WELL INSTALLATION AND SAMPLING TO SUPPORT MASS DISCHARGE EVALUATION REPORT LOCKHEED MARTIN MIDDLE RIVER COMPLEX 2323 EASTERN BOULEVARD MIDDLE RIVER, MARYLAND

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ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
cis-1,2-DCE	*cis*-1,2-dichloroethene
DO	dissolved oxygen
DPT	direct-push technology
EGIS	environmental geographic information system
EESH	energy, environment, safety and health
GPR	ground penetrating radar
HASP	health and safety plan
IDW	investigation-derived waste
LMCPI	LMC Properties, Inc.
Lockheed Martin	Lockheed Martin Corporation
MCL	maximum contaminant level
MDE	Maryland Department of the Environment
µg/L	microgram(s) per liter
MRC	Middle River Complex
ORP	oxidation reduction potential
PCB	polychlorinated biphenyl
PID	photoionization detector
PPE	personal protective equipment
ppm	parts per million
PRB	permeable reactive barrier
PVC	polyvinyl chloride
QA	quality assurance
QC	quality control

RAP	response action plan
1,2,4-TCB	1,2,4-trichlorobenzene
TCE	trichloroethene
TCLP	target characteristic leaching procedure
Tetra Tech	Tetra Tech, Inc.
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
VOC(s)	volatile organic compounds
WMP	waste management plan
ZVI	zero-valent iron

SECTION 1
INTRODUCTION

On behalf of Lockheed Martin Corporation (Lockheed Martin), Tetra Tech, Inc., (Tetra Tech) has prepared this report to summarize well installations supporting the mass discharge assessment and performance monitoring within Blocks E and F at the Middle River Complex (MRC) in Middle River, Maryland (Figure 1-1). Extensive multimedia sampling has been conducted in Blocks E and F to evaluate the extent of trichloroethene (TCE) in soil, groundwater, and surface water. The trichloroethene plume extends from the southeastern corner of Block E to Dark Head Cove in Block F. This report describes the field work performed for a mass discharge assessment investigation that will assess (in a separate report) the potential relationship between trichloroethene-contaminated groundwater in Blocks E and F and adjacent surface water of Dark Head Cove. The objectives of these initial field activities were to complete the following:

- install, develop, and sample 14 wells arranged in a transect perpendicular to the groundwater plume axis near the Block F land interface with Dark Head Cove, including five A-zone, five upper B-zone, and four lower B-zone wells
- install, develop, and sample five wells arranged in a transect perpendicular to the plume axis at the southern boundary of Block E, including four A-zone wells and one B-zone well
- install, develop, and sample four A-zone wells arranged in a transect downgradient and perpendicular to the suspected source of the plume in Block E

Soil borings were advanced via direct-push technology (DPT) and groundwater monitoring wells were installed using pre-packed well screens. The investigation summarized herein targeted permeable intervals identified in Block E and F borings.

This report is organized into the following sections: (1) Introduction, (2) Background and Previous Investigations, (3) Investigation Approach and Methodology, (4) Results, and (5) References. Tables, figures, and appendices are at the end of the report body following Section 5.

SECTION 2
BACKGROUND AND PREVIOUS INVESTIGATIONS

The groundwater response action at the Middle River Complex (MRC) includes enhanced anaerobic bioremediation processes in three areas that have high trichloroethene (TCE) concentrations in groundwater:

- the southeastern TCE area (Block E)
- the southwestern TCE area (Block G)
- the northern TCE area (Block I)

The groundwater response action involves injecting amendments into the subsurface using rows of semi-permanent wells connected by underground piping to injection equipment in each of the three TCE areas. The three areas include Block G, for which a No Further Action has been issued by the Maryland Department of the Environment; Block I, where injections have occurred and are currently being monitored to determine the success of the remediation; and Block E, which is a subject of this study.

2.1 UNDERGROUND STORAGE TANK AREA REMEDY AND DELAY OF BLOCK E INJECTIONS

The remedy implementation at Block E was delayed due to the discovery of an underground storage tank (given the name, "UST 2") and the associated high-concentration TCE suspected source near that location. Following this discovery, a multi-phase extraction system was installed and operated to remove TCE mass and to reduce TCE concentrations in this area. This system operated in 2014 and 2015, and removed approximately 500 pounds of TCE from the subsurface.

Following operation of this system in Block E, expanded baseline sampling was performed in January and April 2016 to determine conditions before tracer testing and subsequent remediation were implemented. Groundwater samples collected from all 28 injection wells were analyzed for volatile organic compounds (VOCs). This sampling showed higher than expected TCE

concentrations at the southern (downgradient) side of Block E, prompting Lockheed Martin Corporation (Lockheed Martin) to expand the investigation to include the adjacent downgradient area of Block F. Additional investigation in these downgradient areas in 2016 and 2017 indicated the presence of a narrow TCE plume extending from Block E to the edge of Dark Head Cove. Although TCE and *cis*-1,2-dichloroethene (*cis*-1,2-DCE) were detected in the surface water during subsequent sampling in Dark Head Cove, concentrations were less than site-specific, risk-based swimming screening levels. Vinyl chloride was not detected in surface water.

2.2 EXTENSION OF BLOCK E REMEDY INTO BLOCK F

The high TCE concentrations near Dark Head Cove prompted Lockheed Martin to consider additional remedial action in Block F. The conceptual design for the proposed groundwater response action at Blocks E and F entails hydraulic containment and creation of a zero-valent iron (ZVI) permeable reactive barrier (PRB) in Block F; groundwater collection and operation of the existing anaerobic reductive dechlorination system in Block E; and the implementation of monitored natural attenuation and land use controls. This alternative is presented in *Groundwater Response Action Plan Addendum Number 4 – Blocks E and F* (Tetra Tech, 2018a), which has been reviewed and approved by the Maryland Department of the Environment (MDE).

The final response-action design is now being developed following the 2018 MDE approval of the groundwater response-action plan (RAP) addendum. The design will provide the basis for the response actions, details for areas and volumes to be treated, final locations and information for the groundwater extraction wells and ZVI PRB, and other details, such as flow rates, piping locations, discharge piping, and treatment unit processes. The operations and maintenance manual, which is part of the final design, includes the groundwater sampling protocol that will be used to evaluate remedial performance in each treatment area.

2.3 MASS DISCHARGE ASSESSMENT

Complementary to the RAP addendum, a study will be performed in 2019 and 2020 to evaluate the relationship between TCE-contaminated groundwater in Blocks E and F and adjacent surface water, and to evaluate the mass discharge/flux of groundwater to surface water. The scope of that study, to be described in more detail under separate cover, will include slug tests and continuous

water-level monitoring to evaluate hydraulic gradients and tidal influence on groundwater levels, and to determine the discharge/recharge relationship of the groundwater/surface water system. Periodic samples will be collected from both passive flux meters and from monitoring wells (using low flow techniques), to measure cumulative water and contaminant fluxes, and to evaluate temporal and spatial VOC concentrations (respectively).

Investigative work summarized in this report includes the installation and sampling of monitoring wells that will be used to:

- provide data for the mass discharge assessment
- fill data gaps to further define the A-zone plume
- revise the conceptual site model (CSM)
- provide performance monitoring after the groundwater remedy in Blocks E and F is implemented

SECTION 3
FIELD INVESTIGATION

Section 3 describes field methodology and the technical approach used for field activities. The Tetra Tech, Inc., (Tetra Tech) field operations leader coordinated mobilization and demobilization, procured the required subcontractors, and mobilized personnel and materials to the field. Investigation results obtained from the comprehensive field program are in Section 4 of this report.

3.1 SITE ACCESS, NOTIFICATIONS, AND PERMITS

Before starting any field work, the assigned Tetra Tech field personnel became familiar with the site-specific health and safety plan (HASP) and the respective "Safe Work" permits and emergency response plan included in the HASP. Tetra Tech conducted mandatory health and safety tailgate meetings before each day's fieldwork. The Tetra Tech site health and safety officer documented the topics covered and personnel in attendance. Safety requirements are addressed in detail in the site-specific Tetra Tech HASP (Tetra Tech, 2018c). Tetra Tech also followed the *Investigation-Derived Waste Management Plan* (WMP) (Tetra Tech, 2018b) that conforms to the Lockheed Martin Corporation (Lockheed Martin) *Energy, Environment, Safety, and Health (EESH) Remediation Waste Management Procedure No. EROP 03, Revision 4 (effective April 17, 2009).*

Tetra Tech provided notification and coordinated access arrangements through Lockheed Martin Security and EMCOR (site maintenance) to gain access to Blocks E and F. Middle River Complex (MRC) tenants were informed and updated about the proposed investigation activities at the LMC Properties, Inc. (LMCPI) bi-weekly meeting. LMCPI was notified of proposed tasks and schedule and approved the work and schedule before mobilization to the field. Tetra Tech submitted the standard digging authorization form and risk handling checklist through EMCOR. Site access, utility clearance, notifications/approvals, and documentation conformed to the provisions of *Lockheed Martin's Remediation Contractor's Environment, Safety and Health (ESH) Handbook, Revision 2, May 1, 2016.*

3.2 UTILITY CLEARANCE

Before starting any intrusive field activities, each soil boring and monitoring well location was screened for the presence of subsurface utilities. In addition to calling in a Miss Utility ticket, Tetra Tech obtained the available MRC facility engineering and utility maps and contracted with a private utility locating service (RETTEW [formerly Enviroscan, Inc.]) to locate and mark underground utilities.

Tetra Tech complied with federal, state, and local laws, regulations, and ordinances relating to the performance of this work. Any required permit, certification, and license applications were made in advance and the sought-after documentation was obtained before field operation. No site operations were affected due to the location of the work. Boring and monitoring well locations were concentrated in Block F near Dark Head Cove and in areas of Block E that were away from Lockheed Martin personnel. During field work, pedestrian and vehicle traffic was not present, as the work area was enclosed by perimeter fencing.

Tetra Tech followed the procedures outlined in the Lockheed Martin Corporation procedures for intrusive work (i.e., E*nterprise Operations* (EO)-28 *and Lockheed Martin Minimum Requirements for Intrusive Fieldwork Work Plans* [Lockheed Martin, 2008]). On July 31, 2018, RETTEW walked the area, noting presence of valves, manholes, and visible outfall piping, and completed utility clearance using a Fisher TW-6 electromagnetic pipe and cable locator/tracer, a cable detection, cable location, and cable avoidance passive locator, and a ground penetrating radar (GPR) system. Located utilities were marked on the ground with the appropriate paint color corresponding to each unique utility. Copies of permits, Miss Utility tickets, and the report prepared by the utility locating company are included as Appendix A.

3.3 FIELD ACTIVITIES

3.3.1 Monitoring Well Installation, Development, and Sampling

Tetra Tech installed, developed, and sampled 14 monitoring wells in Block F (MW137A through MW150B) and nine monitoring wells in Block E (MW151A through MW159A), as shown on Figure 3-1.

Exploratory DPT Coring and Clay Interface Soil Sampling

Before the wells were installed, a Maryland-licensed driller used a direct-push technology (DPT) drill rig to collect a continuous core at four proposed areas in Block F and five proposed areas in Block E to supplement existing data and facilitate placement of well screen depths. More specifically, exploratory borings were advanced:

- In Block F, borings MW139, MW142, MW147, and MW150 were exploratory cores drilled to facilitate placement of their respective monitoring well cluster.
- In Block E, borings MW152B, MW154A, MW155A, MW156A, and MW158A were also drilled to supplement existing data and facilitate placement of well screen depths.

Soil samples were collected at three boring locations (SB-MW154, SB-MW155, and SB-MW158) to provide additional soil data for the mass discharge assessment. Soil samples were collected from the one to two-foot-thick clay layer between the A-zone and B-zone strata; samples were collected from the top, the middle, and the lower portions of the clay layer to evaluate whether contamination is residing and/or migrating through the clay (from the A-zone to the B-zone). Soil samples were screened for volatile organic compounds (VOCs) using a portable photoionization detector (PID) and a consistent headspace-screening methodology (i.e., sealable plastic bag technique). Headspace sampling in the field consisted of cutting the soil core along its long axis, quickly placing one side of the core sample into a sealable plastic bag, and immediately closing the top of the bag. Nine soil samples (three from each exploratory boring) were sent to an analytical laboratory for VOC analysis.

PID VOC field-screening results for clay between the A-zone and B-zone were typically low (i.e., below two parts per million [ppm]). However, some elevated VOC readings were detected in the field in the clay separating A-zone and B-zone groundwater. Therefore, to the extent possible, soil samples for laboratory analysis of VOCs were selected based on elevated readings in the field, as these detections indicated the presence of VOCs.

The four-foot-thick clay layer 8-12 feet below grade at SB-MW155 had some of the highest PID readings (12.4-22.5 ppm VOCs) in the clay zone; therefore, three samples were collected for laboratory analysis there. Soil samples were also collected at SB-MW158, which had slightly

elevated readings, up to 3.8 ppm VOCs, in a five-foot-thick clay at 8-13 feet below grade. Samples were collected from SB-MW158 because a VOC reading at nearby soil boring SB-MW157 was elevated (93.5 ppm); however, the clay layer from which that reading was detected is less than a foot thick, so it (boring SB-MW157) was not sampled. SB-MW158 is also near a known former VOC source (former UST 2) adjacent to former Building D that was removed.

Soil samples for laboratory analysis of VOCs were also collected from clay 9-13 feet below grade at SB-MW154A. Although the field VOC readings at this location were only slightly elevated (0.7-0.9 ppm), soil samples were collected from this boring because it is located along the axis of the plume directly downgradient of elevated TCE (423 micrograms per liter [µg/L]) detections in shallow groundwater at well MW37A (AECOM, 2018), and because it is near SB-MW155, a boring that exhibited elevated field VOC readings in clay at a similar depth.

An experienced and qualified Tetra Tech field geologist performed lithologic logging, and all pertinent information, including boring location, soil/lithology descriptions, and PID readings, were recorded electronically via *Bentley Systems® gINT Professional* boring log software (Appendix B). These electronic records were distributed to the project team and were used to determine well screen intervals for each well.

Pre-packed Monitoring Well Installation

Fourteen new groundwater monitoring wells were installed in the Block F area downgradient of Block E and parallel to the Dark Head Cove shoreline. In addition, nine new groundwater monitoring wells were installed in Block E. The bottom depth of A-zone wells varied from nine to 15 feet below ground surface (bgs) and were based on the depth of the A-B clay transition zone at each location. Two B-zone depths were targeted, an upper B-zone (with bottom screen depths near 17 feet bgs), and a lower B-zone (with bottom screen depths near 26 feet bgs). Well screens for A-zone wells were screened in upper permeable layers above the approximate one- to two-foot-thick confining clay layer present at top depths of nine to 15 feet below grade, while B-zone wells were screened below the clay (lower permeable layer) at each boring location. The pre-packed well screens used for these new wells were installed to targeted depths using a DPT drill rig under the supervision and direction of a Maryland-licensed driller. All pertinent information, including boring location, soil/lithology descriptions, and PID readings were recorded on a soil boring log

form electronically using *gINT Professional* software; these forms are in Appendix C. Log sheets for soil samples collected from borehole drillings are in Appendix D.

Well Construction

Groundwater monitoring wells were constructed of a two-inch-diameter, flush-threaded Schedule-40 polyvinyl chloride (PVC) well casing with a pre-packed PVC well-screen with 0.010-inch wire-wrapped openings. All wells except MW152B were installed with five-foot-long screens; MW152B was installed with a ten-foot-long screen due to a sufficiently thick sand interval at its location and depth. Each pre-packed screen consisted of a slotted PVC well screen surrounded by a stainless-steel mesh containing packed #1 filter sand. A sand filter pack of washed #1 filter sand was placed around the well screen and into the annular space of the four-inch diameter drill rods, to at least two feet above the top of the well screen. Well screen length was selected to address the depth to groundwater and/or thickness of the permeable formation material.

A two-foot thick bentonite seal was installed above the sand pack using bentonite pellets and was allowed to hydrate during installation. Previously sampled project-approved water from a public water-supply hydrant near the MRC conservation building (Lockheed Martin-approved for all MRC environmental studies) was used to hydrate the bentonite when it was necessary to do so. Grout, consisting of Type II Portland cement and powdered bentonite, was placed above the bentonite seal to approximately two feet below grade. Grout was made by mixing a 94-pound bag of Type II Portland cement, nine pounds of powdered sodium bentonite, and no more than eight gallons of water per bag of cement. The relative thicknesses of the bentonite seal, surface seal, and grout were adjusted to accommodate the well depth relative to ground surface.

A protective, locking, flush-mounted well cover was secured over each well casing. The PVC well casing was cut below grade and made watertight by installing a locking, expandable seal in the well casing top. Concrete was installed above the grout in the annular space between the well borehole and outer well casing, and up to approximately six-inches below grade, to provide a surface seal for the well, and to provide support for the flush-mounted cover. The flush-mounted covers were set in a two-square-foot concrete pad.

The highest point on the top of each PVC well casing was marked using a file (i.e., by filing a small groove in the casing) or an indelible marker. Precision Survey, LLC surveyed the marked location of the wells; this information will be used to measure the depth to groundwater at the well. Well construction details were recorded in the field logbook and electronically using *gINT Professional* software. Completed well construction logs are included with the boring logs in Appendix C.

Well Development

The twenty-three newly installed wells were developed to remove fines from the well filter pack and casing, and to ensure a hydraulic connection between the well and the geologic formation. Well development was scheduled as soon as possible following installation, and once a minimum of 24 hours elapsed following well construction, to allow the grout to fully set. Each well was developed first by surge block, then by hand bailing to remove heavy sediments, then by gentle surging and purging with a submersible pump and/or air lifting to remove fines and sediment from the sand pack and well screen.

Development began at the bottom of the well screen, worked up incrementally to the top of the screened interval, and then back down to the bottom of the well. During well development, water level drawdown measurements and groundwater parameters (including pH, temperature, specific conductance, dissolved oxygen [DO], oxidation reduction potential [ORP], and turbidity) were collected every five minutes until pumping was complete. A PID was used to monitor volatile gas concentrations during well development. Before well development, elevated PID readings were observed inside the PVC casing at MW141B (15,000 ppm), MW157A (3,000 ppm), and MW144B (803 ppm). Volatile gas in all wells was properly vented before development began, and headspace air was continuously monitored during well development to ensure the work was completed in accordance with health and safety procedures. Water quality parameters were measured using a Horiba U-52 water quality meter. Turbidity readings were collected using a separate LaMotte 2020e turbidity meter (due to the instability of turbidity meters on multi-meters) and recorded in the field logbook and on a well development record. Development continued until groundwater ran clear and was free of suspended solids, or for a maximum of three hours, whichever occurred first. Slow recharge rates during development were observed at several well locations, with some

wells reaching the 80% recharge threshold days after the first development attempt. All development water was collected in United States Department of Transportation (USDOT)-approved, properly labeled, 55-gallon steel drums in a facility-approved location. All data were recorded in the appropriate site-specific logbook and on a well development record (see Appendix D).

Well Sampling

Before sampling, and after each well was allowed to equilibrate (following development) with the aquifer (for approximately one week), water levels in the new monitoring wells were measured (on January 28, 2019). The static water level was determined by lowering an electronic water level meter probe into the well until the liquid level indicator emitted an audible tone, indicating the air/water interface. The water level was read from the probe cable and recorded to the nearest 0.01 foot as the depth to water from the top of the PVC well casing. Water level and total well depth measurements were recorded in the appropriate site-specific field logbook and on a groundwater level measurement field form.

One round of groundwater samples was collected from each newly installed well after water level measurements were taken. Further discussion of analytical requirements and data are in Section 3.7.

The wells were sampled using the United States Environmental Protection Agency (USEPA) low flow purging/sampling method (USEPA, 1996; updated 2017), whereby water is pumped from the well at a low flow rate and water quality parameters are monitored and recorded during the purging. Wells were purged via a peristaltic pump using disposable polyethylene tubing, at a pumping rate of 100-300 milliliters per minute. The final adjustment of the purge rate depended on water stabilization, and how fast the well recharged (without drawdown below the initial static water level occurring).

During groundwater purging, water level drawdown measurements and groundwater parameters, including pH, temperature, specific conductance, DO, ORP, and turbidity were collected every five minutes, or after each purge volume (whichever was quicker), until purging was complete. These parameters were recorded in the appropriate site-specific logbook, as well as on "Low Flow

Purge Data Sheets." Water quality parameters were measured using an in-line water quality meter (Horiba U-52). Turbidity readings were collected using a separate turbidity meter (LaMotte 2020e) and were recorded in the field logbook and on low flow purge data sheets.

Purging was considered complete when the monitored water quality parameters stabilized, the well was purged dry, or the well had been purged for two hours. Stabilization was considered achieved when three consecutive readings, taken at five-minute intervals, were within ±0.1 standard units for pH, ±3% for specific conductance, and ±10% for ORP and turbidity, or after a maximum of 90 minutes had elapsed. If the monitoring well was purged dry, the water level in the well was allowed to recover to 80% minimum of its initial static water level before groundwater sampling began.

Groundwater samples for VOCs and metals were collected first, followed by samples to be analyzed for the remaining analyses. Samples for each analytical parameter were placed in a cooler containing ice immediately upon collection and shipped to the appropriate laboratory for analysis at the end of each day. All pertinent field logs including static water level data, low flow purge data sheets, sample log sheets, and calibration records are in Appendix D.

3.3.2 Surveying

A professional field surveyor from a qualified, state-licensed, land-surveying firm (Precision Survey and Mapping, LLC) surveyed the horizontal and vertical coordinates of each new well in February 2019. All measurements were surveyed from the top of each well casing. Surveyed locations are accurate to the nearest 0.01 foot for vertical elevations in the North American Vertical Datum 1988, and to the nearest 0.1 foot horizontal coordinates in the North American Datum 1983. Ground elevations at the wells were also surveyed within a vertical accuracy of 0.1 foot. This information was also used to update the MRC environmental geographic information system (EGIS). The full survey report from Precision Survey and Mapping, LLC is included as Appendix E.

3.3.3 Investigation-Derived Waste

Investigation-derived waste (IDW) consisting of all drill cuttings and soil cuttings, decontamination rinse water, purge water, tubing, and personal protective equipment (PPE) was

generated during this investigation. PPE and tubing IDW were placed in trash bags which were placed in a facility trash receptacle to be disposed of as general refuse. Soil cuttings and water were collected and stored in USDOT-approved 55-gallon drums. All drums were appropriately labeled and logged on a drum inventory form. Wastes were characterized and will be disposed of in accordance with applicable state and federal regulations and the 2018 *Investigation-Derived Waste Management Plan* (Tetra Tech, 2018b). After generation, the drums were relocated to a drum staging area (located in Block E/Lot D) as identified by Lockheed Martin personnel. A sample of soil IDW was collected on January 18, 2019 and submitted for analysis of VOCs, polychlorinated biphenyls (PCBs), toxicity characteristic leaching procedure (TCLP) metals, and ignitability. Water IDW generated from this project was listed as hazardous waste due to the known nature of the groundwater in the area. On April 5, 2019, Tetra Tech and the authorized waste-removal representative from Lockheed Martin oversaw drum removal by Clean Harbors. Drums were then transported to the designated removal facility. Signed waste manifests are in Appendix F.

3.4 SAMPLE NOMENCLATURE

Each groundwater sample collected during this investigation was identified with a unique sample identification tag consisting of the site designation (i.e., MRC for Middle River Complex), followed by the sample-type designation (i.e., MW for monitoring well) and well location number (i.e., 137A), followed by the date of the sample. For example, a groundwater sample collected at well location 137A on February 1st, 2019 was identified as "MRC-MW137A-020119."

Each soil sample collected during the investigation was identified with a unique sample identification tag consisting of the sample-type designation (i.e., SB for soil boring), followed by the DPT or well boring number, followed by the depth of the sample. For example, a soil sample collected at well location MW158A at a depth of 9 to 10 feet below ground surface was identified as "SB-MW158-9-10."

Duplicate groundwater screening, groundwater, and soil samples collected were identified with a unique sample identification tag consisting of the sample-type designation (i.e., MW, or SB), followed by DUP (for duplicate), followed by the duplicate number. For example, the first duplicate collected for groundwater sampling was identified as "MRC-MW-DUP-01." Trip blanks

for groundwater samples sent to the laboratory were identified as "TB-mm/dd/yyyy" and were sent with each cooler containing samples to be analyzed for VOCs.

3.5 LABORATORY ANALYSES AND DATA VALIDATION

Tetra Tech arranged for groundwater sample collection and for the quality control (QC) samples collected for laboratory analysis. This included preparation of all chain-of-custody forms and required paperwork relating to transport the samples. Tetra Tech used a laboratory accredited in the State of Maryland (TestAmerica Canton, Ohio) for chemical analyses.

Groundwater samples collected from the newly installed wells were analyzed for the following parameters:

- VOCs by SW846 Method 8260C
- PCBs by SW846 Method 680 (at wells MW140A, MW145A, MW151A, MW152B, and MW153A through MW159A)
- total metals by SW846 Method 6020A
- sulfate by SW846 Method 9056A
- nitrates by SM 4500-NO3E
- total dissolved solids by SM 2540C
- bromide by USEPA 300.0
- iron and manganese by SW846 Method 6010C
- alkalinity by SM 2320B
- salinity by SM 2520B
- hardness (ions) by SM 2340C
- ferrous iron by Hach field kit

As stated earlier, groundwater VOC and metal samples were collected first, followed by samples to be analyzed for the remaining analyses. All samples were placed in a cooler containing ice immediately upon collection (for example, VOC containers were placed in a cooler containing ice immediately after the VOC containers were filled and closed). Aqueous trip blanks were placed in

cooler(s) used to store and ship VOC samples at the beginning of each sampling day; this trip blank accompanied the VOC samples throughout the day and were sent along with the samples to the laboratory. The trip blank(s) were analyzed for VOCs by SW846 Method 8260C. Duplicate samples to be used for matrix spikes were collected and analyzed on a 1:20 basis, and one duplicate sample was collected from each media. Samples were analyzed on a standard turnaround of 21 calendar days. Full data packages from TestAmerica are in Appendix G.

All data provided by the laboratory was validated for all quality control parameters, including accuracy, precision, completeness, and comparability, in accordance with USEPA national functional guidelines for inorganic and organic data (USEPA, 2017a and 2017b, respectively), and in accordance with the USEPA *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (USEPA, 2009). Oversight of laboratory QA/QC was as proactive as possible to ensure valid data are produced during the sampling event. An evaluation of laboratory methodology, method compliance, and any corrective actions was also performed. Data validation reports are in Appendix H.

SECTION 4
INVESTIGATION RESULTS

4.1 A-B ZONE CLAY INTERFACE SOIL SAMPLING

Continuous cores were obtained from the ground surface to the total depth of the borings at new monitoring well locations MRC-MW154, -MW155, and -MW158. The locations of the borings, as well as all monitoring wells installed, are illustrated on Figure 3-1. The completed boring logs as well as construction details are in Appendix C.

Nine soil samples were collected and analysed for volatile organic compounds (VOCs) from the exploratory borings (SB-MW154, -MW155, and -MW158); data obtained from these samples will be used to assist with the mass discharge assessment in a separate report. Specifically, soil samples were collected from the 1-2-foot clay layer between the A- and B-zones; samples were collected from the top, middle, and bottom of this clay layer to evaluate if contamination is residing and/or migrating through the clay. Details and rationale for soil boring and sample selection are provided in Section 3.3.1 and are not repeated here. Volatile organic compounds were not detected in any of the soil samples collected (Table 4-1). The full data report for soil boring samples is in Appendix G, while the validated data report is in Appendix H.

4.2 GROUNDWATER ELEVATION MEASUREMENTS

A synoptic round of groundwater elevation measurements was conducted for each newly installed monitoring well on January 28, 2019. The static water level measurements and their conversions to groundwater elevation are tabulated in Table 4-2. The groundwater elevations are generally consistent with previous interpretations for Blocks E and F in that they reflect an overall northwest-to-southeast groundwater flow direction towards Dark Head Cove, including the western and central portions of the blocks where the mass discharge investigation was performed.

4.3 GROUNDWATER SAMPLING

The twenty-three newly-installed monitoring wells in Blocks E and F were sampled for multiple parameters (see Section 3.7). Groundwater analytical data are summarized in Tables 4-3 and 4-4, and on illustrated tag maps showing detected trichloroethene (TCE), *cis*-1,2-dichoroethene (*cis*-1,2-DCE), and chlorobenzene concentrations in groundwater are included as Figures 4-1 to 4-3, respectively. The complete laboratory data packages are in Appendix G and the data validation reports are in Appendix H. Data validation procedures were completed for all available data packages. No major data quality issues were identified. The non-detection of 2-chloroethyl vinyl ether in trip blanks from three data packages were qualified as rejected due to the laboratory narrative indicating the sample (trip blank) was acid preserved.

4.3.1 Volatile Organic Compound Results

Twenty volatile organic compounds were detected in the newly installed monitoring wells in Blocks E and F, with the most notable detections at MW141B, which yielded a trichloroethene concentration of 21,000 micrograms per liter (µg/L); MW157A, which yielded a *cis*-1,2-dichloroethene concentration of 330 µg/L; and MW139B, which yielded a 1,2,4-trichlorobenzene concentration of 290 µg/L. No VOCs were detected in groundwater samples collected from MW151A, MW153A, MW154A, and MW156A.

Trichloroethene (Figure 4-1) was the most detected volatile organic compound, with detections at 18 of 23 total wells, and *cis*-1,2-dichloroethene (Figure 4-2) was the second most commonly detected (15 of 23 wells). Trichloroethene concentrations ranged from 0.15*J* µg/L to 21,000 µg/L with the highest concentrations detected at MW141B (21,000 µg/L), MW144B (3,600 µg/L), and MW147B (3,500 µg/L). *cis*-1,2-Dichloroethene concentrations ranged from 0.29J µg/L to 330 µg/L, with the maximum concentrations detected at MW157A (330 µg/L), MW141B (180*J* µg/L), MW144B (54*J* µg/L), and MW150B (47 µg/L).

Most of the higher trichloroethene and *cis*-1,2-dichloroethene concentrations detected were in upper (12-17 feet below grade) and lower (21-26 feet below grade) "B" wells in Block F, indicating that that the contaminant plume is nearing Dark Head Cove (Figures 4-1 and 4-2). The trichloroethene results are generally consistent with the current plume footprint in the conceptual

site model, with respect to location and depth (i.e., higher concentrations in the B-zone wells); however, the elevated concentration of trichloroethene at well MW141B (21,000 µg/L) indicates that the longitudinal axis of the plume is located farther west (i.e., west of wells EW2 and SEMW8I) than suggested by the results of recent site-wide groundwater sampling (AECOM, 2018).

MW157A, located nearest to and hydraulically downgradient of the former trichloroethene source (UST 2), had elevated concentrations of both trichloroethene (2,600 µg/L) and *cis*-1,2-dichloroethene (330 µg/L), but no detectable vinyl chloride. Additionally, concentrations of volatile organic compounds were lowest in the middle transect of newly-installed wells (MW151A through MW155A) indicating the effectiveness of the groundwater remedy in this area.

Chlorobenzene (Figure 4-3) was detected at three wells, with the maximum concentration of 68 µg/L at MW139B. 1,2,4-Trichlorobenzene (1,2,4-TCB), 1,3-dichlorobenzene, and 1,4-dichlorobenzene are degradation products of chlorobenzene, and were detected in two groundwater samples each, with the maximum and minimum (trace) concentrations of each detected at MW139B and MW137A (respectively). Specifically, 1,2,4,-trichlorobenzene was detected at concentrations of 290 µg/L and 0.27*J* µg/L, 1,3-dichlorobenzene at 65 µg/L and 0.15*J* µg/L, and 1,4-dichlorobenzene at 42 µg/L and 0.19*J* µg/L. Similar to the distributions of trichloroethene and *cis*-1,2-dichloroethene, the detections of chlorobenzenes were in Block F wells near Dark Head Cove, but were limited to detections in only two wells at the western-most portion of the study area, one of which was an A-zone well (although at only trace concentrations). The chlorobenzene concentrations detected in the western-most wells may be associated with the Block E chlorobenzene plume (currently under investigation) to the northwest, as MW137A and MW139B are hydraulically downgradient and in the possible pathway of this plume.

Volatiles detected in groundwater during this investigation were compared to the federal maximum concentration levels (MCLs) for drinking water, noting that these samples are from groundwater that is not a potable (drinking water) source. Three volatile organic compounds exceeded their respective federal drinking water maximum concentration levels at various concentrations. 1,2,4-Trichlorobenzene exceeded its maximum concentration level (70 µg/L) at MW139B with a concentration of 290 µg/L. Trichloroethene exceeded its maximum concentration level (5 µg/L)

in 14 samples, at concentrations ranging from 13 µg/L (MW152B) to 21,000 µg/L (MW141B). Chlorobenzene also exceeded its maximum concentration level (100 µg/L) at two locations, including MW157A (330 µg/L) and MW141B (180*J* µg/L).

4.3.2 Polychlorinated Biphenyl Results

Eleven newly installed monitoring wells in Blocks E and F were sampled for polychlorinated biphenyls (PCBs) via United States Environmental Protection Agency (USEPA) Method 680. Block F wells sampled for polychlorinated biphenyls included MW140A and MW-145A, while wells MW151A, MW152B, and MW153A through MW159A in Block E were also sampled. Polychlorinated biphenyls were not detected in any of these sampled wells.

4.3.3 Metals Results

Twenty-two total metals (aluminium, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, potassium, selenium, silver, sodium, thallium, vanadium, and zinc) were detected from the newly installed monitoring wells (see Tables 4-3 and 4-4). Metals detections were also compared to federal drinking water maximum contaminant levels, (again noting that this groundwater is not used as a potable water source). All metals detections except beryllium were below their respective maximum contaminant levels. Beryllium exceeded its maximum contaminant level (4 µg/L) at eight wells, with concentrations ranging from 5.5 µg/L (MW137A) to 44 µg/L (MW145A). Beryllium was detected in only two monitoring wells during the 2018 annual groundwater sampling round conducted near Blocks E and F, at MW73B (2 µg/L), which is in the southeastern portion of Block E, and at MW-72B (0.66 µg/L) located north of MW-73B.

SECTION 5
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FIGURES

Figure 1-1 Site Location Map, Blocks E/F, Middle River Complex

Figure 3-1 Mass Discharge Evaluation Monitoring Wells Installed and Sampled - 2019, Blocks E and F

Figure 4-1 Trichloroethene Groundwater Concentrations Detected in Mass Discharge Evaluation Wells - 2019, Blocks E and F

Figure 4-2 *cis*-1,2-Dichloroethene Groundwater Concentrations Detected in Mass Discharge Evaluation Wells - 2019, Blocks E and F

Figure 4-3 Chlorobenzene and Chlorobenzene Isomer Groundwater Concentrations Detected in Mass Discharge Evaluation Wells - 2019, Blocks E and F



2014 aerial photograph provided by U.S. Geological Survey.

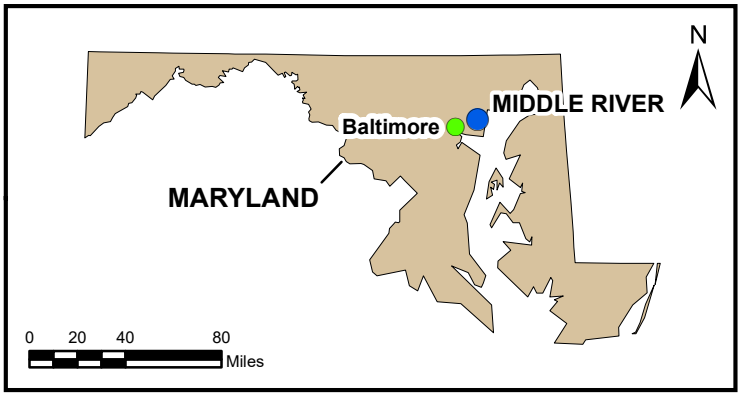

FIGURE 1-1

SITE LOCATION MAP, BLOCKS E/F
MIDDLE RIVER COMPLEX

Lockheed Martin Middle River Complex
Middle River, Maryland

DATE MODIFIED:	CREATED BY:
03/20/19	JEE

TETRA TECH

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\mrc_sitemap_blocks_ef_mar2018.mxd)
03/20/19 -- JEE



FIGURE 3-1

MASS DISCHARGE EVALUATION MONITORING WELLS INSTALLED AND SAMPLED - 2019 BLOCKS E AND F

LEGEND

WELLS INSTALLED AND SAMPLED DURING INVESTIGATION

- BLOCK E
- BLOCK F
- MONITORING WELL NOT SAMPLED
- FORMER UNDERGROUND STORAGE TANK
- TAX BLOCK

2017 aerial photograph provided by the State of Maryland.

Lockheed Martin Middle River Complex
Middle River, Maryland

0 25 50 Feet

N

DATE MODIFIED: 06/10/19

CREATED BY: JEE

TETRA TECH

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\block_ef_distal_plume_samplocs_may2019.mxd)
06/10/19 -- JEE

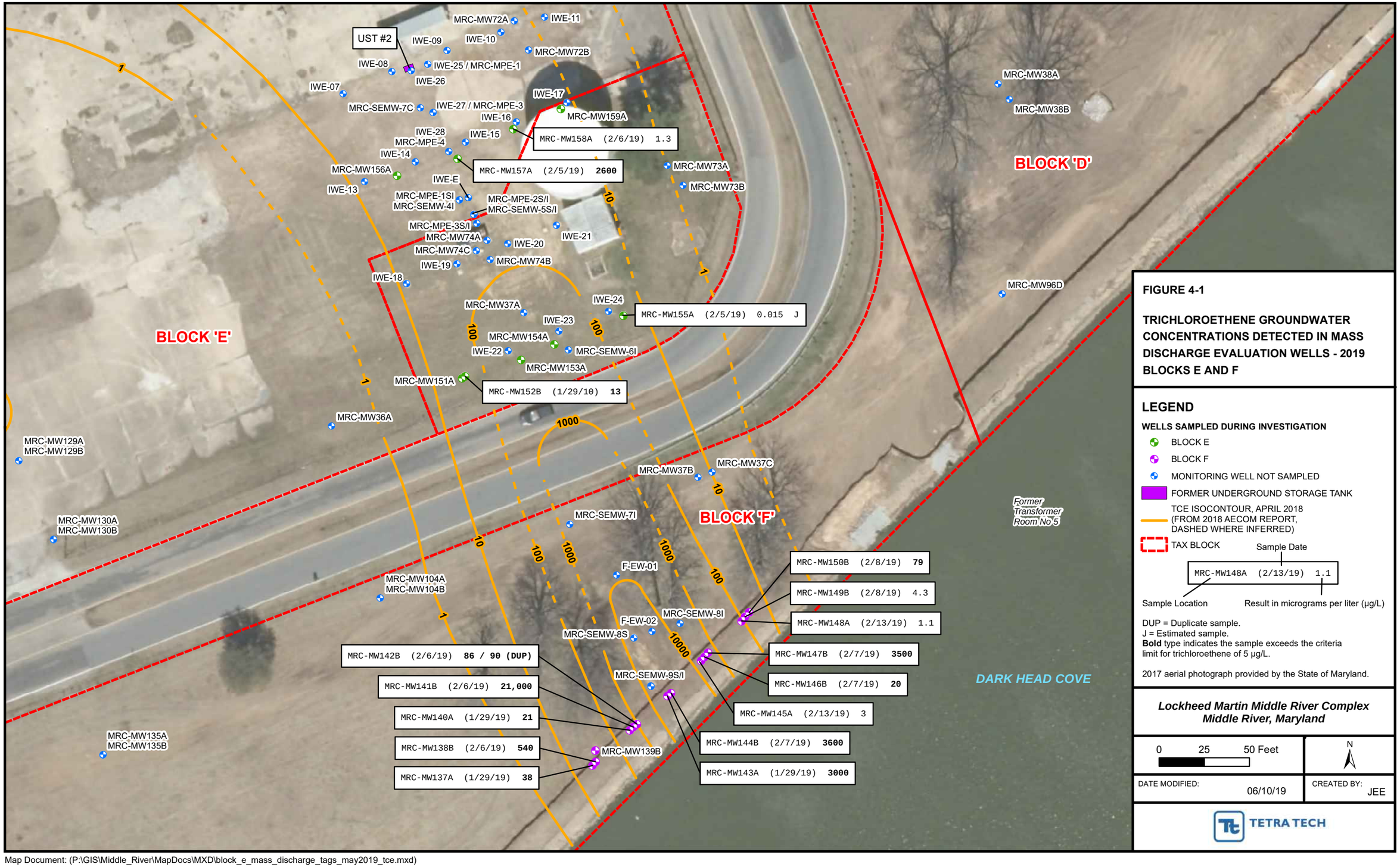

FIGURE 4-1

TRICHLOROETHENE GROUNDWATER CONCENTRATIONS DETECTED IN MASS DISCHARGE EVALUATION WELLS - 2019 BLOCKS E AND F

LEGEND

WELLS SAMPLED DURING INVESTIGATION

- BLOCK E
- BLOCK F
- MONITORING WELL NOT SAMPLED
- FORMER UNDERGROUND STORAGE TANK
- TCE ISOCONTOUR, APRIL 2018 (FROM 2018 AECOM REPORT, DASHED WHERE INFERRED)
- TAX BLOCK

Sample Date

MRC-MW148A (2/13/19) 1.1

Sample Location — Result in micrograms per liter (µg/L)

DUP = Duplicate sample.
J = Estimated sample.
Bold type indicates the sample exceeds the criteria limit for trichloroethene of 5 µg/L.

2017 aerial photograph provided by the State of Maryland.

Lockheed Martin Middle River Complex
Middle River, Maryland

0 25 50 Feet

N

DATE MODIFIED: 06/10/19

CREATED BY: JEE

TETRA TECH

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\block_e_mass_discharge_tags_may2019_tce.mxd)
06/10/19 -- JEE

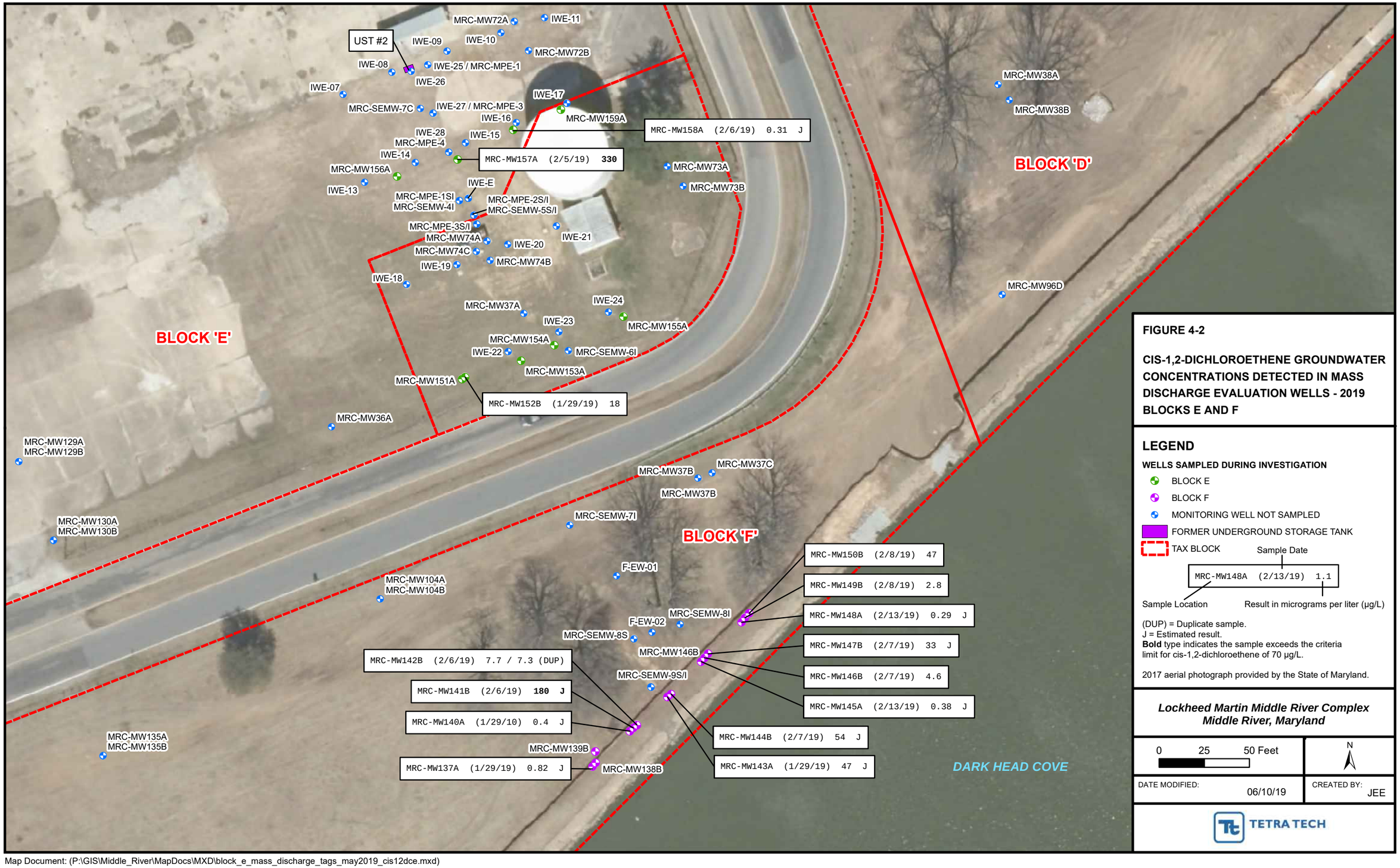

FIGURE 4-2

CIS-1,2-DICHLOROETHENE GROUNDWATER CONCENTRATIONS DETECTED IN MASS DISCHARGE EVALUATION WELLS - 2019 BLOCKS E AND F

LEGEND

WELLS SAMPLED DURING INVESTIGATION

- BLOCK E
- BLOCK F
- MONITORING WELL NOT SAMPLED
- FORMER UNDERGROUND STORAGE TANK
- TAX BLOCK

Sample Date

MRC-MW148A (2/13/19) 1.1

Sample Location — Result in micrograms per liter (µg/L)

(DUP) = Duplicate sample.
J = Estimated result.
Bold type indicates the sample exceeds the criteria limit for cis-1,2-dichloroethene of 70 µg/L.

2017 aerial photograph provided by the State of Maryland.

Lockheed Martin Middle River Complex
Middle River, Maryland

0 25 50 Feet

N

DATE MODIFIED: 06/10/19

CREATED BY: JEE

TETRA TECH

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\block_e_mass_discharge_tags_may2019_cis12dce.mxd)
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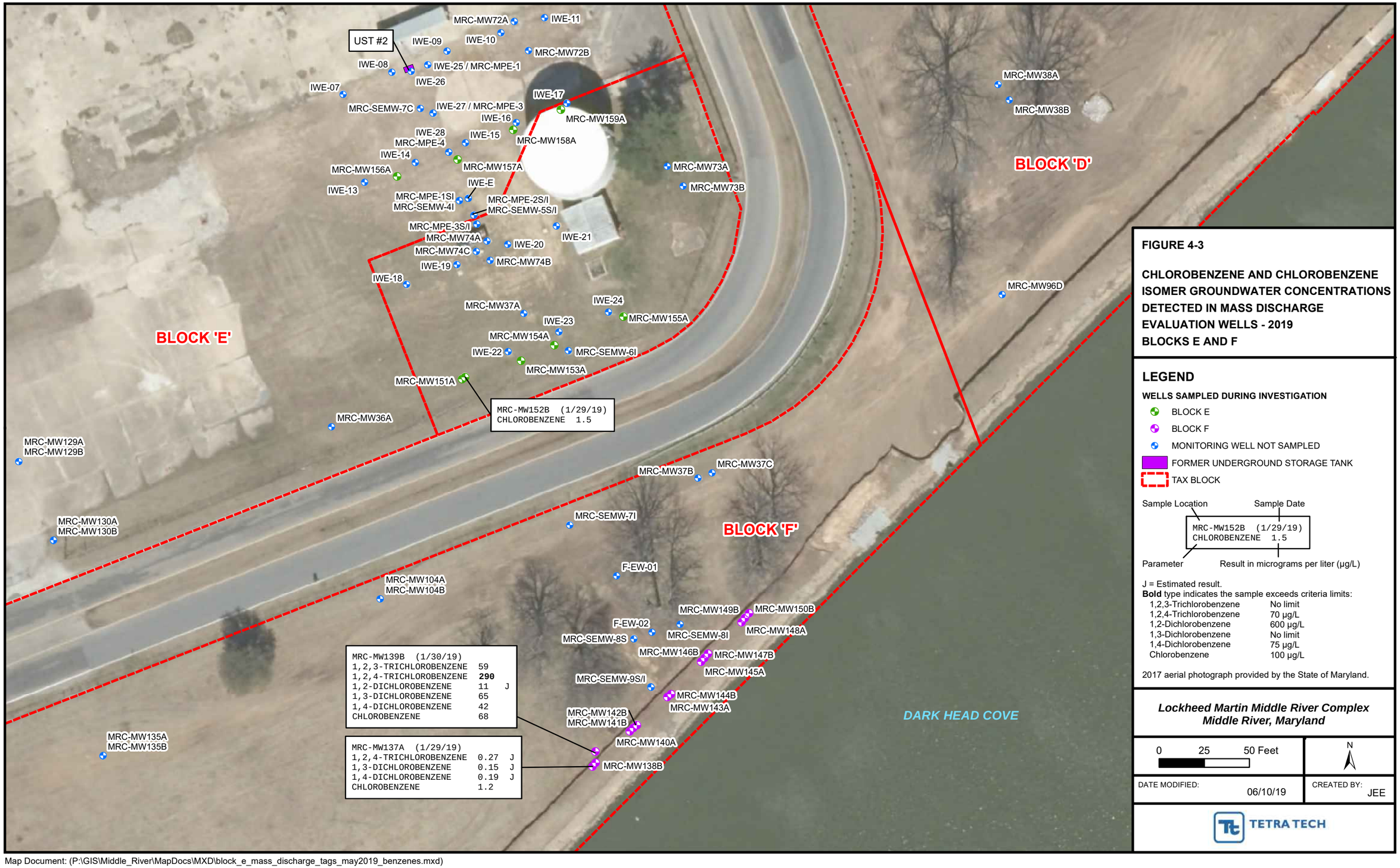


FIGURE 4-3

CHLOROBENZENE AND CHLOROBENZENE ISOMER GROUNDWATER CONCENTRATIONS DETECTED IN MASS DISCHARGE EVALUATION WELLS - 2019 BLOCKS E AND F

LEGEND

WELLS SAMPLED DURING INVESTIGATION

- BLOCK E
- BLOCK F
- MONITORING WELL NOT SAMPLED
- FORMER UNDERGROUND STORAGE TANK
- TAX BLOCK

Sample Location / Sample Date

```
MRC-MW152B  (1/29/19)
CHLOROBENZENE  1.5
```

Parameter / Result in micrograms per liter (µg/L)

J = Estimated result.
Bold type indicates the sample exceeds criteria limits:

1,2,3-Trichlorobenzene	No limit
1,2,4-Trichlorobenzene	70 µg/L
1,2-Dichlorobenzene	600 µg/L
1,3-Dichlorobenzene	No limit
1,4-Dichlorobenzene	75 µg/L
Chlorobenzene	100 µg/L

2017 aerial photograph provided by the State of Maryland.

Lockheed Martin Middle River Complex
Middle River, Maryland

0 25 50 Feet

N

DATE MODIFIED: 06/10/19

CREATED BY: JEE

TETRA TECH

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\block_e_mass_discharge_tags_may2019_benzenes.mxd)
06/10/19 -- JEE

TABLES

Table 4-1 Exploratory Soil Boring Results, Blocks E and F

Table 4-2 Synoptic Groundwater Level Measurements, Blocks E and F

Table 4-3 Comprehensive Groundwater Results, Blocks E and F

Table 4-4 Statistical Summary of Groundwater Results, Blocks E and F

Table 4-1

Exploratory Soil Boring Soil Results, Blocks E and F
Lockheed Martin Middle River Complex, Middle River, Maryland

LOCATION	MRC-MW154A			MRC-MW155A			MRC-MW158A		
SAMPLE ID	SB-MW154-10-12	SB-MW154-12-13	SB-MW154-9-10	SB-MW155-11-12	SB-MW155-8-9	SB-MW155-9-11	SB-MW158-10-11	SB-MW158-11-12	SB-MW158-9-10
SAMPLE DATE	20190108	20190108	20190108	20190108	20190108	20190108	20190108	20190108	20190108
TOP DEPTH	10	12	9	11	8	9	10	11	9
BOTTOM DEPTH	12	13	10	12	9	11	11	12	10
Volatile organic compounds (µg/kg)									
1,1,1,2-TETRACHLOROETHANE	3.2 U	3.4 U	3.2 U	3.6 U	3.3 U	3.3 U	3.4 U	3.3 U	3.5 U
1,1,1-TRICHLOROETHANE	0.88 U	0.93 U	0.9 U	0.98 U	0.9 U	0.91 U	0.95 U	0.9 U	0.98 U
1,1,2,2-TETRACHLOROETHANE	1.5 UJ	1.6 UJ	1.6 UJ	1.7 UJ	1.6 UJ	1.6 UJ	1.6 UJ	1.6 UJ	1.7 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	1.4 U	1.5 U	1.4 U	1.5 U	1.4 U	1.4 U	1.5 U	1.4 U	1.5 U
1,1-DICHLOROETHANE	0.74 U	0.79 U	0.76 U	0.83 U	0.76 U	0.77 U	0.8 U	0.76 U	0.83 U
1,1-DICHLOROETHENE	0.97 U	1 U	0.99 U	1.1 U	0.99 U	1 U	1 U	0.99 U	1.1 U
1,1-DICHLOROPROPENE	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.2 U
1,2,3-TRICHLOROBENZENE	0.61 U	0.65 U	0.63 U	0.69 U	0.63 U	0.64 U	0.66 U	0.63 U	0.68 U
1,2,3-TRICHLOROPROPANE	1.7 UJ	1.8 UJ	1.7 UJ	1.9 UJ	1.7 UJ	1.7 UJ	1.8 UJ	1.7 UJ	1.9 UJ
1,2,3-TRIMETHYLBENZENE	2 U	2.1 U	2 U	2.2 U	2 U	2 U	2.1 U	2 U	2.2 U
1,2,4-TRICHLOROBENZENE	0.61 UJ	0.65 UJ	0.62 UJ	0.68 UJ	0.63 UJ	0.64 UJ	0.66 UJ	0.63 UJ	0.68 UJ
1,2,4-TRIMETHYLBENZENE	1.1 U	1.2 U	1.1 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U
1,2-DIBROMO-3-CHLOROPROPANE	3.9 U	4.1 U	3.9 U	4.3 U	4 U	4 U	4.2 U	3.9 U	4.3 U
1,2-DIBROMOETHANE	0.82 U	0.88 U	0.84 U	0.92 U	0.85 U	0.86 U	0.89 U	0.84 U	0.92 U
1,2-DICHLOROBENZENE	1.2 U	1.3 U	1.2 U	1.3 U	1.2 U	1.2 U	1.3 U	1.2 U	1.3 U
1,2-DICHLOROETHANE	0.83 U	0.88 U	0.84 U	0.92 U	0.85 U	0.86 U	0.89 U	0.84 U	0.92 U
1,2-DICHLOROPROPANE	0.91 U	0.97 U	0.93 U	1 U	0.93 U	0.95 U	0.98 U	0.93 U	1 U
1,3-DICHLOROBENZENE	0.87 U	0.93 U	0.89 U	0.98 U	0.9 U	0.91 U	0.94 U	0.89 U	0.97 U
1,3-DICHLOROPROPANE	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.2 U
1,4-DICHLOROBENZENE	0.94 U	1 U	0.96 U	1.1 U	0.97 U	0.98 U	1 U	0.96 U	1.1 U
2,2-DICHLOROPROPANE	1.3 U	1.4 U	1.3 U	1.4 U	1.3 U	1.3 U	1.4 U	1.3 U	1.4 U
2-BUTANONE	3.8 UJ	4 UJ	3.9 UJ	4.3 UJ	3.9 UJ	4 UJ	4.1 UJ	3.9 UJ	4.2 UJ
2-CHLOROETHYL VINYL ETHER	9.5 U	10 U	9.7 U	11 U	9.8 U	9.9 U	10 U	9.7 U	11 U
2-CHLOROTOLUENE	1 U	1.1 U	1 U	1.1 U	1 U	1.1 U	1.1 U	1 U	1.1 U
2-HEXANONE	4.4 U	4.7 U	4.5 U	4.9 U	4.5 U	4.5 U	4.7 U	4.5 U	4.9 U
4-CHLOROTOLUENE	0.92 U	0.98 U	0.94 U	1 U	0.95 U	0.96 U	0.99 U	0.94 U	1 U
4-ISOPROPYLTOLUENE	3.2 U	3.4 U	3.2 U	3.5 U	3.2 U	3.3 U	3.4 U	3.2 U	3.5 U
4-METHYL-2-PENTANONE	4 U	4.2 U	4.1 U	4.4 U	4.1 U	4.1 U	4.3 U	4.1 U	4.4 U
ACETONE	22 U	24 U	23 U	25 U	23 U	23 U	24 U	23 U	25 U
BENZENE	0.75 U	0.79 U	0.76 U	0.83 U	0.77 U	0.78 U	0.8 U	0.76 U	0.83 U
BROMOBENZENE	1.3 U	1.3 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.3 U	1.4 U
BROMOCHLOROMETHANE	0.64 U	0.68 U	0.65 U	0.71 U	0.65 U	0.66 U	0.68 U	0.65 U	0.71 U
BROMODICHLOROMETHANE	0.73 U	0.77 U	0.74 U	0.81 U	0.75 U	0.76 U	0.78 U	0.74 U	0.81 U
BROMOFORM	2.6 U	2.7 U	2.6 U	2.9 U	2.6 U	2.7 U	2.8 U	2.6 U	2.9 U
BROMOMETHANE	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U	1.1 U	1.1 U	1.1 U	1.2 U
CARBON DISULFIDE	1.2 U	1.3 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.3 U	1.4 U
CARBON TETRACHLORIDE	3.5 U	3.7 U	3.6 U	3.9 U	3.6 U	3.6 U	3.7 U	3.6 U	3.9 U
CHLOROBENZENE	0.98 U	1 U	1 U	1.1 U	1 U	1 U	1.1 U	1 U	1.1 U
CHLORODIBROMOMETHANE	3 U	3.2 U	3 U	3.3 U	3.1 U	3.1 U	3.2 U	3 U	3.3 U
CHLOROETHANE	1.3 U	1.4 U	1.3 U	1.5 U	1.3 U	1.4 U	1.4 U	1.3 U	1.5 U
CHLOROFORM	0.84 U	0.9 U	0.86 U	0.94 U	0.86 U	0.88 U	0.91 U	0.86 U	0.94 U

Table 4-1

Exploratory Soil Boring Soil Results, Blocks E and F
Lockheed Martin Middle River Complex, Middle River, Maryland

LOCATION	MRC-MW154A			MRC-MW155A			MRC-MW158A		
SAMPLE ID	SB-MW154-10-12	SB-MW154-12-13	SB-MW154-9-10	SB-MW155-11-12	SB-MW155-8-9	SB-MW155-9-11	SB-MW158-10-11	SB-MW158-11-12	SB-MW158-9-10
SAMPLE DATE	20190108	20190108	20190108	20190108	20190108	20190108	20190108	20190108	20190108
TOP DEPTH	10	12	9	11	8	9	10	11	9
BOTTOM DEPTH	12	13	10	12	9	11	11	12	10
Volatile organic compounds, continued (µg/kg)									
CHLOROMETHANE	1.1 U	1.2 U	1.1 U	1.2 U	1.1 U	1.2 U	1.2 U	1.1 U	1.2 U
CIS-1,2-DICHLOROETHENE	0.7 U	0.74 U	0.71 U	0.78 U	0.71 U	0.72 U	0.75 U	0.71 U	0.78 U
CIS-1,3-DICHLOROPROPENE	1.5 U	1.6 U	1.6 U	1.7 U	1.6 U	1.6 U	1.7 U	1.6 U	1.7 U
DIBROMOMETHANE	0.72 U	0.76 U	0.73 U	0.8 U	0.73 U	0.74 U	0.77 U	0.73 U	0.8 U
DICHLORODIFLUOROMETHANE	1 U	1.1 U	1 U	1.1 U	1 U	1 U	1.1 U	1 U	1.1 U
DIISOPROPYL ETHER	0.81 U	0.86 U	0.83 U	0.91 U	0.83 U	0.84 U	0.87 U	0.83 U	0.9 U
ETHYL TERT-BUTYL ETHER	2.4 UJ	2.6 UJ	2.5 UJ	2.7 UJ	2.5 UJ	2.5 UJ	2.6 UJ	2.5 UJ	2.7 UJ
ETHYLBENZENE	1.1 U	1.2 U	1.1 U	1.3 U	1.1 U	1.2 U	1.2 U	1.1 U	1.2 U
HEXACHLOROBUTADIENE	4 UJ	4.3 UJ	4.1 UJ	4.5 UJ	4.1 UJ	4.2 UJ	4.3 UJ	4.1 UJ	4.5 UJ
ISOPROPYLBENZENE	0.89 U	0.95 U	0.91 U	0.99 U	0.91 U	0.93 U	0.96 U	0.91 U	0.99 U
METHYL TERT-BUTYL ETHER	0.88 U	0.93 U	0.9 U	0.98 U	0.9 U	0.91 U	0.95 U	0.9 U	0.98 U
METHYLENE CHLORIDE	13 U	14 U	13 U	14 U	13 U	13 U	14 U	13 U	14 U
NAPHTHALENE	2.9 U	3.1 U	2.9 U	3.2 U	3 U	3 U	3.1 U	3 U	3.2 U
N-BUTYLBENZENE	3.7 U	4 U	3.8 U	4.1 U	3.8 U	3.9 U	4 U	3.8 U	4.1 U
N-PROPYLBENZENE	0.78 U	0.83 U	0.8 U	0.88 U	0.8 U	0.81 U	0.84 U	0.8 U	0.87 U
SEC-BUTYLBENZENE	0.92 U	0.98 U	0.94 U	1 U	0.95 U	0.96 U	1 U	0.94 U	1 U
STYRENE	1.2 U	1.3 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.3 U	1.4 U
TERT-AMYL METHYL ETHER	2.4 U	2.6 U	2.5 U	2.7 U	2.5 U	2.5 U	2.6 U	2.5 U	2.7 U
TERT-BUTYLBENZENE	0.97 U	1 U	0.99 U	1.1 U	1 U	1 U	1 U	0.99 U	1.1 U
TERTIARY-BUTYL ALCOHOL	18 UJ	19 UJ	18 UJ	20 UJ	18 UJ	18 UJ	19 UJ	18 UJ	20 UJ
TETRACHLOROETHENE	0.78 U	0.83 U	0.8 U	0.87 U	0.8 U	0.81 U	0.84 U	0.8 U	0.87 U
TOLUENE	0.83 U	0.88 U	0.84 U	0.92 U	0.85 U	0.86 U	0.89 U	0.85 U	0.92 U
TOTAL XYLENES	1.7 U	1.8 U	1.7 U	1.9 U	1.7 U	1.8 U	1.8 U	1.7 U	1.9 U
TRANS-1,2-DICHLOROETHENE	0.5 U	0.53 U	0.51 U	0.56 U	0.51 U	0.52 U	0.54 U	0.51 U	0.55 U
TRANS-1,3-DICHLOROPROPENE	1.1 U	1.2 U	1.1 U	1.2 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U
TRICHLOROETHENE	0.68 U	0.72 U	0.69 U	0.76 U	0.69 U	0.7 U	0.73 U	0.69 U	0.75 U
TRICHLOROFLUOROMETHANE	1.2 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	1.3 U
VINYL ACETATE	2.3 U	2.4 U	2.3 U	2.5 U	2.3 U	2.4 U	2.5 U	2.3 U	2.5 U
VINYL CHLORIDE	0.9 U	0.95 U	0.91 U	1 U	0.92 U	0.93 U	0.96 U	0.92 U	1 U

U - not detected
J -estimated value
µg/kg - micrograms per kilogram

Table 4-2

Synoptic Groundwater Level Measurements
Blocks E and F
Lockheed Martin Middle River Complex, Middle River, Maryland

Well ID	Elevation of reference point (feet)	Total well depth (feet)	Water-level indicator reading (feet)	Groundwater elevation (feet)
MRC-MW137A	4.49	10.4	3.59	0.9
MRC-MW138B	4.52	17.3	3.63	0.89
MRC-MW139B	4.69	26.40	3.07	1.62
MRC-MW140A	4.74	9.15	2.85	1.89
MRC-MW141B	4.71	17.20	3.55	1.16
MRC-MW142B	4.62	26.30	3.16	1.46
MRC-MW143A	5.08	10.30	4.00	1.08
MRC-MW144B	5.13	17.20	3.65	1.48
MRC-MW145A	5.37	10.35	3.52	1.85
MRC-MW146B	5.42	17.25	3.80	1.62
MRC-MW147B	5.08	26.56	3.40	1.68
MRC-MW148A	5.15	10.40	3.30	1.85
MRC-MW149B	5.17	17.30	3.45	1.72
MRC-MW150B	5.09	25.50	3.33	1.76
MRC-MW151A	9.48	14.90	8.60	0.88
MRC-MW152B	9.63	28.00	6.30	3.33
MRC-MW153A	8.58	14.20	5.17	3.41
MRC-MW154A	8.52	10.01	4.38	4.14
MRC-MW155A	8.49	9.88	3.24	5.25
MRC-MW156A	11.59	13.80	2.60	8.99
MRC-MW157A	11.54	14.18	7.12	4.42
MRC-MW158A	11.57	9.80	6.27	5.30
MRC-MW159A	11.29	9.90	5.75	5.54

All water levels were measured on January 28, 2019.
Elevation in feet Noth American Vertical Datum of 1988.

Table 4-3

Comprehensive Groundwater Results, Blocks E and F
Lockheed Martin Middle River Complex, Middle River, Maryland

LOCATION	Federal Maximum Contaminant Levels (µg/L)	MRC-MW137A	MRC-MW138B	MRC-MW139B	MRC-MW140A	MRC-MW141B	MRC-MW142B	MRC-MW142B
SAMPLE ID		MRC-MW137A-012919	MRC-MW138B-020619	MRC-MW139B-013019	MRC-MW140A-012919	MRC-MW141B-020619	MRC-MW142B-020619	MRC-MW142B-020619-AVG
SAMPLE DATE		20190129	20190206	20190130	20190129	20190206	20190206	20190206
Volatile organic compounds (µg/L)								
1,1-DICHLOROETHANE	NC	0.17 U	4.3 U	3.4 U	0.17 U	170 U	0.68 U	0.765 U
1,2,3-TRICHLOROBENZENE	NC	0.54 UJ	14 U	59	0.54 UJ	540 U	2.2 U	2.45 U
1,2,4-TRICHLOROBENZENE	70	0.27 J	6.5 UJ	**290**	0.26 U	260 UJ	1 UJ	1.15 U
1,2-DICHLOROBENZENE	600	0.15 U	3.8 U	11 J	0.15 U	150 U	0.6 U	0.675 U
1,3-DICHLOROBENZENE	NC	0.15 J	3.8 U	65	0.15 U	150 U	0.6 U	0.675 U
1,4-DICHLOROBENZENE	75	0.19 J	4 U	42	0.16 U	160 U	0.64 U	0.72 U
2,2-DICHLOROPROPANE	NC	0.31 U	7.8 U	6.2 U	0.31 U	310 U	1.2 U	1.4 U
2-BUTANONE	NC	1.2 U	29 U	23 U	1.2 U	1200 U	4.6 U	5.2 U
ACETONE	NC	8.5 J	140 U	110 U	5.4 U	5400 U	22 U	24.5 U
BENZENE	5	0.13 U	3.3 U	2.6 U	0.13 U	130 U	0.52 U	0.585 U
CARBON DISULFIDE	NC	0.31 J	7 UJ	5.6 U	0.28 UJ	280 UJ	1.1 UJ	1.25 U
CARBON TETRACHLORIDE	5	0.26 U	6.5 U	5.2 U	0.26 U	260 U	1 U	1.15 U
CHLOROBENZENE	100	1.2	3.5 U	68	0.14 U	140 U	0.56 U	0.63 U
CHLOROFORM	80	0.17 J	3.3 U	2.6 U	0.13 U	130 U	0.68 J	0.695
CIS-1,2-DICHLOROETHENE	70	0.82 J	4 U	3.2 U	0.4 J	**180 J**	7.7	7.5
METHYL TERT-BUTYL ETHER	NC	0.07 U	1.8 U	1.4 U	0.07 U	70 U	3.7 J	3.6
TOLUENE	1000	0.14 U	3.5 U	2.8 U	0.14 U	140 U	0.56 U	0.63 U
TRANS-1,2-DICHLOROETHENE	100	0.19 U	4.8 U	3.8 U	0.19 U	190 U	0.76 U	0.855 U
TRICHLOROETHENE	5	**38**	**540**	10 U	**21**	**21000**	**86**	**88**
VINYL CHLORIDE	2	0.2 U	5 U	4 UJ	0.2 U	200 U	0.8 U	0.9 U
Metals (µg/L)								
ALUMINUM	NC	1000	420	280	4100	140	130	135
ANTIMONY	6	0.82 J	0.84 J	0.57 J	0.72 J	0.57 U	0.57 U	0.57 U
ARSENIC	10	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
BARIUM	2000	100	86	37	42	68	52	61
BERYLLIUM	4	**5.5**	1.5	1.5	**8**	3.1	1.6	1.6
CADMIUM	5	0.9 J	0.21 J	0.21 U	1	0.21 U	0.21 U	0.21 U
CALCIUM	NC	42000	31000	13000	73000	11000	19000	19000
CHROMIUM	100	2.3	2.5	1.4 J	6.1	0.98 U	1.4 J	1.35
COBALT	NC	79	32	20	54	48	30	30
COPPER	1300	23	7.8	20	32	15	20	19.5
IRON	NC	250	1700	1900	2900	260	2700	2700
LEAD	15	0.45 U	1.1	1.1	2.2	0.45 U	0.63 J	0.645
MAGNESIUM	NC	20000	8900	2600	40000	4900	2700	2700
Metals, continued (µg/L)								
MANGANESE	NC	200	120	120	200	94	160	160
NICKEL	NC	160	57	37	72	82	43	44
POTASSIUM	NC	24000	21000	22000	1500	17000	21000	21500
SELENIUM	50	3.5 J	0.89 U	0.89 U	17	0.89 U	0.89 U	0.89 U
SILVER	NC	0.053 U	0.053 U	0.11 J	0.053 U	0.053 U	0.056 J	0.0645
SODIUM	NC	160000	94000	34000	250000	35000	26000	26500
THALLIUM	2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VANADIUM	NC	1.5 J	3.3 J	2.6 J	2.1 J	0.86 J	3 J	2.9
ZINC	NC	200	85	82	200	120	76	75.5
Miscellaneous parameters (mg/L)								
ALKALINITY	NC	37	69	43	2.6 U	29	60	60.5
BROMIDE	NC	0.55	0.24 J	0.044 U	0.71	0.37 J	0.044 U	0.044 U
HARDNESS AS CACO3	NC	210	120	58	430	56	76	76
NITRITE/NITRATE-N	NC	0.14	0.22	0.17	0.049 J	0.86	0.3	0.305
SULFATE	NC	69	22	15	390	17	12	11.5
TOTAL DISSOLVED SOLIDS	NC	700	400	210	1200	190	190	195

Table 4-3

Comprehensive Groundwater Results, Blocks E and F
Lockheed Martin Middle River Complex, Middle River, Maryland

LOCATION	Federal Maximum Contaminant Levels (µg/L)	MRC-MW142B	MRC-MW143A	MRC-MW144B	MRC-MW145A	MRC-MW146B	MRC-MW147B	MRC-MW148A
SAMPLE ID		MRC-MW142B-020619-D	MRC-MW143A-012919	MRC-MW144B-020719	MRC-MW145A-021319	MRC-MW146B-020719	MRC-MW147B-020719	MRC-MW148A-021319
SAMPLE DATE		20190206	20190129	20190207	20190213	20190207	20190207	20190213
Volatile organic compounds (µg/L)								
1,1-DICHLOROETHANE	NC	0.85 U	28 U	24 U	0.17 U	0.17 U	34 U	0.17 U
1,2,3-TRICHLOROBENZENE	NC	2.7 UJ	90 UJ	77 UJ	0.54 U	0.54 UJ	110 UJ	0.54 U
1,2,4-TRICHLOROBENZENE	70	1.3 U	43 U	37 UJ	0.26 U	0.26 UJ	52 UJ	0.26 U
1,2-DICHLOROBENZENE	600	0.75 U	25 U	21 U	0.15 U	0.15 U	30 U	0.15 U
1,3-DICHLOROBENZENE	NC	0.75 U	25 U	21 U	0.15 U	0.15 U	30 U	0.15 U
1,4-DICHLOROBENZENE	75	0.8 U	27 U	23 U	0.16 U	0.16 U	32 U	0.16 U
2,2-DICHLOROPROPANE	NC	1.6 U	52 U	44 U	0.31 U	0.31 U	62 U	0.31 U
2-BUTANONE	NC	5.8 U	190 U	170 U	2.6 J	1.2 U	230 U	1.4 J
ACETONE	NC	27 U	900 U	770 U	5.4 U	5.4 U	1100 U	5.4 U
BENZENE	5	0.65 U	22 U	19 U	0.13 U	0.13 U	26 U	0.22 J
CARBON DISULFIDE	NC	1.4 UJ	47 UJ	40 UJ	0.28 U	0.28 U	56 UJ	0.28 U
CARBON TETRACHLORIDE	5	1.3 U	43 U	37 U	0.26 U	0.26 U	52 U	0.26 U
CHLOROBENZENE	100	0.7 U	23 U	20 U	0.14 U	0.14 U	28 U	0.14 U
CHLOROFORM	80	0.71 J	22 U	19 U	1.9	0.13 U	26 U	0.13 U
CIS-1,2-DICHLOROETHENE	70	7.3	47 J	54 J	0.38 J	4.6	33 J	0.29 J
METHYL TERT-BUTYL ETHER	NC	3.5 J	12 U	10 U	0.07 U	0.07 U	14 U	0.07 U
TOLUENE	1000	0.7 U	23 U	20 U	0.29 J	0.14 U	28 U	0.14 U
TRANS-1,2-DICHLOROETHENE	100	0.95 U	32 U	27 U	0.19 U	0.19 U	38 U	0.19 U
TRICHLOROETHENE	5	**90**	**3000**	**3600**	3	**20**	**3500**	1.1
VINYL CHLORIDE	2	1 U	33 U	29 U	0.2 U	0.2 U	40 U	0.2 U
Metals (µg/L)								
ALUMINUM	NC	140	3000	140	14000	3000	220	1200
ANTIMONY	6	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
ARSENIC	10	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
BARIUM	2000	70	130	60	87	130	63	80
BERYLLIUM	4	1.6	**17**	1.7	**44**	**22**	1.7	**5.7**
CADMIUM	5	0.21 U	1.2	0.21 U	1.9	1	0.21 U	1.3
CALCIUM	NC	19000	37000	14000	33000	18000	6400	32000
CHROMIUM	100	1.3 J	2.8	1.3 J	24	3.4	1.3 J	2
COBALT	NC	30	210	37	320	260	33	79
COPPER	1300	19	31	26	630	240	21 U	31
IRON	NC	2700	1500	2400	500	2500	2300	5600
LEAD	15	0.66 J	1.6	0.57 J	2.2	0.56 J	1.1	0.6 J
MAGNESIUM	NC	2700	32000	4300	38000	28000	4300	19000
Metals, continued (µg/L)								
MANGANESE	NC	160	270	140	660	600	180	510
NICKEL	NC	45	340	67	510	420	49	140
POTASSIUM	NC	22000	13000	16000	5100	3500	14000	48000
SELENIUM	50	0.89 U	10	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U
SILVER	NC	0.073 J	0.053 U	0.08 J	0.091 J	0.053 U	0.053 U	0.053 U
SODIUM	NC	27000	270000	34000	410000	190000	28000	180000
THALLIUM	2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VANADIUM	NC	2.8 J	0.82 U	1.1 J	0.82 U	0.82 U	0.85 J	0.84 J
ZINC	NC	75	460	90	1200	690	84	280
Miscellaneous parameters (mg/L)								
ALKALINITY	NC	61	12	44	2.6 U	2.6 U	27	31
BROMIDE	NC	0.044 U	0.46 J	0.28 J	0.32 J	0.13 J	0.79	0.3 J
HARDNESS AS CACO3	NC	76	250	62	290	200	46	190
NITRITE/NITRATE-N	NC	0.31	0.58	0.28	0.042 U	2.4	0.43	0.073 U
SULFATE	NC	11	93	15	110	160	11	130
TOTAL DISSOLVED SOLIDS	NC	200	990	190	1400	770	130	760

Table 4-3

Comprehensive Groundwater Results, Blocks E and F
Lockheed Martin Middle River Complex, Middle River, Maryland

LOCATION	Federal Maximum Contaminant Levels (µg/L)	MRC-MW149B	MRC-MW150B	MRC-MW151A	MRC-MW152B	MRC-MW153A	MRC-MW154A	MRC-MW155A
SAMPLE ID		MRC-MW149B-020819	MRC-MW150B-020819	MRC-MW151A-020419	MRC-MW152B-012919	MRC-MW153A-013019	MRC-MW154A-021319	MRC-MW155A-020519
SAMPLE DATE		20190208	20190208	20190204	20190129	20190130	20190213	20190205
Volatile organic compounds (µg/L)								
1,1-DICHLOROETHANE	NC	0.17 U	0.43 U	0.17 U	0.2 J	0.17 U	0.17 U	0.17 U
1,2,3-TRICHLOROBENZENE	NC	0.54 UJ	1.4 UJ	0.54 U	0.54 UJ	0.54 U	0.54 U	0.54 U
1,2,4-TRICHLOROBENZENE	70	0.26 UJ	0.65 UJ	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
1,2-DICHLOROBENZENE	600	0.15 U	0.38 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
1,3-DICHLOROBENZENE	NC	0.15 U	0.38 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
1,4-DICHLOROBENZENE	75	0.16 U	0.4 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
2,2-DICHLOROPROPANE	NC	0.31 U	0.78 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
2-BUTANONE	NC	1.2 U	2.9 U	1.2 U	1.2 U	1.2 U	1.2 UJ	1.2 U
ACETONE	NC	5.4 U	14 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U
BENZENE	5	0.13 U	0.33 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
CARBON DISULFIDE	NC	0.62 J	0.7 UJ	0.28 U	0.33 J	0.28 U	0.28 U	0.28 U
CARBON TETRACHLORIDE	5	0.26 U	0.65 U	0.26 U	0.55 J	0.26 U	0.26 U	0.26 U
CHLOROBENZENE	100	0.14 U	0.35 U	0.14 U	1.5	0.14 U	0.14 U	0.14 U
CHLOROFORM	80	0.16 J	0.33 U	0.13 U	0.52 J	0.13 U	0.13 U	0.13 U
CIS-1,2-DICHLOROETHENE	70	2.8	47	0.16 U	18	0.16 U	0.16 U	0.16 U
METHYL TERT-BUTYL ETHER	NC	0.07 U	0.18 U	0.07 U	2.9	0.07 U	0.07 U	0.07 U
TOLUENE	1000	0.14 U	0.35 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
TRANS-1,2-DICHLOROETHENE	100	0.19 U	0.48 U	0.19 U	0.37 J	0.19 U	0.19 U	0.19 U
TRICHLOROETHENE	5	4.3	**79**	0.28 U	**13**	0.38 U	0.1 U	0.15 J
VINYL CHLORIDE	2	0.2 U	1.8 J	0.2 U	0.2 U	0.2 UJ	0.2 U	0.2 U
Metals (µg/L)								
ALUMINUM	NC	1700	150	57	52	3600	1500	77
ANTIMONY	6	0.57 U	0.57 U	0.66 J	0.57 U	0.57 U	0.57 U	0.57 U
ARSENIC	10	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	1.3 J	0.75 U
BARIUM	2000	63	70	57	48	28	63	44
BERYLLIUM	4	**8.1**	1.3	1.7	0.51 J	**14**	0.58 J	0.64 J
CADMIUM	5	0.27 J	0.21 U	0.22 J	0.58 J	0.99 J	0.21 U	0.21 U
CALCIUM	NC	16000	7100	13000	9700	74000	17000	60000
CHROMIUM	100	2.8	1.4 J	0.98 U	0.98 U	2.6	7.7	1.4 J
COBALT	NC	33	20	24	44	190	9.1	0.49 J
COPPER	1300	84	36	170	1.7 U	110	17	35
IRON	NC	1600	1300	47 U	11000	680	4200	140 J
LEAD	15	0.45 U	0.45 U	0.45 U	0.45 U	0.63 J	1.6	0.45 U
MAGNESIUM	NC	8400	3400	3500	3500	35000	4200	14000
Metals, continued (µg/L)								
MANGANESE	NC	180	190	75	600	600	55	15
NICKEL	NC	63	20	34	59	190	18	2.2
POTASSIUM	NC	2800	4700	3900	3300	5300	8800	1600
SELENIUM	50	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U
SILVER	NC	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U	0.053 U
SODIUM	NC	170000	12000	38000	23000	10000	73000	100000
THALLIUM	2	0.2 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VANADIUM	NC	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	7	0.82 U
ZINC	NC	250	70	98	64	300	61	24
Miscellaneous parameters (mg/L)								
ALKALINITY	NC	2.6 U	9	22	44	2.6 U	81	150
BROMIDE	NC	0.097 J	0.08 J	0.044 U	0.044 U	0.044 U	0.094 J	0.14 J
HARDNESS AS CACO3	NC	100	40	52	64	400	74	250
NITRITE/NITRATE-N	NC	0.83	0.46	0.32	0.32	0.11	0.26	0.4
SULFATE	NC	51	21	57	20	370	29	34
TOTAL DISSOLVED SOLIDS	NC	710	120	200	150	570	250	550

Table 4-3

Comprehensive Groundwater Results, Blocks E and F
Lockheed Martin Middle River Complex, Middle River, Maryland

LOCATION SAMPLE ID SAMPLE DATE	Federal Maximum Contaminant Levels (µg/L)	MRC-MW156A MRC-MW156A-020719 20190207	MRC-MW157A MRC-MW157A-020519 20190205	MRC-MW158A MRC-MW158A-020619 20190206	MRC-MW159A MRC-MW159A-020519 20190205
Volatile organic compounds (µg/L)					
1,1-DICHLOROETHANE	NC	0.17 U	21 U	0.17 U	0.17 U
1,2,3-TRICHLOROBENZENE	NC	0.54 UJ	68 U	0.54 UJ	0.54 U
1,2,4-TRICHLOROBENZENE	70	0.26 UJ	33 U	0.26 U	0.26 U
1,2-DICHLOROBENZENE	600	0.15 U	19 U	0.15 U	0.15 U
1,3-DICHLOROBENZENE	NC	0.15 U	19 U	0.15 U	0.15 U
1,4-DICHLOROBENZENE	75	0.16 U	20 U	0.16 U	0.16 U
2,2-DICHLOROPROPANE	NC	0.31 U	57 J	0.31 U	0.31 U
2-BUTANONE	NC	1.2 U	150 U	1.2 U	1.2 U
ACETONE	NC	5.4 U	680 U	5.4 U	5.4 U
BENZENE	5	0.13 U	16 U	0.13 U	0.13 U
CARBON DISULFIDE	NC	0.28 U	35 U	0.28 UJ	0.28 U
CARBON TETRACHLORIDE	5	0.26 U	33 U	0.26 U	0.26 U
CHLOROBENZENE	100	0.14 U	18 U	0.14 U	0.14 U
CHLOROFORM	80	0.13 U	16 U	0.13 U	0.13 U
CIS-1,2-DICHLOROETHENE	70	0.16 U	**330**	0.31 J	0.16 U
METHYL TERT-BUTYL ETHER	NC	0.07 U	8.8 U	0.07 U	0.07 U
TOLUENE	1000	0.14 U	18 U	0.14 U	0.14 U
TRANS-1,2-DICHLOROETHENE	100	0.19 U	24 U	0.19 U	0.19 U
TRICHLOROETHENE	5	0.14 U	**2600**	1.3	0.17 J
VINYL CHLORIDE	2	0.2 U	25 U	0.2 U	0.2 U
Metals (µg/L)					
ALUMINUM	NC	87	310	380	150
ANTIMONY	6	0.57 U	0.57 U	0.66 J	1.8 J
ARSENIC	10	0.75 U	0.75 U	0.75 U	0.75 U
BARIUM	2000	23	62	77	60
BERYLLIUM	4	0.31 U	0.31 U	0.31 U	0.94 J
CADMIUM	5	0.21 U	0.21 U	0.21 U	0.21 U
CALCIUM	NC	110000	32000	180000	130000
CHROMIUM	100	1.1 J	1.3 J	2	0.98 U
COBALT	NC	0.7 J	5.1	1.6	5.6
COPPER	1300	2.1 U	13	13	4.7
IRON	NC	290	370	550	430
LEAD	15	0.45 U	0.49 J	0.45 U	0.45 U
MAGNESIUM	NC	30000	5900	41000	32000
Metals, continued (µg/L)					
MANGANESE	NC	46	96	120	150
NICKEL	NC	2.2	9.4	5.1	2.5
POTASSIUM	NC	11000	21000	18000	12000
SELENIUM	50	0.89 U	0.89 U	0.89 U	0.89 U
SILVER	NC	0.053 U	0.053 U	0.053 U	0.053 U
SODIUM	NC	20000	16000	52000	7900
THALLIUM	2	0.2 U	0.2 U	0.2 U	0.2 U
VANADIUM	NC	0.82 U	2.1 J	1.4 J	1.1 J
ZINC	NC	15 U	29	15 U	15 U
Miscellaneous parameters (mg/L)					
ALKALINITY	NC	280	94	290	210
BROMIDE	NC	0.044 U	0.044 U	0.044 U	0.044 U
HARDNESS AS CACO3	NC	440	130	720	540
NITRITE/NITRATE-N	NC	0.04 U	0.35	0.093 U	0.23
SULFATE	NC	190	68	380	190
TOTAL DISSOLVED SOLIDS	NC	570	240	980	660

Blue-shaded cells indicate that sample concentrations exceed federal MCLs.

J - estimated value
MCL - maximum contaminant levels
µg/L - micrograms per liter
mg/L - milligrams per liter
U - not detected

Table 4-4

Statistical Summary of Groundwater Results, Blocks E and F
Lockheed Martin Middle River Complex, Middle River, Maryland

Chemical	Frequency of Detection		Minimum Non-Detect Concentration	Maximum Non-Detect Concentration	Minimum Detected Concentration		Maximum Detected Concentration		Location of Maximum Detected Sample	Sample of Maximum Detected Sample	Mean of Positive Detects	Mean of All Samples	Standard Deviation
	Number	Percent											
Volatile organic compounds (µg/L)													
1,1-DICHLOROETHANE	1/23	4	0.17	170	0.2	J	0.2	J	MRC-MW152B	MRC-MW152B-012919	0.2	6.271847	17.9232698
1,2,3-TRICHLOROBENZENE	1/23	4	0.54	540	59		59		MRC-MW139B	MRC-MW139B-013019	59	22.356739	57.4556407
1,2,4-TRICHLOROBENZENE	2/23	9	0.26	260	0.27	J	290		MRC-MW139B	MRC-MW139B-013019	145.135	22.113478	64.4969714
1,2-DICHLOROBENZENE	1/23	4	0.15	150	11	J	11	J	MRC-MW139B	MRC-MW139B-013019	11	5.955543	15.834102
1,3-DICHLOROBENZENE	2/23	9	0.15	150	0.15	J	65		MRC-MW139B	MRC-MW139B-013019	32.575	8.30663	20.0551548
1,4-DICHLOROBENZENE	2/23	9	0.16	160	0.19	J	42		MRC-MW139B	MRC-MW139B-013019	21.095	7.686521	18.4389518
2,2-DICHLOROPROPANE	1/23	4	0.31	310	57	J	57	J	MRC-MW157A	MRC-MW157A-020519	57	13.09826	34.0286085
2-BUTANONE	2/23	9	1.2	1200	1.4	J	2.6	J	MRC-MW145A	MRC-MW145A-021319	2	43.967391	126.311732
ACETONE	1/23	4	5.4	5400	8.5	J	8.5	J	MRC-MW137A	MRC-MW137A-012919	8.5	200.5587	569.767453
BENZENE	1/23	4	0.13	130	0.22	J	0.22	J	MRC-MW148A	MRC-MW148A-021319	0.22	4.824891	13.7153669
CARBON DISULFIDE	3/23	13	0.28	280	0.31	J	0.62	J	MRC-MW149B	MRC-MW149B-020819	0.42	10.394565	29.5256648
CARBON TETRACHLORIDE	1/23	4	0.26	260	0.55	J	0.55	J	MRC-MW152B	MRC-MW152B-012919	0.55	9.63	27.4177135
CHLOROBENZENE	3/23	13	0.14	140	1.2		68		MRC-MW139B	MRC-MW139B-013019	23.566666	8.186086	19.6548799
CHLOROFORM	5/23	22	0.13	130	0.16	J	1.9		MRC-MW145A	MRC-MW145A-021319	0.689	4.943913	13.6780806
CIS-1,2-DICHLOROETHENE	15/23	65	0.16	4	0.29	J	330		MRC-MW157A	MRC-MW157A-020519	48.406666	31.746956	75.9662044
METHYL TERT-BUTYL ETHE	2/23	9	0.07	70	2.9		3.7	J	MRC-MW142B	MRC-MW142B-020619	3.25	2.871521	7.34662684
TOLUENE	1/23	4	0.14	140	0.29	J	0.29	J	MRC-MW145A	MRC-MW145A-021319	0.29	5.188695	14.7637936
TRANS-1,2-DICHLOROETHE	1/23	4	0.19	190	0.37	J	0.37	J	MRC-MW152B	MRC-MW152B-012919	0.37	7.04663	20.0409236
TRICHLOROETHENE	18/23	78	0.1	10	0.15	J	21000		MRC-MW141B	MRC-MW141B-020619	1917.1678	1500.6291	4423.51503
VINYL CHLORIDE	1/23	4	0.2	200	1.8	J	1.8	J	MRC-MW150B	MRC-MW150B-020819	1.8	7.463043	21.0751373
Metals (µg/L)													
ALUMINUM	23/23	100	NULL	NULL	52		14000		MRC-MW145A	MRC-MW145A-021319	1552.087	1552.087	2989.44488
ANTIMONY	7/23	30	0.57	0.57	0.57	J	1.8	J	MRC-MW159A	MRC-MW159A-020519	0.867142	0.462173	0.35156735
ARSENIC	1/23	4	0.75	0.75	1.3	J	1.3	J	MRC-MW154A	MRC-MW154A-021319	1.3	0.415217	0.19287583
BARIUM	23/23	100	NULL	NULL	23		130		MRC-MW143A, MRC-MW146B	MRC-MW143A-012919, MRC-MW146B-020719	66.913043	66.913043	27.1743747
BERYLLIUM	20/23	87	0.31	0.31	0.51	J	44		MRC-MW145A	MRC-MW145A-021319	7.0535	6.153695	10.1250779
CADMIUM	11/23	48	0.21	0.21	0.21	J	1.9		MRC-MW145A	MRC-MW145A-021319	0.87	0.470869	0.52504037
CALCIUM	23/23	100	NULL	NULL	6400		180000		MRC-MW158A	MRC-MW158A-020619	42530.435	42530.435	44468.1647
CHROMIUM	19/23	83	0.98	0.98	1.1	J	24		MRC-MW145A	MRC-MW145A-021319	3.618421	3.074347	4.87850464
COBALT	23/23	100	NULL	NULL	0.49	J	320		MRC-MW145A	MRC-MW145A-021319	66.764782	66.764782	89.011015
COPPER	20/23	87	1.7	21	4.7		630		MRC-MW145A	MRC-MW145A-021319	77.9	68.27826	135.484161
IRON	22/23	96	47	47	140	J	11000		MRC-MW152B	MRC-MW152B-012919	2048.6364	1960.587	2423.00831
LEAD	13/23	57	0.45	0.45	0.49	J	2.2		MRC-MW145A, MRC-MW140A	MRC-MW145A-021319, MRC-MW140A-012919	1.107307	0.723695	0.63753292
MAGNESIUM	23/23	100	NULL	NULL	2600		41000		MRC-MW158A	MRC-MW158A-020619	16765.217	16765.217	14282.3034
MANGANESE	23/23	100	NULL	NULL	15		660		MRC-MW145A	MRC-MW145A-021319	233.95652	233.95652	203.438952
NICKEL	23/23	100	NULL	NULL	2.2		510		MRC-MW145A	MRC-MW145A-021319	103.62609	103.62609	138.372009

Table 4-4

Statistical Summary of Groundwater Results, Blocks E and F
Lockheed Martin Middle River Complex, Middle River, Maryland

Chemical	Frequency of Detection		Minimum Non-Detect Concentration	Maximum Non-Detect Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Location of Maximum Detected Sample	Sample of Maximum Detected Sample	Mean of Positive Detects	Mean of All Samples	Standard Deviation
	Number	Percent									
Metals, continued (µg/L)											
POTASSIUM	23/23	100	NULL	NULL	1500	48000	MRC-MW148A	MRC-MW148A-021319	13000	13000	10712.9488
SELENIUM	3/23	13	0.89	0.89	3.5 J	17	MRC-MW140A	MRC-MW140A-012919	10.166666	1.713043	3.91800382
SILVER	4/23	17	0.053	0.053	0.056 J	0.11 J	MRC-MW139B	MRC-MW139B-013019	0.086375	0.036913	0.02425698
SODIUM	23/23	100	NULL	NULL	7900	410000	MRC-MW145A	MRC-MW145A-021319	97104.348	97104.348	105411.49
THALLIUM	1/23	4	0.2	0.2	0.2 J	0.2 J	MRC-MW149B	MRC-MW149B-020819	0.2	0.104347	0.02085144
VANADIUM	13/23	57	0.82	0.82	0.84 J	7	MRC-MW154A	MRC-MW154A-021319	2.126923	1.380434	1.51552415
ZINC	20/23	87	15	15	24	1200	MRC-MW145A	MRC-MW145A-021319	223.125	195	272.791712
Miscellaneous parameters (mg/L)											
ALKALINITY	18/23	78	2.6	2.6	9	290	MRC-MW158A	MRC-MW158A-020619	85.138888	66.913043	85.3542154
BROMIDE	14/23	61	0.044	0.044	0.08 J	0.79	MRC-MW147B	MRC-MW147B-020719	0.325785	0.206913	0.2324183
HARDNESS as $CaCO_3$	23/23	100	NULL	NULL	40	720	MRC-MW158A	MRC-MW158A-020619	208.6087	208.6087	184.675081
NITRITE/NITRATE-N	19/23	83	0.04	0.093	0.049 J	2.4	MRC-MW146B	MRC-MW146B-020719	0.458631	0.38426	0.4963624
SULFATE	23/23	100	NULL	NULL	11	390	MRC-MW140A	MRC-MW140A-012919	106.67391	106.67391	121.85569
TOTAL DISSOLVED SOLIDS	23/23	100	NULL	NULL	120	1400	MRC-MW145A	MRC-MW145A-021319	527.6087	527.6087	370.42319

For non-detects, 1/2 sample quantitation limit was used as a proxy concentration to caluclate statistics.

$CaCO_3$ - calcium carbonate
J - detected result is estimated
µg/L - micrograms per liter
mg/L - milligrams per liter
NULL - value does not exist due to 100% detections
U - not detected

Associated Samples:

MRC-MW137A-012919	MRC-MW144B-020719	MRC-MW152B-012919
MRC-MW138B-020619	MRC-MW145A-021319	MRC-MW153A-013019
MRC-MW139B-013019	MRC-MW146B-020719	MRC-MW154A-021319
MRC-MW140A-012919	MRC-MW147B-020719	MRC-MW155A-020519
MRC-MW141B-020619	MRC-MW148A-021319	MRC-MW156A-020719
MRC-MW142B-020619	MRC-MW149B-020819	MRC-MW157A-020519
MRC-MW142B-020619-D	MRC-MW150B-020819	MRC-MW158A-020619
MRC-MW143A-012919	MRC-MW151A-020419	MRC-MW159A-020519

APPENDICES

Appendix A—Dig Permit, Utility Clearance

Appendix B—Boring Logs; Exploratory Borings

Appendix C—Boring Logs; Well Installation

Appendix D—Log Sheets; Soil, Groundwater, Development, Static Water Level, Calibration

Appendix E—Precision Survey Report

Appendix F—Investigation Derived Waste Disposal Documentation

Appendix G—Full Laboratory Data Reports

Appendix H—Validated Data Reports

APPENDIX A—DIG PERMIT, UTILITY CLEARANCE

LOCKHEED MARTIN

Dig Permit

See Enterprise Operations Procedure EO-28, Digging Projects, for instructions.

Date	Project Manager
December 13, 2018	Tom Blackman (Lockheed Martin EESH) Mike Martin (Tetra Tech)

Building/Location

Tax Block E (Lot D) and Tax Block F (waterfront lot)

Purpose of work:

Monitoring well installation via Geoprobe drilling method, 23 wells will be installed in Block E and Block F, including the area west of the water tower in Block E and parallel to the Block F bulkhead south of Block E.

Company/LM organization performing dig

Tetra Tech overseeing GroundZero (drilling contractor)

Planned dig date	Duration	Start time
January 2nd, 2019	Maximum of two weeks	0700
Expected depth	**Width**	**Length**
No more than 30 feet bgs	6 inches maximum	23 total borings

Underground utilities identified?	Overhead utilities?	Electrical lines?	Gas lines?
☒ Yes ☐ No	☐ Yes ☒ No ☐ N/A	☐ Yes ☒ No	☐ Yes ☒ No
Sewer?	**Water?**	**Telecommunications?**	**Other? Specify:**
☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No ☐ N/A	☐ Yes ☒ No

Site-specific or customer utility locating requirements completed?

☒ Yes ☐ No ☐ N/A

Sketch of dig project (or attach drawing)

See Attached

A private utility locating contractor (Rettew) was used to mark subsurface utilities. Confirmation letter and report attached.

Miss Utility Ticket #s 18839501 and 18839617

The boring locations are shown on Figure 2 (attached).

Project Manager	Date	Customer – Security	Date
Michael Martin Michael Martin	December 13, 2018		12/18/18
Telecommunications	**Date**	**Customer**	**Date**
	12-18		
ESH	**Date**	**Customer**	**Date**
	12/18/18		12-19-18
Building/Facility Manager			**Date**
			12-18-18

LOCKHEED MARTIN

Risk Handling Checklist

Project Manager: Use this checklist to develop risk handling plans before the dig starts. You must also review Enterprise Operations Procedure EO-28, Digging Projects.

General Questions	☒	What Lockheed Martin processes could be affected by the dig? **No Lockheed Martin processes or operations are expected to be impacted as all work will be conducted outside the secured area in Tax Block F (waterfront lot) and E (Lot D). Tetra Tech will work with Lockheed Martin and their tenants to minimize potential impacts, if present.**
	☒	What are the safety hazards? **Utilities, slips/trips/falls, vehicle traffic, drill rig equipment, pinch points**
	☒	What could fail? **Mechanical components on Geoprobe Rig.**
	☒	How could it fail? **A component of the Geoprobe rig could potentially fail. An inspection of the equipment will be conducted on arrival at the site and daily to ensure proper working condition. Approved Health and Safety Plan in place (reviewed by corporate EESH)**
	☒	Does the area need to be returned to its normal state when the work is complete? **Yes, well pads will be installed where well installation occurs, otherwise holes will be grouted to surface.**
	☐	How could the dig affect operations/test/production? **No operations will be affected, work has been conducted in these areas many times without any impact to facility operations.**
	☐	Have potential risks been addressed with area management? **No risks identified**
	☒	Am I comfortable with any risk handling plans, understanding the potential impact? **Yes**
Traffic Control	☒	Ensure proper signage and communication. **Existing security fencing separates roads from proposed work areas.**
	☒	Coordinate road or access closures through Industrial Security before starting the dig. **Existing fencing separates roads from proposed work areas.**
	☒	Ensure the work area is isolated from foot traffic by placing barriers and warning lights as required by EO-28.
	☒	Ensure that vehicle traffic will be safe. **Access to Chesapeake Park Plaza will proceed with caution.**
	☒	Ensure that product transport will be safe. **Access to Chesapeake Park Plaza will proceed with caution.**
Excavation	☒	Review facility drawings to identify utilities. Research old drawings as necessary. **Available site engineering and utility maps were reviewed.**
	☒	Discuss the project with Facility Engineering/Maintenance staff that may have unique knowledge about the construction area not documented in facility drawings. **Work has been completed in this area many times in the past. All third party utility clearance was completed.**
	☒	Process form EO-28-1, Dig Permit. Use this opportunity to explain the process and relate expectations to the contractor/LM organization that will perform the dig.
	☒	Have LM Telecommunications and the local utility identification service locate and mark utilities/underground obstacles.
	☒	Coordinate with other ongoing projects in the affected area. **N/A**
	☒	Make every effort not to excavate around live utilities in service. Schedule an outage in advance or have Maintenance temporarily shut down and isolate the utilities while excavating. **Underground utilities marked by Miss Utility and private utility locating service, no utilities other than storm drains and out of service water lines formerly servicing buildings in Block E. All utilities will be avoided.**
	☐	If live utilities cannot be shut down while excavating, know where to isolate or shut them down if they are damaged while excavating.**N/A**
	☐	Have a spotter(s) work with the equipment operator. Hand dig when necessary. **N/A**
	☐	Excavate along the side of the utility; not on top. **N/A**
	☐	Weather may affect the dig. Ensure water pipes are protected during freezing weather, especially if the trench will be left open over night. Rain may cause the side of the trench to slough, which can undermine and break pipes/conduit. **N/A**
	☐	Ensure care when moving trench boxes in and out of trenches so pipes/conduit aren't damaged by the boxes. **N/A**
	☒	Ensure surface drainage is controlled so that water doesn't get into the excavation and undermine soil supporting utilities. **Protections will be incorporated as necessary to protect storm drain piping and outlets.**
	☒	Ensure stocked material is kept far enough back (minimum 2 feet) so that material and rocks don't fall on utilities in the open hole. **No materials will be stockpiled on site.**
	☒	Ensure backfilling is done carefully: Re-bed utilities with proper material, filling all voids below. Keep inappropriate material from falling on or being placed in the trench. Be careful when compacting backfill in the two feet directly above the utility. **Site restoration consisting of well pad installation and grouting will be completed when each boring is done.**
	☐	Keeps the as-built utility drawing in the field while the excavation site is open. Take pictures if possible (horizontal alignment and elevations), if known utilities deviate from facility drawings or if utilities are found that are not on facility drawings. Give the modified as-built drawings to the Building/Facility Manager, who will update the drawing database.
	☒	Ensure that the equipment operator digs slowly and remains in control. **All site activities will be monitored by Tetra Tech.**

Personal Safety	☐ Ensure that trenching and shoring methods comply with the applicable OSHA regulations and are overseen by a "Competent Person," as defined in those regulations. **NA**	
	☒ Regularly inspect methods to prevent violations. **All construction is monitored by Tetra Tech, all personnel have stop work authority.**	
	☒ Ensure LM employees do not dig or enter any excavation that is more than four feet deep. **All work is being completed by Tetra Tech and its subcontractors.**	
Project Manager signature indicating completion of checklist review Michael Martin 		Date December 13, 2018



Map Document (P:\GIS\Middle_River\MapDocs\MXD\block_ef_detail_plume_samplocs_oct2018.mxd)
10/16/18 – JEE

GEOPHYSICS
JOB COMPLETION REPORT

RETTEW | ENVIROSCAN

TO: Mike Martin – Tetra Tech

FROM: Bill Steinhart, RETTEW Field Services. (RFS)

CC: Felicia Bechtel (RAI)

DATE: 12/19/2018

CLIENT: Tetra Tech	PROJECT LOCATION: Blocks E and F Middle River, MD.
PROJECT NO: 019872013	
PROJECT NAME: Middle River	
TECHNICIAN: Bill Steinhart	

UTILITIES LOCATED:	**EQUIPMENT:**
• **Electric Lines** • **Piping Trench**	☒ EM Locator (RD8000/Metrotech) ☒ Ground Penetrating Radar (GPR) ☒ Fisher TW-6 (metal detector) ☒ C.A.T. Passive Locator ☐ Acoustic Leak Detector ☐ Magnetometer ☐ Integrity Assessment Camera ☐ Traceable Rodder ☐ Concrete GPR

SCOPE OF WORK

RETTEW completed a subsurface utility survey to mark-out utilities within 22 proposed soil boring locations in Blocks E and F of the Middle River Complex (**Figure 1**).

METHODOLOGIES

RETTEW first traced all utilities with visible surface features (i.e. manhole covers, valves, utility poles, hydrants) utilizing the EM locator. RETTEW then searched the survey area for unknown utilities with the GPR, M-scope, and passive utility locator.

RESULTS/CONCLUSIONS

On December 14, 2018, Bill Steinhart arrived on-site and identified the survey boundaries and performed a visual scan for surface features related to utilities. Some paint markings from previous subsurface utility surveys within the streets were faded, but visible. The electric lines were located with the EM locator. The piping trenches were located with GPR. The passive locator was used to find the live power lines associated with those manholes.

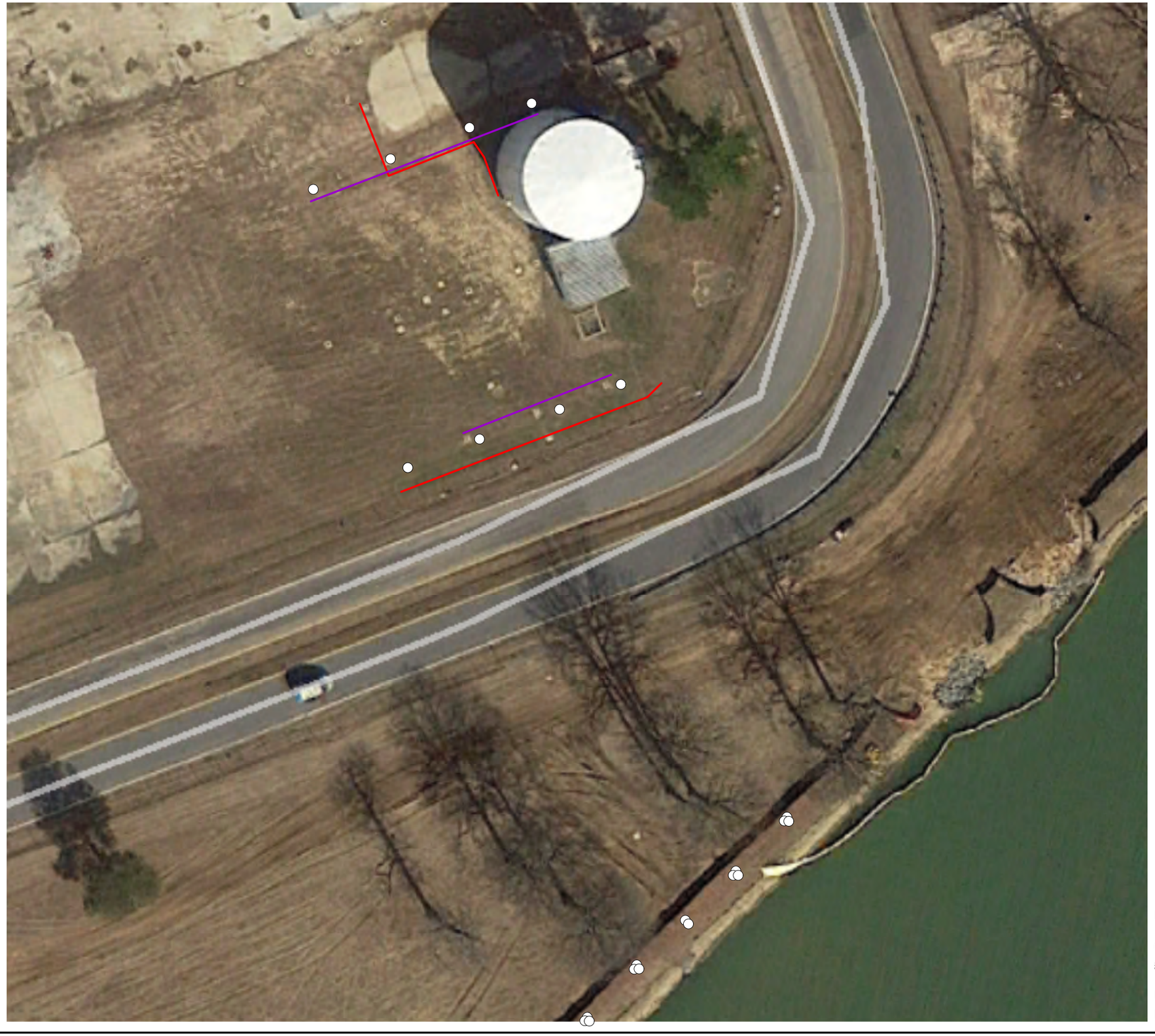
The work was completed on December 14, 2018 and RETTEW photo-documented the survey locations and findings before demobilizing from the site.

ATTACHMENTS: **Figure 1** – Geophysical Survey Data Coverage Map, Blocks E and F.

RETTEW, strives to provide quality and accurate locating services to all of its customers, but due to the nature of underground facilities, RETTEW will not be held liable for any damaged facilities. All customers are advised that they are required to follow their state's One-Call-Law before beginning excavation. The marks placed during this investigation are temporary markings for utility mapping purposes. The marks are not intended, nor should they be used for construction; legal and/or recommended construction tolerance zones associated with the identified utilities were not marked by RETTEW. Prior to construction activities, RETTEW should be contacted for remarking of the utilities and construction tolerance zones.

RETTEW, will not guarantee the longevity of utility markings, due to activities on site that may destroy, or otherwise alter, the markings that were placed on the ground by RETTEW, if the marks have been altered or destroyed, the customer is advised to contact RETTEW for remarkings. Any electronically determined depths provided to the client are estimates only and due to limitations equipment cannot be guaranteed. Client acknowledges that due to the limitations of the equipment used, safe exposure and measurements are the only methods which can precisely determine location and depth of structures marked.

PREPARED BY:	RECEIVED BY:
Bill Steinhart – Senior Geophysicist	
	
(Name and Title)	(Name and Title)



Scale (ft)

0 40 80

N

- Electric Line
- Piping Trench
- Boring Location

Notes:

Coordinates in MD State Plane Grid, NAD-83 geodetic datum.

Basemap site features modified from drawings provided previously by RETTEW, Inc. and current survey.

SURVEY DATE:	12/14/2018
RETTEW No.:	019872013
REVISION DATE:	
DRAWN BY:	WES
DATE:	012/19/2018
SCALE:	1" = 40'
FIGURE NO.	1 of 1

ENVIROSCAN

RETTEW℠

RETTEW Associates, Inc.
3020 Columbia Avenue, Lancaster, PA 17603
Phone (717) 394-3721 Fax (717) 394-1063

Figure 1: Boring Location Survey Results Blocks E and F

Middle River Complex

MIDDLE RIVER

BALTIMORE COUNTY, MD

Miss Utility

Ticket No:	19001063
	STANDARD Update
Update of:	18839501
Update Counter:	1
Original Call Date:	01/02/19 09:06 am
Op / Rev Op:	webusr2 / mdazure
Response Due By:	01/04/19 11:59 pm
Release Time:	01/02/19 09:06 am
Expiration Date:	01/18/19 23:59 pm

CALLER INFORMATION

Company Name:	TETRA TECH, INC
Fax Phone:	
Contact Name:	JOSHUA MULLIS
Phone:	410-279-2700
Caller Address:	20251 CENTURY BLVD SUITE 200 GERMANTOWN,MD 20874
Email Address:	josh.mullis@tetratech.com
Job Site Contact:	JOSH MULLIS
Phone:	410-279-2700

DIG SITE INFORMATION

Type of Work:	SOIL BORING INSTALLATION IN GRASS ON LOCKHEED MARTIN PROPERTY
Work Being Done For:	LOCKHEED MARTIN
Explosives:	N
Permit:	
MDOT Permit:	
Job Number:	

DIG SITE LOCATION

State:	MD
County:	BALTIMORE
Place:	MIDDLE RIVER
Subdivision:	
Address:	

Street: MARTIN BLVD
Intersecting Street: DARK HEAD COVE RD
Extent of Work: DIRECTIONS: FROM THE INTER PROVIDED TRAVEL S ON MARTIN BLVD FOR APPROX 880FT TO LOCATE THE PROPERTY ON THE N SIDE OF THE RD NO MORE THAN 250FT OFF OF THE RD

MARK THE ENTIRE LOCATION OF THE POLYGON

Remarks:
Map Coord NW Lat: 39.3275295
Lon: -76.4280912
SE Lat: 39.3270398
Lon: -76.4276835

MEMBERS NOTIFIED

District	Company Name	Marking Concerns	Damage	Customer Service	Status
BGEBA	BGE ELECTRIC-USIC	800-778-9140	800-685-0123	800-685-0123	Clear/No conflict
BGEBAG	BGE GAS-USIC	800-778-9140	800-685-0123	800-685-0123	Clear/No conflict
CBW04	BALTIMORE CITY DPW - Pro Comm	443-456-6686			Marked
CWMD2	COMCAST/UTILIQUEST	410-536-0070	877-359-1821	888-739-1379	Clear/No conflict (Response by Utiliquest)
MAA02	MD AVIATION ADMIN/OCCLS	410-712-0202			Clear/No conflict
TDEX01	TERRADEX	650-227-3254	650-227-3254	650-227-3254	Clear/No conflict

Legend: Locate Polygon

Lat/Lon


Chesapeake Park Plaza
Chesapeake Park Plaza
Chesapeake Park Plaza
Chesapeake Park Plaza
Chesapeake Park Plaza
Google
5 m
Map data ©2019 Google
Report a map error

Miss Utility

Ticket No:	19001068
	STANDARD Update
Update of:	18839617
Update Counter:	1
Original Call Date:	01/02/19 09:06 am
Op / Rev Op:	webusr2 / mdazure
Response Due By:	01/04/19 11:59 pm
Release Time:	01/02/19 09:07 am
Expiration Date:	01/18/19 23:59 pm

CALLER INFORMATION

Company Name:	TETRA TECH, INC
Fax Phone:	
Contact Name:	JOSHUA MULLIS
Phone:	410-279-2700
Caller Address:	20251 CENTURY BLVD SUITE 200 GERMANTOWN,MD 20874
Email Address:	josh.mullis@tetratech.com
Job Site Contact:	JOSH MULLIS
Phone:	410-279-2700

DIG SITE INFORMATION

Type of Work:	SOIL BORINGS ALONG BULKHEAD NEAR DARK HEAD COVE
Work Being Done For:	LOCKHEED MARTIN
Explosives:	N
Permit:	
MDOT Permit:	
Job Number:	

DIG SITE LOCATION

State:	MD
County:	BALTIMORE
Place:	MIDDLE RIVER
Subdivision:	
Address:	

Street: MARTIN BLVD
Intersecting Street: DARK HEAD COVE ROAD
Extent of Work: DIRECTIONS: FROM THE INTER PROVIDED TRAVEL S ON MARTIN BLVD FOR APPROX 880FT TO LOCATE THE PROPERTY ON THE S SIDE OF THE RD NO MORE THAN 250FT OFF OF THE RD

MARK THE ENTIRE LOCATION OF THE POLYGON. BORINGS ARE LOCATED 10 FEET FROM WATERS EDGE

Remarks:
Map Coord NW Lat: 39.3268429
Lon: -76.4275542
SE Lat: 39.3265142
Lon: -76.4271519

MEMBERS NOTIFIED

District	Company Name	Marking Concerns	Damage	Customer Service	Status
BGEBA	BGE ELECTRIC-USIC	800-778-9140	800-685-0123	800-685-0123	Clear/No conflict
BGEBAG	BGE GAS-USIC	800-778-9140	800-685-0123	800-685-0123	Clear/No conflict
CBW04	BALTIMORE CITY DPW - Pro Comm	443-456-6686			Clear/No conflict
CWMD2	COMCAST/UTILIQUEST	410-536-0070	877-359-1821	888-739-1379	Clear/No conflict (Response by Utiliquest)
MAA02	MD AVIATION ADMIN/OCCLS	410-712-0202			Clear/No conflict
TDEX01	TERRADEX	650-227-3254	650-227-3254	650-227-3254	Clear/No conflict

Legend: Locate Polygon

Lat/Lon

39.326814 -76.426700


Chesapeake Park
Google
5 m
Map data ©2019 Google
Report a map error

APPENDIX B—BORING LOGS; EXPLORATORY BORINGS

BORING NUMBER MRC-MW-139

Tetra Tech Inc

CLIENT Lockheed Martin Corporation **PROJECT NAME** BLOCK E/F MASS DISCHARGE WELL INSTALL

PROJECT NUMBER 112IC08784 **PROJECT LOCATION** MIDDLE RIVER, MARYLAND

DATE STARTED 1/3/19 **COMPLETED** 1/3/19 **GROUND ELEVATION** _____ **HOLE SIZE** 3 inches

DRILLING CONTRACTOR Ground Zero **DRILLING METHOD** DPT

NOTES Exploratory coring location for well cluster 137, 138, 139 **LOGGED BY** J. Mullis

NORTHING 605012.095257611 ft **EASTING** 1474263.53591387 ft **DATUM:** MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0	OL		0.5 brown/gray soft silty OM, rootlets, moist	PID = 4.7
	SC		purple/orange/white low plastic fine silty sandy CLAY, sl moist	
5			7.0	
	SC		red/maroon to purple w/light red low plastic clayey SAND, moist	PID = 0.6
10				PID = 6.4
15			15.0	
	SW		16.0 pink/purple loose medium SAND, wet	
	SC		red w/gold/yellow stiff sandy CLAY, sl moist	PID = 10.9
20			20.0	
	NR		sand sloughed into core	
			23.0	
	SC		yellow to pink/red v low plastic clayey SAND, medium sand, wet	PID = 22.1
25			25.0	
	NR		sand sloughed into core	
			27.0	
	SC		pink/brown v low plastic medium sandy CLAY, moist to wet	
			29.0	
30	SW		light yellow 29-29.5, red/maroon 29.5-32, loose to soft medium SAND w/trace clay, sl moist	PID = 13.6
			32.0	
	CL		yellow w/white/pink/red stiff silty CLAY, sl moist	PID = 27.9
35			35.0	

Bottom of borehole at 35.0 feet.

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BORING NUMBER MRC-MW-142

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/3/19 **COMPLETED** 1/3/19
GROUND ELEVATION **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Exploratory coring location for well cluster 140, 141, 142
LOGGED BY J. Mullis
NORTHING 605033.189007611 ft **EASTING** 1474283.5879972 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0	OL		1.0 brown/gray soft silty OM, rootlets, moist	
	SC		tan/brown low plastic clayey SAND, moist, fine	PID = 0.2
			3.0	
	CL		orange/brown w/white friable silty CLAY w/trace sand and pebbles, dry	
5			5.0	
	SC		6.0 dark gray to black low plastic sandy CLAY, moist, fine	PID = 0.8
	SC		pink/red low plastic clayey SAND, moist, fine	
			8.0	
	CL		9.0 dark red w/pink/white/yellow stiff silty sandy CLAY, v sl moist	PID = 2.4
10	SC		pink/purple low plastic clayey SAND, moist, medium sand	
			13.5	PID = 252
15	SW		red to pink w/tan loose to v low plast SAND w/trace clay, moist, medium sand	PID = 321
20				PID = 61.2
25			25.0	
	NR		sand sloughed into core	
			29.0	
30	SW		red loose well sorted medium SAND, sl moist	PID = 38.2
			33.0	
	CL		34.0 red/maroon/purple stiff silty CLAY w/trace sand, sl moist	PID = 8.9
35	CL		35.0 gold to purple stiff silty CLAY w/trace sand, v sl moist	

Bottom of borehole at 35.0 feet.

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BORING NUMBER MRC-MW-147

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/3/19 **COMPLETED** 1/3/19
GROUND ELEVATION **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Exploratory coring location for well cluster 145, 146, 147
LOGGED BY J. Mullis
NORTHING 605070.949424277 ft **EASTING** 1474323.56195553 ft **DATUM:** MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0	OL		0.4 brown/gray soft silty OM, rootlets, moist	PID = 0.6
	CL		dark red w/white 0.4-8', pinkish 8-9', stiff silty CLAY w/trace sand, v sl moist	
5				
			9.0	
10	SC		9.5 pinkish purple low plastic clayey SAND, moist, fine	PID = 0.1
	SC		10.0 dark red low plastic sandy CLAY, v sl moist, fine sand	
	SW		red loose medium well sorted SAND, wet	
			12.5	
	SC		13.5 red to brown low plastic sandy CLAY, sl moist, fine	PID = 62.2
15	SW		tan/brown loose well sorted medium SAND, moist	
			15.0 pink/light red loose well sorted medium SAND, wet	
	SW			PID = 105.3
20			20.0	
			pink/tan/red loose well sorted medium SAND, wet, coarse sand 24.5-25'	
				PID = 81.8
25	SW			
			29.0	
30	SW		29.2 dark red/maroon loose very fine SAND, sl moist	PID = 134.5
	SC		30.0 dark red w/gold/yellow low plastic sandy CLAY, sl moist	
	NR		sand sloughed into core	
			33.0	
	CL		red w/purple/white/yellow stiff silty CLAY w/trace very fine sand, sl moist	PID = 160.2
35			35.0	

Bottom of borehole at 35.0 feet.

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BORING NUMBER MRC-MW-150

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/3/19 **COMPLETED** 1/3/19
GROUND ELEVATION **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Exploratory coring location for well cluster 148, 149, 150
LOGGED BY J. Mullis
NORTHING 605092.694215944 ft **EASTING** 1474344.00466387 ft **DATUM:** MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0	OL		0.3 brown/gray soft silty OM, rootlets, moist	PID = 0.6
	SM		1.0 tan/gray low plastic silty SAND, very fine, moist	
	SC		dark red w/white mottled stiff sandy CLAY, v fine sand, v sl moist	
5			5.0	
	SC		5.4 tan/brown w/dark gray medium plastic clayey SAND, moist	
	SC		red w/white stiff sandy CLAY, moist, fine	
			9.0	
10	SC		10.0 pink to dark red low plastic clayey SAND, moist	PID = 0.6
	SC		reddish brown high plastic clayey SAND, wet, fine	
			11.7	
	SC		12.2 red to pinkish red stiff sandy CLAY, v sl moist	
	SM		13.4 pinkish red v low plast silty SAND w/trace clay, medium, wet	
	SW		13.6 dark red/maroon loose very fine SAND, sl moist	
15			pinkish tan loose well sorted medium SAND, wet	PID = 1.1
	SW			
20			20.0	
	SW		dark red 20-21', pinkish red to gray/pink 21-25', loose medium SAND, wet	PID = 1.8
25			25.0	
	SW		pinkish red loose well sorted medium SAND, wet	
			29.0	
30	CL		29.8 brown to yellowish gray medium plastic silty CLAY w/ some sand, sl moist	PID = 7.5
	SW		30.0 maroon loose fine SAND, v sl moist	
	NR		sand sloughed into core	
			33.0	
	CL		dark red w/purple/gold/yellow/white/brown stiff silty CLAY w/trace sand, v sl moist	PID = 24.1
35			35.0	

Bottom of borehole at 35.0 feet.

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WELL NUMBER MRC-MW-152B

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/8/19 **COMPLETED** 1/10/19
GROUND ELEVATION 9.88 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES
LOGGED BY J. Mullis
NORTHING 605231.797 ft **EASTING** 1474190.282 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0	OL		0.4 brown/gray soft silty OM, rootlets, moist	9.5	
	SM		tan to white v low plast silty SAND fill material, moist, WG		
			2.3	7.6	
	SM		3.0 black to dark gray v low plastic sandy SILT, sl moist	6.9	PID = 0
	SM		brown to tan loose silty SAND, sl moist		
5			4.6	5.3	
	CL		tan stiff silty CLAY w/trace sand, v sl moist		PID = 0.1
			9.0	0.9	
10	CL		reddish brown stiff silty CLAY w/trace sand, sl moist		
			11.5	-1.6	
	SC		purple/pink/white/yellow low plastic to loose clayey SAND, moist to wet		PID = 1.8
			14.0	-4.1	
15			reddish/maroon stiff CLAY w/silt, v sl moist		
	CL				PID = 1.1
20			20.0	-10.1	
	SM		tan/medium 20-21', tan/purple/fine 21-22.6, white/purple/maroon/medium loose SAND, wet, WG		PID = 0.8
			23.7	-13.8	
	SC		24.3 dark red/purple stiff sandy CLAY, sl moist	-14.4	PID = 0.7
25	SM		25.0 maroon/dark red soft silty SAND, medium, sl moist to moist	-15.1	
			red/purple/pink loose medium SAND, wet, PG		PID = 145
	SW				
30			30.0	-20.1	

Bottom of borehole at 30.0 feet.

WELL DIAGRAM

Casing Top Elev: 9.63 (ft)
Casing Type: 2" PVC

- STEEL FLUSHMOUNT W/CONCRETE PAD
- Bentonite Chips
- #1 Silica Filter Pack 2-inch dia.,10 feet; prepacked 10-slot manufactured continuous slot PVC well screen
- Bottom Cap

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WELL NUMBER MRC-MW-154A

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/8/19 **COMPLETED** 1/8/19
GROUND ELEVATION 8.81 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES
LOGGED BY J. Mullis
NORTHING 605249.364 ft **EASTING** 1474239.675 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	VOC Soil Sample Collected	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA	WELL DIAGRAM
0		OL		0.4 brown/gray soft silty OM, rootlets, moist	8.4	PID = 0.4	Casing Top Elev: 8.52 (ft) Casing Type: 2" PVC
		SM		tan low plastic sandy SILT, fine, moist			STEEL FLUSHMOUNT W/CONCRETE PAD Bentonite Chips
				3.0	5.8		
		SC		tan w/white low plastic sandy silty CLAY, sl moist			
5				5.0	3.8		
		SC		tan/white stiff silty sandy CLAY, sl moist			#1 Silica Filter Pack 2-inch dia.,5 feet; prepacked 10-slot manufactured continuous slot PVC well screen Bottom Cap
				9.0	-0.2		
	9-10(ft)			red/maroon w/tan stiff silty CLAY, sl moist		PID = 0.7	
10						PID = 0.6	
	10-12(ft)	CL					
	12-13(ft)					PID = 0.9	
				13.0	-4.2		
		SW		purple/tan/gold/white loose SAND, medium, wet, PG			
15				15.0	-6.2		

Bottom of borehole at 15.0 feet.

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WELL NUMBER MRC-MW-155A

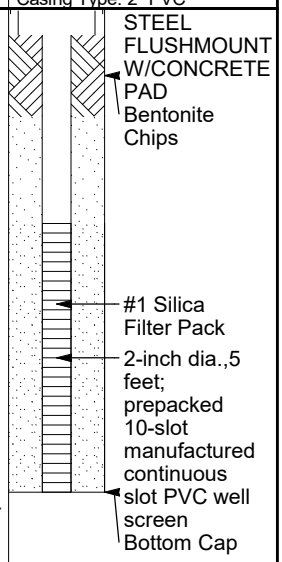
Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/8/19 **COMPLETED** 1/8/19
GROUND ELEVATION 8.73 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES
LOGGED BY J. Mullis
NORTHING 605265.323 ft **EASTING** 1474278.067 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	VOC Soil Sample Collected	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0		OL		0.5 brown/gray soft silty OM, rootlets, moist	8.2	PID = 0.2
		SM		tan/orange v low plastic to loose silty SAND, medium, sl moist		
				4.0	4.7	
		SC		tan/orange low plastic sandy CLAY, sl moist, fine sand		
5				5.0	3.7	
		SC		tan/orange v low plastic clayey SAND, very moist, fine sand		
				6.0	2.7	
		SC		red/brown stiff sandy CLAY, sl moist		
				8.0	0.7	
	8-9(ft)	CL		red w/white stiff silty CLAY, v sl moist		PID = 0.5
						PID = 12.4
10	9-11(ft)			10.0	-1.3	
		CL		purple to red/white stiff silty CLAY, v sl moist		
	11-12(ft)					PID = 22.5
				12.0	-3.3	
		SW		purple/white/tan/dark red loose SAND w/trace clay, very moist to wet, fine sand PG		
15						
20				20.0	-11.3	

Bottom of borehole at 20.0 feet.

WELL DIAGRAM



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WELL NUMBER MRC-MW-156A

Tetra Tech Inc

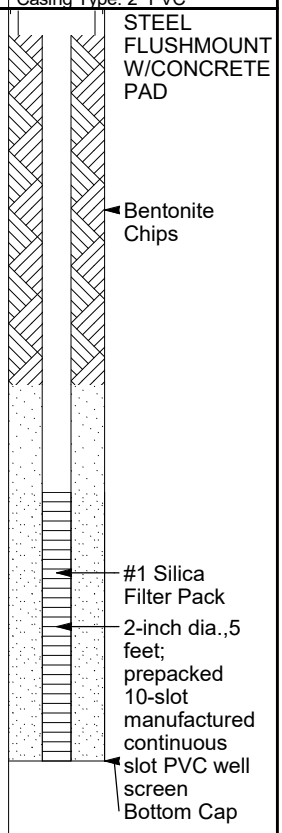
CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/8/19 **COMPLETED** 1/8/19
GROUND ELEVATION 11.85 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES no distinct A/B boundary seen, therefore no VOC samples collected
LOGGED BY J. Mullis
NORTHING 605342.875 ft **EASTING** 1474152.594 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0	OL		0.3 brown/gray soft silty OM, rootlets, moist	11.6	PID = 0.5
	GW		white loose sandy GRAVEL, fill material, sl moist		
			3.0	8.9	
	CL		dark tan low plastic silty CLAY, sl moist		
			4.0	7.9	
	SW		tan loose medium SAND, PG, sl moist		
5			5.0	6.9	
			red w/white mottled stiff to low plastic sandy CLAY, sl moist		PID = 1.6
	SC				
10					PID = 0.5
			13.0	-1.2	
			tan/purple/white stiff silty CLAY, v sl moist		
15	CL				PID = 1.5
			18.0	-6.2	
	SC		tan/red/white/purple loose to v low plastic clayey SAND, v fine, moist		
20			20.0	-8.2	

Bottom of borehole at 20.0 feet.

WELL DIAGRAM

Casing Top Elev: 11.59 (ft)
Casing Type: 2" PVC



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WELL NUMBER MRC-MW-158A

Tetra Tech Inc

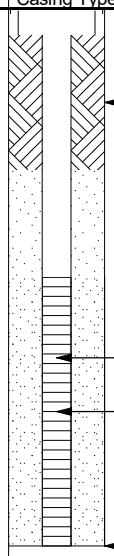
CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/8/19 **COMPLETED** 1/10/19
GROUND ELEVATION 11.93 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES
LOGGED BY J. Mullis
NORTHING 605368.552 ft **EASTING** 1474216.976 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	VOC Soil Sample Collected	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0		OL		0.3 brown/gray soft silty OM, rootlets, moist	11.6	PID = 0.4
		GW		white loose sandy GRAVEL, fill material, sl moist		
				3.0	8.9	
		CL		tan med plastic silty CLAY, moist		
				4.0	7.9	
5		SP		tan loose medium to coarse SAND, moist, well graded		PID = 0.5
				9.0	2.9	
10	9-10(ft)	CL		red/purple stiff silty CLAY, v sl moist		PID = 1
	10-11(ft)					PID = 2.2
	11-12(ft)					PID = 2.2
						PID = 3.8
				13.0	-1.1	
		SM		purple/white/tan/pink v low plastic silty SAND, moist		
				14.5	-2.6	
15		SC		15.0 dark red stiff sandy CLAY, v sl moist	-3.1	
		SP		red/purple loose SAND, poorly sorted, wet		PID = 2.4
				19.0	-7.1	
		SC		red/purple/pink v low plastic clayey SAND, very moist		
20				20.0	-8.1	

Bottom of borehole at 20.0 feet.

WELL DIAGRAM

Casing Top Elev: 11.57 (ft)
Casing Type: 2" PVC



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APPENDIX C—BORING LOGS; WELL INSTALLATION

WELL NUMBER MRC-MW-137A

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/4/19 **COMPLETED** 1/4/19
GROUND ELEVATION 4.77 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Lithology collected from exploratory core MW-139
LOGGED BY J. Mullis
NORTHING 605016.005 ft **EASTING** 1474260.902 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
0.0					Casing Top Elev: 4.49 (ft) Casing Type: 2" PVC
	OL		brown/gray soft silty OM, rootlets, moist	PID = 4.7	STEEL FLUSHMOUNT W/CONCRETE PAD
0.5			4.3		
			purple/orange/white low plastic fine silty sandy CLAY, sl moist		Bentonite Chips
2.5					
	SC				
5.0					
					#1 Silica Filter Pack
7.0			-2.2		
			red/maroon to purple w/light red low plastic clayey SAND, moist	PID = 0.6	
7.5					2-inch dia.,5 feet; prepacked 10-slot manufactured continuous slot PVC well screen
	SC				
10.0			10.0 -5.2		Bottom Cap

Bottom of borehole at 10.0 feet.

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WELL NUMBER MRC-MW-138B

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/4/19 **COMPLETED** 1/4/19
GROUND ELEVATION 4.76 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Lithology collected from exploratory core MW-139
LOGGED BY J. Mullis
NORTHING 605018.079 ft **EASTING** 1474262.578 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
0	OL		0.5 brown/gray soft silty OM, rootlets, moist 4.3	PID = 4.7	Casing Top Elev: 4.52 (ft) Casing Type: 2" PVC STEEL FLUSHMOUNT W/CONCRETE PAD
	SC		purple/orange/white low plastic fine silty sandy CLAY, sl moist		
5					Bentonite Chips
			7.0 -2.2		
			red/maroon to purple w/light red low plastic clayey SAND, moist	PID = 0.6	
10				PID = 6.4	
	SC				
					#1 Silica Filter Pack
15					2-inch dia.,5 feet; prepacked 10-slot manufactured continuous slot PVC well screen
			15.0 -10.2		
	SW		pink/purple loose medium SAND, wet		
			16.0 -11.2		
	SC		red w/gold/yellow stiff sandy CLAY, sl moist	PID = 10.9	
			17.0 -12.2		Bottom Cap

Bottom of borehole at 17.0 feet.

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WELL NUMBER MRC-MW-139B

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/4/19 **COMPLETED** 1/4/19
GROUND ELEVATION 4.97 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Lithology collected from exploratory core MW-139
LOGGED BY J. Mullis
NORTHING 605024.316 ft **EASTING** 1474262.447 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA	WELL DIAGRAM
0						Casing Top Elev: 4.69 (ft) Casing Type: 2" PVC
	OL		0.5 brown/gray soft silty OM, rootlets, moist	4.5	PID = 4.7	STEEL FLUSHMOUNT W/CONCRETE PAD
	SC		purple/orange/white low plastic fine silty sandy CLAY, sl moist			
5			7.0	-2.0	PID = 0.6	
			red/maroon to purple w/light red low plastic clayey SAND, moist			
10					PID = 6.4	Bentonite Chips
	SC					
15			15.0	-10.0		
	SW		pink/purple loose medium SAND, wet			
			16.0	-11.0	PID = 10.9	
	SC		red w/gold/yellow stiff sandy CLAY, sl moist			
20			20.0	-15.0		
	NR		sand sloughed into core			
			23.0	-18.0		#1 Silica Filter Pack 2-inch dia.,5 feet; prepacked 10-slot manufactured continuous slot PVC well screen Bottom Cap
	SC		yellow to pink/red v low plastic clayey SAND, medium sand, wet		PID = 22.1	
25			25.0	-20.0		
	CL		yellow w/white/pink/red stiff silty CLAY, sl moist			
			26.0	-21.0		

Bottom of borehole at 26.0 feet.

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WELL NUMBER MRC-MW-140A

Tetra Tech Inc

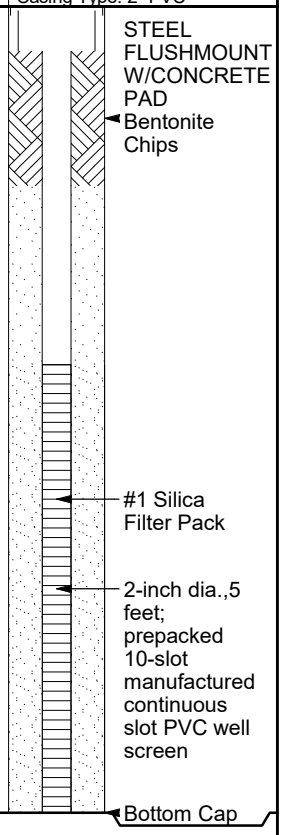
CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/4/19 **COMPLETED** 1/4/19
GROUND ELEVATION 4.98 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Lithology collected from exploratory core MW-142
LOGGED BY J. Mullis
NORTHING 605035.613 ft **EASTING** 1474281.496 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0.0					
	OL		brown/gray soft silty OM, rootlets, moist		PID = 4.7
1.0				4.0	
	SC		tan/brown low plastic clayey SAND, moist, fine		
2.5					
3.0				2.0	
	CL		orange/brown w/white friable silty CLAY w/trace sand and pebbles, dry		
5.0				0.0	
	SC		dark gray to black low plastic sandy CLAY, moist, fine		
6.0				-1.0	
	SC		pink/red low plastic clayey SAND, moist, fine		PID = 0.6
7.5					
8.0				-3.0	
	CL		dark red w/pink/white/yellow stiff silty sandy CLAY, v sl moist		
9.0				-4.0	

Bottom of borehole at 9.0 feet.

WELL DIAGRAM

Casing Top Elev: 4.74 (ft)
Casing Type: 2" PVC



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WELL NUMBER MRC-MW-141B

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/4/19 **COMPLETED** 1/4/19
GROUND ELEVATION 5.04 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Lithology collected from exploratory core MW-142
LOGGED BY J. Mullis
NORTHING 605037.304 ft **EASTING** 1474283.469 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA
0	OL		brown/gray soft silty OM, rootlets, moist	
1.0				4.0
	SC		tan/brown low plastic clayey SAND, moist, fine	PID = 0.2
3.0				2.0
	CL		orange/brown w/white friable silty CLAY w/trace sand and pebbles, dry	
5				
5.0				0.0
	SC		dark gray to black low plastic sandy CLAY, moist, fine	PID = 0.8
6.0				-1.0
	SC		pink/red low plastic clayey SAND, moist, fine	
8.0				-3.0
	CL		dark red w/pink/white/yellow stiff silty sandy CLAY, v sl moist	PID = 2.4
9.0				-4.0
10	SC		pink/purple low plastic clayey SAND, moist, medium sand	
13.5				-8.5
	SW		red to pink w/tan loose to v low plast SAND w/trace clay, moist, medium sand	PID = 252 PID = 321
15				
17.0				-12.0

Bottom of borehole at 17.0 feet.

WELL DIAGRAM

Casing Top Elev: 4.71 (ft)
Casing Type: 2" PVC

- STEEL FLUSHMOUNT W/CONCRETE PAD
- Bentonite Chips
- #1 Silica Filter Pack
- 2-inch dia.,5 feet; prepacked 10-slot manufactured continuous slot PVC well screen
- Bottom Cap

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WELL NUMBER MRC-MW-142B

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/4/19 **COMPLETED** 1/4/19
GROUND ELEVATION 5.05 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Lithology collected from exploratory core MW-142
LOGGED BY J. Mullis
NORTHING 605038.971 ft **EASTING** 1474285.417 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0	OL		brown/gray soft silty OM, rootlets, moist		
1.0				4.1	
	SC		tan/brown low plastic clayey SAND, moist, fine		PID = 0.2
3.0				2.1	
	CL		orange/brown w/white friable silty CLAY w/trace sand and pebbles, dry		
5.0				0.1	
	SC		dark gray to black low plastic sandy CLAY, moist, fine		PID = 0.8
6.0				-1.0	
	SC		pink/red low plastic clayey SAND, moist, fine		
8.0				-3.0	
	CL		dark red w/pink/white/yellow stiff silty sandy CLAY, v sl moist		PID = 2.4
9.0				-4.0	
	SC		pink/purple low plastic clayey SAND, moist, medium sand		
13.5				-8.5	PID = 252
	SW		red to pink w/tan loose to v low plast SAND w/trace clay, moist, medium sand		PID = 321
					PID = 61.2
25.5				-20.5	
26.0	CL		red/maroon/purple stiff silty CLAY w/trace sand, sl moist	-21.0	

Bottom of borehole at 26.0 feet.

WELL DIAGRAM

Casing Top Elev: 4.62 (ft)
Casing Type: 2" PVC

- STEEL FLUSHMOUNT W/CONCRETE PAD
- Bentonite Chips
- #1 Silica Filter Pack
- 2-inch dia.,5 feet; prepacked 10-slot manufactured continuous slot PVC well screen
- Bottom Cap

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WELL NUMBER MRC-MW-143A

Tetra Tech Inc

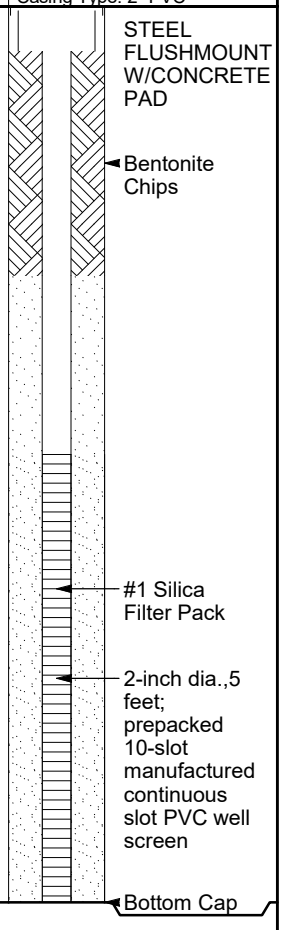
CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/7/19 **COMPLETED** 1/7/19
GROUND ELEVATION 5.38 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES
LOGGED BY J. Mullis
NORTHING 605054.490 ft **EASTING** 1474302.360 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0.0	OL		brown/gray soft silty OM, rootlets, moist		PID = 4.7
1.0				4.4	
	SC		tan/brown low plastic clayey SAND, moist, fine		
2.5					
3.0				2.4	
	CL		orange/brown w/white friable silty CLAY w/trace sand and pebbles, dry		
5.0				0.4	
	SC		dark gray to black low plastic sandy CLAY, moist, fine		
6.0				-0.6	
	SC		pink/red low plastic clayey SAND, moist, fine		PID = 0.6
7.5					
8.0				-2.6	
	CL		dark red w/pink/white/yellow stiff silty sandy CLAY, v sl moist		
10.0				-4.6	

Bottom of borehole at 10.0 feet.

WELL DIAGRAM

Casing Top Elev: 5.08 (ft)
Casing Type: 2" PVC



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WELL NUMBER MRC-MW-144B

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/7/19 **COMPLETED** 1/7/19
GROUND ELEVATION 5.32 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES
LOGGED BY J. Mullis
NORTHING 605056.183 ft **EASTING** 1474304.333 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0	OL		brown/gray soft silty OM, rootlets, moist		
1.0				4.3	
	SC		tan/brown low plastic clayey SAND, moist, fine		PID = 0.2
3.0				2.3	
	CL		orange/brown w/white friable silty CLAY w/trace sand and pebbles, dry		
5					
5.0				0.3	
	SC		dark gray to black low plastic sandy CLAY, moist, fine		PID = 0.8
6.0				-0.7	
	SC		pink/red low plastic clayey SAND, moist, fine		
8.0				-2.7	
	CL		dark red w/pink/white/yellow stiff silty sandy CLAY, v sl moist		PID = 2.4
9.0				-3.7	
10	SC		pink/purple low plastic clayey SAND, moist, medium sand		
13.5				-8.2	PID = 252
15	SW		red to pink w/tan loose to v low plast SAND w/trace clay, moist, medium sand		PID = 321
17.0				-11.7	

Bottom of borehole at 17.0 feet.

WELL DIAGRAM

Casing Top Elev: 5.13 (ft)
Casing Type: 2" PVC

- STEEL FLUSHMOUNT W/CONCRETE PAD
- Bentonite Chips
- #1 Silica Filter Pack
- 2-inch dia.,5 feet; prepacked 10-slot manufactured continuous slot PVC well screen
- Bottom Cap

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WELL NUMBER MRC-MW-145A

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/7/19 **COMPLETED** 1/7/19
GROUND ELEVATION 5.63 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Lithology collected from exploratory core MW-147
LOGGED BY J. Mullis
NORTHING 605074.081 ft **EASTING** 1474321.123 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
0.0					Casing Top Elev: 5.37 (ft) Casing Type: 2" PVC
	OL		0.4 brown/gray soft silty OM, rootlets, moist 5.2	PID = 0.6	STEEL FLUSHMOUNT W/CONCRETE PAD
	CL		dark red w/white 0.4-8', pinkish 8-9', stiff silty CLAY w/trace sand, v sl moist		Bentonite Chips
2.5					
5.0					
7.5					#1 Silica Filter Pack
					2-inch dia.,5 feet; prepacked 10-slot manufactured continuous slot PVC well screen
			9.0 -3.4		
	SC		pinkish purple low plastic clayey SAND, moist, fine	PID = 0.1	
			9.5 -3.9		
10.0	CL		dark red low plastic sandy CLAY, v sl moist, fine sand 10.0 -4.4		Bottom Cap

Bottom of borehole at 10.0 feet.

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WELL NUMBER MRC-MW-146B

Tetra Tech Inc

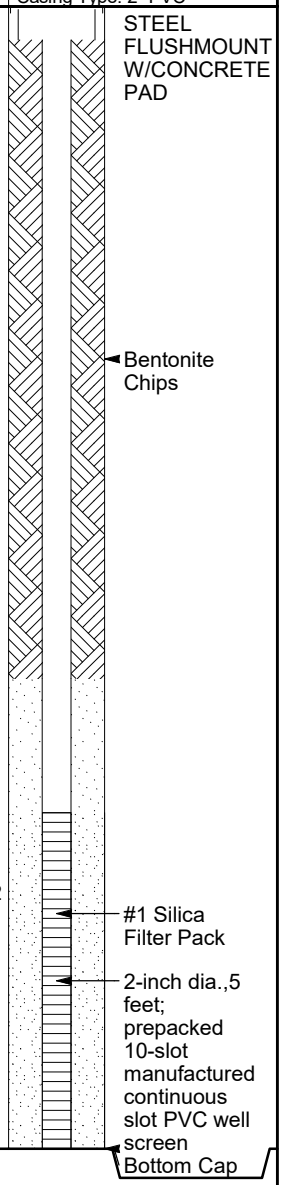
CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/7/19 **COMPLETED** 1/7/19
GROUND ELEVATION 5.62 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Lithology collected from exploratory core MW-147
LOGGED BY J. Mullis
NORTHING 605076.220 ft **EASTING** 1474322.862 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0	OL		0.4 brown/gray soft silty OM, rootlets, moist	5.2	PID = 0.6
	CL		dark red w/white 0.4-8', pinkish 8-9', stiff silty CLAY w/trace sand, v sl moist		
5					
			9.0	-3.4	
	SC		9.5 pinkish purple low plastic clayey SAND, moist, fine	-3.9	PID = 0.1
10	SC		10.0 dark red low plastic sandy CLAY, v sl moist, fine sand	-4.4	
	SW		red loose medium well sorted SAND, wet		
			12.5	-6.9	
	SC		red to brown low plastic sandy CLAY, sl moist, fine		
			13.5	-7.9	PID = 62.2
	SW		tan/brown loose well sorted medium SAND, moist		
15			15.0	-9.4	
	SW		pink/light red loose well sorted medium SAND, wet		
			17.0	-11.4	

Bottom of borehole at 17.0 feet.

WELL DIAGRAM

Casing Top Elev: 5.42 (ft)
Casing Type: 2" PVC



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WELL NUMBER MRC-MW-147B

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/7/19 **COMPLETED** 1/7/19
GROUND ELEVATION 5.30 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Lithology collected from exploratory core MW-147
LOGGED BY J. Mullis
NORTHING 605078.424 ft **EASTING** 1474324.844 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	ENVIRONMENTAL DATA	WELL DIAGRAM
0	OL		0.4 brown/gray soft silty OM, rootlets, moist 4.9	PID = 0.6	Casing Top Elev: 5.08 (ft) Casing Type: 2" PVC STEEL FLUSHMOUNT W/CONCRETE PAD
	CL		dark red w/white 0.4-8', pinkish 8-9', stiff silty CLAY w/trace sand, v sl moist		
5					
			9.0 -3.7		
	SC		9.5 pinkish purple low plastic clayey SAND, moist, fine -4.2	PID = 0.1	
10	SC		10.0 dark red low plastic sandy CLAY, v sl moist, fine sand -4.7		Bentonite Chips
	SW		red loose medium well sorted SAND, wet		
			12.5 -7.2		
	SC		red to brown low plastic sandy CLAY, sl moist, fine		
	SW		13.5 -8.2 tan/brown loose well sorted medium SAND, moist	PID = 62.2	
15			15.0 -9.7		
	SW		pink/light red loose well sorted medium SAND, wet	PID = 105.3	
20			20.0 -14.7		
	SW		pink/tan/red loose well sorted medium SAND, wet, coarse sand 24.5-25'	PID = 81.8	#1 Silica Filter Pack 2-inch dia.,5 feet; prepacked 10-slot manufactured continuous slot PVC well screen Bottom Cap
25			26.0 -20.7		
			Bottom of borehole at 26.0 feet.		

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WELL NUMBER MRC-MW-148A

Tetra Tech Inc

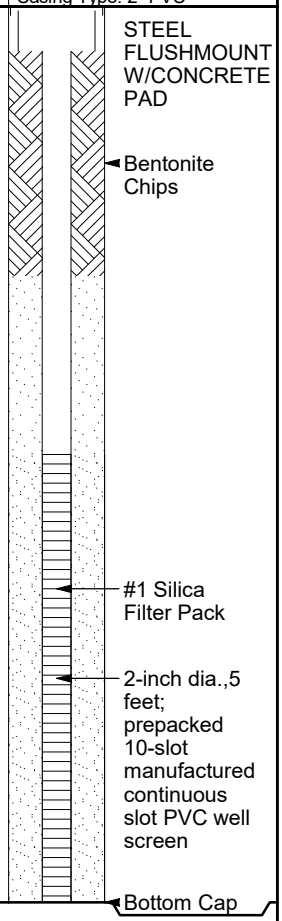
CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/7/19 **COMPLETED** 1/7/19
GROUND ELEVATION 5.22 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Lithology collected from exploratory core MW-150
LOGGED BY J. Mullis
NORTHING 605095.916 ft **EASTING** 1474343.411 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0.0	OL		0.3 brown/gray soft silty OM, rootlets, moist	4.9	PID = 0.6
	SM		tan/gray low plastic silty SAND, very fine, moist		
			1.0	4.2	
			dark red w/white mottled stiff sandy CLAY, v fine sand, v sl moist		
2.5	SC				
5.0			5.0	0.2	
	SC		5.4 tan/brown w/dark gray medium plastic clayey SAND, moist	-0.2	
			red w/white stiff sandy CLAY, moist, fine		
7.5	SC				
			9.0	-3.8	
	SC		pink to dark red low plastic clayey SAND, moist		PID = 0.6
10.0			10.0	-4.8	

Bottom of borehole at 10.0 feet.

WELL DIAGRAM

Casing Top Elev: 5.15 (ft)
Casing Type: 2" PVC



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WELL NUMBER MRC-MW-149B

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/7/19 **COMPLETED** 1/7/19
GROUND ELEVATION 5.39 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Lithology collected from exploratory core MW-150
LOGGED BY J. Mullis
NORTHING 605098.399 ft **EASTING** 1474345.312 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0	OL		0.3 brown/gray soft silty OM, rootlets, moist	5.1	PID = 0.6
	SM		1.0 tan/gray low plastic silty SAND, very fine, moist	4.4	
	SC		dark red w/white mottled stiff sandy CLAY, v fine sand, v sl moist		
5			5.0	0.4	
	SC		5.4 tan/brown w/dark gray medium plastic clayey SAND, moist	0.0	
	SC		red w/white stiff sandy CLAY, moist, fine		
			9.0	-3.6	
	SC		pink to dark red low plastic clayey SAND, moist		PID = 0.6
10			10.0	-4.6	
	SC		reddish brown high plastic clayey SAND, wet, fine		
			11.7	-6.3	
	SC		12.2 red to pinkish red stiff sandy CLAY, v sl moist	-6.8	
	SM		pinkish red v low plast silty SAND w/trace clay, medium, wet		
			13.4	-8.0	
	SW		13.6 dark red/maroon loose very fine SAND, sl moist	-8.2	
15			pinkish tan loose well sorted medium SAND, wet		
	SW				PID = 1.1
			17.0	-11.6	

Bottom of borehole at 17.0 feet.

WELL DIAGRAM

Casing Top Elev: 5.17 (ft)
Casing Type: 2" PVC

- STEEL FLUSHMOUNT W/CONCRETE PAD
- Bentonite Chips
- #1 Silica Filter Pack
- 2-inch dia.,5 feet; prepacked 10-slot manufactured continuous slot PVC well screen
- Bottom Cap

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WELL NUMBER MRC-MW-150B

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/7/19 **COMPLETED** 1/7/19
GROUND ELEVATION 5.36 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES Lithology collected from exploratory core MW-150
LOGGED BY J. Mullis
NORTHING 605100.813 ft **EASTING** 1474347.634 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA	WELL DIAGRAM
0						Casing Top Elev: 5.09 (ft) Casing Type: 2" PVC
	OL		0.3 brown/gray soft silty OM, rootlets, moist	5.1	PID = 0.6	STEEL FLUSHMOUNT W/CONCRETE PAD
	SM		1.0 tan/gray low plastic silty SAND, very fine, moist	4.4		
	SC		dark red w/white mottled stiff sandy CLAY, v fine sand, v sl moist			
5			5.0	0.4		
	SC		5.4 tan/brown w/dark gray medium plastic clayey SAND, moist	0.0		
	SC		red w/white stiff sandy CLAY, moist, fine			
			9.0	-3.6		
	SC		pink to dark red low plastic clayey SAND, moist		PID = 0.6	Bentonite Chips
10			10.0	-4.6		
	SC		reddish brown high plastic clayey SAND, wet, fine			
			11.7	-6.3		
	SC		12.2 red to pinkish red stiff sandy CLAY, v sl moist	-6.8		
	SM		pinkish red v low plast silty SAND w/trace clay, medium, wet			
			13.4	-8.0		
	SW		13.6 dark red/maroon loose very fine SAND, sl moist	-8.2		
15			pinkish tan loose well sorted medium SAND, wet		PID = 1.1	
	SW					
20			20.0	-14.6		
			dark red 20-21', pinkish red to gray/pink 21-25', loose medium SAND, wet		PID = 1.8	
	SW					#1 Silica Filter Pack 2-inch dia.,5 feet; prepacked 10-slot manufactured continuous slot PVC well screen Bottom Cap
25			25.0	-19.6		

Bottom of borehole at 25.0 feet.

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WELL NUMBER MRC-MW-151A

Tetra Tech Inc

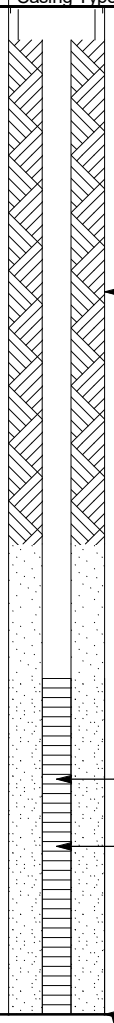
CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/10/19 **COMPLETED** 1/10/19
GROUND ELEVATION 9.82 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES
LOGGED BY J. Mullis
NORTHING 605230.724 ft **EASTING** 1474188.730 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0	OL		0.4 brown/gray soft silty OM, rootlets, moist	9.4	
	SM		tan to white v low plast silty SAND fill material, moist, WG		
			2.3	7.5	
	SM		black to dark gray v low plastic sandy SILT, sl moist		PID = 0
			3.0	6.8	
	SM		brown to tan loose silty SAND, sl moist		
			4.6	5.2	
5	CL		tan stiff silty CLAY w/trace sand, v sl moist		PID = 0.1
			9.0	0.8	
10	CL		reddish brown stiff silty CLAY w/trace sand, sl moist		
			11.5	-1.7	
	SC		purple/pink/white/yellow low plastic to loose clayey SAND, moist to wet		PID = 1.8
			14.0	-4.2	
15	CL		reddish/maroon stiff CLAY w/silt, v sl moist		
			15.0	-5.2	

Bottom of borehole at 15.0 feet.

WELL DIAGRAM

Casing Top Elev: 9.48 (ft)
Casing Type: 2" PVC



STEEL FLUSHMOUNT W/CONCRETE PAD

Bentonite Chips

#1 Silica Filter Pack

2-inch dia.,5 feet; prepacked 10-slot manufactured continuous slot PVC well screen

Bottom Cap

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WELL NUMBER MRC-MW-152B

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/8/19 **COMPLETED** 1/10/19
GROUND ELEVATION 9.88 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES
LOGGED BY J. Mullis
NORTHING 605231.797 ft **EASTING** 1474190.282 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0	OL		0.4 brown/gray soft silty OM, rootlets, moist	9.5	
	SM		tan to white v low plast silty SAND fill material, moist, WG		
			2.3	7.6	
	SM		3.0 black to dark gray v low plastic sandy SILT, sl moist	6.9	PID = 0
	SM		brown to tan loose silty SAND, sl moist		
5			4.6	5.3	
	CL		tan stiff silty CLAY w/trace sand, v sl moist		PID = 0.1
			9.0	0.9	
10	CL		reddish brown stiff silty CLAY w/trace sand, sl moist		
			11.5	-1.6	
	SC		purple/pink/white/yellow low plastic to loose clayey SAND, moist to wet		PID = 1.8
			14.0	-4.1	
15	CL		reddish/maroon stiff CLAY w/silt, v sl moist		PID = 1.1
20			20.0	-10.1	
	SM		tan/medium 20-21', tan/purple/fine 21-22.6, white/purple/maroon/medium loose SAND, wet, WG		PID = 0.8
			23.7	-13.8	
	SC		24.3 dark red/purple stiff sandy CLAY, sl moist	-14.4	PID = 0.7
25	SM		25.0 maroon/dark red soft silty SAND, medium, sl moist to moist	-15.1	
	SW		red/purple/pink loose medium SAND, wet, PG		PID = 145
30			30.0	-20.1	

Bottom of borehole at 30.0 feet.

WELL DIAGRAM

Casing Top Elev: 9.63 (ft)
Casing Type: 2" PVC

- STEEL FLUSHMOUNT W/CONCRETE PAD
- Bentonite Chips
- #1 Silica Filter Pack
- 2-inch dia.,10 feet; prepacked 10-slot manufactured continuous slot PVC well screen
- Bottom Cap

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WELL NUMBER MRC-MW-153A

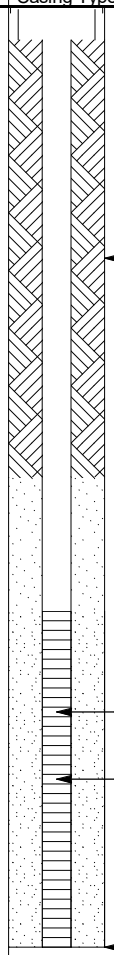
Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/9/19 **COMPLETED** 1/9/19
GROUND ELEVATION 8.82 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES
LOGGED BY J. Mullis
NORTHING 605240.785 ft **EASTING** 1474221.312 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0	OL		0.4 brown/gray soft silty OM, rootlets, moist	8.4	PID = 0.3
	SC		tan/gray v low plastic clayey SILT, sl moist		
			2.0	6.8	
	SC		tan/orange low plastic silty sandy CLAY, sl moist		
5					PID = 0.8
			6.0	2.8	
	CL		red stiff silty CLAY, v sl moist		
			9.5	-0.7	
10	SC		10.0 red/maroon w/tan low plastic sandy CLAY, sl moist	-1.2	
	SC		white/purple loose SAND intermingled with red/maroon/pink soft sandy CLAY, moist to wet, medium sand		PID = 0.3
			14.0	-5.2	
15	CL		red/purple/tan stiff silty sandy CLAY, sl moist		
			15.0	-6.2	
			Bottom of borehole at 15.0 feet.		PID = 0.7

WELL DIAGRAM

Casing Top Elev: 8.56 (ft)
Casing Type: 2" PVC



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WELL NUMBER MRC-MW-154A

Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/8/19 **COMPLETED** 1/8/19
GROUND ELEVATION 8.81 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES
LOGGED BY J. Mullis
NORTHING 605249.364 ft **EASTING** 1474239.675 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	VOC Soil Sample Collected	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA	WELL DIAGRAM
0		OL		0.4 brown/gray soft silty OM, rootlets, moist	8.4	PID = 0.4	Casing Top Elev: 8.52 (ft) Casing Type: 2" PVC
		SM		tan low plastic sandy SILT, fine, moist			STEEL FLUSHMOUNT W/CONCRETE PAD Bentonite Chips
				3.0	5.8		
		SC		tan w/white low plastic sandy silty CLAY, sl moist			
5				5.0	3.8		
		SC		tan/white stiff silty sandy CLAY, sl moist			#1 Silica Filter Pack 2-inch dia.,5 feet; prepacked 10-slot manufactured continuous slot PVC well screen Bottom Cap
				9.0	-0.2		
	9-10(ft)			red/maroon w/tan stiff silty CLAY, sl moist		PID = 0.7	
10							
	10-12(ft)	CL				PID = 0.6	
	12-13(ft)					PID = 0.9	
				13.0	-4.2		
		SW		purple/tan/gold/white loose SAND, medium, wet, PG			
15				15.0	-6.2		

Bottom of borehole at 15.0 feet.

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WELL NUMBER MRC-MW-155A

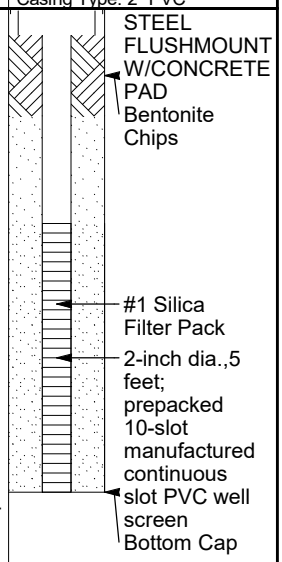
Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/8/19 **COMPLETED** 1/8/19
GROUND ELEVATION 8.73 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES
LOGGED BY J. Mullis
NORTHING 605265.323 ft **EASTING** 1474278.067 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	VOC Soil Sample Collected	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0		OL		0.5 brown/gray soft silty OM, rootlets, moist	8.2	PID = 0.2
		SM		tan/orange v low plastic to loose silty SAND, medium, sl moist		
				4.0	4.7	
		SC		tan/orange low plastic sandy CLAY, sl moist, fine sand		
5				5.0	3.7	
		SC		tan/orange v low plastic clayey SAND, very moist, fine sand		
				6.0	2.7	
		SC		red/brown stiff sandy CLAY, sl moist		
				8.0	0.7	
	8-9(ft)	CL		red w/white stiff silty CLAY, v sl moist		PID = 0.5
						PID = 12.4
10	9-11(ft)			10.0	-1.3	
		CL		purple to red/white stiff silty CLAY, v sl moist		
	11-12(ft)					PID = 22.5
				12.0	-3.3	
		SW		purple/white/tan/dark red loose SAND w/trace clay, very moist to wet, fine sand PG		
15						
20				20.0	-11.3	

Bottom of borehole at 20.0 feet.

WELL DIAGRAM



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WELL NUMBER MRC-MW-156A

Tetra Tech Inc

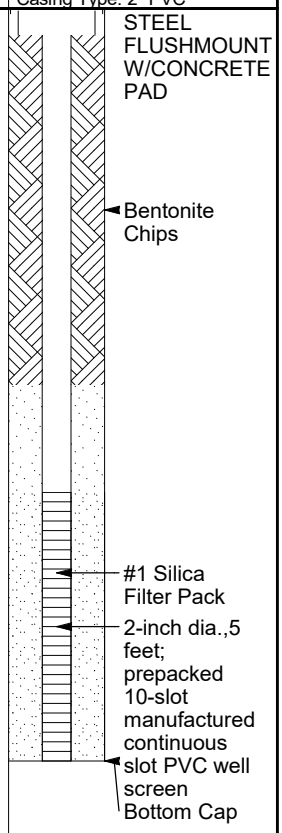
CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/8/19 **COMPLETED** 1/8/19
GROUND ELEVATION 11.85 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES no distinct A/B boundary seen, therefore no VOC samples collected
LOGGED BY J. Mullis
NORTHING 605342.875 ft **EASTING** 1474152.594 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0	OL		0.3 brown/gray soft silty OM, rootlets, moist	11.6	PID = 0.5
	GW		white loose sandy GRAVEL, fill material, sl moist		
			3.0	8.9	
	CL		dark tan low plastic silty CLAY, sl moist		
			4.0	7.9	
	SW		tan loose medium SAND, PG, sl moist		
5			5.0	6.9	
			red w/white mottled stiff to low plastic sandy CLAY, sl moist		PID = 1.6
	SC				
10					PID = 0.5
			13.0	-1.2	
			tan/purple/white stiff silty CLAY, v sl moist		
15	CL				PID = 1.5
			18.0	-6.2	
	SC		tan/red/white/purple loose to v low plastic clayey SAND, v fine, moist		
20			20.0	-8.2	

Bottom of borehole at 20.0 feet.

WELL DIAGRAM

Casing Top Elev: 11.59 (ft)
Casing Type: 2" PVC



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WELL NUMBER MRC-MW-157A

Tetra Tech Inc

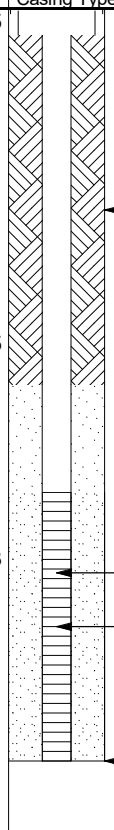
CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/9/19 **COMPLETED** 1/9/19
GROUND ELEVATION 11.92 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES
LOGGED BY J. Mullis
NORTHING 605352.242 ft **EASTING** 1474186.103 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0	OL		0.3 brown/gray soft silty OM, rootlets, moist	11.6	PID = 13.5
	SM		tan/white loose silty SAND fill material, sl moist		
			2.0	9.9	
	GW		white loose sandy GRAVEL, fill material, sl moist		
			3.0	8.9	
	SC		gray/tan v low plastic clayey sandy SILT, black wood fragments, moist		
5			5.0	6.9	
	SC		red/maroon v low plastic clayey SAND, sl moist		
			6.0	5.9	
	CL		6.5 tan/red/white stiff silty CLAY, v sl moist	5.4	PID = 93.5
	SC		red/purple/tan loose to v low plastic clayey SAND, medium, very moist to wet		
10					PID = 70.3
			14.0	-2.1	
	CL		red/purple stiff silty CLAY w/some sand, sl moist		PID = 2.2
15			15.0	-3.1	
	SC		red/purple loose to v low plastic clayey SAND, medium, moist to wet		
			19.0	-7.1	
	CL		red/purple stiff silty CLAY w/some sand, purple concretions, v sl moist		
20			20.0	-8.1	

Bottom of borehole at 20.0 feet.

WELL DIAGRAM

Casing Top Elev: 11.54 (ft)
Casing Type: 2" PVC



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WELL NUMBER MRC-MW-158A

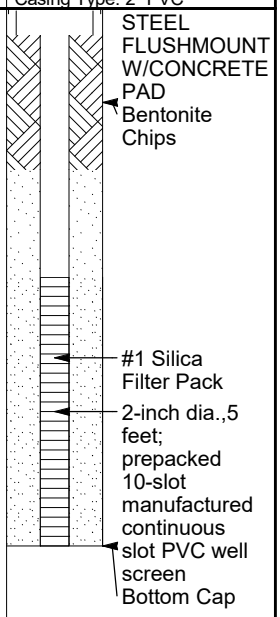
Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/8/19 **COMPLETED** 1/10/19
GROUND ELEVATION 11.93 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES
LOGGED BY J. Mullis
NORTHING 605368.552 ft **EASTING** 1474216.976 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	VOC Soil Sample Collected	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0		OL		0.3 brown/gray soft silty OM, rootlets, moist	11.6	PID = 0.4
		GW		white loose sandy GRAVEL, fill material, sl moist		
				3.0	8.9	
		CL		tan med plastic silty CLAY, moist		
				4.0	7.9	
5		SP		tan loose medium to coarse SAND, moist, well graded		PID = 0.5
				9.0	2.9	
10	9-10(ft)	CL		red/purple stiff silty CLAY, v sl moist		PID = 1
	10-11(ft)					PID = 2.2
	11-12(ft)					PID = 2.2
						PID = 3.8
				13.0	-1.1	
		SM		purple/white/tan/pink v low plastic silty SAND, moist		
				14.5	-2.6	
15		SC		15.0 dark red stiff sandy CLAY, v sl moist	-3.1	
		SP		red/purple loose SAND, poorly sorted, wet		PID = 2.4
				19.0	-7.1	
		SC		red/purple/pink v low plastic clayey SAND, very moist		
20				20.0	-8.1	

Bottom of borehole at 20.0 feet.

WELL DIAGRAM



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WELL NUMBER MRC-MW-159A

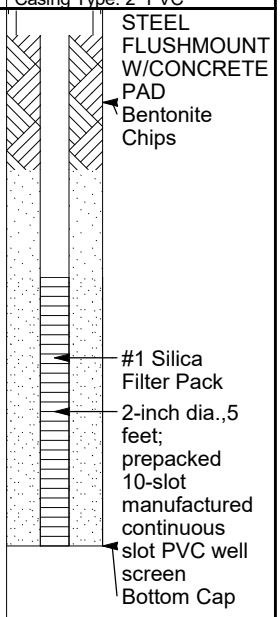
Tetra Tech Inc

CLIENT Lockheed Martin Corporation
PROJECT NAME BLOCK E/F MASS DISCHARGE WELL INSTALL
PROJECT NUMBER 112IC08784
PROJECT LOCATION MIDDLE RIVER, MARYLAND
DATE STARTED 1/10/19 **COMPLETED** 1/10/19
GROUND ELEVATION 11.67 ft **HOLE SIZE** 3 inches
DRILLING CONTRACTOR Ground Zero
DRILLING METHOD DPT
NOTES
LOGGED BY J. Mullis
NORTHING 605379.917 ft **EASTING** 1474243.394 ft
DATUM: MD STATE; Horizontal: NAD83/2011 Epoch 2011, Vertical: NAVD88

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION		ENVIRONMENTAL DATA
0	OL		0.3 brown/gray soft silty OM, rootlets, moist	11.4	PID = 0.4
	GW		white loose sandy GRAVEL, fill material, sl moist		
			3.0	8.7	
	CL		tan med plastic silty CLAY, moist		
			4.0	7.7	
5	SP		tan loose medium to coarse SAND, moist, well graded		PID = 0.5
			9.0	2.7	
10	CL		red/purple stiff silty CLAY, v sl moist		PID = 1 PID = 2.2 PID = 2.2 PID = 3.8
			13.0	-1.3	
	SM		purple/white/tan/pink v low plastic silty SAND, moist		
			14.5	-2.8	
15	SC		15.0 dark red stiff sandy CLAY, v sl moist	-3.3	
	SP		red/purple loose SAND, poorly sorted, wet		PID = 2.4
			19.0	-7.3	
20	SC		red/purple/pink v low plastic clayey SAND, very moist		
			20.0	-8.3	

Bottom of borehole at 20.0 feet.

WELL DIAGRAM



TT MW BORING 3 - GINT STD US LAB.GDT - 2/22/19 13:55 - C:\USERS\JOSH.MULLIS\DESKTOP\BENTLEY\PRACTICE 022618.GPJ

APPENDIX D—LOG SHEETS; SOIL, GROUNDWATER, DEVELOPMENT, STATIC WATER LEVEL, CALIBRATION

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GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Block E/F Synoptic WL Mass Discharge
Project No.: 112IC08784
Location: Middle River, MD
Personnel: W. Pryor
Weather Conditions: clear, 25 deg F
Measuring Device: Solinst WLM
Tidally Influenced: Yes _X___ No ____
Remarks:

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Fines (inches)*	Groundwater Elevation (feet)*	Comments
MRC-MW137A	1/28/2019	1030	4.49	10.40	3.59	0	0.90	
MRC-MW138B	1/28/2019	1031	4.52	17.30	3.63	0	0.89	
MRC-MW139B	1/28/2019	1032	4.69	26.40	3.07	0	1.62	
MRC-MW140A	1/28/2019	1034	4.74	9.15	2.85	0	1.89	
MRC-MW141B	1/28/2019	1035	4.71	17.20	3.55	0	1.16	
MRC-MW142B	1/28/2019	1036	4.62	26.30	3.16	0	1.46	
MRC-MW143A	1/28/2019	1038	5.08	10.30	4.00	0	1.08	
MRC-MW144B	1/28/2019	1039	5.13	17.20	3.65	0	1.48	
MRC-MW145A	1/28/2019	1041	5.37	10.35	3.52	0	1.85	
MRC-MW146B	1/28/2019	1042	5.42	17.25	3.80	0	1.62	
MRC-MW147B	1/28/2019	1043	5.08	26.56	3.40	0	1.68	
MRC-MW148A	1/28/2019	1045	5.15	10.40	3.30	0	1.85	
MRC-MW149B	1/28/2019	1046	5.17	17.30	3.45	0	1.72	
MRC-MW150B	1/28/2019	1047	5.09	25.50	3.33	0	1.76	
MRC-MW151A	1/28/2019	1057	9.48	14.90	8.60	0	0.88	
MRC-MW152B	1/28/2019	1058	9.63	28.00	6.30	0	3.33	
MRC-MW153A	1/28/2019	1101	8.58	14.20	5.17	0	3.41	
MRC-MW154A	1/28/2019	1103	8.52	10.01	4.38	0	4.14	
MRC-MW155A	1/28/2019	1105	8.49	9.88	3.24	0	5.25	
MRC-MW156A	1/28/2019	1109	11.59	13.80	2.60	0	8.99	
MRC-MW157A	1/28/2019	1111	11.54	14.18	7.12	0	4.42	
MRC-MW158A	1/28/2019	1113	11.57	9.80	6.27	0	5.30	
MRC-MW159A	1/28/2019	1115	11.29	9.90	5.75	0	5.54	

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EQUIPMENT CALIBRATION LOG

PROJECT NAME : Block E/F Mass Discharge Well Install

SITE NAME: MRC Block E/F MANUFACTURER: Horiba U-52

PROJECT No.: 112IC08784 SERIAL NUMBER: 22197 (Pine ID)

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
			Parameter	Post-Cal	Pre- calibration	Post-calibration		
1/10/2019	22197	Pryor	pH	4.00	n/a	3.97	8GE373	
1/10/2019	22197	Pryor	scond	4.48	n/a	4.57	8GE373	
1/10/2019	22197	Pryor	turb	0.00	n/a	0.00	8GE373	
1/10/2019	22197	Pryor	DO	N/A	n/a	10.05	8GE373	
1/11/2019	22197	Pryor	pH	4.00	n/a	3.97	8GE373	
1/11/2019	22197	Pryor	scond	4.48	n/a	4.57	8GE373	
1/11/2019	22197	Pryor	turb	0.00	n/a	0.00	8GE373	
1/11/2019	22197	Pryor	DO	N/A	n/a	10.05	8GE373	
1/15/2019	22197	Pryor	pH	4.00	n/a	3.97	8GE373	
1/15/2019	22197	Pryor	scond	4.48	n/a	4.57	8GE373	
1/15/2019	22197	Pryor	turb	0.00	n/a	0.00	8GE373	
1/15/2019	22197	Pryor	DO	N/A	n/a	10.05	8GE373	
1/16/2019	22197	Pryor	pH	4.00	n/a	3.97	8GE373	
1/16/2019	22197	Pryor	scond	4.48	n/a	4.57	8GE373	
1/16/2019	22197	Pryor	turb	0.00	n/a	0.00	8GE373	
1/16/2019	22197	Pryor	DO	N/A	n/a	10.05	8GE373	
1/17/2019	22197	Pryor	pH	4.00	n/a	3.97	8GE373	
1/17/2019	22197	Pryor	scond	4.48	n/a	4.57	8GE373	
1/17/2019	22197	Pryor	turb	0.00	n/a	0.00	8GE373	
1/17/2019	22197	Pryor	DO	N/A	n/a	10.05	8GE373	
1/18/2019	22197	Pryor	pH	4.00	n/a	3.97	8GE373	
1/18/2019	22197	Pryor	scond	4.48	n/a	4.57	8GE373	
1/18/2019	22197	Pryor	turb	0.00	n/a	0.00	8GE373	
1/18/2019	22197	Pryor	DO	N/A	n/a	10.05	8GE373	
1/28/2019	22197	Pryor	pH	4.00	n/a	3.97	8GE373	
1/28/2019	22197	Pryor	scond	4.48	n/a	4.57	8GE373	
1/28/2019	22197	Pryor	turb	0.00	n/a	0.00	8GE373	
1/28/2019	22197	Pryor	DO	N/A	n/a	10.05	8GE373	
1/29/2019	22197	Pryor	pH	4.00	n/a	3.99	8GE373	
1/29/2019	22197	Pryor	scond	4.48	n/a	4.6	8GE373	
1/29/2019	22197	Pryor	turb	0.00	n/a	0.00	8GE373	
1/29/2019	22197	Pryor	DO	N/A	n/a	10.02	8GE373	
1/30/2019	22197	Pryor	pH	4.00	n/a	3.95	8GE373	
1/30/2019	22197	Pryor	scond	4.48	n/a	4.69	8GE373	
1/30/2019	22197	Pryor	turb	0.00	n/a	0.00	8GE373	
1/30/2019	22197	Pryor	DO	N/A	n/a	10	8GE373	
2/4/2019	22197	Pryor	pH	4.00	n/a	3.93	8GE373	
2/4/2019	22197	Pryor	scond	4.48	n/a	4.67	8GE373	
2/4/2019	22197	Pryor	turb	0.00	n/a	0.00	8GE373	
2/4/2019	22197	Pryor	DO	N/A	n/a	10.2	8GE373	
2/5/2019	22197	Pryor	pH	4.00	n/a	4	8GE373	
2/5/2019	22197	Pryor	scond	4.48	n/a	4.49	8GE373	
2/5/2019	22197	Pryor	turb	0.00	n/a	0	8GE373	
2/5/2019	22197	Pryor	DO	N/A	n/a	9.35	8GE373	
2/6/2019	22197	Pryor	pH	4.00	n/a	4	8GE373	
2/6/2019	22197	Pryor	scond	4.48	n/a	4.49	8GE373	
2/6/2019	22197	Pryor	turb	0.00	n/a	3.2	8GE373	
2/6/2019	22197	Pryor	DO	N/A	n/a	9.79	8GE373	
2/7/2019	22197	Pryor	pH	4.00	n/a	4	8GE373	
2/7/2019	22197	Pryor	scond	4.48	n/a	4.49	8GE373	
2/7/2019	22197	Pryor	turb	0.00	n/a	2.3	8GE373	
2/7/2019	22197	Pryor	DO	N/A	n/a	9.85	8GE373	
2/8/2019	22197	Pryor	pH	4.00	n/a	4	8GE373	
2/8/2019	22197	Pryor	scond	4.48	n/a	4.49	8GE373	
2/8/2019	22197	Pryor	turb	0.00	n/a	0.1	8GE373	
2/8/2019	22197	Pryor	DO	N/A	n/a	9.74	8GE373	

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EQUIPMENT CALIBRATION LOG

PROJECT NAME : Block E/F Mass Discharge Well Install

SITE NAME: MRC Block E/F

MANUFACTURER: LaMotte 2020e

PROJECT No.: 112IC08784

SERIAL NUMBER: 19964 (Pine ID)

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
			Parameter	Post-Cal	Pre-calibration	Post-calibration		
1/10/2019	19964	Pryor	turbidity	0/10.0	0.1/9.75	0.0/10.0	Pine supplied blanks	
1/11/2019	19964	Pryor	turbidity	0/10.0	0.15/9.79	0.0/10.0	Pine supplied blanks	
1/15/2019	19964	Pryor	turbidity	0/10.0	0.13/9.85	0.0/10.0	Pine supplied blanks	
1/16/2019	19964	Pryor	turbidity	0/10.0	0.16/9.88	0.0/10.0	Pine supplied blanks	
1/17/2019	19964	Pryor	turbidity	0/10.0	0.13/9.75	0.0/10.0	Pine supplied blanks	
1/18/2019	19964	Pryor	turbidity	0/10.0	0.18/9.80	0.0/10.0	Pine supplied blanks	
1/28/2019	19964	Pryor	turbidity	0/10.0	0.13/9.75	0.0/10.0	Pine supplied blanks	
1/29/2019	19964	Pryor	turbidity	0/10.0	0.10/9.86	0.0/10.0	Pine supplied blanks	
1/30/2019	19964	Pryor	turbidity	0/10.0	0.09/9.90	0.0/10.0	Pine supplied blanks	
2/4/2019	19964	Pryor	turbidity	0/10.0	0.05/9.95	0.0/10.0	Pine supplied blanks	
2/5/2019	19964	Pryor	turbidity	0/10.0	0.08/9.85	0.0/10.0	Pine supplied blanks	
2/6/2019	19964	Pryor	turbidity	0/10.0	0.12/9.75	0.0/10.0	Pine supplied blanks	
2/7/2019	19964	Pryor	turbidity	0/10.0	0.14/9.76	0.0/10.0	Pine supplied blanks	
2/8/2019	19964	Pryor	turbidity	0/10.0	0.15/9.88	0.0/10.0	Pine supplied blanks	

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EQUIPMENT CALIBRATION LOG

PROJECT NAME : Block E/F Mass Discharge Well Install

SITE NAME: MRC Block E/F

MANUFACTURER: MiniRae 3000

PROJECT No.: 112IC08784

SERIAL NUMBER: 21255 (Pine ID)

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
			Parameter	Post-Cal	Pre-calibration	Post-calibration		
1/10/2019	21255	Pryor	isobutylene/fresh air	100.0/0.0 ppm	n/a/0.1 ppm	100.0/0.0 ppm	1B1248107/fresh air	
1/11/2019	21255	Pryor	isobutylene/fresh air	100.0/0.0 ppm	n/a/0.2 ppm	100.0/0.0 ppm	1B1248107/fresh air	
1/15/2019	21255	Pryor	isobutylene/fresh air	100.0/0.0 ppm	n/a/0.1 ppm	100.0/0.0 ppm	1B1248107/fresh air	
1/16/2019	21255	Pryor	isobutylene/fresh air	100.0/0.0 ppm	n/a/0.3 ppm	100.0/0.0 ppm	1B1248107/fresh air	
1/17/2019	21255	Pryor	isobutylene/fresh air	100.0/0.0 ppm	n/a/0.4 ppm	100.0/0.0 ppm	1B1248107/fresh air	
1/18/2019	21255	Pryor	isobutylene/fresh air	100.0/0.0 ppm	n/a/0.1 ppm	100.0/0.0 ppm	1B1248107/fresh air	
1/28/2019	21255	Pryor	isobutylene/fresh air	100.0/0.0 ppm	n/a/0.2 ppm	100.0/0.0 ppm	1B1248107/fresh air	
1/29/2019	21255	Pryor	isobutylene/fresh air	100.0/0.0 ppm	n/a/0.1 ppm	100.0/0.0 ppm	1B1248107/fresh air	
1/30/2019	21255	Pryor	isobutylene/fresh air	100.0/0.0 ppm	n/a/0.3 ppm	100.0/0.0 ppm	1B1248107/fresh air	
2/4/2019	21255	Pryor	isobutylene/fresh air	100.0/0.0 ppm	n/a/0.1 ppm	100.0/0.0 ppm	1B1248107/fresh air	
2/5/2019	21255	Pryor	isobutylene/fresh air	100.0/0.0 ppm	n/a/0.1 ppm	100.0/0.0 ppm	1B1248107/fresh air	
2/6/2019	21255	Pryor	isobutylene/fresh air	100.0/0.0 ppm	n/a/0.1 ppm	100.0/0.0 ppm	1B1248107/fresh air	
2/7/2019	21255	Pryor	isobutylene/fresh air	100.0/0.0 ppm	n/a/0.2 ppm	100.0/0.0 ppm	1B1248107/fresh air	
2/8/2019	21255	Pryor	isobutylene/fresh air	100.0/0.0 ppm	n/a/0.1 ppm	100.0/0.0 ppm	1B1248107/fresh air	

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SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: MRC Block E/F Mass Discharge Well Install
Project No.: 112IC08784

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-MW154
Sample Location: MRC BLOCK E
Sampled By: J. MULLIS
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

		Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	1/8/2019	**9-10'**	**red/maroon**	**stiff silty CLAY, sl moist**
Time:	1230/1232/1234	**10-12'**	**red/maroon**	**stiff silty CLAY, sl moist**
Method: DPT GRAB		**12-13'**	**red/maroon**	**stiff silty CLAY, sl moist**
Monitor Reading (ppm)	0.6-0.9			

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOCs 8260	2 oz glass jar	YES	

OBSERVATIONS / NOTES:

A/B boundary observed from 9-13'

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

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SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: MRC Block E/F Mass Discharge Well Install
Project No.: 112IC08784

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-MW155
Sample Location: MRC BLOCK E
Sampled By: J. MULLIS
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

		Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	1/8/2019			
Time:	1350/1352/1354	**8-9'**	**red w/white**	**stiff silty CLAY, v sl moist**
Method: DPT GRAB		**9-11'**	**purple to red/white**	**stiff silty CLAY, v sl moist**
Monitor Reading (ppm)	0.5-22.5	**11-12'**	**purple to red/white**	**stiff silty CLAY, v sl moist**

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOCs 8260	2 oz glass jar	YES	

OBSERVATIONS / NOTES:

A/B boundary observed from 8-12'

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: MRC Block E/F Mass Discharge Well Install
Project No.: 112IC08784

[] Surface Soil
[X] Subsurface Soil
[] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: SB-MW158
Sample Location: MRC BLOCK E
Sampled By: J. MULLIS
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

		Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	1/8/2019			
Time:	1442/1444/1446	9-10'	red/purple	stiff silty CLAY, v sl moist
Method: DPT GRAB		10-11'	red/purple	stiff silty CLAY, v sl moist
Monitor Reading (ppm)	0.3-3.8	11-12'	red/purple	stiff silty CLAY, v sl moist

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
VOCs 8260	2 oz glass jar	YES	

OBSERVATIONS / NOTES:

A/B boundary observed from 9-12'

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-137A
Site: MRC Block F
Date Installed: 1/4/2019
Date Developed: 1/10, 1/11, 1/15
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 10.4
Static WL Before (ft): 3.5
Static Water Level After (ft.): dry
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
(1/10) 1003	start surge	--	3.15	--	--	--	--	PID= 0.0ppm
(1/10) 1023	start purge	0	5.65	9.98	4.74	1.15	>999	no odor, brown
(1/10) 1028	--	0.75	7.8	10.05	4.7	1.16	>999	--
(1/10) 1033	0.25"	well went dry, let recharge 80% of original volume						--
(1/11) 0832	--	0.75	5.8	9.48	4.92	1.33	>999	--
(1/11) 0837	0	1.5	well went dey, let recharge 80% of original volume				--	--
(1/15) 0855	start purge	1.5	3.8	10.2	4.72	1.32	>999	--
(1/15) 0900	--	2	--	10.99	4.85	1.23	>999	--
(1/15) 0905	0	2.25	**well purged dry a third time over multiple days, well considered developed.**					--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-138B
Site: MRC Block F
Date Installed: 1/4/2019
Date Developed: 1/10, 1/11/, 1/15
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 17.3
Static WL Before (ft): 5.3
Static Water Level After (ft.): dry
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
(1/10) 1120	start surge	0	5.3	--	--	--	--	PID = 109.7 ppm
(1/10) 1140	start purge	--	6.2	--	--	--	--	--
(1/10) 1145	0.25"	--	11.25	13.18	5.37	1.35	1000	red/brown
(1/10) 1150	0.25"	2	16.8	12.17	5.34	1.22	1000	red/brown
(1/10) 1200	0.25"	well went dry let recharge 80% of original volume						--
(1/11) 0930	0.25"	--	5.6	8.67	4.98	1.69	1000	red/brown
(1/11) 0935	0.25"	--	10.22	10.59	5.22	1.57	1000	red/brown
(1/11) 0940	0.25"	3.5	16.8	10..30	5.3	1.4	1000	red/brown
(1/11) 0945	0	well went dry let recharge 80% of original volume						--
(1/15) 0915	0	--	3.5	9.39	5.04	1.69	357	PID = 290.0 ppm
(1/15) 0920	0	--	--	10.71	5.11	1.71	500	cloudy
(1/15) 0925	0	6	**well purged dry a third time over multiple days, well considered developed.**					--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-139B
Site: MRC Block F
Date Installed: 1/4/2019
Date Developed: 1/10/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 26.4
Static WL Before (ft): 5.1
Static Water Level After (ft.): 10.45
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
1307	start surge	--	5.1	--	--	--	--	PID = 0.0 ppm
1326	start purge	--	10.5	15.13	6.04	0.224	1000	brown/red
1330	0.25"	--	11.5	13.88	5.94	0.211	1000	brown/red
1335	0.25"	--	12.15	13.97	5.58	0.233	1000	brown/red
1340	0.25"	--	12.35	14.25	5.31	0.248	1000	brown/red
1345	0.25"	--	12.45	14.1	5.29	0.258	642	brown/red
1350	0.25"	--	12.58	14.21	5.35	0.262	638	brown/red
1355	0.25"	--	12.69	14.22	5.28	0.268	593	brown/red
1400	0.25"	--	12.6	14.15	5.23	0.271	535	brown/red
1405	0"	--	12.6	13.89	4.94	0.275	494	brown/red
1410	0"	--	12.25	13.74	4.9	0.279	455	brown/red
1415	0"	--	12.15	13.64	4.94	0.283	413	brown/red
1420	0"	--	12.15	13.53	4.92	0.287	387	brown/red
1425	0"	--	12.1	13.4	4.91	0.286	367	brown/red
1435	0"	--	12	13.24	4.82	0.296	313	brown/red
1445	0"	--	11.37	13.34	4.92	0.304	241	brown/red
1455	0"	--	10.83	13.2	4.93	0.31	151	clear
1505	0"	--	11	13.22	4.92	0.309	127	clear
1515	0"	--	11	13.65	4.91	0.309	101	clear
1525	0"	--	11	13.3	4.91	0.308	83.4	clear
1535	0"	30 gal	11	13.2	4.9	0.311	9.49	clear

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-140A
Site: MRC Block F
Date Installed: 1/4/2019
Date Developed: 1/11, 1/15, 1/16
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 9.15
Static WL Before (ft): 4.8
Static Water Level After (ft.): dry
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
(1/11) 1007	start surge	--	4.8	--	--	--	--	PID = 2.1 ppm
(1/11) 1027	start purge	--	6.95	7.41	5.08	2.51	>999	--
(1/11) 1032	0.25"	--	8.8	7.77	5.1	2.42	>999	--
(1/11) 1037	0.25"	1 gal	well went dry let recharge 80% of original volume					
(1/15) 0947	0	--	3.3	9.58	5.97	2.5	>999	PID = 4.0 ppm
(1/15) 0952	0	--	6.1	9.61	5.14	2.41	>999	--
(1/15) 0957	0	2 gal	8.82	8.57	5.09	2.45	>999	--
(1/15) 1002	0	--	well went dry let recharge 80% of original volume					
(1/16) 0822	0	--	4.3	11.48	5.03	2.66	>999	
(1/16) 0827	0	--	8.84	10.16	4.89	2.44	>999	--
(1/16) 0832	0	3 gal	**well purged dry a third time over multiple days, well considered developed.**					--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-141B
Site: MRC Block F
Date Installed: 1/4/2019
Date Developed: 1/11, 1/15, 1/16
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 17.2
Static WL Before (ft): 5.3
Static Water Level After (ft.): dry
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
(1/11) 1103	start surge	--	5.3	--	--	--	--	PID = 15000 ppm
(1/11) 1123	start purge	--	8.6	10.96	5.58	0.265	>999	no odor, brown/red
(1/11) 1128	0.25"	--	12.4	11	5.25	0.28	>999	
(1/11) 1133	0.25"	--	13.4	13.18	5.4	0.284	>999	
(1/11) 1138	0.25"	2.5 gal	16.84	13.69	5.1	0.269	>999	
(1/11) 1143	0.25"	well went dry let recharge 80% of original volume						
(1/15) 1008	0	--	3.87	9.26	5.35	0.385	45.6	PID = 15000 ppm
(1/15) 1013	0	--	4.81	10.89	5.22	0.273	39.6	clear
(1/15) 1018	0	--	7.55	11.89	5.22	0.266	41	clear
(1/15) 1023	0	--	13.05	12.15	5.23	0.266	103.5	cloudy
(1/15) 1028	0	6 gal	16.4	11.9	5.13	0.256	110.9	cloudy
(1/15) 1033	0	well went dry let recharge 80% of original volume						
(1/16) 1338	0	--	3	9.33	4.98	0.259	152	cloudy
(1/16) 1343	0	--	--	8.82	4.78	0.255	84.6	clear
(1/16) 1348	0	--	--	10.61	4.93	0.253	30.8	clear
(1/16) 1353	0	--	--	10.35	5.03	0.256	31.4	clear
(1/16) 1358	0	--	--	11.6	5	0.252	16.9	clear
(1/16) 1403	0	10 gal		11.65	5.01	0.251	8.35	well development complete, stabilized

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-142B
Site: MRC Block F
Date Installed: 1/4/2019
Date Developed: 1/11/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 26.3
Static WL Before (ft): 4.6
Static Water Level After (ft.): 9.75
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
1300	start surge	--	4.6	--	--	--	--	PID = 8.7 ppm
1320	start purge	--	6.8	15.54	6.26	0.283	>999	no odor, brown/red
1325	0.25"	--	6.99	15.54	6.13	0.27	>999	no odor, brown/red
1330	0.25"	--	7.65	15.54	6.05	0.262	>999	no odor, brown/red
1340	0.25"	--	8.05	15.55	5.91	0.252	>999	no odor, brown/red
1350	0	--	9	15.72	5.67	0.213	545	cloudy
1400	0	--	9.95	15.78	5.07	0.201	218	cloudy
1410	0	--	9.95	15.7	4.99	0.197	150	cloudy
1420	0	--	9.95	15.71	4.91	0.196	89.5	cloudy
1430	0	--	9.95	15.72	4.91	0.195	63.1	cloudy
1440	0	--	9.95	15.76	5.12	0.193	7.95	clear
1445	0	30 gal	9.95	15.83	4.87	0.193	8	clear
--	--	**well stabilized, developed, 30 gallons purged.**					--	--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-143A
Site: MRC Block F
Date Installed: 1/5/2019
Date Developed: 1/15, 1/16
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 10.3
Static WL Before (ft): 3.95
Static Water Level After (ft.): dry
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
(1/15) 1055	start surge	--	3.95	--	--	--	--	PID = 593 ppm
(1/15) 1115	start purge	--	6.85	9.83	5.2	2.62	>999	no odor, brown/red
(1/15) 1120	0.25"	1 gal	9.4	10.91	5.16	2.68	>999	no odor, brown/red
(1/15) 1125		well went dry let recharge 80% of original volume						--
(1/15) 1415	0.25"	--	3.5	9.72	4.85	2.58	694	--
(1/15) 1420	0	2 gal	9.35	9.85	4.89	2.56	151	--
(1/15) 1425	0	well went dry let recharge 80% of original volume						--
(1/16) 0838	0	--	4.2	8.01	4.78	2.42	716	--
(1/16) 0843	0	3.25 gal	9.35	9.39	4.75	2.57	105	cloudy
(1/16) 0848	0	**well purged dry a third time over multiple days, well considered developed.**					--	--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-144B
Site: MRC Block F
Date Installed: 1/5/2019
Date Developed: 1/15, 1/16
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 17.2
Static WL Before (ft): 3.6
Static Water Level After (ft.): dry
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
1135 (1/15)	Start surge	--	3.6	--	--	--	--	PID reading = 803 ppm
1155 (1/15)	Start purge	--	6.75	12.29	5.32	0.299	>999	no odor, brown
1200 (1/15)	0.25"	--	9.65	13.18	5.43	0.265	>999	--
1205 (1/15)	0.25"	3.5 gal	16.6	12.66	5.62	0.266	>999	--
1210 (1/15)	0.25"	well went dry let recharge 80% of original volume						--
1433 (1/15)	0	--	3.1	10.78	5.49	0.308	>999	--
1438 (1/15)	0	--	--	11.83	5.52	0.266	95.4	--
1443 (1/15)	0	--	--	12.5	5.56	0.269	134	--
1448 (1/15)	0	7 gal	--	13.28	5.45	0.256	800	--
1453 (1/15)	0	well went dry let recharge 80% of original volume						--
0852 (1/16)	0	--	3.94	7.48	5.33	0.364	805	--
0857 (1/16)	0	--	--	10.54	5.39	0.271	604	--
0902 (1/16)	0	--	--	11.25	5.41	0.266	67.4	--
0907 (1/16)	0	--	--	11.1	5.41	0.264	56.9	--
0917 (1/16)	0	--	--	11.62	5.41	0.265	45.3	--
0927 (1/16)	0	10.5 gal	--	12.04	5.35	0.267	50.1	clear
--	--	--	**well purged dry a third time over multiple days, well considered developed.**					--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-145A
Site: MRC Block F
Date Installed: 1/5/2019
Date Developed: 1/15, 1/16, 1/17
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 10.35
Static WL Before (ft): 4.2
Static Water Level After (ft.): DRY
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
1110 (1/15)	start surge	--	--	--	--	--	--	PID reading=1.3 ppm
1135 (1/15)	start purge	--	3.6	11.18	4.78	2.89	>999	brown/red, no odor
1140 (1/15)	0.25"	1.5 gal	--	10.87	4.8	2.96	>999	--
1145 (1/15)	0.25"	well went dry let recharge 80% of original volume						--
0820 (1/16)	0.25"	--	6.48	10.54	4.82	2.95	>999	--
0830 (1/16)	0.25"	3.0 gal	9.5	10.65	4.85	2.98	>999	--
--	--	well went dry let recharge 80% of original volume						--
0730 (1/17)	0	--	6.52	10.5	4.9	2.95	200	--
0740 (1/17)	0	4.5	9.75	10.55	4.91	2.96	45.3	water clear, very slow recharge
--	--	**well purged dry a third time over multiple days, well considered developed.**					--	--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-146B
Site: MRC Block F
Date Installed: 1/5/2019
Date Developed: 1/16/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 17.25
Static WL Before (ft): 3.23
Static Water Level After (ft.): 12.12
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
1200 (1/15)	start surge	--	3.00	--	--	--	--	PID reading=20.1 ppm
1225 (1/15)	start purge	--	--	10.49	6.04	0.385	1000	--
1230 (1/15)	--	2.5 gal	--	10.41	6.10	0.395	1000	--
1235 (1/15)	--	well went dry let recharge 80% of original volume						--
0840 (1/16)	--	--	3.79	13.48	5.27	0.985	1000	--
0845 (1/16)	--	4.5 gal		12.59	5.20	0.959	1000	--
0850 (1/16)	--	well went dry let recharge 80% of original volume						--
1010 (1/16)	--	2.0 gal	3.82	6.19	5.67	0.613	1000	--
1020 (1/16)	--	--	**well purged dry a third time over multiple days, well considered developed.**					--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-147B
Site: MRC Block F
Date Installed: 1/5/2019
Date Developed: 1/15/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 26.56
Static WL Before (ft): 2.5
Static Water Level After (ft.): 6.33
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
1400 (1/15)	start surge	--	2.50	--	--	--	--	PID reading=126.4 ppm
1425 (1/15)	start purge	15.00 gal	--	--	--	--	--	--
1445 (1/15)	--	--	--	15.64	5.34	0.232	20.3	--
1455 (1/15)	--	--	--	15.54	5.31	0.173	13.56	--
1505 (1/15)		--	--	15.51	5.28	0.172	10.63	--
1510 (1/15)		--	--	15.54	5.27	0.174	10.39	--
1515 (1/15)		30 gal	--	15.55	5.24	0.172	7.47	--
--	--	--	**well purged 30 gallons with a final turbidity of 7.47, well considered developed.**					--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-148A
Site: MRC Block F
Date Installed: 1/5/2019
Date Developed: 1/16/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 10.40
Static WL Before (ft): 7.60
Static Water Level After (ft.): 10.15
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
0845 (1/11)	start surge	--	--	--	--	--	--	PID reading=8.1 ppm
0935 (1/11)	start purge	0.5 gal	--	well went dry let recharge 80% of original volume				
0855 (1/15)	--	--	6.25	12.23	5.19	1.13	1000	PID reading=10.8 ppm
0900 (1/15)	--	--	--	11.1	5.23	1.12	1000	--
0905 (1/15)	--	--	--	10.81	5.12	1.14	1000	--
0915 (1/15)	--	--	--	7.23	5.03	1.25	1000	--
0920 (1/15)	--	1.0 gal	--	5.77	5.14	1.15	1000	--
0925 (1/15)	--	--	10.2	well went dry let recharge 80% of original volume				
0855 (1/16)	--	--	8.72	--	--	--	--	--
0900 (1/16)	--	--	--	10.21	5.54	1.17	1000	--
0905 (1/16)	--	--	--	10.59	5.45	1.19	1000	--
0910 (1/16)	--	0.0125 gal	--	9.05	5.55	0.00	1000	--
0915 (1/16)	--	--	--	**well purged dry a third time over multiple days, well considered developed.**				

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-149B
Site: MRC Block F
Date Installed: 1/5/2019
Date Developed: 1/16/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 17.30
Static WL Before (ft): 5.05
Static Water Level After (ft.): 12.99
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
1000	start surge	--	--	--	--	--	--	PID reading=8.7 ppm
1020	start purge	--	--	--	--	--	--	--
1025	--	--	--	10.91	5.5	1.34	1000	--
1035	--	--	--	11.87	5.14	1.25	613	--
1045	--	--	well went dry let recharge 80% of original volume					--
1348	--	--	3.76	--	--	--	--	--
1405	--	--	14.94	13.98	4.48	1.24	956.00	--
1410	--	--	15.00	14.00	4.46	1.22	89.50	--
1415	--	--	--	14.00	4.38	1.22	25.00	--
1420	--	--	--	14.17	4.34	1.22	22.60	--
1425	--	--	--	14.3	4.30	1.22	13.90	--
1430	--	--	--	14.25	4.26	1.22	12.50	--
1435	--	--	--	14.32	4.21	1.21	10.00	--
1440	--	15 gal	12.99	14.35	4.20	1.21	8.47	--
--	--	--	well purged 15 gallons total with a final turbidity of 8.47, well considered developed					--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-150B
Site: MRC Block F
Date Installed: 1/5/2019
Date Developed: 1/15/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 25.50
Static WL Before (ft): 5.10
Static Water Level After (ft.): 8.66
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units _mS/cm____)	Turbidity (NTU)	Remarks (odor, color, etc.)
1130 (1/11)	start surge	--	--	--	--	--	--	PID reading=4.4 ppm
1305 (1/11)	start purge	--	5.15	14.00	6.94	0.352	1000	--
1310 (1/11)	--	--	9.3	13.70	6.90	0.337	1000	--
1315 (1/11)	--	--	9.45	13.90	6.50	0.288	1000	--
1325 (1/11)	--	--	9.58	14.29	6.03	0.241	1000	--
1340 (1/11)	--	12.0 gal	well went dry let recharge 80% of original volume					--
0950 (1/15)	--	--	3.69	12.55	5.51	0.143	72.00	PID reading=43.4 ppm
1005 (1/15)	--	5.0 gal		14.25	5.58	0.141	69.00	--
1015 (1/15)	--	5.0 gal		14.80	5.18	0.121	7.80	--
1020 (1/15)	--	5.0 gal		14.90	5.15	0.121	3.93	--
1030 (1/15)	--	3.0 gal	8.66	15.31	5.32	0.131	3.90	--
--	--	--	well purged 25 gallons total with a final turbidity of 3.90, well considered developed					--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-151A
Site: MRC Block E
Date Installed: 1/10/2019
Date Developed: 1/16/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 14.9
Static WL Before (ft): 6.8
Static Water Level After (ft.): Dry
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
1105 (11/16)	start surge	--	6.80	--	--	--	--	--
1125 (11/16)	start purge	--	--	11.30	5.26	0.259	>999	Brown, no color 1/4inch sediment on bottom
1130 (11/16)	--	--	--	11.04	5.64	0.269	>999	--
1135 (11/16)	--	--	--	10.57	5.71	0.307	>999	--
1140 (11/16)	--	--	--	11.19	5.65	0.297	>999	--
1145 (11/16)	--	--	--	12.24	5.60	0.281	>999	--
1150 (11/16)	--	well went dry let recharge 80% of original volume					--	--
0740 (11/17)	--	--	10.81	--	--	--	--	Only recharged to 10.81'
0750 (11/17)	--	1.0 gal	--	13.04	7.37	0.457	>999	cloudy/turbid
--	--	well went dry let recharge 80% of original volume					--	--
0750 (11/18)	<0.05"	--	12.04	--	--	--	--	Suge 5 minutes
0753 (11/18)	0.00	--	--	11.65	7.23	0.325	300	cloudy, signs of clearoing
0755 (11/18)	0.00	0.5 gal	--	11.55	7.05	0.325	250	cloudy, dry
--	--	--	**well purged dry a third time over multiple days, well considered developed.**					--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-152B
Site: MRC Block E
Date Installed: 1/9/2019
Date Developed: 1/16/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 28.00
Static WL Before (ft): 6.40
Static Water Level After (ft.): 20.00
Screen Length (ft.) 10'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units _mS/cm____)	Turbidity (NTU)	Remarks (odor, color, etc.)
1300	start surge	--	6.40	--	--	--	--	Very soft bottom
1320	start purge	--	8.25	12.00	6.65	0.373	>999	Odor, Brown 1/4inch of sediment on bottom
1325	--	--	8.30	11.98	6.73	0.375	>999	--
1330	--	--	8.35	11.96	6.82	0.378	>999	--
1340	--	--	14.98	15.02	6.58	0.321	>999	--
1350	--	--	21.00	15.05	6.39	0.278	>999	--
1400	--	--	21.00	15.44	6.13	0.245	>999	--
1410	--	--	21.35	15.79	5.91	0.22	981	--
1420	--	--	21.40	15.79	5.85	0.218	800	--
1430	--	--	21.42	15.78	5.80	0.216	789	--
1440	--	--	21.45	15.97	5.66	0.197	109	--
1450	--	--	21.47	15.78	5.63	0.205	105	--
1500	--	25.0 gal	21.47	15.76	5.61	0.202	106	--
--	--	--	**well purged 25 gallons total with a final turbidity of 106, well considered developed.**					

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-153A
Site: MRC Block E
Date Installed: 1/9/2019
Date Developed: 1/18/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 14.20
Static WL Before (ft): 5.18
Static Water Level After (ft.): 12.20
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
1400 (1/16)	start surge	--	--	--	--	--	--	PID reading=7.4 ppm
1420 (1/16)	start purge	2.0 gal	--	5.57	6.3	0.463	1000	--
1430 (1/16)	--	well went dry let recharge 80% of original volume					--	--
0745 (1/17)	--	1.5 gal	6.89	13.16	5.07	0.606	1000	--
0750 (1/17)	--	well went dry let recharge 80% of original volume					--	--
0755 (1/18)	--	--	6.11	13.71	6.37	0.615	1000	--
0800 (1/18)	--	2.0 gal	--	14.27	5.93	0.234	1000	--
--	--	**well purged dry a third time over multiple days, well considered developed.**					--	--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-154A
Site: MRC Block E
Date Installed: 1/9/2019
Date Developed: 1/17/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 10.01
Static WL Before (ft): 7.66
Static Water Level After (ft.): DRY
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
1310 (1/16)	start surge	--	--	--	--	--	--	PID reading=4.4 ppm
1330 (1/16)	start purge	--	--	10.3	7.04	0.58	1000	Purge via bailer
1335 (1/16)	--	0.0125 gal	well went dry let recharge 80% of original volume					--
1445 (1/16)	--	--	8.98	4.02	6.34	0.00	1000	--
1450 (1/16)	--	--	--	4.32	6.60	0.62	1000	--
1455 (1/16)	--	--	--	5.47	6.71	0.00	1000	--
1500 (1/16)	--	0.0125 gal	--	4.97	6.84	0.00	1000	--
1505 (1/16)	--	--	well went dry let recharge 80% of original volume					--
0815 (1/17)	--	0.0625 gal	9.25	9.13	6.89	0.00	1000.00	--
--	--	--	**well purged dry a third time over multiple days, well considered developed.**					--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-155A
Site: MRC Block E
Date Installed: 1/9/2019
Date Developed: 1/18/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 9.88
Static WL Before (ft): 3.58
Static Water Level After (ft.): 7.64
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
1135 (1/16)	start surge	--	--	--	--	--	--	PID reading= 8.6
1300 (1/16)	start purge	2.0 gal	--	5.19	6.23	0.843	1000	--
1305 (1/16)	--	--	well went dry let recharge 80% of original volume					--
0805 (1/17)	--	--	4.35	10.5	5.6	0.896	1000	--
0810 (1/17)	--	1.0 gal	--	10.34	6.49	0.812	1000	--
0815 (1/17)	--	--	well went dry let recharge 80% of original volume					--
0820 (1/18)	--	--	3.3	12.29	6.37	0.37	1000	--
0825 (1/18)	--	1.5 gal	--	11.62	6.03	0	1000	--
--	--	--	**well purged dry a third time over multiple days, well considered developed.**					--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-156A
Site: MRC Block E
Date Installed: 1/9/2019
Date Developed: 1/17/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 13.8
Static WL Before (ft): 3.15
Static Water Level After (ft.): 7.86 (starts 1/18/19)
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
0800-0820	start surge <1"	--	--	--	--	--	--	PID reading= 16.0
0820 (1/17)	start purge <1"	2.5 gal	2.5	--	--	--	--	--
0822 (1/17)	well went dry let recharge 80% of original volume			9.31	6.89	0.6	1000	Brown/red, turbed 2.5 gallons purged
0815 (1/18)	<0.05"	--	7.86	10.34	7.13	0.588	1000	Brown/red, turbed
0820 (1/18)	0.00	1.0 gal	Dry	10.51	7.22	0.601	300	Cloudy, less turbid
--	--	--	**well purged dry a third time over multiple days, well considered developed.**					*Very slow recharge

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-157A
Site: MRC Block E
Date Installed: 1/9/2019
Date Developed: 1/17/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 14.18
Static WL Before (ft): 6.94
Static Water Level After (ft.): 8.10 (1/18)
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
0830-0840	start surge <1"	--	--	--	--	--	--	PID reading= 3000
0840 (1/17)	start purge	--	6.53	--	--	--	--	--
0844 (1/17)	Dry	2.54 gal	Dry	9.92	6.43	0.268	71000	Brown/red, turbid
--	--	well went dry let recharge 80% of original volume					--	--
1340 (1/17)	surge/purge		10.00					--
1345 (1/17)	<1"		10.00	8.92	7.41	0.286	71000	Brown/red, turbid
1347 (1/17)	<0.05"	3.00 gal		10.53	6.41	0.258	71000	Cloudy
--	--	well went dry let recharge 80% of original volume					--	--
1/18/2019	<0.05"	--	--	--	--	--	--	--
0836 (1/18)	0.00	--	8.10	10.91	6.90	0.208	505	Cloudy
0841 (1/18)	0.00	0.50 gal	--	10.19	6.54	0.191	288	Cloudy
0846 (1/18)	0.00	1.0 gal	--	10.28	6.16	0.248	330	Cloudy
0850 (1/18)	0.00	1.5 gal	Dry	9.64	6.20	0.202	250	Cloudy
--	--	**well purged dry a third time over multiple days, well considered developed.**					--	--

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-158A
Site: MRC Block E
Date Installed: 1/10/2019
Date Developed: 1/17/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 9.80
Static WL Before (ft): 6.45
Static Water Level After (ft.):
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
0930-0940	start surge <1"	--	--	--	--	--	--	PID reading= 4.4
0942	start purge <1"	--	6.25	--	--	--	--	--
0943	Dry	1.0 gal	Dry	6.39	7	1.06	71000	Brown/red, turbid
1315	<0.05"	--	7.6	7.89	7.34	1.09	71000	Use bailer to remove volume in well
--	--	well went dry let recharge 80% of original volume					--	top of bailer is clear, bottome is brown/red
0901 (1/18)	0.00	0.25 gal	6.5	9.77	6.95	1	211	first bail: cloudy, clear in bailer
0905 (1/18)	0.00	0.5 gal	--	9.97	7.11	1.04	208	second bail: cloudy, clear in bailer
0908 (1/18)	0.00	0.75 gal	Dry	10.19	7.19	1.05	200	third bail: cloudy, clear in bailer
--	--	**well purged dry a third time over multiple days, well considered developed.**					--	*Very slow recharge

MONITORING WELL DEVELOPMENT RECORD

Well ID: MRC-MW-159A
Site: MRC Block E
Date Installed: 1/10/2019
Date Developed: 1/18/2019
Dev. Method: SURGE + MACRO
Pump Type: MACRO MONSOON

Depth to Bottom (ft.): 9.90
Static WL Before (ft): 6.80
Static Water Level After (ft.): 8.24
Screen Length (ft.) 5'
Specific Capacity:
Casing ID (in.) 2" PVC

Responsible Personnel: Josh Mullis, Walt Pryor, Sophia Larson
Drilling Co.: GroundZero
Project Name: MRC Block E/F Mass Discharge Well Install
Project Number: 112IC08784

Time	Estimated Sediment Thickness (Ft.)	Cumulative Water Volume (Gal.)	Water Level Readings (Ft. below TOC)	Temperature (Degrees C)	pH	Specific Conductance (Units mS/cm)	Turbidity (NTU)	Remarks (odor, color, etc.)
0955 (1/17)	start surge	--	--	--	--	--	--	PID reading= 39.0
1005 (1/17)	start purge	--	6.08	3.23	7.16	0.0891	1000	--
1010 (1/17)	--	1.0 gal	well went dry let recharge 80% of original volume					--
1245 (1/17)	--		6.1	1.13	7.5	0.412	1000	--
--	--	1.0 gal	well went dry let recharge 80% of original volume					--
0835 (1/18)	--		6.05	7.7	7.11	0.001	1000	--
--	--	0.5 gal	**well purged dry a third time over multiple days, well considered developed.**					--

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event: MRC Block E/F Mass Discharge
Project Site Name: MRC Block E/F
Project No.: 112IC08784

Sample ID:	MRC-MW137A-012919	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	01/29/19
MS/MSD Collected:	NA	**Sample Time:**	1300

WELL INFORMATION:

Well ID :	MRC-MW137A	**Purge Date:**	01/28/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	3.59
Top of Screen (ft-BTOR):	5	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	10	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	10.40	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1314	3.59	-	-	-	-	-	-	-	-	Initial no odor
1315	4.30	200	7.22	1.17	8.87	2.00	9.55	88	0.6	Clear
1320	5.00	100	7.09	1.17	9.07	0.79	9.36	90	0.6	Clear
1325	5.60	100	6.94	1.18	9.60	0.26	9.17	90	0.6	Clear
1330	6.20	100	6.83	1.19	10.90	0.33	9.26	91	0.6	Clear
1335	6.80	100	6.7	1.22	25.70	0.84	9.24	98	0.6	Clear
1340	7.40	100	6.47	1.25	55.50	1.35	9.39	111	0.6	Clear
1345	8.05	100	6.39	1.23	69.10	1.05	9.54	114	0.6	Slightly cloudy
1350	Dry									
Let recharge 80% of original volume before sampling. Come back next day (1/29/19 to sample).										

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1314	1350	36	0.75	6.39	1.23	69.10	1.05	9.54	114	0.6	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	N
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 0.0 mg/L

Duplicate information:	Signature(s):
	

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW138B-020619	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/06/19
MS/MSD Collected:	NA	**Sample Time:**	1019

WELL INFORMATION:

Well ID :	MRC-MW138B	**Purge Date:**	02/06/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	3.35
Top of Screen (ft-BTOR):	12	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	17	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	17.30	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
0840	3.35	-	-	-	-	-	-	-	-	Initial no odor
0844	4.05	150	6.19	0.465	15.0	1.68	12.01	231	0.2	Clean Water
0849	4.85	150	6.62	0.452	14.3	0.40	11.92	194	0.2	
0854	5.60	100	6.74	0.446	13.6	0.10	11.90	171	0.2	
0904	7.00	100	6.77	0.452	12.4	0.00	11.23	138	0.2	
0914	8.00	100	6.79	0.451	13.1	0.00	11.30	116	0.2	
0924	9.15	100	6.81	0.456	12.9	0.00	11.09	83	0.2	
0934	10.65	100	6.82	0.461	11.5	0.00	11.43	59	0.2	
0944	11.02	100	6.80	0.462	11.4	0.00	11.51	54	0.2	
0954	11.65	100	6.79	0.466	11.5	0.00	11.43	67	0.2	
1004	12.30	100	6.60	0.515	11.4	0.00	12.10	70	0.2	
1009	13.00	100	6.57	0.518	11.2	0.00	12.12	73	0.2	
1014	13.65	100	6.55	0.521	11.1	0.00	12.15	76	0.2	

Well parameters did not stabilize after 90 min max purge purge samlping begins

FINAL PURGE / SAMPLE DATA:

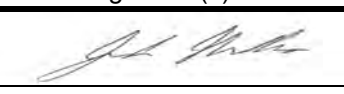
Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
0840	1014	99	2	6.55	0.521	11.1	0.00	12.15	76	0.2	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	N
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 1.0 mg/L

Duplicate information:	Signature(s):
	

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW139B-013019	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	01/30/19
MS/MSD Collected:	NA	**Sample Time:**	1356

WELL INFORMATION:

Well ID :	MRC-MW139B	**Purge Date:**	01/30/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	2.67
Top of Screen (ft-BTOR):	21	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	26	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	26.40	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1300	2.67	-	-	-	-	-	-	-	-	Initial no odor
1301	3.30	300	5.99	0.340	15.9	2.69	10.87	221	0.2	Clean Water
1306	3.40	300	6.71	0.329	15.2	0.45	9.63	121	0.2	Clean Water
1311	4.10	300	6.73	0.304	12.7	0.29	11.03	86	0.1	Clean Water
1321	4.75	250	6.83	0.300	12.4	0.00	11.18	44	0.1	Clean Water
1331	4.75	250	6.57	0.299	11.1	0.00	10.72	47	0.1	Clean Water
1336	4.75	250	6.42	0.298	10.3	0.00	10.69	50	0.1	Clean Water
1341	4.75	250	6.30	0.297	9.05	0.00	10.67	55	0.1	Clean Water
1346	4.75	250	6.24	0.301	8.4	0.00	10.27	56	0.1	Clean Water
1351	4.75	250	6.21	0.298	7.3	0.00	10.65	57	0.1	Clean Water

Well parameters stabilize sampling begins

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1300	1351	51	2	6.21	0.298	7.3	0.00	10.65	57	0.1	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	N
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 1.2 mg/L

Duplicate information:	Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW140A-012919	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	01/29/19
MS/MSD Collected:	NA	**Sample Time:**	1345

WELL INFORMATION:

Well ID :	MRC-MW140A	**Purge Date:**	01/28/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	2.85
Top of Screen (ft-BTOR):	4	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	9	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	9.15	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1400	2.85	-	-	-	-	-	-	-	-	Initial no odor
1401	3.50	200	5.07	2.08	20.20	4.15	9.09	198	1.0	clear
1406	3.90	100	4.65	2.11	10.90	3.45	8.93	216	1.1	
1411	4.40	100	4.65	2.09	14.20	2.84	8.80	223	1.0	
1416	5.12	100	4.78	2.00	45.20	2.76	8.64	225	1.0	slightly cloudy
1421	5.65	100	4.76	2.06	59.10	2.87	8.71	220	1.0	
1426	6.30	100	4.69	2.09	67.70	2.65	8.87	222	1.0	
1431	6.90	100	4.68	2.06	77.00	2.67	9.13	225	1.0	
1436	7.40	100	4.65	2.08	99.40	2.88	9.54	209	1.0	cloudy
1441	8.15	100	4.63	2.07	69.00	2.90	9.60	225	1.0	

Let recharge 80% before sampling begins. Wait to recharge, sample next day (1/29/19)

FINAL PURGE / SAMPLE DATA:

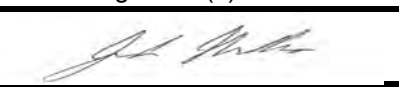
Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1400	1441	41	1	4.63	2.070	690.00	2.9	9.6	225	1	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	Y
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit:

Duplicate information:	Signature(s):
	

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW141B-020619	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/06/19
MS/MSD Collected:	NA	**Sample Time:**	1145

WELL INFORMATION:

Well ID :	MRC-MW141B	**Purge Date:**	02/06/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	3.25
Top of Screen (ft-BTOR):	12	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	17	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	17.20	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1042	3.25	-	-	-	-	-	-	-	-	Initial no odor
1045	4.10	150	6.62	0.262	4.71	1.23	11.69	133	0.1	Clean Water
1050	4.80	150	6.19	0.261	4.85	0.36	11.00	151.00	0.1	Clean Water
1055	6.15	100	6.18	0.257	4.95	0.22	12.10	157	0.1	Clean Water
1105	5.80	100	6.16	0.259	3.83	0.12	11.96	170	0.1	Clean Water
1115	6.00	100	6.12	0.256	3.30	0.10	12.01	173	0.1	Clean Water
1125	6.25	100	6.09	0.257	7.97	0.09	12.12	177	0.1	Clean Water
1130	6.33	100	6.06	0.257	3.00	0.08	12.34	177	0.1	Clean Water
1135	6.36	100	6.03	0.250	3.05	0.07	12.35	175	0.1	Clean Water
1140	6.36	100	6.02	0.249	3.10	0.07	12.37	175	0.1	Clean Water

Well parameter stabilize. Sampling begins.

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1042	1140	62	2	6.02	0.249	3.10	0.07	12.37	175	0.1	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	N
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 0.0 mg/L

Duplicate information:	Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW142B-020619	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	DUP01 Collected	**Sample Date:**	02/06/19
MS/MSD Collected:	NA	**Sample Time:**	1318

WELL INFORMATION:

Well ID :	MRC-MW142B	**Purge Date:**	02/06/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	3.40
Top of Screen (ft-BTOR):	21	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	26	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	26.30	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1211	3.40	-	-	-	-	-	-	-	-	Initial no odor
1212	3.90	300	6.81	0.292	20.1	1.15	13.46	79	0.1	Clean Water
1217	3.99	280	7.18	0.292	10.0	0.12	13.29	1	0.1	Clean Water
1222	3.95	200	7.30	0.294	9.6	0.00	12.87	-32	0.1	Clean Water
1232	3.95	200	7.00	0.272	8.4	0.00	12.44	-15	0.1	Clean Water
1242	3.95	200	6.84	0.261	7.2	0.00	12.65	0	0.1	Clean Water
1253	3.95	200	6.62	0.251	6.5	0.00	12.44	23	0.1	Clean Water
1303	3.95	200	6.52	0.249	5.9	0.00	12.36	32	0.1	Clean Water
1308	3.95	200	6.53	0.249	5.75	0.00	12.28	32	0.1	Clean Water
1313	3.95	200	6.53	0.249	5.66	0.00	12.29	33	0.1	Clean Water
Well parameters stabilze. Sampling begins.										

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1211	1313	62	2	6.53	0.249	5.66	0.00	12.29	33	0.1	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	N
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 3.5 mg/L

Duplicate information:	Signature(s):
DUP01 Collected	

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW143A-012919	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	01/29/19
MS/MSD Collected:	NA	**Sample Time:**	1445

WELL INFORMATION:

Well ID :	MRC-MW143A	**Purge Date:**	01/28/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	4.00
Top of Screen (ft-BTOR):	5	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	10	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	10.30	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1454	4.00	-	-	-	-	-	-	-	-	Initial no odor
1455	4.36	200	6.1	1.14	52.80	7.05	9.21	97	0.6	Slightly Cloudy
1500	5.00	100	6.47	1.13	21.70	6.29	9.17	59.00	0.5	Slightly Cloudy
1505	5.53	100	6.54	1.13	17.20	5.99	9.06	48	0.5	Slightly Cloudy
1510	6.10	100	6.48	1.16	13.00	5.98	8.91	47	0.6	Slightly Cloudy
1515	6.55	100	6.41	1.19	11.50	5.80	9.05	48	0.6	Slightly Cloudy
1520	7.00	100	6.3	1.23	11.30	5.58	9.04	50	0.6	Slightly Cloudy
1525	7.35	100	6.16	1.28	9.71	5.35	9.10	55	0.6	Clear Water
1530	7.65	100	6.04	1.31	10.10	5.50	9.16	66	0.6	Clear Water
1535	8.00	100	5.84	1.35	9.50	4.96	9.41	68	0.7	Clear Water
1540	8.40	100	5.75	1.36	7.68	5.17	9.60	71	0.7	Clear Water
1545	8.95	100	5.58	1.35	6.83	4.42	9.92	72	0.7	Clear Water
1550	9.40	100	5.52	1.42	13.80	3.88	10.02	60	0.7	Clear Water

Let Recharge 80% before sampling begins. Wait for recharge, come back next day to sample (1/29/19)

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1454	1555	61	1.7	5.52	1.420	13.80	3.9	10.02	60	0.7	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	N
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 1.0 mg/L

Duplicate information:	Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW144B-020719	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/07/19
MS/MSD Collected:	NA	**Sample Time:**	1100

WELL INFORMATION:

Well ID :	MRC-MW144B	**Purge Date:**	02/07/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	3.07
Top of Screen (ft-BTOR):	12	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	17	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	17.20	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
0955	3.07	-	-	-	-	-	-	-	-	START
1000	3.97	300	7	0.301	25.40	1.29	11.89	18	0.1	clear
1005	4.40	300	6.81	0.301	27.80	0.32	11.58	-11.00	0.1	clear
1010	5.35	300	6.77	0.298	25.60	0.00	11.55	-22	0.1	clear
1015	5.55	250	6.74	0.295	27.80	0.00	11.69	-27	0.1	clear
1020	5.70	250	6.69	0.291	26.50	0.00	11.67	-28	0.1	clear
1025	5.90	250	6.62	0.284	22.70	0.00	11.71	-27	0.1	clear
1030	5.95	250	6.6	0.281	18.70	0.00	11.69	-25	0.1	clear
1035	6.01	250	6.54	0.275	16.90	0.00	11.71	-22	0.1	clear
1040	6.12	250	6.48	0.271	14.10	0.00	11.78	-19	0.1	clear
1045	6.15	250	6.43	0.266	12.10	0.00	11.82	-15	0.1	clear
1050	6.22	250	6.38	0.261	12.15	0.00	11.97	-11	0.1	clear
1055	6.25	250	6.36	0.259	9.51	0.00	12.01	-10	0.1	clear
1100	6.28	250	6.32	0.250	10.03	0.00	12.09	-7	0.1	clear

2 gallons purged, samplle at 1100, 28 Ferrous Iron Kit

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
0955	1100	65	2	6.32	0.250	10.03	0.00	12.09	-7	0.1	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	N
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 1.0 mg/L

Duplicate information:	Signature(s):
Duplicate information:	**Signature(s):**

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW145A-021319	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/13/19
MS/MSD Collected:	NA	**Sample Time:**	1030

WELL INFORMATION:

Well ID :	MRC-MW145A	**Purge Date:**	02/07/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	3.59
Top of Screen (ft-BTOR):	5	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	10	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	10.35	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1120	3.59	-	-	-	-	-	-	-	-	Start
1125	5.00	300	4.72	2.18	114.0	6.62	10.07	157	1.1	Cloudy
1130	5.59	300	4.72	2.21	59.2	6.47	9.80	158	1.1	Cloudy
1135	6.30	300	4.67	2.23	42.9	6.34	9.55	160	1.1	Cloudy
1140	6.96	300	4.62	2.23	39.7	6.05	9.51	163	1.1	v. sl. Cloudy
1145	7.59	300	4.59	2.23	37.7	6.01	9.60	165	1.1	v. sl. Cloudy
1150	8.45	300	4.52	2.24	97.6	5.65	9.70	169	1.1	Cloudy
1155	9.45	300	4.50	2.25	150.2	4.34	10.27	149	1.1	Turbid
1200	Dry at 1200, retun 2/8/19 to sample									
2/13/19 Collect sample at 1030. Ferrous Iron 1.5 mg/L. Wait for recharge, sample date (2/13/19).										

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1120	1200	40	10.3	4.50	2.25	150.2	4.34	10.27	149	1.1	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	Y
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 1.5 mg/L

Duplicate information:	Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW146B-020719	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/07/19
MS/MSD Collected:	NA	**Sample Time:**	1300

WELL INFORMATION:

Well ID :	MRC-MW146B	**Purge Date:**	02/07/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	3.52
Top of Screen (ft-BTOR):	12	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	17	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	17.25	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1200	3.52	-	-	-	-	-	-	-	-	start
1205	4.40	250	4.22	0.944	484.00	2.90	11.62	142	0.5	cloudy
1210	4.90	250	4.18	0.931	46.90	2.78	11.83	138	0.5	slightly coudy
1215	5.42	250	4.17	0.923	27.00	2.67	12.01	138	0.5	v. slightly coudy
1220	5.55	250	4.18	0.921	26.00	2.44	12.09	137	0.4	clear
1225	5.65	250	4.2	0.921	21.50		12.16	137	0.4	clear
1230	5.81	250	4.24	0.925	15.90	1.93	12.29	137	0.5	clear
1235	5.90	250	4.28	0.927	15.10	1.67	12.46	135	0.5	clear
1240	6.04	250	4.31	0.925	12.20	1.48	12.56	135	0.5	clear
1245	6.09	250	4.31	0.922	10.84	1.35	12.66	135	0.5	clear
1250	6.10	250	4.33	0.922	10.84	1.16	12.80	135	0.5	clear
1255	6.10	250	4.34	0.922	9.73	1.06	12.84	136	0.5	clear

Sample at 1300. 25 gallons purged. 2.2 Ferrous Iron Kit

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1200	1255	55	2.5	4.34	0.922	9.73	1.06	12.84	136	0.5	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	N
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 2.2 mg/L

Duplicate information:	Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW147B-020719	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/07/19
MS/MSD Collected:	NA	**Sample Time:**	1355

WELL INFORMATION:

Well ID :	MRC-MW147B	**Purge Date:**	02/07/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	3.32
Top of Screen (ft-BTOR):	21	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	26	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	26.56	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1300	3.32	-	-	-	-	-	-	-	-	Start
1305	3.85	300	6.02	0.234	80.70	0.52	12.89	103	0.1	Cloudy
1310	4.08	300	6.28	0.219	42.40	0.00	12.88	83	0.1	Cloudy
1315	4.08	300	6.25	0.212	28.60	0.00	12.88	82	0.1	Clear
1320	4.08	300	6.22	0.210	22.00	0.00	12.88	82	0.1	Clear
1325	4.08	300	6.16	0.205	18.60	0.00	12.90	85	0.1	Clear
1330	4.08	300	6.10	0.205	13.70	0.00	12.92	89	0.1	Clear
1335	4.08	300	6.03	0.197	11.60	0.36	12.97	95	0.1	Clear
1340	4.08	300	6.00	0.197	10.58	0.38	12.99	97	0.1	Clear
1345	4.08	300	5.97	0.195	10.21	0.45	13.06	102	0.1	Clear
1350	4.08	300	5.96	0.194	10.00	0.45	13.08	103	0.1	Clear
1355	4.08	300	5.95	0.194	9.80	0.46	13.09	104	0.1	Clear
Sample at 1355. Ferrous Iron 2.6.										

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1300	1355	55	2	5.95	0.194	9.80	0.46	13.09	104	0.1	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	N
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 2.6mg/L

Duplicate information:	Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW148A-021319	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/13/19
MS/MSD Collected:	NA	**Sample Time:**	1115

WELL INFORMATION:

Well ID :	MRC-MW148A	**Purge Date:**	02/07/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	2.90
Top of Screen (ft-BTOR):	5	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	10	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	10.40	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1355	2.90	-	-	-	-	-	-	-	-	Start
1400	3.93	250	6.83	0.958	34.0	4.21	11.57	82	0.5	clear
1405	4.79	250	6.86	0.959	30.7	4.18	11.14	95	0.5	clear
1410	5.23	250	6.86	0.976	27.6	4.28	10.67	105	0.5	clear
1415	5.75	250	6.86	0.998	27.0	4.30	10.26	110	0.5	clear
1420	6.56	250	6.84	1.010	33.7	4.31	10.00	117	0.5	clear
1425	7.35	250	6.53	0.993	72.1	3.50	9.84	136	0.5	clear
1430	8.11	250	9.87	0.991	12.2	3.64	9.87	139	0.5	clear
1435	9.06	250	6.44	0.994	12.200	3.75	9.82	143	0.5	clear
1437	Dry, wait for recharge. Sample date (2/13/19)									

FINAL PURGE / SAMPLE DATA:

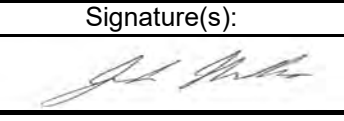
Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1355	1437	42	2	6.44	0.994	12.200	3.75	9.82	143	0.5	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	N
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 2.0 mg/L

Duplicate information:	Signature(s):
	

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW149B-020819	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/08/19
MS/MSD Collected:	NA	**Sample Time:**	0925

WELL INFORMATION:

Well ID :	MRC-MW149B	**Purge Date:**	02/08/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	2.89
Top of Screen (ft-BTOR):	12	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	17	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	17.30	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
0825	2.89	-	-	-	-	-	-	-	-	-
0830	3.65	300	4.25	0.715	16.2	9.69	15.52	200	0.3	Clear
0835	3.89	300	4.26	0.721	12.1	7.28	13.94	173	0.4	Clear
0840	4.11	300	4.26	0.743	13.8	6.25	12.97	170	0.4	Clear
0845	4.2	300	4.26	0.757	13.6	5.37	12.31	175	0.4	Clear
0850	4.22	300	4.26	0.761	13.5	4.95	12.04	175	0.4	Clear
0855	4.25	300	4.26	0.773	12.4	4.15	11.58	182	0.4	Clear
0900	4.26	300	4.26	0.778	11.8	3.81	11.37	185	0.4	Clear
0905	4.26	300	4.25	0.793	12.55	2.92	10.95	196	0.4	Clear
0910	4.26	300	4.25	0.794	12.22	2.81	10.91	196	0.4	Clear
0915	4.26	300	4.24	0.798	12.02	2.46	10.73	201	0.4	Clear
0920	4.26	300	4.23	0.800	12.05	2.46	10.45	199	0.4	Clear
0925	sample									

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
0825	0925	60	2	4.23	0.800	12.05	2.46	10.45	199	0.4	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	N
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 2.0 mg/L

mg

Duplicate information:	Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW150B-020819	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/08/19
MS/MSD Collected:	NA	**Sample Time:**	1110

WELL INFORMATION:

Well ID :	MRC-MW150B	**Purge Date:**	02/08/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	2.67
Top of Screen (ft-BTOR):	20	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	25	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	25.50	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1015	2.67	-	-	-	-	-	-	-	-	
1020	3.00	250	5.34	0.120	10.51	1.70	9.51	89	0.1	clear
1025	3.05	250	5.33	0.114	8.04	1.54	9.56	70.00	0.1	clear
1030	3.07	250	5.32	0.112	8.47	1.44	9.74	64	0.1	clear
1035	3.09	250	5.31	0.112	7.69	1.38	9.89	61	0.1	clear
1040	3.09	250	5.31	0.112	8.12	1.39	9.95	61	0.1	clear
1045	3.10	250	5.31	0.112	8.00	1.34	10.05	61	0.1	clear
1050	3.10	250	5.31	0.113	7.45	1.29	10.24	62	0.1	clear
1055	3.10	250	5.30	0.113	7.30	1.23	10.31	63	0.1	clear
1100					7.48					clear
1105	3.10	250	5.29	0.114	8.49	10.82	10.82	67	0.1	clear
1110	sample									

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1015	1110	55	2	5.29	0.114	8.49	10.82	10.82	67	0.1	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	N
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 2.4 mg/L

Duplicate information:	Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW151A-020419	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	01/29/19
MS/MSD Collected:	NA	**Sample Time:**	1420

WELL INFORMATION:

Well ID :	MRC-MW151A	**Purge Date:**	01/29/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	7.80
Top of Screen (ft-BTOR):	10	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	15	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	14.90	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
0821	7.80	-	-	-	-	-	-	-	-	Initial no odor
0823	8.50	150	6.18	0.327	4.14	12.04	12.21	194	0.2	clear
0828	8.95	100	6.12	0.320	2.52	10.95	11.98	204	0.2	
0833	9.70	100	6.10	0.325	2.65	10.51	11.92	214	0.2	
0838	10.70	100	6.05	0.336	2.74	11.66	11.67	221	0.2	
0843	11.32	100	6.04	0.336	2.50	10.95	11.46	224	0.1	
0848	11.92	100	6.03	0.336	2.34	10.24	11.39	227	0.1	
0853	12.25	100	5.85	0.320	2.35	9.99	11.00	234	0.1	
0858	12.70	100	5.72	0.316	2.37	9.81	10.84	243	0.1	
0908	13.80	100	5.85	0.319	2.99	9.91	10.39	243	0.2	
0913	14.00	100	5.95	0.315	3.90	9.48	11.26	240	0.1	
0918	Dry, Let Recharge 90% Before Sampling Begins									

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
0821	0918	50	1	5.95	0.315	3.90	9.5	11.26	240	0.1	

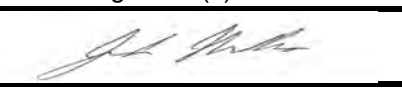
ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	Y
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH

Ferrous Iron Kit:

Duplicate information:	Signature(s):
	

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW152B-012919	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	01/29/19
MS/MSD Collected:	NA	**Sample Time:**	1043

WELL INFORMATION:

Well ID :	MRC-MW152B	**Purge Date:**	01/29/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	5.97
Top of Screen (ft-BTOR):	18	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	28	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	28.00	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
0926	5.97	-	-	-	-	-	-	-	-	Initial no odor
0928	6.55	200	5.87	0.221	10.50	1.32	10.43	216	0.1	Clean water
0933	7.15	100	5.82	0.221	12.10	0.49	0.72	194	0.1	Clean water
0938	7.30	100	5.82	0.221	12.80	0.32	10.78	183	0.1	Clean water
0943	7.45	100	5.82	0.221	13.20	0.27	10.83	177	0.1	Clean water
0953	7.57	100	5.81	0.220	12.20	0.17	10.97	166	0.1	Clean water
1003	7.65	100	5.80	0.220	12.40	0.05	10.99	140	0.1	Clean water
1008	7.66	100	5.81	0.222	12.30	0.00	11.15	125	0.1	Clean water
1013	7.67	100	5.82	0.223	12.50	0.00	11.25	117	0.1	Clean water
1018	7.69	100	5.83	0.229	12.30	0.00	11.26	109	0.1	Clean water
1028	7.72	100	5.84	0.245	6.62	0.00	11.23	78	0.1	Clean water
1033	7.72	100	5.84	0.247	6.60	0.00	11.28	75	0.1	Clean water
1038	7.72	100	5.83	0.247	6.67	0.00	11.25	72	0.1	Clean water

Well Parameters stabilize. Sampling Begins.

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
0926	1038	72	2	5.93	0.247	6.67	0.0	11.25	72	0.1	

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	Y
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 1.2 mg/L

Duplicate information:	Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW153A-0129	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	01/30/19
MS/MSD Collected:	NA	**Sample Time:**	1100

WELL INFORMATION:

Well ID :	MRC-MW153A	**Purge Date:**	01/29/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	4.80
Top of Screen (ft-BTOR):	9	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	14	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	14.20	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1147	4.80	120	-	-	-	-	-	-	-	Initial no odor
1150	5.50	100	4.63	0.699	3.60	8.48	7.63	162	0.3	Clear
1155	6.22	100	4.55	0.695	1.64	8.06	8.42	162	0.3	
1200	7.10	100	4.54	0.692	1.78	7.89	8.69	162	0.3	
1205	7.85	100	4.53	0.682	1.64	7.81	9.00	163	0.3	
1210	8.55	100	4.52	0.679	2.38	7.80	9.18	163	0.3	
1215	9.40	100	4.51	0.682	10.20	7.54	10.69	182	0.3	
1220	9.45	100	4.52	0.656	33.70	7.35	11.29	167	0.3	
1230	10.75	100	4.59	0.588	64.10	7.52	11.46	170	0.3	
1235	11.30	100	4.55	0.647	56.20	7.56	11.04	170	0.3	
1240	12.30	100	4.46	0.676	61.00	6.74	11.76	167	0.3	

Well went dry, let recharge 80% before sampling begins.

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1147	1240	53	1.5	4.46	0.676	61.00	6.7	11.76	167	0.3	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	Y
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit:

Duplicate information:	Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW154A-021319	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/13/19
MS/MSD Collected:	NA	**Sample Time:**	1020

WELL INFORMATION:

Well ID :	MRC-MW154A	**Purge Date:**	02/04/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	4.10
Top of Screen (ft-BTOR):	5	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	10	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	10.01	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
0853	4.10	-	-	-	-	-	-	-	-	Initial no odor
0855	4.80	200	5.77	0.553	8.8	8.17	12.20	245	0.3	Clean Water
0900	5.38	100	6.28	0.538	8.2	7.02	10.95	237	0.3	
0905	5.70	100	6.32	0.548	5.8	7.16	9.79	236	0.3	
0910	6.47	100	6.38	0.547	5.3	6.90	9.63	235	0.3	
0915	7.05	100	6.38	0.545	7.8	6.79	9.72	235	0.3	
0920	7.71	100	6.28	0.540	12.1	6.44	9.94	240	0.3	
0925	8.25	100	6.25	0.542	50.2	6.70	10.25	240	0.3	
0930	8.90	100	6.22	0.538	76.3	6.34	10.57	242	0.3	
0935	9.45	100	6.23	0.536	53.8	6.23	10.84	241	0.3	
0940	Dry									1.5 gallons
1015	5.45	100								
1020	sample	100								at 0850 WL 9.35
1140	10.00	Dry. Wait for recharge, sample on 2/13/19,								

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
0853	1140	72	1.5	6.23	0.536	53.8	6.23	10.84	241	0.3	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	Y
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 2.2 mg/L

Duplicate information:	Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW155A-020519	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/05/19
MS/MSD Collected:	NA	**Sample Time:**	0900

WELL INFORMATION:

Well ID :	MRC-MW155A	**Purge Date:**	2/4/2019-2/5/2019
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	3.62
Top of Screen (ft-BTOR):	4	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	9	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	9.88	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
0947	3.62	-	-	-	-	-	-	-	-	Initial no odor
0949	4.40	200	6.73	0.732	4.20	6.86	10.35	222	0.4	
0954	4.60	100	6.96	0.726	7.10	6.09	10.64	222	0.4	
0959	5.50	100	6.97	0.714	5.00	5.87	10.86	221	0.3	
1004	5.82	100	6.98	0.711	5.70	5.85	10.89	220	0.3	
1009	6.40	100	6.96	0.685	6.70	5.73	10.80	220	0.3	
1015	7.10	100	6.93	0.678	5.20	5.48	10.98	220	0.3	
1019	7.40	100	6.91	0.696	13.40	5.73	10.25	220	0.3	
1024	7.85	100	6.91	0.711	11.70	5.09	10.67	219	0.3	
1029	8.60	100	6.90	0.713	13.50	4.80	11.26	218	0.3	
1034	Dry									1.25 gallons
0855	4.1				7.1					
0900	Collect sample 2/5/19									

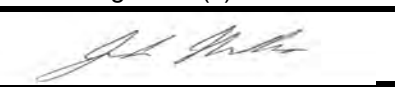
Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
0947	1034	47	1.25	6.90	0.713	13.50	4.80	11.26	218	0.3	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	Y
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 0.0 mg/L

Duplicate information:	Signature(s):
	

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW156A-020719	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/07/19
MS/MSD Collected:	NA	**Sample Time:**	0850

WELL INFORMATION:

Well ID :	MRC-MW156A	**Purge Date:**	02/04/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	3.55
Top of Screen (ft-BTOR):	9	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	14	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	13.80	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1053	3.55	-	-	-	-	-	-	-	-	Initial no odor
1058	4.2	200	7.5	0.602	15.40	3.06	12.41	191	0.3	
1103	5.62	100	7.66	0.616	14.90	2.42	11.27	162.00	0.3	
1108	6.3	100	7.66	0.618	7.50	2.42	11.14	147	0.3	
1113	7.19	100	7.67	0.616	4.80	2.72	11.28	135	0.3	
1118	7.75	100	7.64	0.610	4.00	2.54	11.78	133	0.3	
1123	8.3	100	7.62	0.625	4.80	2.30	11.66	132	0.3	
1128	9.25	100	7.59	0.628	10.90	2.39	12.10	130	0.3	
1133	Dry. Wait for recharge, sample date 2/7/19									1.0 gallon
0857	7.5				7.5					sample

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1053	1133	40	1	7.59	0.628	10.90	2.39	12.10	130	0.3	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	Y
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 1.5 mg/L

Duplicate information:	Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW157A-020519	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/05/19
MS/MSD Collected:	NA	**Sample Time:**	1255

WELL INFORMATION:

Well ID :	MRC-MW157A	**Purge Date:**	02/04/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	7.55
Top of Screen (ft-BTOR):	9	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	14	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	14.18	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1259	7.55	-	-	-	-	-	-	-	-	Initial no odor
1301	8.26	200	8.02	0.264	36.70	1.29	15.23	126	0.1	
1306	9.05	100	8.21	0.254	30.60	0.47	14.40	116	0.1	
1311	9.33	100	8.24	0.254	30.80	0.32	13.88	109	0.1	
1316	9.35	100	7.72	0.264	26.60	0.34	13.67	39	0.1	
1321	10.06	100	7.06	0.279	23.10	0.71	13.10	65	0.1	
1326	10.7	100	6.94	0.284	20.80	0.71	12.76	82	0.1	
1331	11.45	100	6.95	0.250	14.00	1.40	12.74	96	0.1	
1336	Dry. Wait for recharge, sample date 2/5/19									1.2 gallons
0856	7.3									collect samlpe 2/5/19
1255					10.5					

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1259	1336	37	1.2	6.95	0.250	14.00	1.40	12.74	96	0.1	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	Y
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 0.0 mg/L

Duplicate information:	Signature(s):

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW158A-020619	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/06/19
MS/MSD Collected:	NA	**Sample Time:**	1430

WELL INFORMATION:

Well ID :	MRC-MW158A	**Purge Date:**	02/04/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	6.75
Top of Screen (ft-BTOR):	5	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	10	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	9.80	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
1343	6.75	-	-	-	-	-	-	-	-	Initial no odor
1345	7.24	200	7.29	7.29	0.96	4.00	14.3	135.0	0.5	Clean Water
1350	7.72	100	7.37	7.37	1.00	3.23	13.7	134.0	0.5	
1355	8.63	100	7.36	7.36	1.05	2.75	12.4	134.0	0.5	
1400	9.45	100	7.34	7.34	1.05	2.49	13.1	132.0	0.5	
1405	Dry. Wait for recharge, sample date 2/5/19									1.0 Gallons
0859	6.72									sample 2/5/19

FINAL PURGE / SAMPLE DATA:

Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
1343	1405	22	1	7.34	7.34	1.05	2.49	13.1	132.0	0.5	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	Y
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 0.0 mg/L

Duplicate information:	Signature(s):
MRC-DUP01-020619	

GROUNDWATER SAMPLE LOG SHEET

Tetra Tech, Inc.

Event:	MRC Block E/F Mass Discharge
Project Site Name:	MRC Block E/F
Project No.:	112IC08784

Sample ID:	MRC-MW159A-020519	**Sampled By:**	Josh Mullis, Walt Pryor, Sophia Larson
QA/QC Duplicate ID:	NA	**Sample Date:**	02/05/19
MS/MSD Collected:	NA	**Sample Time:**	1014

WELL INFORMATION:

Well ID :	MRC-MW159A	**Purge Date:**	02/05/19
Well Diameter (in):	2" PVC	**Static Water Level (ft-BTOR):**	6.13
Top of Screen (ft-BTOR):	5	**PID Monitor Reading:**	N/A
Bottom of Screen (ft-BTOR):	10	**Purge Method:**	Geopump II Peristaltic Pump
Total Well Depth (ft-BTOR):	9.90	**Sample Method:**	Low Flow - Direct Fill

MONITORING WELL INSPECTION

Condition of Seal:
( ) None (x) Good ( ) Cracked

Condition of Protective Casing:
(x) Good ( ) Damaged ( ) Loose ( ) None Present

Inner Casing: (x) PVC ( ) Steel ( ) None
Condition: (x) Good ( ) Cracked/Broken

EQUIPMENT INFORMATION:

Water Quality Instrument:	Horiba U-52	**Pump Controller:**	Geopump II Peristaltic Pump
Turbidity Meter:	LaMotte 2020e		

PURGE DATA:

Time (Hrs)	Water Level (ft. below TOC)	Flow mL / min.	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	Comments
922	6.13	-	-	-	-	-	-	-	-	Initial no odor
924	6.45	150	8.43	0.733	27.200	3.86	11.93	234	0.1	Slightly Cloudy
929	6.6	100	7.53	0.745	19.200	3.30	11.30	210.00	0.1	Slightly Cloudy
934	6.72	100	7.35	0.769	15.400	3.15	10.76	192	0.1	Slightly Cloudy
939	6.85	100	7.05	0.799	12.700	3.08	10.09	180	0.1	Slightly Cloudy
944	6.85	100	7.02	0.820	10.500	3.07	9.88	164	0.1	Clean Water
949	6.85	100	7.01	0.824	9.200	3.05	9.78	158	0.1	Clean Water
954	6.85	100	7.00	0.826	7.600	3.05	9.78	154	0.1	Clean Water
959	6.85	100	7.00	0.822	6.700	3.01	9.79	153	0.1	Clean Water
1004	6.85	100	7.00	0.822	6	3.06	9.70	153	0.1	Clean Water
1009	6.85	100	7.01	0.818	5.9	3.04	9.67	151	0.1	Clean Water

Well Parameter Stabilize. Sampling Begins.

FINAL PURGE / SAMPLE DATA:

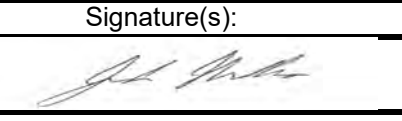
Start Purge	End Purge	Total (min.)	Total Vol. (gal.)	pH (S.U.)	S.C. (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (mV)	Salinity (ppt)	
0922	1009	47	2	7.01	0.818	5.9	3.04	9.67	151	0.1	

ANALYSIS, PRESERVATION AND BOTTLE REQUIRMENTS

Analysis	Method	Preservative	Number	Vol.	Bottle Type	Collected
VOCs	8260C	HCl	3	40 mL	glass vials	Y
PCBs	680	None	2	1 L	amber glass	Y
Total Metals, Iron and Manganese	6020A, 6010C	HNO3	1	500 mL	poly	Y
Total Hardness	2340C	HNO3	1	250 mL	poly	Y
Alkalinity	2320B	None	1	250 mL	poly	Y
Sulfate, Bromide, TDS, Nitrates	9056A, 4500, 300, 2540C	None	1	500 mL	poly	Y
Salinity	2520B	None	1	250 mL	poly	Y

OBSERVATIONS / NOTES:

All samples shipped to TestAmerica in North Canton, OH
Ferrous Iron Kit: 0.0 mg/L

Duplicate information:	Signature(s):
	

APPENDIX E—PRECISION SURVEY REPORT

PRECISION
SURVEY AND MAPPING LLC
Using Modern Technology to Map America

Date: February 20, 2019

Tetra Tech
20251 Century Boulevard, Suite 200,
Germantown, MD 20874-7114

Re: MRC Well Monitoring Report

Attn: Mr. Michael Martin

Dear Mr. Martin,

In accordance with your request, I am providing this letter and attachment which represents the measurements associated with the MRC Monitoring Well Locations performed in February 2019.

The datum used for the measurements are based on the Maryland Coordinate System NAD83/2011 epoch 2011 for horizontal position and NAVD88 for vertical position.

Feel free to give me a call if you have any questions or require additional information regarding the effort.

Thank you,





Charles S. Ruzicka, L.S., President
Professional Land Surveyor MD/DE/DC
Office: 410-459-2124
Cell: 410-925-0080
chuck@precisionsurveys.us

MRC Well Monitoring - February 2019					
Point	Northing	Easting	Elevation	Description	Comment
100	605015.9260	1474260.8490	4.49	MW137A	TOP PVC
101	605016.0050	1474260.9020	4.77	MW137A	AT GRD
102	605018.0790	1474262.5780	4.76	MW138B	AT GRD
103	605017.9720	1474262.5040	4.52	MW138B	TOP PVC
104	605024.3160	1474262.4470	4.97	MW139B	AT GRD
105	605024.2370	1474262.4100	4.69	MW139B	TOP PVC
106	605035.6130	1474281.4960	4.96	MW140A	AT GRD
107	605035.6660	1474281.4980	4.74	MW140A	TOP PVC
108	605037.3040	1474283.4690	5.04	MW141B	AT GRD
109	605037.3370	1474283.5560	4.71	MW141B	TOP PVC
110	605038.9710	1474285.4170	5.05	MW142B	AT GRD
111	605039.0450	1474285.4760	4.62	MW142B	TOP PVC
112	605054.4900	1474302.3600	5.38	MW143A	AT GRD
113	605054.5360	1474302.3970	5.08	MW143A	TOP PVC
114	605056.1830	1474304.3330	5.32	MW144B	AT GRD
115	605056.2560	1474304.3500	5.13	MW144B	TOP PVC
116	605074.0810	1474321.1230	5.63	MW145A	AT GRD
117	605074.1810	1474321.1520	5.37	MW145A	TOP PVC
118	605076.2200	1474322.8620	5.62	MW146B	AT GRD
119	605076.3010	1474322.8430	5.42	MW146B	TOP PVC
120	605078.4240	1474324.8440	5.30	MW147B	AT GRD
121	605078.4780	1474324.9780	5.08	MW147B	TOP PVC
122	605095.9160	1474343.4110	5.22	MW148A	AT GRD
123	605095.8960	1474343.3510	5.15	MW148A	TOP PVC
124	605098.3990	1474345.3120	5.39	MW149B	AT GRD
125	605098.4630	1474345.3900	5.17	MW149B	TOP PVC
126	605100.8130	1474347.6340	5.36	MW150B	AT GRD
127	605100.8680	1474347.6900	5.09	MW150B	TOP PVC
128	605230.7240	1474188.7300	9.82	MW151A	AT GRD
129	605230.6610	1474188.6790	9.48	MW151A	TOP PVC
130	605231.7970	1474190.2820	9.88	MW152B	AT GRD
131	605231.7300	1474190.1910	9.63	MW152B	TOP PVC
132	605240.7850	1474221.3120	8.82	MW153A	AT GRD
133	605240.7480	1474221.1940	8.58	MW153A	TOP PVC
134	605249.3640	1474239.6750	8.81	MW154A	AT GRD
135	605249.3020	1474239.5890	8.52	MW154A	TOP PVC
136	605265.3230	1474278.0670	8.73	MW155A	AT GRD
137	605265.2940	1474277.8990	8.49	MW155A	TOP PVC
138	605342.8750	1474152.5940	11.85	MW156A	AT GRD
139	605342.8950	1474152.6960	11.59	MW156A	TOP PVC
140	605352.2420	1474186.1030	11.92	MW157A	AT GRD
141	605352.2280	1474186.1890	11.54	MW157A	TOP PVC
142	605368.5520	1474216.9760	11.93	MW158A	AT GRD
143	605368.4040	1474217.0180	11.57	MW158A	TOP PVC
144	605379.9170	1474243.3940	11.67	MW159A	AT GRD
145	605379.8120	1474243.3520	11.29	MW159A	TOP PVC

170	605329.3050	1474187.1390	11.70	SEMW4S	TOP PVC
171	605329.4390	1474187.0630	11.70	SEMW4I	TOP PVC
172	605329.3740	1474187.0530	12.04	SEMW4S-I	AT GRD
173	605321.5430	1474195.1440	11.54	SEMW5S	TOP PVC
174	605321.4940	1474195.1990	11.55	SEMW5I	TOP PVC
175	605321.5010	1474195.1310	11.88	SEMW5S-I	AT GRD
176	605985.2610	1473309.4490	31.05	IWN4	TOP PVC 4IN
177	605985.0270	1473309.4020	31.89	IWN4	AT GRD
178	605939.5690	1473309.8680	27.76	IWN5	TOP PVC 4IN
179	605939.6040	1473309.9800	28.62	IWN5	AT GRD
180	605953.6950	1473284.2160	29.73	IWN1	TOP PVC 4IN
181	605953.6200	1473284.1900	30.52	IWN1	AT GRD
182	605927.9340	1473285.8700	27.00	IWN2	TOP PVC 4IN
183	605928.0110	1473285.9450	27.90	IWN2	AT GRD
184	605903.6380	1473287.7040	25.58	IWN3	AT GRD
185	605903.8950	1473287.5340	25.33	IWN3	TOP PVC
186	605909.8480	1473309.6870	25.54	IWN6	AT GRD
187	605890.0490	1473309.9630	24.35	IWN7	AT GRD
188	605890.0010	1473309.9090	23.79	IWN7	TOP PVC
189	605860.1590	1473309.8730	24.43	IWN8	AT GRD
190	605860.1270	1473309.7200	23.68	IWN8	TOP PVC
191	605272.5020	1472571.1930	20.24	IWW-1	AT GRD
192	605272.2730	1472571.2610	19.35	IWW-1	TOP PVC
193	605252.4520	1472593.5080	19.98	IWW-2	AT GRD
194	605252.3380	1472593.2810	19.40	IWW-2	TOP PVC
195	605232.6960	1472616.3120	19.70	IWW-3	AT GRD
196	605232.7030	1472616.1770	18.90	IWW-3	TOP PVC
197	605213.1940	1472638.6490	19.32	IWW-4	AT GRD
198	605213.1270	1472638.4370	18.71	IWW-4	TOP PVC
199	605193.2140	1472661.3050	18.94	IWW-5	AT GRD
200	605193.3200	1472661.0500	18.37	IWW-5	TOP PVC
201	605173.3480	1472684.0340	18.73	IWW-6	AT GRD
202	605173.4950	1472683.7860	18.00	IWW-6	TOP PVC
203	605153.4650	1472706.4200	18.55	IWW-7	AT GRD
204	605153.5160	1472706.1890	17.80	IWW-7	TOP PVC
205	605134.2490	1472728.8470	18.27	IWW-8	AT GRD
206	605134.2760	1472728.6490	17.66	IWW-8	TOP PVC
207	605213.7120	1472550.5540	18.83	IWW-9	AT GRD
208	605214.0950	1472550.6080	17.90	IWW-9	TOP PVC
209	605192.4630	1472575.6170	18.70	IWW-10	AT GRD
210	605192.4850	1472575.7730	17.96	IWW-10	TOP PVC
211	605127.5240	1472650.0790	17.68	IWW-15	AT GRD
212	605127.5150	1472650.5200	17.05	IWW-15	TOP PVC
213	605156.2650	1472534.6850	16.72	IWW-11	AT GRD
214	605156.1880	1472534.8390	15.96	IWW-11	TOP PVC
215	605149.5620	1472571.0430	17.06	IWW-12	AT GRD
216	605149.6000	1472570.7970	16.11	IWW-12	TOP PVC
217	605145.1070	1472593.7110	17.30	IWW-13	AT GRD
218	605145.0090	1472593.9500	16.52	IWW-13	TOP PVC
219	605133.1380	1472620.8040	16.96	IWW-14	AT GRD
220	605132.8990	1472620.8660	16.19	IWW-14	TOP PVC

221	605094.6740	1472529.1160	14.86	IWW-16	AT GRD
222	605094.7330	1472529.0190	14.01	IWW-16	TOP PVC
223	605089.9630	1472555.2480	14.70	IWW-17	AT GRD
224	605089.7580	1472555.4090	13.97	IWW-17	TOP PVC
225	605084.5550	1472584.9920	15.26	IWW-18	AT GRD
226	605084.3690	1472585.1010	14.65	IWW-18	TOP PVC
227	605079.2460	1472614.0960	14.93	IWW-19	AT GRD
228	605079.0480	1472614.3360	14.54	IWW-19	TOP PVC
229	605073.6460	1472642.8380	15.23	IWW-20	AT GRD
230	605073.6540	1472643.2690	14.64	IWW-20	TOP PVC
231	605067.8760	1472672.4900	16.36	IWW-21	AT GRD
232	605067.7460	1472672.8590	15.38	IWW-21	TOP PVC
233	605063.9320	1472694.8090	16.97	IWW-22	AT GRD
234	605063.6930	1472694.8220	16.42	IWW-22	TOP PVC
235	605037.3950	1472513.8190	13.73	IWW-23	AT GRD
236	605037.2840	1472513.8370	12.88	IWW-23	TOP PVC
237	605032.3170	1472539.6530	13.65	IWW-24	AT GRD
238	605032.1960	1472539.7430	13.28	IWW-24	TOP PVC
239	605026.3760	1472569.2590	13.78	IWW-25	AT GRD
240	605026.2150	1472569.4300	13.03	IWW-25	TOP PVC
241	605021.0200	1472598.8420	13.77	IWW-26	AT GRD
242	605020.8850	1472598.9880	12.99	IWW-26	TOP PVC
243	605015.1540	1472628.5030	14.16	IWW-27	AT GRD
244	605015.1060	1472628.6190	13.54	IWW-27	TOP PVC
245	605009.7620	1472657.7430	15.25	IWW-28	AT GRD
246	605009.7140	1472658.0320	14.47	IWW-28	TOP PVC
247	605004.1850	1472687.1390	16.05	IWW-29	AT GRD
248	605004.1330	1472687.3580	15.19	IWW-29	TOP PVC
249	604974.6510	1472514.1660	12.01	IWW-30	AT GRD
250	604974.3530	1472514.5910	11.48	IWW-30	TOP PVC
251	604969.8920	1472542.4860	12.37	IWW-31	AT GRD
252	604969.6510	1472542.6430	11.66	IWW-31	TOP PVC
253	604964.5370	1472569.9980	12.48	IWW-32	AT GRD
254	604964.3260	1472570.0440	11.67	IWW-32	TOP PVC
255	604959.7540	1472597.5520	13.14	IWW-33	AT GRD
256	604959.5590	1472597.7950	12.22	IWW-33	TOP PVC
257	604954.3200	1472626.4690	13.12	IWW-34	AT GRD
258	604954.1060	1472626.6110	12.34	IWW-34	TOP PVC
259	604948.4320	1472654.8030	13.85	IWW-35	AT GRD
260	604948.5310	1472654.7450	13.26	IWW-35	TOP PVC
261	604917.4850	1472521.0340	11.40	IWW-36	AT GRD
262	604917.3250	1472520.9940	10.62	IWW-36	TOP PVC
263	604910.7260	1472550.0940	11.55	IWW-37	AT GRD
264	604910.5280	1472550.2170	10.47	IWW-37	TOP PVC
265	604904.6090	1472579.4530	12.42	IWW-38	AT GRD
266	604904.5190	1472579.4680	11.87	IWW-38	TOP PVC
267	604898.3920	1472607.8140	12.69	IWW-39	AT GRD
268	604898.3270	1472607.9090	11.93	IWW-39	TOP PVC

APPENDIX F—INVESTIGATION DERIVED WASTE DISPOSAL DOCUMENTATION

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) D41901768550 SC PPW 3/12/2019 Form Approved. OMB No. 2050-003

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: MDR000524413
2. Page 1 of 2 57
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 011868048 FLE

5. Generator's Name and Mailing Address: Middle River Complex, 195 Chesapeake Park Plaza Rd, Middle River, MD 21220
Generator's Phone: (301) 528-3021
Generator's Site Address (if different than mailing address): 195 Chesapeake Park Plaza Rd, Baltimore, MD 21220

6. Transporter 1 Company Name: Clean Harbors Environmental Services, Inc. — U.S. EPA ID Number: MAD039322250

7. Transporter 2 Company Name: tri state motor transit co. — U.S. EPA ID Number: MOD095038998

8. Designated Facility Name and Site Address: Clean Harbors El Dorado LLC, 309 American Circle, El Dorado, AR 71730
Facility's Phone: (870) 863-7173
U.S. EPA ID Number: ARD069748192

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., (TRICHLOROETHENE), 9, PG III	6	DM	1800	P	F001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. CH669936 FHG0171 6X55

Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf for purposes of transportation efficiency, convenience, or safety

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Anthony Apanavage / [signature] — Signature: [signature] — Month 4 Day 5 Year 19

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Andrew White — Signature: [signature] — Month 4 Day 5 Year 19
Transporter 2 Printed/Typed Name: J A Reece — Signature: J Reece — Month 4 Day 15 Year 19

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H040 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Linda Goodwin — Signature: Linda Goodwin — Month 4 Day 26 Year 19

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

Please print or type.

Form Approved. OMB No. 2050-0(

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: MDR 000 524413

22. Page: 2/2

23. Manifest Tracking Number: 011868048 FLE

24. Generator's Name: Middle River Complex

25. Transporter 3 Company Name: Clean Harbors Environmental Services Inc

U.S. EPA ID Number: MAD039322250

26. Transporter _____ Company Name

U.S. EPA ID Number

GENERATOR

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		
	TPO							

32. Special Handling Instructions and Additional Information

TRANSPORTER

33. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name: Sheila Taylor (Agent for CHES)

Signature: Sheila Taylor

Month: 4 Day: 17 Year: 19

34. Transporter _____ Acknowledgment of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

EPA Form 8700-22A (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

CleanHarbors
ENVIRONMENTAL SERVICES®

Land Disposal Restriction Notification Form

Printed Date :Apr 05, 2019

MANIFEST INFORMATION

Generator : Middle River Complex

Address: 195 Chesapeake Park Plaza Rd
Baltimore,MD 21220

EPA ID #: M D R 0 0 0 5 2 4 4 1 3

Manifest Tracking Info.

011868048FLE

Sales Order No: 1901768550

LINE ITEM INFORMATION

Line Item:	Page No:	Profile No:	Treatability Group:	LDR Disposal Category
1.	1	CH669936	WASTEWATER	2 (This is subject to LDR.)

EPA Waste Code	EPA Waste SubCategory
F001	NONE

LDR Chemical Data

Chemical	Underlying Hazardous Constituents	Constituents of Concern	Contaminants Subject to Treatment
TRICHLOROETHYLENE	N	Y	N

Certification	Applies to Manifest Line Items
Pursuant to 40 CFR 268.7(a), I hereby notify that this shipment contains waste restricted under 40 CFR Part 268.	1.

Waste analysis data, where available, is attached.

Signature : _____ Print Name Anthony Apanavage

Title : _____ Date : 4/5/19

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH669936

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # *MDR000524413* GENERATOR NAME: *Middle River Complex*

GENERATOR CODE (Assigned by Clean Harbors) *MI5240* CITY *Baltimore* STATE/PROVINCE *MD* ZIP/POSTAL CODE *21220*

ADDRESS *195 Chesapeake Park Plaza Rd* PHONE: (301) 528-3021

CUSTOMER CODE (Assigned by Clean Harbors) *TE0740* CUSTOMER NAME: *Tetra Tech Inc*

ADDRESS *20251 Century Boulevard Suite 200* CITY *Germantown* STATE/PROVINCE *MD* ZIP/POSTAL CODE *20874*

B. WASTE DESCRIPTION

WASTE DESCRIPTION: *IDW Groundwater (Hazardous)*

PROCESS GENERATING WASTE: **Investigative Derived Waste**

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE
- SOLID WITHOUT FREE LIQUID
- POWDER
- MONOLITHIC SOLID
- [x] LIQUID WITH NO SOLIDS
- LIQUID/SOLID MIXTURE
- % FREE LIQUID
- % SETTLED SOLID
- % TOTAL SUSPENDED SOLID
- SLUDGE
- GAS/AEROSOL

NUMBER OF PHASES/LAYERS
- [x] 1 2 3
- % BY VOLUME (Approx.)
- TOP *0.00*
- MIDDLE *0.00*
- BOTTOM *0.00*

VISCOSITY (If liquid present)
- [x] 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR *VARIES*

ODOR
- [x] NONE
- MILD
- STRONG
- Describe:

BOILING POINT °F (°C)
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- [x] >= 130 (>54)

MELTING POINT °F (°C)
- < 140 (<60)
- 140-200 (60-93)
- > 200 (>93)

TOTAL ORGANIC CARBON
- [x] <= 1%
- 1-9%
- >= 10%

FLASH POINT °F (°C)
- < 73 (<23)
- 73 - 100 (23-38)
- 101 - 140 (38-60)
- 141 - 200 (60-93)
- [x] > 200 (>93)

pH
- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY
- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- [x] 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- > 1.2 (e.g. Methylene Chloride)

ASH
- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- [x] Unknown

BTU/LB (MJ/kg)
- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)
- Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
1,2-DICHLOROETHANE	0.0000000	--	0.3310000	PPM
2-BUTANONE (MEK)	0.0000000	--	1.8000000	PPM
CHLOROFORM	0.0000000	--	1.3200000	PPM
TRICHLOROETHENE	0.0000000	--	651.0000000	PPM
WATER	100.0000000	--	100.0000000	%

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [x] NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [x] NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. *G44* SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. *W113*

E. CONSTITUENTS

Are these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0				☑
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑
	VOLATILE COMPOUNDS					
D018	BENZENE	0.5				
D019	CARBON TETRACHLORIDE	0.5				
D021	CHLOROBENZENE	100.0				
D022	CHLOROFORM	6.0				
D028	1,2-DICHLOROETHANE	0.5				
D029	1,1-DICHLOROETHYLENE	0.7				
D035	METHYL ETHYL KETONE	200.0				
D039	TETRACHLOROETHYLENE	0.7				
D040	TRICHLOROETHYLENE	0.5	*651.0000*			
D043	VINYL CHLORIDE	0.2				
	SEMI-VOLATILE COMPOUNDS					
D023	o-CRESOL	200.0				
D024	m-CRESOL	200.0				
D025	p-CRESOL	200.0				
D026	CRESOL (TOTAL)	200.0				
D027	1,4-DICHLOROBENZENE	7.5				
D030	2,4-DINITROTOLUENE	0.13				
D032	HEXACHLOROBENZENE	0.13				
D033	HEXACHLOROBUTADIENE	0.5				
D034	HEXACHLOROETHANE	3.0				
D036	NITROBENZENE	2.0				
D037	PENTACHLOROPHENOL	100.0				
D038	PYRIDINE	5.0				
D041	2,4,5-TRICHLOROPHENOL	400.0				
D042	2,4,6-TRICHLOROPHENOL	2.0				
	PESTICIDES AND HERBICIDES					
D012	ENDRIN	0.02				
D013	LINDANE	0.4				
D014	METHOXYCHLOR	10.0				
D015	TOXAPHENE	0.5				
D016	2,4-D	10.0				
D017	2,4,5-TP (SILVEX)	1.0				
D020	CHLORDANE	0.03				
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008				

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs:

NONE

☑ < 1000 PPM

>= 1000 PPM

PCBs

☑ NONE

< 50 PPM

>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCES	EXPLOSIVE	FUMING	OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	☑ NONE OF THE ABOVE

F. REGULATORY STATUS

☑ YES ☐ NO USEPA HAZARDOUS WASTE?
F001

☐ YES ☑ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code *OUTS101H*

☐ YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

☑ YES ☐ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: *This is subject to LDR.*
VARIANCE INFO:

☐ YES ☑ NO IS THIS A UNIVERSAL WASTE?

☐ YES ☐ NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS VERY SMALL QUANTITY GENERATOR (VSQG) OR A STATE EQUIVALENT DESIGNATION?

☐ YES ☐ NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

☐ YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

☐ YES ☐ NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

☐ YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

☐ YES ☐ NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

☐ YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

☐ YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

☐ YES ☑ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

☐ YES ☑ NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? ____ Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., (TRICHLOROETHENE), 9, PG III

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ☑ ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER

☑ CONTAINERIZED
1-6 CONTAINERS/SHIPMENT
STORAGE CAPACITY: *100*
CONTAINER TYPE:
PORTABLE TOTE TANK BOX|CARTON|CASE
CUBIC YARD BOX ☑ DRUM
OTHER:
DRUM SIZE *55*

BULK LIQUID
GALLONS/SHIPMENT: *0 Min -0 Max* GAL.

BULK SOLID
SHIPMENT UOM: TON YARD
TONS/YARDS/SHIPMENT: *0 Min - 0 Max*

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge.I also certify that any samples submitted are representative of the actual waste.If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
Thomas D. Blackman	THOMAS D. BLACKMAN	PROJECT LEAD	FEB. 12, 2019

1287802

Site Address: 195 Chesapeake Park Plaza Rd
Baltimore, MD 21220

SC PPW 3/12/2019

WORK ORDER 901901768550

DOCUMENT NO. 951575 **STRAIGHT BILL OF LADING**

TRANSPORTER 1 Clean Harbors Environmental Services, Inc. VEHICLE ID #

EPA ID # MAD039322250 TRANS. 1 PHONE (781) 792-5000

TRANSPORTER 2 Robbins D Wood Inc VEHICLE ID #

EPA ID # AUDA0763891 TRANS. 2 PHONE

DESIGNATED FACILITY		SHIPPER	
Clean Harbors Chattanooga LLC		Middle River Complex	
FACILITY EPA ID # TND982141392		SHIPPER EPA ID # MDR000524413	
ADDRESS 5800 Cummings Road		ADDRESS 195 Chesapeake Park Plaza Rd	
CITY Chattanooga	STATE TN ZIP 37419	CITY Middle River	STATE MD ZIP 21220

CONTAINERS NO. & SIZE	TYPE	HM	DESCRIPTION OF MATERIALS	TOTAL QUANTITY	UNIT WT/VOL
1x55	DM		A. NON HAZARDOUS, NON D.O.T. REGULATED, (CONCRETE DEBRIS)	75	~~115~~ P
1x55	DM		B. NON D.O.T. REGULATED, (SOIL)	400	~~400~~ P
3x55	DM		C. NON D.O.T. REGULATED, (WATER)	900	~~900~~ P
			D.		
			E.		
			F.		
			G.		
			H.		

SPECIAL HANDLING INSTRUCTIONS EMERGENCY PHONE #: (800)483-3718 GENERATOR: Middle River Complex
A.CH1669601 B.CH1802061 C.CH1802064
1x55 1x55 3x55

SHIPPERS CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

	PRINT	SIGN	DATE
SHIPPER	Anthony Apanavage		4/4/19
TRANSPORTER 1	Andrew White		4/5/19
TRANSPORTER 2	Troy Johnson		4/16/19
RECEIVED BY	Tony Kelly		4/26/19

1

CHI 107

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH1802051

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # ***MDR000524413*** GENERATOR NAME: ***Middle River Complex***

GENERATOR CODE (Assigned by Clean Harbors) ***MI5240*** CITY ***Baltimore*** STATE/PROVINCE ***MD*** ZIP/POSTAL CODE ***21220***

ADDRESS ***195 Chesapeake Park Plaza Rd*** PHONE: **(301) 528-3021**

CUSTOMER CODE (Assigned by Clean Harbors) ***TE0740*** CUSTOMER NAME: ***Tetra Tech Inc***

ADDRESS ***20251 Century Boulevard Suite 200*** CITY ***Germantown*** STATE/PROVINCE ***MD*** ZIP/POSTAL CODE ***20874***

B. WASTE DESCRIPTION

WASTE DESCRIPTION: ***Non-Haz Soil (Sample ID: EF Soil)***

PROCESS GENERATING WASTE: **E/F Well Installation Soil Cuttings**

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE
- [x] SOLID WITHOUT FREE LIQUID
- [ ] POWDER
- [ ] MONOLITHIC SOLID
- [ ] LIQUID WITH NO SOLIDS
- [ ] LIQUID/SOLID MIXTURE
- [ ] % FREE LIQUID
- [ ] % SETTLED SOLID
- [ ] % TOTAL SUSPENDED SOLID
- [ ] SLUDGE
- [ ] GAS/AEROSOL

NUMBER OF PHASES/LAYERS

1 2 3

% BY VOLUME (Approx.)

TOP ***0.00***

MIDDLE ***0.00***

BOTTOM ***0.00***

VISCOSITY (If liquid present)
- 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR

Varies

ODOR
- [x] NONE
- [ ] MILD
- [ ] STRONG

Describe:

BOILING POINT °F (°C)
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- >= 130 (>54)

MELTING POINT °F (°C)
- < 140 (<60)
- 140-200 (60-93)
- [x] > 200 (>93)

TOTAL ORGANIC CARBON
- <= 1%
- 1-9%
- [x] >= 10%

FLASH POINT °F (°C)
- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- > 200 (>93)

pH
- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY
- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- [x] > 1.2 (e.g. Methylene Chloride)

ASH
- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- [x] Unknown

BTU/LB (MJ/kg)
- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
ARSENIC (TCLP)	0.0060000	--	0.0060000	PPM
BARIUM (TCLP)	0.0480000	--	0.0480000	PPM
CHROMIUM (TCLP)	0.0030000	--	0.0030000	PPM
SOIL	99.0000000	--	100.0000000	%
TRICHLOROETHENE	1.0000000	--	1.0000000	PPB

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES [x] NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [x] NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [x] NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. ***G44*** SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. ***W301***

E. CONSTITUENTS

Are these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0				☑
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑

	VOLATILE COMPOUNDS	
D018	BENZENE	0.5
D019	CARBON TETRACHLORIDE	0.5
D021	CHLOROBENZENE	100.0
D022	CHLOROFORM	6.0
D028	1,2-DICHLOROETHANE	0.5
D029	1,1-DICHLOROETHYLENE	0.7
D035	METHYL ETHYL KETONE	200.0
D039	TETRACHLOROETHYLENE	0.7
D040	TRICHLOROETHYLENE	0.5
D043	VINYL CHLORIDE	0.2
	SEMI-VOLATILE COMPOUNDS	
D023	o-CRESOL	200.0
D024	m-CRESOL	200.0
D025	p-CRESOL	200.0
D026	CRESOL (TOTAL)	200.0
D027	1,4-DICHLOROBENZENE	7.5
D030	2,4-DINITROTOLUENE	0.13
D032	HEXACHLOROBENZENE	0.13
D033	HEXACHLOROBUTADIENE	0.5
D034	HEXACHLOROETHANE	3.0
D036	NITROBENZENE	2.0
D037	PENTACHLOROPHENOL	100.0
D038	PYRIDINE	5.0
D041	2,4,5-TRICHLOROPHENOL	400.0
D042	2,4,6-TRICHLOROPHENOL	2.0
	PESTICIDES AND HERBICIDES	
D012	ENDRIN	0.02
D013	LINDANE	0.4
D014	METHOXYCHLOR	10.0
D015	TOXAPHENE	0.5
D016	2,4-D	10.0
D017	2,4,5-TP (SILVEX)	1.0
D020	CHLORDANE	0.03
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

☑ NONE
< 1000 PPM
>= 1000 PPM

PCBs

NONE
☑ < 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCES	EXPLOSIVE	FUMING	OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	☑ NONE OF THE ABOVE

F. REGULATORY STATUS

YES ☑ NO USEPA HAZARDOUS WASTE?

YES ☑ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code

YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

YES ☑ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: *Not subject to LDR*
VARIANCE INFO:

YES ☑ NO IS THIS A UNIVERSAL WASTE?

YES ☑ NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS VERY SMALL QUANTITY GENERATOR (VSQG) OR A STATE EQUIVALENT DESIGNATION?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES ☑ NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ☑ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

YES NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NON D.O.T. REGULATED, (SOIL)

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ☑ ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER

☑ **CONTAINERIZED**

1-25 CONTAINERS/SHIPMENT

STORAGE CAPACITY: ***100***

CONTAINER TYPE:

PORTABLE TOTE TANK BOX|CARTON|CASE

CUBIC YARD BOX ☑ DRUM

OTHER: DRUM SIZE ***55***

BULK LIQUID

GALLONS/SHIPMENT: ***0 Min -0 Max*** GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

TONS/YARDS/SHIPMENT: ***0 Min - 0 Max***

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge.I also certify that any samples submitted are representative of the actual waste.If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
[signature]	THOMAS D. BLACKMAN	PROJECT LEAD	MARCH 19, 2019

6130

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) D41900551251 SC PPW 7/12/2018 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	MDR000524413	1	(800) 483-3718	011975459 FLE

5. Generator's Name and Mailing Address
Middle River Complex
195 Chesapeake Park Plaza Rd
Middle River, MD 21220
Generator's Phone: (301) 529-3021 c/o Michael Mishena

Generator's Site Address (if different than mailing address)
195 Chesapeake Park Plaza Rd
Baltimore, MD 21220

6. Transporter 1 Company Name: Clean Harbors Environmental Services, Inc. — U.S. EPA ID Number: MAD039322250

7. Transporter 2 Company Name: Robbie D Wood, Inc — U.S. EPA ID Number: ALD067138891

8. Designated Facility Name and Site Address
Clean Harbors Environmental Services, Inc.
2900 Rockefeller Avenue
Cleveland, OH 44115
Facility's Phone: (216) 429-2402
U.S. EPA ID Number: OHD000724153

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON D.O.T. REGULATED, (WATER)	8	DM	400	G	
	2. NON D.O.T. REGULATED (WATER)	1	DF	50	G	
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. CH1759564 8 x 55DM
2. CH1759564 1 x 55DF

Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Michael Mishena — Signature: Michael Mishena — Month: 02 Day: 01 Year: 19

16. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: CLYDE M. KNIGHT — Signature: — Month: 02 Day: 1 Year: 19

Transporter 2 Printed/Typed Name: John Iwanciw — Signature: — Month: 02 Day: 07 Year: 19

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H070			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: John Mertz — Signature: — Month: 02 Day: 20 Year: 19

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)	21. Generator ID Number MDR000524413	22. Page 2	23. Manifest Tracking Number 011975459FLE

24. Generator's Name: Middle River Complex

25. Transporter 3 Company Name: Clean Harbors Env Services Inc | U.S. EPA ID Number: MAD039322250

26. Transporter ____ Company Name | U.S. EPA ID Number

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		

32. Special Handling Instructions and Additional Information

TRANSPORTER

33. Transporter 3 Acknowledgment of Receipt of Materials
Printed/Typed Name: Manager Lakesha Mason | Signature | Month 2 | Day 18 | Year 19

34. Transporter ____ Acknowledgment of Receipt of Materials
Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

EPA Form 8700-22A (Rev. 12-17). Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH1759564

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # ***MDR000524413*** GENERATOR NAME: ***Middle River Complex***

GENERATOR CODE (Assigned by Clean Harbors) ***MI5240*** CITY ***Baltimore*** STATE/PROVINCE ***MD*** ZIP/POSTAL CODE ***21220***

ADDRESS ***195 Chesapeake Park Plaza Rd*** PHONE: ***(301) 528-3021***

CUSTOMER CODE (Assigned by Clean Harbors) ***TE0740*** CUSTOMER NAME: ***Tetra Tech Inc***

ADDRESS ***20251 Century Boulevard Suite 200*** CITY ***Germantown*** STATE/PROVINCE ***MD*** ZIP/POSTAL CODE ***20874***

B. WASTE DESCRIPTION

WASTE DESCRIPTION: ***Non-Haz Water (Sample ID: WC-FTCB-DEVW)***

PROCESS GENERATING WASTE: **Well development water**

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE

- SOLID WITHOUT FREE LIQUID
- POWDER
- MONOLITHIC SOLID
- [x] LIQUID WITH NO SOLIDS
- LIQUID/SOLID MIXTURE

% FREE LIQUID ***99.00 - 100.00***
% SETTLED SOLID ***0.00 - 1.00***
% TOTAL SUSPENDED SOLID ***0.00 - 1.00***

- SLUDGE
- GAS/AEROSOL

NUMBER OF PHASES/LAYERS

1 [x] 2 3

% BY VOLUME (Approx.)

TOP ***99.00***
MIDDLE ***0.00***
BOTTOM ***1.00***

VISCOSITY (If liquid present)

- [x] 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR

Clear

ODOR

- [x] NONE
- MILD
- STRONG

Describe:

BOILING POINT °F (°C)

- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- [x] >= 130 (>54)

MELTING POINT °F (°C)

- < 140 (<60)
- 140-200 (60-93)
- [x] > 200 (>93)

TOTAL ORGANIC CARBON

- [x] <= 1%
- 1-9%
- >= 10%

FLASH POINT °F (°C)

- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- [x] > 200 (>93)

pH

- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY

- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- [x] 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- > 1.2 (e.g. Methylene Chloride)

ASH

- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- [x] Unknown

BTU/LB (MJ/kg)

- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
1,2,4-TRICHLOROBENZENE	2.0000000	--	2.0000000	PPB
1,2-DICHLOROETHANE	1.0000000	--	1.0000000	PPB
1,3-DICHLOROBENZENE	3.0000000	--	3.0000000	PPB
1,4-DICHLOROBENZENE	8.0000000	--	8.0000000	PPB
BARIUM	0.4500000	--	0.4500000	PPM
BENZENE	1.0000000	--	1.0000000	PPB
CADMIUM		--		Trace
CHLOROBENZENE	54.0000000	--	54.0000000	PPB
CHLOROFORM	1.0000000	--	1.0000000	PPB
CHROMIUM	0.0020000	--	0.0020000	PPM

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES [x] NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [x] NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [x] NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. ***G44*** SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. ***W113***

E. CONSTITUENTS

Are these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0				☑
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑
	VOLATILE COMPOUNDS					
D018	BENZENE	0.5				
D019	CARBON TETRACHLORIDE	0.5				
D021	CHLOROBENZENE	100.0				
D022	CHLOROFORM	6.0	*0.0012*			
D028	1,2-DICHLOROETHANE	0.5				
D029	1,1-DICHLOROETHYLENE	0.7				
D035	METHYL ETHYL KETONE	200.0				
D039	TETRACHLOROETHYLENE	0.7				
D040	TRICHLOROETHYLENE	0.5				
D043	VINYL CHLORIDE	0.2				
	SEMI-VOLATILE COMPOUNDS					
D023	o-CRESOL	200.0				
D024	m-CRESOL	200.0				
D025	p-CRESOL	200.0				
D026	CRESOL (TOTAL)	200.0				
D027	1,4-DICHLOROBENZENE	7.5				
D030	2,4-DINITROTOLUENE	0.13				
D032	HEXACHLOROBENZENE	0.13				
D033	HEXACHLOROBUTADIENE	0.5				
D034	HEXACHLOROETHANE	3.0				
D036	NITROBENZENE	2.0				
D037	PENTACHLOROPHENOL	100.0				
D038	PYRIDINE	5.0				
D041	2,4,5-TRICHLOROPHENOL	400.0				
D042	2,4,6-TRICHLOROPHENOL	2.0				
	PESTICIDES AND HERBICIDES					
D012	ENDRIN	0.02				
D013	LINDANE	0.4				
D014	METHOXYCHLOR	10.0				
D015	TOXAPHENE	0.5				
D016	2,4-D	10.0				
D017	2,4,5-TP (SILVEX)	1.0				
D020	CHLORDANE	0.03				
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008				

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

NONE
☑ < 1000 PPM
>= 1000 PPM

PCBs

☑ NONE
< 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCES	EXPLOSIVE	FUMING	OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	☑ NONE OF THE ABOVE

F. REGULATORY STATUS

YES ☑ NO USEPA HAZARDOUS WASTE?

YES ☑ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code

YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

YES ☑ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: ***Not subject to LDR***
VARIANCE INFO:

YES ☑ NO IS THIS A UNIVERSAL WASTE?

YES ☑ NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS VERY SMALL QUANTITY GENERATOR (VSQG) OR A STATE EQUIVALENT DESIGNATION?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ☑ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

YES NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NON D.O.T. REGULATED, (WATER)

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ☑ ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER

☑ **CONTAINERIZED**

25-35 CONTAINERS/SHIPMENT

STORAGE CAPACITY: ***100***

CONTAINER TYPE:

PORTABLE TOTE TANK BOX|CARTON|CASE

CUBIC YARD BOX ☑ DRUM

OTHER:

DRUM SIZE: ***55***

BULK LIQUID

GALLONS/SHIPMENT: ***0 Min -0 Max*** GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

TONS/YARDS/SHIPMENT: ***0 Min - 0 Max***

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge.I also certify that any samples submitted are representative of the actual waste.If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
Tom D. Blackman	THOMAS D. BLACKMAN	LOCKHEED MARTIN PROJECT LEAD	JAN. 9, 2019

Addendum

D. COMPOSITION

CHEMICAL	MIN	--	MAX	UOM
DIRT	0.000000	--	1.0000000	%
TOLUENE	1.000000	--	1.0000000	PPB
WATER	99.00000	--	100.00000	%

G. DOT/TDG INFORMATION

6130

04 1900551251 SC PPW 7/12/2018

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	MDR000524413	2	(800) 483-3718	011975460 FLE

5. Generator's Name and Mailing Address
Middle River Complex
195 Chesapeake Park Plaza Rd
Middle River, MD 21220
Generator's Phone: (301) 528-3021 c/o Michael Mushero

Generator's Site Address (if different than mailing address)
195 Chesapeake Park Plaza Rd
Baltimore, MD 21220

6. Transporter 1 Company Name: Clean Harbors Environmental Services, Inc. — U.S. EPA ID Number: MAD039322250

7. Transporter 2 Company Name: S.J. Transportation — U.S. EPA ID Number: NJD071629976

8. Designated Facility Name and Site Address
Clean Harbors Chattanooga LLC
3300 Cummings Road
Chattanooga, TN 37419
Facility's Phone: (423) 821-6926
U.S. EPA ID Number: TND982141392

9a HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON DOT REGULATED MATERIAL, (CARBON FILTERS)	3	DM	210	P	
	2. NON D.O.T. REGULATED, (SOIL)	9	DM	4500	P	
	3. NON D.O.T. REGULATED, (SOIL)	5	DM	2500	P	
	4. NON D.O.T. REGULATED, (SOIL)	12	DM	6000	P	

14. Special Handling Instructions and Additional Information
1. CR1408675 3 x 55 DM
2. CR1749501 9 x 55 DM
3. CR1759324 5 x 55 DM
4. CR1759571 12 x 55 DM
Contact retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Michael Mushero — Signature: Michael Mushero — Month: 02 Day: 11 Year: 19

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Clyde M. Knight — Signature: — Month: 2 Day: 11 Year: 19

Transporter 2 Printed/Typed Name: Robert Walsh — Signature: — Month: 2 Day: 7 Year: 19

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H141	H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Chris White — Signature: — Month: 2 Day: 19 Year: 19

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

Please print or type. D4 1900551251 SC PPW 7/12/2018 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)	21. Generator ID Number	22. Page	23. Manifest Tracking Number
	MDR000524413	2 of 2	011975460FLE

24. Generator's Name: Middle River Complex

25. Transporter 3 Company Name: Clean Harbors Env. Lucs | U.S. EPA ID Number: MAD039322250

26. Transporter 4 Company Name: Robbie D Woodincee | U.S. EPA ID Number: [illegible]

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes
	5. NON D.O.T. REGULATED. (LACTOIL - SOIL MICROEMULSION)	1	DF	50	G	
	6. NON D.O.T. REGULATED. (WATER)	2	DM	100	G	

GENERATOR

32. Special Handling Instructions and Additional Information
5. CH1741175 1x 55DF
6. CH1759576 2x 55DM

TRANSPORTER

33. Transporter 3 Acknowledgment of Receipt of Materials
Printed/Typed Name: [illegible] | Signature: [illegible] | Month 2 Day 8 Year 19

34. Transporter 4 Acknowledgment of Receipt of Materials
Printed/Typed Name: Doug Thacker | Signature: Doug Thacker | Month 2 Day 18 Year 19

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

5. H141	6. H141			

EPA Form 8700-22A (Rev. 12-17) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH1759571

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # ***MDR000524413*** GENERATOR NAME: ***Middle River Complex***

GENERATOR CODE (Assigned by Clean Harbors) ***MI5240*** CITY ***Baltimore*** STATE/PROVINCE ***MD*** ZIP/POSTAL CODE ***21220***

ADDRESS ***195 Chesapeake Park Plaza Rd*** PHONE: **(301) 528-3021**

CUSTOMER CODE (Assigned by Clean Harbors) ***TE0740*** CUSTOMER NAME: ***Tetra Tech Inc***

ADDRESS ***20251 Century Boulevard Suite 200*** CITY ***Germantown*** STATE/PROVINCE ***MD*** ZIP/POSTAL CODE ***20874***

B. WASTE DESCRIPTION

WASTE DESCRIPTION: ***Non-Haz Soil (Sample ID: WC-FTCB-SOIL)***

PROCESS GENERATING WASTE: ***Well Installation Soil Cuttings***

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE
- [x] SOLID WITHOUT FREE LIQUID
- [ ] POWDER
- [ ] MONOLITHIC SOLID
- [ ] LIQUID WITH NO SOLIDS
- [ ] LIQUID/SOLID MIXTURE
- [ ] % FREE LIQUID
- [ ] % SETTLED SOLID
- [ ] % TOTAL SUSPENDED SOLID
- [ ] SLUDGE
- [ ] GAS/AEROSOL

NUMBER OF PHASES/LAYERS

1 2 3

% BY VOLUME (Approx.)

TOP ***0.00***

MIDDLE ***0.00***

BOTTOM ***0.00***

VISCOSITY (If liquid present)
- 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR

Varies

ODOR
- [x] NONE
- [ ] MILD
- [ ] STRONG

Describe:

BOILING POINT °F (°C)
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- >= 130 (>54)

MELTING POINT °F (°C)
- < 140 (<60)
- 140-200 (60-93)
- [x] > 200 (>93)

TOTAL ORGANIC CARBON
- <= 1%
- 1-9%
- [x] >= 10%

FLASH POINT °F (°C)
- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- > 200 (>93)

pH
- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY
- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- [x] > 1.2 (e.g. Methylene Chloride)

ASH
- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- [x] Unknown

BTU/LB (MJ/kg)
- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
1,2,3-TRICHLOROBENZENE	1.0000000	--	1.0000000	PPB
1,2,4-TRICHLOROBENZENE	3.0000000	--	3.0000000	PPB
AROCLOR-1260	95.0000000	--	95.0000000	PPB
ARSENIC (TCLP)	0.0050000	--	0.0050000	PPM
BARIUM (TCLP)	0.1800000	--	0.1800000	PPM
CADMIUM	0.0020000	--	0.0020000	PPM
CHROMIUM (TCLP)	0.0040000	--	0.0040000	PPM
LEAD	0.0190000	--	0.0190000	PPM
SOIL	99.0000000	--	100.0000000	%

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES [x] NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [x] NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [x] NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. ***G44*** SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. ***W301***

E. CONSTITUENTS

Are these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0				☑
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑

	VOLATILE COMPOUNDS	
D018	BENZENE	0.5
D019	CARBON TETRACHLORIDE	0.5
D021	CHLOROBENZENE	100.0
D022	CHLOROFORM	6.0
D028	1,2-DICHLOROETHANE	0.5
D029	1,1-DICHLOROETHYLENE	0.7
D035	METHYL ETHYL KETONE	200.0
D039	TETRACHLOROETHYLENE	0.7
D040	TRICHLOROETHYLENE	0.5
D043	VINYL CHLORIDE	0.2
	SEMI-VOLATILE COMPOUNDS	
D023	o-CRESOL	200.0
D024	m-CRESOL	200.0
D025	p-CRESOL	200.0
D026	CRESOL (TOTAL)	200.0
D027	1,4-DICHLOROBENZENE	7.5
D030	2,4-DINITROTOLUENE	0.13
D032	HEXACHLOROBENZENE	0.13
D033	HEXACHLOROBUTADIENE	0.5
D034	HEXACHLOROETHANE	3.0
D036	NITROBENZENE	2.0
D037	PENTACHLOROPHENOL	100.0
D038	PYRIDINE	5.0
D041	2,4,5-TRICHLOROPHENOL	400.0
D042	2,4,6-TRICHLOROPHENOL	2.0
	PESTICIDES AND HERBICIDES	
D012	ENDRIN	0.02
D013	LINDANE	0.4
D014	METHOXYCHLOR	10.0
D015	TOXAPHENE	0.5
D016	2,4-D	10.0
D017	2,4,5-TP (SILVEX)	1.0
D020	CHLORDANE	0.03
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

☑ NONE
< 1000 PPM
>= 1000 PPM

PCBs

NONE
☑ < 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCES	EXPLOSIVE	FUMING	OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	✓ NONE OF THE ABOVE

F. REGULATORY STATUS

YES ☑ NO USEPA HAZARDOUS WASTE?

YES ☑ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code

YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

YES ☑ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: ***Not subject to LDR***
VARIANCE INFO:

YES ☑ NO IS THIS A UNIVERSAL WASTE?

YES ☑ NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS VERY SMALL QUANTITY GENERATOR (VSQG) OR A STATE EQUIVALENT DESIGNATION?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES ☑ NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ☑ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

YES NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NON D.O.T. REGULATED, (SOIL)

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ☑ ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER

☑ **CONTAINERIZED**

20-25 CONTAINERS/SHIPMENT

STORAGE CAPACITY: ***100***

CONTAINER TYPE:

PORTABLE TOTE TANK BOX|CARTON|CASE

CUBIC YARD BOX ☑ DRUM

OTHER DRUM SIZE ***55***

BULK LIQUID

GALLONS/SHIPMENT: ***0 Min -0 Max*** GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

TONS/YARDS/SHIPMENT: ***0 Min - 0 Max***

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge.I also certify that any samples submitted are representative of the actual waste.If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
[signature]	THOMAS D. BLACKMAN	LOCKHEED MARTIN PROJECT LEAD	JAN. 9, 2019

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH1759576

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # ***MDR000524413*** GENERATOR NAME: ***Middle River Complex***

GENERATOR CODE (Assigned by Clean Harbors) ***MI5240*** CITY ***Baltimore*** STATE/PROVINCE ***MD*** ZIP/POSTAL CODE ***21220***

ADDRESS ***195 Chesapeake Park Plaza Rd*** PHONE: **(301) 528-3021**

CUSTOMER CODE (Assigned by Clean Harbors) ***TE0740*** CUSTOMER NAME: ***Tetra Tech Inc***

ADDRESS ***20251 Century Boulevard Suite 200*** CITY ***Germantown*** STATE/PROVINCE ***MD*** ZIP/POSTAL CODE ***20874***

B. WASTE DESCRIPTION

WASTE DESCRIPTION: ***Well Installation Decon Water (Sample ID: WC-FTCB-DECON)***

PROCESS GENERATING WASTE: ~~**Decon Water from well installatoin**~~

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE
- SOLID WITHOUT FREE LIQUID
- POWDER
- MONOLITHIC SOLID
- ✔ LIQUID WITH NO SOLIDS
- LIQUID/SOLID MIXTURE
- % FREE LIQUID
- % SETTLED SOLID
- % TOTAL SUSPENDED SOLID
- SLUDGE
- GAS/AEROSOL

NUMBER OF PHASES/LAYERS

✔ 1 2 3

% BY VOLUME (Approx.)

TOP ***0.00***

MIDDLE ***0.00***

BOTTOM ***0.00***

VISCOSITY (If liquid present)
- ✔ 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR

Clear

ODOR
- ✔ NONE
- MILD
- STRONG

Describe:

BOILING POINT °F (°C)
- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- ✔ >= 130 (>54)

MELTING POINT °F (°C)
- < 140 (<60)
- 140-200 (60-93)
- > 200 (>93)

TOTAL ORGANIC CARBON
- ✔ <= 1%
- 1-9%
- >= 10%

FLASH POINT °F (°C)
- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- ✔ > 200 (>93)

pH
- <= 2
- 2.1 - 6.9
- ✔ 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY
- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- ✔ 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- > 1.2 (e.g. Methylene Chloride)

ASH
- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- ✔ Unknown

BTU/LB (MJ/kg)
- ✔ < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
2-BUTANONE	2.0000000	--	2.0000000	PPB
ACETONE	19.0000000	--	19.0000000	PPB
BARIUM	0.0180000	--	0.0180000	PPM
CHLOROFORM	1.0000000	--	1.0000000	PPB
CHROMIUM	0.0020000	--	0.0020000	PPM
WATER	99.0000000	--	100.0000000	%

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES ✔ NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES ✔ NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. ***G44*** SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. ***W113***

E. CONSTITUENTS

Are these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0				☑
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑

	VOLATILE COMPOUNDS		
D018	BENZENE	0.5	
D019	CARBON TETRACHLORIDE	0.5	
D021	CHLOROBENZENE	100.0	
D022	CHLOROFORM	6.0	
D028	1,2-DICHLOROETHANE	0.5	
D029	1,1-DICHLOROETHYLENE	0.7	
D035	METHYL ETHYL KETONE	200.0	
D039	TETRACHLOROETHYLENE	0.7	
D040	TRICHLOROETHYLENE	0.5	
D043	VINYL CHLORIDE	0.2	
	SEMI-VOLATILE COMPOUNDS		
D023	o-CRESOL	200.0	
D024	m-CRESOL	200.0	
D025	p-CRESOL	200.0	
D026	CRESOL (TOTAL)	200.0	
D027	1,4-DICHLOROBENZENE	7.5	
D030	2,4-DINITROTOLUENE	0.13	
D032	HEXACHLOROBENZENE	0.13	
D033	HEXACHLOROBUTADIENE	0.5	
D034	HEXACHLOROETHANE	3.0	
D036	NITROBENZENE	2.0	
D037	PENTACHLOROPHENOL	100.0	
D038	PYRIDINE	5.0	
D041	2,4,5-TRICHLOROPHENOL	400.0	
D042	2,4,6-TRICHLOROPHENOL	2.0	
	PESTICIDES AND HERBICIDES		
D012	ENDRIN	0.02	
D013	LINDANE	0.4	
D014	METHOXYCHLOR	10.0	
D015	TOXAPHENE	0.5	
D016	2,4-D	10.0	
D017	2,4,5-TP (SILVEX)	1.0	
D020	CHLORDANE	0.03	
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008	

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

☑ NONE
< 1000 PPM
>= 1000 PPM

PCBs

☑ NONE
< 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCES	EXPLOSIVE	FUMING	OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	☑ NONE OF THE ABOVE

F. REGULATORY STATUS

YES ✔ NO USEPA HAZARDOUS WASTE?

YES ✔ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code

YES ✔ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

YES ✔ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: ***Not subject to LDR***
VARIANCE INFO:

YES ✔ NO IS THIS A UNIVERSAL WASTE?

YES ✔ NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS VERY SMALL QUANTITY GENERATOR (VSQG) OR A STATE EQUIVALENT DESIGNATION?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES ✔ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES ✔ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ✔ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

YES ✔ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ✔ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

YES NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NON D.O.T. REGULATED, (WATER)

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ✔ ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER

✔ **CONTAINERIZED**

25-35 CONTAINERS/SHIPMENT

STORAGE CAPACITY: ***100***

CONTAINER TYPE:

PORTABLE TOTE TANK BOX|CARTON|CASE

CUBIC YARD BOX ✔ DRUM

OTHER

DRUM SIZE: ***55***

BULK LIQUID

GALLONS/SHIPMENT: ***0 Min -0 Max*** GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

TONS/YARDS/SHIPMENT: ***0 Min - 0 Max***

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge.I also certify that any samples submitted are representative of the actual waste.If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
Tom D. Blackman	THOMAS D. BLACKMAN	LOCKHEED MARTIN PROJECT LEAD	JAN. 9, 2019

WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH1759324

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # ***MDR000524413*** GENERATOR NAME: ***Middle River Complex***

GENERATOR CODE (Assigned by Clean Harbors) ***MI5240*** CITY ***Baltimore*** STATE/PROVINCE ***MD*** ZIP/POSTAL CODE ***21220***

ADDRESS ***195 Chesapeake Park Plaza Rd*** PHONE: ***(301) 528-3021***

CUSTOMER CODE (Assigned by Clean Harbors) ***TE0740*** CUSTOMER NAME: ***Tetra Tech Inc***

ADDRESS ***20251 Century Boulevard Suite 200*** CITY ***Germantown*** STATE/PROVINCE ***MD*** ZIP/POSTAL CODE ***20874***

B. WASTE DESCRIPTION

WASTE DESCRIPTION: ***Non-Haz Soil (Sample ID: SEMW-10D)***

PROCESS GENERATING WASTE: **Soil Cutting**

IS THIS WASTE CONTAINED IN SMALL PACKAGING CONTAINED WITHIN A LARGER SHIPPING CONTAINER ? **No**

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE

- [x] SOLID WITHOUT FREE LIQUID
- [ ] POWDER
- [ ] MONOLITHIC SOLID
- [ ] LIQUID WITH NO SOLIDS
- [ ] LIQUID/SOLID MIXTURE
- [ ] % FREE LIQUID
- [ ] % SETTLED SOLID
- [ ] % TOTAL SUSPENDED SOLID
- [ ] SLUDGE
- [ ] GAS/AEROSOL

NUMBER OF PHASES/LAYERS

1 2 3

% BY VOLUME (Approx.)

TOP ***0.00***

MIDDLE ***0.00***

BOTTOM ***0.00***

VISCOSITY (If liquid present)

- 1 - 100 (e.g. Water)
- 101 - 500 (e.g. Motor Oil)
- 501 - 10,000 (e.g. Molasses)
- > 10,000

COLOR

Varies

ODOR

- [x] NONE
- [ ] MILD
- [ ] STRONG

Describe:

BOILING POINT °F (°C)

- <= 95 (<=35)
- 95 - 100 (35-38)
- 101 - 129 (38-54)
- >= 130 (>54)

MELTING POINT °F (°C)

- < 140 (<60)
- 140-200 (60-93)
- [x] > 200 (>93)

TOTAL ORGANIC CARBON

- <= 1%
- 1-9%
- [x] >= 10%

FLASH POINT °F (°C)

- < 73 (<23)
- 73 - 100 (23-38)
- 101 -140 (38-60)
- 141 -200 (60-93)
- > 200 (>93)

pH

- <= 2
- 2.1 - 6.9
- [x] 7 (Neutral)
- 7.1 - 12.4
- >= 12.5

SPECIFIC GRAVITY

- < 0.8 (e.g. Gasoline)
- 0.8-1.0 (e.g. Ethanol)
- 1.0 (e.g. Water)
- 1.0-1.2 (e.g. Antifreeze)
- [x] > 1.2 (e.g. Methylene Chloride)

ASH

- < 0.1
- 0.1 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- > 20
- [x] Unknown

BTU/LB (MJ/kg)

- [x] < 2,000 (<4.6)
- 2,000-5,000 (4.6-11.6)
- 5,000-10,000 (11.6-23.2)
- > 10,000 (>23.2)

Actual:

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	--	MAX	UOM
BARIUM (TCLP)	0.0330000	--	0.0330000	PPM
CHROMIUM (TCLP)	0.0040000	--	0.0040000	PPM
SOIL	99.0000000	--	100.0000000	%
TRICHLOROETHENE	17.0000000	--	17.0000000	PPB

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES [x] NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES [x] NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES [x] NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. ***G44*** SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. ***W301***

E. CONSTITUENTS

Are these values based on testing or knowledge? Knowledge ☑ Testing

If constituent concentrations are based on analytical testing, analysis must be provided. Please attach document(s) using the link on the Submit tab.

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

RCRA	REGULATED METALS	REGULATORY LEVEL (mg/l)	TCLP mg/l	TOTAL	UOM	NOT APPLICABLE
D004	ARSENIC	5.0				☑
D005	BARIUM	100.0				☑
D006	CADMIUM	1.0				☑
D007	CHROMIUM	5.0				☑
D008	LEAD	5.0				☑
D009	MERCURY	0.2				☑
D010	SELENIUM	1.0				☑
D011	SILVER	5.0				☑

	VOLATILE COMPOUNDS	
D018	BENZENE	0.5
D019	CARBON TETRACHLORIDE	0.5
D021	CHLOROBENZENE	100.0
D022	CHLOROFORM	6.0
D028	1,2-DICHLOROETHANE	0.5
D029	1,1-DICHLOROETHYLENE	0.7
D035	METHYL ETHYL KETONE	200.0
D039	TETRACHLOROETHYLENE	0.7
D040	TRICHLOROETHYLENE	0.5
D043	VINYL CHLORIDE	0.2
	SEMI-VOLATILE COMPOUNDS	
D023	o-CRESOL	200.0
D024	m-CRESOL	200.0
D025	p-CRESOL	200.0
D026	CRESOL (TOTAL)	200.0
D027	1,4-DICHLOROBENZENE	7.5
D030	2,4-DINITROTOLUENE	0.13
D032	HEXACHLOROBENZENE	0.13
D033	HEXACHLOROBUTADIENE	0.5
D034	HEXACHLOROETHANE	3.0
D036	NITROBENZENE	2.0
D037	PENTACHLOROPHENOL	100.0
D038	PYRIDINE	5.0
D041	2,4,5-TRICHLOROPHENOL	400.0
D042	2,4,6-TRICHLOROPHENOL	2.0
	PESTICIDES AND HERBICIDES	
D012	ENDRIN	0.02
D013	LINDANE	0.4
D014	METHOXYCHLOR	10.0
D015	TOXAPHENE	0.5
D016	2,4-D	10.0
D017	2,4,5-TP (SILVEX)	1.0
D020	CHLORDANE	0.03
D031	HEPTACHLOR (AND ITS EPOXIDE)	0.008

OTHER CONSTITUENTS	MAX	UOM	NOT APPLICABLE
BROMINE			☑
CHLORINE			☑
FLUORINE			☑
IODINE			☑
SULFUR			☑
POTASSIUM			☑
SODIUM			☑
AMMONIA			☑
CYANIDE AMENABLE			☑
CYANIDE REACTIVE			☑
CYANIDE TOTAL			☑
SULFIDE REACTIVE			☑

HOCs

☑ NONE
< 1000 PPM
>= 1000 PPM

PCBs

☑ NONE
< 50 PPM
>=50 PPM

IF PCBS ARE PRESENT, IS THE WASTE REGULATED BY TSCA 40 CFR 761?

YES ☑ NO

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES ☑ NO (If yes, explain)

CHOOSE ALL THAT APPLY

DEA REGULATED SUBSTANCES	EXPLOSIVE	FUMING	OSHA REGULATED CARCINOGENS
POLYMERIZABLE	RADIOACTIVE	REACTIVE MATERIAL	☑ NONE OF THE ABOVE

F. REGULATORY STATUS

YES ☑ NO USEPA HAZARDOUS WASTE?

YES ☑ NO DO ANY STATE WASTE CODES APPLY?

Texas Waste Code

YES ☑ NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

YES ☑ NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?

LDR CATEGORY: ***Not subject to LDR***
VARIANCE INFO:

YES ☑ NO IS THIS A UNIVERSAL WASTE?

YES ☑ NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS VERY SMALL QUANTITY GENERATOR (VSQG) OR A STATE EQUIVALENT DESIGNATION?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES ☑ NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES ☑ NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES ☑ NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE >= .3KPA (.044 PSIA)?

YES ☑ NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 77 KPA (11.2 PSIA)?

YES ☑ NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES ☑ NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?

Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

YES NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?

YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?

YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?

What is the TAB quantity for your facility? ____ Megagram/year (1 Mg = 2,200 lbs)

The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing

Describe the knowledge :

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

NON D.O.T. REGULATED, (SOIL)

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ☑ ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER

☑ **CONTAINERIZED**

20-25 CONTAINERS/SHIPMENT

STORAGE CAPACITY: ***100***

CONTAINER TYPE:

PORTABLE TOTE TANK BOX|CARTON|CASE

CUBIC YARD BOX ☑ DRUM

OTHER

DRUM SIZE ***55***

BULK LIQUID

GALLONS/SHIPMENT: ***0 Min -0 Max*** GAL.

BULK SOLID

SHIPMENT UOM: TON YARD

TONS/YARDS/SHIPMENT: ***0 Min - 0 Max***

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

GENERATOR'S CERTIFICATION

I certify that I am authorized to execute this document as an authorized agent. I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge.I also certify that any samples submitted are representative of the actual waste.If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
Thomas D. Blackman	THOMAS D. BLACKMAN	LOCKHEED MARTIN PROJECT LEAD	JAN. 9, 2019

ANALYTICAL REPORT

Job Number: 240-104089-1

Job Description: MRC Block F TCB Waste Characterization

For:
Tetra Tech, Inc.
20251 Century Blvd
Suite 200
Germantown, MD 20874

Attention: Tony Apanavage



Approved for release.
John McFadden
Project Manager I
11/28/2018 3:16 PM

John McFadden, Project Manager I
4101 Shuffel Street NW, North Canton, OH, 44720
(330)497-9396
john.mcfadden@testamericainc.com
11/28/2018

cc: Samantha Brenner
Kelly Carper

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block F TCB Waste Characterization

Report Number: 240-104089-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 11/8/2018 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.3º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples WC-SEMW10D-SOIL (240-104089-2) and WC-FTCB-SOIL (240-104089-4) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were prepared and analyzed on 11/19/2018.

The continuing calibration verification (CCV) analyzed in batch 240-356055 was outside the method criteria for the following analyte: Trichlorofluoromethane. An MRL standard at or below the reporting limit (RL) was analyzed with the affected samplesWC-SEMW10D-SOIL (240-104089-2), WC-FTCB-SOIL (240-104089-4), (CCVIS 240-356055/3), (LCS 240-356055/4), (MB 240-356055/16), (240-104089-B-4-B MS) and (240-104089-B-4-C MSD) and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-110718 (240-104089-1), WC-FTCB-DEVW (240-104089-3) and WC-FTCB-DECON (240-104089-5) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 11/16/2018.

Sample WC-FTCB-DEVW (240-104089-3)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) analyzed in batch 240-355689 was outside the method criteria some analytes. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

The following samples were received preserved with hydrochloric acid: TB-110718 (240-104089-1), WC-FTCB-DEVW (240-104089-3) and WC-FTCB-DECON (240-104089-5). The requested target analyte list includes 2-Chloroethyl vinyl ether, an acid-labile compound that degrades in an acidic medium.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)
Samples WC-SEMW10D-SOIL (240-104089-2) and WC-FTCB-SOIL (240-104089-4) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082A. The samples were prepared on 11/12/2018 and analyzed on 11/14/2018.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: WC-FTCB-SOIL (240-104089-4). Reagents: 3903704, 3800135 and 3869667.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)
Samples WC-FTCB-DEVW (240-104089-3) and WC-FTCB-DECON (240-104089-5) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082A. The samples were prepared on 11/09/2018 and analyzed on 11/13/2018.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-354524.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)
Samples WC-SEMW10D-SOIL (240-104089-2), WC-FTCB-DEVW (240-104089-3), WC-FTCB-SOIL (240-104089-4) and WC-FTCB-DECON (240-104089-5) were analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010B. The samples were leached on 11/15/2018, prepared on 11/16/2018 and analyzed on 11/19/2018.

Barium and Chromium were detected in method blank LB 240-355683/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY
Samples WC-SEMW10D-SOIL (240-104089-2), WC-FTCB-DEVW (240-104089-3), WC-FTCB-SOIL (240-104089-4) and WC-FTCB-DECON (240-104089-5) were analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 11/15/2018, prepared on 11/16/2018 and analyzed on 11/19/2018.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

FLASHPOINT
Samples WC-SEMW10D-SOIL (240-104089-2) and WC-FTCB-SOIL (240-104089-4) were analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 11/20/2018.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

FLASHPOINT
Samples WC-FTCB-DEVW (240-104089-3) and WC-FTCB-DECON (240-104089-5) were analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 11/12/2018.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS
Samples WC-SEMW10D-SOIL (240-104089-2) and WC-FTCB-SOIL (240-104089-4) were analyzed for percent solids in accordance with ASTM Method D2216-80. The samples were analyzed on 11/09/2018.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block F TCB Waste Characterization

TestAmerica Job ID: 240-104089-1

Client Sample ID: TB-110718 — Lab Sample ID: 240-104089-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.22	J	1.0	0.16	ug/L	1		8260C	Total/NA
tert-Butyl alcohol (TBA)	2.2	J	50	1.7	ug/L	1		8260C	Total/NA
Trichloroethene	0.50	J	1.0	0.10	ug/L	1		8260C	Total/NA

Client Sample ID: WC-SEMW10D-SOIL — Lab Sample ID: 240-104089-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	17		6.0	0.76	ug/Kg	1	☼	8260C	Total/NA
Barium	0.033	J B	0.50	0.0013	mg/L	1		6010B	TCLP
Chromium	0.0043	J B	0.050	0.00063	mg/L	1		6010B	TCLP
Flashpoint	>200		1.00	1.00	Degrees F	1		1010A	Total/NA

Client Sample ID: WC-FTCB-DEVW — Lab Sample ID: 240-104089-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trichlorobenzene	1.9	J	2.0	0.52	ug/L	2		8260C	Total/NA
1,2-Dichloroethane	0.70	J	2.0	0.42	ug/L	2		8260C	Total/NA
1,3-Dichlorobenzene	2.6		2.0	0.30	ug/L	2		8260C	Total/NA
1,4-Dichlorobenzene	7.7		2.0	0.32	ug/L	2		8260C	Total/NA
Benzene	0.65	J	2.0	0.26	ug/L	2		8260C	Total/NA
Chlorobenzene	54		2.0	0.28	ug/L	2		8260C	Total/NA
Chloroform	1.2	J	2.0	0.26	ug/L	2		8260C	Total/NA
Toluene	1.3	J	2.0	0.28	ug/L	2		8260C	Total/NA
Barium	0.45	J B	0.50	0.0013	mg/L	1		6010B	TCLP
Cadmium	0.00021	J	0.050	0.00020	mg/L	1		6010B	TCLP
Chromium	0.0022	J B	0.050	0.00063	mg/L	1		6010B	TCLP
Silver	0.00068	J	0.050	0.00062	mg/L	1		6010B	TCLP
Flashpoint	>200		1.00	1.00	Degrees F	1		1010A	Total/NA

Client Sample ID: WC-FTCB-SOIL — Lab Sample ID: 240-104089-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3-Trichlorobenzene	0.68	J	5.6	0.64	ug/Kg	1	☼	8260C	Total/NA
1,2,4-Trichlorobenzene	2.6	J	5.6	0.64	ug/Kg	1	☼	8260C	Total/NA
Aroclor-1260	95		58	25	ug/Kg	1	☼	8082A	Total/NA
Arsenic	0.0052	J	0.050	0.0041	mg/L	1		6010B	TCLP
Barium	0.18	J B	0.50	0.0013	mg/L	1		6010B	TCLP
Cadmium	0.0015	J	0.050	0.00020	mg/L	1		6010B	TCLP
Chromium	0.0040	J B	0.050	0.00063	mg/L	1		6010B	TCLP
Lead	0.019	J	0.050	0.0028	mg/L	1		6010B	TCLP
Flashpoint	>200		1.00	1.00	Degrees F	1		1010A	Total/NA

Client Sample ID: WC-FTCB-DECON — Lab Sample ID: 240-104089-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	1.6	J	10	1.2	ug/L	1		8260C	Total/NA
Acetone	19		10	5.4	ug/L	1		8260C	Total/NA
Chloroform	0.85	J	1.0	0.13	ug/L	1		8260C	Total/NA
Barium	0.018	J B	0.50	0.0013	mg/L	1		6010B	TCLP
Chromium	0.0018	J B	0.050	0.00063	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

Client Sample ID: WC-FTCB-DECON (Continued) Lab Sample ID: 240-104089-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Flashpoint	>200		1.00	1.00	Degrees F	1		1010A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: TB-110718 **Lab Sample ID: 240-104089-1**
Date Collected: 11/07/18 00:00 **Matrix: Water**
Date Received: 11/08/18 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14	ug/L			11/16/18 04:22	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			11/16/18 04:22	1
1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13	ug/L			11/16/18 04:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.41	U	1.0	0.41	ug/L			11/16/18 04:22	1
1,1-Dichloroethane	0.17	U	1.0	0.17	ug/L			11/16/18 04:22	1
1,1-Dichloroethene	0.19	U	1.0	0.19	ug/L			11/16/18 04:22	1
1,1-Dichloropropene	0.14	U	1.0	0.14	ug/L			11/16/18 04:22	1
1,2,3-Trichlorobenzene	0.54	U	1.0	0.54	ug/L			11/16/18 04:22	1
1,2,3-Trichloropropane	0.24	U	1.0	0.24	ug/L			11/16/18 04:22	1
1,2,3-Trimethylbenzene	0.14	U	5.0	0.14	ug/L			11/16/18 04:22	1
1,2,4-Trichlorobenzene	0.26	U	1.0	0.26	ug/L			11/16/18 04:22	1
1,2,4-Trimethylbenzene	0.070	U	1.0	0.070	ug/L			11/16/18 04:22	1
1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91	ug/L			11/16/18 04:22	1
1,2-Dichlorobenzene	0.15	U	1.0	0.15	ug/L			11/16/18 04:22	1
1,2-Dichloroethane	0.21	U	1.0	0.21	ug/L			11/16/18 04:22	1
1,2-Dichloropropane	0.15	U	1.0	0.15	ug/L			11/16/18 04:22	1
1,3-Dichlorobenzene	0.15	U	1.0	0.15	ug/L			11/16/18 04:22	1
1,3-Dichloropropane	0.21	U	1.0	0.21	ug/L			11/16/18 04:22	1
1,4-Dichlorobenzene	0.16	U	1.0	0.16	ug/L			11/16/18 04:22	1
2,2-Dichloropropane	0.31	U	1.0	0.31	ug/L			11/16/18 04:22	1
2-Butanone (MEK)	1.2	U	10	1.2	ug/L			11/16/18 04:22	1
2-Chloroethyl vinyl ether	0.26	U	10	0.26	ug/L			11/16/18 04:22	1
2-Chlorotoluene	0.15	U	1.0	0.15	ug/L			11/16/18 04:22	1
2-Hexanone	0.54	U	10	0.54	ug/L			11/16/18 04:22	1
4-Chlorotoluene	0.090	U	1.0	0.090	ug/L			11/16/18 04:22	1
p-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/16/18 04:22	1
4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42	ug/L			11/16/18 04:22	1
Acetone	5.4	U	10	5.4	ug/L			11/16/18 04:22	1
Benzene	0.13	U	1.0	0.13	ug/L			11/16/18 04:22	1
Bromobenzene	0.12	U	1.0	0.12	ug/L			11/16/18 04:22	1
Bromoform	0.76	U	1.0	0.76	ug/L			11/16/18 04:22	1
Bromomethane	0.42	U	1.0	0.42	ug/L			11/16/18 04:22	1
Carbon disulfide	0.28	U	1.0	0.28	ug/L			11/16/18 04:22	1
Carbon tetrachloride	0.26	U	1.0	0.26	ug/L			11/16/18 04:22	1
Chlorobenzene	0.14	U	1.0	0.14	ug/L			11/16/18 04:22	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			11/16/18 04:22	1
Chloroethane	0.83	U	1.0	0.83	ug/L			11/16/18 04:22	1
Chloroform	0.13	U	1.0	0.13	ug/L			11/16/18 04:22	1
Chloromethane	0.20	U	1.0	0.20	ug/L			11/16/18 04:22	1
cis-1,2-Dichloroethene	**0.22**	**J**	1.0	0.16	ug/L			11/16/18 04:22	1
cis-1,3-Dichloropropene	0.61	U	1.0	0.61	ug/L			11/16/18 04:22	1
Dibromomethane	0.090	U	1.0	0.090	ug/L			11/16/18 04:22	1
Bromochloromethane	0.14	U	1.0	0.14	ug/L			11/16/18 04:22	1
Dichlorodifluoromethane	0.35	U	1.0	0.35	ug/L			11/16/18 04:22	1
Bromodichloromethane	0.17	U	1.0	0.17	ug/L			11/16/18 04:22	1
tert-Butyl alcohol (TBA)	**2.2**	**J**	50	1.7	ug/L			11/16/18 04:22	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/16/18 04:22	1
Hexachlorobutadiene	0.83	U	1.0	0.83	ug/L			11/16/18 04:22	1
Diisopropyl ether	0.17	U	10	0.17	ug/L			11/16/18 04:22	1

Client Sample ID: TB-110718 — Lab Sample ID: 240-104089-1

Date Collected: 11/07/18 00:00 — **Matrix: Water**
Date Received: 11/08/18 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.090	U	1.0	0.090	ug/L			11/16/18 04:22	1
Methyl tert-butyl ether	0.070	U	1.0	0.070	ug/L			11/16/18 04:22	1
Methylene Chloride	2.6	U	5.0	2.6	ug/L			11/16/18 04:22	1
m-Xylene & p-Xylene	0.080	U	2.0	0.080	ug/L			11/16/18 04:22	1
Naphthalene	0.32	U	1.0	0.32	ug/L			11/16/18 04:22	1
n-Butylbenzene	0.14	U	1.0	0.14	ug/L			11/16/18 04:22	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/16/18 04:22	1
o-Xylene	0.090	U	1.0	0.090	ug/L			11/16/18 04:22	1
sec-Butylbenzene	0.13	U	1.0	0.13	ug/L			11/16/18 04:22	1
Styrene	0.10	U	1.0	0.10	ug/L			11/16/18 04:22	1
Tert-amyl methyl ether	0.11	U	5.0	0.11	ug/L			11/16/18 04:22	1
Ethyl t-butyl ether	0.15	U	5.0	0.15	ug/L			11/16/18 04:22	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/16/18 04:22	1
Toluene	0.14	U	1.0	0.14	ug/L			11/16/18 04:22	1
trans-1,2-Dichloroethene	0.19	U	1.0	0.19	ug/L			11/16/18 04:22	1
trans-1,3-Dichloropropene	0.67	U	1.0	0.67	ug/L			11/16/18 04:22	1
Trichloroethene	**0.50**	**J**	1.0	0.10	ug/L			11/16/18 04:22	1
Trichlorofluoromethane	0.45	U	1.0	0.45	ug/L			11/16/18 04:22	1
Vinyl acetate	0.19	U	2.0	0.19	ug/L			11/16/18 04:22	1
Vinyl chloride	0.20	U	1.0	0.20	ug/L			11/16/18 04:22	1
Xylenes, Total	0.15	U	2.0	0.15	ug/L			11/16/18 04:22	1
tert-Butylbenzene	0.14	U	1.0	0.14	ug/L			11/16/18 04:22	1
1,2-Dibromoethane	0.12	U	1.0	0.12	ug/L			11/16/18 04:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 123*		*11/16/18 04:22*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 128*		*11/16/18 04:22*	*1*
4-Bromofluorobenzene (Surr)	*94*		*59 - 120*		*11/16/18 04:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 121*		*11/16/18 04:22*	*1*

Client Sample ID: WC-SEMW10D-SOIL — Lab Sample ID: 240-104089-2

Date Collected: 11/07/18 09:30 — **Matrix: Solid**
Date Received: 11/08/18 09:45 — **Percent Solids: 81.8**

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	3.6	U	6.0	3.6	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,1,1-Trichloroethane	0.99	U	6.0	0.99	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,1,2,2-Tetrachloroethane	1.7	U	6.0	1.7	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	U	6.0	1.5	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,1-Dichloroethane	0.83	U	6.0	0.83	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,1-Dichloroethene	1.1	U	6.0	1.1	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,1-Dichloropropene	1.2	U	6.0	1.2	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,2,3-Trichlorobenzene	0.69	U	6.0	0.69	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,2,3-Trichloropropane	1.9	U	6.0	1.9	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,2,3-Trimethylbenzene	2.2	U	6.0	2.2	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,2,4-Trichlorobenzene	0.69	U	6.0	0.69	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,2,4-Trimethylbenzene	1.2	U	6.0	1.2	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,2-Dibromo-3-Chloropropane	4.3	U	12	4.3	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,2-Dichlorobenzene	1.3	U	6.0	1.3	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1

Client Sample ID: WC-SEMW10D-SOIL **Lab Sample ID: 240-104089-2**
Date Collected: 11/07/18 09:30 **Matrix: Solid**
Date Received: 11/08/18 09:45 **Percent Solids: 81.8**

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	0.93	U	6.0	0.93	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,2-Dichloropropane	1.0	U	6.0	1.0	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,3-Dichlorobenzene	0.98	U	6.0	0.98	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,3-Dichloropropane	1.2	U	6.0	1.2	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,4-Dichlorobenzene	1.1	U	6.0	1.1	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
2,2-Dichloropropane	1.4	U	6.0	1.4	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
2-Butanone (MEK)	4.3	U	24	4.3	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
2-Chloroethyl vinyl ether	11	U	60	11	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
2-Chlorotoluene	1.1	U	6.0	1.1	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
2-Hexanone	4.9	U	24	4.9	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
4-Chlorotoluene	1.0	U	6.0	1.0	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
p-Isopropyltoluene	3.5	U	6.0	3.5	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
4-Methyl-2-pentanone (MIBK)	4.5	U	24	4.5	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Acetone	25	U	30	25	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Benzene	0.84	U	6.0	0.84	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Bromobenzene	1.4	U	6.0	1.4	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Bromoform	2.9	U	6.0	2.9	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Bromomethane	1.2	U	6.0	1.2	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Carbon disulfide	1.4	U	6.0	1.4	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Carbon tetrachloride	3.9	U	6.0	3.9	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Chlorobenzene	1.1	U	6.0	1.1	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Dibromochloromethane	3.3	U	6.0	3.3	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Chloroethane	1.5	U	6.0	1.5	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Chloroform	0.95	U	6.0	0.95	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Chloromethane	1.3	U	6.0	1.3	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
cis-1,2-Dichloroethene	0.78	U	6.0	0.78	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
cis-1,3-Dichloropropene	1.7	U	6.0	1.7	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Dibromomethane	0.80	U	6.0	0.80	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Bromochloromethane	0.71	U	6.0	0.71	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Dichlorodifluoromethane	1.1	U	6.0	1.1	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Bromodichloromethane	0.82	U	6.0	0.82	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
tert-Butyl alcohol (TBA)	20	U	240	20	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Ethylbenzene	1.3	U	6.0	1.3	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Hexachlorobutadiene	4.5	U	6.0	4.5	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Diisopropyl ether	0.91	U	12	0.91	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Isopropylbenzene	1.0	U	6.0	1.0	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Methyl tert-butyl ether	0.99	U	6.0	0.99	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Methylene Chloride	14	U	30	14	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
m-Xylene & p-Xylene	0.94	U	12	0.94	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Naphthalene	3.2	U	6.0	3.2	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
n-Butylbenzene	4.2	U	6.0	4.2	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
N-Propylbenzene	0.88	U	6.0	0.88	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
o-Xylene	1.0	U	6.0	1.0	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
sec-Butylbenzene	1.0	U	6.0	1.0	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Styrene	1.4	U	6.0	1.4	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Tert-amyl methyl ether	2.7	U	6.0	2.7	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Ethyl t-butyl ether	2.7	U	6.0	2.7	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Tetrachloroethene	0.88	U	6.0	0.88	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Toluene	0.93	U	6.0	0.93	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1

Client Sample ID: WC-SEMW10D-SOIL **Lab Sample ID: 240-104089-2**
Date Collected: 11/07/18 09:30 **Matrix: Solid**
Date Received: 11/08/18 09:45 **Percent Solids: 81.8**

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	0.56	U	6.0	0.56	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
trans-1,3-Dichloropropene	1.2	U	6.0	1.2	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Trichloroethene	**17**		6.0	0.76	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Trichlorofluoromethane	1.3	U	6.0	1.3	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Vinyl acetate	2.6	U	12	2.6	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Vinyl chloride	1.0	U	6.0	1.0	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
Xylenes, Total	1.9	U	12	1.9	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
tert-Butylbenzene	1.1	U	6.0	1.1	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1
1,2-Dibromoethane	0.93	U	6.0	0.93	ug/Kg	☼	11/19/18 13:10	11/19/18 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*62 - 135*	*11/19/18 13:10*	*11/19/18 17:43*	*1*
Dibromofluoromethane (Surr)	*77*		*49 - 132*	*11/19/18 13:10*	*11/19/18 17:43*	*1*
4-Bromofluorobenzene (Surr)	*97*		*49 - 141*	*11/19/18 13:10*	*11/19/18 17:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*80*		*48 - 123*	*11/19/18 13:10*	*11/19/18 17:43*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26	U	59	26	ug/Kg	☼	11/12/18 08:27	11/14/18 01:39	1
Aroclor-1221	28	U	59	28	ug/Kg	☼	11/12/18 08:27	11/14/18 01:39	1
Aroclor-1232	27	U	59	27	ug/Kg	☼	11/12/18 08:27	11/14/18 01:39	1
Aroclor-1242	22	U	59	22	ug/Kg	☼	11/12/18 08:27	11/14/18 01:39	1
Aroclor-1248	28	U	59	28	ug/Kg	☼	11/12/18 08:27	11/14/18 01:39	1
Aroclor-1254	27	U	59	27	ug/Kg	☼	11/12/18 08:27	11/14/18 01:39	1
Aroclor-1260	26	U	59	26	ug/Kg	☼	11/12/18 08:27	11/14/18 01:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*81*		*14 - 128*	*11/12/18 08:27*	*11/14/18 01:39*	*1*
DCB Decachlorobiphenyl	*81*		*10 - 132*	*11/12/18 08:27*	*11/14/18 01:39*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0041	U	0.050	0.0041	mg/L		11/16/18 14:00	11/19/18 11:34	1
Barium	**0.033**	**J B**	0.50	0.0013	mg/L		11/16/18 14:00	11/19/18 11:34	1
Cadmium	0.00020	U	0.050	0.00020	mg/L		11/16/18 14:00	11/19/18 11:34	1
Chromium	**0.0043**	**J B**	0.050	0.00063	mg/L		11/16/18 14:00	11/19/18 11:34	1
Lead	0.0028	U	0.050	0.0028	mg/L		11/16/18 14:00	11/19/18 11:34	1
Selenium	0.0060	U	0.050	0.0060	mg/L		11/16/18 14:00	11/19/18 11:34	1
Silver	0.00062	U	0.050	0.00062	mg/L		11/16/18 14:00	11/19/18 11:34	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	U	0.0020	0.00013	mg/L		11/16/18 12:00	11/19/18 14:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	**>200**		1.00	1.00	Degrees F			11/20/18 10:10	1
Percent Solids	**81.8**		0.1	0.1	%			11/09/18 08:36	1
Percent Moisture	**18.2**		0.1	0.1	%			11/09/18 08:36	1

Client Sample ID: WC-FTCB-DEVW **Lab Sample ID: 240-104089-3**
Date Collected: 11/07/18 10:00 **Matrix: Water**
Date Received: 11/08/18 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.28	U	2.0	0.28	ug/L			11/16/18 04:44	2
1,1,1-Trichloroethane	0.48	U	2.0	0.48	ug/L			11/16/18 04:44	2
1,1,2,2-Tetrachloroethane	0.26	U	2.0	0.26	ug/L			11/16/18 04:44	2
1,1,2-Trichloro-1,2,2-trifluoroethane	0.82	U	2.0	0.82	ug/L			11/16/18 04:44	2
1,1-Dichloroethane	0.34	U	2.0	0.34	ug/L			11/16/18 04:44	2
1,1-Dichloroethene	0.38	U	2.0	0.38	ug/L			11/16/18 04:44	2
1,1-Dichloropropene	0.28	U	2.0	0.28	ug/L			11/16/18 04:44	2
1,2,3-Trichlorobenzene	1.1	U	2.0	1.1	ug/L			11/16/18 04:44	2
1,2,3-Trichloropropane	0.48	U	2.0	0.48	ug/L			11/16/18 04:44	2
1,2,3-Trimethylbenzene	0.28	U	10	0.28	ug/L			11/16/18 04:44	2
1,2,4-Trichlorobenzene	**1.9**	**J**	2.0	0.52	ug/L			11/16/18 04:44	2
1,2,4-Trimethylbenzene	0.14	U	2.0	0.14	ug/L			11/16/18 04:44	2
1,2-Dibromo-3-Chloropropane	1.8	U	4.0	1.8	ug/L			11/16/18 04:44	2
1,2-Dichlorobenzene	0.30	U	2.0	0.30	ug/L			11/16/18 04:44	2
1,2-Dichloroethane	**0.70**	**J**	2.0	0.42	ug/L			11/16/18 04:44	2
1,2-Dichloropropane	0.30	U	2.0	0.30	ug/L			11/16/18 04:44	2
1,3-Dichlorobenzene	**2.6**		2.0	0.30	ug/L			11/16/18 04:44	2
1,3-Dichloropropane	0.42	U	2.0	0.42	ug/L			11/16/18 04:44	2
1,4-Dichlorobenzene	**7.7**		2.0	0.32	ug/L			11/16/18 04:44	2
2,2-Dichloropropane	0.62	U	2.0	0.62	ug/L			11/16/18 04:44	2
2-Butanone (MEK)	2.3	U	20	2.3	ug/L			11/16/18 04:44	2
2-Chloroethyl vinyl ether	0.52	U	20	0.52	ug/L			11/16/18 04:44	2
2-Chlorotoluene	0.30	U	2.0	0.30	ug/L			11/16/18 04:44	2
2-Hexanone	1.1	U	20	1.1	ug/L			11/16/18 04:44	2
4-Chlorotoluene	0.18	U	2.0	0.18	ug/L			11/16/18 04:44	2
p-Isopropyltoluene	0.26	U	2.0	0.26	ug/L			11/16/18 04:44	2
4-Methyl-2-pentanone (MIBK)	0.84	U	20	0.84	ug/L			11/16/18 04:44	2
Acetone	11	U	20	11	ug/L			11/16/18 04:44	2
Benzene	**0.65**	**J**	2.0	0.26	ug/L			11/16/18 04:44	2
Bromobenzene	0.24	U	2.0	0.24	ug/L			11/16/18 04:44	2
Bromoform	1.5	U	2.0	1.5	ug/L			11/16/18 04:44	2
Bromomethane	0.84	U	2.0	0.84	ug/L			11/16/18 04:44	2
Carbon disulfide	0.56	U	2.0	0.56	ug/L			11/16/18 04:44	2
Carbon tetrachloride	0.52	U	2.0	0.52	ug/L			11/16/18 04:44	2
Chlorobenzene	**54**		2.0	0.28	ug/L			11/16/18 04:44	2
Dibromochloromethane	0.78	U	2.0	0.78	ug/L			11/16/18 04:44	2
Chloroethane	1.7	U	2.0	1.7	ug/L			11/16/18 04:44	2
Chloroform	**1.2**	**J**	2.0	0.26	ug/L			11/16/18 04:44	2
Chloromethane	0.40	U	2.0	0.40	ug/L			11/16/18 04:44	2
cis-1,2-Dichloroethene	0.32	U	2.0	0.32	ug/L			11/16/18 04:44	2
cis-1,3-Dichloropropene	1.2	U	2.0	1.2	ug/L			11/16/18 04:44	2
Dibromomethane	0.18	U	2.0	0.18	ug/L			11/16/18 04:44	2
Bromochloromethane	0.28	U	2.0	0.28	ug/L			11/16/18 04:44	2
Dichlorodifluoromethane	0.70	U	2.0	0.70	ug/L			11/16/18 04:44	2
Bromodichloromethane	0.34	U	2.0	0.34	ug/L			11/16/18 04:44	2
tert-Butyl alcohol (TBA)	3.4	U	100	3.4	ug/L			11/16/18 04:44	2
Ethylbenzene	0.22	U	2.0	0.22	ug/L			11/16/18 04:44	2
Hexachlorobutadiene	1.7	U	2.0	1.7	ug/L			11/16/18 04:44	2
Diisopropyl ether	0.34	U	20	0.34	ug/L			11/16/18 04:44	2

Client Sample ID: WC-FTCB-DEVW **Lab Sample ID: 240-104089-3**
Date Collected: 11/07/18 10:00 **Matrix: Water**
Date Received: 11/08/18 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	0.18	U	2.0	0.18	ug/L			11/16/18 04:44	2
Methyl tert-butyl ether	0.14	U	2.0	0.14	ug/L			11/16/18 04:44	2
Methylene Chloride	5.2	U	10	5.2	ug/L			11/16/18 04:44	2
m-Xylene & p-Xylene	0.16	U	4.0	0.16	ug/L			11/16/18 04:44	2
Naphthalene	0.64	U	2.0	0.64	ug/L			11/16/18 04:44	2
n-Butylbenzene	0.28	U	2.0	0.28	ug/L			11/16/18 04:44	2
N-Propylbenzene	0.30	U	2.0	0.30	ug/L			11/16/18 04:44	2
o-Xylene	0.18	U	2.0	0.18	ug/L			11/16/18 04:44	2
sec-Butylbenzene	0.26	U	2.0	0.26	ug/L			11/16/18 04:44	2
Styrene	0.20	U	2.0	0.20	ug/L			11/16/18 04:44	2
Tert-amyl methyl ether	0.22	U	10	0.22	ug/L			11/16/18 04:44	2
Ethyl t-butyl ether	0.30	U	10	0.30	ug/L			11/16/18 04:44	2
Tetrachloroethene	0.30	U	2.0	0.30	ug/L			11/16/18 04:44	2
Toluene	**1.3**	**J**	2.0	0.28	ug/L			11/16/18 04:44	2
trans-1,2-Dichloroethene	0.38	U	2.0	0.38	ug/L			11/16/18 04:44	2
trans-1,3-Dichloropropene	1.3	U	2.0	1.3	ug/L			11/16/18 04:44	2
Trichloroethene	0.20	U	2.0	0.20	ug/L			11/16/18 04:44	2
Trichlorofluoromethane	0.90	U	2.0	0.90	ug/L			11/16/18 04:44	2
Vinyl acetate	0.38	U	4.0	0.38	ug/L			11/16/18 04:44	2
Vinyl chloride	0.40	U	2.0	0.40	ug/L			11/16/18 04:44	2
Xylenes, Total	0.30	U	4.0	0.30	ug/L			11/16/18 04:44	2
tert-Butylbenzene	0.28	U	2.0	0.28	ug/L			11/16/18 04:44	2
1,2-Dibromoethane	0.24	U	2.0	0.24	ug/L			11/16/18 04:44	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 123*		*11/16/18 04:44*	*2*
Dibromofluoromethane (Surr)	*103*		*75 - 128*		*11/16/18 04:44*	*2*
4-Bromofluorobenzene (Surr)	*96*		*59 - 120*		*11/16/18 04:44*	*2*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 121*		*11/16/18 04:44*	*2*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.057	U	0.10	0.057	ug/L		11/09/18 08:13	11/13/18 12:56	1
Aroclor-1221	0.058	U	0.10	0.058	ug/L		11/09/18 08:13	11/13/18 12:56	1
Aroclor-1232	0.075	U	0.10	0.075	ug/L		11/09/18 08:13	11/13/18 12:56	1
Aroclor-1242	0.077	U	0.10	0.077	ug/L		11/09/18 08:13	11/13/18 12:56	1
Aroclor-1248	0.051	U	0.10	0.051	ug/L		11/09/18 08:13	11/13/18 12:56	1
Aroclor-1254	0.040	U	0.10	0.040	ug/L		11/09/18 08:13	11/13/18 12:56	1
Aroclor-1260	0.046	U	0.10	0.046	ug/L		11/09/18 08:13	11/13/18 12:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*71*		*22 - 120*	*11/09/18 08:13*	*11/13/18 12:56*	*1*
DCB Decachlorobiphenyl	*46*		*10 - 120*	*11/09/18 08:13*	*11/13/18 12:56*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0041	U	0.050	0.0041	mg/L		11/16/18 14:00	11/19/18 11:38	1
Barium	**0.45**	**J B**	0.50	0.0013	mg/L		11/16/18 14:00	11/19/18 11:38	1
Cadmium	**0.00021**	**J**	0.050	0.00020	mg/L		11/16/18 14:00	11/19/18 11:38	1
Chromium	**0.0022**	**J B**	0.050	0.00063	mg/L		11/16/18 14:00	11/19/18 11:38	1

Client Sample ID: WC-FTCB-DEVW — Lab Sample ID: 240-104089-3

Date Collected: 11/07/18 10:00 — **Matrix: Water**
Date Received: 11/08/18 09:45

Method: 6010B - Metals (ICP) - TCLP (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0028	U	0.050	0.0028	mg/L		11/16/18 14:00	11/19/18 11:38	1
Selenium	0.0060	U	0.050	0.0060	mg/L		11/16/18 14:00	11/19/18 11:38	1
Silver	**0.00068**	**J**	0.050	0.00062	mg/L		11/16/18 14:00	11/19/18 11:38	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	U	0.0020	0.00013	mg/L		11/16/18 12:00	11/19/18 14:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	**>200**		1.00	1.00	Degrees F			11/12/18 06:39	1

Client Sample ID: WC-FTCB-SOIL — Lab Sample ID: 240-104089-4

Date Collected: 11/07/18 10:15 — **Matrix: Solid**
Date Received: 11/08/18 09:45 — **Percent Solids: 83.4**

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	3.3	U	5.6	3.3	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,1,1-Trichloroethane	0.92	U	5.6	0.92	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,1,2,2-Tetrachloroethane	1.6	U	5.6	1.6	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.4	U	5.6	1.4	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,1-Dichloroethane	0.78	U	5.6	0.78	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,1-Dichloroethene	1.0	U	5.6	1.0	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,1-Dichloropropene	1.1	U	5.6	1.1	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,2,3-Trichlorobenzene	**0.68**	**J**	5.6	0.64	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,2,3-Trichloropropane	1.8	U	5.6	1.8	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,2,3-Trimethylbenzene	2.0	U	5.6	2.0	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,2,4-Trichlorobenzene	**2.6**	**J**	5.6	0.64	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,2,4-Trimethylbenzene	1.1	U	5.6	1.1	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,2-Dibromo-3-Chloropropane	4.0	U	11	4.0	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,2-Dichlorobenzene	1.2	U	5.6	1.2	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,2-Dichloroethane	0.87	U	5.6	0.87	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,2-Dichloropropane	0.95	U	5.6	0.95	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,3-Dichlorobenzene	0.91	U	5.6	0.91	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,3-Dichloropropane	1.1	U	5.6	1.1	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,4-Dichlorobenzene	0.99	U	5.6	0.99	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
2,2-Dichloropropane	1.3	U	5.6	1.3	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
2-Butanone (MEK)	4.0	U	22	4.0	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
2-Chloroethyl vinyl ether	10	U	56	10	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
2-Chlorotoluene	1.1	U	5.6	1.1	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
2-Hexanone	4.6	U	22	4.6	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
4-Chlorotoluene	0.97	U	5.6	0.97	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
p-Isopropyltoluene	3.3	U	5.6	3.3	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
4-Methyl-2-pentanone (MIBK)	4.2	U	22	4.2	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Acetone	24	U	28	24	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Benzene	0.78	U	5.6	0.78	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Bromobenzene	1.3	U	5.6	1.3	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Bromoform	2.7	U	5.6	2.7	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Bromomethane	1.1	U	5.6	1.1	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1

Client Sample ID: WC-FTCB-SOIL **Lab Sample ID: 240-104089-4**
Date Collected: 11/07/18 10:15 **Matrix: Solid**
Date Received: 11/08/18 09:45 **Percent Solids: 83.4**

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	1.3	U	5.6	1.3	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Carbon tetrachloride	3.6	U	5.6	3.6	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Chlorobenzene	1.0	U	5.6	1.0	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Dibromochloromethane	3.1	U	5.6	3.1	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Chloroethane	1.4	U	5.6	1.4	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Chloroform	0.88	U	5.6	0.88	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Chloromethane	1.2	U	5.6	1.2	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
cis-1,2-Dichloroethene	0.73	U	5.6	0.73	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
cis-1,3-Dichloropropene	1.6	U	5.6	1.6	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Dibromomethane	0.75	U	5.6	0.75	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Bromochloromethane	0.67	U	5.6	0.67	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Dichlorodifluoromethane	1.1	U	5.6	1.1	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Bromodichloromethane	0.76	U	5.6	0.76	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
tert-Butyl alcohol (TBA)	19	U	220	19	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Ethylbenzene	1.2	U	5.6	1.2	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Hexachlorobutadiene	4.2	U	5.6	4.2	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Diisopropyl ether	0.85	U	11	0.85	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Isopropylbenzene	0.93	U	5.6	0.93	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Methyl tert-butyl ether	0.92	U	5.6	0.92	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Methylene Chloride	13	U	28	13	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
m-Xylene & p-Xylene	0.88	U	11	0.88	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Naphthalene	3.0	U	5.6	3.0	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
n-Butylbenzene	3.9	U	5.6	3.9	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
N-Propylbenzene	0.82	U	5.6	0.82	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
o-Xylene	0.97	U	5.6	0.97	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
sec-Butylbenzene	0.97	U	5.6	0.97	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Styrene	1.3	U	5.6	1.3	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Tert-amyl methyl ether	2.5	U	5.6	2.5	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Ethyl t-butyl ether	2.5	U	5.6	2.5	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Tetrachloroethene	0.82	U	5.6	0.82	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Toluene	0.87	U	5.6	0.87	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
trans-1,2-Dichloroethene	0.52	U	5.6	0.52	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
trans-1,3-Dichloropropene	1.2	U	5.6	1.2	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Trichloroethene	0.71	U	5.6	0.71	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Trichlorofluoromethane	1.2	U	5.6	1.2	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Vinyl acetate	2.4	U	11	2.4	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Vinyl chloride	0.94	U	5.6	0.94	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
Xylenes, Total	1.8	U	11	1.8	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
tert-Butylbenzene	1.0	U	5.6	1.0	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1
1,2-Dibromoethane	0.86	U	5.6	0.86	ug/Kg	☼	11/19/18 13:10	11/19/18 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*62 - 135*	*11/19/18 13:10*	*11/19/18 18:04*	*1*
Dibromofluoromethane (Surr)	*74*		*49 - 132*	*11/19/18 13:10*	*11/19/18 18:04*	*1*
4-Bromofluorobenzene (Surr)	*98*		*49 - 141*	*11/19/18 13:10*	*11/19/18 18:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*80*		*48 - 123*	*11/19/18 13:10*	*11/19/18 18:04*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	25	U	58	25	ug/Kg	☼	11/12/18 08:27	11/14/18 01:59	1

Client Sample ID: WC-FTCB-SOIL — Lab Sample ID: 240-104089-4

Date Collected: 11/07/18 10:15 — **Matrix: Solid**
Date Received: 11/08/18 09:45 — **Percent Solids: 83.4**

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1221	28	U	58	28	ug/Kg	☼	11/12/18 08:27	11/14/18 01:59	1
Aroclor-1232	27	U	58	27	ug/Kg	☼	11/12/18 08:27	11/14/18 01:59	1
Aroclor-1242	22	U	58	22	ug/Kg	☼	11/12/18 08:27	11/14/18 01:59	1
Aroclor-1248	28	U	58	28	ug/Kg	☼	11/12/18 08:27	11/14/18 01:59	1
Aroclor-1254	27	U	58	27	ug/Kg	☼	11/12/18 08:27	11/14/18 01:59	1
Aroclor-1260	**95**		58	25	ug/Kg	☼	11/12/18 08:27	11/14/18 01:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*81*		*14 - 128*	*11/12/18 08:27*	*11/14/18 01:59*	*1*
DCB Decachlorobiphenyl	*85*		*10 - 132*	*11/12/18 08:27*	*11/14/18 01:59*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0052**	**J**	0.050	0.0041	mg/L		11/16/18 14:00	11/19/18 09:56	1
Barium	**0.18**	**J B**	0.50	0.0013	mg/L		11/16/18 14:00	11/19/18 09:56	1
Cadmium	**0.0015**	**J**	0.050	0.00020	mg/L		11/16/18 14:00	11/19/18 09:56	1
Chromium	**0.0040**	**J B**	0.050	0.00063	mg/L		11/16/18 14:00	11/19/18 09:56	1
Lead	**0.019**	**J**	0.050	0.0028	mg/L		11/16/18 14:00	11/19/18 09:56	1
Selenium	0.0060	U	0.050	0.0060	mg/L		11/16/18 14:00	11/19/18 09:56	1
Silver	0.00062	U	0.050	0.00062	mg/L		11/16/18 14:00	11/19/18 09:56	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	U	0.0020	0.00013	mg/L		11/16/18 12:00	11/19/18 14:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	**>200**		1.00	1.00	Degrees F			11/20/18 10:40	1
Percent Solids	**83.4**		0.1	0.1	%			11/09/18 08:36	1
Percent Moisture	**16.6**		0.1	0.1	%			11/09/18 08:36	1

Client Sample ID: WC-FTCB-DECON — Lab Sample ID: 240-104089-5

Date Collected: 11/07/18 10:30 — **Matrix: Water**
Date Received: 11/08/18 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14	ug/L			11/16/18 05:06	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			11/16/18 05:06	1
1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13	ug/L			11/16/18 05:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.41	U	1.0	0.41	ug/L			11/16/18 05:06	1
1,1-Dichloroethane	0.17	U	1.0	0.17	ug/L			11/16/18 05:06	1
1,1-Dichloroethene	0.19	U	1.0	0.19	ug/L			11/16/18 05:06	1
1,1-Dichloropropene	0.14	U	1.0	0.14	ug/L			11/16/18 05:06	1
1,2,3-Trichlorobenzene	0.54	U	1.0	0.54	ug/L			11/16/18 05:06	1
1,2,3-Trichloropropane	0.24	U	1.0	0.24	ug/L			11/16/18 05:06	1
1,2,3-Trimethylbenzene	0.14	U	5.0	0.14	ug/L			11/16/18 05:06	1
1,2,4-Trichlorobenzene	0.26	U	1.0	0.26	ug/L			11/16/18 05:06	1
1,2,4-Trimethylbenzene	0.070	U	1.0	0.070	ug/L			11/16/18 05:06	1
1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91	ug/L			11/16/18 05:06	1
1,2-Dichlorobenzene	0.15	U	1.0	0.15	ug/L			11/16/18 05:06	1

Client Sample ID: WC-FTCB-DECON **Lab Sample ID: 240-104089-5**
Date Collected: 11/07/18 10:30 **Matrix: Water**
Date Received: 11/08/18 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	0.21	U	1.0	0.21	ug/L			11/16/18 05:06	1
1,2-Dichloropropane	0.15	U	1.0	0.15	ug/L			11/16/18 05:06	1
1,3-Dichlorobenzene	0.15	U	1.0	0.15	ug/L			11/16/18 05:06	1
1,3-Dichloropropane	0.21	U	1.0	0.21	ug/L			11/16/18 05:06	1
1,4-Dichlorobenzene	0.16	U	1.0	0.16	ug/L			11/16/18 05:06	1
2,2-Dichloropropane	0.31	U	1.0	0.31	ug/L			11/16/18 05:06	1
2-Butanone (MEK)	**1.6**	**J**	10	1.2	ug/L			11/16/18 05:06	1
2-Chloroethyl vinyl ether	0.26	U	10	0.26	ug/L			11/16/18 05:06	1
2-Chlorotoluene	0.15	U	1.0	0.15	ug/L			11/16/18 05:06	1
2-Hexanone	0.54	U	10	0.54	ug/L			11/16/18 05:06	1
4-Chlorotoluene	0.090	U	1.0	0.090	ug/L			11/16/18 05:06	1
p-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/16/18 05:06	1
4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42	ug/L			11/16/18 05:06	1
Acetone	**19**		10	5.4	ug/L			11/16/18 05:06	1
Benzene	0.13	U	1.0	0.13	ug/L			11/16/18 05:06	1
Bromobenzene	0.12	U	1.0	0.12	ug/L			11/16/18 05:06	1
Bromoform	0.76	U	1.0	0.76	ug/L			11/16/18 05:06	1
Bromomethane	0.42	U	1.0	0.42	ug/L			11/16/18 05:06	1
Carbon disulfide	0.28	U	1.0	0.28	ug/L			11/16/18 05:06	1
Carbon tetrachloride	0.26	U	1.0	0.26	ug/L			11/16/18 05:06	1
Chlorobenzene	0.14	U	1.0	0.14	ug/L			11/16/18 05:06	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			11/16/18 05:06	1
Chloroethane	0.83	U	1.0	0.83	ug/L			11/16/18 05:06	1
Chloroform	**0.85**	**J**	1.0	0.13	ug/L			11/16/18 05:06	1
Chloromethane	0.20	U	1.0	0.20	ug/L			11/16/18 05:06	1
cis-1,2-Dichloroethene	0.16	U	1.0	0.16	ug/L			11/16/18 05:06	1
cis-1,3-Dichloropropene	0.61	U	1.0	0.61	ug/L			11/16/18 05:06	1
Dibromomethane	0.090	U	1.0	0.090	ug/L			11/16/18 05:06	1
Bromochloromethane	0.14	U	1.0	0.14	ug/L			11/16/18 05:06	1
Dichlorodifluoromethane	0.35	U	1.0	0.35	ug/L			11/16/18 05:06	1
Bromodichloromethane	0.17	U	1.0	0.17	ug/L			11/16/18 05:06	1
tert-Butyl alcohol (TBA)	1.7	U	50	1.7	ug/L			11/16/18 05:06	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/16/18 05:06	1
Hexachlorobutadiene	0.83	U	1.0	0.83	ug/L			11/16/18 05:06	1
Diisopropyl ether	0.17	U	10	0.17	ug/L			11/16/18 05:06	1
Isopropylbenzene	0.090	U	1.0	0.090	ug/L			11/16/18 05:06	1
Methyl tert-butyl ether	0.070	U	1.0	0.070	ug/L			11/16/18 05:06	1
Methylene Chloride	2.6	U	5.0	2.6	ug/L			11/16/18 05:06	1
m-Xylene & p-Xylene	0.080	U	2.0	0.080	ug/L			11/16/18 05:06	1
Naphthalene	0.32	U	1.0	0.32	ug/L			11/16/18 05:06	1
n-Butylbenzene	0.14	U	1.0	0.14	ug/L			11/16/18 05:06	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/16/18 05:06	1
o-Xylene	0.090	U	1.0	0.090	ug/L			11/16/18 05:06	1
sec-Butylbenzene	0.13	U	1.0	0.13	ug/L			11/16/18 05:06	1
Styrene	0.10	U	1.0	0.10	ug/L			11/16/18 05:06	1
Tert-amyl methyl ether	0.11	U	5.0	0.11	ug/L			11/16/18 05:06	1
Ethyl t-butyl ether	0.15	U	5.0	0.15	ug/L			11/16/18 05:06	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/16/18 05:06	1
Toluene	0.14	U	1.0	0.14	ug/L			11/16/18 05:06	1

Client Sample ID: WC-FTCB-DECON — Lab Sample ID: 240-104089-5

Date Collected: 11/07/18 10:30 — **Matrix: Water**
Date Received: 11/08/18 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	0.19	U	1.0	0.19	ug/L			11/16/18 05:06	1
trans-1,3-Dichloropropene	0.67	U	1.0	0.67	ug/L			11/16/18 05:06	1
Trichloroethene	0.10	U	1.0	0.10	ug/L			11/16/18 05:06	1
Trichlorofluoromethane	0.45	U	1.0	0.45	ug/L			11/16/18 05:06	1
Vinyl acetate	0.19	U	2.0	0.19	ug/L			11/16/18 05:06	1
Vinyl chloride	0.20	U	1.0	0.20	ug/L			11/16/18 05:06	1
Xylenes, Total	0.15	U	2.0	0.15	ug/L			11/16/18 05:06	1
tert-Butylbenzene	0.14	U	1.0	0.14	ug/L			11/16/18 05:06	1
1,2-Dibromoethane	0.12	U	1.0	0.12	ug/L			11/16/18 05:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 123*		*11/16/18 05:06*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 128*		*11/16/18 05:06*	*1*
4-Bromofluorobenzene (Surr)	*95*		*59 - 120*		*11/16/18 05:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 121*		*11/16/18 05:06*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.058	U	0.10	0.058	ug/L		11/09/18 08:13	11/13/18 13:19	1
Aroclor-1221	0.059	U	0.10	0.059	ug/L		11/09/18 08:13	11/13/18 13:19	1
Aroclor-1232	0.076	U	0.10	0.076	ug/L		11/09/18 08:13	11/13/18 13:19	1
Aroclor-1242	0.078	U	0.10	0.078	ug/L		11/09/18 08:13	11/13/18 13:19	1
Aroclor-1248	0.052	U	0.10	0.052	ug/L		11/09/18 08:13	11/13/18 13:19	1
Aroclor-1254	0.041	U	0.10	0.041	ug/L		11/09/18 08:13	11/13/18 13:19	1
Aroclor-1260	0.047	U	0.10	0.047	ug/L		11/09/18 08:13	11/13/18 13:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*62*		*22 - 120*	*11/09/18 08:13*	*11/13/18 13:19*	*1*
DCB Decachlorobiphenyl	*46*		*10 - 120*	*11/09/18 08:13*	*11/13/18 13:19*	*1*

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0041	U	0.050	0.0041	mg/L		11/16/18 14:00	11/19/18 11:43	1
Barium	**0.018**	**J B**	0.50	0.0013	mg/L		11/16/18 14:00	11/19/18 11:43	1
Cadmium	0.00020	U	0.050	0.00020	mg/L		11/16/18 14:00	11/19/18 11:43	1
Chromium	**0.0018**	**J B**	0.050	0.00063	mg/L		11/16/18 14:00	11/19/18 11:43	1
Lead	0.0028	U	0.050	0.0028	mg/L		11/16/18 14:00	11/19/18 11:43	1
Selenium	0.0060	U	0.050	0.0060	mg/L		11/16/18 14:00	11/19/18 11:43	1
Silver	0.00062	U	0.050	0.00062	mg/L		11/16/18 14:00	11/19/18 11:43	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	U	0.0020	0.00013	mg/L		11/16/18 12:00	11/19/18 14:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	**>200**		1.00	1.00	Degrees F			11/12/18 06:06	1

Default Detection Limits

Client: Tetra Tech, Inc.
Project/Site: MRC Block F TCB Waste Characterization

TestAmerica Job ID: 240-104089-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	RL	MDL	Units	Method
1,1,1,2-Tetrachloroethane	1.0	0.14	ug/L	8260C
1,1,1-Trichloroethane	1.0	0.24	ug/L	8260C
1,1,2,2-Tetrachloroethane	1.0	0.13	ug/L	8260C
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	0.41	ug/L	8260C
1,1-Dichloroethane	1.0	0.17	ug/L	8260C
1,1-Dichloroethene	1.0	0.19	ug/L	8260C
1,1-Dichloropropene	1.0	0.14	ug/L	8260C
1,2,3-Trichlorobenzene	1.0	0.54	ug/L	8260C
1,2,3-Trichloropropane	1.0	0.24	ug/L	8260C
1,2,3-Trimethylbenzene	5.0	0.14	ug/L	8260C
1,2,4-Trichlorobenzene	1.0	0.26	ug/L	8260C
1,2,4-Trimethylbenzene	1.0	0.070	ug/L	8260C
1,2-Dibromo-3-Chloropropane	2.0	0.91	ug/L	8260C
1,2-Dibromoethane	1.0	0.12	ug/L	8260C
1,2-Dichlorobenzene	1.0	0.15	ug/L	8260C
1,2-Dichloroethane	1.0	0.21	ug/L	8260C
1,2-Dichloropropane	1.0	0.15	ug/L	8260C
1,3-Dichlorobenzene	1.0	0.15	ug/L	8260C
1,3-Dichloropropane	1.0	0.21	ug/L	8260C
1,4-Dichlorobenzene	1.0	0.16	ug/L	8260C
2,2-Dichloropropane	1.0	0.31	ug/L	8260C
2-Butanone (MEK)	10	1.2	ug/L	8260C
2-Chloroethyl vinyl ether	10	0.26	ug/L	8260C
2-Chlorotoluene	1.0	0.15	ug/L	8260C
2-Hexanone	10	0.54	ug/L	8260C
4-Chlorotoluene	1.0	0.090	ug/L	8260C
4-Methyl-2-pentanone (MIBK)	10	0.42	ug/L	8260C
Acetone	10	5.4	ug/L	8260C
Benzene	1.0	0.13	ug/L	8260C
Bromobenzene	1.0	0.12	ug/L	8260C
Bromochloromethane	1.0	0.14	ug/L	8260C
Bromodichloromethane	1.0	0.17	ug/L	8260C
Bromoform	1.0	0.76	ug/L	8260C
Bromomethane	1.0	0.42	ug/L	8260C
Carbon disulfide	1.0	0.28	ug/L	8260C
Carbon tetrachloride	1.0	0.26	ug/L	8260C
Chlorobenzene	1.0	0.14	ug/L	8260C
Chloroethane	1.0	0.83	ug/L	8260C
Chloroform	1.0	0.13	ug/L	8260C
Chloromethane	1.0	0.20	ug/L	8260C
cis-1,2-Dichloroethene	1.0	0.16	ug/L	8260C
cis-1,3-Dichloropropene	1.0	0.61	ug/L	8260C
Dibromochloromethane	1.0	0.39	ug/L	8260C
Dibromomethane	1.0	0.090	ug/L	8260C
Dichlorodifluoromethane	1.0	0.35	ug/L	8260C
Diisopropyl ether	10	0.17	ug/L	8260C
Ethyl t-butyl ether	5.0	0.15	ug/L	8260C
Ethylbenzene	1.0	0.11	ug/L	8260C
Hexachlorobutadiene	1.0	0.83	ug/L	8260C
Isopropylbenzene	1.0	0.090	ug/L	8260C
Methyl tert-butyl ether	1.0	0.070	ug/L	8260C
Methylene Chloride	5.0	2.6	ug/L	8260C

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	RL	MDL	Units	Method
m-Xylene & p-Xylene	2.0	0.080	ug/L	8260C
Naphthalene	1.0	0.32	ug/L	8260C
n-Butylbenzene	1.0	0.14	ug/L	8260C
N-Propylbenzene	1.0	0.15	ug/L	8260C
o-Xylene	1.0	0.090	ug/L	8260C
p-Isopropyltoluene	1.0	0.13	ug/L	8260C
sec-Butylbenzene	1.0	0.13	ug/L	8260C
Styrene	1.0	0.10	ug/L	8260C
Tert-amyl methyl ether	5.0	0.11	ug/L	8260C
tert-Butyl alcohol (TBA)	50	1.7	ug/L	8260C
tert-Butylbenzene	1.0	0.14	ug/L	8260C
Tetrachloroethene	1.0	0.15	ug/L	8260C
Toluene	1.0	0.14	ug/L	8260C
trans-1,2-Dichloroethene	1.0	0.19	ug/L	8260C
trans-1,3-Dichloropropene	1.0	0.67	ug/L	8260C
Trichloroethene	1.0	0.10	ug/L	8260C
Trichlorofluoromethane	1.0	0.45	ug/L	8260C
Vinyl acetate	2.0	0.19	ug/L	8260C
Vinyl chloride	1.0	0.20	ug/L	8260C
Xylenes, Total	2.0	0.15	ug/L	8260C

Method: 8260C - Volatile Organic Compounds by GC/MS
Prep: 5030C

Analyte	RL	MDL	Units	Method
1,1,1,2-Tetrachloroethane	5.0	3.0	ug/Kg	8260C
1,1,1-Trichloroethane	5.0	0.82	ug/Kg	8260C
1,1,2,2-Tetrachloroethane	5.0	1.4	ug/Kg	8260C
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	1.3	ug/Kg	8260C
1,1-Dichloroethane	5.0	0.69	ug/Kg	8260C
1,1-Dichloroethene	5.0	0.90	ug/Kg	8260C
1,1-Dichloropropene	5.0	0.99	ug/Kg	8260C
1,2,3-Trichlorobenzene	5.0	0.57	ug/Kg	8260C
1,2,3-Trichloropropane	5.0	1.6	ug/Kg	8260C
1,2,3-Trimethylbenzene	5.0	1.8	ug/Kg	8260C
1,2,4-Trichlorobenzene	5.0	0.57	ug/Kg	8260C
1,2,4-Trimethylbenzene	5.0	1.0	ug/Kg	8260C
1,2-Dibromo-3-Chloropropane	10	3.6	ug/Kg	8260C
1,2-Dibromoethane	5.0	0.77	ug/Kg	8260C
1,2-Dichlorobenzene	5.0	1.1	ug/Kg	8260C
1,2-Dichloroethane	5.0	0.77	ug/Kg	8260C
1,2-Dichloropropane	5.0	0.85	ug/Kg	8260C
1,3-Dichlorobenzene	5.0	0.82	ug/Kg	8260C
1,3-Dichloropropane	5.0	0.99	ug/Kg	8260C
1,4-Dichlorobenzene	5.0	0.88	ug/Kg	8260C
2,2-Dichloropropane	5.0	1.2	ug/Kg	8260C
2-Butanone (MEK)	20	3.6	ug/Kg	8260C
2-Chloroethyl vinyl ether	50	8.9	ug/Kg	8260C
2-Chlorotoluene	5.0	0.95	ug/Kg	8260C
2-Hexanone	20	4.1	ug/Kg	8260C
4-Chlorotoluene	5.0	0.86	ug/Kg	8260C
4-Methyl-2-pentanone (MIBK)	20	3.7	ug/Kg	8260C

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Prep: 5030C

Analyte	RL	MDL	Units	Method
Acetone	25	21	ug/Kg	8260C
Benzene	5.0	0.70	ug/Kg	8260C
Bromobenzene	5.0	1.2	ug/Kg	8260C
Bromochloromethane	5.0	0.59	ug/Kg	8260C
Bromodichloromethane	5.0	0.68	ug/Kg	8260C
Bromoform	5.0	2.4	ug/Kg	8260C
Bromomethane	5.0	0.99	ug/Kg	8260C
Carbon disulfide	5.0	1.2	ug/Kg	8260C
Carbon tetrachloride	5.0	3.3	ug/Kg	8260C
Chlorobenzene	5.0	0.92	ug/Kg	8260C
Chloroethane	5.0	1.2	ug/Kg	8260C
Chloroform	5.0	0.79	ug/Kg	8260C
Chloromethane	5.0	1.0	ug/Kg	8260C
cis-1,2-Dichloroethene	5.0	0.65	ug/Kg	8260C
cis-1,3-Dichloropropene	5.0	1.4	ug/Kg	8260C
Dibromochloromethane	5.0	2.8	ug/Kg	8260C
Dibromomethane	5.0	0.67	ug/Kg	8260C
Dichlorodifluoromethane	5.0	0.94	ug/Kg	8260C
Diisopropyl ether	10	0.76	ug/Kg	8260C
Ethyl t-butyl ether	5.0	2.3	ug/Kg	8260C
Ethylbenzene	5.0	1.0	ug/Kg	8260C
Hexachlorobutadiene	5.0	3.7	ug/Kg	8260C
Isopropylbenzene	5.0	0.83	ug/Kg	8260C
Methyl tert-butyl ether	5.0	0.82	ug/Kg	8260C
Methylene Chloride	25	12	ug/Kg	8260C
m-Xylene & p-Xylene	10	0.78	ug/Kg	8260C
Naphthalene	5.0	2.7	ug/Kg	8260C
n-Butylbenzene	5.0	3.5	ug/Kg	8260C
N-Propylbenzene	5.0	0.73	ug/Kg	8260C
o-Xylene	5.0	0.86	ug/Kg	8260C
p-Isopropyltoluene	5.0	2.9	ug/Kg	8260C
sec-Butylbenzene	5.0	0.86	ug/Kg	8260C
Styrene	5.0	1.2	ug/Kg	8260C
Tert-amyl methyl ether	5.0	2.2	ug/Kg	8260C
tert-Butyl alcohol (TBA)	200	17	ug/Kg	8260C
tert-Butylbenzene	5.0	0.91	ug/Kg	8260C
Tetrachloroethene	5.0	0.73	ug/Kg	8260C
Toluene	5.0	0.77	ug/Kg	8260C
trans-1,2-Dichloroethene	5.0	0.47	ug/Kg	8260C
trans-1,3-Dichloropropene	5.0	1.0	ug/Kg	8260C
Trichloroethene	5.0	0.63	ug/Kg	8260C
Trichlorofluoromethane	5.0	1.1	ug/Kg	8260C
Vinyl acetate	10	2.1	ug/Kg	8260C
Vinyl chloride	5.0	0.84	ug/Kg	8260C
Xylenes, Total	10	1.6	ug/Kg	8260C

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Prep: 3520C

Analyte	RL	MDL	Units	Method
Aroclor-1016	0.10	0.056	ug/L	8082A

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Prep: 3520C

Analyte	RL	MDL	Units	Method
Aroclor-1221	0.10	0.057	ug/L	8082A
Aroclor-1232	0.10	0.074	ug/L	8082A
Aroclor-1242	0.10	0.076	ug/L	8082A
Aroclor-1248	0.10	0.050	ug/L	8082A
Aroclor-1254	0.10	0.040	ug/L	8082A
Aroclor-1260	0.10	0.046	ug/L	8082A

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Prep: 3540C

Analyte	RL	MDL	Units	Method
Aroclor-1016	50	22	ug/Kg	8082A
Aroclor-1221	50	24	ug/Kg	8082A
Aroclor-1232	50	23	ug/Kg	8082A
Aroclor-1242	50	19	ug/Kg	8082A
Aroclor-1248	50	24	ug/Kg	8082A
Aroclor-1254	50	23	ug/Kg	8082A
Aroclor-1260	50	22	ug/Kg	8082A

Method: 6010B - Metals (ICP) - TCLP

Prep: 3010A
Leach: 1311

Analyte	RL	MDL	Units	Method
Arsenic	0.050	0.0041	mg/L	6010B
Arsenic	0.050	0.0041	mg/L	6010B
Barium	0.50	0.0013	mg/L	6010B
Barium	0.50	0.0013	mg/L	6010B
Cadmium	0.050	0.00020	mg/L	6010B
Cadmium	0.050	0.00020	mg/L	6010B
Chromium	0.050	0.00063	mg/L	6010B
Chromium	0.050	0.00063	mg/L	6010B
Lead	0.050	0.0028	mg/L	6010B
Lead	0.050	0.0028	mg/L	6010B
Selenium	0.050	0.0060	mg/L	6010B
Selenium	0.050	0.0060	mg/L	6010B
Silver	0.050	0.00062	mg/L	6010B
Silver	0.050	0.00062	mg/L	6010B

Method: 7470A - Mercury (CVAA) - TCLP

Prep: 7470A
Leach: 1311

Analyte	RL	MDL	Units	Method
Mercury	0.0020	0.00013	mg/L	7470A
Mercury	0.0020	0.00013	mg/L	7470A

General Chemistry

Analyte	RL	MDL	Units	Method
Flashpoint	1.00	1.00	Degrees F	1010A
Flashpoint	1.00	1.00	Degrees F	1010A

Default Detection Limits

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-104089-1
Project/Site: MRC Block F TCB Waste Characterization

General Chemistry (Continued)

Analyte	RL	MDL	Units	Method
Percent Moisture	0.1	0.1	%	Moisture
Percent Solids	0.1	0.1	%	Moisture

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block F TCB Waste Characterization

TestAmerica Job ID: 240-104089-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	BFB	DCA
Lab Sample ID	Client Sample ID	(62-135)	(49-132)	(49-141)	(48-123)
240-104089-2	WC-SEMW10D-SOIL	97	77	97	80
240-104089-4	WC-FTCB-SOIL	95	74	98	80
240-104089-4 MS	WC-FTCB-SOIL	96	83	94	79
240-104089-4 MSD	WC-FTCB-SOIL	96	82	94	77
LCS 240-356055/15	Lab Control Sample	91	80	89	76
LCS 240-356055/4	Lab Control Sample	91	88	84	79
MB 240-356055/16	Method Blank	93	81	92	78

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	BFB	DCA
Lab Sample ID	Client Sample ID	(70-123)	(75-128)	(59-120)	(70-121)
240-104014-E-1 MS	Matrix Spike	103	100	102	99
240-104014-H-1 MSD	Matrix Spike Duplicate	100	100	101	99
240-104089-1	TB-110718	99	102	94	103
240-104089-3	WC-FTCB-DEVW	98	103	96	103
240-104089-5	WC-FTCB-DECON	100	100	95	101
LCS 240-355689/4	Lab Control Sample	102	100	100	98
MB 240-355689/7	Method Blank	98	100	94	102

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(14-128)	(10-132)
240-104089-2	WC-SEMW10D-SOIL	81	81
240-104089-4	WC-FTCB-SOIL	81	85
240-104227-B-2-B MS	Matrix Spike	79	78
240-104227-B-2-C MSD	Matrix Spike Duplicate	67	75
LCS 240-354879/24-A	Lab Control Sample	73	78
MB 240-354879/23-A	Method Blank	82	90

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Surrogate Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-104089-1
Project/Site: MRC Block F TCB Waste Characterization

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
		TCX1	DCBP1								
Lab Sample ID	Client Sample ID	(22-120)	(10-120)								
240-104089-3	WC-FTCB-DEVW	71	46								
240-104089-5	WC-FTCB-DECON	62	46								
LCS 240-354524/17-A	Lab Control Sample	58	45								
MB 240-354524/16-A	Method Blank	105	82								

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-355689/7 **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 355689

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14	ug/L			11/15/18 21:19	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			11/15/18 21:19	1
1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13	ug/L			11/15/18 21:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.41	U	1.0	0.41	ug/L			11/15/18 21:19	1
1,1-Dichloroethane	0.17	U	1.0	0.17	ug/L			11/15/18 21:19	1
1,1-Dichloroethene	0.19	U	1.0	0.19	ug/L			11/15/18 21:19	1
1,1-Dichloropropene	0.14	U	1.0	0.14	ug/L			11/15/18 21:19	1
1,2,3-Trichlorobenzene	0.54	U	1.0	0.54	ug/L			11/15/18 21:19	1
1,2,3-Trichloropropane	0.24	U	1.0	0.24	ug/L			11/15/18 21:19	1
1,2,3-Trimethylbenzene	0.14	U	5.0	0.14	ug/L			11/15/18 21:19	1
1,2,4-Trichlorobenzene	0.26	U	1.0	0.26	ug/L			11/15/18 21:19	1
1,2,4-Trimethylbenzene	0.070	U	1.0	0.070	ug/L			11/15/18 21:19	1
1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91	ug/L			11/15/18 21:19	1
1,2-Dichlorobenzene	0.15	U	1.0	0.15	ug/L			11/15/18 21:19	1
1,2-Dichloroethane	0.21	U	1.0	0.21	ug/L			11/15/18 21:19	1
1,2-Dichloropropane	0.15	U	1.0	0.15	ug/L			11/15/18 21:19	1
1,3-Dichlorobenzene	0.15	U	1.0	0.15	ug/L			11/15/18 21:19	1
1,3-Dichloropropane	0.21	U	1.0	0.21	ug/L			11/15/18 21:19	1
1,4-Dichlorobenzene	0.16	U	1.0	0.16	ug/L			11/15/18 21:19	1
2,2-Dichloropropane	0.31	U	1.0	0.31	ug/L			11/15/18 21:19	1
2-Butanone (MEK)	1.2	U	10	1.2	ug/L			11/15/18 21:19	1
2-Chloroethyl vinyl ether	0.26	U	10	0.26	ug/L			11/15/18 21:19	1
2-Chlorotoluene	0.15	U	1.0	0.15	ug/L			11/15/18 21:19	1
2-Hexanone	0.54	U	10	0.54	ug/L			11/15/18 21:19	1
4-Chlorotoluene	0.090	U	1.0	0.090	ug/L			11/15/18 21:19	1
p-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			11/15/18 21:19	1
4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42	ug/L			11/15/18 21:19	1
Acetone	5.4	U	10	5.4	ug/L			11/15/18 21:19	1
Benzene	0.13	U	1.0	0.13	ug/L			11/15/18 21:19	1
Bromobenzene	0.12	U	1.0	0.12	ug/L			11/15/18 21:19	1
Bromoform	0.76	U	1.0	0.76	ug/L			11/15/18 21:19	1
Bromomethane	0.42	U	1.0	0.42	ug/L			11/15/18 21:19	1
Carbon disulfide	0.28	U	1.0	0.28	ug/L			11/15/18 21:19	1
Carbon tetrachloride	0.26	U	1.0	0.26	ug/L			11/15/18 21:19	1
Chlorobenzene	0.14	U	1.0	0.14	ug/L			11/15/18 21:19	1
Dibromochloromethane	0.39	U	1.0	0.39	ug/L			11/15/18 21:19	1
Chloroethane	0.83	U	1.0	0.83	ug/L			11/15/18 21:19	1
Chloroform	0.13	U	1.0	0.13	ug/L			11/15/18 21:19	1
Chloromethane	0.20	U	1.0	0.20	ug/L			11/15/18 21:19	1
cis-1,2-Dichloroethene	0.16	U	1.0	0.16	ug/L			11/15/18 21:19	1
cis-1,3-Dichloropropene	0.61	U	1.0	0.61	ug/L			11/15/18 21:19	1
Dibromomethane	0.090	U	1.0	0.090	ug/L			11/15/18 21:19	1
Bromochloromethane	0.14	U	1.0	0.14	ug/L			11/15/18 21:19	1
Dichlorodifluoromethane	0.35	U	1.0	0.35	ug/L			11/15/18 21:19	1
Bromodichloromethane	0.17	U	1.0	0.17	ug/L			11/15/18 21:19	1
tert-Butyl alcohol (TBA)	1.7	U	50	1.7	ug/L			11/15/18 21:19	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			11/15/18 21:19	1
Hexachlorobutadiene	0.83	U	1.0	0.83	ug/L			11/15/18 21:19	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 240-355689/7 **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 355689

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diisopropyl ether	0.17	U	10	0.17	ug/L			11/15/18 21:19	1
Isopropylbenzene	0.090	U	1.0	0.090	ug/L			11/15/18 21:19	1
Methyl tert-butyl ether	0.070	U	1.0	0.070	ug/L			11/15/18 21:19	1
Methylene Chloride	2.6	U	5.0	2.6	ug/L			11/15/18 21:19	1
m-Xylene & p-Xylene	0.080	U	2.0	0.080	ug/L			11/15/18 21:19	1
Naphthalene	0.32	U	1.0	0.32	ug/L			11/15/18 21:19	1
n-Butylbenzene	0.14	U	1.0	0.14	ug/L			11/15/18 21:19	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			11/15/18 21:19	1
o-Xylene	0.090	U	1.0	0.090	ug/L			11/15/18 21:19	1
sec-Butylbenzene	0.13	U	1.0	0.13	ug/L			11/15/18 21:19	1
Styrene	0.10	U	1.0	0.10	ug/L			11/15/18 21:19	1
Tert-amyl methyl ether	0.11	U	5.0	0.11	ug/L			11/15/18 21:19	1
Ethyl t-butyl ether	0.15	U	5.0	0.15	ug/L			11/15/18 21:19	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			11/15/18 21:19	1
Toluene	0.14	U	1.0	0.14	ug/L			11/15/18 21:19	1
trans-1,2-Dichloroethene	0.19	U	1.0	0.19	ug/L			11/15/18 21:19	1
trans-1,3-Dichloropropene	0.67	U	1.0	0.67	ug/L			11/15/18 21:19	1
Trichloroethene	0.10	U	1.0	0.10	ug/L			11/15/18 21:19	1
Trichlorofluoromethane	0.45	U	1.0	0.45	ug/L			11/15/18 21:19	1
Vinyl acetate	0.19	U	2.0	0.19	ug/L			11/15/18 21:19	1
Vinyl chloride	0.20	U	1.0	0.20	ug/L			11/15/18 21:19	1
Xylenes, Total	0.15	U	2.0	0.15	ug/L			11/15/18 21:19	1
tert-Butylbenzene	0.14	U	1.0	0.14	ug/L			11/15/18 21:19	1
1,2-Dibromoethane	0.12	U	1.0	0.12	ug/L			11/15/18 21:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 123*		*11/15/18 21:19*	*1*
Dibromofluoromethane (Surr)	*100*		*75 - 128*		*11/15/18 21:19*	*1*
4-Bromofluorobenzene (Surr)	*94*		*59 - 120*		*11/15/18 21:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 121*		*11/15/18 21:19*	*1*

Lab Sample ID: LCS 240-355689/4 **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 355689

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	20.0	19.8		ug/L		99	80 - 124
1,1,1-Trichloroethane	20.0	18.9		ug/L		94	69 - 134
1,1,2,2-Tetrachloroethane	20.0	20.7		ug/L		104	65 - 139
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	21.3		ug/L		107	50 - 156
1,1-Dichloroethane	20.0	19.6		ug/L		98	75 - 133
1,1-Dichloroethene	20.0	20.1		ug/L		100	65 - 139
1,1-Dichloropropene	20.0	19.6		ug/L		98	78 - 126
1,2,3-Trichlorobenzene	20.0	21.3		ug/L		106	39 - 138
1,2,3-Trichloropropane	20.0	20.7		ug/L		104	66 - 139
1,2,4-Trichlorobenzene	20.0	20.4		ug/L		102	42 - 133
1,2,4-Trimethylbenzene	20.0	20.3		ug/L		101	74 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 240-355689/4 **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 355689

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	20.0	20.9		ug/L		104	46 - 132
1,2-Dichlorobenzene	20.0	21.1		ug/L		105	78 - 120
1,2-Dichloroethane	20.0	18.4		ug/L		92	71 - 135
1,2-Dichloropropane	20.0	20.0		ug/L		100	78 - 133
1,3-Dichlorobenzene	20.0	20.1		ug/L		101	78 - 120
1,3-Dichloropropane	20.0	19.7		ug/L		98	72 - 134
1,4-Dichlorobenzene	20.0	20.0		ug/L		100	78 - 120
2,2-Dichloropropane	20.0	13.4		ug/L		67	42 - 150
2-Butanone (MEK)	40.0	42.4		ug/L		106	39 - 163
2-Chloroethyl vinyl ether	20.0	18.8		ug/L		94	55 - 137
2-Chlorotoluene	20.0	20.7		ug/L		103	78 - 123
2-Hexanone	40.0	38.6		ug/L		96	43 - 148
4-Chlorotoluene	20.0	20.2		ug/L		101	77 - 125
p-Isopropyltoluene	20.0	20.7		ug/L		104	69 - 122
4-Methyl-2-pentanone (MIBK)	40.0	39.1		ug/L		98	49 - 143
Acetone	40.0	42.3		ug/L		106	21 - 162
Benzene	20.0	20.1		ug/L		100	80 - 123
Bromobenzene	20.0	20.4		ug/L		102	74 - 129
Bromoform	20.0	18.5		ug/L		92	49 - 141
Bromomethane	20.0	19.4		ug/L		97	41 - 175
Carbon disulfide	20.0	16.9		ug/L		85	60 - 138
Carbon tetrachloride	20.0	19.3		ug/L		97	63 - 140
Chlorobenzene	20.0	19.4		ug/L		97	80 - 121
Dibromochloromethane	20.0	19.2		ug/L		96	70 - 132
Chloroethane	20.0	20.0		ug/L		100	33 - 173
Chloroform	20.0	19.7		ug/L		98	79 - 127
Chloromethane	20.0	17.8		ug/L		89	54 - 143
cis-1,2-Dichloroethene	20.0	19.4		ug/L		97	76 - 128
cis-1,3-Dichloropropene	20.0	19.2		ug/L		96	64 - 132
Dibromomethane	20.0	19.1		ug/L		96	74 - 124
Bromochloromethane	20.0	17.7		ug/L		88	74 - 130
Dichlorodifluoromethane	20.0	15.2		ug/L		76	29 - 148
Bromodichloromethane	20.0	18.9		ug/L		94	77 - 125
tert-Butyl alcohol (TBA)	200	233		ug/L		116	10 - 161
Ethylbenzene	20.0	19.8		ug/L		99	80 - 120
Hexachlorobutadiene	20.0	20.6		ug/L		103	38 - 136
Isopropylbenzene	20.0	19.9		ug/L		100	74 - 120
Methyl tert-butyl ether	20.0	17.1		ug/L		86	51 - 133
Methylene Chloride	20.0	20.3		ug/L		102	70 - 134
m-Xylene & p-Xylene	20.0	20.0		ug/L		100	80 - 120
Naphthalene	20.0	20.7		ug/L		103	28 - 141
n-Butylbenzene	20.0	20.5		ug/L		102	57 - 126
N-Propylbenzene	20.0	20.5		ug/L		102	77 - 123
o-Xylene	20.0	20.3		ug/L		102	80 - 120
sec-Butylbenzene	20.0	20.7		ug/L		104	68 - 123
Styrene	20.0	19.9		ug/L		99	79 - 120
Tetrachloroethene	20.0	19.8		ug/L		99	74 - 130
Toluene	20.0	19.5		ug/L		98	78 - 129

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 240-355689/4 **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 355689

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	20.0	19.3		ug/L		96	78 - 133
trans-1,3-Dichloropropene	20.0	17.1		ug/L		85	55 - 128
Trichloroethene	20.0	19.7		ug/L		98	76 - 125
Trichlorofluoromethane	20.0	18.9		ug/L		94	51 - 164
Vinyl acetate	20.0	18.3		ug/L		91	45 - 151
Vinyl chloride	20.0	19.2		ug/L		96	58 - 143
Xylenes, Total	40.0	40.3		ug/L		101	80 - 120
tert-Butylbenzene	20.0	20.2		ug/L		101	70 - 121
1,2-Dibromoethane	20.0	19.1		ug/L		96	77 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*70 - 123*
Dibromofluoromethane (Surr)	*100*		*75 - 128*
4-Bromofluorobenzene (Surr)	*100*		*59 - 120*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 121*

Lab Sample ID: MB 240-356055/16 **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 356055

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	3.0	U	5.0	3.0	ug/Kg			11/19/18 14:29	1
1,1,1-Trichloroethane	0.82	U	5.0	0.82	ug/Kg			11/19/18 14:29	1
1,1,2,2-Tetrachloroethane	1.4	U	5.0	1.4	ug/Kg			11/19/18 14:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.3	U	5.0	1.3	ug/Kg			11/19/18 14:29	1
1,1-Dichloroethane	0.69	U	5.0	0.69	ug/Kg			11/19/18 14:29	1
1,1-Dichloroethene	0.90	U	5.0	0.90	ug/Kg			11/19/18 14:29	1
1,1-Dichloropropene	0.99	U	5.0	0.99	ug/Kg			11/19/18 14:29	1
1,2,3-Trichlorobenzene	0.57	U	5.0	0.57	ug/Kg			11/19/18 14:29	1
1,2,3-Trichloropropane	1.6	U	5.0	1.6	ug/Kg			11/19/18 14:29	1
1,2,3-Trimethylbenzene	1.8	U	5.0	1.8	ug/Kg			11/19/18 14:29	1
1,2,4-Trichlorobenzene	0.57	U	5.0	0.57	ug/Kg			11/19/18 14:29	1
1,2,4-Trimethylbenzene	1.0	U	5.0	1.0	ug/Kg			11/19/18 14:29	1
1,2-Dibromo-3-Chloropropane	3.6	U	10	3.6	ug/Kg			11/19/18 14:29	1
1,2-Dichlorobenzene	1.1	U	5.0	1.1	ug/Kg			11/19/18 14:29	1
1,2-Dichloroethane	0.77	U	5.0	0.77	ug/Kg			11/19/18 14:29	1
1,2-Dichloropropane	0.85	U	5.0	0.85	ug/Kg			11/19/18 14:29	1
1,3-Dichlorobenzene	0.82	U	5.0	0.82	ug/Kg			11/19/18 14:29	1
1,3-Dichloropropane	0.99	U	5.0	0.99	ug/Kg			11/19/18 14:29	1
1,4-Dichlorobenzene	0.88	U	5.0	0.88	ug/Kg			11/19/18 14:29	1
2,2-Dichloropropane	1.2	U	5.0	1.2	ug/Kg			11/19/18 14:29	1
2-Butanone (MEK)	3.6	U	20	3.6	ug/Kg			11/19/18 14:29	1
2-Chloroethyl vinyl ether	8.9	U	50	8.9	ug/Kg			11/19/18 14:29	1
2-Chlorotoluene	0.95	U	5.0	0.95	ug/Kg			11/19/18 14:29	1
2-Hexanone	4.1	U	20	4.1	ug/Kg			11/19/18 14:29	1
4-Chlorotoluene	0.86	U	5.0	0.86	ug/Kg			11/19/18 14:29	1
p-Isopropyltoluene	2.9	U	5.0	2.9	ug/Kg			11/19/18 14:29	1
4-Methyl-2-pentanone (MIBK)	3.7	U	20	3.7	ug/Kg			11/19/18 14:29	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 240-356055/16 **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 356055

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	21	U	25	21	ug/Kg			11/19/18 14:29	1
Benzene	0.70	U	5.0	0.70	ug/Kg			11/19/18 14:29	1
Bromobenzene	1.2	U	5.0	1.2	ug/Kg			11/19/18 14:29	1
Bromoform	2.4	U	5.0	2.4	ug/Kg			11/19/18 14:29	1
Bromomethane	0.99	U	5.0	0.99	ug/Kg			11/19/18 14:29	1
Carbon disulfide	1.2	U	5.0	1.2	ug/Kg			11/19/18 14:29	1
Carbon tetrachloride	3.3	U	5.0	3.3	ug/Kg			11/19/18 14:29	1
Chlorobenzene	0.92	U	5.0	0.92	ug/Kg			11/19/18 14:29	1
Dibromochloromethane	2.8	U	5.0	2.8	ug/Kg			11/19/18 14:29	1
Chloroethane	1.2	U	5.0	1.2	ug/Kg			11/19/18 14:29	1
Chloroform	0.79	U	5.0	0.79	ug/Kg			11/19/18 14:29	1
Chloromethane	1.0	U	5.0	1.0	ug/Kg			11/19/18 14:29	1
cis-1,2-Dichloroethene	0.65	U	5.0	0.65	ug/Kg			11/19/18 14:29	1
cis-1,3-Dichloropropene	1.4	U	5.0	1.4	ug/Kg			11/19/18 14:29	1
Dibromomethane	0.67	U	5.0	0.67	ug/Kg			11/19/18 14:29	1
Bromochloromethane	0.59	U	5.0	0.59	ug/Kg			11/19/18 14:29	1
Dichlorodifluoromethane	0.94	U	5.0	0.94	ug/Kg			11/19/18 14:29	1
Bromodichloromethane	0.68	U	5.0	0.68	ug/Kg			11/19/18 14:29	1
tert-Butyl alcohol (TBA)	17	U	200	17	ug/Kg			11/19/18 14:29	1
Ethylbenzene	1.0	U	5.0	1.0	ug/Kg			11/19/18 14:29	1
Hexachlorobutadiene	3.7	U	5.0	3.7	ug/Kg			11/19/18 14:29	1
Diisopropyl ether	0.76	U	10	0.76	ug/Kg			11/19/18 14:29	1
Isopropylbenzene	0.83	U	5.0	0.83	ug/Kg			11/19/18 14:29	1
Methyl tert-butyl ether	0.82	U	5.0	0.82	ug/Kg			11/19/18 14:29	1
Methylene Chloride	12	U	25	12	ug/Kg			11/19/18 14:29	1
m-Xylene & p-Xylene	0.78	U	10	0.78	ug/Kg			11/19/18 14:29	1
Naphthalene	2.7	U	5.0	2.7	ug/Kg			11/19/18 14:29	1
n-Butylbenzene	3.5	U	5.0	3.5	ug/Kg			11/19/18 14:29	1
N-Propylbenzene	0.73	U	5.0	0.73	ug/Kg			11/19/18 14:29	1
o-Xylene	0.86	U	5.0	0.86	ug/Kg			11/19/18 14:29	1
sec-Butylbenzene	0.86	U	5.0	0.86	ug/Kg			11/19/18 14:29	1
Styrene	1.2	U	5.0	1.2	ug/Kg			11/19/18 14:29	1
Tert-amyl methyl ether	2.2	U	5.0	2.2	ug/Kg			11/19/18 14:29	1
Ethyl t-butyl ether	2.3	U	5.0	2.3	ug/Kg			11/19/18 14:29	1
Tetrachloroethene	0.73	U	5.0	0.73	ug/Kg			11/19/18 14:29	1
Toluene	0.77	U	5.0	0.77	ug/Kg			11/19/18 14:29	1
trans-1,2-Dichloroethene	0.47	U	5.0	0.47	ug/Kg			11/19/18 14:29	1
trans-1,3-Dichloropropene	1.0	U	5.0	1.0	ug/Kg			11/19/18 14:29	1
Trichloroethene	0.63	U	5.0	0.63	ug/Kg			11/19/18 14:29	1
Trichlorofluoromethane	1.1	U	5.0	1.1	ug/Kg			11/19/18 14:29	1
Vinyl acetate	2.1	U	10	2.1	ug/Kg			11/19/18 14:29	1
Vinyl chloride	0.84	U	5.0	0.84	ug/Kg			11/19/18 14:29	1
Xylenes, Total	1.6	U	10	1.6	ug/Kg			11/19/18 14:29	1
tert-Butylbenzene	0.91	U	5.0	0.91	ug/Kg			11/19/18 14:29	1
1,2-Dibromoethane	0.77	U	5.0	0.77	ug/Kg			11/19/18 14:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*62 - 135*		*11/19/18 14:29*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 240-356055/16
Matrix: Solid
Analysis Batch: 356055

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	81		49 - 132		11/19/18 14:29	1
4-Bromofluorobenzene (Surr)	92		49 - 141		11/19/18 14:29	1
1,2-Dichloroethane-d4 (Surr)	78		48 - 123		11/19/18 14:29	1

Lab Sample ID: LCS 240-356055/15
Matrix: Solid
Analysis Batch: 356055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	91		62 - 135
Dibromofluoromethane (Surr)	80		49 - 132
4-Bromofluorobenzene (Surr)	89		49 - 141
1,2-Dichloroethane-d4 (Surr)	76		48 - 123

Lab Sample ID: LCS 240-356055/4
Matrix: Solid
Analysis Batch: 356055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	57.3		ug/Kg		115	73 - 124
1,1,1-Trichloroethane	50.0	53.2		ug/Kg		106	64 - 135
1,1,2,2-Tetrachloroethane	50.0	54.9		ug/Kg		110	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	48.9		ug/Kg		98	56 - 138
1,1-Dichloroethane	50.0	50.5		ug/Kg		101	72 - 122
1,1-Dichloroethene	50.0	55.8		ug/Kg		112	57 - 139
1,1-Dichloropropene	50.0	52.4		ug/Kg		105	72 - 127
1,2,3-Trichlorobenzene	50.0	48.6		ug/Kg		97	59 - 120
1,2,3-Trichloropropane	50.0	52.7		ug/Kg		105	68 - 128
1,2,4-Trichlorobenzene	50.0	47.9		ug/Kg		96	54 - 120
1,2,4-Trimethylbenzene	50.0	54.4		ug/Kg		109	75 - 121
1,2-Dibromo-3-Chloropropane	50.0	42.7		ug/Kg		85	38 - 135
1,2-Dichlorobenzene	50.0	52.9		ug/Kg		106	73 - 120
1,2-Dichloroethane	50.0	46.6		ug/Kg		93	64 - 126
1,2-Dichloropropane	50.0	49.7		ug/Kg		99	78 - 122
1,3-Dichlorobenzene	50.0	50.6		ug/Kg		101	70 - 120
1,3-Dichloropropane	50.0	50.6		ug/Kg		101	76 - 120
1,4-Dichlorobenzene	50.0	50.4		ug/Kg		101	71 - 120
2,2-Dichloropropane	50.0	52.3		ug/Kg		105	42 - 143
2-Butanone (MEK)	100	86.2		ug/Kg		86	45 - 148
2-Chloroethyl vinyl ether	50.0	45.3	J	ug/Kg		91	58 - 154
2-Chlorotoluene	50.0	53.1		ug/Kg		106	75 - 120
2-Hexanone	100	99.8		ug/Kg		100	52 - 145
4-Chlorotoluene	50.0	53.3		ug/Kg		107	74 - 121
p-Isopropyltoluene	50.0	57.3		ug/Kg		115	74 - 124
4-Methyl-2-pentanone (MIBK)	100	100		ug/Kg		100	53 - 139
Acetone	100	91.3		ug/Kg		91	43 - 159
Benzene	50.0	49.9		ug/Kg		100	74 - 123

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 240-356055/4
Client Sample ID: Lab Control Sample
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 356055

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	50.0	50.3		ug/Kg		101	75 - 120
Bromoform	50.0	51.2		ug/Kg		102	46 - 137
Bromomethane	10.0	9.22		ug/Kg		92	10 - 152
Carbon disulfide	50.0	50.8		ug/Kg		102	29 - 153
Carbon tetrachloride	50.0	49.6		ug/Kg		99	56 - 139
Chlorobenzene	50.0	52.2		ug/Kg		104	80 - 120
Dibromochloromethane	50.0	53.5		ug/Kg		107	58 - 131
Chloroethane	10.0	11.4		ug/Kg		114	15 - 155
Chloroform	50.0	51.2		ug/Kg		102	72 - 124
Chloromethane	10.0	11.3		ug/Kg		113	45 - 128
cis-1,2-Dichloroethene	50.0	50.7		ug/Kg		101	74 - 123
cis-1,3-Dichloropropene	50.0	50.9		ug/Kg		102	63 - 137
Dibromomethane	50.0	48.3		ug/Kg		97	71 - 122
Bromochloromethane	50.0	47.4		ug/Kg		95	72 - 124
Dichlorodifluoromethane	10.0	10.5		ug/Kg		105	26 - 138
Bromodichloromethane	50.0	51.8		ug/Kg		104	63 - 132
tert-Butyl alcohol (TBA)	500	523		ug/Kg		105	41 - 139
Ethylbenzene	50.0	54.5		ug/Kg		109	76 - 120
Hexachlorobutadiene	50.0	48.1		ug/Kg		96	58 - 122
Isopropylbenzene	50.0	57.6		ug/Kg		115	77 - 124
Methyl tert-butyl ether	50.0	48.8		ug/Kg		98	66 - 127
Methylene Chloride	50.0	49.7		ug/Kg		99	62 - 137
m-Xylene & p-Xylene	50.0	54.5		ug/Kg		109	77 - 120
Naphthalene	50.0	48.2		ug/Kg		96	51 - 120
n-Butylbenzene	50.0	56.9		ug/Kg		114	64 - 133
N-Propylbenzene	50.0	54.8		ug/Kg		110	73 - 129
o-Xylene	50.0	55.1		ug/Kg		110	79 - 120
sec-Butylbenzene	50.0	57.9		ug/Kg		116	73 - 126
Styrene	50.0	54.0		ug/Kg		108	76 - 121
Tetrachloroethene	50.0	52.3		ug/Kg		105	76 - 120
Toluene	50.0	53.4		ug/Kg		107	76 - 120
trans-1,2-Dichloroethene	50.0	52.8		ug/Kg		106	71 - 133
trans-1,3-Dichloropropene	50.0	51.6		ug/Kg		103	55 - 121
Trichloroethene	50.0	50.6		ug/Kg		101	73 - 126
Trichlorofluoromethane	10.0	13.2		ug/Kg		132	47 - 146
Vinyl acetate	50.0	52.0		ug/Kg		104	43 - 144
Vinyl chloride	10.0	12.2		ug/Kg		122	52 - 130
Xylenes, Total	100	110		ug/Kg		110	79 - 120
tert-Butylbenzene	50.0	56.1		ug/Kg		112	73 - 122
1,2-Dibromoethane	50.0	52.6		ug/Kg		105	76 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*91*		*62 - 135*
Dibromofluoromethane (Surr)	*88*		*49 - 132*
4-Bromofluorobenzene (Surr)	*84*		*49 - 141*
1,2-Dichloroethane-d4 (Surr)	*79*		*48 - 123*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 240-104089-4 MS **Client Sample ID: WC-FTCB-SOIL**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 356055 **Prep Batch: 356153**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	3.3	U	59.4	52.9		ug/Kg	☼	89	16 - 137
1,1,1-Trichloroethane	0.92	U	59.4	50.3		ug/Kg	☼	85	38 - 143
1,1,2,2-Tetrachloroethane	1.6	U	59.4	65.9		ug/Kg	☼	111	16 - 178
1,1,2-Trichloro-1,2,2-trifluoroethane	1.4	U	59.4	42.8		ug/Kg	☼	72	37 - 147
1,1-Dichloroethane	0.78	U	59.4	52.4		ug/Kg	☼	88	50 - 133
1,1-Dichloroethene	1.0	U	59.4	50.9		ug/Kg	☼	86	36 - 150
1,1-Dichloropropene	1.1	U	59.4	50.7		ug/Kg	☼	85	30 - 138
1,2,3-Trichlorobenzene	0.68	J	59.4	32.9		ug/Kg	☼	54	10 - 120
1,2,3-Trichloropropane	1.8	U	59.4	59.1		ug/Kg	☼	99	10 - 178
1,2,4-Trichlorobenzene	2.6	J	59.4	34.2		ug/Kg	☼	53	10 - 120
1,2,4-Trimethylbenzene	1.1	U	59.4	44.7		ug/Kg	☼	75	10 - 149
1,2-Dibromo-3-Chloropropane	4.0	U	59.4	43.3		ug/Kg	☼	73	10 - 141
1,2-Dichlorobenzene	1.2	U	59.4	42.9		ug/Kg	☼	72	10 - 130
1,2-Dichloroethane	0.87	U	59.4	51.4		ug/Kg	☼	87	42 - 127
1,2-Dichloropropane	0.95	U	59.4	55.8		ug/Kg	☼	94	51 - 128
1,3-Dichlorobenzene	0.91	U	59.4	37.6		ug/Kg	☼	63	10 - 131
1,3-Dichloropropane	1.1	U	59.4	56.9		ug/Kg	☼	96	34 - 121
1,4-Dichlorobenzene	0.99	U	59.4	37.5		ug/Kg	☼	63	10 - 130
2,2-Dichloropropane	1.3	U	59.4	47.0		ug/Kg	☼	79	20 - 141
2-Butanone (MEK)	4.0	U	119	87.9		ug/Kg	☼	74	20 - 148
2-Chloroethyl vinyl ether	10	U	59.4	47.5	J	ug/Kg	☼	80	10 - 134
2-Chlorotoluene	1.1	U	59.4	43.4		ug/Kg	☼	73	10 - 179
2-Hexanone	4.6	U	119	109		ug/Kg	☼	92	15 - 147
4-Chlorotoluene	0.97	U	59.4	41.6		ug/Kg	☼	70	10 - 158
p-Isopropyltoluene	3.3	U	59.4	41.0		ug/Kg	☼	69	10 - 142
4-Methyl-2-pentanone (MIBK)	4.2	U	119	120		ug/Kg	☼	101	29 - 143
Acetone	24	U	119	173		ug/Kg	☼	145	10 - 160
Benzene	0.78	U	59.4	52.5		ug/Kg	☼	88	39 - 133
Bromobenzene	1.3	U	59.4	43.6		ug/Kg	☼	73	10 - 164
Bromoform	2.7	U	59.4	43.0		ug/Kg	☼	72	18 - 120
Bromomethane	1.1	U	11.9	10.4		ug/Kg	☼	87	10 - 159
Carbon disulfide	1.3	U	59.4	40.1		ug/Kg	☼	67	16 - 145
Carbon tetrachloride	3.6	U	59.4	44.6		ug/Kg	☼	75	22 - 142
Chlorobenzene	1.0	U	59.4	47.0		ug/Kg	☼	79	21 - 131
Dibromochloromethane	3.1	U	59.4	50.8		ug/Kg	☼	85	27 - 126
Chloroethane	1.4	U	11.9	12.3		ug/Kg	☼	104	17 - 162
Chloroform	0.88	U	59.4	52.6		ug/Kg	☼	89	51 - 130
Chloromethane	1.2	U	11.9	12.0		ug/Kg	☼	101	26 - 149
cis-1,2-Dichloroethene	0.73	U	59.4	49.9		ug/Kg	☼	84	50 - 128
cis-1,3-Dichloropropene	1.6	U	59.4	53.5		ug/Kg	☼	90	15 - 132
Dibromomethane	0.75	U	59.4	51.4		ug/Kg	☼	86	37 - 138
Bromochloromethane	0.67	U	59.4	46.4		ug/Kg	☼	78	36 - 147
Dichlorodifluoromethane	1.1	U	11.9	10.3		ug/Kg	☼	86	15 - 150
Bromodichloromethane	0.76	U	59.4	53.4		ug/Kg	☼	90	32 - 129
tert-Butyl alcohol (TBA)	19	U	594	579		ug/Kg	☼	97	59 - 128
Ethylbenzene	1.2	U	59.4	45.5		ug/Kg	☼	77	20 - 135
Hexachlorobutadiene	4.2	U	59.4	22.3		ug/Kg	☼	38	10 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 240-104089-4 MS **Client Sample ID: WC-FTCB-SOIL**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 356055 **Prep Batch: 356153**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	0.93	U	59.4	45.3		ug/Kg	☼	76	20 - 138
Methyl tert-butyl ether	0.92	U	59.4	55.1		ug/Kg	☼	93	48 - 134
Methylene Chloride	13	U	59.4	47.8		ug/Kg	☼	80	39 - 145
m-Xylene & p-Xylene	0.88	U	59.4	44.1		ug/Kg	☼	74	16 - 137
Naphthalene	3.0	U	59.4	45.2		ug/Kg	☼	76	10 - 120
n-Butylbenzene	3.9	U	59.4	39.2		ug/Kg	☼	66	10 - 149
N-Propylbenzene	0.82	U	59.4	41.5		ug/Kg	☼	70	10 - 162
o-Xylene	0.97	U	59.4	47.8		ug/Kg	☼	80	21 - 138
sec-Butylbenzene	0.97	U	59.4	43.3		ug/Kg	☼	73	10 - 156
Styrene	1.3	U	59.4	43.6		ug/Kg	☼	73	10 - 134
Tetrachloroethene	0.82	U	59.4	44.9		ug/Kg	☼	76	20 - 151
Toluene	0.87	U	59.4	51.8		ug/Kg	☼	87	29 - 141
trans-1,2-Dichloroethene	0.52	U	59.4	49.5		ug/Kg	☼	83	44 - 141
trans-1,3-Dichloropropene	1.2	U	59.4	53.0		ug/Kg	☼	89	15 - 120
Trichloroethene	0.71	U	59.4	44.2		ug/Kg	☼	74	25 - 148
Trichlorofluoromethane	1.2	U	11.9	14.2		ug/Kg	☼	120	38 - 149
Vinyl acetate	2.4	U	59.4	23.9		ug/Kg	☼	40	10 - 120
Vinyl chloride	0.94	U	11.9	13.7		ug/Kg	☼	115	31 - 148
Xylenes, Total	1.8	U	119	91.9		ug/Kg	☼	77	19 - 137
tert-Butylbenzene	1.0	U	59.4	69.0		ug/Kg	☼	116	10 - 148
1,2-Dibromoethane	0.86	U	59.4	53.9		ug/Kg	☼	91	36 - 125

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*62 - 135*
Dibromofluoromethane (Surr)	*83*		*49 - 132*
4-Bromofluorobenzene (Surr)	*94*		*49 - 141*
1,2-Dichloroethane-d4 (Surr)	*79*		*48 - 123*

Lab Sample ID: 240-104089-4 MSD **Client Sample ID: WC-FTCB-SOIL**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 356055 **Prep Batch: 356153**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	3.3	U	59.6	46.1		ug/Kg	☼	77	16 - 137	14	40
1,1,1-Trichloroethane	0.92	U	59.6	44.7		ug/Kg	☼	75	38 - 143	12	40
1,1,2,2-Tetrachloroethane	1.6	U	59.6	63.1		ug/Kg	☼	106	16 - 178	4	40
1,1,2-Trichloro-1,2,2-trifluoroethane	1.4	U	59.6	38.8		ug/Kg	☼	65	37 - 147	10	37
1,1-Dichloroethane	0.78	U	59.6	46.0		ug/Kg	☼	77	50 - 133	13	40
1,1-Dichloroethene	1.0	U	59.6	44.2		ug/Kg	☼	74	36 - 150	14	40
1,1-Dichloropropene	1.1	U	59.6	43.3		ug/Kg	☼	73	30 - 138	16	36
1,2,3-Trichlorobenzene	0.68	J	59.6	28.7		ug/Kg	☼	47	10 - 120	14	40
1,2,3-Trichloropropane	1.8	U	59.6	57.3		ug/Kg	☼	96	10 - 178	3	40
1,2,4-Trichlorobenzene	2.6	J	59.6	30.6		ug/Kg	☼	47	10 - 120	11	40
1,2,4-Trimethylbenzene	1.1	U	59.6	36.6		ug/Kg	☼	62	10 - 149	20	40
1,2-Dibromo-3-Chloropropane	4.0	U	59.6	41.6		ug/Kg	☼	70	10 - 141	4	40
1,2-Dichlorobenzene	1.2	U	59.6	37.1		ug/Kg	☼	62	10 - 130	15	40
1,2-Dichloroethane	0.87	U	59.6	45.7		ug/Kg	☼	77	42 - 127	12	34

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 240-104089-4 MSD **Client Sample ID: WC-FTCB-SOIL**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 356055 **Prep Batch: 356153**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dichloropropane	0.95	U	59.6	48.8		ug/Kg	☼	82	51 - 128	13	36
1,3-Dichlorobenzene	0.91	U	59.6	32.8		ug/Kg	☼	55	10 - 131	14	40
1,3-Dichloropropane	1.1	U	59.6	53.2		ug/Kg	☼	89	34 - 121	7	40
1,4-Dichlorobenzene	0.99	U	59.6	32.6		ug/Kg	☼	55	10 - 130	14	40
2,2-Dichloropropane	1.3	U	59.6	42.6		ug/Kg	☼	71	20 - 141	10	40
2-Butanone (MEK)	4.0	U	119	87.7		ug/Kg	☼	74	20 - 148	0	36
2-Chloroethyl vinyl ether	10	U	59.6	46.1	J	ug/Kg	☼	77	10 - 134	3	40
2-Chlorotoluene	1.1	U	59.6	35.4		ug/Kg	☼	59	10 - 179	20	40
2-Hexanone	4.6	U	119	120		ug/Kg	☼	101	15 - 147	10	40
4-Chlorotoluene	0.97	U	59.6	35.7		ug/Kg	☼	60	10 - 158	15	40
p-Isopropyltoluene	3.3	U	59.6	33.2		ug/Kg	☼	56	10 - 142	21	40
4-Methyl-2-pentanone (MIBK)	4.2	U	119	120		ug/Kg	☼	101	29 - 143	0	40
Acetone	24	U	119	164		ug/Kg	☼	137	10 - 160	5	39
Benzene	0.78	U	59.6	45.0		ug/Kg	☼	75	39 - 133	16	40
Bromobenzene	1.3	U	59.6	37.9		ug/Kg	☼	64	10 - 164	14	40
Bromoform	2.7	U	59.6	40.8		ug/Kg	☼	68	18 - 120	5	40
Bromomethane	1.1	U	11.9	9.39		ug/Kg	☼	79	10 - 159	10	40
Carbon disulfide	1.3	U	59.6	34.9		ug/Kg	☼	59	16 - 145	14	40
Carbon tetrachloride	3.6	U	59.6	38.7		ug/Kg	☼	65	22 - 142	14	40
Chlorobenzene	1.0	U	59.6	40.8		ug/Kg	☼	69	21 - 131	14	40
Dibromochloromethane	3.1	U	59.6	46.9		ug/Kg	☼	79	27 - 126	8	40
Chloroethane	1.4	U	11.9	10.4		ug/Kg	☼	88	17 - 162	17	40
Chloroform	0.88	U	59.6	47.1		ug/Kg	☼	79	51 - 130	11	32
Chloromethane	1.2	U	11.9	10.1		ug/Kg	☼	85	26 - 149	18	37
cis-1,2-Dichloroethene	0.73	U	59.6	45.1		ug/Kg	☼	76	50 - 128	10	40
cis-1,3-Dichloropropene	1.6	U	59.6	47.4		ug/Kg	☼	80	15 - 132	12	40
Dibromomethane	0.75	U	59.6	47.8		ug/Kg	☼	80	37 - 138	7	30
Bromochloromethane	0.67	U	59.6	43.8		ug/Kg	☼	74	36 - 147	6	40
Dichlorodifluoromethane	1.1	U	11.9	7.66		ug/Kg	☼	64	15 - 150	29	31
Bromodichloromethane	0.76	U	59.6	46.4		ug/Kg	☼	78	32 - 129	14	39
tert-Butyl alcohol (TBA)	19	U	596	578		ug/Kg	☼	97	59 - 128	0	39
Ethylbenzene	1.2	U	59.6	38.7		ug/Kg	☼	65	20 - 135	16	40
Hexachlorobutadiene	4.2	U	59.6	17.4		ug/Kg	☼	29	10 - 120	25	40
Isopropylbenzene	0.93	U	59.6	38.0		ug/Kg	☼	64	20 - 138	18	40
Methyl tert-butyl ether	0.92	U	59.6	50.6		ug/Kg	☼	85	48 - 134	8	34
Methylene Chloride	13	U	59.6	44.6		ug/Kg	☼	75	39 - 145	7	40
m-Xylene & p-Xylene	0.88	U	59.6	37.1		ug/Kg	☼	62	16 - 137	17	40
Naphthalene	3.0	U	59.6	38.5		ug/Kg	☼	65	10 - 120	16	40
n-Butylbenzene	3.9	U	59.6	31.5		ug/Kg	☼	53	10 - 149	22	40
N-Propylbenzene	0.82	U	59.6	34.3		ug/Kg	☼	58	10 - 162	19	40
o-Xylene	0.97	U	59.6	40.1		ug/Kg	☼	67	21 - 138	17	40
sec-Butylbenzene	0.97	U	59.6	34.7		ug/Kg	☼	58	10 - 156	22	40
Styrene	1.3	U	59.6	39.0		ug/Kg	☼	65	10 - 134	11	40
Tetrachloroethene	0.82	U	59.6	39.4		ug/Kg	☼	66	20 - 151	13	40
Toluene	0.87	U	59.6	44.9		ug/Kg	☼	75	29 - 141	14	40
trans-1,2-Dichloroethene	0.52	U	59.6	43.3		ug/Kg	☼	73	44 - 141	13	40
trans-1,3-Dichloropropene	1.2	U	59.6	48.3		ug/Kg	☼	81	15 - 120	9	40
Trichloroethene	0.71	U	59.6	37.5		ug/Kg	☼	63	25 - 148	16	40

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 240-104089-4 MSD **Client Sample ID: WC-FTCB-SOIL**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 356055 **Prep Batch: 356153**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane	1.2	U	11.9	12.2		ug/Kg	☼	103	38 - 149	15	39
Vinyl acetate	2.4	U	59.6	27.3		ug/Kg	☼	46	10 - 120	13	40
Vinyl chloride	0.94	U	11.9	11.3		ug/Kg	☼	95	31 - 148	19	37
Xylenes, Total	1.8	U	119	77.2		ug/Kg	☼	65	19 - 137	17	40
tert-Butylbenzene	1.0	U	59.6	56.8		ug/Kg	☼	95	10 - 148	19	40
1,2-Dibromoethane	0.86	U	59.6	52.4		ug/Kg	☼	88	36 - 125	3	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*62 - 135*
Dibromofluoromethane (Surr)	*82*		*49 - 132*
4-Bromofluorobenzene (Surr)	*94*		*49 - 141*
1,2-Dichloroethane-d4 (Surr)	*77*		*48 - 123*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-354524/16-A **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 355036 **Prep Batch: 354524**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.056	U	0.10	0.056	ug/L		11/09/18 08:13	11/13/18 07:53	1
Aroclor-1221	0.057	U	0.10	0.057	ug/L		11/09/18 08:13	11/13/18 07:53	1
Aroclor-1232	0.074	U	0.10	0.074	ug/L		11/09/18 08:13	11/13/18 07:53	1
Aroclor-1242	0.076	U	0.10	0.076	ug/L		11/09/18 08:13	11/13/18 07:53	1
Aroclor-1248	0.050	U	0.10	0.050	ug/L		11/09/18 08:13	11/13/18 07:53	1
Aroclor-1254	0.040	U	0.10	0.040	ug/L		11/09/18 08:13	11/13/18 07:53	1
Aroclor-1260	0.046	U	0.10	0.046	ug/L		11/09/18 08:13	11/13/18 07:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*105*		*22 - 120*	*11/09/18 08:13*	*11/13/18 07:53*	*1*
DCB Decachlorobiphenyl	*82*		*10 - 120*	*11/09/18 08:13*	*11/13/18 07:53*	*1*

Lab Sample ID: LCS 240-354524/17-A **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 355036 **Prep Batch: 354524**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	1.89		ug/L		75	28 - 120
Aroclor-1260	2.50	2.04		ug/L		81	30 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*58*		*22 - 120*
DCB Decachlorobiphenyl	*45*		*10 - 120*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 240-354879/23-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 355209 **Prep Batch: 354879**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	22	U	50	22	ug/Kg		11/12/18 08:27	11/13/18 22:13	1
Aroclor-1221	24	U	50	24	ug/Kg		11/12/18 08:27	11/13/18 22:13	1
Aroclor-1232	23	U	50	23	ug/Kg		11/12/18 08:27	11/13/18 22:13	1
Aroclor-1242	19	U	50	19	ug/Kg		11/12/18 08:27	11/13/18 22:13	1
Aroclor-1248	24	U	50	24	ug/Kg		11/12/18 08:27	11/13/18 22:13	1
Aroclor-1254	23	U	50	23	ug/Kg		11/12/18 08:27	11/13/18 22:13	1
Aroclor-1260	22	U	50	22	ug/Kg		11/12/18 08:27	11/13/18 22:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*14 - 128*	*11/12/18 08:27*	*11/13/18 22:13*	*1*
DCB Decachlorobiphenyl	*90*		*10 - 132*	*11/12/18 08:27*	*11/13/18 22:13*	*1*

Lab Sample ID: LCS 240-354879/24-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 355209 **Prep Batch: 354879**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor-1016			1000	678		ug/Kg		68	47 - 120		
Aroclor-1260			1000	758		ug/Kg		76	46 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*73*		*14 - 128*
DCB Decachlorobiphenyl	*78*		*10 - 132*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-355862/2-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 356115 **Prep Batch: 355862**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0041	U	0.050	0.0041	mg/L		11/16/18 14:00	11/19/18 09:47	1
Barium	0.0013	U	0.50	0.0013	mg/L		11/16/18 14:00	11/19/18 09:47	1
Cadmium	0.00020	U	0.050	0.00020	mg/L		11/16/18 14:00	11/19/18 09:47	1
Chromium	0.00063	U	0.050	0.00063	mg/L		11/16/18 14:00	11/19/18 09:47	1
Lead	0.0028	U	0.050	0.0028	mg/L		11/16/18 14:00	11/19/18 09:47	1
Selenium	0.0060	U	0.050	0.0060	mg/L		11/16/18 14:00	11/19/18 09:47	1
Silver	0.00062	U	0.050	0.00062	mg/L		11/16/18 14:00	11/19/18 09:47	1

Lab Sample ID: LCS 240-355862/3-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 356115 **Prep Batch: 355862**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			2.00	2.22		mg/L		111	50 - 150		
Barium			2.00	1.96		mg/L		98	50 - 150		
Cadmium			0.0500	0.0528		mg/L		106	50 - 150		

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 240-355862/3-A
Matrix: Solid
Analysis Batch: 356115

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355862

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.200	0.194		mg/L		97	50 - 150
Lead	0.500	0.481		mg/L		96	50 - 150
Selenium	2.00	2.28		mg/L		114	50 - 150
Silver	0.0500	0.0505		mg/L		101	50 - 150

Lab Sample ID: LB 240-355683/1-B
Matrix: Solid
Analysis Batch: 356115

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 355862

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0041	U	0.050	0.0041	mg/L		11/16/18 14:00	11/19/18 09:43	1
Barium	0.00312	J	0.50	0.0013	mg/L		11/16/18 14:00	11/19/18 09:43	1
Cadmium	0.00020	U	0.050	0.00020	mg/L		11/16/18 14:00	11/19/18 09:43	1
Chromium	0.00174	J	0.050	0.00063	mg/L		11/16/18 14:00	11/19/18 09:43	1
Lead	0.0028	U	0.050	0.0028	mg/L		11/16/18 14:00	11/19/18 09:43	1
Selenium	0.0060	U	0.050	0.0060	mg/L		11/16/18 14:00	11/19/18 09:43	1
Silver	0.00062	U	0.050	0.00062	mg/L		11/16/18 14:00	11/19/18 09:43	1

Lab Sample ID: 240-104089-4 MS
Matrix: Solid
Analysis Batch: 356115

Client Sample ID: WC-FTCB-SOIL
Prep Type: TCLP
Prep Batch: 355862

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0052	J	5.00	5.43		mg/L		109	75 - 125
Barium	0.18	J B	50.0	50.4		mg/L		100	75 - 125
Cadmium	0.0015	J	1.00	1.05		mg/L		105	75 - 125
Chromium	0.0040	J B	5.00	4.65		mg/L		93	75 - 125
Lead	0.019	J	5.00	5.08		mg/L		101	75 - 125
Selenium	0.0060	U	1.00	1.11		mg/L		111	75 - 125
Silver	0.00062	U	1.00	0.939		mg/L		94	75 - 125

Lab Sample ID: 240-104089-4 MSD
Matrix: Solid
Analysis Batch: 356115

Client Sample ID: WC-FTCB-SOIL
Prep Type: TCLP
Prep Batch: 355862

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0052	J	5.00	5.17		mg/L		103	75 - 125	5	20
Barium	0.18	J B	50.0	48.5		mg/L		97	75 - 125	4	20
Cadmium	0.0015	J	1.00	1.00		mg/L		100	75 - 125	4	20
Chromium	0.0040	J B	5.00	4.58		mg/L		91	75 - 125	2	20
Lead	0.019	J	5.00	4.87		mg/L		97	75 - 125	4	20
Selenium	0.0060	U	1.00	1.05		mg/L		105	75 - 125	5	20
Silver	0.00062	U	1.00	0.919		mg/L		92	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-355863/2-A
Matrix: Solid
Analysis Batch: 356258

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 355863

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	U	0.0020	0.00013	mg/L		11/16/18 12:00	11/19/18 14:14	1

Lab Sample ID: LCS 240-355863/3-A
Matrix: Solid
Analysis Batch: 356258

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355863

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00500	0.00506		mg/L		101	80 - 120		

Lab Sample ID: LB 240-355683/1-C
Matrix: Solid
Analysis Batch: 356258

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 355863

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	U	0.0020	0.00013	mg/L		11/16/18 12:00	11/19/18 14:12	1

Lab Sample ID: 240-104089-4 MS
Matrix: Solid
Analysis Batch: 356258

Client Sample ID: WC-FTCB-SOIL
Prep Type: TCLP
Prep Batch: 355863

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.00013	U	0.00500	0.00510		mg/L		102	80 - 120		

Lab Sample ID: 240-104089-4 MSD
Matrix: Solid
Analysis Batch: 356258

Client Sample ID: WC-FTCB-SOIL
Prep Type: TCLP
Prep Batch: 355863

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00013	U	0.00500	0.00491		mg/L		98	80 - 120	4	20

Method: 1010A - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 240-354853/1
Matrix: Water
Analysis Batch: 354853

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Flashpoint			81.0	81.00		Degrees F		100	97 - 103		

Lab Sample ID: 240-104089-5 DU
Matrix: Water
Analysis Batch: 354853

Client Sample ID: WC-FTCB-DECON
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Flashpoint	>200			>200		Degrees F				NC	20

Method: 1010A - Ignitability, Pensky-Martens Closed-Cup Method (Continued)

Lab Sample ID: LCS 240-356267/1
Client Sample ID: Lab Control Sample
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 356267

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Flashpoint			81.0	79.00		Degrees F		98	97 - 103		

Lab Sample ID: 240-104089-2 DU
Client Sample ID: WC-SEMW10D-SOIL
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 356267

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Flashpoint	>200			>200		Degrees F				NC	20

GC/MS VOA

Analysis Batch: 355689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-1	TB-110718	Total/NA	Water	8260C	
240-104089-3	WC-FTCB-DEVW	Total/NA	Water	8260C	
240-104089-5	WC-FTCB-DECON	Total/NA	Water	8260C	
MB 240-355689/7	Method Blank	Total/NA	Water	8260C	
LCS 240-355689/4	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 356055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-2	WC-SEMW10D-SOIL	Total/NA	Solid	8260C	356153
240-104089-4	WC-FTCB-SOIL	Total/NA	Solid	8260C	356153
MB 240-356055/16	Method Blank	Total/NA	Solid	8260C	
LCS 240-356055/15	Lab Control Sample	Total/NA	Solid	8260C	
LCS 240-356055/4	Lab Control Sample	Total/NA	Solid	8260C	
240-104089-4 MS	WC-FTCB-SOIL	Total/NA	Solid	8260C	356153
240-104089-4 MSD	WC-FTCB-SOIL	Total/NA	Solid	8260C	356153

Prep Batch: 356153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-2	WC-SEMW10D-SOIL	Total/NA	Solid	5030C	
240-104089-4	WC-FTCB-SOIL	Total/NA	Solid	5030C	
240-104089-4 MS	WC-FTCB-SOIL	Total/NA	Solid	5030C	
240-104089-4 MSD	WC-FTCB-SOIL	Total/NA	Solid	5030C	

GC Semi VOA

Prep Batch: 354524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-3	WC-FTCB-DEVW	Total/NA	Water	3520C	
240-104089-5	WC-FTCB-DECON	Total/NA	Water	3520C	
MB 240-354524/16-A	Method Blank	Total/NA	Water	3520C	
LCS 240-354524/17-A	Lab Control Sample	Total/NA	Water	3520C	

Prep Batch: 354879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-2	WC-SEMW10D-SOIL	Total/NA	Solid	3540C	
240-104089-4	WC-FTCB-SOIL	Total/NA	Solid	3540C	
MB 240-354879/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-354879/24-A	Lab Control Sample	Total/NA	Solid	3540C	

Analysis Batch: 355036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-3	WC-FTCB-DEVW	Total/NA	Water	8082A	354524
240-104089-5	WC-FTCB-DECON	Total/NA	Water	8082A	354524
MB 240-354524/16-A	Method Blank	Total/NA	Water	8082A	354524
LCS 240-354524/17-A	Lab Control Sample	Total/NA	Water	8082A	354524

Analysis Batch: 355209

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-2	WC-SEMW10D-SOIL	Total/NA	Solid	8082A	354879
240-104089-4	WC-FTCB-SOIL	Total/NA	Solid	8082A	354879

GC Semi VOA (Continued)

Analysis Batch: 355209 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-354879/23-A	Method Blank	Total/NA	Solid	8082A	354879
LCS 240-354879/24-A	Lab Control Sample	Total/NA	Solid	8082A	354879

Metals

Leach Batch: 355683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-2	WC-SEMW10D-SOIL	TCLP	Solid	1311	
240-104089-3	WC-FTCB-DEVW	TCLP	Water	1311	
240-104089-4	WC-FTCB-SOIL	TCLP	Solid	1311	
240-104089-5	WC-FTCB-DECON	TCLP	Water	1311	
LB 240-355683/1-B	Method Blank	TCLP	Solid	1311	
LB 240-355683/1-C	Method Blank	TCLP	Solid	1311	
240-104089-4 MS	WC-FTCB-SOIL	TCLP	Solid	1311	
240-104089-4 MSD	WC-FTCB-SOIL	TCLP	Solid	1311	

Prep Batch: 355862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-2	WC-SEMW10D-SOIL	TCLP	Solid	3010A	355683
240-104089-3	WC-FTCB-DEVW	TCLP	Water	3010A	355683
240-104089-4	WC-FTCB-SOIL	TCLP	Solid	3010A	355683
240-104089-5	WC-FTCB-DECON	TCLP	Water	3010A	355683
LB 240-355683/1-B	Method Blank	TCLP	Solid	3010A	355683
MB 240-355862/2-A	Method Blank	Total/NA	Solid	3010A	
LCS 240-355862/3-A	Lab Control Sample	Total/NA	Solid	3010A	
240-104089-4 MS	WC-FTCB-SOIL	TCLP	Solid	3010A	355683
240-104089-4 MSD	WC-FTCB-SOIL	TCLP	Solid	3010A	355683

Prep Batch: 355863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-2	WC-SEMW10D-SOIL	TCLP	Solid	7470A	355683
240-104089-3	WC-FTCB-DEVW	TCLP	Water	7470A	355683
240-104089-4	WC-FTCB-SOIL	TCLP	Solid	7470A	355683
240-104089-5	WC-FTCB-DECON	TCLP	Water	7470A	355683
LB 240-355683/1-C	Method Blank	TCLP	Solid	7470A	355683
MB 240-355863/2-A	Method Blank	Total/NA	Solid	7470A	
LCS 240-355863/3-A	Lab Control Sample	Total/NA	Solid	7470A	
240-104089-4 MS	WC-FTCB-SOIL	TCLP	Solid	7470A	355683
240-104089-4 MSD	WC-FTCB-SOIL	TCLP	Solid	7470A	355683

Analysis Batch: 356115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-2	WC-SEMW10D-SOIL	TCLP	Solid	6010B	355862
240-104089-3	WC-FTCB-DEVW	TCLP	Water	6010B	355862
240-104089-4	WC-FTCB-SOIL	TCLP	Solid	6010B	355862
240-104089-5	WC-FTCB-DECON	TCLP	Water	6010B	355862
LB 240-355683/1-B	Method Blank	TCLP	Solid	6010B	355862
MB 240-355862/2-A	Method Blank	Total/NA	Solid	6010B	355862
LCS 240-355862/3-A	Lab Control Sample	Total/NA	Solid	6010B	355862
240-104089-4 MS	WC-FTCB-SOIL	TCLP	Solid	6010B	355862

Metals (Continued)

Analysis Batch: 356115 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-4 MSD	WC-FTCB-SOIL	TCLP	Solid	6010B	355862

Analysis Batch: 356258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-2	WC-SEMW10D-SOIL	TCLP	Solid	7470A	355863
240-104089-3	WC-FTCB-DEVW	TCLP	Water	7470A	355863
240-104089-4	WC-FTCB-SOIL	TCLP	Solid	7470A	355863
240-104089-5	WC-FTCB-DECON	TCLP	Water	7470A	355863
LB 240-355683/1-C	Method Blank	TCLP	Solid	7470A	355863
MB 240-355863/2-A	Method Blank	Total/NA	Solid	7470A	355863
LCS 240-355863/3-A	Lab Control Sample	Total/NA	Solid	7470A	355863
240-104089-4 MS	WC-FTCB-SOIL	TCLP	Solid	7470A	355863
240-104089-4 MSD	WC-FTCB-SOIL	TCLP	Solid	7470A	355863

General Chemistry

Analysis Batch: 354538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-2	WC-SEMW10D-SOIL	Total/NA	Solid	Moisture	
240-104089-4	WC-FTCB-SOIL	Total/NA	Solid	Moisture	

Analysis Batch: 354853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-3	WC-FTCB-DEVW	Total/NA	Water	1010A	
240-104089-5	WC-FTCB-DECON	Total/NA	Water	1010A	
LCS 240-354853/1	Lab Control Sample	Total/NA	Water	1010A	
240-104089-5 DU	WC-FTCB-DECON	Total/NA	Water	1010A	

Analysis Batch: 356267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-104089-2	WC-SEMW10D-SOIL	Total/NA	Solid	1010A	
240-104089-4	WC-FTCB-SOIL	Total/NA	Solid	1010A	
LCS 240-356267/1	Lab Control Sample	Total/NA	Solid	1010A	
240-104089-2 DU	WC-SEMW10D-SOIL	Total/NA	Solid	1010A	

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Block F TCB Waste Characterization

TestAmerica Job ID: 240-104089-1

Client Sample ID: TB-110718
Date Collected: 11/07/18 00:00
Date Received: 11/08/18 09:45

Lab Sample ID: 240-104089-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	355689	11/16/18 04:22	TJL1	TAL CAN

Client Sample ID: WC-SEMW10D-SOIL
Date Collected: 11/07/18 09:30
Date Received: 11/08/18 09:45

Lab Sample ID: 240-104089-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			355683	11/15/18 16:25	DRJ	TAL CAN
TCLP	Prep	3010A			355862	11/16/18 14:00	MBB	TAL CAN
TCLP	Analysis	6010B		1	356115	11/19/18 11:34	WKD	TAL CAN
TCLP	Leach	1311			355683	11/15/18 16:25	DRJ	TAL CAN
TCLP	Prep	7470A			355863	11/16/18 12:00	MBB	TAL CAN
TCLP	Analysis	7470A		1	356258	11/19/18 14:30	AJC	TAL CAN
Total/NA	Analysis	1010A		1	356267	11/20/18 10:10	TPH	TAL CAN
Total/NA	Analysis	Moisture		1	354538	11/09/18 08:36	MES	TAL CAN

Client Sample ID: WC-SEMW10D-SOIL
Date Collected: 11/07/18 09:30
Date Received: 11/08/18 09:45

Lab Sample ID: 240-104089-2
Matrix: Solid
Percent Solids: 81.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			356153	11/19/18 13:10	SAM	TAL CAN
Total/NA	Analysis	8260C		1	356055	11/19/18 17:43	SAM	TAL CAN
Total/NA	Prep	3540C			354879	11/12/18 08:27	ZMF	TAL CAN
Total/NA	Analysis	8082A		1	355209	11/14/18 01:39	KMG	TAL CAN

Client Sample ID: WC-FTCB-DEVW
Date Collected: 11/07/18 10:00
Date Received: 11/08/18 09:45

Lab Sample ID: 240-104089-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	355689	11/16/18 04:44	TJL1	TAL CAN
Total/NA	Prep	3520C			354524	11/09/18 08:13	SDE	TAL CAN
Total/NA	Analysis	8082A		1	355036	11/13/18 12:56	CSC	TAL CAN
TCLP	Leach	1311			355683	11/15/18 16:25	DRJ	TAL CAN
TCLP	Prep	3010A			355862	11/16/18 14:00	MBB	TAL CAN
TCLP	Analysis	6010B		1	356115	11/19/18 11:38	WKD	TAL CAN
TCLP	Leach	1311			355683	11/15/18 16:25	DRJ	TAL CAN
TCLP	Prep	7470A			355863	11/16/18 12:00	MBB	TAL CAN
TCLP	Analysis	7470A		1	356258	11/19/18 14:32	AJC	TAL CAN
Total/NA	Analysis	1010A		1	354853	11/12/18 06:39	TPH	TAL CAN

Lab Chronicle

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-104089-1
Project/Site: MRC Block F TCB Waste Characterization

Client Sample ID: WC-FTCB-SOIL — Lab Sample ID: 240-104089-4

Date Collected: 11/07/18 10:15 **Matrix: Solid**
Date Received: 11/08/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			355683	11/15/18 16:25	DRJ	TAL CAN
TCLP	Prep	3010A			355862	11/16/18 14:00	MBB	TAL CAN
TCLP	Analysis	6010B		1	356115	11/19/18 09:56	WKD	TAL CAN
TCLP	Leach	1311			355683	11/15/18 16:25	DRJ	TAL CAN
TCLP	Prep	7470A			355863	11/16/18 12:00	MBB	TAL CAN
TCLP	Analysis	7470A		1	356258	11/19/18 14:23	AJC	TAL CAN
Total/NA	Analysis	1010A		1	356267	11/20/18 10:40	TPH	TAL CAN
Total/NA	Analysis	Moisture		1	354538	11/09/18 08:36	MES	TAL CAN

Client Sample ID: WC-FTCB-SOIL — Lab Sample ID: 240-104089-4

Date Collected: 11/07/18 10:15 **Matrix: Solid**
Date Received: 11/08/18 09:45 **Percent Solids: 83.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030C			356153	11/19/18 13:10	SAM	TAL CAN
Total/NA	Analysis	8260C		1	356055	11/19/18 18:04	SAM	TAL CAN
Total/NA	Prep	3540C			354879	11/12/18 08:27	ZMF	TAL CAN
Total/NA	Analysis	8082A		1	355209	11/14/18 01:59	KMG	TAL CAN

Client Sample ID: WC-FTCB-DECON — Lab Sample ID: 240-104089-5

Date Collected: 11/07/18 10:30 **Matrix: Water**
Date Received: 11/08/18 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	355689	11/16/18 05:06	TJL1	TAL CAN
Total/NA	Prep	3520C			354524	11/09/18 08:13	SDE	TAL CAN
Total/NA	Analysis	8082A		1	355036	11/13/18 13:19	CSC	TAL CAN
TCLP	Leach	1311			355683	11/15/18 16:25	DRJ	TAL CAN
TCLP	Prep	3010A			355862	11/16/18 14:00	MBB	TAL CAN
TCLP	Analysis	6010B		1	356115	11/19/18 11:43	WKD	TAL CAN
TCLP	Leach	1311			355683	11/15/18 16:25	DRJ	TAL CAN
TCLP	Prep	7470A			355863	11/16/18 12:00	MBB	TAL CAN
TCLP	Analysis	7470A		1	356258	11/19/18 14:34	AJC	TAL CAN
Total/NA	Analysis	1010A		1	354853	11/12/18 06:06	TPH	TAL CAN

Laboratory References:
TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-104089-1
Project/Site: MRC Block F TCB Waste Characterization

Laboratory: TestAmerica Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-19
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-19
Illinois	NELAP	5	200004	07-31-19
Kansas	NELAP	7	E-10336	01-31-19
Kentucky (UST)	State Program	4	58	02-23-19
Kentucky (WW)	State Program	4	98016	12-31-18 *
Minnesota	NELAP	5	039-999-348	12-31-18 *
Minnesota (Petrofund)	State Program	1	3506	07-31-19
Nevada	State Program	9	OH00048	07-31-19
New Jersey	NELAP	2	OH001	06-30-19
New York	NELAP	2	10975	03-31-19
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-19
Pennsylvania	NELAP	3	68-00340	08-31-19 *
Texas	NELAP	6	T104704517-18-10	08-31-19
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-19
Washington	State Program	10	C971	01-12-19
West Virginia DEP	State Program	3	210	12-31-18 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-104089-1
Project/Site: MRC Block F TCB Waste Characterization

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
6010B	Metals (ICP)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
1010A	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN
1311	TCLP Extraction	SW846	TAL CAN
3010A	Preparation, Total Metals	SW846	TAL CAN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL CAN
3540C	Soxhlet Extraction	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-104089-1
Project/Site: MRC Block F TCB Waste Characterization

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-104089-1	TB-110718	Water	11/07/18 00:00	11/08/18 09:45
240-104089-2	WC-SEMW10D-SOIL	Solid	11/07/18 09:30	11/08/18 09:45
240-104089-3	WC-FTCB-DEVW	Water	11/07/18 10:00	11/08/18 09:45
240-104089-4	WC-FTCB-SOIL	Solid	11/07/18 10:15	11/08/18 09:45
240-104089-5	WC-FTCB-DECON	Water	11/07/18 10:30	11/08/18 09:45

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A3UX14 Analysis Batch Number: 355881

Lab Sample ID: IC 240-355881/3 Client Sample ID:

Date Analyzed: 11/16/18 16:59 Lab File ID: 1416820.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
N-Propylbenzene		Invalid Compound ID	macenczaks	11/18/18 10:31
2-Chlorotoluene	10.60	Peak assignment corrected	macenczaks	11/18/18 10:31

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A3UX14 Analysis Batch Number: 356055

Lab Sample ID: MB 240-356055/16 Client Sample ID:

Date Analyzed: 11/19/18 14:29 Lab File ID: 1416880.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Butanone (MEK)		Invalid Compound ID	macenczaks	11/19/18 14:55
2-Hexanone		Invalid Compound ID	macenczaks	11/19/18 14:54
Vinyl chloride		Invalid Compound ID	macenczaks	11/19/18 14:55
1,3-Dichlorobenzene	11.23	Peak assignment corrected	macenczaks	11/19/18 14:54

Lab Sample ID: 240-104089-2 Client Sample ID: WC-SEMW10D-SOIL

Date Analyzed: 11/19/18 17:43 Lab File ID: 1416889.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dichlorobenzene		Invalid Compound ID	macenczaks	11/20/18 09:17
2-Butanone (MEK)		Invalid Compound ID	macenczaks	11/20/18 09:17
cis-1,2-Dichloroethene		Invalid Compound ID	macenczaks	11/20/18 09:17
tert-Butyl alcohol (TBA)		Invalid Compound ID	macenczaks	11/20/18 09:17
Vinyl chloride		Invalid Compound ID	macenczaks	11/20/18 09:17

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A3UX14 Analysis Batch Number: 356055

Lab Sample ID: 240-104089-4 Client Sample ID: WC-FTCB-SOIL

Date Analyzed: 11/19/18 18:04 Lab File ID: 1416890.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylbenzene	9.40	Peak assignment corrected	macenczaks	11/20/18 09:20
1,3-Dichlorobenzene		Invalid Compound ID	macenczaks	11/20/18 09:20
2-Butanone (MEK)		Invalid Compound ID	macenczaks	11/20/18 09:20
Vinyl chloride		Invalid Compound ID	macenczaks	11/20/18 09:20

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A3UX19 Analysis Batch Number: 337766

Lab Sample ID: STD8260 240-337766/13 I Client Sample ID:

Date Analyzed: 07/24/18 20:04 Lab File ID: U1900794.d GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane		Invalid Compound ID	laveyt	07/25/18 10:11
Acetone		Invalid Compound ID	laveyt	07/25/18 09:52
Bromoform		Invalid Compound ID	laveyt	07/25/18 09:54
Methylene Chloride		Invalid Compound ID	laveyt	07/25/18 09:52
n-Heptane		Invalid Compound ID	laveyt	07/25/18 09:54
tert-Butyl alcohol (TBA)		Invalid Compound ID	laveyt	07/25/18 09:53
1,3-Dichlorobenzene	10.81	Peak assignment corrected	laveyt	07/25/18 09:51

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A3UX19 Analysis Batch Number: 342719

Lab Sample ID: STD8260 240-342719/13 I Client Sample ID:

Date Analyzed: 08/27/18 19:23 Lab File ID: U1901329.d GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane		Invalid Compound ID	laveyt	08/27/18 19:49
Acetone		Invalid Compound ID	laveyt	08/27/18 19:48
Methylene Chloride		Invalid Compound ID	laveyt	08/27/18 19:48
Naphthalene		Invalid Compound ID	laveyt	08/27/18 20:00
n-Heptane		Invalid Compound ID	laveyt	08/27/18 19:48
Tetrahydrofuran		Invalid Compound ID	laveyt	08/27/18 19:48
trans-1,4-Dichloro-2-butene		Invalid Compound ID	laveyt	08/27/18 19:50
1,3-Dichlorobenzene	10.82	Peak assignment corrected	laveyt	08/27/18 19:47

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A3UX19 Analysis Batch Number: 355689

Lab Sample ID: CCVIS 240-355689/3 Client Sample ID:

Date Analyzed: 11/15/18 19:49 Lab File ID: U1903841.d GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.28	Split Peak	laveyt	11/15/18 20:11

Lab Sample ID: 240-104089-5 Client Sample ID: WC-FTCB-DECON

Date Analyzed: 11/16/18 05:06 Lab File ID: U1903866.d GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromochloromethane		Invalid Compound ID	laveyt	11/16/18 14:19

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Analysis Batch Number: 350710

Lab Sample ID: STD005 240-350710/4 IC Client Sample ID:

Date Analyzed: 10/18/18 15:16 Lab File ID: P12101804.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 1	4.78	Baseline Smoothing	hassl	10/19/18 07:21
PCB-1232 Peak 2	5.29	Baseline Smoothing	hassl	10/19/18 07:21
PCB-1232 Peak 3	5.91	Baseline Smoothing	hassl	10/19/18 07:21
PCB-1232 Peak 4	6.09	Baseline Smoothing	hassl	10/19/18 07:21
PCB-1232 Peak 5	6.41	Baseline Smoothing	hassl	10/19/18 07:21

Lab Sample ID: STD01 240-350710/5 IC Client Sample ID:

Date Analyzed: 10/18/18 15:36 Lab File ID: P12101805.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 1	4.78	Baseline Smoothing	hassl	10/19/18 07:21
PCB-1232 Peak 2	5.29	Baseline Smoothing	hassl	10/19/18 07:21
PCB-1232 Peak 3	5.91	Baseline Smoothing	hassl	10/19/18 07:21
PCB-1232 Peak 4	6.08	Baseline Smoothing	hassl	10/19/18 07:21
PCB-1232 Peak 5	6.41	Baseline Smoothing	hassl	10/19/18 07:21

Lab Sample ID: STD05 240-350710/7 IC Client Sample ID:

Date Analyzed: 10/18/18 16:17 Lab File ID: P12101807.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 1	5.76	Baseline Smoothing	hassl	10/19/18 07:20
PCB-1232 Peak 2	6.33	Baseline Smoothing	hassl	10/19/18 07:20
PCB-1232 Peak 3	6.95	Baseline Smoothing	hassl	10/19/18 07:20
PCB-1232 Peak 4	7.12	Baseline Smoothing	hassl	10/19/18 07:20
PCB-1232 Peak 5	7.44	Baseline Smoothing	hassl	10/19/18 07:20

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Analysis Batch Number: 350710

Lab Sample ID: STD1 240-350710/8 IC Client Sample ID:

Date Analyzed: 10/18/18 16:38 Lab File ID: P12101808.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 1	5.76	Baseline Smoothing	hassl	10/19/18 07:20
PCB-1232 Peak 2	6.34	Baseline Smoothing	hassl	10/19/18 07:20
PCB-1232 Peak 3	6.95	Baseline Smoothing	hassl	10/19/18 07:20
PCB-1232 Peak 4	7.12	Baseline Smoothing	hassl	10/19/18 07:20
PCB-1232 Peak 5	7.44	Baseline Smoothing	hassl	10/19/18 07:20

Lab Sample ID: STD02 240-350710/12 IC Client Sample ID:

Date Analyzed: 10/18/18 18:00 Lab File ID: P12101812.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242 Peak 1	5.75	Baseline Smoothing	hassl	10/19/18 06:59
PCB-1242 Peak 2	6.33	Baseline Smoothing	hassl	10/19/18 06:59
PCB-1242 Peak 3	6.94	Baseline Smoothing	hassl	10/19/18 06:59
PCB-1242 Peak 4	7.12	Baseline Smoothing	hassl	10/19/18 06:59
PCB-1242 Peak 5	7.44	Baseline Smoothing	hassl	10/19/18 06:59

Lab Sample ID: STD05 240-350710/13 IC Client Sample ID:

Date Analyzed: 10/18/18 18:21 Lab File ID: P12101813.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242 Peak 1	5.75	Baseline Smoothing	hassl	10/19/18 06:58
PCB-1242 Peak 2	6.33	Baseline Smoothing	hassl	10/19/18 06:58
PCB-1242 Peak 3	6.94	Baseline Smoothing	hassl	10/19/18 06:58
PCB-1242 Peak 4	7.12	Baseline Smoothing	hassl	10/19/18 06:58
PCB-1242 Peak 5	7.44	Baseline Smoothing	hassl	10/19/18 06:58

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Analysis Batch Number: 350710

Lab Sample ID: STD15 240-350710/15 IC Client Sample ID:

Date Analyzed: 10/18/18 19:02 Lab File ID: P12101815.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242 Peak 1	5.76	Baseline Smoothing	hassl	10/19/18 06:58
PCB-1242 Peak 2	6.33	Baseline Smoothing	hassl	10/19/18 06:58
PCB-1242 Peak 3	6.94	Baseline Smoothing	hassl	10/19/18 06:58
PCB-1242 Peak 4	7.12	Baseline Smoothing	hassl	10/19/18 06:58
PCB-1242 Peak 5	7.44	Baseline Smoothing	hassl	10/19/18 06:58

Lab Sample ID: STD005 240-350710/28 IC Client Sample ID:

Date Analyzed: 10/18/18 23:29 Lab File ID: P12101828.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 1	4.78	Baseline Smoothing	hassl	10/19/18 07:04
PCB-1016 Peak 2	5.28	Baseline Smoothing	hassl	10/19/18 07:04
PCB-1016 Peak 3	5.91	Baseline Smoothing	hassl	10/19/18 07:04
PCB-1016 Peak 4	6.08	Baseline Smoothing	hassl	10/19/18 07:04
PCB-1016 Peak 5	6.41	Baseline Smoothing	hassl	10/19/18 07:04

Lab Sample ID: STD05 240-350710/31 ICI Client Sample ID:

Date Analyzed: 10/19/18 00:30 Lab File ID: P12101831.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1260 Peak 1	8.12	Baseline Smoothing	hassl	10/19/18 07:05
PCB-1260 Peak 2	8.45	Baseline Smoothing	hassl	10/19/18 07:05
PCB-1260 Peak 3	8.92	Baseline Smoothing	hassl	10/19/18 07:05
PCB-1260 Peak 4	9.56	Baseline Smoothing	hassl	10/19/18 07:05
PCB-1260 Peak 5	9.88	Baseline Smoothing	hassl	10/19/18 07:05

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Analysis Batch Number: 350710

Lab Sample ID: STD05 240-350710/31 ICI Client Sample ID:

Date Analyzed: 10/19/18 00:30 Lab File ID: P12101831.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1260 Peak 1	9.27	Incomplete Integration	grantk	10/19/18 13:13
PCB-1260 Peak 2	9.52	Incomplete Integration	grantk	10/19/18 13:13
PCB-1260 Peak 3	10.05	Incomplete Integration	grantk	10/19/18 13:13
PCB-1260 Peak 4	10.66	Incomplete Integration	grantk	10/19/18 13:13
PCB-1260 Peak 5	11.03	Incomplete Integration	grantk	10/19/18 13:13

Lab Sample ID: STD1 240-350710/32 IC Client Sample ID:

Date Analyzed: 10/19/18 00:51 Lab File ID: P12101832.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1260 Peak 1	8.12	Baseline Smoothing	hassl	10/19/18 07:05
PCB-1260 Peak 2	8.45	Baseline Smoothing	hassl	10/19/18 07:05
PCB-1260 Peak 3	8.92	Baseline Smoothing	hassl	10/19/18 07:05
PCB-1260 Peak 4	9.56	Baseline Smoothing	hassl	10/19/18 07:05
PCB-1260 Peak 5	9.88	Baseline Smoothing	hassl	10/19/18 07:05

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Analysis Batch Number: 350710

Lab Sample ID: STD15 240-350710/33 IC Client Sample ID:

Date Analyzed: 10/19/18 01:11 Lab File ID: P12101833.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 1	5.75	Baseline Smoothing	hassl	10/19/18 07:06
PCB-1016 Peak 2	6.33	Baseline Smoothing	hassl	10/19/18 07:06
PCB-1016 Peak 3	6.94	Baseline Smoothing	hassl	10/19/18 07:06
PCB-1016 Peak 4	7.12	Baseline Smoothing	hassl	10/19/18 07:06
PCB-1016 Peak 5	7.44	Baseline Smoothing	hassl	10/19/18 07:06
PCB-1260 Peak 1	9.27	Baseline Smoothing	hassl	10/19/18 07:06
PCB-1260 Peak 2	9.52	Baseline Smoothing	hassl	10/19/18 07:06
PCB-1260 Peak 3	10.05	Baseline Smoothing	hassl	10/19/18 07:06
PCB-1260 Peak 4	10.66	Baseline Smoothing	hassl	10/19/18 07:06
PCB-1260 Peak 5	11.03	Baseline Smoothing	hassl	10/19/18 07:06

Lab Sample ID: ICV 240-350710/43 Client Sample ID:

Date Analyzed: 10/19/18 08:56 Lab File ID: P12101843.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1260 Peak 1	8.12	Baseline Smoothing	hassl	10/19/18 09:38
PCB-1260 Peak 2	8.45	Baseline Smoothing	hassl	10/19/18 09:38
PCB-1260 Peak 3	8.91	Baseline Smoothing	hassl	10/19/18 09:38
PCB-1260 Peak 4	9.56	Baseline Smoothing	hassl	10/19/18 09:38
PCB-1260 Peak 5	9.88	Baseline Smoothing	hassl	10/19/18 09:38

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Analysis Batch Number: 350710

Lab Sample ID: ICV 240-350710/43 Client Sample ID:

Date Analyzed: 10/19/18 08:56 Lab File ID: P12101843.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 1	5.75	Baseline Smoothing	hassl	10/19/18 09:39
PCB-1016 Peak 2	6.33	Baseline Smoothing	hassl	10/19/18 09:39
PCB-1016 Peak 3	6.94	Baseline Smoothing	hassl	10/19/18 09:39
PCB-1016 Peak 4	7.11	Baseline Smoothing	hassl	10/19/18 09:39
PCB-1016 Peak 5	7.44	Baseline Smoothing	hassl	10/19/18 09:39

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Analysis Batch Number: 355209

Lab Sample ID: CCV 240-355209/3 CCVIS Client Sample ID:

Date Analyzed: 11/13/18 18:27 Lab File ID: P12111340.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1260 Res 3	2.88	Unspecified		
PCB-1260		Unspecified		
PCB-1260 Peak 1	8.96	Unspecified		
PCB-1260 Peak 2	9.22	Unspecified		
PCB-1260 Peak 3	9.74	Unspecified		
PCB-1260 Peak 4	10.37	Unspecified		
1260 Res 1	10.61	Unspecified		
1260 Res 2	10.67	Unspecified		
PCB-1260 Peak 5	10.75	Unspecified		

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Analysis Batch Number: 355209

Lab Sample ID: 240-104227-B-2-B MS Client Sample ID:

Date Analyzed: 11/13/18 21:32 Lab File ID: P12111349.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Aroclor-1221		Unspecified		
Aroclor-1232		Unspecified		
Aroclor-1242		Unspecified		
Aroclor-1248		Unspecified		
Aroclor-1254		Unspecified		
PCB-1221 Peak 1		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1221 Peak 2		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1221 Peak 3		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1232 Peak 1		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1232 Peak 2		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1232 Peak 3		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1232 Peak 4		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1232 Peak 5		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1242 Peak 1		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1242 Peak 2		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1242 Peak 3		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1242 Peak 4		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1242 Peak 5		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1248 Peak 1		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1248 Peak 2		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1248 Peak 3		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1248 Peak 4		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1248 Peak 5		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1254 Peak 1		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1254 Peak 2		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1254 Peak 3		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1254 Peak 4		Invalid Compound ID	grantk	11/14/18 09:44
PCB-1254 Peak 5		Invalid Compound ID	grantk	11/14/18 09:44

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Analysis Batch Number: 355209

Lab Sample ID: 240-104227-B-2-B MS Client Sample ID:

Date Analyzed: 11/13/18 21:32 Lab File ID: P12111349.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Aroclor-1221		Unspecified		
Aroclor-1232		Unspecified		
Aroclor-1242		Unspecified		
Aroclor-1248		Unspecified		
Aroclor-1254		Unspecified		
PCB-1221 Peak 1		Unspecified		
PCB-1221 Peak 2		Unspecified		
PCB-1221 Peak 3		Unspecified		
PCB-1232 Peak 1		Unspecified		
PCB-1232 Peak 2		Unspecified		
PCB-1232 Peak 3		Unspecified		
PCB-1232 Peak 4		Unspecified		
PCB-1232 Peak 5		Unspecified		
PCB-1242 Peak 1		Unspecified		
PCB-1242 Peak 2		Unspecified		
PCB-1242 Peak 3		Unspecified		
PCB-1242 Peak 4		Unspecified		
PCB-1242 Peak 5		Unspecified		
PCB-1248 Peak 1		Unspecified		
PCB-1248 Peak 2		Unspecified		
PCB-1248 Peak 3		Unspecified		
PCB-1248 Peak 4		Unspecified		
PCB-1248 Peak 5		Unspecified		
PCB-1254 Peak 1		Unspecified		
PCB-1254 Peak 2		Unspecified		
PCB-1254 Peak 3		Unspecified		
PCB-1254 Peak 4		Unspecified		
PCB-1254 Peak 5		Unspecified		

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Analysis Batch Number: 355209

Lab Sample ID: 240-104227-B-2-C MSD Client Sample ID:

Date Analyzed: 11/13/18 21:53 Lab File ID: P12111350.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Aroclor-1221		Unspecified		
Aroclor-1232		Unspecified		
Aroclor-1242		Unspecified		
Aroclor-1248		Unspecified		
Aroclor-1254		Unspecified		
PCB-1221 Peak 1		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1221 Peak 2		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1221 Peak 3		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1232 Peak 1		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1232 Peak 2		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1232 Peak 3		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1232 Peak 4		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1232 Peak 5		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1242 Peak 1		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1242 Peak 2		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1242 Peak 3		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1242 Peak 4		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1242 Peak 5		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1248 Peak 1		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1248 Peak 2		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1248 Peak 3		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1248 Peak 4		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1248 Peak 5		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1254 Peak 1		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1254 Peak 2		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1254 Peak 3		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1254 Peak 4		Invalid Compound ID	grantk	11/14/18 10:44
PCB-1254 Peak 5		Invalid Compound ID	grantk	11/14/18 10:44

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Analysis Batch Number: 355209

Lab Sample ID: 240-104227-B-2-C MSD Client Sample ID:

Date Analyzed: 11/13/18 21:53 Lab File ID: P12111350.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Aroclor-1221		Unspecified		
Aroclor-1232		Unspecified		
Aroclor-1242		Unspecified		
Aroclor-1248		Unspecified		
Aroclor-1254		Unspecified		
PCB-1221 Peak 1		Unspecified		
PCB-1221 Peak 2		Unspecified		
PCB-1221 Peak 3		Unspecified		
PCB-1232 Peak 1		Unspecified		
PCB-1232 Peak 2		Unspecified		
PCB-1232 Peak 3		Unspecified		
PCB-1232 Peak 4		Unspecified		
PCB-1232 Peak 5		Unspecified		
PCB-1242 Peak 1		Unspecified		
PCB-1242 Peak 2		Unspecified		
PCB-1242 Peak 3		Unspecified		
PCB-1242 Peak 4		Unspecified		
PCB-1242 Peak 5		Unspecified		
PCB-1248 Peak 1		Unspecified		
PCB-1248 Peak 2		Unspecified		
PCB-1248 Peak 3		Unspecified		
PCB-1248 Peak 4		Unspecified		
PCB-1248 Peak 5		Unspecified		
PCB-1254 Peak 1		Unspecified		
PCB-1254 Peak 2		Unspecified		
PCB-1254 Peak 3		Unspecified		
PCB-1254 Peak 4		Unspecified		
PCB-1254 Peak 5		Unspecified		

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Analysis Batch Number: 355209

Lab Sample ID: 240-104089-4 Client Sample ID: WC-FTCB-SOIL

Date Analyzed: 11/14/18 01:59 Lab File ID: P12111362.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Aroclor-1248		Unspecified		
Aroclor-1254		Unspecified		
PCB-1248 Peak 1		Invalid Compound ID	grantk	11/14/18 11:09
PCB-1248 Peak 2		Invalid Compound ID	grantk	11/14/18 11:09
PCB-1248 Peak 3		Invalid Compound ID	grantk	11/14/18 11:09
PCB-1248 Peak 4		Invalid Compound ID	grantk	11/14/18 11:09
PCB-1248 Peak 5		Invalid Compound ID	grantk	11/14/18 11:09
PCB-1254 Peak 1		Invalid Compound ID	grantk	11/14/18 11:10
PCB-1254 Peak 2		Invalid Compound ID	grantk	11/14/18 11:10
PCB-1254 Peak 3		Invalid Compound ID	grantk	11/14/18 11:10
PCB-1254 Peak 4		Invalid Compound ID	grantk	11/14/18 11:10
PCB-1254 Peak 5		Invalid Compound ID	grantk	11/14/18 11:10

Lab Sample ID: 240-104089-4 Client Sample ID: WC-FTCB-SOIL

Date Analyzed: 11/14/18 01:59 Lab File ID: P12111362.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Aroclor-1248		Unspecified		
Aroclor-1254		Unspecified		
PCB-1248 Peak 1		Unspecified		
PCB-1248 Peak 2		Unspecified		
PCB-1248 Peak 3		Unspecified		
PCB-1248 Peak 4		Unspecified		
PCB-1248 Peak 5		Unspecified		
PCB-1254 Peak 1		Unspecified		
PCB-1254 Peak 2		Unspecified		
PCB-1254 Peak 3		Unspecified		
PCB-1254 Peak 4		Unspecified		
PCB-1254 Peak 5		Unspecified		

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP4 Analysis Batch Number: 353863

Lab Sample ID: STD005 240-353863/4 IC Client Sample ID:

Date Analyzed: 11/06/18 13:25 Lab File ID: P4110604.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232		Unspecified		
PCB-1232 Peak 1	4.11	Baseline Smoothing	hassl	11/07/18 05:51
PCB-1232 Peak 2	4.83	Baseline Smoothing	hassl	11/07/18 05:51
PCB-1232 Peak 3	5.68	Baseline Smoothing	hassl	11/07/18 05:51
PCB-1232 Peak 4	5.90	Baseline Smoothing	hassl	11/07/18 05:51
PCB-1232 Peak 5	6.32	Split Peak	hassl	11/07/18 05:51

Lab Sample ID: STD005 240-353863/4 IC Client Sample ID:

Date Analyzed: 11/06/18 13:25 Lab File ID: P4110604.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232		Unspecified		
PCB-1232 Peak 1	5.46	Unspecified		
PCB-1232 Peak 2	6.22	Unspecified		
PCB-1232 Peak 3	6.97	Unspecified		
PCB-1232 Peak 4	7.19	Unspecified		
PCB-1232 Peak 5	7.56	Unspecified		

Lab Sample ID: STD005 240-353863/10 IC Client Sample ID:

Date Analyzed: 11/06/18 15:36 Lab File ID: P4110610.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242		Unspecified		
PCB-1242 Peak 1	4.11	Baseline Smoothing	hassl	11/07/18 05:54
PCB-1242 Peak 2	4.83	Baseline Smoothing	hassl	11/07/18 05:54
PCB-1242 Peak 3	5.68	Baseline Smoothing	hassl	11/07/18 05:54
PCB-1242 Peak 4	5.90	Baseline Smoothing	hassl	11/07/18 05:54
PCB-1242 Peak 5	6.32	Baseline Smoothing	hassl	11/07/18 05:54

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP4 Analysis Batch Number: 353863

Lab Sample ID: STD005 240-353863/10 IC Client Sample ID:

Date Analyzed: 11/06/18 15:36 Lab File ID: P4110610.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242		Unspecified		
PCB-1242 Peak 1	5.46	Unspecified		
PCB-1242 Peak 2	6.21	Unspecified		
PCB-1242 Peak 3	6.97	Unspecified		
PCB-1242 Peak 4	7.19	Unspecified		
PCB-1242 Peak 5	7.56	Unspecified		

Lab Sample ID: STD1 240-353863/14 IC Client Sample ID:

Date Analyzed: 11/06/18 17:04 Lab File ID: P4110614.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1268 Peak 1	9.75	Baseline Smoothing	hassl	11/07/18 05:57
PCB-1268 Peak 2	9.78	Baseline Smoothing	hassl	11/07/18 05:57
PCB-1268 Peak 3	9.95	Baseline Smoothing	hassl	11/07/18 05:57
PCB-1268 Peak 4	10.24	Baseline Smoothing	hassl	11/07/18 05:57
PCB-1268 Peak 5	10.48	Baseline Smoothing	hassl	11/07/18 05:57

Lab Sample ID: STD05 240-353863/19 IC Client Sample ID:

Date Analyzed: 11/06/18 18:54 Lab File ID: P4110619.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1-Bromo-2-nitrobenzene	2.06	Split Peak	hassl	11/07/18 06:44
PCB-1248 Peak 1	4.83	Baseline Smoothing	hassl	11/07/18 06:45
PCB-1248 Peak 2	6.57	Baseline Smoothing	hassl	11/07/18 06:45
PCB-1248 Peak 3	7.23	Baseline Smoothing	hassl	11/07/18 06:45
PCB-1248 Peak 4	7.53	Baseline Smoothing	hassl	11/07/18 06:45
PCB-1248 Peak 5	8.02	Baseline Smoothing	hassl	11/07/18 06:45

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP4 Analysis Batch Number: 353863

Lab Sample ID: STD005 240-353863/28 IC Client Sample ID:

Date Analyzed: 11/06/18 22:10 Lab File ID: P4110628.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1016 Peak 1	4.12	Unspecified		
PCB-1016 Peak 2	4.84	Unspecified		
PCB-1016 Peak 3	5.69	Unspecified		
PCB-1016 Peak 4	5.91	Unspecified		
PCB-1016 Peak 5	6.32	Peak assignment corrected	hassl	11/07/18 06:06

Lab Sample ID: STD005 240-353863/28 IC Client Sample ID:

Date Analyzed: 11/06/18 22:10 Lab File ID: P4110628.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1016 Peak 1	5.47	Unspecified		
PCB-1016 Peak 2	6.22	Unspecified		
PCB-1016 Peak 3	6.98	Unspecified		
PCB-1016 Peak 4	7.19	Unspecified		
PCB-1016 Peak 5	7.56	Unspecified		

Lab Sample ID: STD1 240-353863/32 IC Client Sample ID:

Date Analyzed: 11/06/18 23:35 Lab File ID: P4110632.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1260 Peak 1	9.24	Baseline Smoothing	hassl	11/07/18 06:08
PCB-1260 Peak 2	9.45	Baseline Smoothing	hassl	11/07/18 06:08
PCB-1260 Peak 3	9.76	Baseline Smoothing	hassl	11/07/18 06:08
PCB-1260 Peak 4	10.31	Baseline Smoothing	hassl	11/07/18 06:08
PCB-1260 Peak 5	10.62	Baseline Smoothing	hassl	11/07/18 06:08

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP4 Analysis Batch Number: 353863

Lab Sample ID: STD15 240-353863/33 IC Client Sample ID:

Date Analyzed: 11/06/18 23:56 Lab File ID: P4110633.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1260 Peak 1	9.24	Baseline Smoothing	hassl	11/07/18 06:08
PCB-1260 Peak 2	9.44	Baseline Smoothing	hassl	11/07/18 06:08
PCB-1260 Peak 3	9.76	Baseline Smoothing	hassl	11/07/18 06:08
PCB-1260 Peak 4	10.31	Baseline Smoothing	hassl	11/07/18 06:08
PCB-1260 Peak 5	10.61	Baseline Smoothing	hassl	11/07/18 06:08

Lab Sample ID: ICV 240-353863/35 Client Sample ID:

Date Analyzed: 11/07/18 00:38 Lab File ID: P4110635.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 1	4.11	Baseline Smoothing	hassl	11/07/18 06:22
PCB-1232 Peak 2	4.83	Baseline Smoothing	hassl	11/07/18 06:22
PCB-1232 Peak 3	5.67	Baseline Smoothing	hassl	11/07/18 06:22
PCB-1232 Peak 4	5.90	Baseline Smoothing	hassl	11/07/18 06:22
PCB-1232 Peak 5	6.31	Baseline Smoothing	hassl	11/07/18 06:22

Lab Sample ID: ICV 240-353863/36 Client Sample ID:

Date Analyzed: 11/07/18 00:58 Lab File ID: P4110636.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242 Peak 1	4.11	Baseline Smoothing	hassl	11/07/18 06:23
PCB-1242 Peak 2	4.83	Baseline Smoothing	hassl	11/07/18 06:23
PCB-1242 Peak 3	5.66	Baseline Smoothing	hassl	11/07/18 06:23
PCB-1242 Peak 4	5.90	Baseline Smoothing	hassl	11/07/18 06:23
PCB-1242 Peak 5	6.31	Baseline Smoothing	hassl	11/07/18 06:23

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP4 Analysis Batch Number: 353863

Lab Sample ID: ICV 240-353863/37 Client Sample ID:

Date Analyzed: 11/07/18 01:19 Lab File ID: P4110637.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 1	6.21	Split Peak	hassl	11/07/18 06:24
PCB-1248 Peak 2	6.97	Split Peak	hassl	11/07/18 06:24
PCB-1248 Peak 3	7.85	Split Peak	hassl	11/07/18 06:24
PCB-1248 Peak 4	8.37	Split Peak	hassl	11/07/18 06:24
PCB-1248 Peak 5	9.05	Split Peak	hassl	11/07/18 06:24

Lab Sample ID: ICV 240-353863/39 Client Sample ID:

Date Analyzed: 11/07/18 02:01 Lab File ID: P4110639.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1016 Peak 1	4.11	Unspecified		
PCB-1016 Peak 2	4.83	Unspecified		
PCB-1016 Peak 3	5.65	Peak assignment corrected	hassl	11/07/18 06:26
PCB-1016 Peak 4	5.90	Unspecified		
PCB-1016 Peak 5	6.31	Unspecified		

Lab Sample ID: ICV 240-353863/39 Client Sample ID:

Date Analyzed: 11/07/18 02:01 Lab File ID: P4110639.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1016 Peak 1	5.46	Unspecified		
PCB-1016 Peak 2	6.21	Unspecified		
PCB-1016 Peak 3	6.97	Unspecified		
PCB-1016 Peak 4	7.19	Unspecified		
PCB-1016 Peak 5	7.56	Unspecified		

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP4 Analysis Batch Number: 355036

Lab Sample ID: LCS 240-354524/17-A Client Sample ID:

Date Analyzed: 11/13/18 08:14 Lab File ID: P4111310.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 1	5.44	Baseline Smoothing	coastc	11/14/18 06:08
PCB-1016 Peak 2	6.19	Baseline Smoothing	coastc	11/14/18 06:08
PCB-1016 Peak 4	7.16	Baseline Smoothing	coastc	11/14/18 06:08
PCB-1016 Peak 5	7.54	Baseline Smoothing	coastc	11/14/18 06:08
PCB-1260 Peak 1	9.23	Baseline Smoothing	coastc	11/14/18 06:08
PCB-1260 Peak 2	9.43	Baseline Smoothing	coastc	11/14/18 06:08
PCB-1260 Peak 3	9.75	Baseline Smoothing	coastc	11/14/18 06:08
PCB-1260 Peak 4	10.30	Baseline Smoothing	coastc	11/14/18 06:08
PCB-1260 Peak 5	10.60	Baseline Smoothing	coastc	11/14/18 06:08

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
ex10PPMSPK_00043	03/13/19	09/13/18	MEOH, Lot 0000196626	1000 mL	ex1016/1260st_00013	10 mL	Aroclor-1016	10 ug/mL
							Aroclor-1260	10 ug/mL
.ex1016/1260st_00013	05/31/24	Restek, Lot A0134815			(Purchased Reagent)		Aroclor-1016	1000 ug/mL
							Aroclor-1260	1000 ug/mL
ex2/.2SURRW_00115	05/01/19	11/01/18	MEOH, Lot 0000196628	2000 mL	exPESTSURRstd_00011	2 mL	DCB Decachlorobiphenyl	0.2 ug/mL
							Tetrachloro-m-xylene	0.2 ug/mL
.exPESTSURRstd_00011	06/23/24	Restek, Lot A0136320			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
EXpH(0-14)_00027	10/09/21	Merck, Lot HC850248			(Purchased Reagent)		pH at time of analysis	1 No Unit
EXTCLPBUFF1_01688	11/15/18	11/14/18	DIWATER, Lot 11142018	96 L	EXTCLP5MNAOH_00042	1502.98 g	Sodium Hydroxide	0.313121 %
					EXTCLPACETIC_00028	547.2 mL	Acetic acid	0.57 %
.EXTCLP5MNAOH_00042	02/19/20	10/29/18	DIWATER, Lot 10292018	3 L	EXTCLPNAOH_00035	600 g	Sodium Hydroxide	200 mol/L
..EXTCLPNAOH_00035	02/19/20	Macron, Lot 0000206395			(Purchased Reagent)		Sodium Hydroxide	1 g/g
.EXTCLPACETIC_00028	06/21/22	Macron, Lot 00000180067			(Purchased Reagent)		Acetic acid	1 g/g
EXTCLPFILTERS_00041	10/10/21	Whatman, Lot 16827491			(Purchased Reagent)		Prep Analyte	100 Filter
EXTCLPHCLW_00062	10/09/20	10/11/18	DIWATER, Lot 10112018	2000 mL	MTTMHCL_00222	166 mL	Hydrogen Chloride	83 mol/L
.MTTMHCL_00222	10/09/20	JT Baker(Avantor), Lot 0000201226			(Purchased Reagent)		Hydrogen Chloride	100 %
K2S2O8_00091	10/25/20	10/25/18	DIWATER, Lot DIWATER	2.5 L	MTK2S208_00050	125 g	Potassium persulfate	0.05 g/g
.MTK2S208_00050	09/25/23	Macron, Lot 0000194817			(Purchased Reagent)		Potassium persulfate	1 g/g
MT1to1HCL_00086	05/14/19	11/14/18	DIWATER, Lot DIWATER	2500 mL	MTTMHCL_00225	1250 mL	Hydrogen Chloride	0.5 mL/mL
.MTTMHCL_00225	11/05/20	JT Baker(Avantor), Lot 0000201226			(Purchased Reagent)		Hydrogen Chloride	100 %
MT6500ICV_00050	04/10/19	10/10/18	DIWATER, Lot DIWATER	1000 mL	MTTRICV3_00011	6 mL	Barium	1500 ug/L
							Chromium	1500 ug/L
					MTTRICV5_00015	1.5 mL	Arsenic	375 ug/L
							Cadmium	375 ug/L
							Lead	375 ug/L
							Selenium	375 ug/L
					MTTRICVAG_00010	7.5 mL	Silver	750 ug/L
.MTTRICV3_00011	11/30/19	CPI, Lot 10075909-3			(Purchased Reagent)		Barium	250 mg/L
							Chromium	250 mg/L
.MTTRICV5_00015	09/03/19	CPI, Lot 10075909-1			(Purchased Reagent)		Arsenic	250 ug/mL
							Cadmium	250 ug/mL
							Lead	250 ug/mL
							Selenium	250 ug/mL
.MTTRICVAG_00010	06/20/19	CPI, Lot 10072207-5			(Purchased Reagent)		Silver	100 mg/L
MTAGSPIKEW_00087	12/08/18	10/10/18	DIWATER, Lot DIWATER	1000 mL	MTAG_00007	2.5 mL	Silver	2500 ug/L
					MTTMHNO3_00169	50 mL	Nitric acid	50000000 ug/L
.MTAG_00007	12/08/18	HIGH PURITY STANDARDS, Lot 1713128			(Purchased Reagent)		Silver	1000 ug/mL
.MTTMHNO3_00169	10/08/20	Macron, Lot 0000200458			(Purchased Reagent)		Nitric acid	100 %
MTH2S04_00066	11/08/20	Macron, Lot 0000198960			(Purchased Reagent)		Sulfuric acid	100 %
MTHGCALW_01969	11/16/18	11/16/18	DIWATER, Lot DIWATER	200 mL	MTHGCAL_00034	2 mL	Mercury	100 ug/L
					MTTMHNO3_00173	0.25 mL	Nitric acid	1250000 ug/L
.MTHGCAL_00034	01/31/19	High Purity, Lot 1800827			(Purchased Reagent)		Mercury	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MTTMHNO3_00173	11/13/20	Macron, Lot 0000200458			(Purchased Reagent)		Nitric acid	100 %
MTHGCALW_01971	11/19/18	11/19/18	DIWATER, Lot DIWATER	200 mL	MTHGCAL_00034	2 mL	Mercury	100 ug/L
					MTTMHNO3_00173	0.25 mL	Nitric acid	1250000 ug/L
.MTHGCAL_00034	01/31/19	High Purity, Lot 1800827			(Purchased Reagent)		Mercury	10 ug/mL
.MTTMHNO3_00173	11/13/20	Macron, Lot 0000200458			(Purchased Reagent)		Nitric acid	100 %
MTHgICV_00001_00427	11/19/18	11/19/18	DIWATER, Lot DIWATER	100 mL	LLHg-ICV_00008	1 mL	Mercury	0.1 ug/mL
					MTTMHNO3_00173	0.125 mL	Nitric acid	1250 ug/mL
.LLHg-ICV_00008	01/31/19	Elemental Scientific, Lot 1817815			(Purchased Reagent)		Mercury	10 ug/mL
.MTTMHNO3_00173	11/13/20	Macron, Lot 0000200458			(Purchased Reagent)		Nitric acid	100 %
MTICP1_00079	03/31/19	10/25/18	DIWATER, Lot DI WATER	1000 mL	MTICPSPIKE1A_00013	50 mL	Al	100000 ug/L
							Arsenic	100000 ug/L
							B	50000 ug/L
							Barium	100000 ug/L
							Be	2500 ug/L
							Cadmium	2500 ug/L
							Chromium	10000 ug/L
							Co	25000 ug/L
							Cu	12500 ug/L
							Fe	50000 ug/L
							Lead	25000 ug/L
							Mn	25000 ug/L
							Ni	25000 ug/L
							Selenium	100000 ug/L
							Tl	100000 ug/L
							V	25000 ug/L
							Zn	25000 ug/L
					MTICPSPIKEB_00012	50 mL	Mo	50000 ug/L
							Sb	25000 ug/L
							Sn	100000 ug/L
							Ti	50000 ug/L
					MTICPSpikeOdd_00009	50 mL	Li	50000 ug/L
							Si	50000 ug/L
							SiO2	107000 ug/L
							Sr	50000 ug/L
					MTTMHNO3_00170	50 mL	Nitric acid	50000000 ug/L
.MTICPSPIKE1A_00013	03/31/19	High Purity Standards, Lot 1807331			(Purchased Reagent)		Al	2000 ug/mL
							Arsenic	2000 ug/mL
							B	1000 ug/mL
							Barium	2000 ug/mL
							Be	50 ug/mL
							Cadmium	50 ug/mL
							Chromium	200 ug/mL
							Co	500 ug/mL
							Cu	250 ug/mL
							Fe	1000 ug/mL
							Lead	500 ug/mL
							Mn	500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ni	500 ug/mL
							Selenium	2000 ug/mL
							Tl	2000 ug/mL
							V	500 ug/mL
							Zn	500 ug/mL
.MTICPSPIKEB_00012	03/31/19	High Purity Standards, Lot 1807336			(Purchased Reagent)		Mo	1000 ug/mL
							Sb	500 ug/mL
							Sn	2000 ug/mL
							Ti	1000 ug/mL
.MTICPSpikeOdd_00009	03/31/19	High Purity Standards, Lot 1807221			(Purchased Reagent)		Li	1000 ug/mL
							Si	1000 ug/mL
							SiO2	2140 ug/mL
							Sr	1000 ug/mL
.MTTMHNO3_00170	10/17/20	Macron, Lot 0000200458			(Purchased Reagent)		Nitric acid	100 %
MTICP2A_00088	04/25/19	10/25/18	DIWATER, Lot NONE	1000 mL	MTTMHNO3_00170	50 mL	Nitric acid	50000 mg/L
					MTTRCAL2_00020	250 mL	Ca	2500 mg/L
							K	2500 mg/L
							Mg	2500 mg/L
							Na	2500 mg/L
.MTTMHNO3_00170	10/17/20	Macron, Lot 0000200458			(Purchased Reagent)		Nitric acid	100 %
.MTTRCAL2_00020	06/30/19	HIGH PURITY STANDARDS, Lot 1812740			(Purchased Reagent)		Ca	10000 ug/mL
							K	10000 ug/mL
							Mg	10000 ug/mL
							Na	10000 ug/mL
MTICPCCV_00142	05/15/19	11/15/18	DIWATER, Lot DIWATER	2000 mL	MTICPCCV1_00025	200 mL	Arsenic	500 ug/L
							Barium	2000 ug/L
							Cadmium	500 ug/L
							Chromium	2000 ug/L
							Lead	500 ug/L
							Selenium	500 ug/L
					MTICPCCV2_00025	200 mL	Silver	1000 ug/L
.MTICPCCV1_00025	08/22/19	INORGANIC VENTURES, Lot N2-MEB665676			(Purchased Reagent)		Arsenic	5000 ug/L
							Barium	20000 ug/L
							Cadmium	5000 ug/L
							Chromium	20000 ug/L
							Lead	5000 ug/L
							Selenium	5000 ug/L
.MTICPCCV2_00025	08/22/19	INORGANIC VENTURES, Lot N2-MEB665677			(Purchased Reagent)		Silver	10000 ug/L
MTICPICSABW_00019	03/23/19	09/23/18	DIWATER, Lot DIWATER	1000 mL	MTICPICSAB1_00008	100 mL	Al	500000 ug/L
							Arsenic	1000 ug/L
							B	500 ug/L
							Barium	500 ug/L
							Be	500 ug/L
							Ca	500000 ug/L
							Cadmium	1000 ug/L
							Chromium	500 ug/L
							Co	500 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Cu	500 ug/L
							Fe	200000 ug/L
							K	10000 ug/L
							Lead	1000 ug/L
							Li	500 ug/L
							Mg	500000 ug/L
							Mn	500 ug/L
							Na	10000 ug/L
							Ni	1000 ug/L
							Selenium	1000 ug/L
							Sr	1500 ug/L
							Tl	1000 ug/L
							V	500 ug/L
							Zn	1000 ug/L
					MTICPICSAB2_00008	100 mL	Mo	1000 ug/L
							Sb	1000 ug/L
							Si	10000 ug/L
							Silver	1000 ug/L
							Sn	500 ug/L
							Ti	500 ug/L
.MTICPICSAB1_00008	08/28/19	INORGANIC VENTURES, Lot N2-MEB669101			(Purchased Reagent)		Al	5000000 ug/L
							Arsenic	10000 ug/L
							B	5000 ug/L
							Barium	5000 ug/L
							Be	5000 ug/L
							Ca	5000000 ug/L
							Cadmium	10000 ug/L
							Chromium	5000 ug/L
							Co	5000 ug/L
							Cu	5000 ug/L
							Fe	2000000 ug/L
							K	100000 ug/L
							Lead	10000 ug/L
							Li	5000 ug/L
							Mg	5000000 ug/L
							Mn	5000 ug/L
							Na	100000 ug/L
							Ni	10000 ug/L
							Selenium	10000 ug/L
							Sr	15000 ug/L
							Tl	10000 ug/L
							V	5000 ug/L
							Zn	10000 ug/L
.MTICPICSAB2_00008	08/28/19	INORGANIC VENTURES, Lot N2-MEB669102			(Purchased Reagent)		Mo	10000 ug/L
							Sb	10000 ug/L
							Si	100000 ug/L
							Silver	10000 ug/L
							Sn	5000 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ti	5000 ug/L
MTKMN04W_00178	11/07/20	11/07/18	DIWATER, Lot DIWATER	2.5 L	MTKMN04_00048	125 g	Potassium Permanganate	50000 mg/L
.MTKMN04_00048	08/28/23	Fisher, Lot 174580			(Purchased Reagent)		Potassium Permanganate	1 g/g
MTNONRCRA+ODD_00011	07/31/19	High-Purity Standards, Lot 1820210			(Purchased Reagent)		Al	100 ug/mL
							B	50 ug/mL
							Be	2.5 ug/mL
							Co	25 ug/mL
							Cu	12.5 ug/mL
							Fe	50 ug/mL
							Li	50 ug/mL
							Mn	25 ug/mL
							Mo	50 ug/mL
							Ni	25 ug/mL
							Sb	25 ug/mL
							Si	50 ug/mL
							Sn	100 ug/mL
							Sr	50 ug/mL
							Ti	50 ug/mL
							Tl	100 ug/mL
							V	25 ug/mL
							Zn	25 ug/mL
MTRCRA_00014	02/28/19	High Purity Standards, Lot 1804648			(Purchased Reagent)		Arsenic	500 mg/L
							Barium	5000 mg/L
							Cadmium	100 mg/L
							Chromium	500 mg/L
							Lead	500 mg/L
							Selenium	100 mg/L
							Silver	100 mg/L
MTTMHNO3_00173	11/13/20	Macron, Lot 0000200458			(Purchased Reagent)		Nitric acid	100 %
MTTRCRIC_00065	05/12/19	11/12/18	DIWATER, Lot DIWATER	1000 mL	MTTRCRI6010C_00020	50 mL	Arsenic	15 ug/L
							Barium	200 ug/L
							Cadmium	5 ug/L
							Chromium	10 ug/L
							Lead	10 ug/L
							Selenium	20 ug/L
							Silver	10 ug/L
.MTTRCRI6010C_00020	11/12/19	Inorganic Ventures, Lot N2-MEB664971			(Purchased Reagent)		Arsenic	300 ug/L
							Barium	4000 ug/L
							Cadmium	100 ug/L
							Chromium	200 ug/L
							Lead	200 ug/L
							Selenium	400 ug/L
							Silver	200 ug/L
MTTRICSAW_00043	03/14/19	10/30/18	DIWATER, Lot DIWATER	1000 mL	MTTRICSA_00016	100 mL	Al	500000 ug/L
							Ca	500000 ug/L
							Fe	200000 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Mg	500000 ug/L
.MTTRICSA_00016	03/14/19	INORGANIC VENTURES, Lot K2-MEB643109			(Purchased Reagent)		Al	5000 ug/mL
							Ca	5000 ug/mL
							Fe	2000 ug/mL
							Mg	5000 ug/mL
SG1221ICV@1.0_00025	04/19/19	10/19/18	HEXANE, Lot 3678472	10 mL	SG1221ICV@100_00008	0.1 mL	Aroclor-1221	1 ug/mL
.SG1221ICV@100_00008	10/19/19	10/19/18	HEXANE, Lot 3678472	10 mL	SG 1221 ICV_00015	1 mL	Aroclor-1221	100 ug/mL
..SG 1221 ICV_00015	09/30/23	restek, Lot a0128546			(Purchased Reagent)		Aroclor-1221	1000 ug/mL
SG1232ICV@1.0_00023	01/03/19	07/03/18	HEXANE, Lot 3678472	10 mL	SG1232ICV@100_00007	0.1 mL	Aroclor-1232	1 ug/mL
.SG1232ICV@100_00007	01/31/19	07/03/18	HEXANE, Lot 3678472	10 mL	SG 1232 ICV_00010	1 mL	Aroclor-1232	100 ug/mL
..SG 1232 ICV_00010	01/31/19	ULTRA SCIENTIFIC, Lot CG-4471			(Purchased Reagent)		Aroclor-1232	1000 ug/mL
SG1242ICV@1.0_00024	01/03/19	07/03/18	HEXANE, Lot 3678472	10 mL	SG1242ICV@100_00008	0.1 mL	Aroclor-1242	1 ug/mL
.SG1242ICV@100_00008	07/03/19	07/03/18	HEXANE, Lot 3678472	10 mL	SG 1242 ICV_00010	1 mL	Aroclor-1242	100 ug/mL
..SG 1242 ICV_00010	07/31/22	ULTRA SCIENTIFIC, Lot CR-2838			(Purchased Reagent)		Aroclor-1242	1000 ug/mL
SG1248@.05ppm_00025	02/10/19	08/10/18	HEXANE, Lot 3678472	50 mL	SG1248@10ppm_00013	0.25 mL	PCB-1248 Peak 1	0.05 ug/mL
							PCB-1248 Peak 2	0.05 ug/mL
							PCB-1248 Peak 3	0.05 ug/mL
							PCB-1248 Peak 4	0.05 ug/mL
							PCB-1248 Peak 5	0.05 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG1248@10ppm_00013	08/10/19	08/10/18	Hexane, Lot 3678472	100 mL	SG1248_00012	1 mL	PCB-1248 Peak 1	10 ug/mL
							PCB-1248 Peak 2	10 ug/mL
							PCB-1248 Peak 3	10 ug/mL
							PCB-1248 Peak 4	10 ug/mL
							PCB-1248 Peak 5	10 ug/mL
..SG1248_00012	04/30/24	Restek, Lot A0134182			(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20	Restek, Lot A0124315			(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1248@0.1PPM_00027	02/23/19	08/27/18	HEXANE, Lot 3678472	50 mL	SG1248@10ppm_00013	0.5 mL	PCB-1248 Peak 1	0.1 ug/mL
							PCB-1248 Peak 2	0.1 ug/mL
							PCB-1248 Peak 3	0.1 ug/mL
							PCB-1248 Peak 4	0.1 ug/mL
							PCB-1248 Peak 5	0.1 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG1248@10ppm_00013	08/10/19	08/10/18	Hexane, Lot 3678472	100 mL	SG1248_00012	1 mL	PCB-1248 Peak 1	10 ug/mL
							PCB-1248 Peak 2	10 ug/mL
							PCB-1248 Peak 3	10 ug/mL
							PCB-1248 Peak 4	10 ug/mL
							PCB-1248 Peak 5	10 ug/mL
..SG1248_00012	04/30/24	Restek, Lot A0134182			(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1248@0.2ppm_00024	02/10/19	08/27/18	HEXANE, Lot 3678472	50 mL	SG1248@10ppm_00013	1 mL	PCB-1248 Peak 1	0.2 ug/mL
							PCB-1248 Peak 2	0.2 ug/mL
							PCB-1248 Peak 3	0.2 ug/mL
							PCB-1248 Peak 4	0.2 ug/mL
							PCB-1248 Peak 5	0.2 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG1248@10ppm_00013	08/10/19	08/10/18	Hexane, Lot 3678472	100 mL	SG1248_00012	1 mL	PCB-1248 Peak 1	10 ug/mL
							PCB-1248 Peak 2	10 ug/mL
							PCB-1248 Peak 3	10 ug/mL
							PCB-1248 Peak 4	10 ug/mL
							PCB-1248 Peak 5	10 ug/mL
..SG1248_00012	04/30/24		Restek, Lot A0134182		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1248@0.5ppm_00036	02/10/19	08/10/18	HEXANE, Lot 3678472	100 mL	SG1248@10ppm_00013	5 mL	PCB-1248 Peak 1	0.5 ug/mL
							PCB-1248 Peak 2	0.5 ug/mL
							PCB-1248 Peak 3	0.5 ug/mL
							PCB-1248 Peak 4	0.5 ug/mL
							PCB-1248 Peak 5	0.5 ug/mL
					SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG1248@10ppm_00013	08/10/19	08/10/18	Hexane, Lot 3678472	100 mL	SG1248_00012	1 mL	PCB-1248 Peak 1	10 ug/mL
							PCB-1248 Peak 2	10 ug/mL
							PCB-1248 Peak 3	10 ug/mL
							PCB-1248 Peak 4	10 ug/mL
							PCB-1248 Peak 5	10 ug/mL
..SG1248_00012	04/30/24		Restek, Lot A0134182		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1248@0.5ppm_00037	02/23/19	10/17/18	HEXANE, Lot 3678472	100 mL	SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1248@0.5ppm_00037	02/23/19	10/17/18	HEXANE, Lot 3678472	100 mL	SG1248@10ppm_00013	5 mL	Aroclor-1248	0.5 ug/mL
							PCB-1248 Peak 1	0.5 ug/mL
							PCB-1248 Peak 2	0.5 ug/mL
							PCB-1248 Peak 3	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1248 Peak 4	0.5 ug/mL
							PCB-1248 Peak 5	0.5 ug/mL
.SG1248@10ppm_00013	08/10/19	08/10/18	Hexane, Lot 3678472	100 mL	SG1248_00012	1 mL	Aroclor-1248	10 ug/mL
							PCB-1248 Peak 1	10 ug/mL
							PCB-1248 Peak 2	10 ug/mL
							PCB-1248 Peak 3	10 ug/mL
							PCB-1248 Peak 4	10 ug/mL
							PCB-1248 Peak 5	10 ug/mL
..SG1248_00012	04/30/24		Restek, Lot A0134182		(Purchased Reagent)		Aroclor-1248	1000 ug/mL
							PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
SG1248@1.0ppm_00027	02/10/19	08/10/18	HEXANE, Lot 3678472	50 mL	SG1248@10ppm_00013	5 mL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG1248@10ppm_00013	08/10/19	08/10/18	Hexane, Lot 3678472	100 mL	SG1248_00012	1 mL	PCB-1248 Peak 1	10 ug/mL
							PCB-1248 Peak 2	10 ug/mL
							PCB-1248 Peak 3	10 ug/mL
							PCB-1248 Peak 4	10 ug/mL
							PCB-1248 Peak 5	10 ug/mL
..SG1248_00012	04/30/24		Restek, Lot A0134182		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1248@1.5ppm_00004	02/10/19	08/10/18	HEXANE, Lot 3678472	50 mL	SG1248@10ppm_00013	7.5 mL	PCB-1248 Peak 1	1.5 ug/mL
							PCB-1248 Peak 2	1.5 ug/mL
							PCB-1248 Peak 3	1.5 ug/mL
							PCB-1248 Peak 4	1.5 ug/mL
							PCB-1248 Peak 5	1.5 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG1248@10ppm_00013	08/10/19	08/10/18	Hexane, Lot 3678472	100 mL	SG1248_00012	1 mL	PCB-1248 Peak 1	10 ug/mL
							PCB-1248 Peak 2	10 ug/mL
							PCB-1248 Peak 3	10 ug/mL
							PCB-1248 Peak 4	10 ug/mL
							PCB-1248 Peak 5	10 ug/mL
..SG1248_00012	04/30/24		Restek, Lot A0134182		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1248 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1248ICV@1.0_00027	03/17/19	09/17/18	HEXANE, Lot 3678472	10 mL	SG1248ICV@100_00010	0.1 mL	Aroclor-1248	1 ug/mL
.SG1248ICV@100_00010	09/17/19	09/17/18	HEXANE, Lot 3678472	10 mL	SG 1248 ICV_00011	1 mL	Aroclor-1248	100 ug/mL
..SG 1248 ICV_00011	04/30/23		restek, Lot a0124143		(Purchased Reagent)		Aroclor-1248	1000 ug/mL
SG1254ICV@1.0_00024	04/19/19	10/19/18	HEXANE, Lot 3678472	10 mL	SG1254ICV@100_00009	0.1 mL	Aroclor-1254	1 ug/mL
.SG1254ICV@100_00009	10/19/19	10/19/18	HEXANE, Lot 3678472	10 mL	SGPCB1254_00010	1 mL	Aroclor-1254	100 ug/mL
..SGPCB1254_00010	10/31/21		ULTRA SCIENTIFIC, Lot CK-3221		(Purchased Reagent)		Aroclor-1254	1000 ug/mL
SG1254ICV@1.0_00025	05/07/19	11/07/18	HEXANE, Lot 3863007	10 mL	SG1254ICV@100_00009	0.1 mL	Aroclor-1254	1 ug/mL
.SG1254ICV@100_00009	10/19/19	10/19/18	HEXANE, Lot 3678472	10 mL	SGPCB1254_00010	1 mL	Aroclor-1254	100 ug/mL
..SGPCB1254_00010	10/31/21		ULTRA SCIENTIFIC, Lot CK-3221		(Purchased Reagent)		Aroclor-1254	1000 ug/mL
SG1660@.05PPM_00024	02/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1016/1260_00025	0.5 mL	PCB-1016 Peak 1	0.05 ug/mL
							PCB-1016 Peak 2	0.05 ug/mL
							PCB-1016 Peak 3	0.05 ug/mL
							PCB-1016 Peak 4	0.05 ug/mL
							PCB-1016 Peak 5	0.05 ug/mL
							PCB-1260 Peak 1	0.05 ug/mL
							PCB-1260 Peak 2	0.05 ug/mL
							PCB-1260 Peak 3	0.05 ug/mL
							PCB-1260 Peak 4	0.05 ug/mL
							PCB-1260 Peak 5	0.05 ug/mL
					SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
					SGPCGSURRSTK_00010	0.125 mL	DCB Decachlorobiphenyl	0.0025 ug/mL
							Tetrachloro-m-xylene	0.0025 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	PCB-1016 Peak 1	10 ug/mL
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24		Restek, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23		Restek, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660@0.2ppm_00027	02/22/19	08/22/18	HEXANE, Lot 3678472	50 mL	SG1016/1260_00025	1 mL	PCB-1016 Peak 1	0.2 ug/mL
							PCB-1016 Peak 2	0.2 ug/mL
							PCB-1016 Peak 3	0.2 ug/mL
							PCB-1016 Peak 4	0.2 ug/mL
							PCB-1016 Peak 5	0.2 ug/mL
							PCB-1260 Peak 1	0.2 ug/mL
							PCB-1260 Peak 2	0.2 ug/mL
							PCB-1260 Peak 3	0.2 ug/mL
							PCB-1260 Peak 4	0.2 ug/mL
							PCB-1260 Peak 5	0.2 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
					SGPCGSURRSTK_00010	0.25 mL	DCB Decachlorobiphenyl	0.01 ug/mL
							Tetrachloro-m-xylene	0.01 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	PCB-1016 Peak 1	10 ug/mL
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24		Restek, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23		Restek, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660@0.5PPM_00083	02/20/19	08/20/18	HEXANE, Lot 3602072	100 mL	SG1016/1260_00025	5 mL	PCB-1016 Peak 1	0.5 ug/mL
							PCB-1016 Peak 2	0.5 ug/mL
							PCB-1016 Peak 3	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1016 Peak 4	0.5 ug/mL
							PCB-1016 Peak 5	0.5 ug/mL
							PCB-1260 Peak 1	0.5 ug/mL
							PCB-1260 Peak 2	0.5 ug/mL
							PCB-1260 Peak 3	0.5 ug/mL
							PCB-1260 Peak 4	0.5 ug/mL
							PCB-1260 Peak 5	0.5 ug/mL
					SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
					SGPCGSURRSTK_00010	1.25 mL	DCB Decachlorobiphenyl	0.025 ug/mL
							Tetrachloro-m-xylene	0.025 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	PCB-1016 Peak 1	10 ug/mL
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24		Restek, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23		Restek, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660@0.5PPM_00084	02/23/19	09/12/18	HEXANE, Lot 3678472	100 mL	SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1660@0.5PPM_00084	02/23/19	09/12/18	HEXANE, Lot 3678472	100 mL	SG1016/1260_00025	5 mL	Aroclor-1016	0.5 ug/mL
							Aroclor-1260	0.5 ug/mL
							PCB-1016 Peak 1	0.5 ug/mL
							PCB-1016 Peak 2	0.5 ug/mL
							PCB-1016 Peak 3	0.5 ug/mL
							PCB-1016 Peak 4	0.5 ug/mL
							PCB-1016 Peak 5	0.5 ug/mL
							PCB-1260 Peak 1	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260 Peak 2	0.5 ug/mL
							PCB-1260 Peak 3	0.5 ug/mL
							PCB-1260 Peak 4	0.5 ug/mL
							PCB-1260 Peak 5	0.5 ug/mL
					SGPCGSURRSTK_00010	1.25 mL	DCB Decachlorobiphenyl	0.025 ug/mL
							Tetrachloro-m-xylene	0.025 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	Aroclor-1016	10 ug/mL
							Aroclor-1260	10 ug/mL
							PCB-1016 Peak 1	10 ug/mL
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24	Restek, Lot A0134815			(Purchased Reagent)		Aroclor-1016	1000 ug/mL
							Aroclor-1260	1000 ug/mL
							PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23	Restek, Lot A0130424			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660@0.5PPM_00085	02/23/19	11/02/18	HEXANE, Lot 3863007	100 mL	SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20	Restek, Lot A0124315			(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1660@0.5PPM_00085	02/23/19	11/02/18	HEXANE, Lot 3863007	100 mL	SG1016/1260_00025	5 mL	1260 Res 1	0.5 ug/mL
							1260 Res 2	0.5 ug/mL
							1260 Res 3	0.5 ug/mL
							Aroclor-1016	0.5 ug/mL
							Aroclor-1260	0.5 ug/mL
							PCB-1016 Peak 1	0.5 ug/mL
							PCB-1016 Peak 2	0.5 ug/mL
							PCB-1016 Peak 3	0.5 ug/mL
							PCB-1016 Peak 4	0.5 ug/mL
							PCB-1016 Peak 5	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260 Peak 1	0.5 ug/mL
							PCB-1260 Peak 2	0.5 ug/mL
							PCB-1260 Peak 3	0.5 ug/mL
							PCB-1260 Peak 4	0.5 ug/mL
							PCB-1260 Peak 5	0.5 ug/mL
					SGPCGSURRSTK_00010	1.25 mL	DCB Decachlorobiphenyl	0.025 ug/mL
							Tetrachloro-m-xylene	0.025 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	1260 Res 1	10 ug/mL
							1260 Res 2	10 ug/mL
							1260 Res 3	10 ug/mL
							Aroclor-1016	10 ug/mL
							Aroclor-1260	10 ug/mL
							PCB-1016 Peak 1	10 ug/mL
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24	Restek, Lot A0134815			(Purchased Reagent)		1260 Res 1	1000 ug/mL
							1260 Res 2	1000 ug/mL
							1260 Res 3	1000 ug/mL
							Aroclor-1016	1000 ug/mL
							Aroclor-1260	1000 ug/mL
							PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23	Restek, Lot A0130424			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660@1.0PPM_00029	02/22/19	08/22/18	HEXANE, Lot 3678472	50 mL	SG1016/1260_00025	5 mL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
					SGPCGSURRSTK_00010	1.25 mL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	PCB-1016 Peak 1	10 ug/mL
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24	Restek, Lot A0134815			(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20	Restek, Lot A0124315			(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23	Restek, Lot A0130424			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660@1.5PPM_00005	02/22/19	08/22/18	HEXANE, Lot 3678472	50 mL	SG1016/1260_00025	7.5 mL	PCB-1016 Peak 1	1.5 ug/mL
							PCB-1016 Peak 2	1.5 ug/mL
							PCB-1016 Peak 3	1.5 ug/mL
							PCB-1016 Peak 4	1.5 ug/mL
							PCB-1016 Peak 5	1.5 ug/mL
							PCB-1260 Peak 1	1.5 ug/mL
							PCB-1260 Peak 2	1.5 ug/mL
							PCB-1260 Peak 3	1.5 ug/mL
							PCB-1260 Peak 4	1.5 ug/mL
							PCB-1260 Peak 5	1.5 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
					SGPCGSURRSTK_00010	2.5 mL	DCB Decachlorobiphenyl	0.1 ug/mL
							Tetrachloro-m-xylene	0.1 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	PCB-1016 Peak 1	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24		Restek, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23		Restek, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660ICV@1.0_00037	04/19/19	10/19/18	HEXANE, Lot 3678472	10 mL	SG1660ICV@100_00016	0.1 mL	Aroclor-1016	1 ug/mL
							Aroclor-1260	1 ug/mL
					SGPCGSURRSTK_00010	0.25 mL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
.SG1660ICV@100_00016	10/18/19	10/18/18	HEXANE, Lot 3678472	10 mL	SG 1660 ICV_00017	1 mL	Aroclor-1016	100 ug/mL
							Aroclor-1260	100 ug/mL
..SG 1660 ICV_00017	03/31/24		restek, Lot a0133256		(Purchased Reagent)		Aroclor-1016	1000 ug/mL
							Aroclor-1260	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23		Restek, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660STD@0.1_00024	02/22/19	08/22/18	HEXANE, Lot 3678472	50 mL	SG1016/1260_00025	0.5 mL	PCB-1016 Peak 1	0.1 ug/mL
							PCB-1016 Peak 2	0.1 ug/mL
							PCB-1016 Peak 3	0.1 ug/mL
							PCB-1016 Peak 4	0.1 ug/mL
							PCB-1016 Peak 5	0.1 ug/mL
							PCB-1260 Peak 1	0.1 ug/mL
							PCB-1260 Peak 2	0.1 ug/mL
							PCB-1260 Peak 3	0.1 ug/mL
							PCB-1260 Peak 4	0.1 ug/mL
							PCB-1260 Peak 5	0.1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
					SGPCGSURRSTK_00010	0.125 mL	DCB Decachlorobiphenyl	0.005 ug/mL
							Tetrachloro-m-xylene	0.005 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	PCB-1016 Peak 1	10 ug/mL
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24	Restek, Lot A0134815			(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20	Restek, Lot A0124315			(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23	Restek, Lot A0130424			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG2154@0.05PP_00020	02/23/19	08/24/18	HEXANE, Lot 3678472	50 mL	SG2154@10ppm_00014	0.25 mL	PCB-1221 Peak 1	0.05 ug/mL
							PCB-1221 Peak 2	0.05 ug/mL
							PCB-1221 Peak 3	0.05 ug/mL
							PCB-1254 Peak 1	0.05 ug/mL
							PCB-1254 Peak 2	0.05 ug/mL
							PCB-1254 Peak 3	0.05 ug/mL
							PCB-1254 Peak 4	0.05 ug/mL
							PCB-1254 Peak 5	0.05 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG2154@10ppm_00014	08/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1221/1254_00007	1 mL	PCB-1221 Peak 1	10 ug/mL
							PCB-1221 Peak 2	10 ug/mL
							PCB-1221 Peak 3	10 ug/mL
							PCB-1254 Peak 1	10 ug/mL
							PCB-1254 Peak 2	10 ug/mL
							PCB-1254 Peak 3	10 ug/mL
							PCB-1254 Peak 4	10 ug/mL
							PCB-1254 Peak 5	10 ug/mL
..SG1221/1254_00007	01/31/24	restek, Lot A0131802			(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG2154@0.2PPM_00020	02/23/19	08/24/18	HEXANE, Lot 3678472	50 mL	SG2154@10ppm_00014	1 mL	PCB-1221 Peak 1	0.2 ug/mL
							PCB-1221 Peak 2	0.2 ug/mL
							PCB-1221 Peak 3	0.2 ug/mL
							PCB-1254 Peak 1	0.2 ug/mL
							PCB-1254 Peak 2	0.2 ug/mL
							PCB-1254 Peak 3	0.2 ug/mL
							PCB-1254 Peak 4	0.2 ug/mL
							PCB-1254 Peak 5	0.2 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG2154@10ppm_00014	08/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1221/1254_00007	1 mL	PCB-1221 Peak 1	10 ug/mL
							PCB-1221 Peak 2	10 ug/mL
							PCB-1221 Peak 3	10 ug/mL
							PCB-1254 Peak 1	10 ug/mL
							PCB-1254 Peak 2	10 ug/mL
							PCB-1254 Peak 3	10 ug/mL
							PCB-1254 Peak 4	10 ug/mL
							PCB-1254 Peak 5	10 ug/mL
..SG1221/1254_00007	01/31/24		restek, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG2154@0.5PPM_00040	02/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG2154@10ppm_00014	5 mL	PCB-1221 Peak 1	0.5 ug/mL
							PCB-1221 Peak 2	0.5 ug/mL
							PCB-1221 Peak 3	0.5 ug/mL
							PCB-1254 Peak 1	0.5 ug/mL
							PCB-1254 Peak 2	0.5 ug/mL
							PCB-1254 Peak 3	0.5 ug/mL
							PCB-1254 Peak 4	0.5 ug/mL
							PCB-1254 Peak 5	0.5 ug/mL
					SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG2154@10ppm_00014	08/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1221/1254_00007	1 mL	PCB-1221 Peak 1	10 ug/mL
							PCB-1221 Peak 2	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1221 Peak 3	10 ug/mL
							PCB-1254 Peak 1	10 ug/mL
							PCB-1254 Peak 2	10 ug/mL
							PCB-1254 Peak 3	10 ug/mL
							PCB-1254 Peak 4	10 ug/mL
							PCB-1254 Peak 5	10 ug/mL
..SG1221/1254_00007	01/31/24		restek, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG2154@0.5PPM_00041	02/23/19	10/08/18	HEXANE, Lot 3678472	100 mL	SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG2154@0.5PPM_00041	02/23/19	10/08/18	HEXANE, Lot 3678472	100 mL	SG2154@10ppm_00014	5 mL	Aroclor-1221	0.5 ug/mL
							Aroclor-1254	0.5 ug/mL
							PCB-1221 Peak 1	0.5 ug/mL
							PCB-1221 Peak 2	0.5 ug/mL
							PCB-1221 Peak 3	0.5 ug/mL
							PCB-1254 Peak 1	0.5 ug/mL
							PCB-1254 Peak 2	0.5 ug/mL
							PCB-1254 Peak 3	0.5 ug/mL
							PCB-1254 Peak 4	0.5 ug/mL
							PCB-1254 Peak 5	0.5 ug/mL
.SG2154@10ppm_00014	08/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1221/1254_00007	1 mL	Aroclor-1221	10 ug/mL
							Aroclor-1254	10 ug/mL
							PCB-1221 Peak 1	10 ug/mL
							PCB-1221 Peak 2	10 ug/mL
							PCB-1221 Peak 3	10 ug/mL
							PCB-1254 Peak 1	10 ug/mL
							PCB-1254 Peak 2	10 ug/mL
							PCB-1254 Peak 3	10 ug/mL
							PCB-1254 Peak 4	10 ug/mL
							PCB-1254 Peak 5	10 ug/mL
..SG1221/1254_00007	01/31/24		restek, Lot A0131802		(Purchased Reagent)		Aroclor-1221	1000 ug/mL
							Aroclor-1254	1000 ug/mL
							PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
SG2154@1.0PPM_00028	02/23/19	08/24/18	HEXANE, Lot 3678472	50 mL	SG2154@10ppm_00014	5 mL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG2154@10ppm_00014	08/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1221/1254_00007	1 mL	PCB-1221 Peak 1	10 ug/mL
							PCB-1221 Peak 2	10 ug/mL
							PCB-1221 Peak 3	10 ug/mL
							PCB-1254 Peak 1	10 ug/mL
							PCB-1254 Peak 2	10 ug/mL
							PCB-1254 Peak 3	10 ug/mL
							PCB-1254 Peak 4	10 ug/mL
							PCB-1254 Peak 5	10 ug/mL
..SG1221/1254_00007	01/31/24		restek, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG2154@1.5PPM_00004	02/23/19	08/24/18	HEXANE, Lot 3678472	50 mL	SG2154@10ppm_00014	7.5 mL	PCB-1221 Peak 1	1.5 ug/mL
							PCB-1221 Peak 2	1.5 ug/mL
							PCB-1221 Peak 3	1.5 ug/mL
							PCB-1254 Peak 1	1.5 ug/mL
							PCB-1254 Peak 2	1.5 ug/mL
							PCB-1254 Peak 3	1.5 ug/mL
							PCB-1254 Peak 4	1.5 ug/mL
							PCB-1254 Peak 5	1.5 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG2154@10ppm_00014	08/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1221/1254_00007	1 mL	PCB-1221 Peak 1	10 ug/mL
							PCB-1221 Peak 2	10 ug/mL
							PCB-1221 Peak 3	10 ug/mL
							PCB-1254 Peak 1	10 ug/mL
							PCB-1254 Peak 2	10 ug/mL
							PCB-1254 Peak 3	10 ug/mL
							PCB-1254 Peak 4	10 ug/mL
							PCB-1254 Peak 5	10 ug/mL
..SG1221/1254_00007	01/31/24		restek, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG2154@O.1PPM_00021	02/23/19	08/24/18	HEXANE, Lot 3678472	50 mL	SG2154@10ppm_00014	0.5 mL	PCB-1221 Peak 1	0.1 ug/mL
							PCB-1221 Peak 2	0.1 ug/mL
							PCB-1221 Peak 3	0.1 ug/mL
							PCB-1254 Peak 1	0.1 ug/mL
							PCB-1254 Peak 2	0.1 ug/mL
							PCB-1254 Peak 3	0.1 ug/mL
							PCB-1254 Peak 4	0.1 ug/mL
							PCB-1254 Peak 5	0.1 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG2154@10ppm_00014	08/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1221/1254_00007	1 mL	PCB-1221 Peak 1	10 ug/mL
							PCB-1221 Peak 2	10 ug/mL
							PCB-1221 Peak 3	10 ug/mL
							PCB-1254 Peak 1	10 ug/mL
							PCB-1254 Peak 2	10 ug/mL
							PCB-1254 Peak 3	10 ug/mL
							PCB-1254 Peak 4	10 ug/mL
							PCB-1254 Peak 5	10 ug/mL
..SG1221/1254_00007	01/31/24		restek, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG3262@.05PPM_00013	02/09/19	08/09/18	HEXANE, Lot 3678472	50 mL	SG32/6210PPM_00010	0.25 mL	PCB-1232 Peak 1	50 ug/L
							PCB-1232 Peak 2	50 ug/L
							PCB-1232 Peak 3	50 ug/L
							PCB-1232 Peak 4	50 ug/L
							PCB-1232 Peak 5	50 ug/L
							PCB-1262 Peak 1	50 ug/L
							PCB-1262 Peak 2	50 ug/L
							PCB-1262 Peak 3	50 ug/L
							PCB-1262 Peak 4	50 ug/L
							PCB-1262 Peak 5	50 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.SG32/6210PPM_00010	08/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/62 STK_00005	1 mL	PCB-1232 Peak 1	10 ug/mL
							PCB-1232 Peak 2	10 ug/mL
							PCB-1232 Peak 3	10 ug/mL
							PCB-1232 Peak 4	10 ug/mL
							PCB-1232 Peak 5	10 ug/mL
							PCB-1262 Peak 1	10 ug/mL
							PCB-1262 Peak 2	10 ug/mL
							PCB-1262 Peak 3	10 ug/mL
							PCB-1262 Peak 4	10 ug/mL
							PCB-1262 Peak 5	10 ug/mL
..SG32/62 STK_00005	01/31/24		Restelk, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG3262@.2PPM_00016	02/09/19	08/09/18	HEXANE, Lot 3678472	50 mL	SG32/6210PPM_00010	1 mL	PCB-1232 Peak 1	200 ug/L
							PCB-1232 Peak 2	200 ug/L
							PCB-1232 Peak 3	200 ug/L
							PCB-1232 Peak 4	200 ug/L
							PCB-1232 Peak 5	200 ug/L
							PCB-1262 Peak 1	200 ug/L
							PCB-1262 Peak 2	200 ug/L
							PCB-1262 Peak 3	200 ug/L
							PCB-1262 Peak 4	200 ug/L
							PCB-1262 Peak 5	200 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG32/6210PPM_00010	08/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/62 STK_00005	1 mL	PCB-1232 Peak 1	10 ug/mL
							PCB-1232 Peak 2	10 ug/mL
							PCB-1232 Peak 3	10 ug/mL
							PCB-1232 Peak 4	10 ug/mL
							PCB-1232 Peak 5	10 ug/mL
							PCB-1262 Peak 1	10 ug/mL
							PCB-1262 Peak 2	10 ug/mL
							PCB-1262 Peak 3	10 ug/mL
							PCB-1262 Peak 4	10 ug/mL
							PCB-1262 Peak 5	10 ug/mL
..SG32/62 STK_00005	01/31/24		Restelk, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG3262@0.1PPM_00014	02/09/19	08/09/18	HEXANE, Lot 3678472	50 mL	SG32/6210PPM_00010	0.5 mL	PCB-1232 Peak 1	100 ug/L
							PCB-1232 Peak 2	100 ug/L
							PCB-1232 Peak 3	100 ug/L
							PCB-1232 Peak 4	100 ug/L
							PCB-1232 Peak 5	100 ug/L
							PCB-1262 Peak 1	100 ug/L
							PCB-1262 Peak 2	100 ug/L
							PCB-1262 Peak 3	100 ug/L
							PCB-1262 Peak 4	100 ug/L
							PCB-1262 Peak 5	100 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG32/6210PPM_00010	08/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/62 STK_00005	1 mL	PCB-1232 Peak 1	10 ug/mL
							PCB-1232 Peak 2	10 ug/mL
							PCB-1232 Peak 3	10 ug/mL
							PCB-1232 Peak 4	10 ug/mL
							PCB-1232 Peak 5	10 ug/mL
							PCB-1262 Peak 1	10 ug/mL
							PCB-1262 Peak 2	10 ug/mL
							PCB-1262 Peak 3	10 ug/mL
							PCB-1262 Peak 4	10 ug/mL
							PCB-1262 Peak 5	10 ug/mL
..SG32/62 STK_00005	01/31/24		Restelk, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG3262@0.5PPM_00030	02/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/6210PPM_00010	5 mL	PCB-1232 Peak 1	500 ug/L
							PCB-1232 Peak 2	500 ug/L
							PCB-1232 Peak 3	500 ug/L
							PCB-1232 Peak 4	500 ug/L
							PCB-1232 Peak 5	500 ug/L
							PCB-1262 Peak 1	500 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1262 Peak 2	500 ug/L
							PCB-1262 Peak 3	500 ug/L
							PCB-1262 Peak 4	500 ug/L
							PCB-1262 Peak 5	500 ug/L
					SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG32/6210PPM_00010	08/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/62 STK_00005	1 mL	PCB-1232 Peak 1	10 ug/mL
							PCB-1232 Peak 2	10 ug/mL
							PCB-1232 Peak 3	10 ug/mL
							PCB-1232 Peak 4	10 ug/mL
							PCB-1232 Peak 5	10 ug/mL
							PCB-1262 Peak 1	10 ug/mL
							PCB-1262 Peak 2	10 ug/mL
							PCB-1262 Peak 3	10 ug/mL
							PCB-1262 Peak 4	10 ug/mL
							PCB-1262 Peak 5	10 ug/mL
..SG32/62 STK_00005	01/31/24		Restelk, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG3262@0.5PPM_00031	02/23/19	10/09/18	HEXANE, Lot 3678472	100 mL	SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG3262@0.5PPM_00031	02/23/19	10/09/18	HEXANE, Lot 3678472	100 mL	SG32/6210PPM_00010	5 mL	Aroclor-1232	500 ug/L
							PCB-1232 Peak 1	500 ug/L
							PCB-1232 Peak 2	500 ug/L
							PCB-1232 Peak 3	500 ug/L
							PCB-1232 Peak 4	500 ug/L
							PCB-1232 Peak 5	500 ug/L
							PCB-1262	500 ug/L
							PCB-1262 Peak 1	500 ug/L
							PCB-1262 Peak 2	500 ug/L
							PCB-1262 Peak 3	500 ug/L
							PCB-1262 Peak 4	500 ug/L
							PCB-1262 Peak 5	500 ug/L
.SG32/6210PPM_00010	08/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/62 STK_00005	1 mL	Aroclor-1232	10 ug/mL
							PCB-1232 Peak 1	10 ug/mL
							PCB-1232 Peak 2	10 ug/mL
							PCB-1232 Peak 3	10 ug/mL
							PCB-1232 Peak 4	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1232 Peak 5	10 ug/mL
							PCB-1262	10 ug/mL
							PCB-1262 Peak 1	10 ug/mL
							PCB-1262 Peak 2	10 ug/mL
							PCB-1262 Peak 3	10 ug/mL
							PCB-1262 Peak 4	10 ug/mL
							PCB-1262 Peak 5	10 ug/mL
..SG32/62 STK_00005	01/31/24		Restelk, Lot A0132023		(Purchased Reagent)		Aroclor-1232	1000 ug/mL
							PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
SG3262@1.0PPM_00019	02/09/19	08/09/18	HEXANE, Lot 3678472	50 mL	SG32/6210PPM_00010	5 mL	PCB-1232 Peak 1	1000 ug/L
							PCB-1232 Peak 2	1000 ug/L
							PCB-1232 Peak 3	1000 ug/L
							PCB-1232 Peak 4	1000 ug/L
							PCB-1232 Peak 5	1000 ug/L
							PCB-1262 Peak 1	1000 ug/L
							PCB-1262 Peak 2	1000 ug/L
							PCB-1262 Peak 3	1000 ug/L
							PCB-1262 Peak 4	1000 ug/L
							PCB-1262 Peak 5	1000 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG32/6210PPM_00010	08/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/62 STK_00005	1 mL	PCB-1232 Peak 1	10 ug/mL
							PCB-1232 Peak 2	10 ug/mL
							PCB-1232 Peak 3	10 ug/mL
							PCB-1232 Peak 4	10 ug/mL
							PCB-1232 Peak 5	10 ug/mL
							PCB-1262 Peak 1	10 ug/mL
							PCB-1262 Peak 2	10 ug/mL
							PCB-1262 Peak 3	10 ug/mL
							PCB-1262 Peak 4	10 ug/mL
							PCB-1262 Peak 5	10 ug/mL
..SG32/62 STK_00005	01/31/24		Restelk, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG3262@1.5PPM_00004	02/09/19	08/09/18	HEXANE, Lot 3678472	50 mL	SG32/6210PPM_00010	7.5 mL	PCB-1232 Peak 1	1500 ug/L
							PCB-1232 Peak 2	1500 ug/L
							PCB-1232 Peak 3	1500 ug/L
							PCB-1232 Peak 4	1500 ug/L
							PCB-1232 Peak 5	1500 ug/L
							PCB-1262 Peak 1	1500 ug/L
							PCB-1262 Peak 2	1500 ug/L
							PCB-1262 Peak 3	1500 ug/L
							PCB-1262 Peak 4	1500 ug/L
							PCB-1262 Peak 5	1500 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG32/6210PPM_00010	08/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/62 STK_00005	1 mL	PCB-1232 Peak 1	10 ug/mL
							PCB-1232 Peak 2	10 ug/mL
							PCB-1232 Peak 3	10 ug/mL
							PCB-1232 Peak 4	10 ug/mL
							PCB-1232 Peak 5	10 ug/mL
							PCB-1262 Peak 1	10 ug/mL
							PCB-1262 Peak 2	10 ug/mL
							PCB-1262 Peak 3	10 ug/mL
							PCB-1262 Peak 4	10 ug/mL
							PCB-1262 Peak 5	10 ug/mL
..SG32/62 STK_00005	01/31/24		Restelk, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG42/68@1.0PP_00023	02/14/19	08/14/18	HEXANE, Lot 3678472	50 mL	SG42/6810PPM_00009	5 mL	PCB-1242 Peak 1	1000 ug/L
							PCB-1242 Peak 2	1000 ug/L
							PCB-1242 Peak 3	1000 ug/L
							PCB-1242 Peak 4	1000 ug/L
							PCB-1242 Peak 5	1000 ug/L
							PCB-1268 Peak 1	1000 ug/L
							PCB-1268 Peak 2	1000 ug/L
							PCB-1268 Peak 3	1000 ug/L
							PCB-1268 Peak 4	1000 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1268 Peak 5	1000 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	PCB-1242 Peak 1	10000 ug/L
							PCB-1242 Peak 2	10000 ug/L
							PCB-1242 Peak 3	10000 ug/L
							PCB-1242 Peak 4	10000 ug/L
							PCB-1242 Peak 5	10000 ug/L
							PCB-1268 Peak 1	10000 ug/L
							PCB-1268 Peak 2	10000 ug/L
							PCB-1268 Peak 3	10000 ug/L
							PCB-1268 Peak 4	10000 ug/L
							PCB-1268 Peak 5	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG4268@.05PPM_00014	02/14/19	08/14/18	HEXANE, Lot 3678472	50 mL	SG42/6810PPM_00009	0.25 mL	PCB-1242 Peak 1	50 ug/L
							PCB-1242 Peak 2	50 ug/L
							PCB-1242 Peak 3	50 ug/L
							PCB-1242 Peak 4	50 ug/L
							PCB-1242 Peak 5	50 ug/L
							PCB-1268 Peak 1	50 ug/L
							PCB-1268 Peak 2	50 ug/L
							PCB-1268 Peak 3	50 ug/L
							PCB-1268 Peak 4	50 ug/L
							PCB-1268 Peak 5	50 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	PCB-1242 Peak 1	10000 ug/L
							PCB-1242 Peak 2	10000 ug/L
							PCB-1242 Peak 3	10000 ug/L
							PCB-1242 Peak 4	10000 ug/L
							PCB-1242 Peak 5	10000 ug/L
							PCB-1268 Peak 1	10000 ug/L
							PCB-1268 Peak 2	10000 ug/L
							PCB-1268 Peak 3	10000 ug/L
							PCB-1268 Peak 4	10000 ug/L
							PCB-1268 Peak 5	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG4268@.1PPM_00014	02/14/19	08/14/18	HEXANE, Lot 3678472	50 mL	SG42/6810PPM_00009	0.5 mL	PCB-1242 Peak 1	100 ug/L
							PCB-1242 Peak 2	100 ug/L
							PCB-1242 Peak 3	100 ug/L
							PCB-1242 Peak 4	100 ug/L
							PCB-1242 Peak 5	100 ug/L
							PCB-1268 Peak 1	100 ug/L
							PCB-1268 Peak 2	100 ug/L
							PCB-1268 Peak 3	100 ug/L
							PCB-1268 Peak 4	100 ug/L
							PCB-1268 Peak 5	100 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	PCB-1242 Peak 1	10000 ug/L
							PCB-1242 Peak 2	10000 ug/L
							PCB-1242 Peak 3	10000 ug/L
							PCB-1242 Peak 4	10000 ug/L
							PCB-1242 Peak 5	10000 ug/L
							PCB-1268 Peak 1	10000 ug/L
							PCB-1268 Peak 2	10000 ug/L
							PCB-1268 Peak 3	10000 ug/L
							PCB-1268 Peak 4	10000 ug/L
							PCB-1268 Peak 5	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG4268@.2PPM_00014	02/14/19	08/14/18	HEXANE, Lot 3678472	50 mL	SG42/6810PPM_00009	1 mL	PCB-1242 Peak 1	200 ug/L
							PCB-1242 Peak 2	200 ug/L
							PCB-1242 Peak 3	200 ug/L
							PCB-1242 Peak 4	200 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1242 Peak 5	200 ug/L
							PCB-1268 Peak 1	200 ug/L
							PCB-1268 Peak 2	200 ug/L
							PCB-1268 Peak 3	200 ug/L
							PCB-1268 Peak 4	200 ug/L
							PCB-1268 Peak 5	200 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	PCB-1242 Peak 1	10000 ug/L
							PCB-1242 Peak 2	10000 ug/L
							PCB-1242 Peak 3	10000 ug/L
							PCB-1242 Peak 4	10000 ug/L
							PCB-1242 Peak 5	10000 ug/L
							PCB-1268 Peak 1	10000 ug/L
							PCB-1268 Peak 2	10000 ug/L
							PCB-1268 Peak 3	10000 ug/L
							PCB-1268 Peak 4	10000 ug/L
							PCB-1268 Peak 5	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG4268@0.5PPM_00030	02/14/19	08/14/18	HEXANE, Lot 3678472	100 mL	SG42/6810PPM_00009	5 mL	PCB-1242 Peak 1	500 ug/L
							PCB-1242 Peak 2	500 ug/L
							PCB-1242 Peak 3	500 ug/L
							PCB-1242 Peak 4	500 ug/L
							PCB-1242 Peak 5	500 ug/L
							PCB-1268 Peak 1	500 ug/L
							PCB-1268 Peak 2	500 ug/L
							PCB-1268 Peak 3	500 ug/L
							PCB-1268 Peak 4	500 ug/L
							PCB-1268 Peak 5	500 ug/L
					SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	PCB-1242 Peak 1	10000 ug/L
							PCB-1242 Peak 2	10000 ug/L
							PCB-1242 Peak 3	10000 ug/L
							PCB-1242 Peak 4	10000 ug/L
							PCB-1242 Peak 5	10000 ug/L
							PCB-1268 Peak 1	10000 ug/L
							PCB-1268 Peak 2	10000 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1268 Peak 3	10000 ug/L
							PCB-1268 Peak 4	10000 ug/L
							PCB-1268 Peak 5	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG4268@0.5PPM_00030	02/14/19	08/14/18	HEXANE, Lot 3678472	100 mL	SG42/6810PPM_00009	5 mL	Aroclor-1242	500 ug/L
							PCB-1268	500 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	Aroclor-1242	10000 ug/L
							PCB-1268	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		Aroclor-1242	1000 ug/mL
							PCB-1268	1000 ug/mL
SG4268@0.5PPM_00031	02/23/19	11/02/18	HEXANE, Lot 3863007	100 mL	SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG4268@0.5PPM_00031	02/23/19	11/02/18	HEXANE, Lot 3863007	100 mL	SG42/6810PPM_00009	5 mL	Aroclor-1242	500 ug/L
							PCB-1242 Peak 1	500 ug/L
							PCB-1242 Peak 2	500 ug/L
							PCB-1242 Peak 3	500 ug/L
							PCB-1242 Peak 4	500 ug/L
							PCB-1242 Peak 5	500 ug/L
							PCB-1268	500 ug/L
							PCB-1268 Peak 1	500 ug/L
							PCB-1268 Peak 2	500 ug/L
							PCB-1268 Peak 3	500 ug/L
							PCB-1268 Peak 4	500 ug/L
							PCB-1268 Peak 5	500 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	Aroclor-1242	10000 ug/L
							PCB-1242 Peak 1	10000 ug/L
							PCB-1242 Peak 2	10000 ug/L
							PCB-1242 Peak 3	10000 ug/L
							PCB-1242 Peak 4	10000 ug/L
							PCB-1242 Peak 5	10000 ug/L
							PCB-1268	10000 ug/L
							PCB-1268 Peak 1	10000 ug/L
							PCB-1268 Peak 2	10000 ug/L
							PCB-1268 Peak 3	10000 ug/L
							PCB-1268 Peak 4	10000 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1268 Peak 5	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		Aroclor-1242	1000 ug/mL
							PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
SG4268@1.5PPM_00005	02/14/19	08/14/18	HEXANE, Lot 3678472	50 mL	SG42/6810PPM_00009	7.5 mL	PCB-1242 Peak 1	1500 ug/L
							PCB-1242 Peak 2	1500 ug/L
							PCB-1242 Peak 3	1500 ug/L
							PCB-1242 Peak 4	1500 ug/L
							PCB-1242 Peak 5	1500 ug/L
							PCB-1268 Peak 1	1500 ug/L
							PCB-1268 Peak 2	1500 ug/L
							PCB-1268 Peak 3	1500 ug/L
							PCB-1268 Peak 4	1500 ug/L
							PCB-1268 Peak 5	1500 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	PCB-1242 Peak 1	10000 ug/L
							PCB-1242 Peak 2	10000 ug/L
							PCB-1242 Peak 3	10000 ug/L
							PCB-1242 Peak 4	10000 ug/L
							PCB-1242 Peak 5	10000 ug/L
							PCB-1268 Peak 1	10000 ug/L
							PCB-1268 Peak 2	10000 ug/L
							PCB-1268 Peak 3	10000 ug/L
							PCB-1268 Peak 4	10000 ug/L
							PCB-1268 Peak 5	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SGPCBISTD_00015	12/19/18	06/19/18	HEXANE, Lot 3602072	100 mL	SGPCBIS STOCk_00010	10 mL	1-Bromo-2-nitrobenzene	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.SGPCBIS STOCk_00010	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SGPCBISTD_00016	02/23/19	08/23/18	HEXANE, Lot 3678472	100 mL	SGPCBIS STOCk_00011	10 mL	1-Bromo-2-nitrobenzene	1 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
VM250SS_00050	01/04/19	10/04/18	MEOH, Lot +200920000196628JJ	50 mL	VM567650_00029	5 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.VM567650_00029	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
vm50is_stk_A_00001	11/14/18	05/14/18	MEOH, Lot 191720	50 mL	vm30241_00007	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
.vm30241_00007	01/31/23		restek, Lot A0134242		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
vm50is_stk_A_00002	05/15/19	11/15/18	MEOH, Lot 191720	50 mL	vm30241_00007	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
.vm30241_00007	01/31/23		restek, Lot A0134242		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
							Fluorobenzene	2500 ug/mL
vm50ss_00329	07/27/18	07/20/18	MEOH, Lot na	4 mL	vm50ss_stk_00078	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.vm50ss_stk_00078	12/20/18	06/20/18	MEOH, Lot 178178	200 mL	VM567650_00029	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
..VM567650_00029	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
vm50ss_00333	08/29/18	08/22/18	MEOH, Lot na	4 mL	vm50ss_stk_00078	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.vm50ss_stk_00078	12/20/18	06/20/18	MEOH, Lot 178178	200 mL	VM567650_00029	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..VM567650_00029	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
vm50ss_00343	11/23/18	11/16/18	MEOH, Lot na	4 mL	vm50ss_stk_00079	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.vm50ss_stk_00079	05/07/19	11/07/18	MEOH, Lot 178178	200 mL	VM567650_00029	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
..VM567650_00029	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
vm50ss_stk_00077	09/27/18	03/27/18	MEOH, Lot 0000136118	200 mL	VM567650_00027	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.VM567650_00027	07/31/21		Restek, Lot A0120212		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
vm50ss_stk_00078	12/20/18	06/20/18	MEOH, Lot 178178	200 mL	VM567650_00029	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.VM567650_00029	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
VM568718_00013	12/31/22		restek, Lot A0133525		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
vmarolistdw_00256	07/26/18	07/19/18	MEOH, Lot na	4 mL	VMACROLSTD_00062	4 mL	Acrolein	250 ug/mL
.VMACROLSTD_00062	08/31/18	06/01/18	MEOH, Lot 178178	100 mL	VM568720_00028	1.25 mL	Acrolein	250 ug/mL
..VM568720_00028	08/31/18		restek, Lot A0135693		(Purchased Reagent)		Acrolein	20000 ug/mL
vmarolistdw_00260	08/27/18	08/20/18	MEOH, Lot na	4 mL	VMACROLSTD_00062	4 mL	Acrolein	250 ug/mL
.VMACROLSTD_00062	08/31/18	06/01/18	MEOH, Lot 178178	100 mL	VM568720_00028	1.25 mL	Acrolein	250 ug/mL
..VM568720_00028	08/31/18		restek, Lot A0135693		(Purchased Reagent)		Acrolein	20000 ug/mL
VMAROLISTDW_00273	11/23/18	11/16/18	MEOH, Lot na	4 mL	VMACROLSTD_00065	4 mL	Acrolein	250 ug/mL
.VMACROLSTD_00065	11/30/18	10/31/18	MEOH, Lot 0000196628	20 mL	VM568720_00030	0.25 mL	Acrolein	250 ug/mL
..VM568720_00030	01/31/19		restek, Lot A0139537		(Purchased Reagent)		Acrolein	20000 ug/mL
vmbfb_00020							1,2-Dichloroethene, Total	

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
					vm30026_00002	1.25 mL	BFB	50 ug/mL
.vm30026_00002	07/31/21		restek, Lot A0120567		(Purchased Reagent)		BFB	2000 ug/mL
VMFASA9W_00194	07/26/18	07/19/18	MEOH, Lot NA	4 mL	VMFASA9_00013	4 mL	1,2,3-Trimethylbenzene	50 ug/mL
							Diisopropyl ether	50 ug/mL
							Ethyl t-butyl ether	50 ug/mL
							Tert-amyl methyl ether	50 ug/mL
.VMFASA9_00013	09/30/18	05/01/18	MEOH, Lot 0000177891	100 mL	VM570808S_00004	2 mL	1,2,3-Trimethylbenzene	50 ug/mL
					VM571993S_00002	2 mL	Diisopropyl ether	50 ug/mL
							Ethyl t-butyl ether	50 ug/mL
							Tert-amyl methyl ether	50 ug/mL
..VM570808S_00004	09/30/18		Restek, Lot A0126195		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
..VM571993S_00002	12/31/18		restek, Lot A0123771		(Purchased Reagent)		Diisopropyl ether	2500 ug/mL
							Ethyl t-butyl ether	2500 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
VMFASA9W_00209	11/25/18	11/18/18	MEOH, Lot NA	4 mL	VMFASA9_00015	4 mL	1,2,3-Trimethylbenzene	50 ug/mL
							Diisopropyl ether	50 ug/mL
							Ethyl t-butyl ether	50 ug/mL
							Tert-amyl methyl ether	50 ug/mL
.VMFASA9_00015	12/31/18	11/01/18	MEOH, Lot 0000196628	100 mL	VM570808S_00005	2 mL	1,2,3-Trimethylbenzene	50 ug/mL
					VM571993S_00003	2 mL	Diisopropyl ether	50 ug/mL
							Ethyl t-butyl ether	50 ug/mL
							Tert-amyl methyl ether	50 ug/mL
..VM570808S_00005	08/31/19		Restek, Lot A0135368		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
..VM571993S_00003	12/31/18		restek, Lot A0123771		(Purchased Reagent)		Diisopropyl ether	2500 ug/mL
							Ethyl t-butyl ether	2500 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
VMFASGW_00271	08/28/18	08/21/18	MEOH, Lot NA	4 mL	VMFASG_00074	4 mL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.VMFASG_00074	09/13/18	08/13/18	MEOH, Lot 0000196626	100 mL	vm569722S_00004	2 mL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
..vm569722S_00004	11/30/18		Restek, Lot A0115484		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
VMFASGW_00282	11/15/18	11/08/18	MEOH, Lot NA	4 mL	VMFASG_00076	4 mL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.VMFASG_00076	11/15/18	10/15/18	MEOH, Lot 0000196628	100 mL	vm569722S_00005	2 mL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
..vm569722S_00005	01/31/20		Restek, Lot A0124116		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
VMFASGW_00283	11/23/18	11/16/18	MEOH, Lot NA	4 mL	VMFASG_00077	4 mL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.VMFASG_00077	12/16/18	11/16/18	MEOH, Lot 0000196628	100 mL	vm569722S_00005	2 mL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
..vm569722S_00005	01/31/20		Restek, Lot A0124116		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
VMFASPW_00264	09/03/18	08/27/18	MEOH, Lot n/a	4 mL	VMRFASP_00049	4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	50 ug/mL
							Vinyl acetate	50 ug/mL
							1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							p-Isopropyltoluene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol (TBA)	500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
.VMRFASP_00049	10/31/18	07/18/18	MEOH, Lot 0000196626	100 mL	VM569721S_00003	0.8 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
					VM569723S_00006	2 mL	2-Chloroethyl vinyl ether	50 ug/mL
					VM569724S_00019	1 mL	Vinyl acetate	50 ug/mL
					VM571992S_00002	2 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							p-Isopropyltoluene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol (TBA)	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
..VM569721S_00003	03/31/19		Restek, Lot A0108013		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723S_00006	11/30/18		Restek, Lot A0115500		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724S_00019	10/31/18		Restek, Lot A0137486		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..VM571992S_00002	12/31/18		Restek, Lot A0123775		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							p-Isopropyltoluene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butyl alcohol (TBA)	25000 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
VMFASPW_00275	11/16/18	11/09/18	MEOH, Lot n/a	4 mL	VMRFASP_00051	4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	50 ug/mL
							Vinyl acetate	50 ug/mL
							1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							p-Isopropyltoluene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol (TBA)	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
.VMRFASP_00051	11/30/18	10/23/18	MEOH, Lot 0000196628	100 mL	VM569721S_00003	0.8 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
					VM569723S_00006	2 mL	2-Chloroethyl vinyl ether	50 ug/mL
					VM569724S_00020	1 mL	Vinyl acetate	50 ug/mL
					VM571992S_00001	2 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							p-Isopropyltoluene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol (TBA)	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
..VM569721S_00003	03/31/19		Restek, Lot A0108013		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723S_00006	11/30/18		Restek, Lot A0115500		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724S_00020	02/28/19		Restek, Lot A0140470		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..VM571992S_00001	12/31/18		Restek, Lot A0123775		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							p-Isopropyltoluene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butyl alcohol (TBA)	25000 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
VMFASPW_00276	11/23/18	11/16/18	MEOH, Lot n/a	4 mL	VMRFASP_00051	4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	50 ug/mL
							Vinyl acetate	50 ug/mL
							1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							p-Isopropyltoluene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol (TBA)	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Xylenes, Total	100 ug/mL
.VMRFASP_00051	11/30/18	10/23/18	MEOH, Lot 0000196628	100 mL	VM569721S_00003	0.8 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
					VM569723S_00006	2 mL	2-Chloroethyl vinyl ether	50 ug/mL
					VM569724S_00020	1 mL	Vinyl acetate	50 ug/mL
					VM571992S_00001	2 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							p-Isopropyltoluene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol (TBA)	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
..VM569721S_00003	03/31/19		Restek, Lot A0108013		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723S_00006	11/30/18		Restek, Lot A0115500		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724S_00020	02/28/19		Restek, Lot A0140470		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..VM571992S_00001	12/31/18		Restek, Lot A0123775		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							p-Isopropyltoluene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butyl alcohol (TBA)	25000 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
vmra9w_00259	07/30/18	07/23/18	MEOH, Lot NA	4 mL	VMRA9_00024	4 mL	1-Chloro-1-fluoroethane TIC	50 ug/mL
							Cyclohexanone	500 ug/mL
							Pentachloroethane	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1-Chlorohexane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Benzyl chloride	50 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
							Ethyl acetate	100 ug/mL
							Ethyl acrylate	50 ug/mL
							Methyl methacrylate	100 ug/mL
							n-Butyl acetate	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acetonitrile	500 ug/mL
							Diisopropyl ether	50 ug/mL
							Ethyl t-butyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
.VMRA9_00024	12/17/18	06/17/18	MEOH, Lot 173605TF	50 mL	Freon 151_00003	1 mL	1-Chloro-1-fluoroethane TIC	50 ug/mL
					VM569727_00002	1 mL	Cyclohexanone	500 ug/mL
					vm570806_00003	2 mL	Pentachloroethane	100 ug/mL
					vm570807_00003	2 mL	2-Methylnaphthalene	100 ug/mL
					VM570808_00004	1 mL	1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1-Chlorohexane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Benzyl chloride	50 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
					VM570809_00005	1 mL	Ethyl acetate	100 ug/mL
							Ethyl acrylate	50 ug/mL
							Methyl methacrylate	100 ug/mL
							n-Butyl acetate	50 ug/mL
					VM571993_00001	1 mL	Acetonitrile	500 ug/mL
							Diisopropyl ether	50 ug/mL
							Ethyl t-butyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
..Freon 151_00003	12/17/18	06/17/18	MEOH, Lot 173605TF	20 mL	Freon 151_00001	0.5 mL	1-Chloro-1-fluoroethane TIC	2500 ug/mL
...Freon 151_00001	06/18/19	SynQuest Laboratories , Inc, Lot 270800			(Purchased Reagent)		1-Chloro-1-fluoroethane TIC	10 %
..VM569727_00002	03/31/19	RESTEK, Lot A0118487			(Purchased Reagent)		Cyclohexanone	25000 ug/mL
..vm570806_00003	04/30/22	Restek, Lot A0126447			(Purchased Reagent)		Pentachloroethane	2500 ug/mL
..vm570807_00003	02/28/22	Restek, Lot A0125050			(Purchased Reagent)		2-Methylnaphthalene	2500 ug/mL
..VM570808_00004	05/31/19	Restek, Lot A0132816			(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							1,3,5-Trichlorobenzene	2500 ug/mL
							1-Chlorohexane	2500 ug/mL
							2-Chloro-1,3-butadiene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Benzyl chloride	2500 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
..VM570809_00005	04/30/19	Restek, Lot A0131668			(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Ethyl acrylate	2500 ug/mL
							Methyl methacrylate	5000 ug/mL
							n-Butyl acetate	2500 ug/mL
..VM571993_00001	12/31/18	restek, Lot A0123796			(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Diisopropyl ether	2500 ug/mL
							Ethyl t-butyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
VMRA9W_00273	11/20/18	11/13/18	MEOH, Lot NA	4 mL	VMRA9_00024	4 mL	1-Chloro-1-fluoroethane TIC	50 ug/mL
							Cyclohexanone	500 ug/mL
							Pentachloroethane	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1-Chlorohexane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Benzyl chloride	50 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
							Ethyl acetate	100 ug/mL
							Ethyl acrylate	50 ug/mL
							Methyl methacrylate	100 ug/mL
							n-Butyl acetate	50 ug/mL
							Acetonitrile	500 ug/mL
							Diisopropyl ether	50 ug/mL
							Ethyl t-butyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
.VMRA9_00024	12/17/18	06/17/18	MEOH, Lot 173605TF	50 mL	Freon 151_00003	1 mL	1-Chloro-1-fluoroethane TIC	50 ug/mL
					VM569727_00002	1 mL	Cyclohexanone	500 ug/mL
					vm570806_00003	2 mL	Pentachloroethane	100 ug/mL
					vm570807_00003	2 mL	2-Methylnaphthalene	100 ug/mL
					VM570808_00004	1 mL	1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1-Chlorohexane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Benzyl chloride	50 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
					VM570809_00005	1 mL	Ethyl acetate	100 ug/mL
							Ethyl acrylate	50 ug/mL
							Methyl methacrylate	100 ug/mL
							n-Butyl acetate	50 ug/mL
					VM571993_00001	1 mL	Acetonitrile	500 ug/mL
							Diisopropyl ether	50 ug/mL
							Ethyl t-butyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
..Freon 151_00003	12/17/18	06/17/18	MEOH, Lot 173605TF	20 mL	Freon 151_00001	0.5 mL	1-Chloro-1-fluoroethane TIC	2500 ug/mL
...Freon 151_00001	06/18/19	SynQuest Laboratories , Inc, Lot 270800			(Purchased Reagent)		1-Chloro-1-fluoroethane TIC	10 %
..VM569727_00002	03/31/19	RESTEK, Lot A0118487			(Purchased Reagent)		Cyclohexanone	25000 ug/mL
..vm570806_00003	04/30/22	Restek, Lot A0126447			(Purchased Reagent)		Pentachloroethane	2500 ug/mL
..vm570807_00003	02/28/22	Restek, Lot A0125050			(Purchased Reagent)		2-Methylnaphthalene	2500 ug/mL
..VM570808_00004	05/31/19	Restek, Lot A0132816			(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3,5-Trichlorobenzene	2500 ug/mL
							1-Chlorohexane	2500 ug/mL
							2-Chloro-1,3-butadiene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Benzyl chloride	2500 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
..VM570809_00005	04/30/19		Restek, Lot A0131668		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Ethyl acrylate	2500 ug/mL
							Methyl methacrylate	5000 ug/mL
							n-Butyl acetate	2500 ug/mL
..VM571993_00001	12/31/18		restek, Lot A0123796		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Diisopropyl ether	2500 ug/mL
							Ethyl t-butyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
vmrgas_00255	07/30/18	07/23/18	MEOH, Lot 0000196626	10 mL	vm569722_00011	0.2 mL	Bromomethane	50 ug/mL
							Butadiene	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.vm569722_00011	10/31/20		Restek, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
vmrgas_00259	08/31/18	08/24/18	MEOH, Lot 0000196628	10 mL	vm569722_00011	0.2 mL	Bromomethane	50 ug/mL
							Butadiene	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.vm569722_00011	10/31/20		Restek, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Vinyl chloride	2500 ug/mL
VMRGAS_00269	11/15/18	11/08/18	MEOH, Lot 0000196628	10 mL	vm569722_00011	0.2 mL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.vm569722_00011	10/31/20		Restek, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
VMRGAS_00270	11/20/18	11/13/18	MEOH, Lot 0000196628	10 mL	vm569722_00011	0.2 mL	Bromomethane	50 ug/mL
							Butadiene	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.vm569722_00011	10/31/20		Restek, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
vmrprimw_00292	07/26/18	07/19/18	MEOH, Lot NA	4 mL	VMRPRIM_00028	4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	100 ug/mL
							Vinyl acetate	50 ug/mL
							1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							p-Isopropyltoluene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol (TBA)	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
.VMRPRIM_00028	07/29/18	04/29/18	MEOH, Lot 0000177891	50 mL	VM569721_00002	0.4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
					VM569723_00003	2 mL	2-Chloroethyl vinyl ether	100 ug/mL
					VM569724_00014	0.5 mL	Vinyl acetate	50 ug/mL
					VM571992_00001	1 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							p-Isopropyltoluene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol (TBA)	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
..VM569721_00002	08/31/18		Restek, Lot A0113194		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723_00003	07/31/18		restek, Lot A0112895		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724_00014	07/31/18		Restek, Lot A0134268		(Purchased Reagent)		Vinyl acetate	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..VM571992_00001	12/31/18		Restek, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							p-Isopropyltoluene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butyl alcohol (TBA)	25000 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
vmrprimw_00297	08/29/18	08/22/18	MEOH, Lot NA	4 mL	VMRPRIM_00029	4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	100 ug/mL
							Vinyl acetate	50 ug/mL
							1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							p-Isopropyltoluene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol (TBA)	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
.VMRPRIM_00029	10/31/18	07/28/18	MEOH, Lot 0000196626	50 mL	VM569721_00004	0.4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
					VM569723_00004	2 mL	2-Chloroethyl vinyl ether	100 ug/mL
					VM569724_00016	0.5 mL	Vinyl acetate	50 ug/mL
					VM571992_00001	1 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							p-Isopropyltoluene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol (TBA)	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
..VM569721_00004	11/30/18		Restek, Lot A0115554		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723_00004	11/30/18		restek, Lot A0115628		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724_00016	10/31/18		Restek, Lot A0137562		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..VM571992_00001	12/31/18		Restek, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							p-Isopropyltoluene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butyl alcohol (TBA)	25000 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
VMRPRIMW_00308	11/15/18	11/08/18	MEOH, Lot NA	4 mL	VMRPRIM_00031	4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	100 ug/mL
							Vinyl acetate	50 ug/mL
							1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							Benzene	50 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							p-Isopropyltoluene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol (TBA)	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
.VMRPRIM_00031	11/30/18	10/31/18	MEOH, Lot 0000196628	50 mL	VM569721_00003	0.4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
					VM569723_00004	2 mL	2-Chloroethyl vinyl ether	100 ug/mL
					VM569724_00017	0.5 mL	Vinyl acetate	50 ug/mL
					VM571992_00001	1 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							p-Isopropyltoluene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol (TBA)	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..VM569721_00003	11/30/18		Restek, Lot A0115554		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723_00004	11/30/18		restek, Lot A0115628		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724_00017	02/28/19		Restek, Lot A0140258		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..VM571992_00001	12/31/18		Restek, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							p-Isopropyltoluene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butyl alcohol (TBA)	25000 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
VMRPRIMW_00309	11/21/18	11/14/18	MEOH, Lot NA	4 mL	VMRPRIM_00031	4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	100 ug/mL
							Vinyl acetate	50 ug/mL
							1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							p-Isopropyltoluene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol (TBA)	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
.VMRPRIM_00031	11/30/18	10/31/18	MEOH, Lot 0000196628	50 mL	VM569721_00003	0.4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acetone	100 ug/mL
					VM569723_00004	2 mL	2-Chloroethyl vinyl ether	100 ug/mL
					VM569724_00017	0.5 mL	Vinyl acetate	50 ug/mL
					VM571992_00001	1 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							p-Isopropyltoluene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol (TBA)	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
..VM569721_00003	11/30/18		Restek, Lot A0115554		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723_00004	11/30/18		restek, Lot A0115628		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724_00017	02/28/19		Restek, Lot A0140258		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..VM571992_00001	12/31/18		Restek, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							p-Isopropyltoluene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							tert-Butyl alcohol (TBA)	25000 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
VMRPRIMW_00309	11/21/18	11/14/18	MEOH, Lot NA	4 mL	VMRPRIM_00031	4 mL	Xylenes, Total	100 ug/mL
.VMRPRIM_00031	11/30/18	10/31/18	MEOH, Lot 0000196628	50 mL	VM571992_00001	1 mL	Xylenes, Total	100 ug/mL
..VM571992_00001	12/31/18	Restek, Lot A0123711			(Purchased Reagent)		Xylenes, Total	5000 ug/mL
WCP-XYLENE_00023	04/05/20	JT Baker, Lot 187183			(Purchased Reagent)		Flashpoint	81 Degrees F

Reagent

ex1016/1260st_00013

Rec'd 8/10/18

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039 **Lot No.:** A0134815

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

3744008
ID ex1016/1260st_00013
Exp 05/31/24 Prpd:BMB Opn:08/10/18
Aroclor 1016/1260 Standar

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016		1,001.3 µg/mL	+/- 5.8348	µg/mL	Gravimetric
	CAS # 12674-11-2	(Lot 164887)		+/- 31.7260	µg/mL	Unstressed
	Purity ----%			+/- 41.4488	µg/mL	Stressed
2	Aroclor 1260		1,000.0 µg/mL	+/- 5.8275	µg/mL	Gravimetric
	CAS # 11096-82-5	(Lot 155463)		+/- 31.6864	µg/mL	Unstressed
	Purity ----%			+/- 41.3971	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

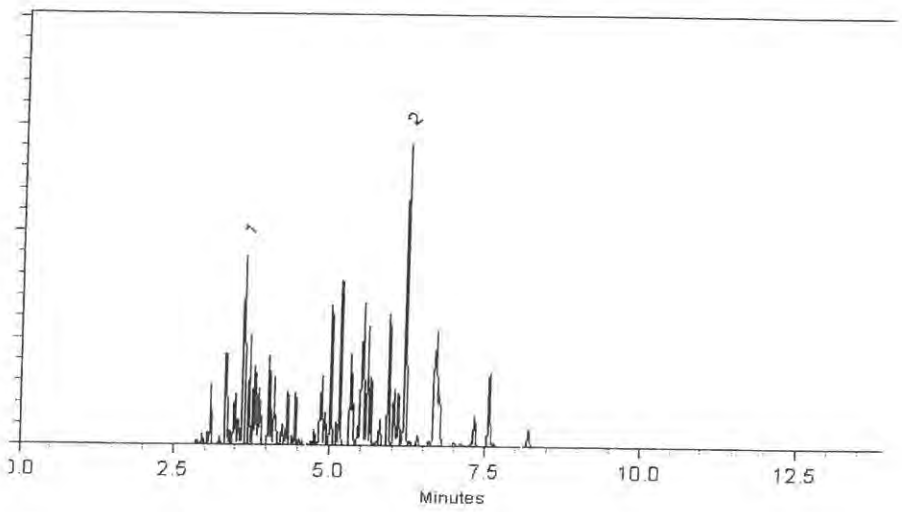
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician

Date Mixed: 01-Feb-2018 **Balance:** B251644995

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 02-Feb-2018

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

ex10PPMSPK_00043

running on P12 @ 10x

LABORATORY STANDARDS DOCUMENTATION FORM
FOR TESTAMERICA LABORATORIES, INC.

Standard No. 3790277 ID: ex10PPMSPK_00043 Exp: 03/13/19 Prpd: cs Cnt: 09/14/18

Standard Name Aroclor 1016/1260 Spike

Date Created 09-13-18

Extractionist Initials AT

Extractionist Comments Please Confirm the new Spike

♦ **Please return copy of chromatogram and recovery results** ♦

Date Analyzed 9/14/18

Passed? Yes ☒

No ☐

Returned copy of chromatogram and recovery page to Extractions? Yes ☒

No ☐

Analyst Initials CSH

Analyst Comments

WI-NC-020A_101207

Preliminary Report

TestAmerica Canton

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Canton\ChromData\A2HP12\20180913-79835.b\P12091309.D
Lims ID: Spike
Inj. Date: 13-Sep-2018 19:40:03
Worklist ID: 240-0079835-009
Instrument: A2HP12
Method: PCB12IS

Detector 1: GC ECD1A

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3510C
6 PCB-1016	1.00	0.8395	84.0	27-125
6 PCB-1016-1	1.00	0.8068	80.7	27-125
6 PCB-1016-2	1.00	0.8776	87.8	27-125
6 PCB-1016-3	1.00	0.7621	76.2	27-125
6 PCB-1016-4	1.00	0.8975	89.8	27-125
6 PCB-1016-5	1.00	0.8537	85.4	27-125
10 PCB-1260	1.00	0.9265	92.6	31-131
10 PCB-1260-1	1.00	0.8862	88.6	31-131
10 PCB-1260-2	1.00	0.9309	93.1	31-131
10 PCB-1260-3	1.00	0.9395	94.0	31-131
10 PCB-1260-4	1.00	0.9603	96.0	31-131
10 PCB-1260-5	1.00	0.9154	91.5	31-131

Detector 2: GC ecd2b

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3510C
6 PCB-1016	1.00	0.8602	86.0	27-125
6 PCB-1016-1	1.00	0.8362	83.6	27-125
6 PCB-1016-2	1.00	0.8448	84.5	27-125
6 PCB-1016-3	1.00	0.8732	87.3	27-125
6 PCB-1016-4	1.00	0.8642	86.4	27-125
6 PCB-1016-5	1.00	0.8827	88.3	27-125
10 PCB-1260	1.00	0.9207	92.1	31-131
10 PCB-1260-1	1.00	0.9010	90.1	31-131
10 PCB-1260-2	1.00	0.9134	91.3	31-131
10 PCB-1260-3	1.00	0.9211	92.1	31-131
10 PCB-1260-4	1.00	0.9440	94.4	31-131
10 PCB-1260-5	1.00	0.9241	92.4	31-131

Samples for Limit Group: 1, Lims Prep Method: 3510C

240-101117-B-3-G 240-101117-B-1-C 240-101117-B-2-C
240-101117-B-4-C

Reagent

ex2/.2SURRW_00115

P13

LABORATORY STANDARDS DOCUMENTATION FORM
FOR TESTAMERICA LABORATORIES, INC.

Standard No. 3883602 ID: ex2/ 2SURRW_00115 Exp: 05/01/19 Prpd: BMB Crl: 11/01/18 Pest/PCB Surrogates

Standard Name

Date Created 11/1/18

Extractionist Initials BB

Extractionist Comments Please confirm new surrogate.

♦ Please return copy of chromatogram and recovery results ♦

Date Analyzed 11/1/18

Passed? Yes [X] No [ ]

Returned copy of chromatogram and recovery page to Extractions? Yes [X] No [ ]

Analyst Initials LH

Analyst Comments

WI-NC-020A_101207

Report Date: 01-Nov-2018 12:32:25 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Canton

Recovery Report

Data File:	\\ChromNA\Canton\ChromData\A2HP13\20181101-81444.b\P13110109.D				
Lims ID:	New Surr				
Client ID:					
Sample Type:	Client				
Inject. Date:	01-Nov-2018 12:15:17	ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	240-0081444-009				
Operator ID:		Instrument ID:	A2HP13		
Method:	\\ChromNA\Canton\ChromData\A2HP13\20181101-81444.b\PCB13 IS.m				
Limit Group:	GC 8082 IS				
Last Update:	01-Nov-2018 10:31:36	Calib Date:	31-Oct-2018 23:16:22		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A2HP13\20181031-81410.b\P13103133.D				
Column 1 :			Det: GC ECD1A		
Column 2 :			Det: GC ecd2b		
Process Host:	CTX0311				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0185	92.55
$ 12 DCB Decachlorobiphenyl	0.0200	0.0181	90.69

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0189	94.36
$ 12 DCB Decachlorobiphenyl	0.0200	0.0188	93.98

Reagent

---

exPESTSURRstd_00011

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Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0136320

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2024 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4,5,6-Tetrachloro-m-xylene	200.3 µg/mL	+/- 1.1673	µg/mL	Gravimetric
	CAS # 877-09-8 (Lot 0052481)		+/- 6.3472	µg/mL	Unstressed
	Purity 98%		+/- 8.2923	µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)	200.2 µg/mL	+/- 1.1667	µg/mL	Gravimetric
	CAS # 2051-24-3 (Lot ER071509-01)		+/- 6.3436	µg/mL	Unstressed
	Purity 99%		+/- 8.2877	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

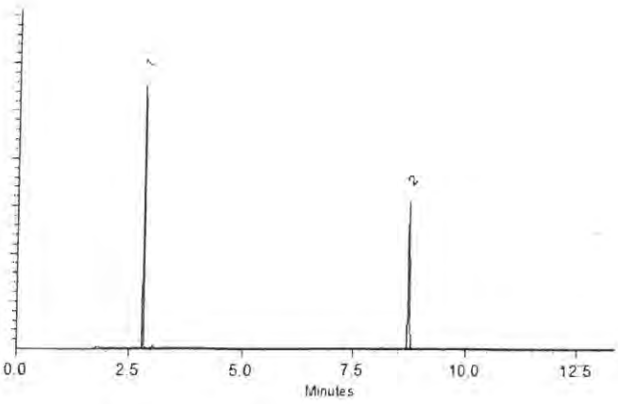
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dustin J Lidgett

Dustin Lidgett - Mix Technician **Date Mixed:** 20-Mar-2018 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC **Date Passed:** 23-Mar-2018

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

ISTD_00004

RCVD 3/8/17

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32279 **Lot No.:** A0124315

Description : 1-Bromo-2-nitrobenzene Standard

1-Bromo-2-nitrobenzene Standard 1000 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1-Bromo-2-nitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 577-19-5 (Lot 643872/1)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

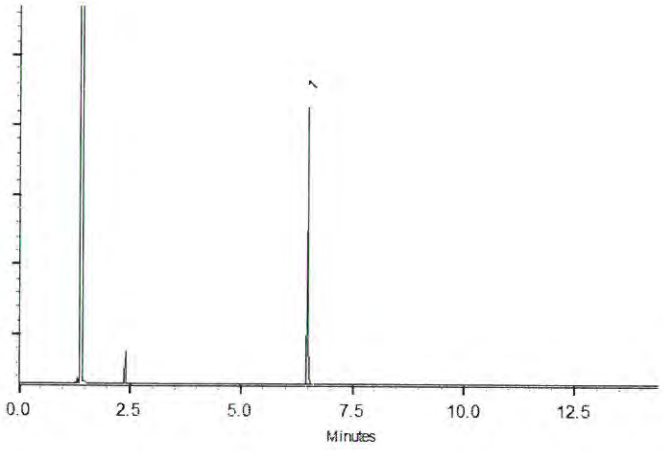
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician

Date Mixed: 18-Jan-2017 **Balance:** B251644995

Justine Albertson - Operations Tech-ARM QC

Date Passed: 20-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

LLHg-ICV_00008

Recd 7-19-18 Ku

Certificate of Analysis

Certified Reference Material

Product Description:

Mercury

Product Number:	**S1-Hg-10xVol**
Lot Number:	**1817815**
Matrix:	5% (v/v) HNO_3

Certified Value:

Element	(µg/mL)	SRM ID	SRM Lot#
Mercury	10.0 ± 0.2	3133	061204

The Certified value is based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **July 2018**

Certificate Issue Date: **June 27, 2018**

Drew Peterson, Product Manager-Standard Solutions

7277 World Communications Dr. | Omaha, NE 68122 USA | Phone: +1.402.991.7800 | Fax: +1.402.991.7799

Preparation Information:

This standard is prepared using **99.9998%** pure **mercury metal** which was purchased from a qualified vendor per ISO 9001:2008 guidelines and assayed by analytical methods for conformity prior to use. This standard was manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
   The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
   The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
   The calibrations of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**
   The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
   The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If an SRM is not availabe, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High-Purity Standards.

Reagent

MTAG_00007

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Rec'd 6-12-17 KW

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Silver

Product Number: **100051-1**
Lot Number: **1713128**
Matrix: 2% (v/v) HNO_3

Certified Value:

Element	(µg/mL)	SRM ID	SRM Lot#
Silver	1000 ± 3	3151	160729

The Certified value is based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.
* Refer to Traceability Information, Section d

Uncertified Values:

Density: 1.010 g/mL ± 0.002 g/mL @ 21.2°C

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot via ICP-OES/ICP-MS analysis. The values are reported in µg/L.

Ag		M	Cu	<	0.02	Li	<	0.5	Rb	<	0.02	Th	<	0.02
Al	<	0.05	Dy	<	0.02	Lu	<	0.02	Re	<	0.02	Ti	<	0.02
As	<	0.05	Er	<	0.02	Mg	<	0.1	Rh	<	0.02	Tl	<	0.02
Au	<	0.02	Eu	<	0.02	Mn	<	0.05	Ru	<	0.1	Tm	<	0.02
B	<	1	Fe	<	1	Mo	<	0.02	Sb	<	0.02	U	<	0.05
Ba	<	0.02	Ga	<	0.02	Na	<	3	Sc	<	0.02	V	<	0.05
Be	<	0.02	Gd	<	0.02	Nb	<	0.02	Se	<	0.5	W	<	0.02
Bi	<	0.02	Ge	<	0.1	Nd	<	0.02	Si		45	Y	<	0.02
Ca	<	1	Hf	<	0.02	Ni	<	0.02	Sm	<	0.02	Yb	<	0.02
Cd	<	0.02	Ho	<	0.02	Os	<	0.02	Sn	<	0.5	Zn	<	0.02
Ce	<	0.02	In	<	0.02	Pb	<	0.05	Sr	<	0.02	Zr	<	0.02
Co	<	0.05	Ir	<	0.02	Pd	<	0.02	Ta	<	0.02			
Cr	<	0.05	K	<	1	Pr	<	0.02	Tb	<	0.02			
Cs		4	La	<	0.02	Pt	<	0.02	Te	<	0.02			

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for eighteen months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **6/8/2017**
Expire Date: **December 08, 2018**
Certificate Issue Date: **May 11, 2017**

Moven Mutuvari

Moven Mutuvari, Ph. D, Laboratory Manager

Preparation Information:

This standard is prepared using **99.992%** pure **silver metal** which was purchased from a qualified vendor per ISO 9001:2008 guidelines and assayed by analytical methods for conformity prior to use. This standard was manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
   The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
   The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
   The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
   The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
   The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If an SRM is not availabe, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High-Purity Standards.

Reagent

MTHGCAL_00034

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Rec'd 1-15-18 KW

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Mercury

Product Number: **10 33-1**
Lot Number: **1800827**
Matrix: 5% (v/v) HNO_3

Certified Value:

Element	(µg/mL)	SRM ID	SRM Lot#
Mercury	10.0 ± 0.2	3133	061204

The Certified value is based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: 1/11/2018
Expiration Date: January 2019
Certificate Issue Date: January 8, 2018

Moven Mututuvari

Moven Mututuvari, Ph. D, Laboratory Manager

Preparation Information:

This standard is prepared using **99.9998%** pure **mercury metal** which was purchased from a qualified vendor per ISO 9001:2008 guidelines and assayed by analytical methods for conformity prior to use. This standard was manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
   The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
   The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
   The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
   The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
   The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If an SRM is not availabe, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High-Purity Standards.

Reagent

MTICPCCV1_00025

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

Recd 7-26-18 KM

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-CCV1
Lot Number:	N2-MEB665676
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	500 000 µg/L ea:
	Calcium, Potassium, Magnesium, Sodium,
	250 000 µg/L ea:
	Aluminum, Iron,
	50 000 µg/L ea:
	Strontium, Boron, Lithium,
	20 000 µg/L ea:
	Manganese, Nickel, Barium,
	Beryllium, Cobalt, Chromium,
	Copper, Vanadium, Zinc,
	10 000 µg/L ea:
	Thallium,
	5 000 µg/L ea:
	Cadmium, Arsenic, Lead, Selenium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	250 000.00 ± 900.00 µg/L	Arsenic, As	5 000 ± 30 µg/L
Barium, Ba	20 000.0 ± 90.0 µg/L	Beryllium, Be	20 000.0 ± 90.0 µg/L
Boron, B	50 000.0 ± 310.0 µg/L	Cadmium, Cd	5 000 ± 30 µg/L
Calcium, Ca	500 000.00 ± 2 000.00 µg/L	Chromium, Cr	20 000.0 ± 90.0 µg/L
Cobalt, Co	20 000.0 ± 90.0 µg/L	Copper, Cu	20 000.0 ± 80.0 µg/L
Iron, Fe	250 000.00 ± 1 000.00 µg/L	Lead, Pb	5 000 ± 26 µg/L
Lithium, Li	49 990.0 ± 210.0 µg/L	Magnesium, Mg	500 000.00 ± 2 000.00 µg/L
Manganese, Mn	20 000.0 ± 80.0 µg/L	Nickel, Ni	20 000.0 ± 90.0 µg/L
Potassium, K	499 900.00 ± 1 900.00 µg/L	Selenium, Se	5 000 ± 26 µg/L
Sodium, Na	499 900.00 ± 1 900.00 µg/L	Strontium, Sr	50 020.0 ± 200.0 µg/L
Thallium, Tl	10 000.0 ± 50.0 µg/L	Vanadium, V	20 000.0 ± 80.0 µg/L
Zinc, Zn	20 000.0 ± 80.0 µg/L		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	EDTA	928	928
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	993012
Tl	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures; 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030; Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: 8-22-18 KL

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Reagent

MTICPCCV2_00025

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

Rec'd 7-26-18 km

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-CCV2
Lot Number:	N2-MEB665677
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	50 000 µg/L ea: Silicon, Tin, Titanium, 20 000 µg/L ea: Molybdenum, 10 000 µg/L ea: Silver, 5 000 µg/L ea: Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	5 000 ± 34 µg/L	Molybdenum, Mo	20 000.0 ± 110.0 µg/L
Silicon, Si	50 000.0 ± 290.0 µg/L	Silver, Ag	10 000.0 ± 40.0 µg/L
Tin, Sn	50 000.0 ± 240.0 µg/L	Titanium, Ti	50 000.0 ± 270.0 µg/L

Density: 1.024 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2
Si	ICP Assay	3150	130912
Si	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: 8-22-18 KM

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Reagent

MTICPICSAB1_00008

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

Rec'd 6.27.18 KW

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution		
Catalog Number:	TA-ICSAB1		
Lot Number:	N2-MEB669101		
Matrix:	5% (v/v) HNO3		
Value / Analyte(s):	5 000 000 µg/L ea:		
	Aluminum,	Calcium,	Magnesium,
	2 000 000 µg/L ea:		
	Iron,		
	100 000 µg/L ea:		
	Potassium,	Sodium,	
	15 000 µg/L ea:		
	Strontium,		
	10 000 µg/L ea:		
	Thallium,	Zinc,	Nickel,
	Lead,	Selenium,	Cadmium,
	Arsenic,		
	5 000 µg/L ea:		
	Boron,	Barium,	Beryllium,
	Cobalt,	Chromium,	Copper,
	Lithium,	Manganese,	Vanadium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 000 000.000 ± 18 000.000 µg/L	Arsenic, As	10 000.0 ± 60.0 µg/L
Barium, Ba	5 000 ± 26 µg/L	Beryllium, Be	5 000 ± 29 µg/L
Boron, B	5 000 ± 30 µg/L	Cadmium, Cd	10 000.0 ± 60.0 µg/L
Calcium, Ca	5 000 000.000 ± 20 000.000 µg/L	Chromium, Cr	5 000 ± 26 µg/L
Cobalt, Co	5 000 ± 26 µg/L	Copper, Cu	5 001 ± 30 µg/L
Iron, Fe	2 000 000.000 ± 8 000.000 µg/L	Lead, Pb	10 000.0 ± 40.0 µg/L
Lithium, Li	5 000 ± 26 µg/L	Magnesium, Mg	5 000 000.000 ± 20 000.000 µg/L
Manganese, Mn	5 001 ± 26 µg/L	Nickel, Ni	10 000.0 ± 60.0 µg/L
Potassium, K	100 100.00 ± 400.00 µg/L	Selenium, Se	10 000.0 ± 50.0 µg/L
Sodium, Na	100 000.00 ± 400.00 µg/L	Strontium, Sr	15 000.0 ± 90.0 µg/L
Thallium, Tl	10 000.0 ± 60.0 µg/L	Vanadium, V	5 000 ± 30 µg/L
Zinc, Zn	10 000.0 ± 60.0 µg/L		

Density: 1.100 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	110830
B	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	993012
Tl	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 25, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 25, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: 8.28.18 KW

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MTICPICSAB2_00008

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

Recd 6.27.18 kw

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED - Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICSAB2
Lot Number:	N2-MEB669102
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	100 000 µg/L ea: Silicon, 10 000 µg/L ea: Silver, Molybdenum, Antimony, 5 000 µg/L ea: Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	10 000.0 ± 70.0 µg/L	Molybdenum, Mo	10 000.0 ± 70.0 µg/L
Silicon, Si	100 000.00 ± 600.00 µg/L	Silver, Ag	10 000.0 ± 70.0 µg/L
Tin, Sn	5 000 ± 38 µg/L	Titanium, Ti	5 000 ± 30 µg/L

Density: 1.024 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2
Si	ICP Assay	3150	130912
Si	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 25, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 25, 2022**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: 8-28-18 KW

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MTICPSPIKE1A_00013

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Recd 3-20-18 KW

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Name:	ICP Spike 1
Part Number:	**SM-606-101 Solution A**
Lot Number:	**1807331**
Matrix:	5% HNO_3
Purity:	99.99% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	2000 ± 20	3101a	140903	Fe	1000 ± 6	3126a	140812
As	2000 ± 20	3103a	100818	Pb	500 ± 5	3128	101026
Ba	2000 ± 12	3104a	140909	Mn	500 ± 8	3132	050429
Be	50.0 ± 0.5	3105a	090514	Ni	500 ± 3	3136	120619
B	1000 ± 10	3107	110830	Se	2000 ± 20	3149	100901
Cd	50.0 ± 0.3	3108	130116	Tl	2000 ± 10	*	
Cr	200 ± 1	3112a	030730	V	500 ± 3	3165	160906
Co	500 ± 3	3113	000630	Zn	500 ± 3	3168a	120629
Cu	250.0 ± 1.5	3114	121207				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **March 2018**

Certificate Issue Date: March 16, 2018

Moven Mututuvari

Moven Mututuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MTICPSPIKEB_00012

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Rec'd 3.2018 KW

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	ICP Spike 1
Part Number:	**SM-606-101** Solution B
Lot Number:	**1807336**
Matrix:	5% HNO_3 + 0.5% HF
Purity:	99.98% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Sb	500 ± 5	3102a	140911	Sn	2000 ± 20	3161a	140914
Mo	1000 ± 10	3134	130418	Ti	1000 ± 10	3162a	130925

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **March 2018**

Certificate Issue Date: March 16, 2018

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

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The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MTICPSpikeOdd_00009

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Rec'd 3-2018 KL

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Name:	ICP Spike Odds
Part Number:	**SM-606-121**
Lot Number:	**1807221**
Matrix:	2% HNO_3
Purity:	99.999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Li	1000 ± 6	3129a	100714	Sr	1000 ± 5	*	
Si	1000 ± 10	3150	130912				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **March 2018**

Certificate Issue Date: March 14, 2018

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
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The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

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Reagent

MTNONRCRA+ODD_00011

Rec'd 7-26-18 KL

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Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Part Number:	**SM-606-135**
Lot Number:	**1820210**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.98% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	100.0 ± 0.6	3101a	140903	Mo	50.0 ± 0.5	3134	130418
Sb	25.0 ± 0.3	3102a	140911	Ni	25.0 ± 0.2	3136	120619
Be	2.50 ± 0.03	3105a	090514	Si	50.0 ± 0.5	3150	130912
B	50.0 ± 0.5	3107	110830	Sr	50.0 ± 0.3	*	
Co	25.0 ± 0.2	3113	000630	Tl	100.0 ± 0.6	*	
Cu	12.5 ± 0.1	3114	121207	Sn	100 ± 1	3161a	140917
Fe	50.0 ± 0.3	3126a	140812	Ti	50.0 ± 0.5	3162a	130925
Li	50.0 ± 0.5	3129a	100714	V	25.0 ± 0.3	3165	160906
Mn	25.00 ± 0.15	3132	050429	Zn	25.0 ± 0.2	3168a	120629

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **July 2018**

Certificate Issue Date: **July 23, 2018**

Moven Mututuvari

Moven Mututuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**

The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.

The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**

The calibrations of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**

The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**

The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MTRCRA_00014

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Recd 2-20-18 KL

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Part Number: **SM-606-080**
Lot Number: **1804648**
Matrix: 2% HNO_3
Purity: 99.992% - 99.999%

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
As	500 ± 5	3103a	100818	Pb	500 ± 3	3128	101026
Ba	5000 ± 30	3104a	140909	Se	100 ± 1	3149	100901
Cd	100.0 ± 0.5	3108	130116	Ag	100.0 ± 0.5	3151	160729
Cr	500.0 ± 2.5	3112a	030730				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **February 2018**

Certificate Issue Date: February 16, 2018

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

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Intended Use:

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The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

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Reagent

MTTRCAL2_00020

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Recd 6-14-18 KL

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	ICP Analytical Mixture 15
Part Number:	**ICP-AM-15**
Lot Number:	**1812740**
Matrix:	5% HNO_3
Purity:	99.98% - 99.999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Ca	10000 ± 60	3109a	130213	K	10000 ± 100	3141a	140813
Mg	10000 ± 60	3131a	140110	Na	10000 ± 60	3152a	120715

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Density: 1.126 g/mL ± 0.002 g/mL @ 20.0°C ± 0.3 °C

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date:JUNE 2018

Certificate Issue Date: May 9, 2018

Moven Mututuvari

Moven Mututuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

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The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**

The calibrations of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**

The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**

The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

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Reagent

MTTRCRI6010C_00020

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 • 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

Rec'd 9-3-19 ku

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CRIC-REV3
Lot Number:	N2-MEB670185
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	100 000 µg/L ea: Calcium, Potassium, Magnesium, Sodium, 10 000 µg/L ea: Silicon, 4 000 µg/L ea: Iron, Barium, Aluminum, 2 000 µg/L ea: Boron, Tin, 1 000 µg/L ea: Strontium, Titanium, Vanadium, Zinc, Lithium, 800 µg/L ea: Molybdenum, Nickel, 500 µg/L ea: Copper, 400 µg/L ea: Antimony, Selenium, Thallium, 300 µg/L ea: Manganese, Arsenic, 200 µg/L ea: Silver, Cobalt, Chromium, Lead, 100 µg/L ea: Beryllium, Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	4 002 ± 20 µg/L	Antimony, Sb	400.2 ± 2.7 µg/L
Arsenic, As	300.0 ± 2.3 µg/L	Barium, Ba	4 001 ± 20 µg/L
Beryllium, Be	100.0 ± 0.6 µg/L	Boron, B	2 000 ± 19 µg/L
Cadmium, Cd	100.0 ± 0.7 µg/L	Calcium, Ca	100 000.00 ± 500.00 µg/L
Chromium, Cr	200.0 ± 1.2 µg/L	Cobalt, Co	200.0 ± 1.4 µg/L
Copper, Cu	500.2 ± 2.2 µg/L	Iron, Fe	4 000 ± 20 µg/L
Lead, Pb	200.0 ± 1.4 µg/L	Lithium, Li	1 000 ± 6 µg/L
Magnesium, Mg	100 000.00 ± 500.00 µg/L	Manganese, Mn	300.3 ± 1.4 µg/L
Molybdenum, Mo	800 ± 5 µg/L	Nickel, Ni	801 ± 4 µg/L
Potassium, K	100 000.00 ± 500.00 µg/L	Selenium, Se	400.2 ± 3.0 µg/L
Silicon, Si	10 010.0 ± 70.0 µg/L	Silver, Ag	200.0 ± 1.7 µg/L
Sodium, Na	100 000.00 ± 500.00 µg/L	Strontium, Sr	1 001 ± 6 µg/L
Thallium, Tl	400.0 ± 3.2 µg/L	Tin, Sn	2 001 ± 11 µg/L
Titanium, Ti	1 000 ± 7 µg/L	Vanadium, V	1 000 ± 6 µg/L
Zinc, Zn	1 001 ± 6 µg/L		

Density: 1.027 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	000505
Li	Calculated		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Sb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Si	ICP Assay	3150	130912
Si	Calculated		See Sec. 4.2
Sn	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2
Tl	Calculated		See Sec. 4.2

V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030; Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 31, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 31, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity KD

- Sealed TCT Bag Open Date: 11-12-18

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MTTRICSA_00016

Rec'd 2-26-18 KW

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-ICS-A
Lot Number:	K2-MEB643109
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Aluminum, Calcium, Magnesium, 2 000 µg/mL ea: Iron

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 000 ± 22 µg/mL	Calcium, Ca	5 000 ± 20 µg/mL
Iron, Fe	2 000 ± 8 µg/mL	Magnesium, Mg	5 000 ± 20 µg/mL

Certified Density: 1.085 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000400	M	Eu	<	0.000100	O	Na		0.027559	M	Se	<	0.002091	M	Zn		0.008219
s	Al	<		s	Fe	<		M	Nb	<	0.000100	O	Si		0.217000	M	Zr	<	0.001002
M	As	<	0.005613	M	Ga	<	0.000100	M	Nd	<	0.000601	M	Sm	<	0.000100				
M	Au	<	0.000199	M	Gd	<	0.000100	M	Ni	<	0.005613	M	Sn	<	0.000200				
M	B	<	0.008420	M	Ge	<	0.000400	M	Os	<	0.000099	M	Sr		0.043302				
M	Ba	<	0.001603	M	Hf	<	0.000100	O	P	<	0.108500	M	Ta	<	0.000100				
O	Be	<	0.000217	M	Hg	<	0.000597	M	Pb		0.003408	M	Tb	<	0.000100				
M	Bi	<	0.000400	M	Ho	<	0.000100	M	Pd	<	0.000100	M	Te	<	0.003107				
s	Ca	<		M	In	<	0.000400	M	Pr	<	0.000200	M	Th	<	0.000100				
M	Cd	<	0.000100	M	Ir	<	0.000099	M	Pt	<	0.000100	M	Ti	<	0.000801				
M	Ce	<	0.002004	O	K		0.011718	M	Rb	<	0.000100	M	Tl	<	0.000100				
M	Co	<	0.003207	M	La	<	0.000801	M	Re	<	0.000100	M	Tm	<	0.000100				
M	Cr		0.024658	O	Li		0.005425	M	Rh	<	0.000100	M	U	<	0.000100				
M	Cs	<	0.000601	M	Lu	<	0.000100	M	Ru	<	0.000099	M	V	<	0.000400				
M	Cu	<	0.004610	s	Mg	<		O	S		0.422173	M	W	<	0.000100				
M	Dy	<	0.000100	M	Mn		0.002606	M	Sb	<	0.000200	M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000400	M	Sc	<	0.001403	M	Yb	<	0.000100				

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

11.1 Certification Issue Date

July 01, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 01, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: 3-14-18 KW

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

11.4 Revision Status

- Revision 1 - Wednesday, Apr 26, 2017. Added TMI data

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Joseph Burns
Technical Support Technician



Certificate Approved By:

Michael Booth
Supervisor, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Reagent

MTTRICV5_00015

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Rec'd 3-7-18 ku

Multi-Element Aqueous CRM

Product #: Z-G34-4400-080925JC05

Custom ICV 5 ISO Guide 34 Standard

Lot #: 10075909-1

Matrix: 2% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	250.0 ± 1.3 µg/mL	Pb	250.1 ± 1.3 µg/mL	Se	250.2 ± 1.3 µg/mL
Cd	250.5 ± 1.3 µg/mL	Sb	250.2 ± 1.3 µg/mL	Tl	500.4 ± 2.5 µg/mL

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO Guide 34**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

March 3, 2018

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
    - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM
Ag	3151	1077a		Hf	3122	—		S	3154	2770
Al	3101a	1075a		Hg	3133	3133		Sb	3102a	3102a
As	3103a	3103a		Ho	3123a	—		Sc	3148a	3148a
Au	3121	—		In	3124a	3124a		Se	3149	3149
B	3107	3107		K	3141a	3141a		Si	3150	1066a
Ba	3104a	1051b		La	3127a	3127a		Sm	3147a	—
Be	3105a	3105a		Li	3129a	3129a		Sn	3161a	1057b
Bi	3106	3106		Lu	3130a	—		SO_4^{-2}	3181	—
Br^-	3184	—		Mg	3131a	3131a		Sr	3153a	3153a
Ca	3109a	3109a		Mn	3132	3132		Ta	3155	—
Cd	3108	1053a		Mo	3134	3134		Tb	3157a	—
Ce	3110	3110		Na	3152a	3152a		Te	3156	—
Cl^-	3182	1818a		Nb	3137	—		Th	3159	—
Co	3113	3113		Nd	3135a	—		Ti	3162a	3162a
Cr	3112a	1078b		Ni	3136	1065b		Tl	3158	3158
Cs	3111a	—		NO_3^-	3185	—		Tm	3160a	—
Cu	3114	1080a		P	3139a	3139a		U	3164	—
Dy	3115a	—		Pb	3128	3128		V	3165	1052b
Er	3116a	—		Pd	3138	—		W	3163	3163
Eu	3117a	—		PO_4^{-3}	3186	—		Y	3167a	3167a
F^-	3183	—		Pr	3142a	—		Yb	3166a	—
Fe	3126a	1079b		Pt	3140	3140		Zn	3168a	3168a
Ga	3119a	—		Rb	3145a	—		Zr	3169	3169
Gd	3118a	—		Re	3143	—				
Ge	3120a	—		Rh	3144	3144				

Reagent

MTTRICVAG_00010

CERTIFICATE OF ANALYSIS

Rec'd 12-26-17 KW

Single-Element Aqueous CRM

Product #: Z-G34-060047-03-01

ISO Guide 34 - Silver (Ag) – 100 µg/mL

Lot #: 10072207-5

Matrix: 2% HNO_3

Element	Certified Concentration & Uncertainty
Ag	**100.0 ± 0.5 µg/mL**

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO Guide 34**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 100.0 µg/mL by gravimetric methods using a single-element concentrate dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3151**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

December 20, 2017

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
5580 Skylane Boulevard P: 707.525.5788
Santa Rosa, CA 95403 P: 800.878.7654
F: 707.545.7901

Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
    - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

SG 1221 ICV_00015

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32007.SEC **Lot No.:** A0128546

Description : Aroclor® 1221 Standard

Aroclor® 1221 Standard 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2023 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1221	1,000.0 µg/mL	+/- 10.0737	µg/mL	Gravimetric
	CAS # 11104-28-2.SEC (Lot W-126-07)		+/- 32.7345	µg/mL	Unstressed
	Purity ----%		+/- 42.2047	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Rec'd 7/26/18
(K)

3718495
ID: SG 1221 ICV_00015
Exp: 09/30/23 Prpd: KMG
Aroclor 1221 ICV @1000ppm

Reagent

SG 1232 ICV_00010

Certificate of Analysis

Aroclor 1232 Solution

Product Number: EPA-1302 **Page:** 1 of 1

Lot Number: CG-4471 **Lot Issue Date:** 07-Jan-2011 **Expiration Date:** 31-Jan-2019

This Certified Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1232	011141-16-5	NT01019	1003 ± 5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (18-25° C)

Received
12/6/16
CGH

2830202
ID: SG 1232 ICV_00010
Exp: 01/31/19 Prpd. LSH
Aroclor 1232 ICV @ 1000pp

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

ACCREDITED

ISO 17025:2005 Accredited A2LA Cert. No. 0851-01

ISO 9001:2008 Registered TUV USA, Inc. Cert. No. 09-1009

250 Smith Street, North Kingstown, RI 02852 USA
401-294-9400 Fax: 295-2330
www.ultrasci.com

William J Leahy
Quality Assurance Manager

Reagent

SG 1242 ICV_00010

Certificate of Analysis

Aroclor 1242 Solution

Product Number EPA-1312 **Page:** 1 of 1

Lot Number: CR-2838 **Lot Issue Date:** 22-Jun-2017 **Expiration Date:** 31-Jul-2025

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1242	053469-21-9	NT01020	1001 ± 5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

3456287
ID: SG 1242 ICV_00010
Exp: 07/31/22 Prpd: LSH
Aroclor 1242 ICV @ 1000pp

RECEIVED 2/8/18 LSH

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

ISO 9001
Registered
TUV USA, Inc.

John Russo
President

Monica Bourgeois
Director of QA/RA

250 SMITH STREET • NORTH KINGSTOWN, RHODE ISLAND 02852 • WWW.ULTRASCI.COM

Reagent

SG 1248 ICV_00011

Received 1/31/2018
SEM

3447163
ID: SG 1248 ICV_00011
Exp: 04/30/23 Prpd: SEM
Aroclor 1248 ICV @ 1000pp

RESTEK

Safety Data Sheet

Revision Date: 12/29/16

www.restek.com

1. IDENTIFICATION

Catalog Number / Product Name:	**32010.SEC / Aroclor® 1248 Standard**
Company:	Restek Corporation
Address:	110 Benner Circle Bellefonte, Pa. 16823
Phone#:	814-353-1300
Fax#:	814-353-1309
Emergency#:	800-424-9300 (CHEMTREC) 703-527-3887 (Outside the US)
Email:	www.restek.com
Revision Number:	3
Intended use:	For Laboratory use only

2. HAZARD(S)IDENTIFICATION

Emergency Overview:

GHS Hazard Symbols:





GHS Classification:	Aspiration Hazard Category 1 Flammable Liquid Category 2 Skin Corrosion/Irritation Category 2 Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure Category 2 Hazardous to the aquatic environment - Chronic Category 2 Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3
GHS Signal Word:	Danger
GHS Hazard:	Highly flammable liquid and vapour. May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.
GHS Precautions:	
Safety Precautions:	Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilation and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands and skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
First Aid Measures:	IF SWALLOWED: Immediately call a POISON CENTER/doctor/.... IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. Get medical advice/attention if you feel unwell. Specific treatment see section 4.

Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use extinguishing media in section 5 for extinction.
Collect spillage.

Storage: Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal: Dispose of contents/container according to section 13 of the SDS.

Single Exposure Target Organs: No data available.

Repeated Exposure Target Organs: No data available.

3. COMPOSITION / INFORMATION ON INGREDIENT

Chemical Name	CAS #	EINEC #	% Composition
hexane	110-54-3	203-777-6	99.900000
aroclor® 1248	12672-29-6		0.100000

4. FIRST-AID MEASURES

Inhalation: Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen.

Eyes: Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention.

Skin Contact: Wash with soap and water. Remove contaminated clothing and launder. Get medical attention if irritation develops or persists.

Ingestion: Do not induce vomiting and seek medical attention immediately. Drink two glasses of water or milk to dilute. Provide medical care provider with this SDS.

5. FIRE- FIGHTING MEASURES

Extinguishing Media: Use alcohol resistant foam, carbon dioxide, or dry chemical extinguishing agents. Water spray or fog may also be effective for extinguishing if swept across the base of the fire. Water can also be used to absorb heat and keep exposed material from being damaged by fire.

Fire and/or Explosion Hazards: Vapors may be ignited by heat, sparks, flames or other sources of ignition at or above the low flash point giving rise to a Class B fire. Vapors are heavier than air and may travel to a source of ignition and flash back

Fire Fighting Methods and Protection: Do not enter fire area without proper protection including self-contained toxic breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products. Flammable component(s) of this material may be lighter than water and burn while floating on the surface. Use water spray/fog for cooling.

Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Equipment: Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.

Methods for Clean-up: Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay.

Gather and store in a sealed container pending a waste disposal evaluation.

7. HANDLING AND STORAGE

Handling Technical Measures and Precautions: Harmful or irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. Use spark-proof tools and explosion-proof equipment

Storage Technical Measures and Conditions: Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed. Keep away from sources of ignition

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

United States:

Chemical Name	CAS No.	IDLH	ACGIH STEL	ACGIH TLV-TWA	OSHA Exposure Limit
hexane	110-54-3	1100 ppm IDLH (10% LEL)	1000 ppm	50 ppm TWA	500 ppm TWA; 1800 mg/m3 TWA
aroclor® 1248	12672-29-6	ND		No TLV	No data available.

Personal Protection:

Engineering Measures: Local exhaust ventilation is recommended when generating excessive levels of vapors from handling or thermal processing.

Respiratory Protection: Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms.

Eye Protection: Wear chemically resistant safety glasses with side shields when handling this product. Do not wear contact lenses.

Skin Protection: Wear protective gloves. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance, color:	No data available.
Odor:	Mild
Physical State:	No data available.
pH:	No data available.
Vapor Pressure:	No data available.
Vapor Density:	2.97 (air = 1)
Boiling Point:	No data available.
Melting Point:	-95 °C Melting Point
Flash Point:	-8
Flammability:	Highly Flammable
Upper Flammable/Explosive Limit, % in air:	No data available.
Lower Flammable/Explosive Limit, % in air:	No data available.
Autoignition Temperature:	No data available. deg C
Decomposition Temperature:	No data available.
Specific Gravity:	0.672 g/cm3 at 15 °C
Evaporation Rate:	No data available.
Odor Threshold:	No data available.
Solubility:	Negligible; 0-1%
Partition Coefficient: n-octanol in water:	No data available.
VOC % by weight:	0
Molecular Weight:	No data available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions.
Conditions to Avoid:	No data available.
Materials to Avoid / Chemical Incompatiability:	Strong oxidizing agents
Hazardous Decomposition Products:	No data available.

11. TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation Contact Absorption Ingestion

Target Organs Potentially Affected By Exposure: Eyes, Central nervous system stimulation, Respiratory Tract, Skin, Peripheral Nervous System

Chemical Interactions That Change Toxicity: None Known

Immediate (Acute) Health Effects by Route of Exposure:

Inhalation Irritation: Can cause severe respiratory irritation, dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.

Skin Contact: Can cause moderate skin irritation, defatting, and dermatitis. Not likely to cause permanent damage.

Skin Absorption: May cause irritation and minor systemic damage.Harmful if absorbed through the skin.

Eye Contact: Can cause moderate irritation, tearing and reddening, but not likely to permanently injure eye tissue.

Ingestion Irritation: Irritating to mouth, throat, and stomach. Can cause abdominal discomfort, nausea, vomiting and diarrhea.Harmful if swallowed.

Ingestion Toxicity: Toxic if swallowed. May cause target organ failure and/or death.

Long-Term (Chronic) Health Effects:

Carcinogenicity: No data.

Reproductive and Developmental Toxicity: No data available to indicate product or any components present at greater than 0.1% may cause birth defects.

Inhalation: Upon prolonged and/or repeated exposure, can cause severe respiratory irritation, dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.

Skin Contact: Upon prolonged or repeated contact, can cause moderate skin irritation, defatting, and dermatitis. Not likely to cause permanent damage.

Skin Absorption: Upon prolonged or repeated exposure, harmful if absorbed through the skin. May cause minor systemic damage.

Component Toxicological Data:

NIOSH:

Chemical Name	CAS No.	LD50/LC50
n-Hexane	110-54-3	Oral LD50 Rat 25 g/kg

Component Carcinogenic Data:

OSHA:

Chemical Name	CAS No.
No data available.	

ACGIH:

Chemical Name	CAS No.
No data available.	

NIOSH:

Chemical Name	CAS No.
No data available.	

NTP:

Chemical Name	CAS No.
No data available.	

IARC:

Chemical Name	CAS No.	Group No.
No data.		Group 1
No data.		Group 2A
No data.		Group 2B

12. ECOLOGICAL INFORMATION

Overview: Moderate ecological hazard. This product may be dangerous to plants and/or wildlife.

Mobility: No data

Persistence: No data

Bioaccumulation: No data

Degradability: No data

Ecological Toxicity Data: No data available.

13. DISPOSAL CONSIDERATIONS

Waste Description of Spent Product: Spent or discarded material is a hazardous waste.
Disposal Methods: Dispose of by incineration following Federal, State, Local, or Provincial regulations.
Waste Disposal of Packaging: Comply with all Local, State, Federal, and Provincial Environmental Regulations.

14. TRANSPORTATION INFORMATION

United States:
DOT Proper Shipping Name: Hexanes
UN Number: UN1208
Hazard Class: 3
Packing Group: II

International:
IATA Proper Shipping Name: Hexanes
UN Number: UN1208
Hazard Class: 3
Packing Group: II

Marine Pollutant: Yes

Chemical Name	CAS#	Marine Pollutant	Severe Marine Pollutant
hexane	110-54-3	Y	N

15. REGULATORY INFORMATION

United States:

Chemical Name	CAS#	CERCLA	SARA 313	SARA EHS 313	TSCA
hexane	110-54-3	X	X	-	X
aroclor® 1248	12672-29-6	X	-	-	-

The following chemicals are listed on CA Prop 65:

Chemical Name	CAS #	Regulation

State Right To Know Listing:

Chemical Name	CAS#	New Jersey	Massachusetts	Pennsylvania	California
hexane	110-54-3	X	X	X	-
aroclor® 1248	12672-29-6	-	X	X	X

16. OTHER INFORMATION

Prior Version Date: 11/04/14
Other Information: Any changes to the SDS compared to previous versions are marked by a vertical line in front of the concerned paragraph.
References: No data available.
Disclaimer: Restek Corporation provides the descriptions, data and information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. It is provided for your guidance only. Because many factors may affect processing or application/use, Restek Corporation recommends you perform an assessment to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either expressed or implied, including fitness for a particular purpose, are made regarding prodcuts described, data or information set forth. In no case shall the descriptions, information, or data provided be considered a part of our terms and conditions of sale. Further, the descriptions, data and information furnished hereunder are given gratis. No obligation or liability for the description, data and information given are assumed. All such being given and accepted at your risk.

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32010.SEC **Lot No.:** A0124143

Description : Aroclor® 1248 Standard

Aroclor® 1248 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2023 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1248	1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 12672-29-6.SEC (Lot 106-248)		+/- 31.9609	µg/mL	Unstressed
	Purity ----%		+/- 41.7443	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

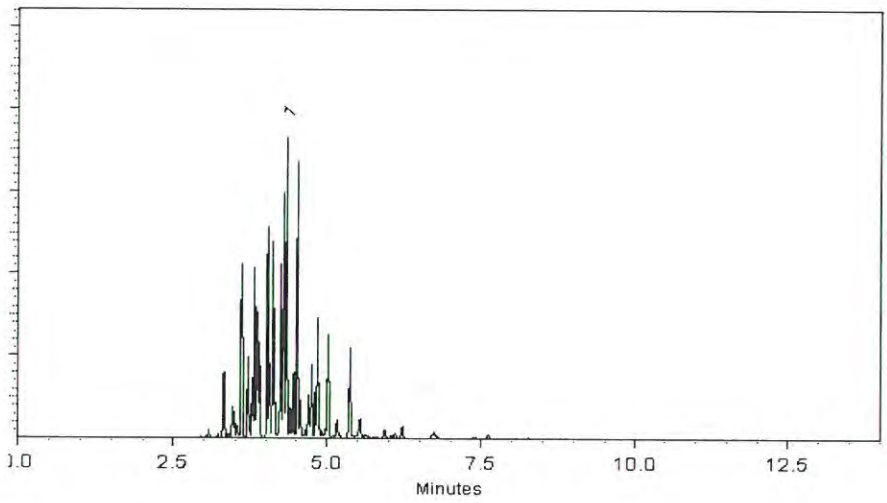
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician **Date Mixed:** 12-Jan-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 16-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SG 1660 ICV_00017

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039.SEC **Lot No.:** A0133256

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016		1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 12674-11-2.SEC	(Lot NTO1016)		+/- 31.9609	µg/mL	Unstressed
	Purity ----%			+/- 41.7443	µg/mL	Stressed
2	Aroclor 1260		1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 11096-82-5.SEC	(Lot 021-020-1A)		+/- 31.8340	µg/mL	Unstressed
	Purity ----%			+/- 41.5787	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Received 6/14/19

Reagent

SG 42/68 STK_00005

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Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569747 **Lot No.:** A0133093

Description : PCB-1242/1268 Standard

PCB-1242/1268 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1242	1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 53469-21-9 (Lot 01141-A)		+/- 31.9609	µg/mL	Unstressed
	Purity ----%		+/- 41.7443	µg/mL	Stressed
2	Aroclor 1268	1,000.0 µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 11100-14-4 (Lot 2743900)		+/- 31.7072	µg/mL	Unstressed
	Purity ----%		+/- 41.4130	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

3745070
ID: SG 42/68 STK_00005
Exp. 03/31/24 Prpd: LSH
Aroclors 1242/1268 @ 1000

Received 8/10/18

Reagent

SG1016/1260MX_00013

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039 **Lot No.:** A0134815

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016 **CAS #** 12674-11-2 (Lot 164887) **Purity** ----%	1,001.3 µg/mL	+/- 5.8348 +/- 31.7260 +/- 41.4488	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Aroclor 1260 **CAS #** 11096-82-5 (Lot 155463) **Purity** ----%	1,000.0 µg/mL	+/- 5.8275 +/- 31.6864 +/- 41.3971	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

3754227
ID: SG1016/1260MX_00013
Exp: 05/31/24 Prpd: LSH
Aroclor1016/1260 Stock Mi

Received 8/10/18

Reagent

SG1221/1254_00007

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569745 **Lot No.:** A0131802

Description : PCB-1221/1254 Standard

PCB-1221/1254 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1221		1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 11104-28-2	(Lot 2781200)		+/- 31.8975	µg/mL	Unstressed
	Purity ----%			+/- 41.6615	µg/mL	Stressed
2	Aroclor 1254		1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 11097-69-1	(Lot 124-191-B)		+/- 31.7706	µg/mL	Unstressed
	Purity ----%			+/- 41.4958	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

3745059
ID: SG1221/1254_00007
Exp. 01/31/24 Prpd: LSH
1221/1254 stock @ 1000ug/

RECIEVED 8/10/18
LSH

Reagent

SG1221ICV@1.0_00025

Report Date: 19-Oct-2018 10:24:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Canton
ICV, ICal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101844.D
Lims ID: ICV 1221
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 09:26:48 ALS Bottle#: 44 Worklist Smp#: 44
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-044
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082 IS
Last Update: 19-Oct-2018 07:53:25 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0322

Start Cal Date: 18-Oct-2018 15:16:26
End Cal Date: 19-Oct-2018 01:11:38

Detector 1: GC ECD1A

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 PCB-1221	0.5000	0.4615	8.0	20.0	92.3	
3 PCB-1221-1	0.5000	0.4825	-3.5	20.0	96.5	
3 PCB-1221-2	0.5000	0.4592	-8.2	20.0	91.8	
3 PCB-1221-3	0.5000	0.4428	-11.4	20.0	88.6	

Detector 2: GC ecd2b

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 PCB-1221	0.5000	0.4427	11.0	20.0	88.5	
3 PCB-1221-1	0.5000	0.4596	-8.1	20.0	91.9	
3 PCB-1221-2	0.5000	0.4382	-12.4	20.0	87.6	
3 PCB-1221-3	0.5000	0.4303	-13.9	20.0	86.1	

Reagent

SG1232ICV@1.0_00023

Preliminary Report

TestAmerica Canton
ICV, ICal Verification Report

Data File:	\\ChromNA\Canton\ChromData\A2HP11\20180702-77561.b\P11062942.D				
Lims ID:	icv 1232				
Client ID:					
Sample Type:	ICV				
Inject. Date:	03-Jul-2018 07:15:48	ALS Bottle#:	42	Worklist Smp#:	42
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	240-0077561-042				
Operator ID:		Instrument ID:	A2HP11		
Sublist:					
Method:	\\ChromNA\Canton\ChromData\A2HP11\20180702-77561.b\PCB11 IS.m				
Limit Group:	GC 608 PCB IS				
Last Update:	03-Jul-2018 07:34:29	Calib Date:	03-Jul-2018 02:04:18		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A2HP11\20180702-77561.b\P11062933.D				
Column 1 :			Det: GC ECD1A		
Column 2 :			Det: GC ecd2b		
Process Host:	XAWRK019				
Start Cal Date:	02-Jul-2018 14:47:38				
End Cal Date:	03-Jul-2018 02:04:18				

Detector 1: GC ECD1A

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
4 PCB-1232	0.5000	0.5280	6.0	20.0	105.6	
4 PCB-1232-1	0.5000	0.5628	12.6	20.0	112.6	
4 PCB-1232-2	0.5000	0.5836	16.7	20.0	116.7	
4 PCB-1232-3	0.5000	0.4992	-0.2	20.0	99.8	
4 PCB-1232-4	0.5000	0.5237	4.7	20.0	104.7	
4 PCB-1232-5	0.5000	0.4707	-5.9	20.0	94.1	

Detector 2: GC ecd2b

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
4 PCB-1232	0.5000	0.5783	16.0	20.0	115.7	
4 PCB-1232-1	0.5000	0.5846	16.9	20.0	116.9	
4 PCB-1232-2	0.5000	0.6117	* 22.3	20.0	122.3	
4 PCB-1232-3	0.5000	0.5506	10.1	20.0	110.1	
4 PCB-1232-4	0.5000	0.5520	10.4	20.0	110.4	
4 PCB-1232-5	0.5000	0.5926	18.5	20.0	118.5	

Reagent

SG1242ICV@1.0_00024

Preliminary Report

TestAmerica Canton
ICV, ICal Verification Report

Data File:	\\ChromNA\Canton\ChromData\A2HP11\20180702-77561.b\P11062946.D				
Lims ID:	icv 1242				
Client ID:					
Sample Type:	ICV				
Inject. Date:	03-Jul-2018 08:50:03	ALS Bottle#:	46	Worklist Smp#:	45
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:					
Operator ID:		Instrument ID:	A2HP11		
Sublist:					
Method:	\\ChromNA\Canton\ChromData\A2HP11\20180702-77561.b\PCB11 IS.m				
Limit Group:	GC 8082 IS				
Last Update:	03-Jul-2018 09:34:56	Calib Date:	03-Jul-2018 02:04:18		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A2HP11\20180702-77561.b\P11062933.D				
Column 1 :			Det: GC ECD1A		
Column 2 :			Det: GC ecd2b		
Process Host:	XAWRK019				
Start Cal Date:	02-Jul-2018 14:47:38				
End Cal Date:	03-Jul-2018 02:04:18				

Detector 1: GC ECD1A

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
5 PCB-1242	0.5000	0.5437	9.0	20.0	108.7	
5 PCB-1242-1	0.5000	0.5589	11.8	20.0	111.8	
5 PCB-1242-2	0.5000	0.5287	5.7	20.0	105.7	
5 PCB-1242-3	0.5000	0.5198	4.0	20.0	104.0	
5 PCB-1242-4	0.5000	0.5469	9.4	20.0	109.4	
5 PCB-1242-5	0.5000	0.5645	12.9	20.0	112.9	

Detector 2: GC ecd2b

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
5 PCB-1242	0.5000	0.5534	11.0	20.0	110.7	
5 PCB-1242-1	0.5000	0.5578	11.6	20.0	111.6	
5 PCB-1242-2	0.5000	0.5504	10.1	20.0	110.1	
5 PCB-1242-3	0.5000	0.5629	12.6	20.0	112.6	
5 PCB-1242-4	0.5000	0.5596	11.9	20.0	111.9	
5 PCB-1242-5	0.5000	0.5365	7.3	20.0	107.3	

Reagent

SG1248@0.5ppm_00036

Preliminary Report

TestAmerica Canton
CCV, Cal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP10\20180813-78835.b\P10081309.D
Lims ID: 1248
Client ID:
Sample Type: CCV
Inject. Date: 13-Aug-2018 08:15:53 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0078835-009
Operator ID: Instrument ID: A2HP10
Sublist: chrom-PCB10 IS*sub3

Method: \\ChromNA\Canton\ChromData\A2HP10\20180813-78835.b\PCB10 IS.m
Limit Group: GC 8082 IS
Last Update: 13-Aug-2018 10:19:48 Calib Date: 01-Jun-2018 03:19:17
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP10\20180531-76471.b\P10053133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK019

Start Cal Date: 31-May-2018 18:06:49
End Cal Date: 01-Jun-2018 03:19:17

Detector 1: GC ECD1A

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
7 PCB-1248	0.5000		0.4974		-0.5	15	99
7 PCB-1248-1	0.013234	0.001		0.014064	6.3	15	106
7 PCB-1248-2	0.036714	0.003		0.034832	-5.1	15	95
7 PCB-1248-3	0.038326	0.001		0.037724	-1.6	15	98
7 PCB-1248-4	0.029296	0.0		0.028137	-4.0	15	96
7 PCB-1248-5	0.019151	0.0		0.019483	1.7	15	102

Start Cal Date: 31-May-2018 18:06:49
End Cal Date: 01-Jun-2018 03:19:17

Detector 2: GC ecd2b

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
7 PCB-1248	0.5000		0.4451		-11.0	15	89
7 PCB-1248-1	0.016716	0.001		0.014483	-13.4	15	87
7 PCB-1248-2	0.040804	0.002		0.036573	-10.4	15	90
7 PCB-1248-3	0.035307	0.001		0.032352	-8.4	15	92
7 PCB-1248-4	0.039610	0.0		0.037302	-5.8	15	94
7 PCB-1248-5	0.021551	0.0		0.017887	*-17.0	15	83

Reagent

SG1248@0.5ppm_00037

Report Date: 18-Oct-2018 07:54:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Canton

CCV, Cal Verification Report

Ccal Sample: \\ChromNA\Canton\ChromData\A2HP13\20181018-80952.b\P13101809.D

Lims ID: NEW 1248 0.5 Inj. Date: 18-Oct-2018 07:36:28

Worklist ID: 240-0080952-009 Sublist: chrom-PCB13 IS*sub3

Method: PCB13 IS Instrument: A2HP13

Detector 1: GC ECD1A

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D
7 PCB-1248-1	0.01435		-9.5	15.0	0.01435		-9.5		0.01435		-9.5		0.01435		-9.5	
7 PCB-1248-2	0.02309		-9.8	15.0	0.02309		-9.8		0.02309		-9.8		0.02309		-9.8	
7 PCB-1248-3	0.03196		-11.5	15.0	0.03196		-11.5		0.03196		-11.5		0.03196		-11.5	
7 PCB-1248-4	0.02765		-10.6	15.0	0.02765		-10.6		0.02765		-10.6		0.02765		-10.6	
7 PCB-1248-5	0.01808		-6.8	15.0	0.01808		-6.8		0.01808		-6.8		0.01808		-6.8	

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
Number of Failures	0	0	0	0
Number of Global Failures	0	0	0	0
Grand Mean/Limit	9.6	9.6	9.6	9.6

Detector 2: GC ecd2b

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D
7 PCB-1248-1	0.01465		-9.6	15.0	0.01465		-0.09		0.01465		-9.6		0.01465		-9.6	
7 PCB-1248-2	0.02071		-11.6	15.0	0.02071		-2.9		0.02071		-11.6		0.02071		-11.6	
7 PCB-1248-3	0.03239		-0.8	15.0	0.03239		-0.8		0.03239		-0.8		0.03239		-0.8	
7 PCB-1248-4	0.03588		-4.5	15.0	0.03588		-4.5		0.03588		-4.5		0.03588		-4.5	
7 PCB-1248-5	0.02019		0.9	15.0	0.02019		0.9		0.02019		0.9		0.02019		0.9	

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
Number of Failures	0	0	0	0
Number of Global Failures	0	0	0	0
Grand Mean/Limit	5.5	1.8	5.5	5.5

Reagent

SG1248_00012

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32010 **Lot No.:** A0134182

Description : Aroclor® 1248 Standard

Aroclor® 1248 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1248	1,001.5 µg/mL	+/- 5.8774	µg/mL	Gravimetric
	CAS # 12672-29-6 (Lot W-108-07)		+/- 31.7415	µg/mL	Unstressed
	Purity ----%		+/- 41.4650	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

RECEIVED 8/10/18 CR

3742806
ID: SG1248_00012
Exp: 04/30/24 Prpd: LSH
Restek 1248 stock 1000 ug

Reagent

SG1248ICV@1.0_00027

Report Date: 17-Sep-2018 08:37:24 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Canton
ICV, ICal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP10\20180914-79876.b\P10091644.D
Lims ID: icv 1248
Client ID:
Sample Type: ICV
Inject. Date: 17-Sep-2018 08:08:11 ALS Bottle#: 44 Worklist Smp#: 44
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A2HP10
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP10\20180914-79876.b\PCB10 IS.m
Limit Group: GC 608 PCB IS
Last Update: 17-Sep-2018 08:35:40 Calib Date: 17-Sep-2018 00:14:10
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP10\20180914-79876.b\P10091633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK011

Start Cal Date: 16-Sep-2018 15:03:34
End Cal Date: 17-Sep-2018 00:14:10

Detector 1: GC ECD1A

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
7 PCB-1248	0.5000	0.4429	11.0	20.0	88.6	
7 PCB-1248-1	0.5000	0.4597	-8.1	20.0	91.9	
7 PCB-1248-2	0.5000	0.3687	*-26.3	20.0	73.7	
7 PCB-1248-3	0.5000	0.4816	-3.7	20.0	96.3	
7 PCB-1248-4	0.5000	0.4710	-5.8	20.0	94.2	
7 PCB-1248-5	0.5000	0.4338	-13.2	20.0	86.8	

Detector 2: GC ecd2b

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
7 PCB-1248	0.5000	0.4751	5.0	20.0	95.0	
7 PCB-1248-1	0.5000	0.4821	-3.6	20.0	96.4	
7 PCB-1248-2	0.5000	0.5347	6.9	20.0	106.9	
7 PCB-1248-3	0.5000	0.4430	-11.4	20.0	88.6	
7 PCB-1248-4	0.5000	0.5233	4.7	20.0	104.7	
7 PCB-1248-5	0.5000	0.3926	*-21.5	20.0	78.5	

Reagent

SG1254ICV@1.0_00024

Report Date: 19-Oct-2018 09:05:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Canton
ICV, ICal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101842.D
Lims ID: icv 1254
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 08:35:33 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-042
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082 IS
Last Update: 19-Oct-2018 09:05:23 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0322

Start Cal Date: 18-Oct-2018 15:16:26
End Cal Date: 19-Oct-2018 01:11:38

Detector 1: GC ECD1A

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
8 PCB-1254	0.5000	0.4823	4.0	20.0	96.5	
8 PCB-1254-1	0.5000	0.4621	-7.6	20.0	92.4	
8 PCB-1254-2	0.5000	0.4666	-6.7	20.0	93.3	
8 PCB-1254-3	0.5000	0.4806	-3.9	20.0	96.1	
8 PCB-1254-4	0.5000	0.4974	-0.5	20.0	99.5	
8 PCB-1254-5	0.5000	0.5046	0.9	20.0	100.9	

Detector 2: GC ecd2b

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
8 PCB-1254	0.5000	0.4388	12.0	20.0	87.8	
8 PCB-1254-1	0.5000	0.4234	-15.3	20.0	84.7	
8 PCB-1254-2	0.5000	0.4423	-11.5	20.0	88.5	
8 PCB-1254-3	0.5000	0.4264	-14.7	20.0	85.3	
8 PCB-1254-4	0.5000	0.4329	-13.4	20.0	86.6	
8 PCB-1254-5	0.5000	0.4689	-6.2	20.0	93.8	

Reagent

SG1254ICV@1.0_00025

Report Date: 07-Nov-2018 08:03:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Canton
ICV, ICal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110643.D
Lims ID: icv 1254
Client ID:
Sample Type: ICV
Inject. Date: 07-Nov-2018 07:38:47 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A2HP4
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 608 PCB IS
Last Update: 07-Nov-2018 08:03:45 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0322

Start Cal Date: 06-Nov-2018 13:25:16
End Cal Date: 06-Nov-2018 23:56:16

Detector 1: GC ECD1A

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
8 PCB-1254	0.5000	0.4892	2.0	20.0	97.8	
8 PCB-1254-1	0.5000	0.4592	-8.2	20.0	91.8	
8 PCB-1254-2	0.5000	0.4751	-5.0	20.0	95.0	
8 PCB-1254-3	0.5000	0.5037	0.7	20.0	100.7	
8 PCB-1254-4	0.5000	0.4979	-0.4	20.0	99.6	
8 PCB-1254-5	0.5000	0.5099	2.0	20.0	102.0	

Detector 2: GC ecd2b

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
8 PCB-1254	0.5000	0.4700	6.0	20.0	94.0	
8 PCB-1254-1	0.5000	0.4568	-8.6	20.0	91.4	
8 PCB-1254-2	0.5000	0.4606	-7.9	20.0	92.1	
8 PCB-1254-3	0.5000	0.4561	-8.8	20.0	91.2	
8 PCB-1254-4	0.5000	0.4868	-2.6	20.0	97.4	
8 PCB-1254-5	0.5000	0.4898	-2.0	20.0	98.0	

Reagent

SG1660@.05PPM_00024

Report Date: 22-Aug-2018 12:17:03 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Canton

CCV, Cal Verification Report

Ccal Sample: \\ChromNA\Canton\ChromData\A2HP4\20180822-79137.b\P4082214.D

Lims ID: ccv 1660 0.5 Inj. Date: 22-Aug-2018 11:58:44

Worklist ID: 240-0079137-014 Sublist: chrom-PCB4 is*sub5

Method: PCB4 is Instrument: A2HP4

Detector 1: GC ECD1A

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Ma %I
2 Tetrachloro-m-xylene	1.22464		-2.2	15.0	1.22464		-2.2		1.22464		-2.2		1.22464		-2.2	
5 PCB-1016-1	0.02431		6.2	15.0	0.02431		6.2		0.02431		6.2		0.02431		6.2	
5 PCB-1016-2	0.03979		2.0	15.0	0.03979		2.0		0.03979		2.0		0.03979		2.0	
5 PCB-1016-3	0.08565		1.1	15.0	0.08565		1.1		0.08565		1.1		0.08565		1.1	
5 PCB-1016-4	0.03867		2.8	15.0	0.03867		2.8		0.03867		2.8		0.03867		2.8	
5 PCB-1016-5	0.01611		4.2	15.0	0.01611		4.2		0.01611		4.2		0.01611		4.2	
0 PCB-1260-1	0.04271		-1.9	15.0	0.04271		-1.9		0.04271		-1.9		0.04271		-1.9	
0 PCB-1260-2	0.06871		0.5	15.0	0.06871		0.5		0.06871		0.5		0.06871		0.5	
0 PCB-1260-3	0.05212		*18.8	*15.0	0.05212		-4.2		0.05212		18.8		0.05212		18.8	
0 PCB-1260-4	0.09757		-5.2	15.0	0.09757		-5.2		0.09757		-5.2		0.09757		-5.2	
0 PCB-1260-5	0.05062		-0.2	15.0	0.05062		-0.2		0.05062		-0.2		0.05062		-0.2	
12 DCB Decachlorobipheny	1.04528		8.7	15.0	1.04528		8.7		1.04528		8.7		1.04528		8.7	
6 1260 Res 1	ND				ND				ND				ND			
3 1260 Res 2																
5 1260 Res 3	ND				ND				ND				ND			

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
mber of Failures	1	0	0	0
mber of Global Failures	0	0	0	0
and Mean/Limit	4.5	3.3	4.5	4.5

Detector 2: GC ecd2b

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min RF	%D	Max. %D	Ccal RF	Min RF	%D	Max. %D	Ccal RF	Min. RF	%D	Ma %I
2 Tetrachloro-m-xylene	1.31898		1.1	15.0	1.31898		1.1		1.31898		1.1		1.31898		1.1	
5 PCB-1016-1	0.02535		2.4	15.0	0.02535		2.4		0.02535		2.4		0.02535		2.4	
5 PCB-1016-2	0.05078		10.4	15.0	0.05078		10.4		0.05078		10.4		0.05078		10.4	
5 PCB-1016-3	0.09157		2.2	15.0	0.09157		2.2		0.09157		2.2		0.09157		2.2	
5 PCB-1016-4	0.03914		5.3	15.0	0.03914		5.3		0.03914		5.3		0.03914		5.3	
5 PCB-1016-5	0.01890		*16.7	*15.0	0.01890		16.7		0.01890		16.7		0.01890		16.7	
0 PCB-1260-1	0.05427		12.2	15.0	0.05427		12.2		0.05427		12.2		0.05427		12.2	
0 PCB-1260-2	0.05808		1.4	15.0	0.05808		1.4		0.05808		1.4		0.05808		1.4	
0 PCB-1260-3	0.05897		*25.1	*15.0	0.05897		25.1		0.05897		25.1		0.05897		25.1	
0 PCB-1260-4	0.11897		-1.1	15.0	0.11897		-1.1		0.11897		-1.1		0.11897		-1.1	
0 PCB-1260-5	0.08494		3.2	15.0	0.08494		3.2		0.08494		3.2		0.08494		3.2	
12 DCB Decachlorobipheny	1.42090		13.3	15.0	1.42090		-18.5		1.42090		13.3		1.42090		13.3	
6 1260 Res 1	ND				ND				ND				ND			
3 1260 Res 2																
5 1260 Res 3	ND				ND				ND				ND			

Preliminary Report

Method: \\ChromNA\Canton\ChromData\A2HP4\20180822-79137.b\PCB4 is.m

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
mber of Failures	2	0	0	0
mber of Global Failures	0	0	0	0
and Mean/Limit	7.9	8.3	7.9	7.9

Reagent

SG1660@0.5PPM_00083

Preliminary Report

TestAmerica Canton
CCV, Cal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20180821-79126.b\P13082109.D
Lims ID: NEW CCV 1660
Client ID:
Sample Type: CCV
Inject. Date: 21-Aug-2018 18:01:29 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0079126-009
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP13\20180821-79126.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 22-Aug-2018 05:56:33 Calib Date: 24-Jul-2018 00:31:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP13\20180723-78236.b\P13072333.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK023

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 1: GC ECD1A

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
$ 2 Tetrachloro-m-xylene	1.023026	0.0		0.974198	-4.8	20	95
6 PCB-1016	0.5000		0.4660		-6.8	20	93
6 PCB-1016-1	0.018029	-0.002		0.016314	-9.5	20	90
6 PCB-1016-2	0.036356	0.0		0.033409	-8.1	20	92
6 PCB-1016-3	0.077581	0.0		0.072822	-6.1	20	94
6 PCB-1016-4	0.032675	0.0		0.030348	-7.1	20	93
6 PCB-1016-5	0.013849	-0.002		0.013411	-3.2	20	97
10 PCB-1260	0.5000		0.4699		-6.0	20	94
10 PCB-1260-1	0.045413	-0.001		0.041640	-8.3	20	92
10 PCB-1260-2	0.069771	-0.001		0.064974	-6.9	20	93
10 PCB-1260-3	0.074672	0.0		0.072496	-2.9	20	97
10 PCB-1260-4	0.106684	-0.001		0.101578	-4.8	20	95
10 PCB-1260-5	0.054316	0.0		0.050422	-7.2	20	93
$ 12 DCB Decachlorobiphenyl	1.018870	0.001		1.008625	-1.0	20	99
16 1260 Res 1	No Ccal Rslts	0.006		Reagent Dsble			
13 1260 Res 2	No Ccal Rslts	0.0		Reagent Dsble			
15 1260 Res 3	No Ccal Rslts	0.007		Reagent Dsble			

(I) Fails an Initial Calibration Test

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 2: GC ecd2b

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec

Report Date: 22-Aug-2018 05:56:36 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20180821-79126.b\P13082109.D

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
$ 2 Tetrachloro-m-xylene	1.003368	-0.002		0.923903	-7.9	20	92
6 PCB-1016	0.5000		0.4499		-10.0	20	90
6 PCB-1016-1	0.018503	-0.002		0.016076	-13.1	20	87
6 PCB-1016-2	0.036461	-0.002		0.033044	-9.4	20	91
6 PCB-1016-3	0.074630	-0.002		0.068079	-8.8	20	91
6 PCB-1016-4	0.027960	-0.003		0.024174	-13.5	20	86
6 PCB-1016-5	0.013643	-0.002		0.012918	-5.3	20	95
10 PCB-1260	0.5000		0.4526		-9.5	20	91
10 PCB-1260-1	0.042876	-0.002		0.037084	-13.5	20	86
10 PCB-1260-2	0.050167	-0.002		0.044616	-11.1	20	89
10 PCB-1260-3	0.038230	0.0		0.035618	-6.8	20	93
10 PCB-1260-4	0.093263	-0.002		0.084709	-9.2	20	91
10 PCB-1260-5	0.064821	-0.001		0.060422	-6.8	20	93
$ 12 DCB Decachlorobiphenyl	0.881600	-0.002		0.841184	-4.6	20	95
16 1260 Res 1	No Ccal Rslts	0.0		Reagent Dsble			
13 1260 Res 2	No Ccal Rslts	-0.001		Reagent Dsble			
15 1260 Res 3	No Ccal Rslts	0.0		Reagent Dsble			

(I) Fails an Initial Calibration Test

Reagent

SG1660@0.5PPM_00084

Preliminary Report

TestAmerica Canton
CCV, Cal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20180914-79840.b\P13091409.D
Lims ID: NEW 1660
Client ID:
Sample Type: CCV
Inject. Date: 14-Sep-2018 07:29:25 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0079840-009
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP13\20180914-79840.b\PCB13 IS.m
Limit Group: GC 8082 IS
Last Update: 14-Sep-2018 11:41:51 Calib Date: 24-Jul-2018 00:31:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP13\20180723-78236.b\P13072333.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK005

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 1: GC ECD1A

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
$ 2 Tetrachloro-m-xylene	1.023026	0.0		0.970476	-5.1	15	95
6 PCB-1016	0.5000		0.4688		-6.2	15	94
6 PCB-1016-1	0.018029	-0.001		0.016189	-10.2	15	90
6 PCB-1016-2	0.036356	0.0		0.033762	-7.1	15	93
6 PCB-1016-3	0.077581	0.0		0.074170	-4.4	15	96
6 PCB-1016-4	0.032675	0.0		0.030975	-5.2	15	95
6 PCB-1016-5	0.013849	-0.001		0.013262	-4.2	15	96
10 PCB-1260	0.5000		0.4689		-6.2	15	94
10 PCB-1260-1	0.045413	-0.002		0.041796	-8.0	15	92
10 PCB-1260-2	0.069771	0.001		0.064293	-7.9	15	92
10 PCB-1260-3	0.074672	0.0		0.071125	-4.7	15	95
10 PCB-1260-4	0.106684	-0.001		0.101240	-5.1	15	95
10 PCB-1260-5	0.054316	-0.001		0.051374	-5.4	15	95
$ 12 DCB Decachlorobiphenyl	1.018870	0.0		1.011762	-0.7	15	99
16 1260 Res 1	*ND						
13 1260 Res 2	No Ccal Rslts	-0.001		Reagent Dsble			
15 1260 Res 3	No Ccal Rslts	-0.001		Reagent Dsble			

(I) Fails an Initial Calibration Test

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 2: GC ecd2b

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec

Report Date: 14-Sep-2018 11:42:34 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20180914-79840.b\P13091409.D

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
$ 2 Tetrachloro-m-xylene	1.003368	-0.001		0.926935	-7.6	15	92
6 PCB-1016	0.5000		0.4753		-4.9	15	95
6 PCB-1016-1	0.018503	-0.001		0.016113	-12.9	15	87
6 PCB-1016-2	0.036461	0.0		0.033250	-8.8	15	91
6 PCB-1016-3	0.074630	-0.002		0.070499	-5.5	15	94
6 PCB-1016-4	0.027960	-0.002		0.030112	7.7	15	108
6 PCB-1016-5	0.013643	-0.001		0.012945	-5.1	15	95
10 PCB-1260	0.5000		0.4645		-7.1	15	93
10 PCB-1260-1	0.042876	-0.001		0.037976	-11.4	15	89
10 PCB-1260-2	0.050167	-0.001		0.045963	-8.4	15	92
10 PCB-1260-3	0.038230	-0.001		0.036499	-4.5	15	95
10 PCB-1260-4	0.093263	-0.001		0.087315	-6.4	15	94
10 PCB-1260-5	0.064821	-0.001		0.061708	-4.8	15	95
$ 12 DCB Decachlorobiphenyl	0.881600	-0.001		0.835605	-5.2	15	95
16 1260 Res 1	*ND						
13 1260 Res 2	No Ccal Rslts	-0.001		Reagent Dsble			
15 1260 Res 3	No Ccal Rslts	-0.001		Reagent Dsble			

(I) Fails an Initial Calibration Test

Reagent

SG1660@0.5PPM_00085

Report Date: 05-Nov-2018 10:01:55 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Canton

CCV, Cal Verification Report

Ccal Sample: \\ChromNA\Canton\ChromData\A2HP10\20181105-81560.b\P10110509.D
Lims ID: new 1660
Worklist ID: 240-0081560-009
Method: PCB10 IS
Inj. Date: 05-Nov-2018 08:42:46
Sublist: chrom-PCB10 IS*sub5
Instrument: A2HP10

Detector 1: GC ECD1A

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D
$ 2 Tetrachloro-m-xylene	0.91637		-10.5	15.0	0.91637		-10.5	20.0	0.91637		-10.5		0.91637		-10.5	20.0
6 PCB-1016-1	0.01625		-14.8	15.0	0.01625		-5.1	15.0	0.01625		-5.1		0.01625		-14.8	20.0
6 PCB-1016-2	0.02463		*-22.8	*15.0	0.02463		*-22.8	*15.0	0.02463		-22.8		0.02463		*-22.8	*20.0
6 PCB-1016-3	0.07424		-4.3	15.0	0.07424		-4.3	15.0	0.07424		-4.3		0.07424		-4.3	20.0
6 PCB-1016-4	0.03158		-11.4	15.0	0.03158		-4.8	15.0	0.03158		-11.4		0.03158		-11.4	20.0
6 PCB-1016-5	0.03242		-1.7	15.0	0.03242		-1.7	15.0	0.03242		-1.7		0.03242		-1.7	20.0
10 PCB-1260-1	0.04286		0.7	15.0	0.04286		0.7	15.0	0.04286		0.7		0.04286		0.7	20.0
10 PCB-1260-2	0.08002		1.3	15.0	0.08002		1.3	15.0	0.08002		1.3		0.08002		1.3	20.0
10 PCB-1260-3	0.08149		0.6	15.0	0.08149		0.6	15.0	0.08149		0.6		0.08149		0.6	20.0
10 PCB-1260-4	0.11580		4.0	15.0	0.11580		4.0	15.0	0.11580		4.0		0.11580		4.0	20.0
10 PCB-1260-5	0.05717		4.3	15.0	0.05717		4.3	15.0	0.05717		4.3		0.05717		4.3	20.0
$ 12 DCB Decachlorobipheny	1.07447		0.2	15.0	1.07447		0.2	20.0	1.07447		0.2		1.07447		0.2	20.0
16 1260 Res 1																
13 1260 Res 2	ND				ND				ND				ND			
15 1260 Res 3																

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
Number of Failures	1	1	0	1
Number of Global Failures	0	0	0	0
Grand Mean/Limit	6.4	5.0	5.6	6.4

Detector 2: GC ecd2b

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D
$ 2 Tetrachloro-m-xylene	0.95567		-9.9	15.0	0.95567		-9.9	20.0	0.95567		-9.9		0.95567		-9.9	20.0
6 PCB-1016-1	0.01603		-12.1	15.0	0.01603		-4.2	15.0	0.01603		-12.1		0.01603		-12.1	20.0
6 PCB-1016-2	0.03202		-10.3	15.0	0.03202		-2.1	15.0	0.03202		-10.3		0.03202		-10.3	20.0
6 PCB-1016-3	0.07344		-1.7	15.0	0.07344		-1.7	15.0	0.07344		-1.7		0.07344		-1.7	20.0
6 PCB-1016-4	0.03065		-5.7	15.0	0.03065		-5.7	15.0	0.03065		-5.7		0.03065		-5.7	20.0
6 PCB-1016-5	0.01649		-4.5	15.0	0.01649		5.2	15.0	0.01649		-4.5		0.01649		-4.5	20.0
10 PCB-1260-1	0.03699		-8.0	15.0	0.03699		-8.0	15.0	0.03699		-8.0		0.03699		-8.0	20.0
10 PCB-1260-2	0.04444		-0.4	15.0	0.04444		-0.4	15.0	0.04444		-0.4		0.04444		-0.4	20.0
10 PCB-1260-3	0.06108		1.5	15.0	0.06108		1.5	15.0	0.06108		1.5		0.06108		1.5	20.0
10 PCB-1260-4	0.08972		2.4	15.0	0.08972		2.4	15.0	0.08972		2.4		0.08972		2.4	20.0
10 PCB-1260-5	0.06461		1.9	15.0	0.06461		1.9	15.0	0.06461		1.9		0.06461		1.9	20.0
$ 12 DCB Decachlorobipheny	0.86348		-2.5	15.0	0.86348		8.1	20.0	0.86348		-2.5		0.86348		-2.5	20.0
16 1260 Res 1																
13 1260 Res 2	ND				ND				ND				ND			
15 1260 Res 3																

Reagent

SG1660ICV@1.0_00037

Report Date: 19-Oct-2018 09:39:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Canton
ICV, ICal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101843.D
Lims ID: icv 1660
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 08:56:00 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-043
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082 IS
Last Update: 19-Oct-2018 09:39:12 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0322

Start Cal Date: 18-Oct-2018 15:16:26
End Cal Date: 19-Oct-2018 01:11:38

Detector 1: GC ECD1A

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
$ 2 Tetrachloro-m-xyle	0.0250	0.0239	-4.3	20.0	95.7	
6 PCB-1016	0.5000	0.4474	11.0	20.0	89.5	
6 PCB-1016-1	0.5000	0.5027	0.5	20.0	100.5	
6 PCB-1016-2	0.5000	0.4583	-8.3	20.0	91.7	
6 PCB-1016-3	0.5000	0.3471	*-30.6	20.0	69.4	
6 PCB-1016-4	0.5000	0.4797	-4.1	20.0	95.9	
6 PCB-1016-5	0.5000	0.4493	-10.1	20.0	89.9	
10 PCB-1260	0.5000	0.4802	4.0	20.0	96.0	
10 PCB-1260-1	0.5000	0.5169	3.4	20.0	103.4	
10 PCB-1260-2	0.5000	0.5296	5.9	20.0	105.9	
10 PCB-1260-3	0.5000	0.4265	-14.7	20.0	85.3	
10 PCB-1260-4	0.5000	0.4498	-10.0	20.0	90.0	
10 PCB-1260-5	0.5000	0.4780	-4.4	20.0	95.6	
$ 12 DCB Decachlorobiph	0.0250	0.0227	-9.3	20.0	90.7	

Report Date: 19-Oct-2018 09:39:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101843.D

Detector 2: GC ecd2b

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
$ 2 Tetrachloro-m-xyle	0.0250	0.0228	-8.9	20.0	91.1	
6 PCB-1016	0.5000	0.4404	12.0	20.0	88.1	
6 PCB-1016-1	0.5000	0.4751	-5.0	20.0	95.0	
6 PCB-1016-2	0.5000	0.4052	-19.0	20.0	81.0	
6 PCB-1016-3	0.5000	0.4422	-11.6	20.0	88.4	
6 PCB-1016-4	0.5000	0.4478	-10.4	20.0	89.6	
6 PCB-1016-5	0.5000	0.4315	-13.7	20.0	86.3	
10 PCB-1260	0.5000	0.4644	7.0	20.0	92.9	
10 PCB-1260-1	0.5000	0.5056	1.1	20.0	101.1	
10 PCB-1260-2	0.5000	0.5019	0.4	20.0	100.4	
10 PCB-1260-3	0.5000	0.4286	-14.3	20.0	85.7	
10 PCB-1260-4	0.5000	0.4445	-11.1	20.0	88.9	
10 PCB-1260-5	0.5000	0.4415	-11.7	20.0	88.3	
$ 12 DCB Decachlorobiph	0.0250	0.0231	-7.5	20.0	92.5	

Reagent

SG2154@0.5PPM_00041

Preliminary Report

TestAmerica Canton

CCV, Cal Verification Report

Ccal Sample: \\ChromNA\Canton\ChromData\A2HP13\20181009-80648.b\P13100912.D

Lims ID: new 1254 .5 Inj. Date: 09-Oct-2018 08:25:34

Worklist ID: 240-0080648-012 Sublist: chrom-PCB13 IS*sub4

Method: PCB13 IS Instrument: A2HP13

Detector 1: GC ECD1A

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Ma %I
PCB-1221-1	0.01053		1.2	15.0	0.01053		1.2		0.01053		3.8		0.01053		1.2	
PCB-1221-2	0.00690		0.6	15.0	0.00690		0.6		0.00690		0.6		0.00690		0.6	
PCB-1221-3	0.02524		1.3	15.0	0.02524		11.6		0.02524		1.3		0.02524		1.3	
PCB-1254-1	0.03118		0.2	15.0	0.03118		0.2		0.03118		0.2		0.03118		0.2	
PCB-1254-2	0.04325		-0.2	15.0	0.04325		-0.2		0.04325		-0.2		0.04325		-0.2	
PCB-1254-3	0.05965		2.3	15.0	0.05965		2.3		0.05965		2.3		0.05965		2.3	
PCB-1254-4	0.04287		4.3	15.0	0.04287		4.3		0.04287		4.3		0.04287		4.3	
PCB-1254-5	0.06301		4.4	15.0	0.06301		4.4		0.06301		4.4		0.06301		4.4	

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
mber of Failures	0	0	0	0
mber of Global Failures	0	0	0	0
and Mean/Limit	1.8	3.1	2.1	1.8

Detector 2: GC ecd2b

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Ma %I
PCB-1221-1	0.01070		-1.5	15.0	0.01070		10.6		0.01070		-1.5		0.01070		-1.5	
PCB-1221-2	0.00712		-1.9	15.0	0.00712		9.9		0.00712		-1.9		0.00712		-1.9	
PCB-1221-3	0.02494		-3.5	15.0	0.02494		9.6		0.02494		-3.5		0.02494		-3.5	
PCB-1254-1	0.03404		-1.1	15.0	0.03404		7.9		0.03404		-1.1		0.03404		-1.1	
PCB-1254-2	0.03796		-5.9	15.0	0.03796		4.3		0.03796		-5.9		0.03796		-5.9	
PCB-1254-3	0.05374		-0.5	15.0	0.05374		-0.5		0.05374		-0.5		0.05374		-0.5	
PCB-1254-4	0.03992		-0.2	15.0	0.03992		-0.2		0.03992		-0.2		0.03992		-0.2	
PCB-1254-5	0.05558		-3.0	15.0	0.05558		5.1		0.05558		-3.0		0.05558		-3.0	

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
mber of Failures	0	0	0	0
mber of Global Failures	0	0	0	0
and Mean/Limit	2.2	6.0	2.2	2.2

Reagent

SG32/62 STK_00005

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569746 **Lot No.:** A0132023

Description : PCB-1232/1262 Standard

PCB-1232/1262 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1232	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 11141-16-5 (Lot W-107-05)		+/- 31.8340	µg/mL	Unstressed
	Purity ----%		+/- 41.5787	µg/mL	Stressed
2	Aroclor 1262	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 37324-23-5 (Lot 3067100)		+/- 31.7706	µg/mL	Unstressed
	Purity ----%		+/- 41.4958	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

3740481
ID: SG32/62 STK_00005
Exp: 01/31/24 Prpd: LSH
Aroclors 1232/1262 @1000

Reagent

SG32/6210PPM_00010

Report Date: 09-Aug-2018 11:25:35 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Canton
CCV, Cal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP10\20180809-78746.b\P10080920.D
Lims ID: new 32/62 stock
Client ID:
Sample Type: CCV
Inject. Date: 09-Aug-2018 11:09:11 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0078746-020
Operator ID: Instrument ID: A2HP10
Sublist: chrom-PCB10 IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP10\20180809-78746.b\PCB10 IS.m
Limit Group: GC 8082 IS
Last Update: 09-Aug-2018 11:25:34 Calib Date: 01-Jun-2018 03:19:17
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP10\20180531-76471.b\P10053133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK002

Start Cal Date: 31-May-2018 18:06:49
End Cal Date: 01-Jun-2018 03:19:17

Detector 1: GC ECD1A

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
4 PCB-1232	1.00		0.8896		-11.0	15	89
4 PCB-1232-1	0.019321	0.001		0.018931	-2.0	15	98
4 PCB-1232-2	0.014513	0.0		0.013610	-6.2	15	94
4 PCB-1232-3	0.032270	-0.001		0.018793	*-41.8	15	58
4 PCB-1232-4	0.013883	0.0		0.013846	-0.3	15	100
4 PCB-1232-5	0.012963	-0.001		0.012323	-4.9	15	95
9 PCB-1262	1.00		0.9478		-5.2	15	95
9 PCB-1262-1	0.051639	0.0		0.047166	-8.7	15	91
9 PCB-1262-2	0.064012	0.0		0.061506	-3.9	15	96
9 PCB-1262-3	0.053715	-0.001		0.052529	-2.2	15	98
9 PCB-1262-4	0.128905	-0.001		0.123490	-4.2	15	96
9 PCB-1262-5	0.050221	-0.001		0.046655	-7.1	15	93

Start Cal Date: 31-May-2018 18:06:49
End Cal Date: 01-Jun-2018 03:19:17

Detector 2: GC ecd2b

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
4 PCB-1232	1.00		0.8903		-11.0	15	89
4 PCB-1232-1	0.021416	0.001		0.019489	-9.0	15	91
4 PCB-1232-2	0.017429	0.0		0.015422	-11.5	15	88
4 PCB-1232-3	0.035751	0.0		0.032347	-9.5	15	90
4 PCB-1232-4	0.015711	-0.002		0.014398	-8.4	15	92
4 PCB-1232-5	0.011438	0.0		0.009559	*-16.4	15	84

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A2HP10\20180809-78746.b\P10080920.D

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
9 PCB-1262	1.00		0.9009		-9.9	15	90
9 PCB-1262-1	0.044004	0.0		0.039370	-10.5	15	89
9 PCB-1262-2	0.065484	-0.002		0.057721	-11.9	15	88
9 PCB-1262-3	0.059562	-0.002		0.054026	-9.3	15	91
9 PCB-1262-4	0.126581	-0.001		0.115618	-8.7	15	91
9 PCB-1262-5	0.091529	0.0		0.083110	-9.2	15	91

Reagent

SG3262@0.5PPM_00030

Report Date: 10-Aug-2018 08:13:48 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Canton

CCV, Cal Verification Report

Ccal Sample: \\ChromNA\Canton\ChromData\A2HP10\20180810-78783.b\P10081009.D

Lims ID: 32/62 0.5 Inj. Date: 10-Aug-2018 07:36:54

Worklist ID: 240-0078783-009 Sublist: chrom-PCB10 IS*sub1

Method: PCB10 IS Instrument: A2HP10

Detector 1: GC ECD1A

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Ma %I
PCB-1232-1	0.02045		5.8	15.0	0.02045		18.3		0.02045		5.8		0.02045		5.8	
PCB-1232-2	0.01544		6.4	15.0	0.01544		18.5		0.01544		6.4		0.01544		6.4	
PCB-1232-3	0.03310		2.6	15.0	0.03310		2.6		0.03310		2.6		0.03310		2.6	
PCB-1232-4	0.01586		14.2	15.0	0.01586		14.2		0.01586		14.2		0.01586		14.2	
PCB-1232-5	0.01357		4.7	15.0	0.01357		4.7		0.01357		4.7		0.01357		4.7	
PCB-1262-1	0.04932		-4.5	15.0	0.04932		4.1		0.04932		-4.5		0.04932		-4.5	
PCB-1262-2	0.06509		1.7	15.0	0.06509		1.7		0.06509		1.7		0.06509		1.7	
PCB-1262-3	0.05645		5.1	15.0	0.05645		5.1		0.05645		5.1		0.05645		5.1	
PCB-1262-4	0.13882		7.7	15.0	0.13882		7.7		0.13882		7.7		0.13882		7.7	
PCB-1262-5	0.05190		3.3	15.0	0.05190		3.3		0.05190		3.3		0.05190		3.3	

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
mber of Failures	0	0	0	0
mber of Global Failures	0	0	0	0
and Mean/Limit	5.6	8.0	5.6	5.6

Detector 2: GC ecd2b

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Ma %I
PCB-1232-1	0.02107		-1.6	15.0	0.02107		11.7		0.02107		-1.6		0.02107		-1.6	
PCB-1232-2	0.01738		-0.3	15.0	0.01738		11.6		0.01738		-0.3		0.01738		-0.3	
PCB-1232-3	0.03422		-4.3	15.0	0.03422		-4.3		0.03422		-4.3		0.03422		-4.3	
PCB-1232-4	0.01618		3.0	15.0	0.01618		13.0		0.01618		3.0		0.01618		3.0	
PCB-1232-5	0.01032		-9.8	15.0	0.01032		1.3		0.01032		-9.8		0.01032		-9.8	
PCB-1262-1	0.03982		-9.5	15.0	0.03982		-9.5		0.03982		-9.5		0.03982		-9.5	
PCB-1262-2	0.05809		-11.3	15.0	0.05809		-11.3		0.05809		-11.3		0.05809		-11.3	
PCB-1262-3	0.05544		-6.9	15.0	0.05544		-6.9		0.05544		-6.9		0.05544		-6.9	
PCB-1262-4	0.11696		-7.6	15.0	0.11696		-7.6		0.11696		-7.6		0.11696		-7.6	
PCB-1262-5	0.08721		-4.7	15.0	0.08721		-4.7		0.08721		-4.7		0.08721		-4.7	

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
mber of Failures	0	0	0	0
mber of Global Failures	0	0	0	0
and Mean/Limit	5.9	8.2	5.9	5.9

Reagent

SG3262@0.5PPM_00031

Preliminary Report

TestAmerica Canton
CCV, Cal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20181009-80648.b\P13100910.D
Lims ID: new 32/62 .5
Client ID:
Sample Type: CCV
Inject. Date: 09-Oct-2018 07:48:50 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0080648-010
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP13\20181009-80648.b\PCB13 IS.m
Limit Group: GC 8082 IS
Last Update: 09-Oct-2018 06:03:16 Calib Date: 24-Jul-2018 00:31:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP13\20180723-78236.b\P13072333.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 1: GC ECD1A

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
4 PCB-1232	0.5000		0.4663		-6.7	15	93
4 PCB-1232-1	0.021686	0.001		0.020008	-7.7	15	92
4 PCB-1232-2	0.017425	0.001		0.015949	-8.5	15	92
4 PCB-1232-3	0.035544	0.0		0.033550	-5.6	15	94
4 PCB-1232-4	0.015077	0.001		0.014237	-5.6	15	94
4 PCB-1232-5	0.005640	0.0		0.005284	-6.3	15	94
9 PCB-1262	0.5000		0.4790		-4.2	15	96
9 PCB-1262-1	0.053629	0.0		0.050339	-6.1	15	94
9 PCB-1262-2	0.5000	0.001	0.4968	0.067738	-0.6	15	99
9 PCB-1262-3	0.063305	0.0		0.059477	-6.0	15	94
9 PCB-1262-4	0.132726	0.001		0.127091	-4.2	15	96
9 PCB-1262-5	0.056306	0.0		0.054072	-4.0	15	96

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 2: GC ecd2b

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
4 PCB-1232	0.5000		0.4595		-8.1	15	92
4 PCB-1232-1	0.022261	0.001		0.019917	-10.5	15	89
4 PCB-1232-2	0.018598	-0.001		0.016913	-9.1	15	91
4 PCB-1232-3	0.034748	-0.001		0.031483	-9.4	15	91
4 PCB-1232-4	0.013899	0.0		0.013613	-2.1	15	98
4 PCB-1232-5	0.008073	-0.001		0.007313	-9.4	15	91

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20181009-80648.b\P13100910.D

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
9 PCB-1262	0.5000		0.4552		-9.0	15	91
9 PCB-1262-1	0.042134	0.0		0.038014	-9.8	15	90
9 PCB-1262-2	0.059008	-0.001		0.053646	-9.1	15	91
9 PCB-1262-3	0.055748	0.001		0.050543	-9.3	15	91
9 PCB-1262-4	0.110790	0.0		0.102351	-7.6	15	92
9 PCB-1262-5	0.079913	0.0		0.072759	-9.0	15	91

Reagent

SG42/6810PPM_00009

Report Date: 14-Aug-2018 07:34:50 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Canton
CCV, Cal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20180813-78874.b\P13081345.D
Lims ID: 42/68 stock
Client ID:
Sample Type: CCV
Inject. Date: 13-Aug-2018 18:29:11 ALS Bottle#: 45 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0078874-009
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP13\20180813-78874.b\PCB13 IS.m
Limit Group: GC 8082 IS
Last Update: 14-Aug-2018 07:34:49 Calib Date: 24-Jul-2018 00:31:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP13\20180723-78236.b\P13072333.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK026

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 1: GC ECD1A

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
5 PCB-1242	1.00		0.8711		-12.9	15	87
5 PCB-1242-1	0.015166	0.001		0.013111	-13.5	15	86
5 PCB-1242-2	0.030187	-0.001		0.026137	-13.4	15	87
5 PCB-1242-3	0.063740	0.002		0.049804	*-21.9	15	78
5 PCB-1242-4	0.026999	0.001		0.024639	-8.7	15	91
5 PCB-1242-5	0.011340	0.0		0.010557	-6.9	15	93
11 PCB-1268	1.00		0.9677		-3.2	15	97
11 PCB-1268-1	0.155993	-0.001		0.150924	-3.2	15	97
11 PCB-1268-2	0.151589	-0.001		0.145635	-3.9	15	96
11 PCB-1268-3	0.130147	-0.001		0.125242	-3.8	15	96
11 PCB-1268-4	0.054063	-0.002		0.052744	-2.4	15	98
11 PCB-1268-5	0.400174	-0.001		0.389115	-2.8	15	97

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 2: GC ecd2b

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
5 PCB-1242	1.00		0.8872		-11.3	15	89
5 PCB-1242-1	0.015661	0.0		0.013225	*-15.6	15	84
5 PCB-1242-2	0.030319	-0.002		0.024689	*-18.6	15	81
5 PCB-1242-3	0.060900	0.001		0.055856	-8.3	15	92
5 PCB-1242-4	0.023848	-0.001		0.022992	-3.6	15	96
5 PCB-1242-5	0.011227	-0.001		0.010061	-10.4	15	90

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20180813-78874.b\P13081345.D

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
11 PCB-1268	1.00		0.9407		-5.9	15	94
11 PCB-1268-1	0.125342	0.0		0.117975	-5.9	15	94
11 PCB-1268-2	0.123557	0.0		0.115862	-6.2	15	94
11 PCB-1268-3	0.105661	-0.001		0.098037	-7.2	15	93
11 PCB-1268-4	0.045940	0.0		0.041808	-9.0	15	91
11 PCB-1268-5	0.331774	0.001		0.327279	-1.4	15	99

Reagent

SG4268@0.5PPM_00030

Preliminary Report

TestAmerica Canton
CCV, Cal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20180817-79005.b\P13081709.D
Lims ID: 42/68 new
Client ID:
Sample Type: CCV
Inject. Date: 17-Aug-2018 08:05:37 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0079005-009
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP13\20180817-79005.b\PCB13 IS.m
Limit Group: GC 8082 IS
Last Update: 17-Aug-2018 09:32:12 Calib Date: 24-Jul-2018 00:31:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP13\20180723-78236.b\P13072333.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK015

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 1: GC ECD1A

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
5 PCB-1242	0.5000		0.4740		-5.2	15	95
5 PCB-1242-1	0.015166	-0.001		0.014112	-6.9	15	93
5 PCB-1242-2	0.030187	-0.001		0.027922	-7.5	15	92
5 PCB-1242-3	0.063740	-0.001		0.060812	-4.6	15	95
5 PCB-1242-4	0.026999	0.001		0.025756	-4.6	15	95
5 PCB-1242-5	0.011340	-0.001		0.011077	-2.3	15	98
11 PCB-1268	0.5000		0.4885		-2.3	15	98
11 PCB-1268-1	0.155993	-0.001		0.152172	-2.4	15	98
11 PCB-1268-2	0.151589	0.0		0.147590	-2.6	15	97
11 PCB-1268-3	0.130147	0.0		0.126292	-3.0	15	97
11 PCB-1268-4	0.054063	-0.001		0.053344	-1.3	15	99
11 PCB-1268-5	0.400174	-0.002		0.391863	-2.1	15	98

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 2: GC ecd2b

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
5 PCB-1242	0.5000		0.4559		-8.8	15	91
5 PCB-1242-1	0.015661	0.0		0.014102	-10	15	90
5 PCB-1242-2	0.030319	-0.001		0.027417	-9.6	15	90
5 PCB-1242-3	0.060900	-0.001		0.056229	-7.7	15	92
5 PCB-1242-4	0.023848	0.0		0.021362	-10.4	15	90
5 PCB-1242-5	0.011227	0.0		0.010502	-6.5	15	94

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20180817-79005.b\P13081709.D

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
11 PCB-1268	0.5000		0.4758		-4.8	15	95
11 PCB-1268-1	0.125342	-0.002		0.118347	-5.6	15	94
11 PCB-1268-2	0.123557	-0.001		0.116490	-5.7	15	94
11 PCB-1268-3	0.105661	-0.001		0.097847	-7.4	15	93
11 PCB-1268-4	0.045940	-0.002		0.045268	-1.5	15	99
11 PCB-1268-5	0.331774	0.0		0.318484	-4.0	15	96

Reagent

SGPCB1254_00010

Certificate of Analysis

Aroclor 1254 Solution

Product Number: EPA-1352 **Page:** 1 of 1

Lot Number: CK-3221 **Lot Issue Date:** 26-Sep-2013 **Expiration Date:** 31-Oct-2021

This certified Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1254	011097-69-1	RM00922	1002 ± 5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15-30°C)

Rec 9/24/14 @

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

ACCREDITED
ISO 17025:2005 Accredited A2LA Cert. No. 0851-01
ISO 9001:2008 Registered TUV USA, Inc. Cert. No. 09-1009

250 Smith Street, North Kingstown, RI 02852 USA
401-294-9400 Fax: 295-2330
wwww.ultrasci.com

William J. Leary
Quality Assurance Manager

Reagent

SGPCBIS STOCk_00010

Report Date: 26-Feb-2018 07:16:15 Chrom Revision: 2.2 08-Feb-2018 13:38:42

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022315.D
Lims ID: old IS
Client ID:
Sample Type: Client
Inject. Date: 23-Feb-2018 15:31:28 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0073532-015
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\PCB4 is.m
Limit Group: GC 8082 IS
Last Update: 23-Feb-2018 13:29:28 Calib Date: 31-Jan-2018 23:13:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20180131-72897.b\P4013133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK028

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022303.D
Sample Type: CCVIS Sublist: chrom-PCB4 is*sub5
Sample Info: 240-0073532-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	77268453	38634227	154536906	71373643	92.37

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	1.846	1.346	2.346	1.847	-0.001	0.069

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	150281311	75140656	300562622	140318743	93.37

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.148	1.648	2.648	2.155	-0.007	0.331

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Report Date: 26-Feb-2018 07:16:51 Chrom Revision: 2.2 08-Feb-2018 13:38:42

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022316.D
Lims ID: New IS #10
Client ID:
Sample Type: Client
Inject. Date: 23-Feb-2018 15:48:14 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0073532-016
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\PCB4 is.m
Limit Group: GC 8082 IS
Last Update: 23-Feb-2018 13:29:28 Calib Date: 31-Jan-2018 23:13:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20180131-72897.b\P4013133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK028

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022303.D
Sample Type: CCVIS Sublist: chrom-PCB4 is*sub5
Sample Info: 240-0073532-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	77268453	38634227	154536906	72640734	94.01

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	1.846	1.346	2.346	1.847	-0.001	0.035

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	150281311	75140656	300562622	143263259	95.33

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.148	1.648	2.648	2.154	-0.006	0.302

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Report Date: 26-Feb-2018 07:17:23 Chrom Revision: 2.2 08-Feb-2018 13:38:42

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022317.D
Lims ID: New IS # 11
Client ID:
Sample Type: Client
Inject. Date: 23-Feb-2018 16:05:04 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0073532-017
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\PCB4 is.m
Limit Group: GC 8082 IS
Last Update: 23-Feb-2018 13:29:28 Calib Date: 31-Jan-2018 23:13:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20180131-72897.b\P4013133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK028

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022303.D
Sample Type: CCVIS Sublist: chrom-PCB4 is*sub5
Sample Info: 240-0073532-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	77268453	38634227	154536906	72955713	94.42

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	1.846	1.346	2.346	1.846	0.000	-0.005

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	150281311	75140656	300562622	141972130	94.47

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.148	1.648	2.648	2.153	-0.006	0.267

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Reagent

SGPCBIS STOCk_00011

Report Date: 26-Feb-2018 07:16:15 Chrom Revision: 2.2 08-Feb-2018 13:38:42

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022315.D
Lims ID: old IS
Client ID:
Sample Type: Client
Inject. Date: 23-Feb-2018 15:31:28 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0073532-015
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\PCB4 is.m
Limit Group: GC 8082 IS
Last Update: 23-Feb-2018 13:29:28 Calib Date: 31-Jan-2018 23:13:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20180131-72897.b\P4013133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK028

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022303.D
Sample Type: CCVIS Sublist: chrom-PCB4 is*sub5
Sample Info: 240-0073532-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	77268453	38634227	154536906	71373643	92.37

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	1.846	1.346	2.346	1.847	-0.001	0.069

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	150281311	75140656	300562622	140318743	93.37

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.148	1.648	2.648	2.155	-0.007	0.331

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Report Date: 26-Feb-2018 07:16:51 Chrom Revision: 2.2 08-Feb-2018 13:38:42

Preliminary Report

TestAmerica Canton

Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022316.D
Lims ID: New IS #10
Client ID:
Sample Type: Client
Inject. Date: 23-Feb-2018 15:48:14 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0073532-016
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\PCB4 is.m
Limit Group: GC 8082 IS
Last Update: 23-Feb-2018 13:29:28 Calib Date: 31-Jan-2018 23:13:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20180131-72897.b\P4013133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK028

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022303.D
Sample Type: CCVIS Sublist: chrom-PCB4 is*sub5
Sample Info: 240-0073532-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	77268453	38634227	154536906	72640734	94.01

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	1.846	1.346	2.346	1.847	-0.001	0.035

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	150281311	75140656	300562622	143263259	95.33

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.148	1.648	2.648	2.154	-0.006	0.302

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Report Date: 26-Feb-2018 07:17:23 Chrom Revision: 2.2 08-Feb-2018 13:38:42

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022317.D
Lims ID: New IS # 11
Client ID:
Sample Type: Client
Inject. Date: 23-Feb-2018 16:05:04 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0073532-017
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\PCB4 is.m
Limit Group: GC 8082 IS
Last Update: 23-Feb-2018 13:29:28 Calib Date: 31-Jan-2018 23:13:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20180131-72897.b\P4013133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK028

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022303.D
Sample Type: CCVIS Sublist: chrom-PCB4 is*sub5
Sample Info: 240-0073532-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	77268453	38634227	154536906	72955713	94.42

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	1.846	1.346	2.346	1.846	0.000	-0.005

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	150281311	75140656	300562622	141972130	94.47

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.148	1.648	2.648	2.153	-0.006	0.267

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Reagent

SGPCBISTD_00015

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP10\20180619-77103.b\P10061937.D
Lims ID: NEW ISTD 00015
Client ID:
Sample Type: Client
Inject. Date: 20-Jun-2018 02:04:50 ALS Bottle#: 37 Worklist Smp#: 13
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0077103-013
Operator ID: Instrument ID: A2HP10

Method: \\ChromNA\Canton\ChromData\A2HP10\20180619-77103.b\PCB10 IS.m
Limit Group: GC 8082A IS
Last Update: 20-Jun-2018 09:54:01 Calib Date: 01-Jun-2018 03:19:17
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP10\20180531-76471.b\P10053133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK010

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP10\20180619-77103.b\P10061927.D
Sample Type: CCVIS Sublist: chrom-PCB10 IS*sub5
Sample Info: 240-0077103-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	151328537	75664269	302657074	140202466	92.65

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.644	2.144	3.144	2.647	-0.002	0.088

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	57547875	28773938	115095750	54305571	94.37

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	3.321	2.821	3.821	3.322	-0.001	0.020

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Reagent

SGPCBISTD_00016

Report Date: 24-Aug-2018 10:39:35 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP10\20180824-79213.b\P10082409.D
Lims ID: new IS
Client ID:
Sample Type: Client
Inject. Date: 24-Aug-2018 09:58:01 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0079213-009
Operator ID: Instrument ID: A2HP10

Method: \\ChromNA\Canton\ChromData\A2HP10\20180824-79213.b\PCB10 IS.m
Limit Group: GC 8082 IS
Last Update: 24-Aug-2018 08:31:24 Calib Date: 01-Jun-2018 03:19:17
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP10\20180531-76471.b\P10053133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK012

NEW

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP10\20180824-79213.b\P10082403.D
Sample Type: CCVIS Sublist: chrom-PCB10 IS*sub5
Sample Info: 240-0079213-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	158394186	79197093	316788372	140633670	88.79

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.642	2.142	3.142	2.640	0.002	-0.087

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	59140356	29570178	118280712	53490107	90.45

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	3.320	2.820	3.820	3.305	0.015	-0.446

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Report Date: 24-Aug-2018 10:40:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP10\20180824-79213.b\P10082410.D
Lims ID: MB 240-341633/19-A
Client ID:
Sample Type: MB
Inject. Date: 24-Aug-2018 10:17:02 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0079213-010
Operator ID: Instrument ID: A2HP10

Method: \\ChromNA\Canton\ChromData\A2HP10\20180824-79213.b\PCB10 IS.m
Limit Group: GC 8082 IS
Last Update: 24-Aug-2018 08:31:24 Calib Date: 01-Jun-2018 03:19:17
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP10\20180531-76471.b\P10053133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK012

OLD

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP10\20180824-79213.b\P10082403.D
Sample Type: CCVIS Sublist: chrom-PCB10 IS*sub5
Sample Info: 240-0079213-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	158394186	79197093	316788372	158748538	100.22

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.642	2.142	3.142	2.646	-0.003	0.128

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	59140356	29570178	118280712	60962607	103.08

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	3.320	2.820	3.820	3.317	0.002	-0.074

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Reagent

SGPESTSURR_00011

Report Date: 13-Oct-2017 09:44:48 Chrom Revision: 2.2 16-Aug-2017 16:24:46 Page: 1

TestAmerica Laboratories
Worklist Report

Worklist Name: 101317 Worklist Number: 69619
Instrument Name: A2HP12 Chrom Method: PCB12IS
Injection Volume: 1.000 Units: uL
Analysis Type: Semi VOA
Batch Directory: \\ChromNA\Canton\ChromData\A2HP12\20171013-69619.b
Upload Directory: \\CorpTALSAPP17\240-NC-RawData\Organics\GC\A2HP12
Run Reagent: SGPCBISTD_00012 Amount Added: 5.000, Units: uL

298860

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
240-0069619-001	# 1 RB HEX lot 0000175756		RB	sv	1.000	mL	1.000
240-0069619-002	# 2 PB		PB	sv	1.000	mL	1.000
240-0069619-003	# 3 CCV AR1660	SG 1260 res_00002 SG1660@0.5PPM_00075	CCVIS	sv	1.000	mL	1.000
240-0069619-004	# 4 CCV AR1232/1262	SG3262@0.5PPM_00021	CCV	sv	1.000	mL	1.000
240-0069619-005	# 5 CCV AR1242/1268	SG4268@0.5PPM_00025	CCV	sv	1.000	mL	1.000
240-0069619-006	# 6 CCV AR1248	SG1248@0.5ppm_00030	CCV	sv	1.000	mL	1.000
240-0069619-007	# 7 CCV AR1221/1254	SG2154@0.5PPM_00033	CCV	sv	1.000	mL	1.000
240-0069619-008	# 8 RTC DDD/DDT/DDE	PBCRTC_00018	RTC	sv	1.000	mL	1.000
240-0069619-009	# 9 320-32221-K-10-A		Client	sv	1.000	mL	1.000
240-0069619-010	#10 240-86269-A-1-A		Client	sv	1.000	mL	1.000
240-0069619-011	#11 Samp 23		Client	sv	1.000	mL	1.000
240-0069619-012	#12 Samp 24		Client	sv	1.000	mL	1.000
240-0069619-013	#13 Samp 25		Client	sv	1.000	mL	1.000

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 240-298457

Method Code: 240-3520C-240

Analyst: Scott, Caitlin

Batch Open: 10/10/2017 3:55:00PM

Batch End: 10/11/2017 3:54:41PM

Liquid-Liquid Extraction (Continuous)

	Input Sample Lab ID (Analytical Method)	SDG (Job #)	GrossWt TareWt	InitAmnt FinAmnt	PHs Rcvd	PHs Adj1	PHs Adj2	Due Date	Analytical TAT	Dlv Rank	Comments	Output Sample Lab ID
1	190-14615-B-1 (8082)	N/A (190-14615-1)		870 mL	7			10/12/17	4_Days	2	TBA STR	190-14615-B-1-B
				2 mL								
2	240-86102-B-1 (8082)	N/A (240-86102-1)		1000 mL	7			10/12/17	4_Day_RUSH	2	X10/X20/X50	240-86102-B-1-A
				2 mL								
3	240-86149-B-1 (8082)	N/A (240-86149-1)		1030 mL	5			10/19/17	8_Days	4	STR	240-86149-B-1-A
				2 mL								
4	240-86007-O-1 (8082A)	N/A (240-86007-1)		1000 mL	7			10/17/17	8_Days	4	TBA	240-86007-O-1-A
				2 mL								
5	240-86007-P-2 (8082A)	N/A (240-86007-1)		990 mL	7			10/17/17	8_Days	4		240-86007-P-2-A
				2 mL								
6	240-86007-Q-3 (8082A)	N/A (240-86007-1)		1040 mL	7			10/17/17	8_Days	4		240-86007-Q-3-A
				2 mL								
7	240-86007-P-4 (8082A)	N/A (240-86007-1)		1050 mL	7			10/17/17	8_Days	4		240-86007-P-4-A
				2 mL								
8	240-86007-O-5 (8082A)	N/A (240-86007-1)		950 mL	7			10/17/17	8_Days	4		240-86007-O-5-A
				2 mL								
9	240-86007-M-6 (8082A)	N/A (240-86007-1)		1020 mL	7			10/17/17	8_Days	4	TBA STR	240-86007-M-6-A
				2 mL								
10	MB~240-298457/10 N/A	N/A		1000 mL	7			N/A	N/A	N/A		MB 240-298457/10-A
				2 mL								

Page 320 of 2069

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

P12 FIONT
AB: 298666

Batch Number: 240-298457

Method Code: 240-3520C-240

Analyst: Scott, Caitlin

Batch Open: 10/10/2017 3:55:00PM

Batch End: 10/11/2017 3:54:41PM

11	LCS~240-298457/11 N/A	N/A		1000 mL 2 mL	7			N/A	N/A	N/A	
12	320-32221-K-10 (8082)	10/3 & 10/4/17 samples (320-32221-1)		1030 mL 2 mL	7			10/24/17	12_Days	4	STR 

WI-NC-0170

Clean-ups

Batch: 258457

Clean-up	Date	Initials	Date	Initials	Culture Tubes
Acid Clean	10/11/17	TS			328/793
TBA					
Silica Gel					
$KMnO_4$					
Florisil					
Alumina					

Solid SW-846-3500 Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 240-298545

Method Code: 240-3540C-240

Analyst: Thabet, Ahmed

Batch Open: 10/11/2017 12:05:00PM

Batch End: 10/12/2017 4:05:00AM

Soxhlet Extraction

Pf 298792 K

	Input Sample Lab ID (Analytical Method)	SDG (Job #)	Initial Amount	Final Amount	Due Date	Analytical TAT	Dlv Rank	Comments	Output Sample Lab ID
1	240-86205-D-1 (8082A)	N/A (240-86205-1)	9.93 g	10 mL	10/20/17	8_Days	4	tbt/sf	240-86205-D-1-A
2	240-86216-E-1 (8082A)	N/A (240-86216-1)	10.09 g	10 mL	10/20/17	8_Days	2	sf	240-86216-E-1-G
3	240-86108-G-3 (8082)	N/A (240-86108-1)	10.07 g	10 mL	10/18/17	8_Days	4	tbt/sf	240-86108-G-3-C
4	240-86108-G-3~MS (8082)	N/A (240-86108-1)	10.24 g	10 mL	10/18/17	8_Days	4	↓	240-86108-G-3-D MS
5	240-86108-G-3~MSD (8082)	N/A (240-86108-1)	10.26 g	10 mL	10/18/17	8_Days	4	↓	240-86108-G-3-E MSD
6	MB~240-298545/6 N/A	N/A	10 g	10 mL	N/A	N/A	N/A		MB 240-298545/6-A
7	LCS~240-298545/7 N/A	N/A	10 g	10 mL	N/A	N/A	N/A		LCS 240-298545/7-A
9	240-86269-A-1 (8082)	N/A (240-86269-1)	10.17 g	10 mL	10/13/17	2_Day_RUSH	2	sf tbt/sf	240-86269-A-1-A
10	240-86267-A-1 (8082)	N/A (240-86267-1)	10.17 g	10 mL	10/13/17	2_Day_RUSH	2	sf	240-86267-A-1-A
11	240-86147-A-7-A (8082A)	N/A (240-86147-1)	1.30 g	10 mL	10/12/17	3_Day_RUSH	2	tbt / xc	240-86147-A-7-D
12	240-86147-A-8-A (8082A)	N/A (240-86147-1)	1.29 g	10 mL	10/12/17	3_Day_RUSH	2	↓	240-86147-A-8-D
	240-86147-A-9-A (8082A)	N/A (240-86147-1)	1.06 g	10 mL	10/12/17	3_Day_RUSH	2		240-86147-A-9-D

Printed : 10/12/2017

TestAmerica Canton

Clean-ups

Batch: 298545

Clean-up	Date	Initials	Date	Initials	Culture Tubes
Acid Clean	10-12-17	TS.			3281793
TBA	10/12/17	TS			3281793
Silica Gel					
$KMnO_4$					
Florisil					
Alumina					

WI-NC-0170

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0130424

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2023 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4,5,6-Tetrachloro-m-xylene		201.2 µg/mL	+/- 1.1725	µg/mL	Gravimetric
	CAS # 877-09-8	(Lot 0052481)		+/- 6.3751	µg/mL	Unstressed
	Purity 98%			+/- 8.3288	µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)		201.5 µg/mL	+/- 1.1742	µg/mL	Gravimetric
	CAS # 2051-24-3	(Lot ER071509-01)		+/- 6.3848	µg/mL	Unstressed
	Purity 99%			+/- 8.3415	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

3289189
ID: SGPESTSURR_00011
Exp: 11/30/23 Prpd: KMG
PESTICIDE SURROGATE Reste

Rec'd 10/13/17

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

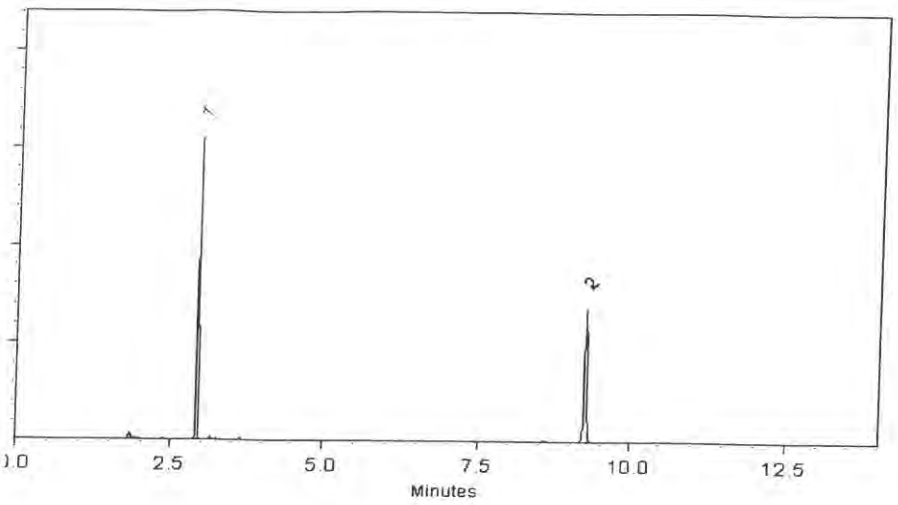
rrier Gas:
ıelium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician **Date Mixed:** 31-Aug-2017 **Balance:** B345965662

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 07-Sep-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

vm30026_00002

Rec: 4/11/17 (5)

VM30026-00002

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30026 **Lot No.:** A0120567

Description : 4-Bromofluorobenzene Mixture

4-Bromofluorobenzene 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1-Bromo-4-fluorobenzene (BFB)	2,019.3 µg/mL	+/- 11.8506	µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 20401KOV)		+/- 113.2335	µg/mL	Unstressed
	Purity 99%		+/- 115.8825	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

vm30241_00007

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30241 **Lot No.:** A0134242

Description : 8260A Internal Standard Mix

8260A Internal Standard Mix 2,500 µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2023 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Fluorobenzene **CAS #** 462-06-6 (Lot BCBK8171V) **Purity** 99%	2,503.6 µg/mL	+/- 14.5561 µg/mL +/- 140.3744 µg/mL +/- 143.6590 µg/mL	Gravimetric Unstressed Stressed
2	Chlorobenzene-d5 **CAS #** 3114-55-4 (Lot PR-22736) **Purity** 99%	2,506.4 µg/mL	+/- 14.5724 µg/mL +/- 140.5314 µg/mL +/- 143.8196 µg/mL	Gravimetric Unstressed Stressed
3	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-18488) **Purity** 99%	2,513.4 µg/mL	+/- 14.6131 µg/mL +/- 140.9238 µg/mL +/- 144.2213 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

VM30241-00007

REC'D 5-4-18

Reagent

VM567650_00027

VM567650-00027 Rec: 4/10/17 (39)

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0120212

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : July 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dibromofluoromethane **CAS #** 1868-53-7 **Purity** 99%	(Lot 032015)	2,521.3 µg/mL	+/- 14.6591 µg/mL +/- 141.3668 µg/mL +/- 144.6746 µg/mL		Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 **Purity** 99%	(Lot 14C-191)	2,523.7 µg/mL	+/- 14.6730 µg/mL +/- 141.5014 µg/mL +/- 144.8123 µg/mL		Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 **Purity** 99%	(Lot PR-26623)	2,523.6 µg/mL	+/- 14.6724 µg/mL +/- 141.4957 µg/mL +/- 144.8066 µg/mL		Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 **Purity** 99%	(Lot 20401KOV)	2,510.9 µg/mL	+/- 14.5986 µg/mL +/- 140.7837 µg/mL +/- 144.0778 µg/mL		Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VM567650_00029

Rec: 8/22/17
VM567650-00029

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0124069

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 0012016) **Purity** 99%	2,521.2 µg/mL	+/- 14.6582 µg/mL +/- 141.3584 µg/mL +/- 144.6660 µg/mL		Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot PR-25433) **Purity** 98%	2,513.8 µg/mL	+/- 14.6157 µg/mL +/- 140.9489 µg/mL +/- 144.2469 µg/mL		Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot PR-27311) **Purity** 99%	2,519.4 µg/mL	+/- 14.6480 µg/mL +/- 141.2603 µg/mL +/- 144.5656 µg/mL		Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 20401KOV) **Purity** 99%	2,520.8 µg/mL	+/- 14.6559 µg/mL +/- 141.3360 µg/mL +/- 144.6430 µg/mL		Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VM568718_00013

Rec: 4/17/18
VM568718_00013

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Catalog No. : 568718 **Lot No.:** A0133525

Description : 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000µg/mL, P&T Methanol/Water (90:10), 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	tert-Butyl-d9-alcohol **CAS #** 25725-11-5 **Purity** 98%	(Lot CD-107)	5,043.8 µg/mL	+/- 29.3235 +/- 107.9879 +/- 111.1273	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone-d5 **CAS #** 24313-50-6 **Purity** 99%	(Lot M-276)	1,258.0 µg/mL	+/- 7.3141 +/- 26.9339 +/- 27.7169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Fluorobenzene **CAS #** 462-06-6 **Purity** 99%	(Lot BCBK8171V)	251.8 µg/mL	+/- 1.4674 +/- 5.3920 +/- 5.5487	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1,4-Dioxane-d8 **CAS #** 17647-74-4 **Purity** 99%	(Lot I-19942)	5,037.4 µg/mL	+/- 29.2862 +/- 107.8502 +/- 110.9856	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chlorobenzene-d5 **CAS #** 3114-55-4 **Purity** 99%	(Lot PR-22736)	251.6 µg/mL	+/- 1.4660 +/- 5.3870 +/- 5.5435	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 **Purity** 99%	(Lot PR-18488)	251.4 µg/mL	+/- 1.4652 +/- 5.3841 +/- 5.5406	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Reagent

VM568720_00028

rec: 6/1/18

VM568720-00028

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Catalog No. : 568720 **Lot No.:** A0135693

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2018 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Acrolein		19,777.5 µg/mL		+/- 115.8016	µg/mL	Gravimetric
	CAS # 107-02-8	(Lot 171116JLM)			+/- 634.1288	µg/mL	Unstressed
	Purity 99%				+/- 737.1054	µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Reagent

VM568720_00030

VM_568720_00030 Rec: 12/26/18

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720 **Lot No.:** A0139537

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2019 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acrolein	19,780.7 µg/mL	+/- 115.8202	µg/mL	Gravimetric
	CAS # 107-02-8 (Lot 180618JACG)		+/- 634.2304	µg/mL	Unstressed
	Purity 99%		+/- 737.2234	µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Reagent

VM569721_00002

VM569721_00002 Rec: 9/16/15

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0113194

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acetone		12,510.0 µg/mL	+/- 73.2488	µg/mL	Gravimetric
	CAS # 67-64-1	(Lot 07196AK)		+/- 665.8110	µg/mL	Unstressed
	Purity 99%			+/- 666.5452	µg/mL	Stressed
2	2-Butanone (MEK)		12,527.5 µg/mL	+/- 73.3513	µg/mL	Gravimetric
	CAS # 78-93-3	(Lot BCBK4358V)		+/- 666.7424	µg/mL	Unstressed
	Purity 99%			+/- 667.4776	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)		12,503.0 µg/mL	+/- 73.2078	µg/mL	Gravimetric
	CAS # 108-10-1	(Lot SHBF5332V)		+/- 665.4385	µg/mL	Unstressed
	Purity 99%			+/- 666.1722	µg/mL	Stressed
4	2-Hexanone		12,509.0 µg/mL	+/- 73.2429	µg/mL	Gravimetric
	CAS # 591-78-6	(Lot MKBN7380V)		+/- 665.7578	µg/mL	Unstressed
	Purity 99%			+/- 666.4919	µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

VM569721_00003

VM569721_00003 Rec: 9/8/16

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0115554

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1 (Lot 07196AK) **Purity** 99%	12,501.8 µg/mL	+/- 72.6865 µg/mL +/- 754.2890 µg/mL +/- 756.0798 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 (Lot SHBG0444V) **Purity** 98%	12,499.7 µg/mL	+/- 72.6744 µg/mL +/- 754.1625 µg/mL +/- 755.9530 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 (Lot SHBF9556V) **Purity** 99%	12,500.6 µg/mL	+/- 72.6796 µg/mL +/- 754.2166 µg/mL +/- 756.0072 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 (Lot MKBT3158V) **Purity** 99%	12,502.4 µg/mL	+/- 72.6900 µg/mL +/- 754.3252 µg/mL +/- 756.1161 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

VM569721_00004

Rec: 1-25-17

VMS69721_00004

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0115554

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1 (Lot 07196AK) **Purity** 99%	12,501.8 µg/mL	+/- 72.6865 µg/mL +/- 754.2890 µg/mL +/- 756.0798 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 (Lot SHBG0444V) **Purity** 98%	12,499.7 µg/mL	+/- 72.6744 µg/mL +/- 754.1625 µg/mL +/- 755.9530 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 (Lot SHBF9556V) **Purity** 99%	12,500.6 µg/mL	+/- 72.6796 µg/mL +/- 754.2166 µg/mL +/- 756.0072 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 (Lot MKBT3158V) **Purity** 99%	12,502.4 µg/mL	+/- 72.6900 µg/mL +/- 754.3252 µg/mL +/- 756.1161 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

VM569721S_00003

Rec: 7/12/16 (20)
VM569721S-00003

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Catalog No. : 569721.sec **Lot No.:** A0118013

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1.SEC (Lot P14A572) **Purity** 99%	12,550.0 µg/mL	+/- 73.4830 µg/mL +/- 757.2470 µg/mL +/- 759.0446 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3.SEC (Lot RA58J) **Purity** 99%	12,603.0 µg/mL	+/- 73.7933 µg/mL +/- 760.4450 µg/mL +/- 762.2502 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1.SEC (Lot E29T040) **Purity** 99%	12,591.5 µg/mL	+/- 73.7260 µg/mL +/- 759.7511 µg/mL +/- 761.5546 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6.SEC (Lot V3NRA) **Purity** 99%	12,588.0 µg/mL	+/- 73.7055 µg/mL +/- 759.5399 µg/mL +/- 761.3429 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

vm569722_00011

Rec: 4/17/18

VM569722_00011

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 **Lot No.:** A0131502

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot Q167-08) **Purity** 99%	2,501.3 µg/mL	+/- 20.2137 µg/mL +/- 140.9452 µg/mL +/- 144.2108 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBG9707V) **Purity** 99%	2,504.9 µg/mL	+/- 24.8531 µg/mL +/- 141.8827 µg/mL +/- 145.1364 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 1026101231B1) **Purity** 99%	2,498.3 µg/mL	+/- 21.7258 µg/mL +/- 141.0069 µg/mL +/- 144.2635 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot SHBH7966) **Purity** 99%	2,499.9 µg/mL	+/- 19.8572 µg/mL +/- 140.8167 µg/mL +/- 144.0816 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,500.4 µg/mL	+/- 24.9675 µg/mL +/- 141.6590 µg/mL +/- 144.9064 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot 23593) **Purity** 99%	2,500.1 µg/mL	+/- 25.2649 µg/mL +/- 141.6931 µg/mL +/- 144.9388 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot 4938100) **Purity** 99%	2,500.0 µg/mL	+/- 16.7114 µg/mL +/- 140.4149 µg/mL +/- 143.6892 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11) **CAS #** 75-69-4 **Purity** 99%	(Lot SHBH4155V)	2,499.5 µg/mL	+/- 20.7085 +/- 140.9189 +/- 144.1805	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

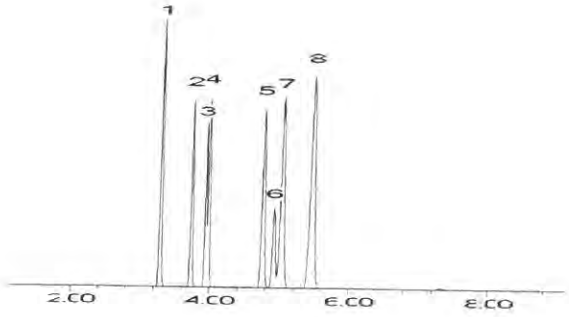
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician **Date Mixed:** 10-Oct-2017 **Balance:** B251644995

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 12-Oct-2017

Manufactured under Restek's ISO 9001:2008
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Certificate #FM 80397

Reagent

vm569722S_00004

VM569722S - 00004 Rec'd 7/12/16 (20)

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Catalog No. : 569722.sec **Lot No.:** A0115484

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8.SEC (Lot 22274) **Purity** 99%	2,505.6 µg/mL	+/- 16.6251 µg/mL +/- 140.7169 µg/mL +/- 143.9990 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3.SEC (Lot 18343) **Purity** 99%	2,517.3 µg/mL	+/- 17.3796 µg/mL +/- 141.4522 µg/mL +/- 144.7477 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4.SEC (Lot MKBK6872V) **Purity** 99%	2,510.2 µg/mL	+/- 16.6342 µg/mL +/- 140.9727 µg/mL +/- 144.2609 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0.SEC (Lot 22331) **Purity** 99%	2,516.5 µg/mL	+/- 17.4874 µg/mL +/- 141.4240 µg/mL +/- 144.7182 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9.SEC (Lot Q119-46) **Purity** 99%	2,511.5 µg/mL	+/- 16.8310 µg/mL +/- 141.0664 µg/mL +/- 144.3557 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3.SEC (Lot 00004202) **Purity** 99%	2,504.8 µg/mL	+/- 16.4341 µg/mL +/- 140.6469 µg/mL +/- 143.9283 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4.SEC (Lot SHBC0858V) **Purity** 99%	2,500.5 µg/mL	+/- 16.1659 µg/mL +/- 140.3776 µg/mL +/- 143.6540 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)		2,524.5	µg/mL	+/- 16.8928	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot Q12B-59)			+/- 141.7952	µg/mL	Unstressed
	Purity 99%				+/- 145.1017	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

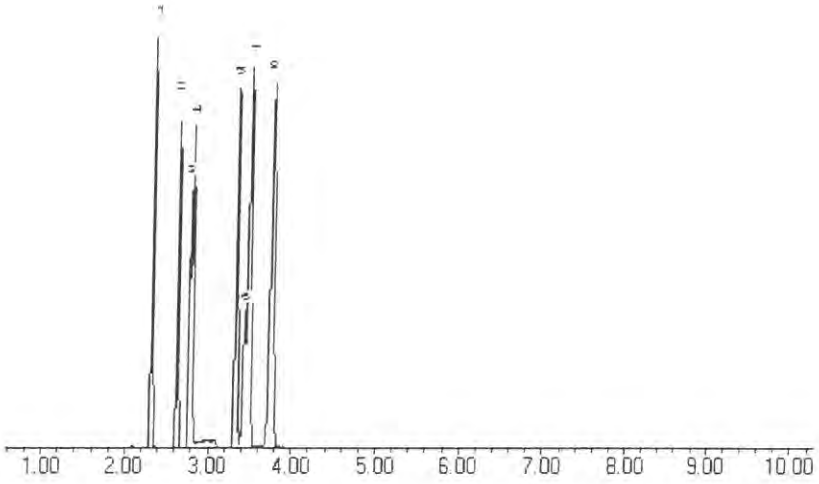
Carrier Gas:
helium-constant flow 2.0 mL/min

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Lane Kibe - Mix Technician

Date Mixed: 17-Nov-2015 **Balance:** 1127510105

Jennifer L. Pollino - QC Analyst

Date Passed: 10-Dec-2015

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Reagent

vm569722S_00005

VM 569722S-00005 Rec: 7/17/17

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0124116

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8.SEC (Lot 23586) **Purity** 99%	2,503.4 µg/mL	+/- 19.5506 µg/mL +/- 140.9699 µg/mL +/- 144.2404 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3.SEC (Lot 18343) **Purity** 99%	2,508.1 µg/mL	+/- 21.1963 µg/mL +/- 141.4639 µg/mL +/- 144.7353 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4.SEC (Lot MKBK6872V) **Purity** 99%	2,518.6 µg/mL	+/- 19.4186 µg/mL +/- 141.7924 µg/mL +/- 145.0836 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0.SEC (Lot 22331) **Purity** 99%	2,504.0 µg/mL	+/- 20.5722 µg/mL +/- 141.1450 µg/mL +/- 144.4130 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9.SEC (Lot Q119-46) **Purity** 99%	2,498.5 µg/mL	+/- 19.9806 µg/mL +/- 140.7602 µg/mL +/- 144.0229 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3.SEC (Lot 00004202) **Purity** 99%	2,494.9 µg/mL	+/- 17.8868 µg/mL +/- 140.2786 µg/mL +/- 143.5429 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4.SEC (Lot SHBC0858V) **Purity** 99%	2,503.4 µg/mL	+/- 20.0421 µg/mL +/- 141.0350 µg/mL +/- 144.3039 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)		2,503.2	µg/mL	+/-	18.7037	µg/mL	Gravimetric
	CAS #	75-69-4.SEC (Lot Q12B-59)			+/-	140.8450	µg/mL	Unstressed
	Purity	99%			+/-	144.1179	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

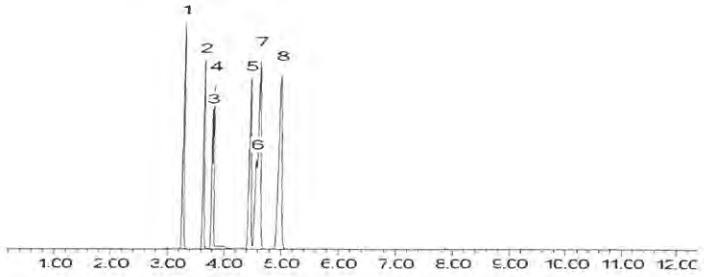
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician **Date Mixed:** 12-Jan-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 17-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

VM569723_00003

VM 569723-00003 Rec'd 11/12/15

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Catalog No. : 569723 **Lot No.:** A0112895

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Chloroethyl vinyl ether	2,503.2 µg/mL	+/- 14.6902	µg/mL	Gravimetric
	CAS # 110-75-8 (Lot MKBK2735V)		+/- 53.1239	µg/mL	Unstressed
	Purity 99%		+/- 53.3593	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Reagent

VM569723_00004

VM569723-00004 Rec: 5/16/16 (20)

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Catalog No. : 569723 **Lot No.:** A0115628

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Chloroethyl vinyl ether **CAS #** 110-75-8 (Lot MKBK2735V) **Purity** 99%	2,509.2 µg/mL	+/- 14.5887 µg/mL +/- 53.7223 µg/mL +/- 55.2841 µg/mL		Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Reagent

VM569723S_00006

VM569723S-0006 RCC: 9/9/20 (20)

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Catalog No. : 569723.sec **Lot No.:** A0115500

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Chloroethyl vinyl ether	2,501.5 µg/mL	+/- 14.5439	µg/mL	Gravimetric
	CAS # 110-75-8.SEC (Lot BQZ2K-QD)		+/- 53.5574	µg/mL	Unstressed
	Purity 99%		+/- 55.1144	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Reagent

VM569724_00014

Rc'd 4/17/18 VM569724_00014

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Catalog No. : 569724 **Lot No.:** A0134268

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2018 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Vinyl acetate	5,014.0 µg/mL	+/- 29.3581	µg/mL	Gravimetric
	CAS # 108-05-4 (Lot STBD7333V)		+/- 302.5368	µg/mL	Unstressed
	Purity 99%		+/- 303.2550	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Reagent

VM569724_00016

VM569724_05016 Rcd: 7/13/18

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Catalog No. : 569724 **Lot No.:** A0137562

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2018 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Vinyl acetate	5,020.0 µg/mL	+/- 29.4602	µg/mL	Gravimetric
	CAS # 108-05-4 (Lot STBD7333V)		+/- 302.9053	µg/mL	Unstressed
	Purity 99%		+/- 303.6243	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Reagent

VM569724S_00019

Rcld : 7/13/18

VM5697245_00019

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Catalog No. : 569724.SEC **Lot No.:** A0137486

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2018 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Vinyl acetate	5,035.0 µg/mL	+/- 29.5482	µg/mL	Gravimetric
	CAS # 108-05-4.SEC (Lot F3Z5C)		+/- 303.8104	µg/mL	Unstressed
	Purity 99%		+/- 304.5316	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Reagent

VM569727_00002

VM569727_00002 Rec: 11/29/16 (10)

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Catalog No. : 569727 **Lot No.:** A0118487

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000 µg/ml, Water, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2019 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Cyclohexanone	25,000.4 µg/mL	+/- 146.3826 µg/mL	Gravimetric
	CAS # 108-94-1 (Lot MKBN5282V)		+/- 1.508.4819 µg/mL	Unstressed
	Purity 99%		+/- 1.512.0629 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Reagent

vm570806_00003

VM570806-00003 Rec: 12/1/17

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Catalog No. : 570806 **Lot No.:** A0126447

Description : 8260 List 2 / Std #4 Pentachloroethane

8260 List 2 / Std #4 Pentachloroethane 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Pentachloroethane	2,519.0 µg/mL	+/- 14.7829	µg/mL	Gravimetric
	CAS # 76-01-7 (Lot 160830B-BL2)		+/- 141.2521	µg/mL	Unstressed
	Purity 99%		+/- 144.5566	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

vm570807_00003

VM570807_00003
Rec: 12/1/17

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Catalog No. : 570807 **Lot No.:** A0125050

Description : 8260 List 2 / Std #5 Methylnaphthalenes

8260 List 2 / Std #5 Methylnaphthalenes 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Methylnaphthalene	2,511.8 µg/mL	+/- 14.7406	µg/mL	Gravimetric
	CAS # 91-57-6 (Lot STBF0201V)		+/- 140.8484	µg/mL	Unstressed
	Purity 95%		+/- 144.1434	µg/mL	Stressed
2	1-Methylnaphthalene	2,514.2 µg/mL	+/- 14.7547	µg/mL	Gravimetric
	CAS # 90-12-0 (Lot 523400-9)		+/- 140.9824	µg/mL	Unstressed
	Purity 98%		+/- 144.2806	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VM570808_00004

VM570808_00004 Rec: 1/11/18

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Catalog No. : 570808 **Lot No.:** A0132816

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2,500-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Propanol (isopropanol) **CAS #** 67-63-0 (Lot SHBG8138V) **Purity** 99%	25,038.4 µg/mL	+/- 146.6053 µg/mL +/- 1,238.7172 µg/mL +/- 1,269.5131 µg/mL	Gravimetric Unstressed Stressed
2	Chloroprene (2-chloro-1,3-butadiene) **CAS #** 126-99-8 (Lot 170628JLM) **Purity** 99%	2,522.0 µg/mL	+/- 14.8005 µg/mL +/- 124.7741 µg/mL +/- 127.8760 µg/mL	Gravimetric Unstressed Stressed
3	Methacrylonitrile **CAS #** 126-98-7 (Lot 1012014) **Purity** 99%	25,034.4 µg/mL	+/- 146.5819 µg/mL +/- 1,238.5193 µg/mL +/- 1,269.3102 µg/mL	Gravimetric Unstressed Stressed
4	2,2,4-Trimethylpentane (isooctane) **CAS #** 540-84-1 (Lot SHBF8066V) **Purity** 99%	2,512.8 µg/mL	+/- 14.7465 µg/mL +/- 124.3190 µg/mL +/- 127.4095 µg/mL	Gravimetric Unstressed Stressed
5	1-Butanol **CAS #** 71-36-3 (Lot SHBH5137V) **Purity** 98%	62,503.6 µg/mL	+/- 365.9535 µg/mL +/- 3,092.2204 µg/mL +/- 3,169.0963 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitropropane **CAS #** 79-46-9 (Lot BCBL0537V) **Purity** 98%	5,015.6 µg/mL	+/- 29.3677 µg/mL +/- 248.1373 µg/mL +/- 254.3062 µg/mL	Gravimetric Unstressed Stressed
7	1-Chlorohexane **CAS #** 544-10-5 (Lot 05107LK) **Purity** 98%	2,502.5 µg/mL	+/- 14.6862 µg/mL +/- 123.8108 µg/mL +/- 126.8886 µg/mL	Gravimetric Unstressed Stressed

8	1,2,3-Trimethylbenzene **CAS #** 526-73-8 **Purity** 97%	(Lot 877605-14)	2,505.7 µg/mL	+/- 14.7049 +/- 123.9679 +/- 127.0497	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Benzyl chloride **CAS #** 100-44-7 **Purity** 99%	(Lot SHBB7346V)	2,507.2 µg/mL	+/- 14.7137 +/- 124.0419 +/- 127.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3,5-Trichlorobenzene **CAS #** 108-70-3 **Purity** 99%	(Lot 11319AS)	2,502.4 µg/mL	+/- 14.6855 +/- 123.8044 +/- 126.8822	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

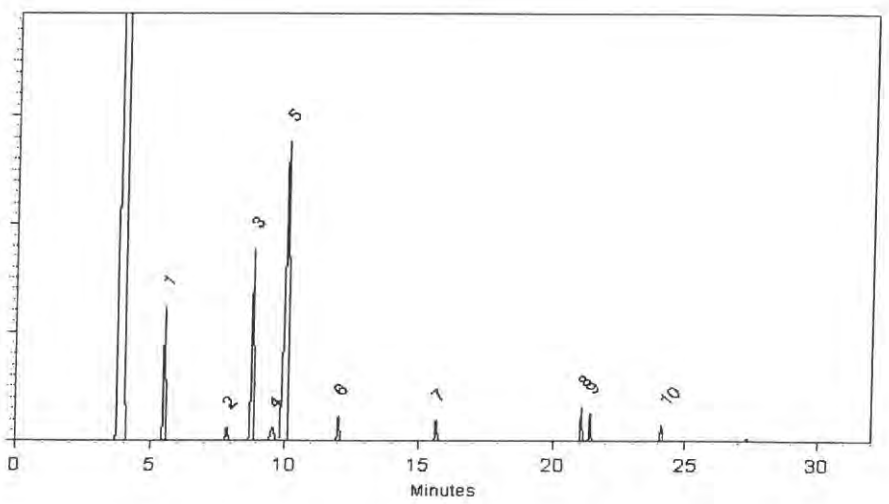
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 29-Nov-2017 **Balance:** B707717271

Amanda Miller - Operations Tech-ARM QC

Date Passed: 01-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

VM570808S_00004

VM570808S-00004 Rec 10/27/17

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Catalog No. : 570808.SEC **Lot No.:** A0126195

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2500-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Propanol (isopropanol) **CAS #** 67-63-0.SEC (Lot NWVYK) **Purity** 98%	25,010.4 µg/mL	+/- 146.4413 µg/mL +/- 1,237.3312 µg/mL +/- 1,268.0926 µg/mL	Gravimetric Unstressed Stressed
2	Chloroprene (2-chloro-1,3-butadiene) **CAS #** 126-99-8 * (Lot 170113JLM) **Purity** 99%	2,519.6 µg/mL	+/- 14.7864 µg/mL +/- 124.6554 µg/mL +/- 127.7543 µg/mL	Gravimetric Unstressed Stressed
3	Methacrylonitrile **CAS #** 126-98-7 * (Lot 1012014) **Purity** 99%	25,013.6 µg/mL	+/- 146.4601 µg/mL +/- 1,237.4903 µg/mL +/- 1,268.2556 µg/mL	Gravimetric Unstressed Stressed
4	2,2,4-Trimethylpentane (Isooctane) **CAS #** 540-84-1.SEC (Lot 4597900) **Purity** 99%	2,502.4 µg/mL	+/- 14.6855 µg/mL +/- 123.8044 µg/mL +/- 126.8822 µg/mL	Gravimetric Unstressed Stressed
5	1-Butanol **CAS #** 71-36-3.SEC (Lot QBO2D) **Purity** 99%	62,532.0 µg/mL	+/- 366.1197 µg/mL +/- 3,093.6246 µg/mL +/- 3,170.5355 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitropropane **CAS #** 79-46-9.SEC (Lot 6M3NJ) **Purity** 98%	5,012.9 µg/mL	+/- 29.3516 µg/mL +/- 248.0015 µg/mL +/- 254.1671 µg/mL	Gravimetric Unstressed Stressed
7	1-Chlorohexane **CAS #** 544-10-5.SEC (Lot 3890000) **Purity** 98%	2,507.6 µg/mL	+/- 14.7161 µg/mL +/- 124.0629 µg/mL +/- 127.1470 µg/mL	Gravimetric Unstressed Stressed

8	1,2,3-Trimethylbenzene **CAS #** 526-73-8.SEC **Purity** 96%	(Lot 5602500)	2,505.6 µg/mL	+/- 14.7043 +/- 123.9628 +/- 127.0444	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Benzyl chloride **CAS #** 100-44-7.SEC **Purity** 99%	(Lot H29N03)	2,506.4 µg/mL	+/- 14.7090 +/- 124.0023 +/- 127.0850	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3,5-Trichlorobenzene **CAS #** 108-70-3.SEC **Purity** 99%	(Lot I28U021)	2,504.0 µg/mL	+/- 14.6949 +/- 123.8836 +/- 126.9633	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

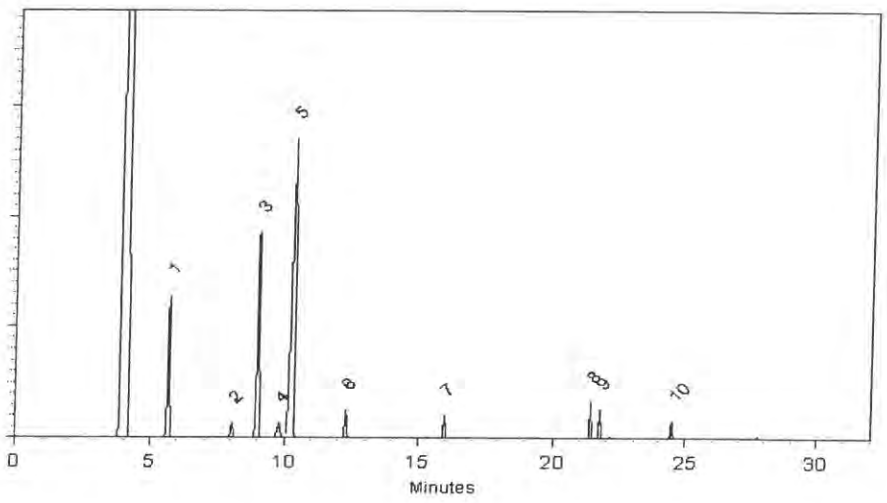
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician **Date Mixed:** 27-Mar-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 29-Mar-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

VM570808S_00005

Rec: 6/15/18 10 vials

VM570808s-00005

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570808.SEC **Lot No.:** A0135368

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2,500-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	2-Propanol (isopropanol)		24,998.8 µg/mL	+/-	146.3736	µg/mL	Gravimetric
	CAS # 67-63-0.SEC	(Lot NWVYK)		+/-	1,236.7591	µg/mL	Unstressed
	Purity 98%			+/-	1,267.5062	µg/mL	Stressed
2	Chloroprene (2-chloro-1,3-butadiene)		2,521.5 µg/mL	+/-	14.7976	µg/mL	Gravimetric
	CAS # 126-99-8 *	(Lot 180302JLM)		+/-	124.7494	µg/mL	Unstressed
	Purity 99%			+/-	127.8506	µg/mL	Stressed
3	Methacrylonitrile		25,005.5 µg/mL	+/-	146.4127	µg/mL	Gravimetric
	CAS # 126-98-7 *	(Lot 1012014)		+/-	1,237.0896	µg/mL	Unstressed
	Purity 99%			+/-	1,267.8449	µg/mL	Stressed
4	2,2,4-Trimethylpentane (Isooctane)		2,511.0 µg/mL	+/-	14.7360	µg/mL	Gravimetric
	CAS # 540-84-1.SEC	(Lot 4597900)		+/-	124.2299	µg/mL	Unstressed
	Purity 99%			+/-	127.3182	µg/mL	Stressed
5	1-Butanol		62,527.5 µg/mL	+/-	366.0934	µg/mL	Gravimetric
	CAS # 71-36-3.SEC	(Lot QBO2D)		+/-	3,093.4020	µg/mL	Unstressed
	Purity 99%			+/-	3,170.3073	µg/mL	Stressed
6	2-Nitropropane		5,030.3 µg/mL	+/-	29.4537	µg/mL	Gravimetric
	CAS # 79-46-9.SEC	(Lot Y4YWD)		+/-	248.8645	µg/mL	Unstressed
	Purity 98%			+/-	255.0515	µg/mL	Stressed
7	1-Chlorohexane		2,506.8 µg/mL	+/-	14.7115	µg/mL	Gravimetric
	CAS # 544-10-5.SEC	(Lot 3890000)		+/-	124.0241	µg/mL	Unstressed
	Purity 98%			+/-	127.1073	µg/mL	Stressed

8	1,2,3-Trimethylbenzene **CAS #** 526-73-8.SEC **Purity** 92%	(Lot 7110200)	2,497.8 µg/mL	+/- 14.6585 +/- 123.5769 +/- 126.6489	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Benzyl chloride **CAS #** 100-44-7.SEC **Purity** 99%	(Lot H29N03)	2,522.5 µg/mL	+/- 14.8034 +/- 124.7989 +/- 127.9013	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3,5-Trichlorobenzene **CAS #** 108-70-3.SEC **Purity** 99%	(Lot I28U021)	2,515.0 µg/mL	+/- 14.7594 +/- 124.4278 +/- 127.5210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

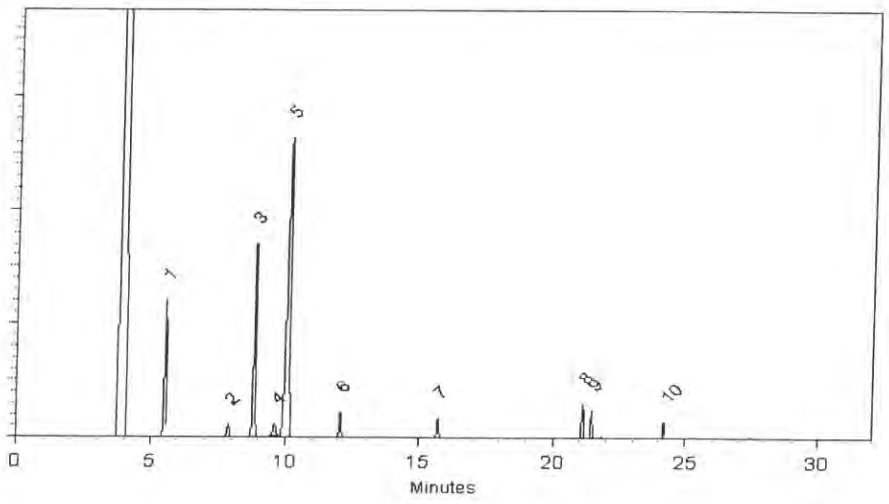
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Larry J. Moore - Mix Technician **Date Mixed:** 19-Feb-2018 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 12-Mar-2018

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

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Rec: 1/11/18

V M570809_00003

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809 **Lot No.:** A0131668

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2,500-5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethyl acetate **CAS #** 141-78-6 (Lot SHBG6401V) **Purity** 99%	5,019.0 µg/mL	+/- 29.3873 µg/mL +/- 302.8385 µg/mL +/- 303.5574 µg/mL	Gravimetric Unstressed Stressed
2	Ethyl acrylate **CAS #** 140-88-5 (Lot 10129902) **Purity** 99%	2,521.0 µg/mL	+/- 14.7946 µg/mL +/- 152.1164 µg/mL +/- 152.4775 µg/mL	Gravimetric Unstressed Stressed
3	Methyl methacrylate **CAS #** 80-62-6 (Lot MKBV3172V) **Purity** 99%	5,027.5 µg/mL	+/- 29.4371 µg/mL +/- 303.3514 µg/mL +/- 304.0715 µg/mL	Gravimetric Unstressed Stressed
4	Butyl acetate **CAS #** 123-86-4 (Lot SHBH0056V) **Purity** 99%	2,512.0 µg/mL	+/- 14.7418 µg/mL +/- 151.5733 µg/mL +/- 151.9331 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VM571992_00001

VM571992_00001 Rec'd 1-25-17

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571992 **Lot No.:** A0123711

Description : 8260 List 1 / Std #1 MegaMix (2017)

8260 List 1 / Std #1 MegaMix (2017) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7 (Lot SHBG1462V) **Purity** 99%	2,501.3 µg/mL	+/- 14.5425 µg/mL +/- 150.9115 µg/mL +/- 151.2698 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 (Lot 00009482) **Purity** 99%	2,505.1 µg/mL	+/- 14.5650 µg/mL +/- 151.1453 µg/mL +/- 151.5041 µg/mL	Gravimetric Unstressed Stressed
3	1,1-dichloroethene **CAS #** 75-35-4 (Lot SHBG8609V) **Purity** 99%	2,511.5 µg/mL	+/- 14.6021 µg/mL +/- 151.5299 µg/mL +/- 151.8897 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0 (Lot SHBF0688V) **Purity** 99%	25,001.8 µg/mL	+/- 145.3547 µg/mL +/- 1,508.4656 µg/mL +/- 1,512.0470 µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate **CAS #** 79-20-9 (Lot SHBG4345V) **Purity** 99%	5,000.5 µg/mL	+/- 29.0733 µg/mL +/- 301.7023 µg/mL +/- 302.4186 µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) **CAS #** 74-88-4 (Lot SHBF2149V) **Purity** 99%	2,502.9 µg/mL	+/- 14.5519 µg/mL +/- 151.0095 µg/mL +/- 151.3681 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1 (Lot SHBF8133V) **Purity** 99%	2,517.1 µg/mL	+/- 14.6348 µg/mL +/- 151.8693 µg/mL +/- 152.2299 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane) **CAS #** 75-09-2 **Purity** 99%	(Lot SHBH2578V)	2,502.1 µg/mL	+/- 14.5476 +/- 150.9643 +/- 151.3227	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide **CAS #** 75-15-0 **Purity** 99%	(Lot S20A856)	2,501.4 µg/mL	+/- 14.5432 +/- 150.9190 +/- 151.2773	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile **CAS #** 107-13-1 **Purity** 99%	(Lot T07B2030)	25,001.3 µg/mL	+/- 145.3518 +/- 1,508.4355 +/- 1,512.0167	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Methyl-tert-butyl ether (MTBE) **CAS #** 1634-04-4 **Purity** 99%	(Lot SHBG2655V)	2,505.3 µg/mL	+/- 14.5657 +/- 151.1528 +/- 151.5117	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	cis-1,2-Dichloroethene **CAS #** 156-59-2 **Purity** 98%	(Lot MKBV2831V)	2,500.5 µg/mL	+/- 14.5379 +/- 150.8644 +/- 151.2226	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Hexane (C6) **CAS #** 110-54-3 **Purity** 99%	(Lot SHBG2674V)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	1,1-Dichloroethane **CAS #** 75-34-3 **Purity** 99%	(Lot 00008621)	2,500.4 µg/mL	+/- 14.5374 +/- 150.8587 +/- 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	2,2-Dichloropropane **CAS #** 594-20-7 **Purity** 98%	(Lot BCBR0622V)	2,501.0 µg/mL	+/- 14.5408 +/- 150.8940 +/- 151.2522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	trans-1,2-Dichloroethene **CAS #** 156-60-5 **Purity** 99%	(Lot 09431AEV)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Isobutanol (2-Methyl-1-propanol) **CAS #** 78-83-1 **Purity** 99%	(Lot SHBG8201V)	62,512.5 µg/mL	+/- 363.4341 +/- 3,771.6543 +/- 3,780.6088	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	chloroform **CAS #** 67-66-3 **Purity** 99%	(Lot MKBV2089V)	2,501.9 µg/mL	+/- 14.5461 +/- 150.9492 +/- 151.3076	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Bromochloromethane **CAS #** 74-97-5 **Purity** 99%	(Lot 00004559)	2,503.3 µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Tetrahydrofuran **CAS #** 109-99-9 **Purity** 99%	(Lot SHBG2910V)	5,001.3 µg/mL	+/- 29.0777 +/- 301.7476 +/- 302.4640	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	1,1,1-trichloroethane **CAS #** 71-55-6 **Purity** 99%	(Lot B15W12061)	2,500.3 µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	Cyclohexane **CAS #** 110-82-7 **Purity** 99%	(Lot MKBX4768V)	2,502.0 µg/mL	+/- 14.5468 +/- 150.9567 +/- 151.3151	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	1,1-Dichloropropene **CAS #** 563-58-6 **Purity** 99%	(Lot 160727JLM)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	carbon tetrachloride **CAS #** 56-23-5 **Purity** 99%	(Lot SHBG1763V)	2,503.3 µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	n-Heptane (C7) **CAS #** 142-82-5 **Purity** 99%	(Lot SHBG6171V)	2,505.5 µg/mL	+/- 14.5672 +/- 151.1679 +/- 151.5268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2-Dichloroethane **CAS #** 107-06-2 **Purity** 99%	(Lot SHBF9313V)	2,504.8 µg/mL	+/- 14.5628 +/- 151.1227 +/- 151.4815	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Benzene **CAS #** 71-43-2 **Purity** 99%	(Lot SHBH2056V)	2,506.9 µg/mL	+/- 14.5752 +/- 151.2509 +/- 151.6100	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Trichloroethene **CAS #** 79-01-6 **Purity** 99%	(Lot SHBH1955V)	2,502.4 µg/mL	+/- 14.5490 +/- 150.9794 +/- 151.3378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Methylcyclohexane **CAS #** 108-87-2 **Purity** 98%	(Lot SHBG0634V)	2,500.3 µg/mL	+/- 14.5372 +/- 150.8570 +/- 151.2152	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane **CAS #** 78-87-5 **Purity** 99%	(Lot 01113D0V)	2,503.0 µg/mL	+/- 14.5527 +/- 151.0171 +/- 151.3756	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1 **Purity** 99%	(Lot SHBH2584V)	50,011.4 µg/mL	+/- 290.7552 +/- 3,017.4064 +/- 3,024.5702	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3 **Purity** 98%	(Lot 10183283)	2,501.9 µg/mL	+/- 14.5465 +/- 150.9531 +/- 151.3115	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene **CAS #** 10061-01-5 **Purity** 99%	(Lot 22622)	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene **CAS #** 108-88-3 **Purity** 99%	(Lot SHBH1932V)	2,504.3 µg/mL	+/- 14.5599 +/- 151.0925 +/- 151.4512	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate **CAS #** 97-63-2 **Purity** 99%	(Lot SHBD9190V)	2,506.9 µg/mL	+/- 14.5752 +/- 151.2509 +/- 151.6100	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene **CAS #** 10061-02-6 **Purity** 99%	(Lot C584177)	2,503.6 µg/mL	+/- 14.5563 +/- 151.0548 +/- 151.4134	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane **CAS #** 79-00-5 **Purity** 99%	(Lot FGB01)	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane **CAS #** 142-28-9 **Purity** 99%	(Lot BCBG2162V)	2,503.5 µg/mL	+/- 14.5556 +/- 151.0472 +/- 151.4059	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBD9374V)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	dibromochloromethane **CAS #** 124-48-1 **Purity** 98%	(Lot MKBW3597V)	2,500.2 µg/mL	+/- 14.5365 +/- 150.8497 +/- 151.2078	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) **CAS #** 106-93-4 **Purity** 99%	(Lot BCBH3877V)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene **CAS #** 108-90-7 **Purity** 99%	(Lot SHBF0505V)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot SHBG4347V)	1,250.3 µg/mL	+/- 7.2691 +/- 75.4331 +/- 75.6122	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	p-Xylene **CAS #** 106-42-3 **Purity** 99%	(Lot SHBG3928V)	1,251.3 µg/mL	+/- 7.2749 +/- 75.4935 +/- 75.6727	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Ethylbenzene **CAS #** 100-41-4 **Purity** 99%	(Lot SHBG5920V)	2,503.3 µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	1,1,1,2-Tetrachloroethane **CAS #** 630-20-6 **Purity** 99%	(Lot MKBS3769V)	2,500.3 µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene **CAS #** 95-47-6 **Purity** 99%	(Lot SHBH3432V)	2,504.9 µg/mL	+/- 14.5636 +/- 151.1302 +/- 151.4890	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Styrene **CAS #** 100-42-5 **Purity** 99%	(Lot MKBS7097V)	2,506.3 µg/mL	+/- 14.5716 +/- 151.2132 +/- 151.5722	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) **CAS #** 98-82-8 **Purity** 99%	(Lot 10185056)	2,501.6 µg/mL	+/- 14.5447 +/- 150.9341 +/- 151.2925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	bromoform **CAS #** 75-25-2 **Purity** 99%	(Lot SHBD8459V)	2,502.9 µg/mL	+/- 14.5519 +/- 151.0095 +/- 151.3681	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	bromodichloromethane **CAS #** 75-27-4 **Purity** 97%	(Lot MKBW5506V)	2,506.8 µg/mL	+/- 14.5750 +/- 151.2490 +/- 151.6081	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	1,1,2,2-Tetrachloroethane **CAS #** 79-34-5 **Purity** 99%	(Lot CFA4D)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane **CAS #** 96-18-4 **Purity** 99%	(Lot BCBH8722V)	2,508.5 µg/mL	+/- 14.5846 +/- 151.3489 +/- 151.7082	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-dichloro-2-butene **CAS #** 110-57-6 **Purity** 95%	(Lot MKBP6041V)	2,500.8 µg/mL	+/- 14.5396 +/- 150.8817 +/- 151.2399	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene **CAS #** 103-65-1 **Purity** 99%	(Lot MKBJ0332V)	2,501.9 µg/mL	+/- 14.5461 +/- 150.9492 +/- 151.3076	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Bromobenzene **CAS #** 108-86-1 **Purity** 99%	(Lot MKBD4032V)	2,507.0 µg/mL	+/- 14.5759 +/- 151.2584 +/- 151.6175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,3,5-Trimethylbenzene **CAS #** 108-67-8 **Purity** 99%	(Lot BCBQ2165V)	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene **CAS #** 95-49-8 **Purity** 99%	(Lot MKBW5554V)	2,500.6 µg/mL	+/- 14.5388 +/- 150.8738 +/- 151.2320	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene **CAS #** 106-43-4 **Purity** 99%	(Lot MKBL7753V)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene **CAS #** 98-06-6 **Purity** 99%	(Lot S52237V)	2,507.0 µg/mL	+/- 14.5759 +/- 151.2584 +/- 151.6175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,2,4-Trimethylbenzene **CAS #** 95-63-6 **Purity** 98%	(Lot MKBJ6229V)	2,500.8 µg/mL	+/- 14.5401 +/- 150.8866 +/- 151.2448	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene **CAS #** 135-98-8 **Purity** 99%	(Lot MKBR9260V)	2,505.4 µg/mL	+/- 14.5665 +/- 151.1604 +/- 151.5193	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	p-Isopropyltoluene (p-Cymene) **CAS #** 99-87-6 **Purity** 99%	(Lot MKBS2604V)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBM5751V)	2,503.9 µg/mL	+/- 14.5577 +/- 151.0699 +/- 151.4285	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBS1350V)	2,509.9 µg/mL	+/- 14.5926 +/- 151.4319 +/- 151.7914	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene **CAS #** 104-51-8 **Purity** 99%	(Lot 09418JJV)	2,503.3 µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot SHBD7331V)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8 **Purity** 99%	(Lot FBL01)	2,505.0 µg/mL	+/- 14.5643 +/- 151.1378 +/- 151.4966	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene **CAS #** 120-82-1 **Purity** 99%	(Lot SHBC5541V)	2,505.3 µg/mL	+/- 14.5657 +/- 151.1528 +/- 151.5117	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene **CAS #** 87-68-3 **Purity** 98%	(Lot J31X013)	2,506.5 µg/mL	+/- 14.5728 +/- 151.2266 +/- 151.5856	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBW2603V)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene		2,511.1	µg/mL	+/-	14.5999	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot 12912PFV)			+/-	151.5073	µg/mL	Unstressed
	Purity 99%				+/-	151.8670	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

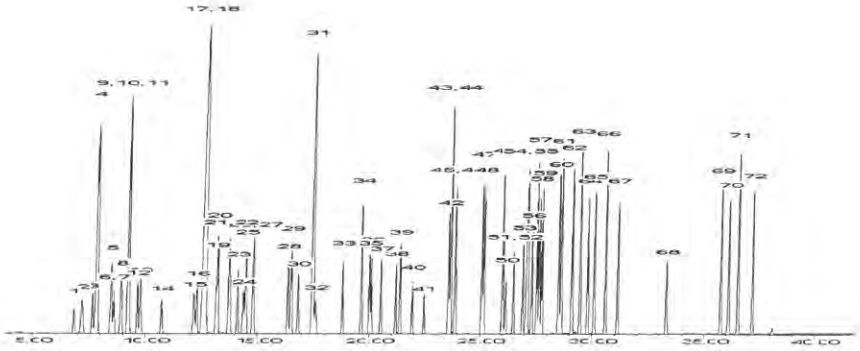
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician **Date Mixed:** 22-Dec-2016 **Balance:** B251644995

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 04-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

VM571992S_00001

Rec: 1-25-17
VMS71992S-00001

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571992.sec **Lot No.:** A0123775

Description : 8260 List 1 / Std #1 MegaMix (2017)

8260 List 1 / Std #1 MegaMix (2017) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7.SEC (Lot F23X068) **Purity** 98%	2,501.2 µg/mL	+/- 14.5422 µg/mL +/- 150.9088 µg/mL +/- 151.2671 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1.SEC (Lot 18342) **Purity** 99%	2,501.1 µg/mL	+/- 14.5418 µg/mL +/- 150.9040 µg/mL +/- 151.2622 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethene **CAS #** 75-35-4.SEC (Lot 2767000) **Purity** 99%	2,500.5 µg/mL	+/- 14.5381 µg/mL +/- 150.8662 µg/mL +/- 151.2244 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0.SEC (Lot XYXDO) **Purity** 98%	25,003.1 µg/mL	+/- 145.3626 µg/mL +/- 1,508.5475 µg/mL +/- 1,512.1291 µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate **CAS #** 79-20-9.SEC (Lot YDGVD) **Purity** 99%	5,000.4 µg/mL	+/- 29.0726 µg/mL +/- 301.6948 µg/mL +/- 302.4111 µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) **CAS #** 74-88-4.SEC (Lot Y25A027) **Purity** 99%	2,500.4 µg/mL	+/- 14.5374 µg/mL +/- 150.8587 µg/mL +/- 151.2169 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1.SEC (Lot VEBOC) **Purity** 98%	2,500.1 µg/mL	+/- 14.5358 µg/mL +/- 150.8423 µg/mL +/- 151.2004 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane) **CAS #** 75-09-2.SEC (Lot FGM02) **Purity** 99%	2,500.8 µg/mL	+/- 14.5396 +/- 150.8813 +/- 151.2395	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide **CAS #** 75-15-0.SEC (Lot MKBL1376V) **Purity** 99%	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile **CAS #** 107-13-1.SEC (Lot UERIL) **Purity** 99%	25,000.9 µg/mL	+/- 145.3496 +/- 1,508.4128 +/- 1,511.9941	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Methyl-tert-butyl ether (MTBE) **CAS #** 1634-04-4.SEC (Lot ZAQTA-MS) **Purity** 99%	2,500.0 µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	cis-1,2-Dichloroethene **CAS #** 156-59-2.SEC (Lot HGC01-BLKT) **Purity** 98%	2,500.7 µg/mL	+/- 14.5394 +/- 150.8792 +/- 151.2374	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Hexane (C6) **CAS #** 110-54-3.SEC (Lot 10188491) **Purity** 99%	2,501.5 µg/mL	+/- 14.5439 +/- 150.9266 +/- 151.2849	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	1,1-Dichloroethane **CAS #** 75-34-3.SEC (Lot 5379000) **Purity** 99%	2,500.3 µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	2,2-Dichloropropane **CAS #** 594-20-7.SEC (Lot I7E8E) **Purity** 98%	2,500.1 µg/mL	+/- 14.5358 +/- 150.8423 +/- 151.2004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	trans-1,2-Dichloroethene **CAS #** 156-60-5.SEC (Lot TS5UB) **Purity** 97%	2,500.2 µg/mL	+/- 14.5362 +/- 150.8466 +/- 151.2048	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Isobutanol (2-Methyl-1-propanol) **CAS #** 78-83-1.SEC (Lot 83NHH) **Purity** 99%	62,506.9 µg/mL	+/- 363.4014 +/- 3,771.3149 +/- 3,780.2687	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Chloroform **CAS #** 67-66-3.SEC (Lot 1297547) **Purity** 99%	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Bromochloromethane **CAS #** 74-97-5.SEC (Lot 5670200) **Purity** 99%	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Tetrahydrofuran **CAS #** 109-99-9.SEC (Lot K3V7J-SJ) **Purity** 99%	5,002.3 µg/mL	+/- 29.0835 +/- 301.8079 +/- 302.5245	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	1,1,1-Trichloroethane **CAS #** 71-55-6.SEC (Lot CS160712) **Purity** 98%	2,500.7 µg/mL	+/- 14.5394 +/- 150.8792 +/- 151.2374	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	Cyclohexane **CAS #** 110-82-7.SEC (Lot YADRA) **Purity** 99%	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	1,1-Dichloropropene **CAS #** 563-58-6.SEC (Lot 5221100) **Purity** 96%	2,501.3 µg/mL	+/- 14.5427 +/- 150.9133 +/- 151.2716	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Carbon tetrachloride **CAS #** 56-23-5.SEC **Purity** 99%	(Lot 11466)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	n-Heptane (C7) **CAS #** 142-82-5.SEC **Purity** 99%	(Lot OGM01)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2-Dichloroethane **CAS #** 107-06-2.SEC **Purity** 99%	(Lot FO6PK)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Benzene **CAS #** 71-43-2.SEC **Purity** 99%	(Lot B28Y008)	2,501.5 µg/mL	+/- 14.5439 +/- 150.9266 +/- 151.2849	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Trichloroethene **CAS #** 79-01-6.SEC **Purity** 99%	(Lot H04X050)	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Methylcyclohexane **CAS #** 108-87-2.SEC **Purity** 99%	(Lot 24MSD-CD)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane **CAS #** 78-87-5.SEC **Purity** 99%	(Lot OGG01)	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1.SEC **Purity** 99%	(Lot MUFZH)	50,007.1 µg/mL	+/- 290.7305 +/- 3,017.1500 +/- 3,024.3132	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3.SEC **Purity** 99%	(Lot FGI01-OICH)	2,501.6 µg/mL	+/- 14.5447 +/- 150.9341 +/- 151.2925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene **CAS #** 10061-01-5.SEC **Purity** 99%	(Lot 487OA)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene **CAS #** 108-88-3.SEC **Purity** 99%	(Lot YND2B-BD)	2,500.0 µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate **CAS #** 97-63-2.SEC **Purity** 99%	(Lot MLWYK-LS)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene **CAS #** 10061-02-6.SEC **Purity** 99%	(Lot ZDMSL)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane **CAS #** 79-00-5.SEC **Purity** 98%	(Lot 5034600)	2,500.8 µg/mL	+/- 14.5401 +/- 150.8866 +/- 151.2448	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane **CAS #** 142-28-9.SEC **Purity** 99%	(Lot AGN01-EFPC)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene **CAS #** 127-18-4.SEC **Purity** 99%	(Lot F09W014)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	Dibromochloromethane **CAS #** 124-48-1.SEC **Purity** 97%	(Lot 10181507)	2,500.4	µg/mL	+/- 14.5376 +/- 150.8613 +/- 151.2194	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) **CAS #** 106-93-4.SEC **Purity** 99%	(Lot 3505900)	2,500.5	µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene **CAS #** 108-90-7.SEC **Purity** 99%	(Lot 1161936)	2,501.0	µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	m-Xylene **CAS #** 108-38-3.SEC **Purity** 99%	(Lot OUKMG-GB)	1,250.9	µg/mL	+/- 7.2727 +/- 75.4708 +/- 75.6500	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	p-Xylene **CAS #** 106-42-3.SEC **Purity** 99%	(Lot GM01)	1,250.5	µg/mL	+/- 7.2705 +/- 75.4482 +/- 75.6273	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Ethylbenzene **CAS #** 100-41-4.SEC **Purity** 99%	(Lot PI4SE)	2,500.9	µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	1,1,1,2-Tetrachloroethane **CAS #** 630-20-6.SEC **Purity** 99%	(Lot GC01)	2,501.1	µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene **CAS #** 95-47-6.SEC **Purity** 99%	(Lot FGL01-KTPK)	2,500.9	µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Styrene **CAS #** 100-42-5.SEC **Purity** 99%	(Lot OFIOL-IA)	2,500.4	µg/mL	+/- 14.5374 +/- 150.8587 +/- 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) **CAS #** 98-82-8.SEC **Purity** 99%	(Lot 2PHXG-IH)	2,500.5	µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	Bromoform **CAS #** 75-25-2.SEC **Purity** 99%	(Lot 5139000)	2,502.3	µg/mL	+/- 14.5483 +/- 150.9718 +/- 151.3303	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	Bromodichloromethane **CAS #** 75-27-4.SEC **Purity** 98%	(Lot 13780)	2,500.1	µg/mL	+/- 14.5358 +/- 150.8423 +/- 151.2004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	1,1,2,2-Tetrachloroethane **CAS #** 79-34-5.SEC **Purity** 99%	(Lot CFA4D-AQ)	2,501.3	µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane **CAS #** 96-18-4.SEC **Purity** 98%	(Lot OGI01)	2,500.1	µg/mL	+/- 14.5358 +/- 150.8423 +/- 151.2004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-Dichloro-2-butene **CAS #** 110-57-6.SEC **Purity** 98%	(Lot 100700-3)	2,501.0	µg/mL	+/- 14.5408 +/- 150.8940 +/- 151.2522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene **CAS #** 103-65-1.SEC **Purity** 99%	(Lot T2HFC-IT)	2,500.0	µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Bromobenzene		2,500.1	µg/mL	+/-	14.5359	µg/mL	Gravimetric
	CAS # 108-86-1.SEC	(Lot 2FUHG-EM)			+/-	150.8436	µg/mL	Unstressed
	Purity 99%				+/-	151.2017	µg/mL	Stressed
57	1,3,5-Trimethylbenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 108-67-8.SEC	(Lot TOOOF)			+/-	150.8512	µg/mL	Unstressed
	Purity 99%				+/-	151.2093	µg/mL	Stressed
58	2-Chlorotoluene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 95-49-8.SEC	(Lot SW8QG-AO)			+/-	150.8889	µg/mL	Unstressed
	Purity 99%				+/-	151.2471	µg/mL	Stressed
59	4-Chlorotoluene		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 106-43-4.SEC	(Lot P4XHJ-AO)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
60	tert-Butylbenzene		2,500.1	µg/mL	+/-	14.5359	µg/mL	Gravimetric
	CAS # 98-06-6.SEC	(Lot OGN01-CAI)			+/-	150.8436	µg/mL	Unstressed
	Purity 99%				+/-	151.2017	µg/mL	Stressed
61	1,2,4-Trimethylbenzene		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 95-63-6.SEC	(Lot SC7LO-QA)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
62	sec-Butylbenzene		2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
	CAS # 135-98-8.SEC	(Lot OGN01-IMA)			+/-	150.9190	µg/mL	Unstressed
	Purity 99%				+/-	151.2773	µg/mL	Stressed
63	4-Isopropyltoluene (p-cymene)		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 99-87-6.SEC	(Lot 5221800)			+/-	150.9115	µg/mL	Unstressed
	Purity 99%				+/-	151.2698	µg/mL	Stressed
64	1,3-Dichlorobenzene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 541-73-1.SEC	(Lot FMDFD)			+/-	150.8889	µg/mL	Unstressed
	Purity 99%				+/-	151.2471	µg/mL	Stressed
65	1,4-Dichlorobenzene		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 106-46-7.SEC	(Lot 4Y5DC)			+/-	150.8813	µg/mL	Unstressed
	Purity 99%				+/-	151.2395	µg/mL	Stressed
66	n-Butylbenzene		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 104-51-8.SEC	(Lot OGN01-PNP)			+/-	150.8813	µg/mL	Unstressed
	Purity 99%				+/-	151.2395	µg/mL	Stressed
67	1,2-Dichlorobenzene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 95-50-1.SEC	(Lot R6QDM)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane		2,501.5	µg/mL	+/-	14.5436	µg/mL	Gravimetric
	CAS # 96-12-8.SEC	(Lot LC00408V)			+/-	150.9236	µg/mL	Unstressed
	Purity 98%				+/-	151.2819	µg/mL	Stressed
69	1,2,4-Trichlorobenzene		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot 3LYYC)			+/-	150.9869	µg/mL	Unstressed
	Purity 99%				+/-	151.3454	µg/mL	Stressed
70	Hexachlorobutadiene		2,501.4	µg/mL	+/-	14.5433	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 5526800)			+/-	150.9198	µg/mL	Unstressed
	Purity 97%				+/-	151.2781	µg/mL	Stressed
71	Naphthalene		2,501.8	µg/mL	+/-	14.5454	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot SKZ5N)			+/-	150.9417	µg/mL	Unstressed
	Purity 99%				+/-	151.3000	µg/mL	Stressed

72	1,2,3-Trichlorobenzene		2,500.7 µg/mL	+/-	14.5394	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)		+/-	150.8792	µg/mL	Unstressed
	Purity 98%			+/-	151.2374	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

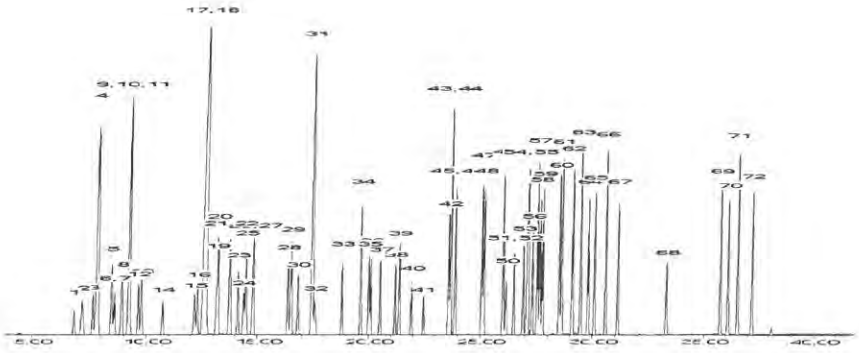
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 28-Dec-2016 **Balance:** 1127510105

Jennifer J Pollino

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 04-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

VM571992S_00002

Rec'd 5/4/17
VM571992S-00002

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571992.sec **Lot No.:** A0123775

Description : 8260 List 1 / Std #1 MegaMix (2017)

8260 List 1 / Std #1 MegaMix (2017) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7.SEC (Lot F23X068) **Purity** 98%	2,501.2 µg/mL	+/- 14.5422 +/- 150.9088 +/- 151.2671	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1.SEC (Lot 18342) **Purity** 99%	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethene **CAS #** 75-35-4.SEC (Lot 2767000) **Purity** 99%	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0.SEC (Lot XYXDO) **Purity** 98%	25,003.1 µg/mL	+/- 145.3626 +/- 1,508.5475 +/- 1,512.1291	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate **CAS #** 79-20-9.SEC (Lot YDGVD) **Purity** 99%	5,000.4 µg/mL	+/- 29.0726 +/- 301.6948 +/- 302.4111	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) **CAS #** 74-88-4.SEC (Lot Y25A027) **Purity** 99%	2,500.4 µg/mL	+/- 14.5374 +/- 150.8587 +/- 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1.SEC (Lot VEBOC) **Purity** 98%	2,500.1 µg/mL	+/- 14.5358 +/- 150.8423 +/- 151.2004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane) **CAS #** 75-09-2.SEC (Lot FGM02) **Purity** 99%		2,500.8 µg/mL	+/- 14.5396 +/- 150.8813 +/- 151.2395	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide **CAS #** 75-15-0.SEC **Purity** 99%	(Lot MKBL1376V)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile **CAS #** 107-13-1.SEC **Purity** 99%	(Lot UERIL)	25,000.9 µg/mL	+/- 145.3496 +/- 1,508.4128 +/- 1,511.9941	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Methyl-tert-butyl ether (MTBE) **CAS #** 1634-04-4.SEC **Purity** 99%	(Lot ZAQTA-MS)	2,500.0 µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	cis-1,2-Dichloroethene **CAS #** 156-59-2.SEC **Purity** 98%	(Lot HGC01-BLKT)	2,500.7 µg/mL	+/- 14.5394 +/- 150.8792 +/- 151.2374	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Hexane (C6) **CAS #** 110-54-3.SEC **Purity** 99%	(Lot 10188491)	2,501.5 µg/mL	+/- 14.5439 +/- 150.9266 +/- 151.2849	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	1,1-Dichloroethane **CAS #** 75-34-3.SEC **Purity** 99%	(Lot 5379000)	2,500.3 µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	2,2-Dichloropropane **CAS #** 594-20-7.SEC **Purity** 98%	(Lot I7E8E)	2,500.1 µg/mL	+/- 14.5358 +/- 150.8423 +/- 151.2004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	trans-1,2-Dichloroethene **CAS #** 156-60-5.SEC **Purity** 97%	(Lot TS5UB)	2,500.2 µg/mL	+/- 14.5362 +/- 150.8466 +/- 151.2048	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Isobutanol (2-Methyl-1-propanol) **CAS #** 78-83-1.SEC **Purity** 99%	(Lot 83NHH)	62,506.9 µg/mL	+/- 363.4014 +/- 3,771.3149 +/- 3,780.2687	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Chloroform **CAS #** 67-66-3.SEC **Purity** 99%	(Lot 1297547)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Bromochloromethane **CAS #** 74-97-5.SEC **Purity** 99%	(Lot 5670200)	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Tetrahydrofuran **CAS #** 109-99-9.SEC **Purity** 99%	(Lot K3V7J-SJ)	5,002.3 µg/mL	+/- 29.0835 +/- 301.8079 +/- 302.5245	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	1,1,1-Trichloroethane **CAS #** 71-55-6.SEC **Purity** 98%	(Lot CS160712)	2,500.7 µg/mL	+/- 14.5394 +/- 150.8792 +/- 151.2374	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	Cyclohexane **CAS #** 110-82-7.SEC **Purity** 99%	(Lot YADRA)	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	1,1-Dichloropropene **CAS #** 563-58-6.SEC **Purity** 96%	(Lot 5221100)	2,501.3 µg/mL	+/- 14.5427 +/- 150.9133 +/- 151.2716	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Carbon tetrachloride **CAS #** 56-23-5.SEC **Purity** 99%	(Lot 11466)	2,500.5	µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	n-Heptane (C7) **CAS #** 142-82-5.SEC **Purity** 99%	(Lot OGM01)	2,500.5	µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2-Dichloroethane **CAS #** 107-06-2.SEC **Purity** 99%	(Lot FO6PK)	2,500.1	µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Benzene **CAS #** 71-43-2.SEC **Purity** 99%	(Lot B28Y008)	2,501.5	µg/mL	+/- 14.5439 +/- 150.9266 +/- 151.2849	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Trichloroethene **CAS #** 79-01-6.SEC **Purity** 99%	(Lot H04X050)	2,501.0	µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Methylcyclohexane **CAS #** 108-87-2.SEC **Purity** 99%	(Lot 24MSD-CD)	2,500.9	µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane **CAS #** 78-87-5.SEC **Purity** 99%	(Lot OGG01)	2,501.1	µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1.SEC **Purity** 99%	(Lot MUFZH)	50,007.1	µg/mL	+/- 290.7305 +/- 3,017.1500 +/- 3,024.3132	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3.SEC **Purity** 99%	(Lot FGI01-OICH)	2,501.6	µg/mL	+/- 14.5447 +/- 150.9341 +/- 151.2925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene **CAS #** 10061-01-5.SEC **Purity** 99%	(Lot 487OA)	2,500.1	µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene **CAS #** 108-88-3.SEC **Purity** 99%	(Lot YND2B-BD)	2,500.0	µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate **CAS #** 97-63-2.SEC **Purity** 99%	(Lot MLWYK-LS)	2,500.5	µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene **CAS #** 10061-02-6.SEC **Purity** 99%	(Lot ZDMSL)	2,500.5	µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane **CAS #** 79-00-5.SEC **Purity** 98%	(Lot 5034600)	2,500.8	µg/mL	+/- 14.5401 +/- 150.8866 +/- 151.2448	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane **CAS #** 142-28-9.SEC **Purity** 99%	(Lot AGN01-EFPC)	2,500.5	µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene **CAS #** 127-18-4.SEC **Purity** 99%	(Lot F09W014)	2,501.3	µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	Dibromochloromethane **CAS #** 124-48-1.SEC **Purity** 97%	(Lot 10181507)	2,500.4	µg/mL	+/- 14.5376 +/- 150.8613 +/- 151.2194	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) **CAS #** 106-93-4.SEC **Purity** 99%	(Lot 3505900)	2,500.5	µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene **CAS #** 108-90-7.SEC **Purity** 99%	(Lot 1161936)	2,501.0	µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	m-Xylene **CAS #** 108-38-3.SEC **Purity** 99%	(Lot OUKMG-GB)	1,250.9	µg/mL	+/- 7.2727 +/- 75.4708 +/- 75.6500	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	p-Xylene **CAS #** 106-42-3.SEC **Purity** 99%	(Lot GM01)	1,250.5	µg/mL	+/- 7.2705 +/- 75.4482 +/- 75.6273	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Ethylbenzene **CAS #** 100-41-4.SEC **Purity** 99%	(Lot PI4SE)	2,500.9	µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	1,1,1,2-Tetrachloroethane **CAS #** 630-20-6.SEC **Purity** 99%	(Lot GC01)	2,501.1	µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene **CAS #** 95-47-6.SEC **Purity** 99%	(Lot FGL01-KTPK)	2,500.9	µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Styrene **CAS #** 100-42-5.SEC **Purity** 99%	(Lot OFIOL-IA)	2,500.4	µg/mL	+/- 14.5374 +/- 150.8587 +/- 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) **CAS #** 98-82-8.SEC **Purity** 99%	(Lot 2PHXG-IH)	2,500.5	µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	Bromoform **CAS #** 75-25-2.SEC **Purity** 99%	(Lot 5139000)	2,502.3	µg/mL	+/- 14.5483 +/- 150.9718 +/- 151.3303	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	Bromodichloromethane **CAS #** 75-27-4.SEC **Purity** 98%	(Lot 13780)	2,500.1	µg/mL	+/- 14.5358 +/- 150.8423 +/- 151.2004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	1,1,2,2-Tetrachloroethane **CAS #** 79-34-5.SEC **Purity** 99%	(Lot CFA4D-AQ)	2,501.3	µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane **CAS #** 96-18-4.SEC **Purity** 98%	(Lot OGI01)	2,500.1	µg/mL	+/- 14.5358 +/- 150.8423 +/- 151.2004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-Dichloro-2-butene **CAS #** 110-57-6.SEC **Purity** 98%	(Lot 100700-3)	2,501.0	µg/mL	+/- 14.5408 +/- 150.8940 +/- 151.2522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene **CAS #** 103-65-1.SEC **Purity** 99%	(Lot T2HFC-IT)	2,500.0	µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Bromobenzene		2,500.1	µg/mL	+/-	14.5359	µg/mL	Gravimetric
	CAS # 108-86-1.SEC	(Lot 2FUHG-EM)			+/-	150.8436	µg/mL	Unstressed
	Purity 99%				+/-	151.2017	µg/mL	Stressed
57	1,3,5-Trimethylbenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 108-67-8.SEC	(Lot TOOOF)			+/-	150.8512	µg/mL	Unstressed
	Purity 99%				+/-	151.2093	µg/mL	Stressed
58	2-Chlorotoluene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 95-49-8.SEC	(Lot SW8QG-AO)			+/-	150.8889	µg/mL	Unstressed
	Purity 99%				+/-	151.2471	µg/mL	Stressed
59	4-Chlorotoluene		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 106-43-4.SEC	(Lot P4XHJ-AO)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
60	tert-Butylbenzene		2,500.1	µg/mL	+/-	14.5359	µg/mL	Gravimetric
	CAS # 98-06-6.SEC	(Lot OGN01-CAI)			+/-	150.8436	µg/mL	Unstressed
	Purity 99%				+/-	151.2017	µg/mL	Stressed
61	1,2,4-Trimethylbenzene		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 95-63-6.SEC	(Lot SC7LO-QA)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
62	sec-Butylbenzene		2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
	CAS # 135-98-8.SEC	(Lot OGN01-IMA)			+/-	150.9190	µg/mL	Unstressed
	Purity 99%				+/-	151.2773	µg/mL	Stressed
63	4-Isopropyltoluene (p-cymene)		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 99-87-6.SEC	(Lot 5221800)			+/-	150.9115	µg/mL	Unstressed
	Purity 99%				+/-	151.2698	µg/mL	Stressed
64	1,3-Dichlorobenzene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 541-73-1.SEC	(Lot FMDFD)			+/-	150.8889	µg/mL	Unstressed
	Purity 99%				+/-	151.2471	µg/mL	Stressed
65	1,4-Dichlorobenzene		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 106-46-7.SEC	(Lot 4Y5DC)			+/-	150.8813	µg/mL	Unstressed
	Purity 99%				+/-	151.2395	µg/mL	Stressed
66	n-Butylbenzene		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 104-51-8.SEC	(Lot OGN01-PNP)			+/-	150.8813	µg/mL	Unstressed
	Purity 99%				+/-	151.2395	µg/mL	Stressed
67	1,2-Dichlorobenzene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 95-50-1.SEC	(Lot R6QDM)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane		2,501.5	µg/mL	+/-	14.5436	µg/mL	Gravimetric
	CAS # 96-12-8.SEC	(Lot LC00408V)			+/-	150.9236	µg/mL	Unstressed
	Purity 98%				+/-	151.2819	µg/mL	Stressed
69	1,2,4-Trichlorobenzene		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot 3LYYC)			+/-	150.9869	µg/mL	Unstressed
	Purity 99%				+/-	151.3454	µg/mL	Stressed
70	Hexachlorobutadiene		2,501.4	µg/mL	+/-	14.5433	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 5526800)			+/-	150.9198	µg/mL	Unstressed
	Purity 97%				+/-	151.2781	µg/mL	Stressed
71	Naphthalene		2,501.8	µg/mL	+/-	14.5454	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot SKZ5N)			+/-	150.9417	µg/mL	Unstressed
	Purity 99%				+/-	151.3000	µg/mL	Stressed

72	1,2,3-Trichlorobenzene		2,500.7 µg/mL	+/-	14.5394	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)		+/-	150.8792	µg/mL	Unstressed
	Purity 98%			+/-	151.2374	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

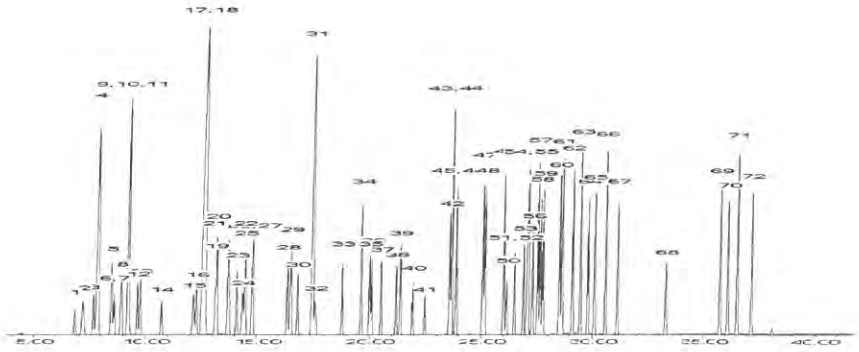
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 28-Dec-2016 **Balance:** 1127510105

Jennifer J Pollino

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 04-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

VM571993_00001

VM571993-0001 Rec: 2-1-17

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571993 **Lot No.:** A0123796

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2500-25,000 µg/ml, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile **CAS #** 75-05-8 (Lot SHBB3177V) **Purity** 98%	25,004.5 µg/mL	+/- 145.3705 µg/mL +/- 1,236.9157 µg/mL +/- 1,267.6727 µg/mL	Gravimetric Unstressed Stressed
2	Diisopropyl ether (DIPE) **CAS #** 108-20-3 (Lot SHBC0391V) **Purity** 99%	2,505.0 µg/mL	+/- 14.5643 µg/mL +/- 123.9170 µg/mL +/- 126.9983 µg/mL	Gravimetric Unstressed Stressed
3	Ethyl-tert-butyl ether (ETBE) **CAS #** 637-92-3 (Lot MKBT8400V) **Purity** 99%	2,501.5 µg/mL	+/- 14.5439 µg/mL +/- 123.7438 µg/mL +/- 126.8208 µg/mL	Gravimetric Unstressed Stressed
4	Propionitrile **CAS #** 107-12-0 (Lot BCBM6569V) **Purity** 99%	25,003.8 µg/mL	+/- 145.3664 µg/mL +/- 1,236.8808 µg/mL +/- 1,267.6370 µg/mL	Gravimetric Unstressed Stressed
5	tert-Amyl alcohol **CAS #** 75-85-4 (Lot STBB1898V) **Purity** 99%	25,006.0 µg/mL	+/- 145.3794 µg/mL +/- 1,236.9921 µg/mL +/- 1,267.7510 µg/mL	Gravimetric Unstressed Stressed
6	tert-Amyl methyl ether (TAME) **CAS #** 994-05-8 (Lot HMBD8698V) **Purity** 98%	2,505.4 µg/mL	+/- 14.5664 µg/mL +/- 123.9353 µg/mL +/- 127.0170 µg/mL	Gravimetric Unstressed Stressed

Reagent

VM571993S_00002

Rec: 2-1-17

VM571993s - 00002

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571993.sec **Lot No.:** A0123771

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2500-25,000 µg/ml, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile **CAS #** 75-05-8.SEC (Lot 7KGDA) **Purity** 99%	25,091.5 µg/mL	+/- 146.9162 µg/mL +/- 1,241.3442 µg/mL +/- 1,272.2054 µg/mL	Gravimetric Unstressed Stressed
2	Diisopropyl ether (DIPE) **CAS #** 108-20-3.SEC (Lot LL7TN-SH) **Purity** 98%	2,525.0 µg/mL	+/- 14.8179 µg/mL +/- 124.9211 µg/mL +/- 128.0265 µg/mL	Gravimetric Unstressed Stressed
3	Ethyl-tert-butyl ether (ETBE) **CAS #** 637-92-3.SEC (Lot MHBJG-QK) **Purity** 99%	2,509.0 µg/mL	+/- 14.7242 µg/mL +/- 124.1310 µg/mL +/- 127.2168 µg/mL	Gravimetric Unstressed Stressed
4	Propionitrile **CAS #** 107-12-0.SEC (Lot RTXQL) **Purity** 99%	25,125.5 µg/mL	+/- 147.1153 µg/mL +/- 1,243.0263 µg/mL +/- 1,273.9293 µg/mL	Gravimetric Unstressed Stressed
5	tert-Amyl alcohol **CAS #** 75-85-4.SEC (Lot MMGO1) **Purity** 99%	25,056.0 µg/mL	+/- 146.7084 µg/mL +/- 1,239.5880 µg/mL +/- 1,270.4054 µg/mL	Gravimetric Unstressed Stressed
6	tert-Amyl methyl ether (TAME) **CAS #** 994-05-8.SEC (Lot 5614600) **Purity** 99%	2,517.5 µg/mL	+/- 14.7741 µg/mL +/- 124.5515 µg/mL +/- 127.6478 µg/mL	Gravimetric Unstressed Stressed

Reagent

VM571993S_00003

Rec: 4/11/17

VM571993s-00003

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571993.sec **Lot No.:** A0123771

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2500-25,000 µg/ml, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile **CAS #** 75-05-8.SEC (Lot 7KGDA) **Purity** 99%	25,091.5 µg/mL	+/- 146.9162 µg/mL +/- 1,241.3442 µg/mL +/- 1,272.2054 µg/mL	Gravimetric Unstressed Stressed
2	Diisopropyl ether (DIPE) **CAS #** 108-20-3.SEC (Lot LL7TN-SH) **Purity** 98%	2,525.0 µg/mL	+/- 14.8179 µg/mL +/- 124.9211 µg/mL +/- 128.0265 µg/mL	Gravimetric Unstressed Stressed
3	Ethyl-tert-butyl ether (ETBE) **CAS #** 637-92-3.SEC (Lot MHBJG-QK) **Purity** 99%	2,509.0 µg/mL	+/- 14.7242 µg/mL +/- 124.1310 µg/mL +/- 127.2168 µg/mL	Gravimetric Unstressed Stressed
4	Propionitrile **CAS #** 107-12-0.SEC (Lot RTXQL) **Purity** 99%	25,125.5 µg/mL	+/- 147.1153 µg/mL +/- 1,243.0263 µg/mL +/- 1,273.9293 µg/mL	Gravimetric Unstressed Stressed
5	tert-Amyl alcohol **CAS #** 75-85-4.SEC (Lot MMGO1) **Purity** 99%	25,056.0 µg/mL	+/- 146.7084 µg/mL +/- 1,239.5880 µg/mL +/- 1,270.4054 µg/mL	Gravimetric Unstressed Stressed
6	tert-Amyl methyl ether (TAME) **CAS #** 994-05-8.SEC (Lot 5614600) **Purity** 99%	2,517.5 µg/mL	+/- 14.7741 µg/mL +/- 124.5515 µg/mL +/- 127.6478 µg/mL	Gravimetric Unstressed Stressed

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
WC-SEMW10D-SOIL	240-104089-2	77	80	97	97
WC-FTCB-SOIL	240-104089-4	74	80	95	98
	MB 240-356055/16	81	78	93	92
	LCS 240-356055/4	88	79	91	84
	LCS 240-356055/15	80	76	91	89
WC-FTCB-SOIL MS	240-104089-4 MS	83	79	96	94
WC-FTCB-SOIL MSD	240-104089-4 MSD	82	77	96	94

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	49-132
DCA = 1,2-Dichloroethane-d4 (Surr)	48-123
TOL = Toluene-d8 (Surr)	62-135
BFB = 4-Bromofluorobenzene (Surr)	49-141

Column to be used to flag recovery values

FORM II 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-110718	240-104089-1	102	103	99	94
WC-FTCB-DEVW	240-104089-3	103	103	98	96
WC-FTCB-DECON	240-104089-5	100	101	100	95
	MB 240-355689/7	100	102	98	94
	LCS 240-355689/4	100	98	102	100
	240-104014-E-1 MS	100	99	103	102
	240-104014-H-1 MSD	100	99	100	101

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Water Level: Low Lab File ID: U1903842.d

Lab ID: LCS 240-355689/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	20.0	19.8	99	80-124	
1,1,1-Trichloroethane	20.0	18.9	94	69-134	
1,1,2,2-Tetrachloroethane	20.0	20.7	104	65-139	
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	21.3	107	50-156	
1,1-Dichloroethane	20.0	19.6	98	75-133	
1,1-Dichloroethene	20.0	20.1	100	65-139	
1,1-Dichloropropene	20.0	19.6	98	78-126	
1,2,3-Trichlorobenzene	20.0	21.3	106	39-138	
1,2,3-Trichloropropane	20.0	20.7	104	66-139	
1,2,4-Trichlorobenzene	20.0	20.4	102	42-133	
1,2,4-Trimethylbenzene	20.0	20.3	101	74-120	
1,2-Dibromo-3-Chloropropane	20.0	20.9	104	46-132	
1,2-Dichlorobenzene	20.0	21.1	105	78-120	
1,2-Dichloroethane	20.0	18.4	92	71-135	
1,2-Dichloropropane	20.0	20.0	100	78-133	
1,3-Dichlorobenzene	20.0	20.1	101	78-120	
1,3-Dichloropropane	20.0	19.7	98	72-134	
1,4-Dichlorobenzene	20.0	20.0	100	78-120	
2,2-Dichloropropane	20.0	13.4	67	42-150	
2-Butanone (MEK)	40.0	42.4	106	39-163	
2-Chloroethyl vinyl ether	20.0	18.8	94	55-137	
2-Chlorotoluene	20.0	20.7	103	78-123	
2-Hexanone	40.0	38.6	96	43-148	
4-Chlorotoluene	20.0	20.2	101	77-125	
p-Isopropyltoluene	20.0	20.7	104	69-122	
4-Methyl-2-pentanone (MIBK)	40.0	39.1	98	49-143	
Acetone	40.0	42.3	106	21-162	
Benzene	20.0	20.1	100	80-123	
Bromobenzene	20.0	20.4	102	74-129	
Bromoform	20.0	18.5	92	49-141	
Bromomethane	20.0	19.4	97	41-175	
Carbon disulfide	20.0	16.9	85	60-138	
Carbon tetrachloride	20.0	19.3	97	63-140	
Chlorobenzene	20.0	19.4	97	80-121	
Dibromochloromethane	20.0	19.2	96	70-132	
Chloroethane	20.0	20.0	100	33-173	
Chloroform	20.0	19.7	98	79-127	
Chloromethane	20.0	17.8	89	54-143	
cis-1,2-Dichloroethene	20.0	19.4	97	76-128	
cis-1,3-Dichloropropene	20.0	19.2	96	64-132	
Dibromomethane	20.0	19.1	96	74-124	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Water Level: Low Lab File ID: U1903842.d

Lab ID: LCS 240-355689/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromochloromethane	20.0	17.7	88	74-130	
Dichlorodifluoromethane	20.0	15.2	76	29-148	
Bromodichloromethane	20.0	18.9	94	77-125	
tert-Butyl alcohol (TBA)	200	233	116	10-161	
Ethylbenzene	20.0	19.8	99	80-120	
Hexachlorobutadiene	20.0	20.6	103	38-136	
Isopropylbenzene	20.0	19.9	100	74-120	
Methyl tert-butyl ether	20.0	17.1	86	51-133	
Methylene Chloride	20.0	20.3	102	70-134	
m-Xylene & p-Xylene	20.0	20.0	100	80-120	
Naphthalene	20.0	20.7	103	28-141	
n-Butylbenzene	20.0	20.5	102	57-126	
N-Propylbenzene	20.0	20.5	102	77-123	
o-Xylene	20.0	20.3	102	80-120	
sec-Butylbenzene	20.0	20.7	104	68-123	
Styrene	20.0	19.9	99	79-120	
Tetrachloroethene	20.0	19.8	99	74-130	
Toluene	20.0	19.5	98	78-129	
trans-1,2-Dichloroethene	20.0	19.3	96	78-133	
trans-1,3-Dichloropropene	20.0	17.1	85	55-128	
Trichloroethene	20.0	19.7	98	76-125	
Trichlorofluoromethane	20.0	18.9	94	51-164	
Vinyl acetate	20.0	18.3	91	45-151	
Vinyl chloride	20.0	19.2	96	58-143	
Xylenes, Total	40.0	40.3	101	80-120	
tert-Butylbenzene	20.0	20.2	101	70-121	
1,2-Dibromoethane	20.0	19.1	96	77-123	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 1416868.D

Lab ID: LCS 240-356055/4 Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	50.0	57.3	115	73-124	
1,1,1-Trichloroethane	50.0	53.2	106	64-135	
1,1,2,2-Tetrachloroethane	50.0	54.9	110	68-128	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	48.9	98	56-138	
1,1-Dichloroethane	50.0	50.5	101	72-122	
1,1-Dichloroethene	50.0	55.8	112	57-139	
1,1-Dichloropropene	50.0	52.4	105	72-127	
1,2,3-Trichlorobenzene	50.0	48.6	97	59-120	
1,2,3-Trichloropropane	50.0	52.7	105	68-128	
1,2,4-Trichlorobenzene	50.0	47.9	96	54-120	
1,2,4-Trimethylbenzene	50.0	54.4	109	75-121	
1,2-Dibromo-3-Chloropropane	50.0	42.7	85	38-135	
1,2-Dichlorobenzene	50.0	52.9	106	73-120	
1,2-Dichloroethane	50.0	46.6	93	64-126	
1,2-Dichloropropane	50.0	49.7	99	78-122	
1,3-Dichlorobenzene	50.0	50.6	101	70-120	
1,3-Dichloropropane	50.0	50.6	101	76-120	
1,4-Dichlorobenzene	50.0	50.4	101	71-120	
2,2-Dichloropropane	50.0	52.3	105	42-143	
2-Butanone (MEK)	100	86.2	86	45-148	
2-Chloroethyl vinyl ether	50.0	45.3 J	91	58-154	
2-Chlorotoluene	50.0	53.1	106	75-120	
2-Hexanone	100	99.8	100	52-145	
4-Chlorotoluene	50.0	53.3	107	74-121	
p-Isopropyltoluene	50.0	57.3	115	74-124	
4-Methyl-2-pentanone (MIBK)	100	100	100	53-139	
Acetone	100	91.3	91	43-159	
Benzene	50.0	49.9	100	74-123	
Bromobenzene	50.0	50.3	101	75-120	
Bromoform	50.0	51.2	102	46-137	
Bromomethane	10.0	9.22	92	10-152	
Carbon disulfide	50.0	50.8	102	29-153	
Carbon tetrachloride	50.0	49.6	99	56-139	
Chlorobenzene	50.0	52.2	104	80-120	
Dibromochloromethane	50.0	53.5	107	58-131	
Chloroethane	10.0	11.4	114	15-155	
Chloroform	50.0	51.2	102	72-124	
Chloromethane	10.0	11.3	113	45-128	
cis-1,2-Dichloroethene	50.0	50.7	101	74-123	
cis-1,3-Dichloropropene	50.0	50.9	102	63-137	
Dibromomethane	50.0	48.3	97	71-122	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 1416868.D

Lab ID: LCS 240-356055/4 Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Bromochloromethane	50.0	47.4	95	72-124	
Dichlorodifluoromethane	10.0	10.5	105	26-138	
Bromodichloromethane	50.0	51.8	104	63-132	
tert-Butyl alcohol (TBA)	500	523	105	41-139	
Ethylbenzene	50.0	54.5	109	76-120	
Hexachlorobutadiene	50.0	48.1	96	58-122	
Isopropylbenzene	50.0	57.6	115	77-124	
Methyl tert-butyl ether	50.0	48.8	98	66-127	
Methylene Chloride	50.0	49.7	99	62-137	
m-Xylene & p-Xylene	50.0	54.5	109	77-120	
Naphthalene	50.0	48.2	96	51-120	
n-Butylbenzene	50.0	56.9	114	64-133	
N-Propylbenzene	50.0	54.8	110	73-129	
o-Xylene	50.0	55.1	110	79-120	
sec-Butylbenzene	50.0	57.9	116	73-126	
Styrene	50.0	54.0	108	76-121	
Tetrachloroethene	50.0	52.3	105	76-120	
Toluene	50.0	53.4	107	76-120	
trans-1,2-Dichloroethene	50.0	52.8	106	71-133	
trans-1,3-Dichloropropene	50.0	51.6	103	55-121	
Trichloroethene	50.0	50.6	101	73-126	
Trichlorofluoromethane	10.0	13.2	132	47-146	
Vinyl acetate	50.0	52.0	104	43-144	
Vinyl chloride	10.0	12.2	122	52-130	
Xylenes, Total	100	110	110	79-120	
tert-Butylbenzene	50.0	56.1	112	73-122	
1,2-Dibromoethane	50.0	52.6	105	76-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 1416892.D

Lab ID: 240-104089-4 MS Client ID: WC-FTCB-SOIL MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	59.4	3.3 U	52.9	89	16-137	
1,1,1-Trichloroethane	59.4	0.92 U	50.3	85	38-143	
1,1,2,2-Tetrachloroethane	59.4	1.6 U	65.9	111	16-178	
1,1,2-Trichloro-1,2,2-trifluoroethane	59.4	1.4 U	42.8	72	37-147	
1,1-Dichloroethane	59.4	0.78 U	52.4	88	50-133	
1,1-Dichloroethene	59.4	1.0 U	50.9	86	36-150	
1,1-Dichloropropene	59.4	1.1 U	50.7	85	30-138	
1,2,3-Trichlorobenzene	59.4	0.68 J	32.9	54	10-120	
1,2,3-Trichloropropane	59.4	1.8 U	59.1	99	10-178	
1,2,4-Trichlorobenzene	59.4	2.6 J	34.2	53	10-120	
1,2,4-Trimethylbenzene	59.4	1.1 U	44.7	75	10-149	
1,2-Dibromo-3-Chloropropane	59.4	4.0 U	43.3	73	10-141	
1,2-Dichlorobenzene	59.4	1.2 U	42.9	72	10-130	
1,2-Dichloroethane	59.4	0.87 U	51.4	87	42-127	
1,2-Dichloropropane	59.4	0.95 U	55.8	94	51-128	
1,3-Dichlorobenzene	59.4	0.91 U	37.6	63	10-131	
1,3-Dichloropropane	59.4	1.1 U	56.9	96	34-121	
1,4-Dichlorobenzene	59.4	0.99 U	37.5	63	10-130	
2,2-Dichloropropane	59.4	1.3 U	47.0	79	20-141	
2-Butanone (MEK)	119	4.0 U	87.9	74	20-148	
2-Chloroethyl vinyl ether	59.4	10 U	47.5 J	80	10-134	
2-Chlorotoluene	59.4	1.1 U	43.4	73	10-179	
2-Hexanone	119	4.6 U	109	92	15-147	
4-Chlorotoluene	59.4	0.97 U	41.6	70	10-158	
p-Isopropyltoluene	59.4	3.3 U	41.0	69	10-142	
4-Methyl-2-pentanone (MIBK)	119	4.2 U	120	101	29-143	
Acetone	119	24 U	173	145	10-160	
Benzene	59.4	0.78 U	52.5	88	39-133	
Bromobenzene	59.4	1.3 U	43.6	73	10-164	
Bromoform	59.4	2.7 U	43.0	72	18-120	
Bromomethane	11.9	1.1 U	10.4	87	10-159	
Carbon disulfide	59.4	1.3 U	40.1	67	16-145	
Carbon tetrachloride	59.4	3.6 U	44.6	75	22-142	
Chlorobenzene	59.4	1.0 U	47.0	79	21-131	
Dibromochloromethane	59.4	3.1 U	50.8	85	27-126	
Chloroethane	11.9	1.4 U	12.3	104	17-162	
Chloroform	59.4	0.88 U	52.6	89	51-130	
Chloromethane	11.9	1.2 U	12.0	101	26-149	
cis-1,2-Dichloroethene	59.4	0.73 U	49.9	84	50-128	
cis-1,3-Dichloropropene	59.4	1.6 U	53.5	90	15-132	
Dibromomethane	59.4	0.75 U	51.4	86	37-138	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 1416892.D

Lab ID: 240-104089-4 MS Client ID: WC-FTCB-SOIL MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
Bromochloromethane	59.4	0.67 U	46.4	78	36-147	
Dichlorodifluoromethane	11.9	1.1 U	10.3	86	15-150	
Bromodichloromethane	59.4	0.76 U	53.4	90	32-129	
tert-Butyl alcohol (TBA)	594	19 U	579	97	59-128	
Ethylbenzene	59.4	1.2 U	45.5	77	20-135	
Hexachlorobutadiene	59.4	4.2 U	22.3	38	10-120	
Isopropylbenzene	59.4	0.93 U	45.3	76	20-138	
Methyl tert-butyl ether	59.4	0.92 U	55.1	93	48-134	
Methylene Chloride	59.4	13 U	47.8	80	39-145	
m-Xylene & p-Xylene	59.4	0.88 U	44.1	74	16-137	
Naphthalene	59.4	3.0 U	45.2	76	10-120	
n-Butylbenzene	59.4	3.9 U	39.2	66	10-149	
N-Propylbenzene	59.4	0.82 U	41.5	70	10-162	
o-Xylene	59.4	0.97 U	47.8	80	21-138	
sec-Butylbenzene	59.4	0.97 U	43.3	73	10-156	
Styrene	59.4	1.3 U	43.6	73	10-134	
Tetrachloroethene	59.4	0.82 U	44.9	76	20-151	
Toluene	59.4	0.87 U	51.8	87	29-141	
trans-1,2-Dichloroethene	59.4	0.52 U	49.5	83	44-141	
trans-1,3-Dichloropropene	59.4	1.2 U	53.0	89	15-120	
Trichloroethene	59.4	0.71 U	44.2	74	25-148	
Trichlorofluoromethane	11.9	1.2 U	14.2	120	38-149	
Vinyl acetate	59.4	2.4 U	23.9	40	10-120	
Vinyl chloride	11.9	0.94 U	13.7	115	31-148	
Xylenes, Total	119	1.8 U	91.9	77	19-137	
tert-Butylbenzene	59.4	1.0 U	69.0	116	10-148	
1,2-Dibromoethane	59.4	0.86 U	53.9	91	36-125	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Water Level: Low Lab File ID: U1903847.d

Lab ID: 240-104014-E-1 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,2-Dichloroethane	20.0	0.21 U	18.1	90	65-135	
2-Butanone (MEK)	40.0	1.2 U	41.4	104	37-156	
Benzene	20.0	0.13 U	19.6	98	71-122	
Carbon disulfide	20.0	0.28 U	21.7	108	43-144	
Chlorobenzene	20.0	0.14 U	19.4	97	70-123	
Chloroform	20.0	0.13 U	19.1	95	68-130	
Ethylbenzene	20.0	0.11 U	19.5	97	66-120	
m-Xylene & p-Xylene	20.0	0.080 U	19.8	99	63-121	
o-Xylene	20.0	0.090 U	19.9	100	69-120	
Styrene	20.0	0.10 U	19.6	98	68-120	
Toluene	20.0	0.14 U	19.6	98	62-132	
Xylenes, Total	40.0	0.15 U	39.7	99	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 1416893.D

Lab ID: 240-104089-4 MSD Client ID: WC-FTCB-SOIL MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	59.6	46.1	77	14	40	16-137	
1,1,1-Trichloroethane	59.6	44.7	75	12	40	38-143	
1,1,2,2-Tetrachloroethane	59.6	63.1	106	4	40	16-178	
1,1,2-Trichloro-1,2,2-trifluoroethane	59.6	38.8	65	10	37	37-147	
1,1-Dichloroethane	59.6	46.0	77	13	40	50-133	
1,1-Dichloroethene	59.6	44.2	74	14	40	36-150	
1,1-Dichloropropene	59.6	43.3	73	16	36	30-138	
1,2,3-Trichlorobenzene	59.6	28.7	47	14	40	10-120	
1,2,3-Trichloropropane	59.6	57.3	96	3	40	10-178	
1,2,4-Trichlorobenzene	59.6	30.6	47	11	40	10-120	
1,2,4-Trimethylbenzene	59.6	36.6	62	20	40	10-149	
1,2-Dibromo-3-Chloropropane	59.6	41.6	70	4	40	10-141	
1,2-Dichlorobenzene	59.6	37.1	62	15	40	10-130	
1,2-Dichloroethane	59.6	45.7	77	12	34	42-127	
1,2-Dichloropropane	59.6	48.8	82	13	36	51-128	
1,3-Dichlorobenzene	59.6	32.8	55	14	40	10-131	
1,3-Dichloropropane	59.6	53.2	89	7	40	34-121	
1,4-Dichlorobenzene	59.6	32.6	55	14	40	10-130	
2,2-Dichloropropane	59.6	42.6	71	10	40	20-141	
2-Butanone (MEK)	119	87.7	74	0	36	20-148	
2-Chloroethyl vinyl ether	59.6	46.1 J	77	3	40	10-134	
2-Chlorotoluene	59.6	35.4	59	20	40	10-179	
2-Hexanone	119	120	101	10	40	15-147	
4-Chlorotoluene	59.6	35.7	60	15	40	10-158	
p-Isopropyltoluene	59.6	33.2	56	21	40	10-142	
4-Methyl-2-pentanone (MIBK)	119	120	101	0	40	29-143	
Acetone	119	164	137	5	39	10-160	
Benzene	59.6	45.0	75	16	40	39-133	
Bromobenzene	59.6	37.9	64	14	40	10-164	
Bromoform	59.6	40.8	68	5	40	18-120	
Bromomethane	11.9	9.39	79	10	40	10-159	
Carbon disulfide	59.6	34.9	59	14	40	16-145	
Carbon tetrachloride	59.6	38.7	65	14	40	22-142	
Chlorobenzene	59.6	40.8	69	14	40	21-131	
Dibromochloromethane	59.6	46.9	79	8	40	27-126	
Chloroethane	11.9	10.4	88	17	40	17-162	
Chloroform	59.6	47.1	79	11	32	51-130	
Chloromethane	11.9	10.1	85	18	37	26-149	
cis-1,2-Dichloroethene	59.6	45.1	76	10	40	50-128	
cis-1,3-Dichloropropene	59.6	47.4	80	12	40	15-132	
Dibromomethane	59.6	47.8	80	7	30	37-138	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 1416893.D

Lab ID: 240-104089-4 MSD Client ID: WC-FTCB-SOIL MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromochloromethane	59.6	43.8	74	6	40	36-147	
Dichlorodifluoromethane	11.9	7.66	64	29	31	15-150	
Bromodichloromethane	59.6	46.4	78	14	39	32-129	
tert-Butyl alcohol (TBA)	596	578	97	0	39	59-128	
Ethylbenzene	59.6	38.7	65	16	40	20-135	
Hexachlorobutadiene	59.6	17.4	29	25	40	10-120	
Isopropylbenzene	59.6	38.0	64	18	40	20-138	
Methyl tert-butyl ether	59.6	50.6	85	8	34	48-134	
Methylene Chloride	59.6	44.6	75	7	40	39-145	
m-Xylene & p-Xylene	59.6	37.1	62	17	40	16-137	
Naphthalene	59.6	38.5	65	16	40	10-120	
n-Butylbenzene	59.6	31.5	53	22	40	10-149	
N-Propylbenzene	59.6	34.3	58	19	40	10-162	
o-Xylene	59.6	40.1	67	17	40	21-138	
sec-Butylbenzene	59.6	34.7	58	22	40	10-156	
Styrene	59.6	39.0	65	11	40	10-134	
Tetrachloroethene	59.6	39.4	66	13	40	20-151	
Toluene	59.6	44.9	75	14	40	29-141	
trans-1,2-Dichloroethene	59.6	43.3	73	13	40	44-141	
trans-1,3-Dichloropropene	59.6	48.3	81	9	40	15-120	
Trichloroethene	59.6	37.5	63	16	40	25-148	
Trichlorofluoromethane	11.9	12.2	103	15	39	38-149	
Vinyl acetate	59.6	27.3	46	13	40	10-120	
Vinyl chloride	11.9	11.3	95	19	37	31-148	
Xylenes, Total	119	77.2	65	17	40	19-137	
tert-Butylbenzene	59.6	56.8	95	19	40	10-148	
1,2-Dibromoethane	59.6	52.4	88	3	40	36-125	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Water Level: Low Lab File ID: U1903848.d

Lab ID: 240-104014-H-1 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,2-Dichloroethane	20.0	18.2	91	1	24	65-135	
2-Butanone (MEK)	40.0	43.2	108	4	35	37-156	
Benzene	20.0	20.2	101	3	22	71-122	
Carbon disulfide	20.0	17.6	88	21	33	43-144	
Chlorobenzene	20.0	19.6	98	1	23	70-123	
Chloroform	20.0	19.6	98	3	23	68-130	
Ethylbenzene	20.0	19.9	99	2	24	66-120	
m-Xylene & p-Xylene	20.0	20.2	101	2	25	63-121	
o-Xylene	20.0	20.5	102	3	25	69-120	
Styrene	20.0	20.2	101	3	26	68-120	
Toluene	20.0	19.7	98	1	23	62-132	
Xylenes, Total	40.0	40.7	102	2	25	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab File ID: 1416880.D Lab Sample ID: MB 240-356055/16

Matrix: Solid Heated Purge:(Y/N) Y

Instrument ID: A3UX14 Date Analyzed: 11/19/2018 14:29

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-356055/4	1416868.D	11/19/2018 10:11
	LCS 240-356055/15	1416879.D	11/19/2018 14:08
WC-SEMW10D-SOIL	240-104089-2	1416889.D	11/19/2018 17:43
WC-FTCB-SOIL	240-104089-4	1416890.D	11/19/2018 18:04
WC-FTCB-SOIL MS	240-104089-4 MS	1416892.D	11/19/2018 18:47
WC-FTCB-SOIL MSD	240-104089-4 MSD	1416893.D	11/19/2018 19:09

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab File ID: U1903845.d Lab Sample ID: MB 240-355689/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX19 Date Analyzed: 11/15/2018 21:19

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-355689/4	U1903842.d	11/15/2018 20:11
	240-104014-E-1 MS	U1903847.d	11/15/2018 22:03
	240-104014-H-1 MSD	U1903848.d	11/15/2018 22:26
TB-110718	240-104089-1	U1903864.d	11/16/2018 04:22
WC-FTCB-DEVW	240-104089-3	U1903865.d	11/16/2018 04:44
WC-FTCB-DECON	240-104089-5	U1903866.d	11/16/2018 05:06

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab File ID: BFB14841.D BFB Injection Date: 11/16/2018

Instrument ID: A3UX14 BFB Injection Time: 16:17

Analysis Batch No.: 355881

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.7	
75	30.0 - 60.0 % of mass 95	41.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.3	(0.3) 1
174	50.0 - 120.00 % of mass 95	77.6	
175	5.0 - 9.0 % of mass 174	5.7	(7.3) 1
176	95.0 - 101.0 % of mass 174	76.7	(98.8) 1
177	5.0 - 9.0 % of mass 176	5.2	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 240-355881/3	1416820.D	11/16/2018	16:59
	IC 240-355881/4	1416821.D	11/16/2018	17:20
	IC 240-355881/5	1416822.D	11/16/2018	17:42
	ICIS 240-355881/6	1416823.D	11/16/2018	18:03
	IC 240-355881/7	1416824.D	11/16/2018	18:25
	IC 240-355881/8	1416825.D	11/16/2018	18:46
	IC 240-355881/9	1416826.D	11/16/2018	19:08
	IC 240-355881/10	1416827.D	11/16/2018	19:29
	IC 240-355881/11	1416828.D	11/16/2018	19:51
	ICV 240-355881/12	1416829.D	11/16/2018	20:13

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab File ID: BFB14843.D BFB Injection Date: 11/19/2018

Instrument ID: A3UX14 BFB Injection Time: 09:07

Analysis Batch No.: 356055

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.0	
75	30.0 - 60.0 % of mass 95	41.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.4	(0.6) 1
174	50.0 - 120.00 % of mass 95	74.8	
175	5.0 - 9.0 % of mass 174	5.4	(7.3) 1
176	95.0 - 101.0 % of mass 174	73.8	(98.6) 1
177	5.0 - 9.0 % of mass 176	4.7	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-356055/3	1416867.D	11/19/2018	09:49
	LCS 240-356055/4	1416868.D	11/19/2018	10:11
	IC 240-356055/5	1416869.D	11/19/2018	10:32
	IC 240-356055/6	1416870.D	11/19/2018	10:54
	IC 240-356055/7	1416871.D	11/19/2018	11:15
	IC 240-356055/8	1416872.D	11/19/2018	11:37
	IC 240-356055/9	1416873.D	11/19/2018	11:58
	IC 240-356055/10	1416874.D	11/19/2018	12:20
	IC 240-356055/11	1416875.D	11/19/2018	12:41
	IC 240-356055/12	1416876.D	11/19/2018	13:03
	IC 240-356055/13	1416877.D	11/19/2018	13:24
	ICV 240-356055/14	1416878.D	11/19/2018	13:46
	LCS 240-356055/15	1416879.D	11/19/2018	14:08
	MB 240-356055/16	1416880.D	11/19/2018	14:29
WC-SEMW10D-SOIL	240-104089-2	1416889.D	11/19/2018	17:43
WC-FTCB-SOIL	240-104089-4	1416890.D	11/19/2018	18:04
WC-FTCB-SOIL MS	240-104089-4 MS	1416892.D	11/19/2018	18:47
WC-FTCB-SOIL MSD	240-104089-4 MSD	1416893.D	11/19/2018	19:09

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab File ID: bfb036.d BFB Injection Date: 07/24/2018

Instrument ID: A3UX19 BFB Injection Time: 17:22

Analysis Batch No.: 337766

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.1	
75	30.0 - 60.0 % of mass 95	53.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	1.1	(1.2) 1
174	50.0 - 120.00 % of mass 95	84.3	
175	5.0 - 9.0 % of mass 174	6.2	(7.4) 1
176	95.0 - 101.0 % of mass 174	80.7	(95.7) 1
177	5.0 - 9.0 % of mass 176	5.4	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-337766/2	U1900783.d	07/24/2018	17:50
	STD8260 240-337766/3	U1900784.d	07/24/2018	18:13
	STD8260 240-337766/9	U1900790.d	07/24/2018	18:35
	ICIS 240-337766/10	U1900791.d	07/24/2018	18:57
	STD8260 240-337766/11	U1900792.d	07/24/2018	19:20
	STD8260 240-337766/12	U1900793.d	07/24/2018	19:42
	STD8260 240-337766/13	U1900794.d	07/24/2018	20:04

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab File ID: bfb037.d BFB Injection Date: 07/25/2018

Instrument ID: A3UX19 BFB Injection Time: 11:28

Analysis Batch No.: 337917

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	52.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	1.1	(1.3) 1
174	50.0 - 120.00 % of mass 95	82.7	
175	5.0 - 9.0 % of mass 174	6.4	(7.8) 1
176	95.0 - 101.0 % of mass 174	80.3	(97.1) 1
177	5.0 - 9.0 % of mass 176	5.2	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STDA9 240-337917/8	U1900802.d	07/25/2018	13:24
	STDA9 240-337917/9	U1900803.d	07/25/2018	13:46
	STDA9 240-337917/10	U1900804.d	07/25/2018	14:08
	STDA9 240-337917/11	U1900805.d	07/25/2018	14:30
	STDA9 240-337917/12	U1900806.d	07/25/2018	14:52
	STDA9 240-337917/13	U1900807.d	07/25/2018	15:15
	ICV 240-337917/14	U1900808.d	07/25/2018	15:37

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab File ID: bfb058.d BFB Injection Date: 08/27/2018

Instrument ID: A3UX19 BFB Injection Time: 16:23

Analysis Batch No.: 342719

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.5	
75	30.0 - 60.0 % of mass 95	49.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	94.9	
175	5.0 - 9.0 % of mass 174	7.3	(7.7) 1
176	95.0 - 101.0 % of mass 174	92.7	(97.7) 1
177	5.0 - 9.0 % of mass 176	5.9	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-342719/7	U1901323.d	08/27/2018	17:09
	STD8260 240-342719/8	U1901324.d	08/27/2018	17:31
	STD8260 240-342719/9	U1901325.d	08/27/2018	17:53
	ICIS 240-342719/10	U1901326.d	08/27/2018	18:16
	STD8260 240-342719/11	U1901327.d	08/27/2018	18:38
	STD8260 240-342719/12	U1901328.d	08/27/2018	19:01
	STD8260 240-342719/13	U1901329.d	08/27/2018	19:23
	ICV 240-342719/14	U1901330.d	08/27/2018	19:45

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab File ID: bfb133.d BFB Injection Date: 11/15/2018

Instrument ID: A3UX19 BFB Injection Time: 19:02

Analysis Batch No.: 355689

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.4	
75	30.0 - 60.0 % of mass 95	46.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	101.0	
175	5.0 - 9.0 % of mass 174	7.5	(7.4) 1
176	95.0 - 101.0 % of mass 174	97.7	(96.8) 1
177	5.0 - 9.0 % of mass 176	6.2	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-355689/2	U1903840.d	11/15/2018	19:27
	CCVIS 240-355689/3	U1903841.d	11/15/2018	19:49
	LCS 240-355689/4	U1903842.d	11/15/2018	20:11
	MB 240-355689/7	U1903845.d	11/15/2018	21:19
	240-104014-E-1 MS	U1903847.d	11/15/2018	22:03
	240-104014-H-1 MSD	U1903848.d	11/15/2018	22:26
TB-110718	240-104089-1	U1903864.d	11/16/2018	04:22
WC-FTCB-DEVW	240-104089-3	U1903865.d	11/16/2018	04:44
WC-FTCB-DECON	240-104089-5	U1903866.d	11/16/2018	05:06

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Sample No.: ICIS 240-355881/6 Date Analyzed: 11/16/2018 18:03

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 1416823.D Heated Purge: (Y/N) Y

Calibration ID: 48073

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		2015750	6.32	1412675	9.29	634809	11.28
UPPER LIMIT		4031500	6.82	2825350	9.79	1269618	11.78
LOWER LIMIT		1007875	5.82	706338	8.79	317405	10.78
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-355881/12		1706502	6.32	1257902	9.29	590763	11.28
CCVIS 240-356055/3		1596566	6.32	1020361	9.29	483261	11.29

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Sample No.: CCVIS 240-356055/3 Date Analyzed: 11/19/2018 09:49

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 1416867.D Heated Purge: (Y/N) Y

Calibration ID: 48073

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1596566	6.32	1020361	9.29	483261	11.29
UPPER LIMIT		3193132	6.82	2040722	9.79	966522	11.79
LOWER LIMIT		798283	5.82	510181	8.79	241631	10.79
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-356055/4		1571040	6.32	1033262	9.29	474151	11.28
LCS 240-356055/15		1370025	6.32	931793	9.29	405595	11.28
MB 240-356055/16		1287785	6.32	893127	9.29	379462	11.28
240-104089-2	WC-SEMW10D-SOIL	1089649	6.32	706987	9.29	293915	11.29
240-104089-4	WC-FTCB-SOIL	1041070	6.32	669879	9.29	268999	11.28
240-104089-4 MS	WC-FTCB-SOIL MS	1182999	6.32	755541	9.29	315965	11.28
240-104089-4 MSD	WC-FTCB-SOIL MSD	1118739	6.32	721201	9.29	304240	11.28

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Sample No.: ICIS 240-342719/10 Date Analyzed: 08/27/2018 18:16

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): U1901326.d Heated Purge: (Y/N) N

Calibration ID: 46687

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		972482	5.65	783101	8.50	430906	10.88
UPPER LIMIT		1944964	6.15	1566202	9.00	861812	11.38
LOWER LIMIT		486241	5.15	391551	8.00	215453	10.38
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-342719/14		955207	5.65	765531	8.50	424750	10.88
CCVIS 240-355689/3		816685	5.65	664993	8.50	364439	10.88

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Sample No.: CCVIS 240-355689/3 Date Analyzed: 11/15/2018 19:49

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): U1903841.d Heated Purge: (Y/N) N

Calibration ID: 47354

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		816685	5.65	664993	8.50	364439	10.88
UPPER LIMIT		1633370	6.15	1329986	9.00	728878	11.38
LOWER LIMIT		408343	5.15	332497	8.00	182220	10.38
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-355689/4		804007	5.65	651130	8.50	353362	10.88
MB 240-355689/7		781668	5.65	649582	8.50	345027	10.88
240-104014-E-1 MS		807865	5.67	645434	8.50	355659	10.88
240-104014-H-1 MSD		799470	5.65	659619	8.50	361097	10.88
240-104089-1	TB-110718	748472	5.65	609277	8.50	318118	10.88
240-104089-3	WC-FTCB-DEVW	749370	5.65	625756	8.50	326205	10.88
240-104089-5	WC-FTCB-DECON	757978	5.65	607030	8.50	323857	10.88

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: TB-110718 | Lab Sample ID: 240-104089-1

Matrix: Water | Lab File ID: U1903864.d

Analysis Method: 8260C | Date Collected: 11/07/2018 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 11/16/2018 04:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	p-Isopropyltoluene	0.13	U	1.0	0.13
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
108-86-1	Bromobenzene	0.12	U	1.0	0.12
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: TB-110718 | Lab Sample ID: 240-104089-1

Matrix: Water | Lab File ID: U1903864.d

Analysis Method: 8260C | Date Collected: 11/07/2018 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 11/16/2018 04:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	0.39	U	1.0	0.39
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.22	J	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
74-95-3	Dibromomethane	0.090	U	1.0	0.090
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-65-0	tert-Butyl alcohol (TBA)	2.2	J	50	1.7
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
108-20-3	Diisopropyl ether	0.17	U	10	0.17
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
179601-23-1	m-Xylene & p-Xylene	0.080	U	2.0	0.080
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
95-47-6	o-Xylene	0.090	U	1.0	0.090
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
100-42-5	Styrene	0.10	U	1.0	0.10
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
637-92-3	Ethyl t-butyl ether	0.15	U	5.0	0.15
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.50	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: TB-110718 | Lab Sample ID: 240-104089-1

Matrix: Water | Lab File ID: U1903864.d

Analysis Method: 8260C | Date Collected: 11/07/2018 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 11/16/2018 04:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		70-123
1868-53-7	Dibromofluoromethane (Surr)	102		75-128
460-00-4	4-Bromofluorobenzene (Surr)	94		59-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-121

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903864.d
Lims ID: 240-104089-B-1
Client ID: TB-110718
Sample Type: Client
Inject. Date: 16-Nov-2018 04:22:11 ALS Bottle#: 0 Worklist Smp#: 26
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 026
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 16-Nov-2018 13:59:42 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: laveyt Date: 16-Nov-2018 14:18:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.653	0.001	99	748472	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.499	0.001	83	609277	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	94	318118	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	59	205257	20.4	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	97	237417	20.5	
$ 6 Toluene-d8 (Surr)	98	7.100	7.100	0.000	93	721922	19.8	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.673	0.001	91	257377	18.7	
9 Dichlorodifluoromethane	85		1.598				ND	
10 Chloromethane	50		1.811				ND	
11 Vinyl chloride	62		1.906				ND	
13 Bromomethane	94		2.226				ND	
14 Chloroethane	64		2.309				ND	
16 Trichlorofluoromethane	101		2.558				ND	
20 1,1,2-Trichloro-1,2,2-trif	101		3.056				ND	
21 1,1-Dichloroethene	61		3.056				ND	
22 Acetone	43	3.080	3.068	0.012	92	8121	2.77	
24 Carbon disulfide	76		3.282				ND	
28 Methylene Chloride	49		3.495				ND	
29 2-Methyl-2-propanol	59	3.578	3.578	0.000	52	2223	2.19	
32 trans-1,2-Dichloroethene	61		3.732				ND	
31 Methyl tert-butyl ether	73		3.732				ND	
34 1,1-Dichloroethane	63		4.112				ND	
35 Vinyl acetate	43		4.147				ND	
36 Isopropyl ether	87		4.171				ND	
38 Tert-butyl ethyl ether	59		4.491				ND	
40 cis-1,2-Dichloroethene	96	4.634	4.634	0.000	14	2371	0.2192	
41 2-Butanone (MEK)	72		4.634				ND	
39 2,2-Dichloropropane	77		4.634				ND	
45 Chlorobromomethane	49		4.835				ND	
47 Chloroform	83		4.906				ND	
48 1,1,1-Trichloroethane	97		5.084				ND	
50 1,1-Dichloropropene	75		5.227				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 Carbon tetrachloride	117		5.238				ND	
53 Benzene	78		5.416				ND	
54 1,2-Dichloroethane	62		5.416				ND	
55 Tert-amyl methyl ether	73		5.499				ND	
58 Trichloroethene	130	5.986	5.985	0.001	79	5876	0.4969	
61 1,2-Dichloropropane	63		6.187				ND	
63 Dibromomethane	174		6.294				ND	
65 Dichlorobromomethane	83		6.436				ND	
67 2-Chloroethyl vinyl ether	63		6.697				ND	
68 cis-1,3-Dichloropropene	75		6.839				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.982				ND	
70 Toluene	91		7.171				ND	
71 trans-1,3-Dichloropropene	75		7.361				ND	
75 Tetrachloroethene	166		7.693				ND	
76 1,3-Dichloropropane	76		7.705				ND	
77 2-Hexanone	43		7.764				ND	
79 Chlorodibromomethane	129		7.930				ND	
80 Ethylene Dibromide	107		8.049				ND	
82 Chlorobenzene	112		8.523				ND	
83 1,1,1,2-Tetrachloroethane	131		8.606				ND	
84 Ethylbenzene	106		8.630				ND	
85 m-Xylene & p-Xylene	106		8.749				ND	
86 o-Xylene	106		9.152				ND	
87 Styrene	104		9.164				ND	
88 Bromoform	173		9.353				ND	
89 Isopropylbenzene	105		9.519				ND	
91 1,1,2,2-Tetrachloroethane	83		9.816				ND	
92 Bromobenzene	156		9.840				ND	
93 1,2,3-Trichloropropane	110		9.863				ND	
95 N-Propylbenzene	120		9.946				ND	
96 2-Chlorotoluene	126		10.041				ND	
98 4-Chlorotoluene	126		10.148				ND	
99 tert-Butylbenzene	119		10.468				ND	
101 1,2,4-Trimethylbenzene	105		10.515				ND	
102 sec-Butylbenzene	105		10.693				ND	
103 1,3-Dichlorobenzene	146		10.824				ND	
104 4-Isopropyltoluene	119		10.848				ND	
105 1,4-Dichlorobenzene	146		10.907				ND	
106 1,2,3-Trimethylbenzene	105		10.966				ND	
108 n-Butylbenzene	91		11.286				ND	
109 1,2-Dichlorobenzene	146		11.298				ND	
110 1,2-Dibromo-3-Chloropropan	157		12.128				ND	
112 1,2,4-Trichlorobenzene	180		13.018				ND	
113 Hexachlorobutadiene	225		13.207				ND	
114 Naphthalene	128		13.279				ND	
115 1,2,3-Trichlorobenzene	180		13.539				ND	
S 126 Xylenes, Total	106		16.520				ND	

Reagents:

vm50ss_stk_00078	Amount Added:	2.00	Units: uL	Run Reagent
vmDist_H2o_00133	Amount Added:	0.00	Units:	Run Reagent
vm50is_stk_A_00002	Amount Added:	2.00	Units: uL	Run Reagent

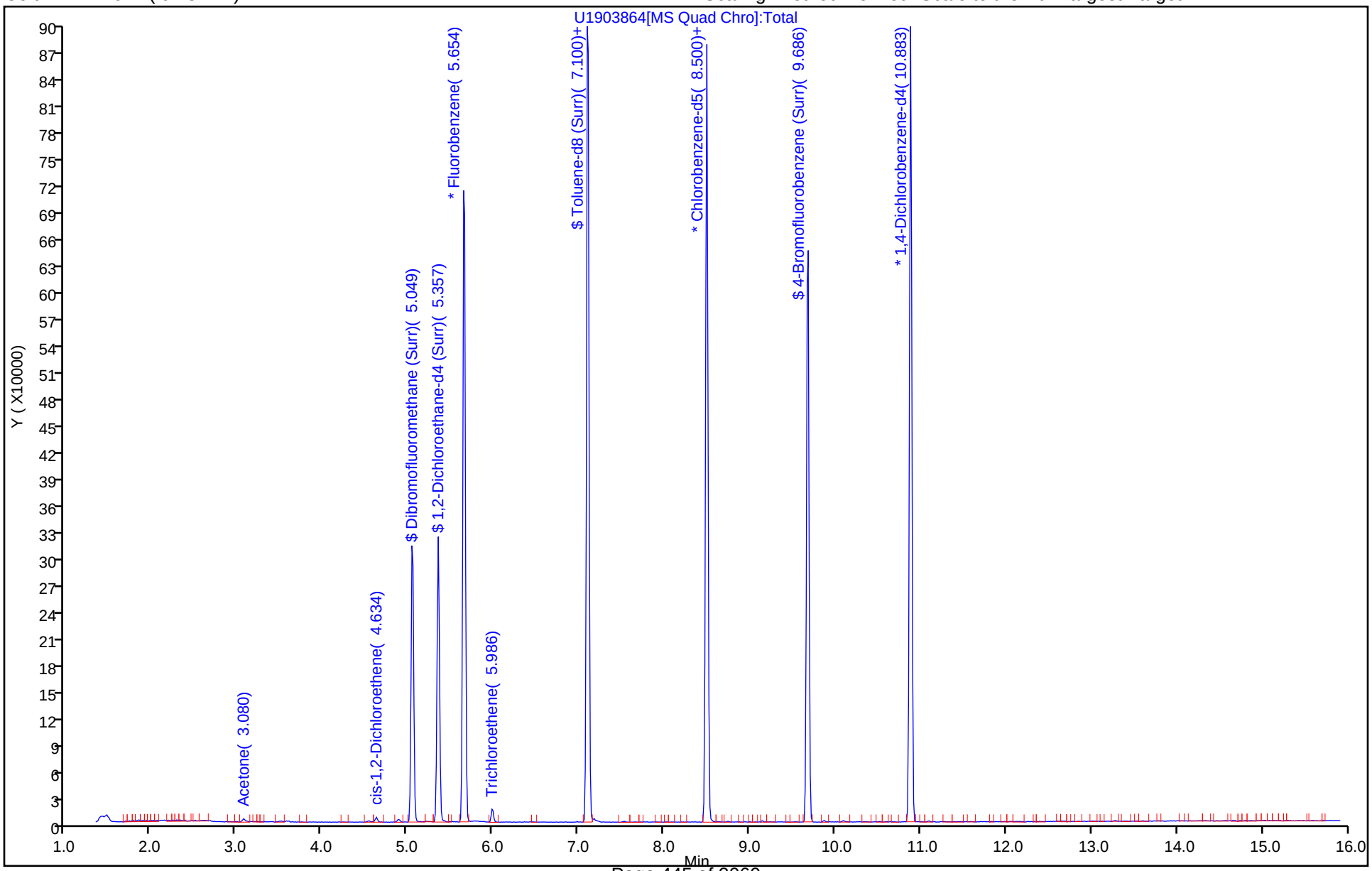
Report Date: 16-Nov-2018 14:18:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903864.d

Injection Date:	16-Nov-2018 04:22:11	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	240-104089-B-1	Lab Sample ID:	240-104089-1	Worklist Smp#:	26
Client ID:	TB-110718				
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903864.d
Lims ID: 240-104089-B-1
Client ID: TB-110718
Sample Type: Client
Inject. Date: 16-Nov-2018 04:22:11 ALS Bottle#: 0 Worklist Smp#: 26
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 026
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 16-Nov-2018 13:59:42 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: laveyt Date: 16-Nov-2018 14:18:21

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	20.0	20.4	101.87
$ 5 1,2-Dichloroethane-d4 (Surr)	20.0	20.5	102.59
$ 6 Toluene-d8 (Surr)	20.0	19.8	98.80
$ 7 4-Bromofluorobenzene (Surr)	20.0	18.7	93.61

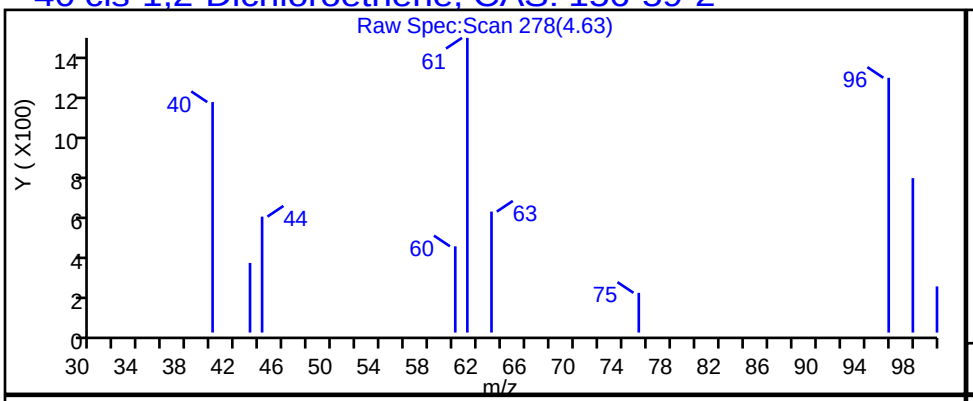
Report Date: 16-Nov-2018 14:18:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

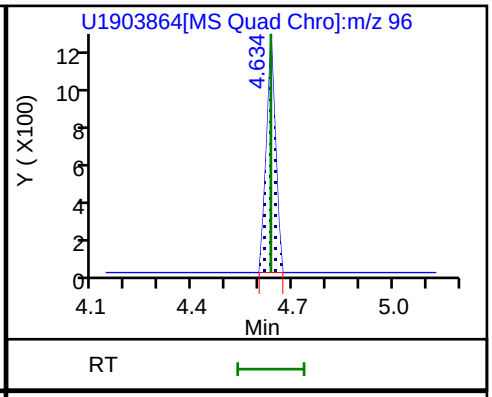
TestAmerica Canton

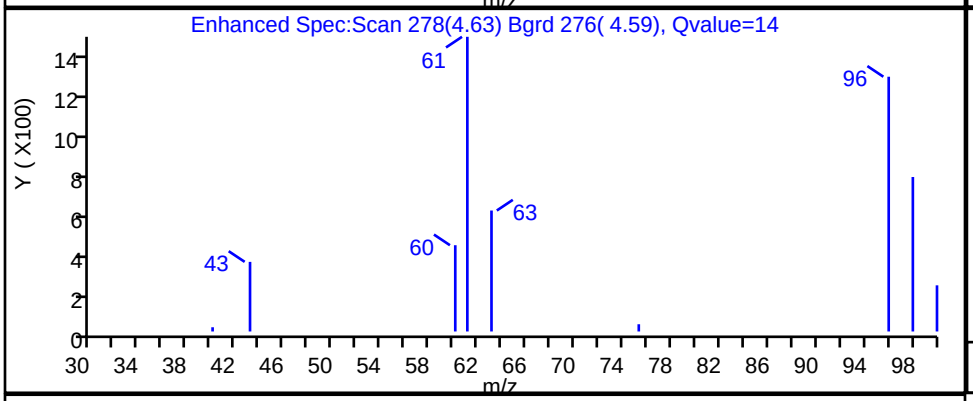
Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903864.d

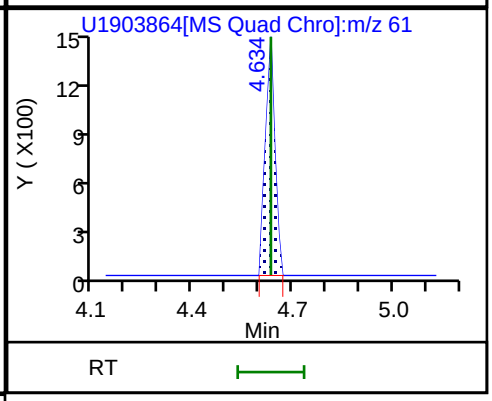
Injection Date:	16-Nov-2018 04:22:11	Instrument ID:	A3UX19		
Lims ID:	240-104089-B-1	Lab Sample ID:	240-104089-1		
Client ID:	TB-110718				
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

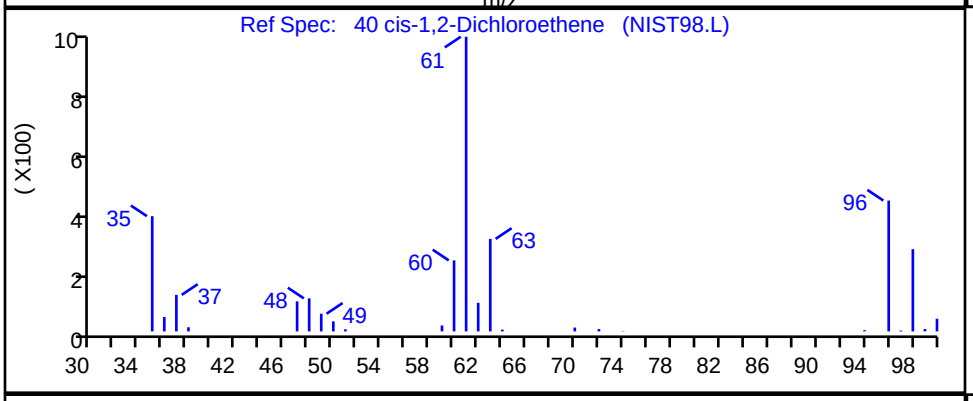
40 cis-1,2-Dichloroethene, CAS: 156-59-2

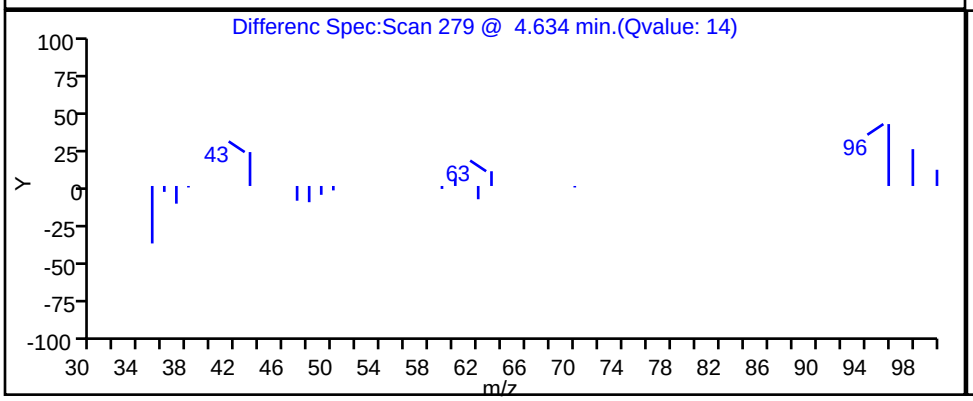


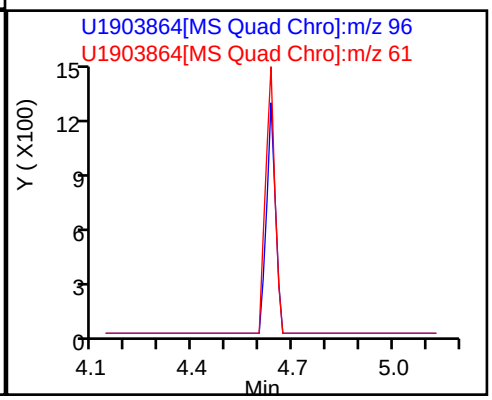












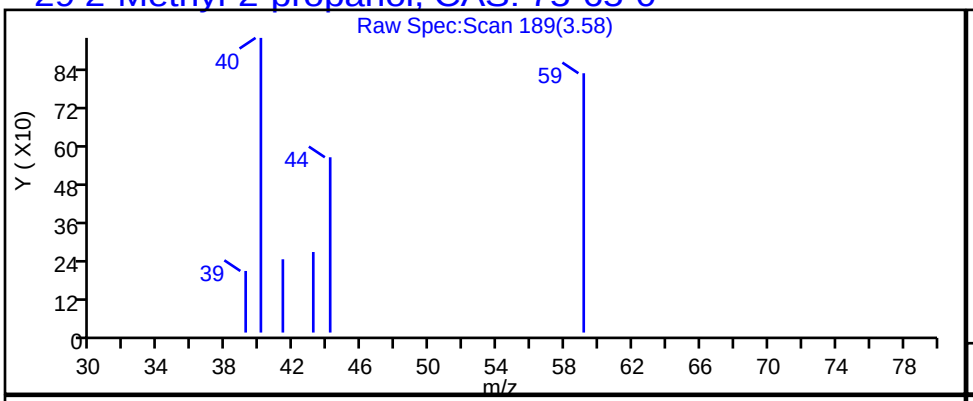
Report Date: 16-Nov-2018 14:18:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

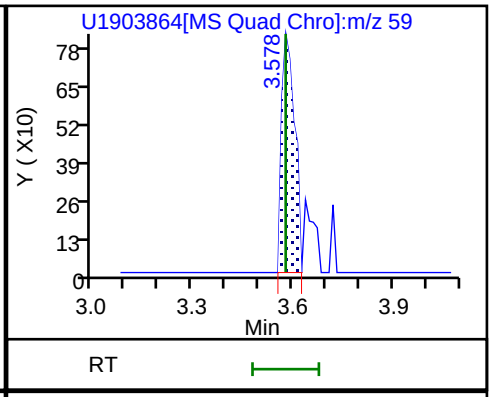
TestAmerica Canton

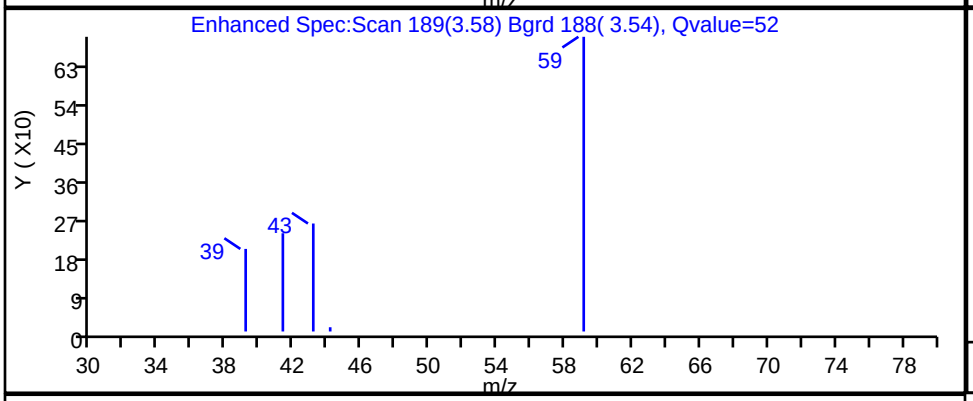
Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903864.d

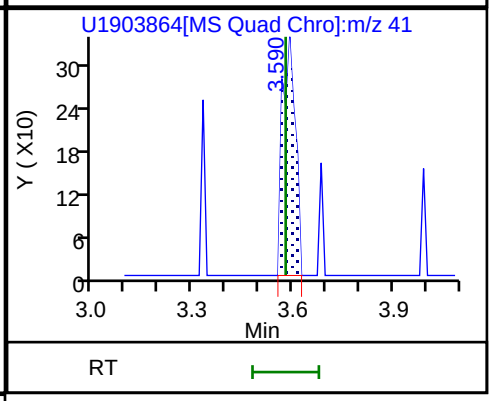
Injection Date:	16-Nov-2018 04:22:11	Instrument ID:	A3UX19		
Lims ID:	240-104089-B-1	Lab Sample ID:	240-104089-1		
Client ID:	TB-110718				
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

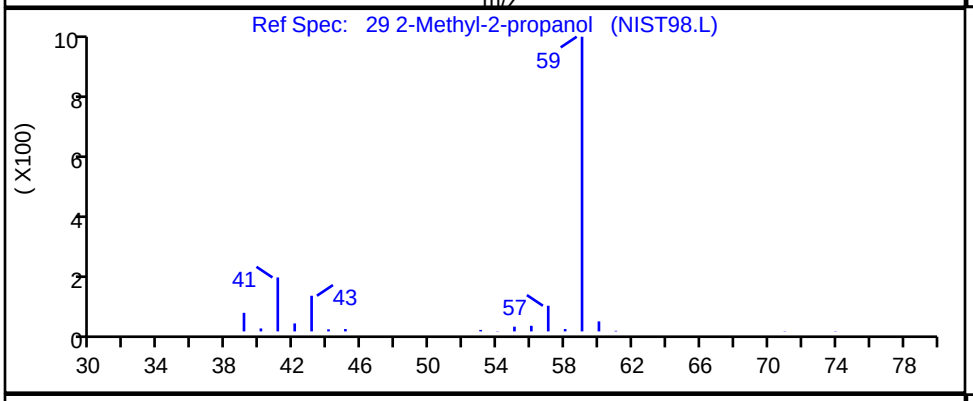
29 2-Methyl-2-propanol, CAS: 75-65-0

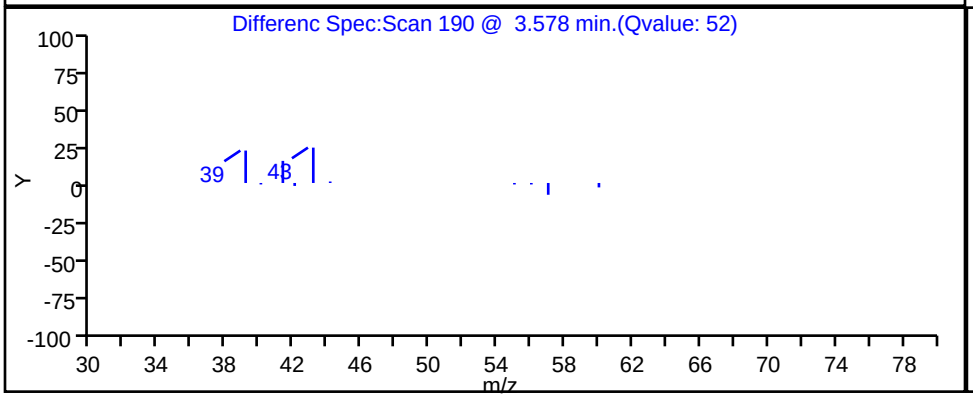


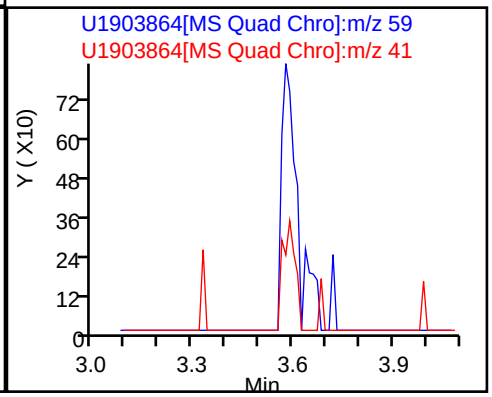












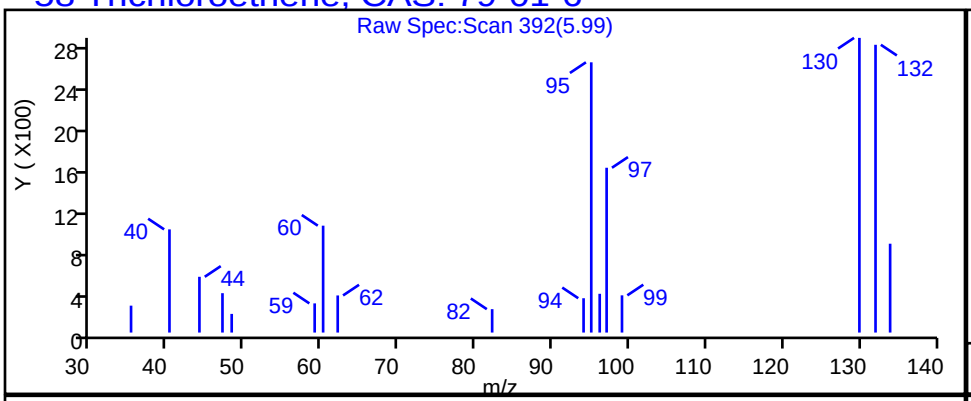
Report Date: 16-Nov-2018 14:18:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

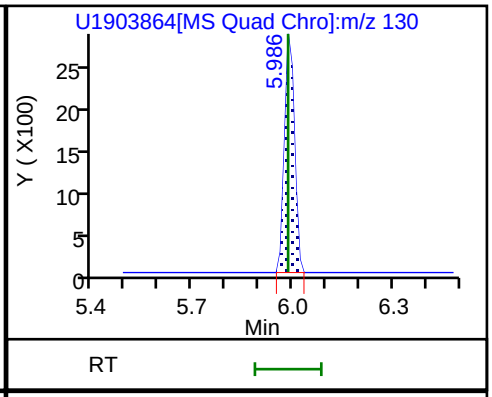
TestAmerica Canton

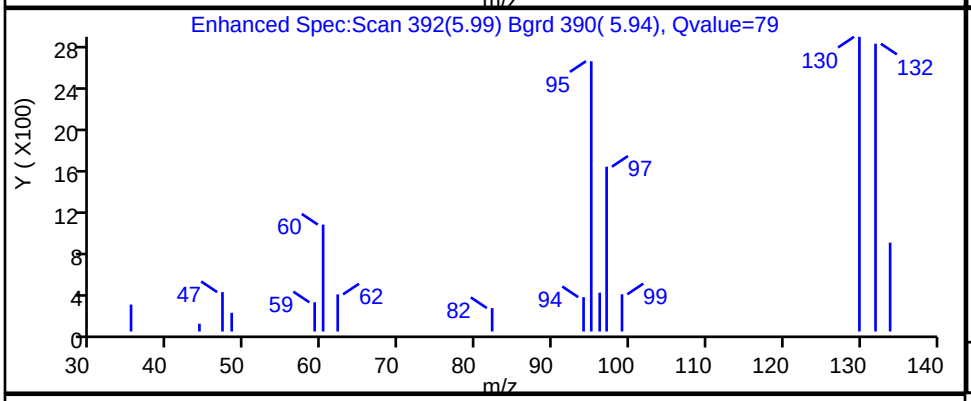
Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903864.d

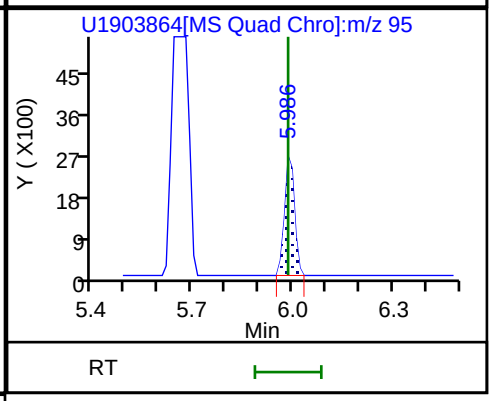
Injection Date:	16-Nov-2018 04:22:11	Instrument ID:	A3UX19		
Lims ID:	240-104089-B-1	Lab Sample ID:	240-104089-1		
Client ID:	TB-110718				
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

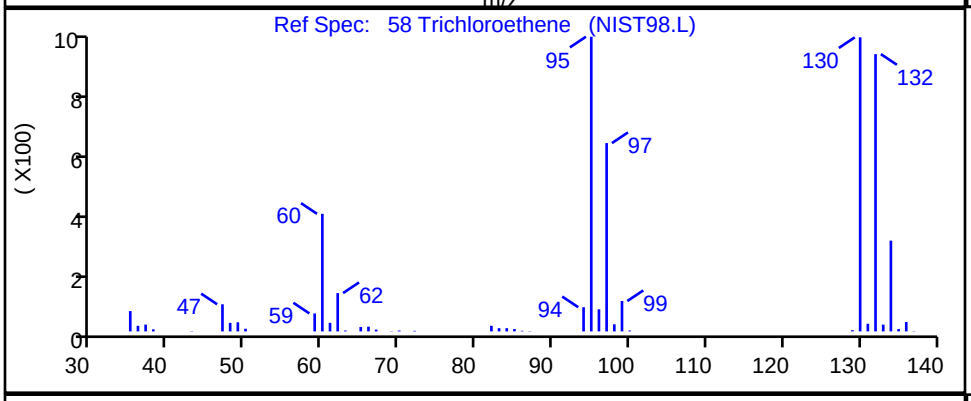
58 Trichloroethene, CAS: 79-01-6

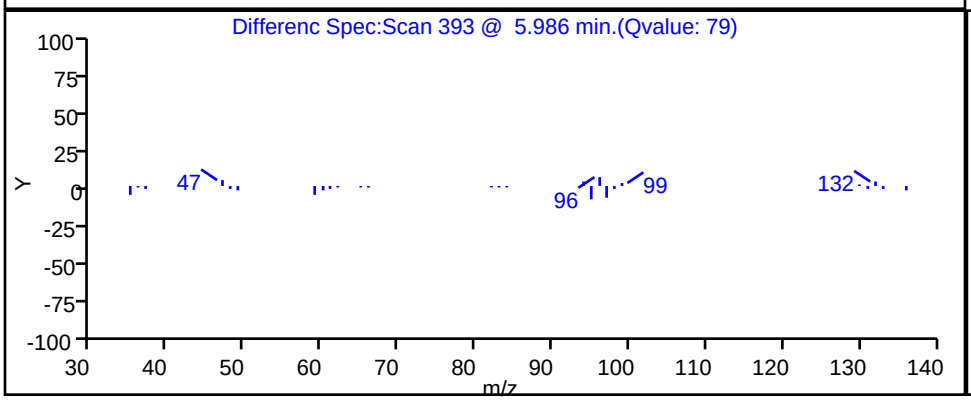


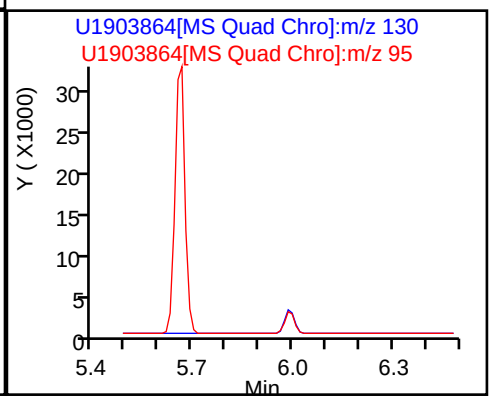












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-SEMW10D-SOIL | Lab Sample ID: 240-104089-2

Matrix: Solid | Lab File ID: 1416889.D

Analysis Method: 8260C | Date Collected: 11/07/2018 09:30

Sample wt/vol: 5.0850(g) | Date Analyzed: 11/19/2018 17:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 18.2 | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.6	U	6.0	3.6
71-55-6	1,1,1-Trichloroethane	0.99	U	6.0	0.99
79-34-5	1,1,2,2-Tetrachloroethane	1.7	U	6.0	1.7
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.5	U	6.0	1.5
75-34-3	1,1-Dichloroethane	0.83	U	6.0	0.83
75-35-4	1,1-Dichloroethene	1.1	U	6.0	1.1
563-58-6	1,1-Dichloropropene	1.2	U	6.0	1.2
87-61-6	1,2,3-Trichlorobenzene	0.69	U	6.0	0.69
96-18-4	1,2,3-Trichloropropane	1.9	U	6.0	1.9
526-73-8	1,2,3-Trimethylbenzene	2.2	U	6.0	2.2
120-82-1	1,2,4-Trichlorobenzene	0.69	U	6.0	0.69
95-63-6	1,2,4-Trimethylbenzene	1.2	U	6.0	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	4.3	U	12	4.3
95-50-1	1,2-Dichlorobenzene	1.3	U	6.0	1.3
107-06-2	1,2-Dichloroethane	0.93	U	6.0	0.93
78-87-5	1,2-Dichloropropane	1.0	U	6.0	1.0
541-73-1	1,3-Dichlorobenzene	0.98	U	6.0	0.98
142-28-9	1,3-Dichloropropane	1.2	U	6.0	1.2
106-46-7	1,4-Dichlorobenzene	1.1	U	6.0	1.1
594-20-7	2,2-Dichloropropane	1.4	U	6.0	1.4
78-93-3	2-Butanone (MEK)	4.3	U	24	4.3
110-75-8	2-Chloroethyl vinyl ether	11	U	60	11
95-49-8	2-Chlorotoluene	1.1	U	6.0	1.1
591-78-6	2-Hexanone	4.9	U	24	4.9
106-43-4	4-Chlorotoluene	1.0	U	6.0	1.0
99-87-6	p-Isopropyltoluene	3.5	U	6.0	3.5
108-10-1	4-Methyl-2-pentanone (MIBK)	4.5	U	24	4.5
67-64-1	Acetone	25	U	30	25
71-43-2	Benzene	0.84	U	6.0	0.84
108-86-1	Bromobenzene	1.4	U	6.0	1.4
75-25-2	Bromoform	2.9	U	6.0	2.9
74-83-9	Bromomethane	1.2	U	6.0	1.2
75-15-0	Carbon disulfide	1.4	U	6.0	1.4
56-23-5	Carbon tetrachloride	3.9	U	6.0	3.9
108-90-7	Chlorobenzene	1.1	U	6.0	1.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-SEMW10D-SOIL | Lab Sample ID: 240-104089-2

Matrix: Solid | Lab File ID: 1416889.D

Analysis Method: 8260C | Date Collected: 11/07/2018 09:30

Sample wt/vol: 5.0850(g) | Date Analyzed: 11/19/2018 17:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 18.2 | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	3.3	U	6.0	3.3
75-00-3	Chloroethane	1.5	U	6.0	1.5
67-66-3	Chloroform	0.95	U	6.0	0.95
74-87-3	Chloromethane	1.3	U	6.0	1.3
156-59-2	cis-1,2-Dichloroethene	0.78	U	6.0	0.78
10061-01-5	cis-1,3-Dichloropropene	1.7	U	6.0	1.7
74-95-3	Dibromomethane	0.80	U	6.0	0.80
74-97-5	Bromochloromethane	0.71	U	6.0	0.71
75-71-8	Dichlorodifluoromethane	1.1	U	6.0	1.1
75-27-4	Bromodichloromethane	0.82	U	6.0	0.82
75-65-0	tert-Butyl alcohol (TBA)	20	U	240	20
100-41-4	Ethylbenzene	1.3	U	6.0	1.3
87-68-3	Hexachlorobutadiene	4.5	U	6.0	4.5
108-20-3	Diisopropyl ether	0.91	U	12	0.91
98-82-8	Isopropylbenzene	1.0	U	6.0	1.0
1634-04-4	Methyl tert-butyl ether	0.99	U	6.0	0.99
75-09-2	Methylene Chloride	14	U	30	14
179601-23-1	m-Xylene & p-Xylene	0.94	U	12	0.94
91-20-3	Naphthalene	3.2	U	6.0	3.2
104-51-8	n-Butylbenzene	4.2	U	6.0	4.2
103-65-1	N-Propylbenzene	0.88	U	6.0	0.88
95-47-6	o-Xylene	1.0	U	6.0	1.0
135-98-8	sec-Butylbenzene	1.0	U	6.0	1.0
100-42-5	Styrene	1.4	U	6.0	1.4
994-05-8	Tert-amyl methyl ether	2.7	U	6.0	2.7
637-92-3	Ethyl t-butyl ether	2.7	U	6.0	2.7
127-18-4	Tetrachloroethene	0.88	U	6.0	0.88
108-88-3	Toluene	0.93	U	6.0	0.93
156-60-5	trans-1,2-Dichloroethene	0.56	U	6.0	0.56
10061-02-6	trans-1,3-Dichloropropene	1.2	U	6.0	1.2
79-01-6	Trichloroethene	17		6.0	0.76
75-69-4	Trichlorofluoromethane	1.3	U	6.0	1.3
108-05-4	Vinyl acetate	2.6	U	12	2.6
75-01-4	Vinyl chloride	1.0	U	6.0	1.0
1330-20-7	Xylenes, Total	1.9	U	12	1.9
98-06-6	tert-Butylbenzene	1.1	U	6.0	1.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-SEMW10D-SOIL | Lab Sample ID: 240-104089-2

Matrix: Solid | Lab File ID: 1416889.D

Analysis Method: 8260C | Date Collected: 11/07/2018 09:30

Sample wt/vol: 5.0850(g) | Date Analyzed: 11/19/2018 17:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 18.2 | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
106-93-4	1,2-Dibromoethane	0.93	U	6.0	0.93

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	97		62-135
1868-53-7	Dibromofluoromethane (Surr)	77		49-132
460-00-4	4-Bromofluorobenzene (Surr)	97		49-141
17060-07-0	1,2-Dichloroethane-d4 (Surr)	80		48-123

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416889.D
Lims ID: 240-104089-B-2-A
Client ID: WC-SEMW10D-SOIL
Sample Type: Client
Inject. Date: 19-Nov-2018 17:43:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-104089-b-2-a
Misc. Info.: 240-0082085-025
Operator ID: 002808 Instrument ID: A3UX14

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 20-Nov-2018 09:17:44

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	6.315	6.315	0.000	100	1089649	50.0	
*	2 Chlorobenzene-d5	117	9.285	9.285	0.000	96	706987	50.0	
*	3 1,4-Dichlorobenzene-d4	152	11.285	11.285	-0.001	99	293915	50.0	
$	4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	93	223450	38.7	
$	5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	93	260770	40.0	
$	6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	994821	48.5	
$	7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	317128	48.5	
	9 Dichlorodifluoromethane	85		1.061				ND	
	10 Chloromethane	50		1.191				ND	
	11 Vinyl chloride	62		1.286				ND	U
	13 Bromomethane	94		1.522				ND	
	15 Chloroethane	64		1.605				ND	
	17 Trichlorofluoromethane	101		1.806				ND	
	21 1,1-Dichloroethene	96		2.268				ND	
	22 1,1,2-Trichloro-1,2,2-trif	151		2.292				ND	
	24 Acetone	43	2.374	2.374	0.000	98	4881	2.40	
	26 Carbon disulfide	76		2.457				ND	
	30 Methylene Chloride	84		2.824				ND	
	31 2-Methyl-2-propanol	59		3.061				ND	U
	32 trans-1,2-Dichloroethene	96		3.132				ND	
	33 Methyl tert-butyl ether	73	3.155	3.155	0.000	88	1919	0.1354	
	36 1,1-Dichloroethane	63		3.735				ND	
	38 Isopropyl ether	87		3.877				ND	
	39 Vinyl acetate	86		3.889				ND	
	40 Tert-butyl ethyl ether	59		4.504				ND	
	41 2,2-Dichloropropane	97		4.682				ND	
	42 cis-1,2-Dichloroethene	96		4.717				ND	U
	43 2-Butanone (MEK)	43		4.824				ND	U
	46 Chlorobromomethane	128		5.108				ND	
	49 Chloroform	83		5.273				ND	
	50 1,1,1-Trichloroethane	97		5.451				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
52 Carbon tetrachloride	117		5.652				ND	
53 1,1-Dichloropropene	75		5.676				ND	
54 Benzene	78		5.948				ND	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	93	1186	0.1551	
57 Tert-amyl methyl ether	73		6.137				ND	
59 Trichloroethene	130	6.729	6.729	0.000	97	91555	14.5	
63 1,2-Dichloropropane	63		6.977				ND	
65 Dibromomethane	93		7.108				ND	
68 Dichlorobromomethane	83		7.297				ND	
70 2-Chloroethyl vinyl ether	63		7.640				ND	
71 cis-1,3-Dichloropropene	75		7.747				ND	
73 4-Methyl-2-pentanone (MIBK	43		7.924				ND	
74 Toluene	91		8.031				ND	
75 trans-1,3-Dichloropropene	75		8.291				ND	
78 Tetrachloroethene	164		8.528				ND	
79 1,3-Dichloropropane	76		8.587				ND	
80 2-Hexanone	43		8.693				ND	
82 Chlorodibromomethane	129		8.788				ND	
83 Ethylene Dibromide	107		8.871				ND	
85 Chlorobenzene	112		9.308				ND	
86 1,1,1,2-Tetrachloroethane	131		9.391				ND	
87 Ethylbenzene	106		9.415				ND	
88 m-Xylene & p-Xylene	106		9.510				ND	
89 o-Xylene	106		9.853				ND	
90 Styrene	104		9.876				ND	
91 Bromoform	173		10.030				ND	
92 Isopropylbenzene	105		10.172				ND	
94 Bromobenzene	156		10.421				ND	
95 1,1,2,2-Tetrachloroethane	83		10.456				ND	
96 1,2,3-Trichloropropane	110		10.492				ND	
98 N-Propylbenzene	120		10.527				ND	
99 2-Chlorotoluene	126		10.586				ND	
101 4-Chlorotoluene	126		10.693				ND	
103 tert-Butylbenzene	119		10.953				ND	
105 1,2,4-Trimethylbenzene	105		10.989				ND	
107 sec-Butylbenzene	105		11.131				ND	
108 1,3-Dichlorobenzene	146		11.225				ND	U
109 4-Isopropyltoluene	119		11.261				ND	
110 1,4-Dichlorobenzene	146		11.296				ND	
111 1,2,3-Trimethylbenzene	105		11.344				ND	
113 n-Butylbenzene	91		11.604				ND	
114 1,2-Dichlorobenzene	146		11.616				ND	
115 1,2-Dibromo-3-Chloropropan	157		12.279				ND	
117 1,2,4-Trichlorobenzene	180		12.953				ND	
118 Hexachlorobutadiene	225		13.095				ND	
119 Naphthalene	128		13.166				ND	
120 1,2,3-Trichlorobenzene	180		13.367				ND	
S 134 Xylenes, Total	106		16.530				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

VM250SS_00050	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00132	Amount Added:	0.00	Units:	Run Reagent
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00010	Amount Added:	0.00	Units:	Run Reagent

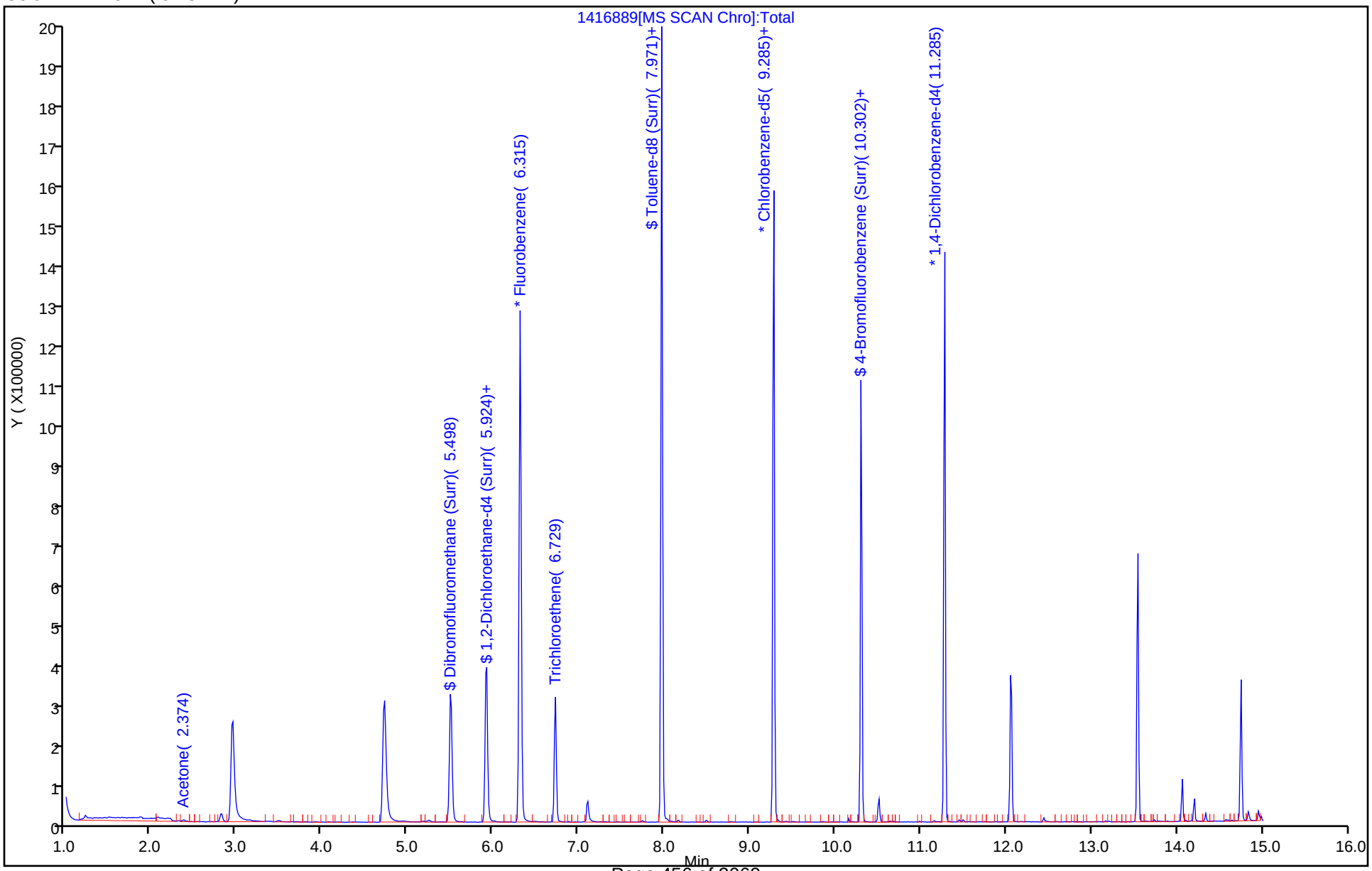
Report Date: 20-Nov-2018 09:44:36 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416889.D

Injection Date:	19-Nov-2018 17:43:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	240-104089-B-2-A	Lab Sample ID:	240-104089-2	Worklist Smp#:	25
Client ID:	WC-SEMW10D-SOIL				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416889.D
Lims ID: 240-104089-B-2-A
Client ID: WC-SEMW10D-SOIL
Sample Type: Client
Inject. Date: 19-Nov-2018 17:43:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-104089-b-2-a
Misc. Info.: 240-0082085-025
Operator ID: 002808 Instrument ID: A3UX14

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 20-Nov-2018 09:17:44

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	38.7	77.35
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	40.0	79.99
$ 6 Toluene-d8 (Surr)	50.0	48.5	97.08
$ 7 4-Bromofluorobenzene (Surr)	50.0	48.5	97.05

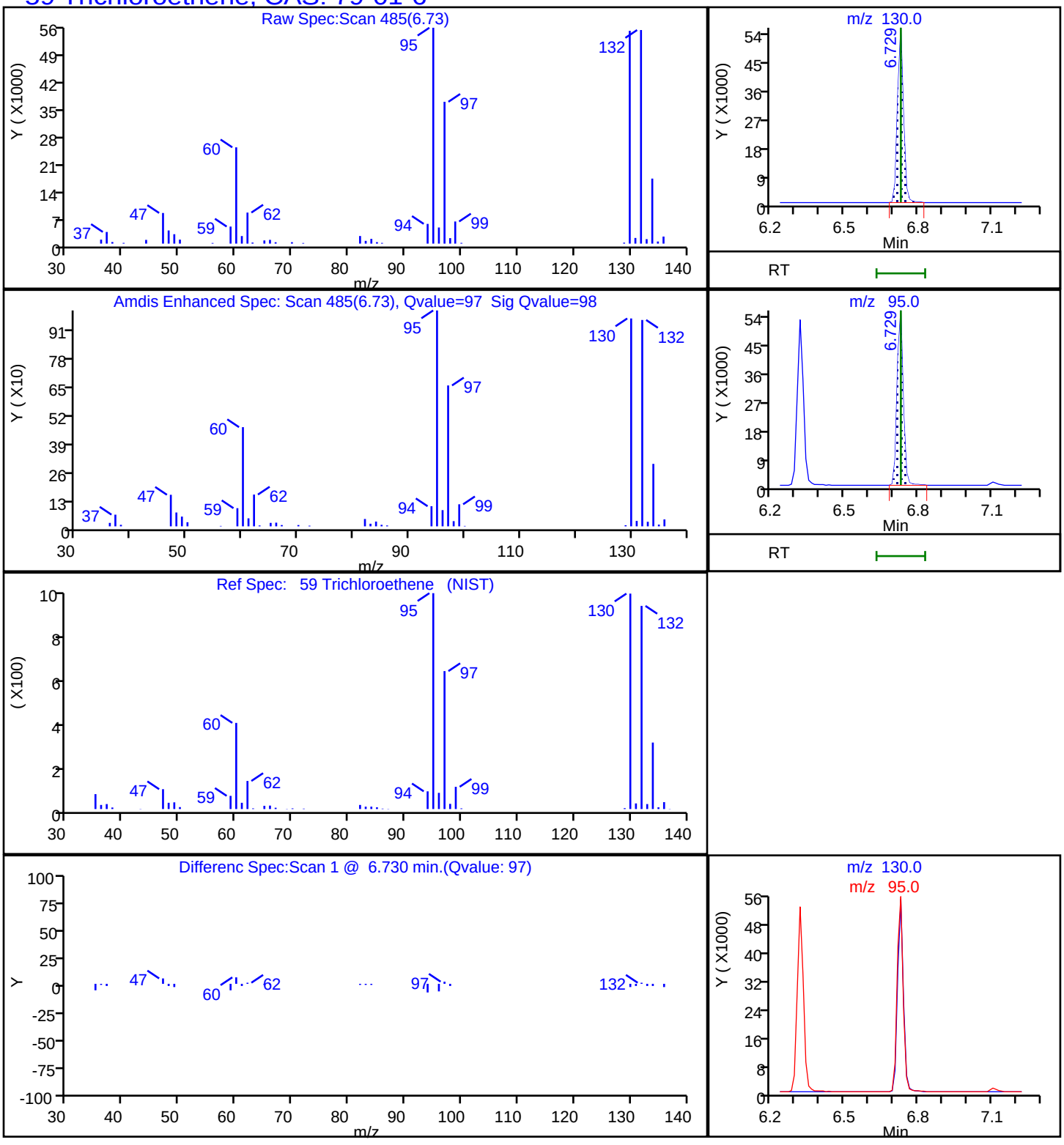
Report Date: 20-Nov-2018 09:44:37 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416889.D

Injection Date:	19-Nov-2018 17:43:30	Instrument ID:	A3UX14		
Lims ID:	240-104089-B-2-A	Lab Sample ID:	240-104089-2		
Client ID:	WC-SEMW10D-SOIL				
Operator ID:	002808	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_14	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

59 Trichloroethene, CAS: 79-01-6



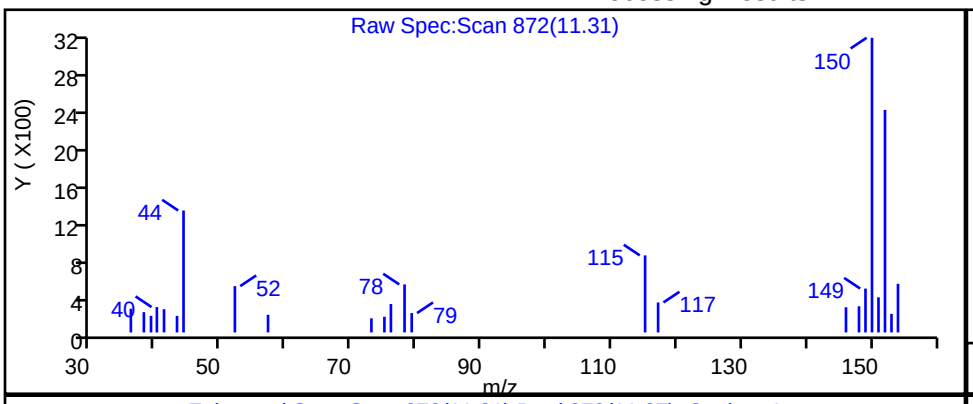
User Disabled Compound Report

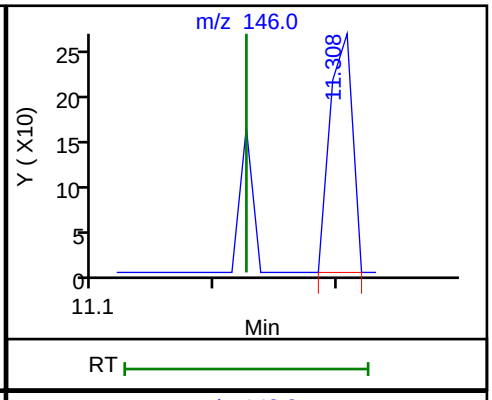
TestAmerica Canton

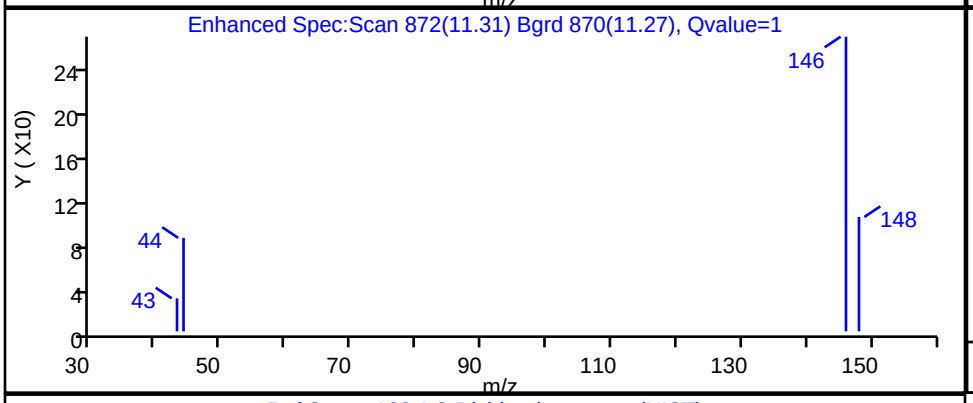
Data File:	\\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416889.D				
Injection Date:	19-Nov-2018 17:43:30	Instrument ID:	A3UX14		
Lims ID:	240-104089-B-2-A	Lab Sample ID:	240-104089-2		
Client ID:	WC-SEMW10D-SOIL				
Operator ID:	002808	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_14	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

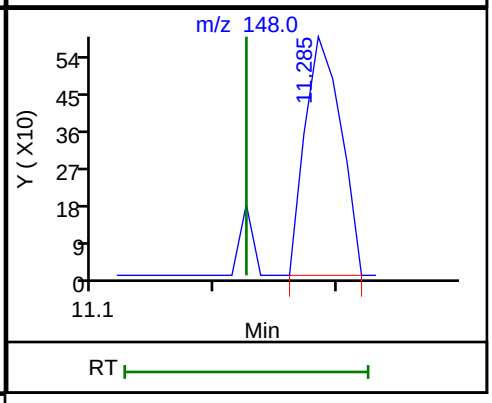
108 1,3-Dichlorobenzene, CAS: 541-73-1

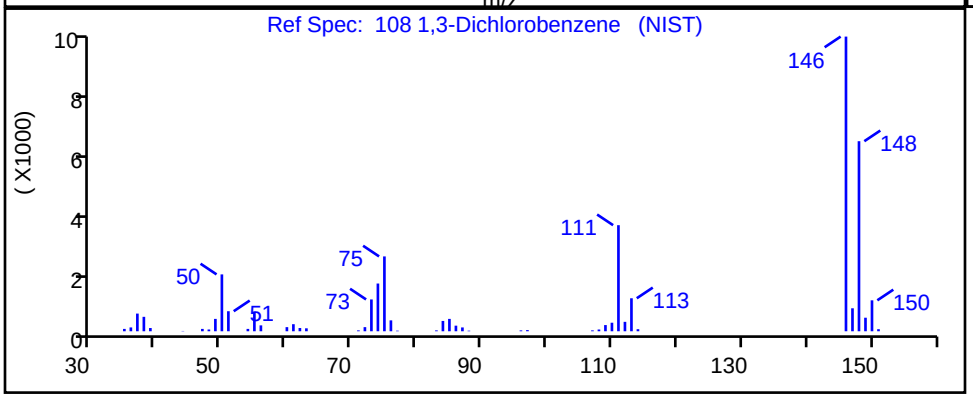
Processing Results











RT	Mass	Response	Amount
11.31	146.00	344	0.035739
11.28	148.00	1206	

Reviewer: macenczaks, 20-Nov-2018 09:17:15

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

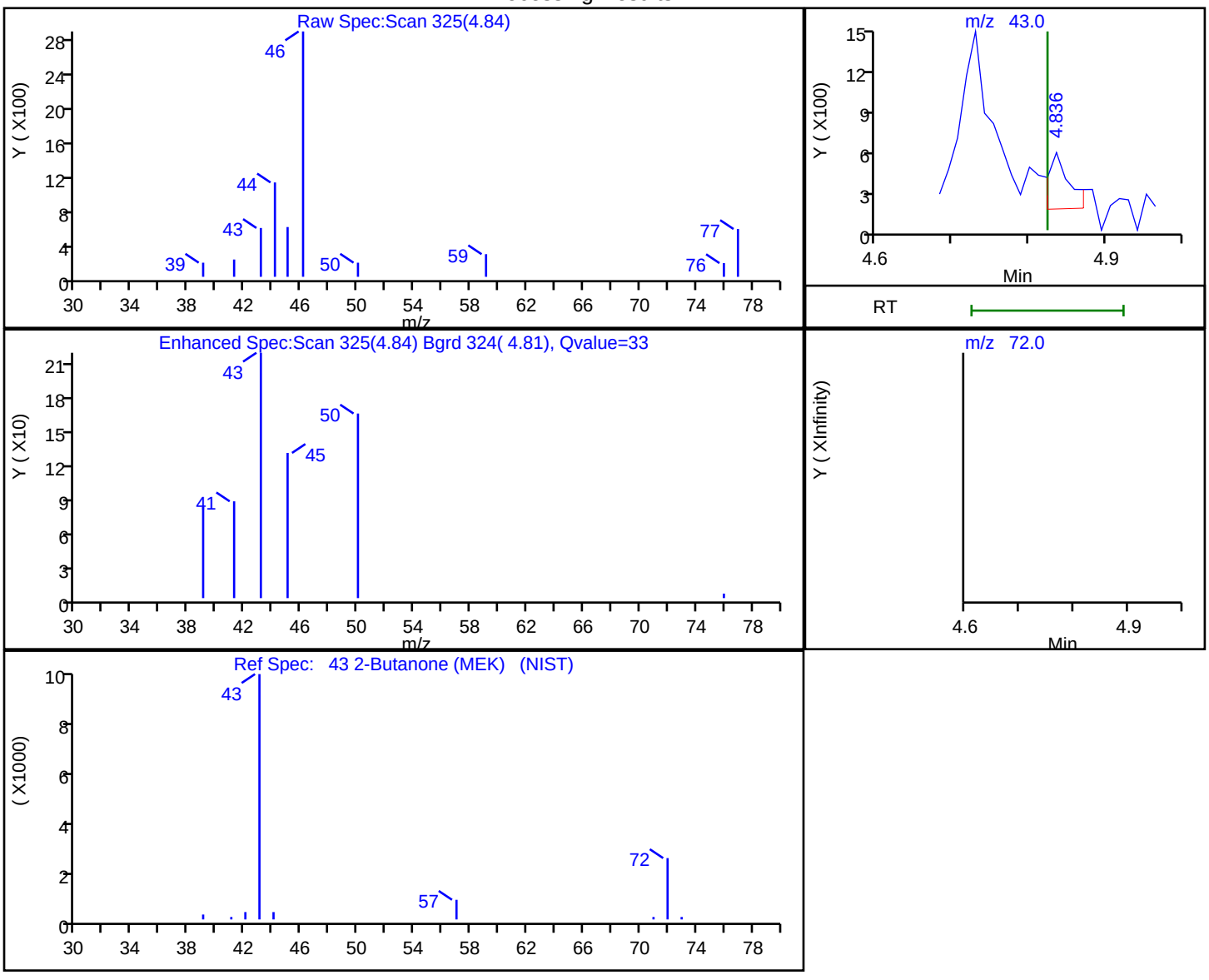
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416889.D				
Injection Date:	19-Nov-2018 17:43:30	Instrument ID:	A3UX14		
Lims ID:	240-104089-B-2-A	Lab Sample ID:	240-104089-2		
Client ID:	WC-SEMW10D-SOIL				
Operator ID:	002808	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_14	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

43 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
4.84	43.00	809	0.245952
4.82	72.00	0	

Reviewer: macenczaks, 20-Nov-2018 09:17:26

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

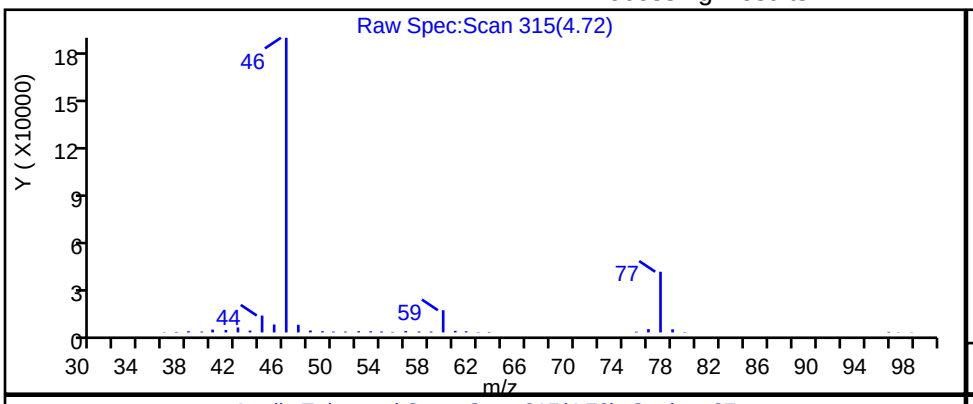
User Disabled Compound Report

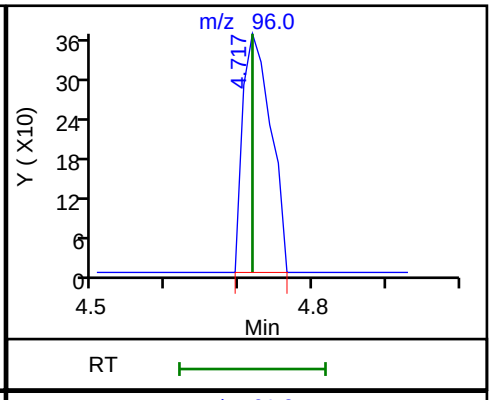
TestAmerica Canton

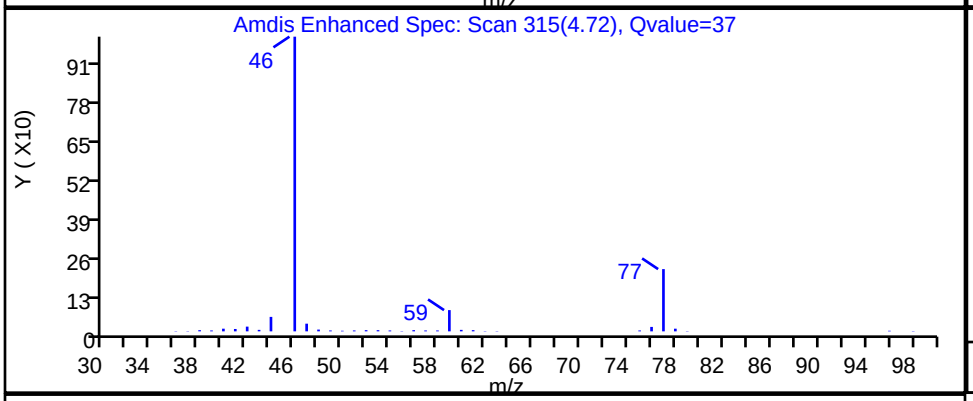
Data File:	\\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416889.D				
Injection Date:	19-Nov-2018 17:43:30	Instrument ID:	A3UX14		
Lims ID:	240-104089-B-2-A	Lab Sample ID:	240-104089-2		
Client ID:	WC-SEMW10D-SOIL				
Operator ID:	002808	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_14	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

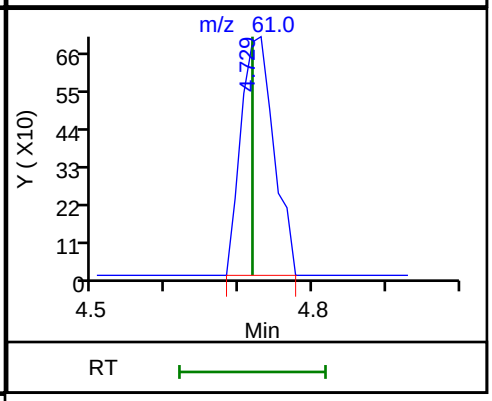
42 cis-1,2-Dichloroethene, CAS: 156-59-2

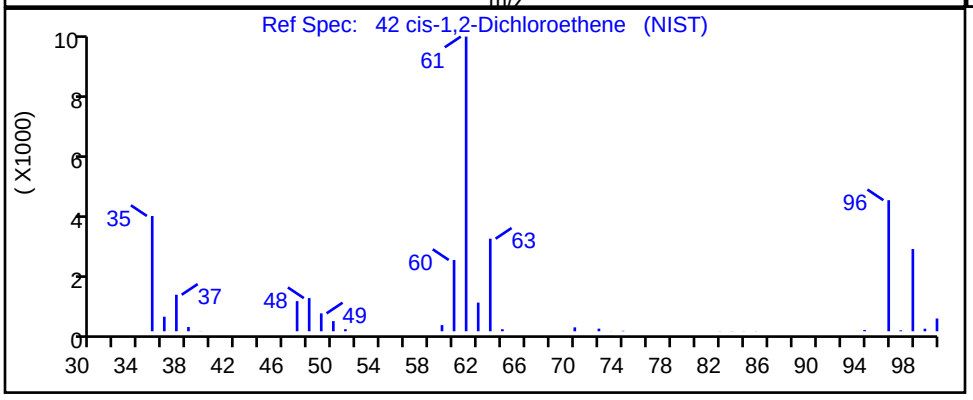
Processing Results











RT	Mass	Response	Amount
4.72	96.00	962	0.133841
4.73	61.00	2198	

Reviewer: macenczaks, 20-Nov-2018 09:17:28

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

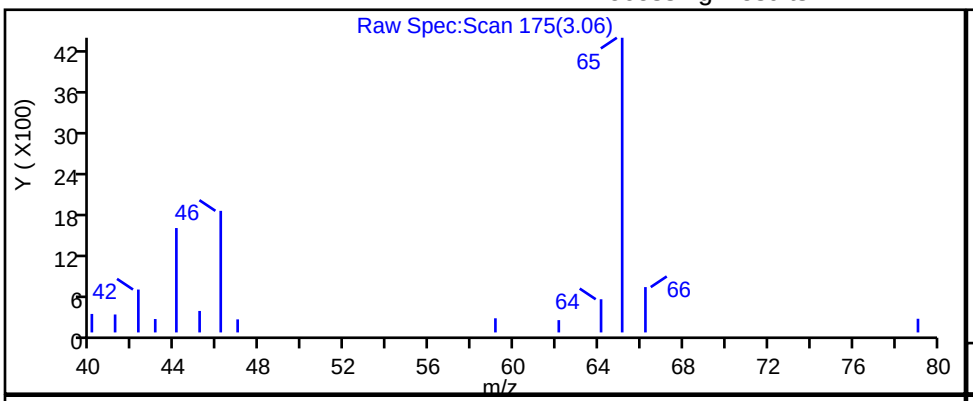
User Disabled Compound Report

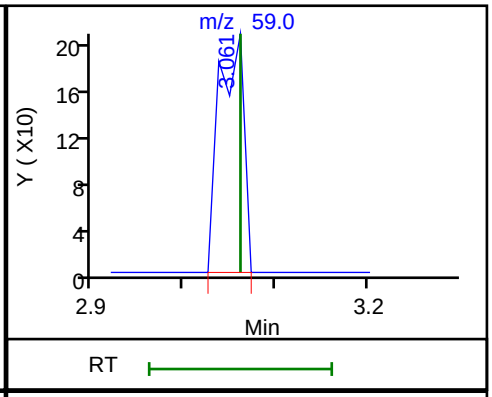
TestAmerica Canton

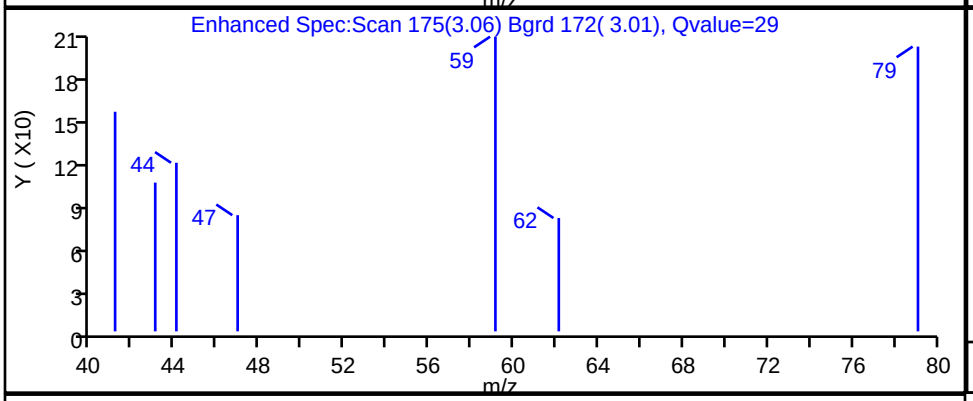
Data File:	\\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416889.D				
Injection Date:	19-Nov-2018 17:43:30	Instrument ID:	A3UX14		
Lims ID:	240-104089-B-2-A	Lab Sample ID:	240-104089-2		
Client ID:	WC-SEMW10D-SOIL				
Operator ID:	002808	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_14	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

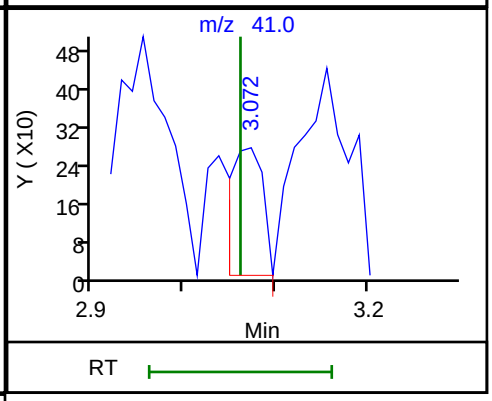
31 2-Methyl-2-propanol, CAS: 75-65-0

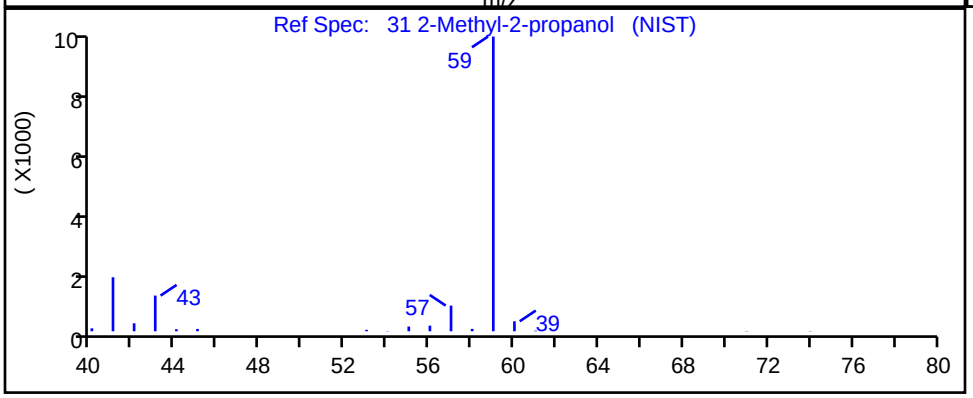
Processing Results











RT	Mass	Response	Amount
3.06	59.00	388	0.672001
3.07	41.00	682	

Reviewer: macenczaks, 20-Nov-2018 09:17:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

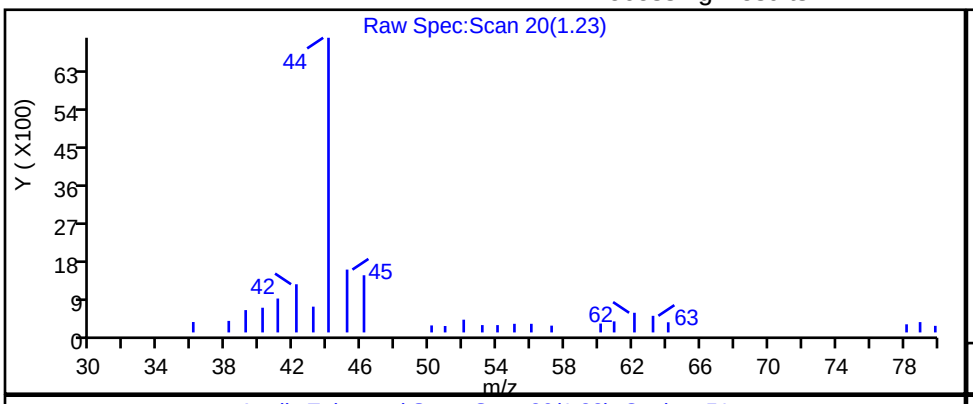
User Disabled Compound Report

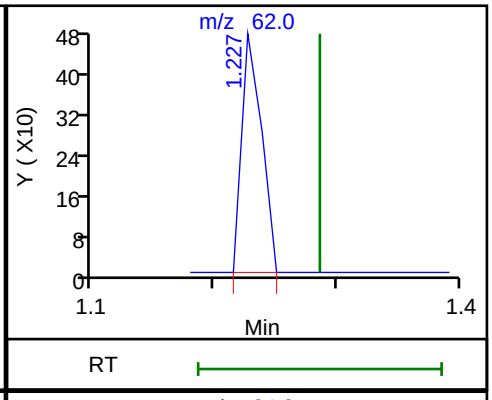
TestAmerica Canton

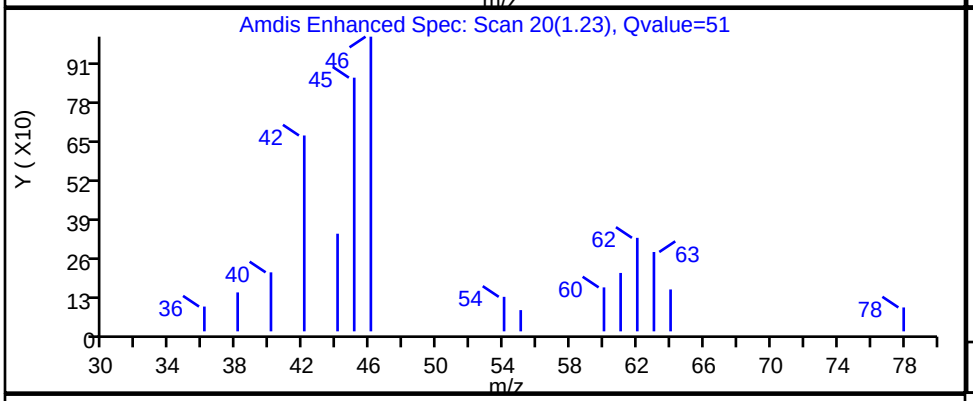
Data File:	\\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416889.D				
Injection Date:	19-Nov-2018 17:43:30	Instrument ID:	A3UX14		
Lims ID:	240-104089-B-2-A	Lab Sample ID:	240-104089-2		
Client ID:	WC-SEMW10D-SOIL				
Operator ID:	002808	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_14	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

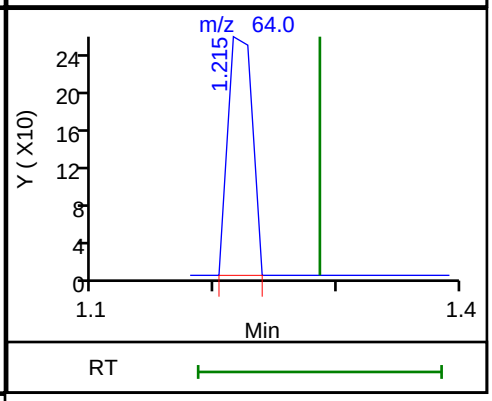
11 Vinyl chloride, CAS: 75-01-4

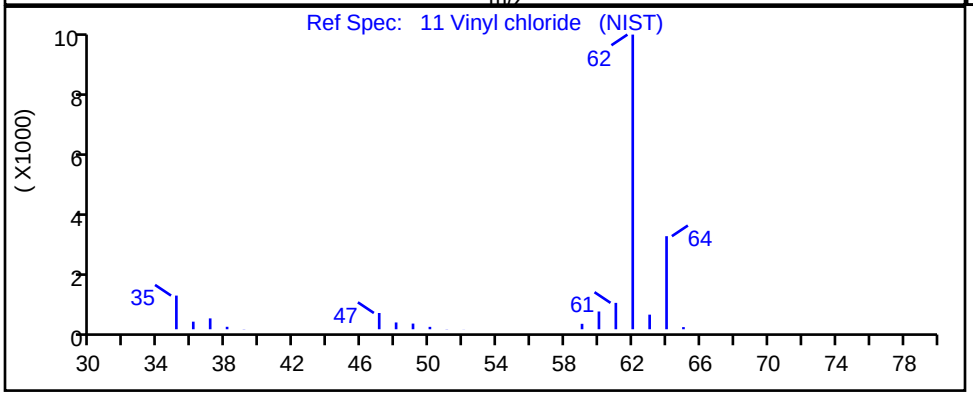
Processing Results











RT	Mass	Response	Amount
1.23	62.00	533	0.112964
1.21	64.00	353	

Reviewer: macenczaks, 20-Nov-2018 09:17:41

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-DEVW | Lab Sample ID: 240-104089-3

Matrix: Water | Lab File ID: U1903865.d

Analysis Method: 8260C | Date Collected: 11/07/2018 10:00

Sample wt/vol: 5(mL) | Date Analyzed: 11/16/2018 04:44

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.28	U	2.0	0.28
71-55-6	1,1,1-Trichloroethane	0.48	U	2.0	0.48
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	2.0	0.26
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.82	U	2.0	0.82
75-34-3	1,1-Dichloroethane	0.34	U	2.0	0.34
75-35-4	1,1-Dichloroethene	0.38	U	2.0	0.38
563-58-6	1,1-Dichloropropene	0.28	U	2.0	0.28
87-61-6	1,2,3-Trichlorobenzene	1.1	U	2.0	1.1
96-18-4	1,2,3-Trichloropropane	0.48	U	2.0	0.48
526-73-8	1,2,3-Trimethylbenzene	0.28	U	10	0.28
120-82-1	1,2,4-Trichlorobenzene	1.9	J	2.0	0.52
95-63-6	1,2,4-Trimethylbenzene	0.14	U	2.0	0.14
96-12-8	1,2-Dibromo-3-Chloropropane	1.8	U	4.0	1.8
95-50-1	1,2-Dichlorobenzene	0.30	U	2.0	0.30
107-06-2	1,2-Dichloroethane	0.70	J	2.0	0.42
78-87-5	1,2-Dichloropropane	0.30	U	2.0	0.30
541-73-1	1,3-Dichlorobenzene	2.6		2.0	0.30
142-28-9	1,3-Dichloropropane	0.42	U	2.0	0.42
106-46-7	1,4-Dichlorobenzene	7.7		2.0	0.32
594-20-7	2,2-Dichloropropane	0.62	U	2.0	0.62
78-93-3	2-Butanone (MEK)	2.3	U	20	2.3
110-75-8	2-Chloroethyl vinyl ether	0.52	U	20	0.52
95-49-8	2-Chlorotoluene	0.30	U	2.0	0.30
591-78-6	2-Hexanone	1.1	U	20	1.1
106-43-4	4-Chlorotoluene	0.18	U	2.0	0.18
99-87-6	p-Isopropyltoluene	0.26	U	2.0	0.26
108-10-1	4-Methyl-2-pentanone (MIBK)	0.84	U	20	0.84
67-64-1	Acetone	11	U	20	11
71-43-2	Benzene	0.65	J	2.0	0.26
108-86-1	Bromobenzene	0.24	U	2.0	0.24
75-25-2	Bromoform	1.5	U	2.0	1.5
74-83-9	Bromomethane	0.84	U	2.0	0.84
75-15-0	Carbon disulfide	0.56	U	2.0	0.56
56-23-5	Carbon tetrachloride	0.52	U	2.0	0.52
108-90-7	Chlorobenzene	54		2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-DEVW | Lab Sample ID: 240-104089-3

Matrix: Water | Lab File ID: U1903865.d

Analysis Method: 8260C | Date Collected: 11/07/2018 10:00

Sample wt/vol: 5(mL) | Date Analyzed: 11/16/2018 04:44

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	0.78	U	2.0	0.78
75-00-3	Chloroethane	1.7	U	2.0	1.7
67-66-3	Chloroform	1.2	J	2.0	0.26
74-87-3	Chloromethane	0.40	U	2.0	0.40
156-59-2	cis-1,2-Dichloroethene	0.32	U	2.0	0.32
10061-01-5	cis-1,3-Dichloropropene	1.2	U	2.0	1.2
74-95-3	Dibromomethane	0.18	U	2.0	0.18
74-97-5	Bromochloromethane	0.28	U	2.0	0.28
75-71-8	Dichlorodifluoromethane	0.70	U	2.0	0.70
75-27-4	Bromodichloromethane	0.34	U	2.0	0.34
75-65-0	tert-Butyl alcohol (TBA)	3.4	U	100	3.4
100-41-4	Ethylbenzene	0.22	U	2.0	0.22
87-68-3	Hexachlorobutadiene	1.7	U	2.0	1.7
108-20-3	Diisopropyl ether	0.34	U	20	0.34
98-82-8	Isopropylbenzene	0.18	U	2.0	0.18
1634-04-4	Methyl tert-butyl ether	0.14	U	2.0	0.14
75-09-2	Methylene Chloride	5.2	U	10	5.2
179601-23-1	m-Xylene & p-Xylene	0.16	U	4.0	0.16
91-20-3	Naphthalene	0.64	U	2.0	0.64
104-51-8	n-Butylbenzene	0.28	U	2.0	0.28
103-65-1	N-Propylbenzene	0.30	U	2.0	0.30
95-47-6	o-Xylene	0.18	U	2.0	0.18
135-98-8	sec-Butylbenzene	0.26	U	2.0	0.26
100-42-5	Styrene	0.20	U	2.0	0.20
994-05-8	Tert-amyl methyl ether	0.22	U	10	0.22
637-92-3	Ethyl t-butyl ether	0.30	U	10	0.30
127-18-4	Tetrachloroethene	0.30	U	2.0	0.30
108-88-3	Toluene	1.3	J	2.0	0.28
156-60-5	trans-1,2-Dichloroethene	0.38	U	2.0	0.38
10061-02-6	trans-1,3-Dichloropropene	1.3	U	2.0	1.3
79-01-6	Trichloroethene	0.20	U	2.0	0.20
75-69-4	Trichlorofluoromethane	0.90	U	2.0	0.90
108-05-4	Vinyl acetate	0.38	U	4.0	0.38
75-01-4	Vinyl chloride	0.40	U	2.0	0.40
1330-20-7	Xylenes, Total	0.30	U	4.0	0.30
98-06-6	tert-Butylbenzene	0.28	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-DEVW | Lab Sample ID: 240-104089-3

Matrix: Water | Lab File ID: U1903865.d

Analysis Method: 8260C | Date Collected: 11/07/2018 10:00

Sample wt/vol: 5(mL) | Date Analyzed: 11/16/2018 04:44

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
106-93-4	1,2-Dibromoethane	0.24	U	2.0	0.24

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	98		70-123
1868-53-7	Dibromofluoromethane (Surr)	103		75-128
460-00-4	4-Bromofluorobenzene (Surr)	96		59-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-121

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903865.d
Lims ID: 240-104089-B-3
Client ID: WC-FTCB-DEVW
Sample Type: Client
Inject. Date: 16-Nov-2018 04:44:27 ALS Bottle#: 0 Worklist Smp#: 27
Injection Vol: 5.0 mL Dil. Factor: 2.0000
Sample Info: 027
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 16-Nov-2018 13:59:42 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: laveyt Date: 16-Nov-2018 14:19:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.653	0.001	99	749370	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.499	0.001	83	625756	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	94	326205	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	60	208156	20.6	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	97	239173	20.6	
$ 6 Toluene-d8 (Surr)	98	7.101	7.100	0.001	92	736436	19.6	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.673	0.001	91	270043	19.1	
9 Dichlorodifluoromethane	85		1.598				ND	
10 Chloromethane	50		1.811				ND	
11 Vinyl chloride	62	1.918	1.906	0.012	1	1345	0.1205	
13 Bromomethane	94		2.226				ND	
14 Chloroethane	64		2.309				ND	
16 Trichlorofluoromethane	101		2.558				ND	
20 1,1,2-Trichloro-1,2,2-trif	101		3.056				ND	
21 1,1-Dichloroethene	61		3.056				ND	
22 Acetone	43	3.069	3.068	0.001	90	7404	2.52	
24 Carbon disulfide	76		3.282				ND	
28 Methylene Chloride	49	3.484	3.495	-0.011	71	11275	1.06	
29 2-Methyl-2-propanol	59	3.579	3.578	0.001	8	246	0.2424	
32 trans-1,2-Dichloroethene	61		3.732				ND	
31 Methyl tert-butyl ether	73		3.732				ND	
34 1,1-Dichloroethane	63		4.112				ND	
35 Vinyl acetate	43		4.147				ND	
36 Isopropyl ether	87		4.171				ND	
38 Tert-butyl ethyl ether	59		4.491				ND	
40 cis-1,2-Dichloroethene	96	4.634	4.634	0.000	4	1523	0.1406	
41 2-Butanone (MEK)	72	4.622	4.634	-0.012	43	428	0.2419	
39 2,2-Dichloropropane	77		4.634				ND	
45 Chlorobromomethane	49		4.835				ND	
47 Chloroform	83	4.907	4.906	0.001	65	9930	0.5979	
48 1,1,1-Trichloroethane	97		5.084				ND	
50 1,1-Dichloropropene	75		5.227				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 Carbon tetrachloride	117		5.238				ND	
53 Benzene	78	5.417	5.416	0.001	54	11542	0.3237	
54 1,2-Dichloroethane	62	5.417	5.416	0.001	1	4725	0.3503	
55 Tert-amyl methyl ether	73		5.499				ND	
58 Trichloroethene	130		5.985				ND	
61 1,2-Dichloropropane	63		6.187				ND	
63 Dibromomethane	174		6.294				ND	
65 Dichlorobromomethane	83		6.436				ND	
67 2-Chloroethyl vinyl ether	63		6.697				ND	
68 cis-1,3-Dichloropropene	75		6.839				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.982				ND	
70 Toluene	91	7.172	7.171	0.001	73	26860	0.6352	
71 trans-1,3-Dichloropropene	75		7.361				ND	
75 Tetrachloroethene	166		7.693				ND	
76 1,3-Dichloropropane	76		7.705				ND	
77 2-Hexanone	43		7.764				ND	
79 Chlorodibromomethane	129		7.930				ND	
80 Ethylene Dibromide	107		8.049				ND	
82 Chlorobenzene	112	8.524	8.523	0.001	95	776060	26.8	
83 1,1,1,2-Tetrachloroethane	131		8.606				ND	
84 Ethylbenzene	106		8.630				ND	
85 m-Xylene & p-Xylene	106		8.749				ND	
86 o-Xylene	106		9.152				ND	
87 Styrene	104		9.164				ND	
88 Bromoform	173		9.353				ND	
89 Isopropylbenzene	105		9.519				ND	
91 1,1,2,2-Tetrachloroethane	83		9.816				ND	
92 Bromobenzene	156		9.840				ND	
93 1,2,3-Trichloropropane	110		9.863				ND	
95 N-Propylbenzene	120		9.946				ND	
96 2-Chlorotoluene	126		10.041				ND	
98 4-Chlorotoluene	126		10.148				ND	
99 tert-Butylbenzene	119		10.468				ND	
101 1,2,4-Trimethylbenzene	105		10.515				ND	
102 sec-Butylbenzene	105		10.693				ND	
103 1,3-Dichlorobenzene	146	10.812	10.824	-0.012	14	30002	1.30	
104 4-Isopropyltoluene	119		10.848				ND	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	78	91337	3.84	
106 1,2,3-Trimethylbenzene	105		10.966				ND	
108 n-Butylbenzene	91		11.286				ND	
109 1,2-Dichlorobenzene	146	11.310	11.298	0.012	26	2540	0.1214	
110 1,2-Dibromo-3-Chloropropan	157		12.128				ND	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	75	13533	0.9704	
113 Hexachlorobutadiene	225		13.207				ND	
114 Naphthalene	128		13.279				ND	
115 1,2,3-Trichlorobenzene	180	13.540	13.539	0.001	36	3407	0.2721	
S 126 Xylenes, Total	106		16.520				ND	

Reagents:

vm50ss_stk_00078	Amount Added:	2.00	Units: uL	Run Reagent
vmDist_H2o_00133	Amount Added:	0.00	Units:	Run Reagent
vm50is_stk_A_00002	Amount Added:	2.00	Units: uL	Run Reagent

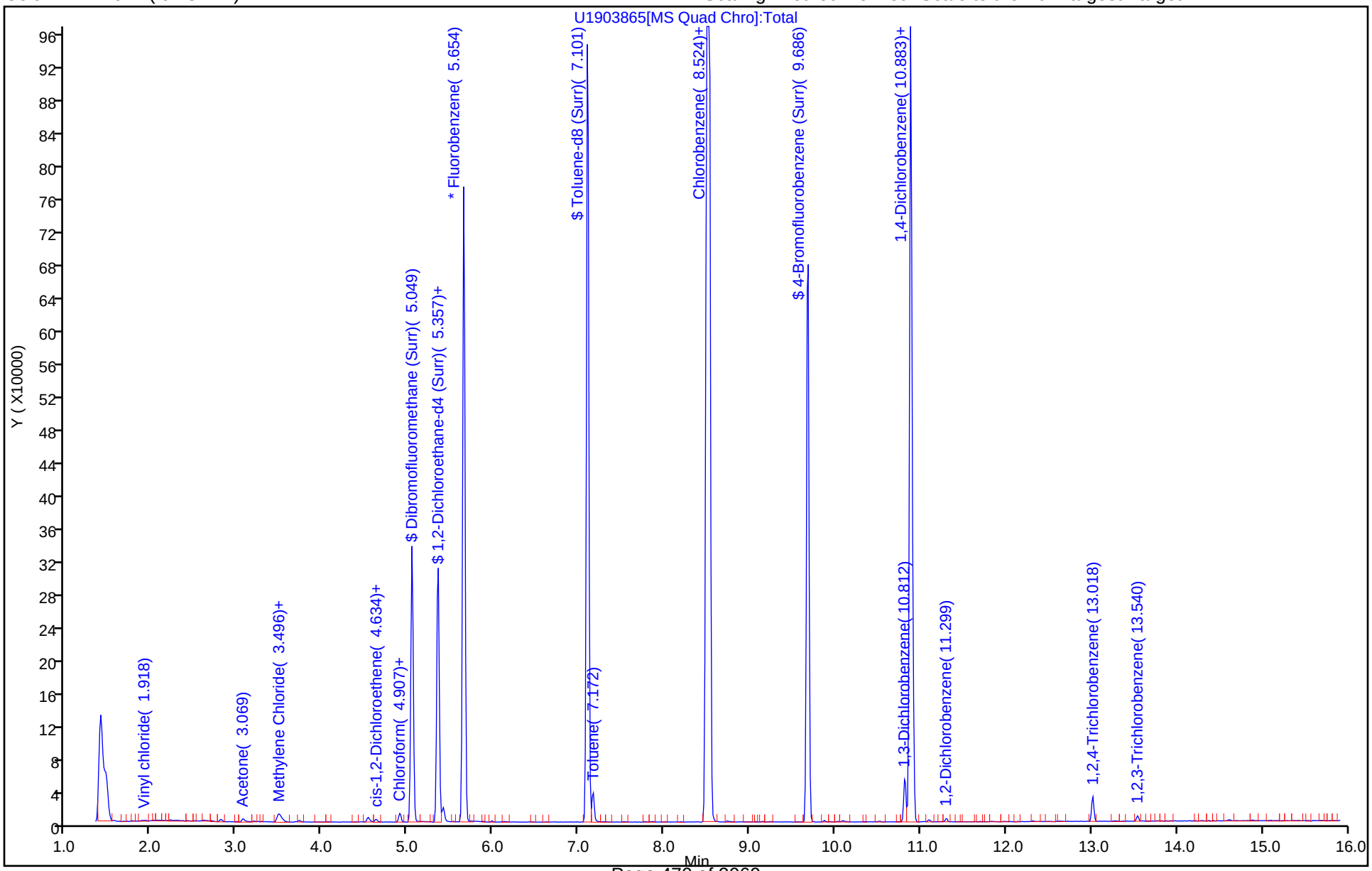
Report Date: 16-Nov-2018 14:19:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903865.d

Injection Date:	16-Nov-2018 04:44:27	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	240-104089-B-3	Lab Sample ID:	240-104089-3	Worklist Smp#:	27
Client ID:	WC-FTCB-DEVW				
Injection Vol:	5.0 mL	Dil. Factor:	2.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903865.d
Lims ID: 240-104089-B-3
Client ID: WC-FTCB-DEVW
Sample Type: Client
Inject. Date: 16-Nov-2018 04:44:27 ALS Bottle#: 0 Worklist Smp#: 27
Injection Vol: 5.0 mL Dil. Factor: 2.0000
Sample Info: 027
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 16-Nov-2018 13:59:42 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: laveyt Date: 16-Nov-2018 14:19:29

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	20.0	20.6	206.37
$ 5 1,2-Dichloroethane-d4 (Surr)	20.0	20.6	206.45
$ 6 Toluene-d8 (Surr)	20.0	19.6	196.26
$ 7 4-Bromofluorobenzene (Surr)	20.0	19.1	191.25

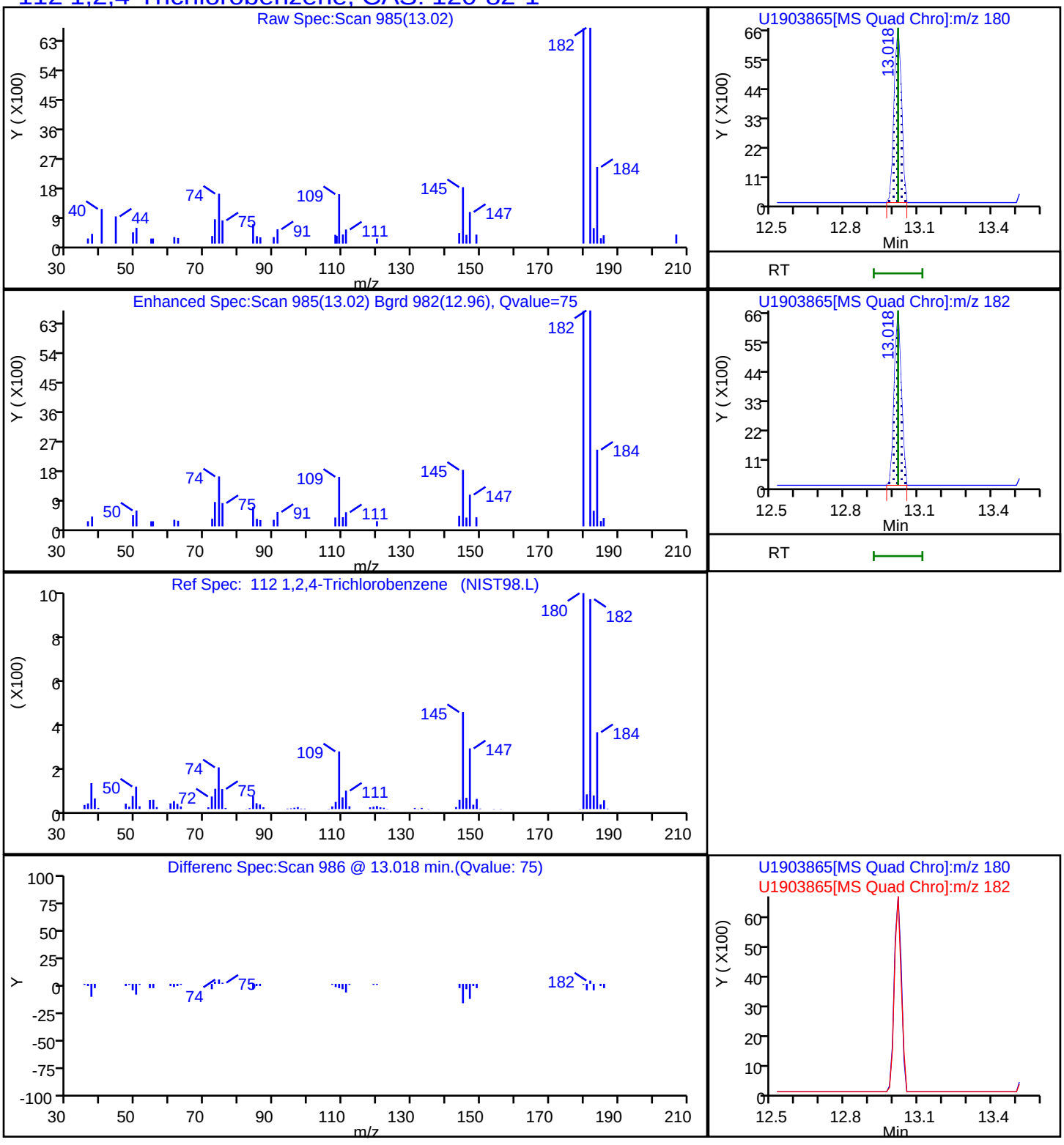
Report Date: 16-Nov-2018 14:19:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903865.d

Injection Date:	16-Nov-2018 04:44:27	Instrument ID:	A3UX19		
Lims ID:	240-104089-B-3	Lab Sample ID:	240-104089-3		
Client ID:	WC-FTCB-DEVW				
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	27
Injection Vol:	5.0 mL	Dil. Factor:	2.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

112 1,2,4-Trichlorobenzene, CAS: 120-82-1



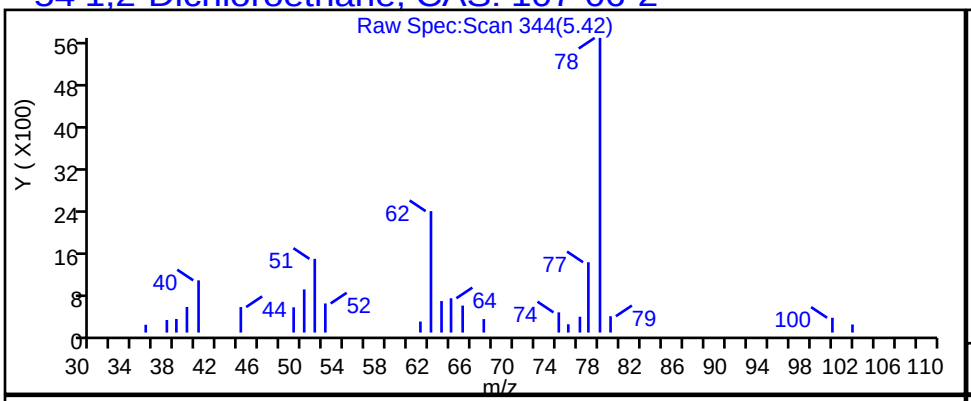
Report Date: 16-Nov-2018 14:19:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

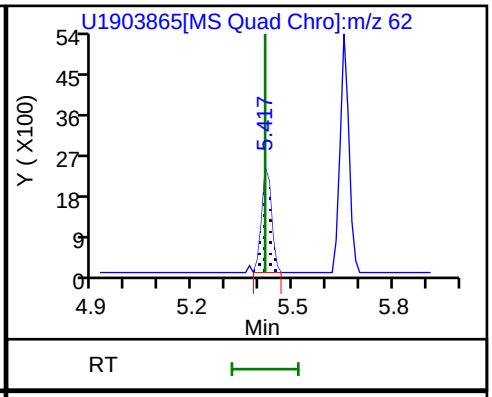
TestAmerica Canton

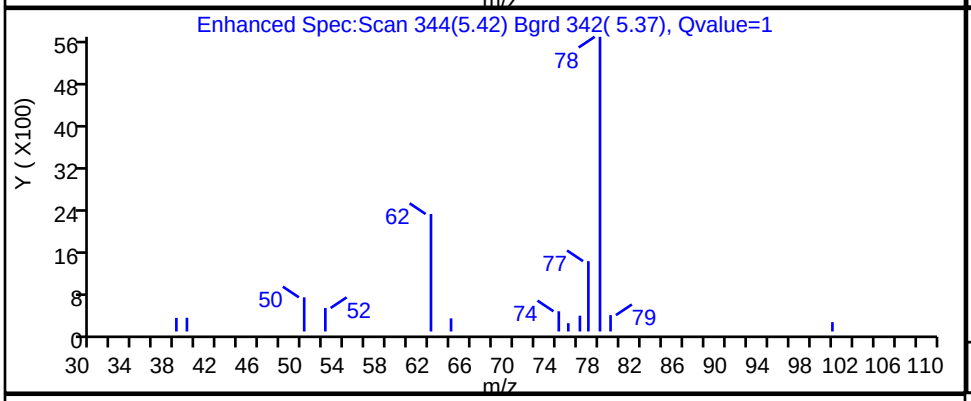
Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903865.d

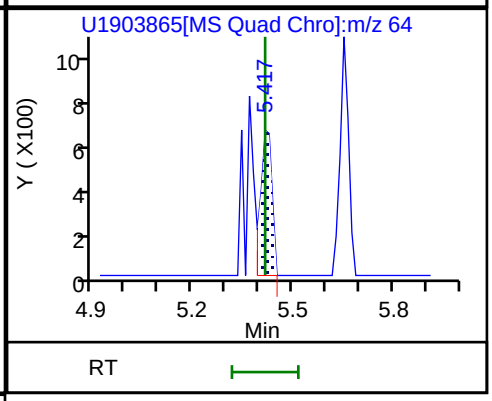
Injection Date:	16-Nov-2018 04:44:27	Instrument ID:	A3UX19		
Lims ID:	240-104089-B-3	Lab Sample ID:	240-104089-3		
Client ID:	WC-FTCB-DEVW				
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	27
Injection Vol:	5.0 mL	Dil. Factor:	2.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

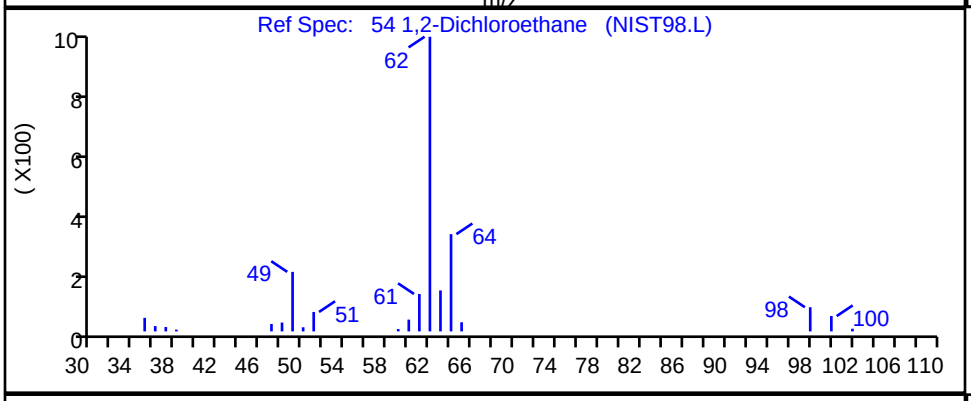
54 1,2-Dichloroethane, CAS: 107-06-2

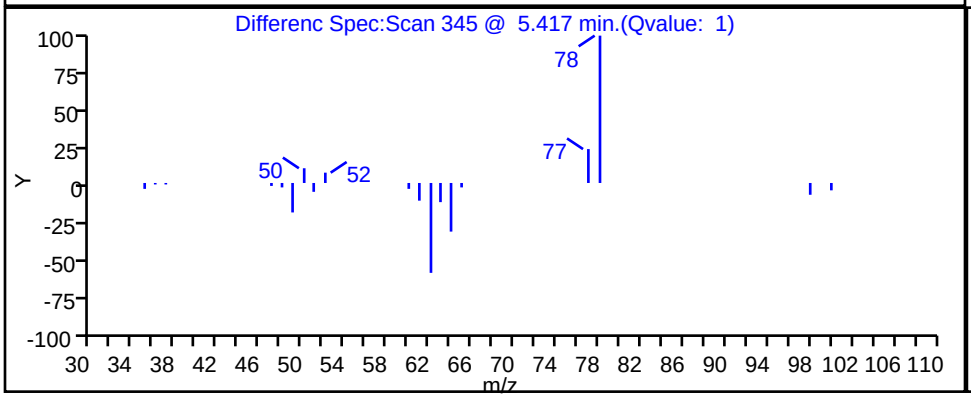


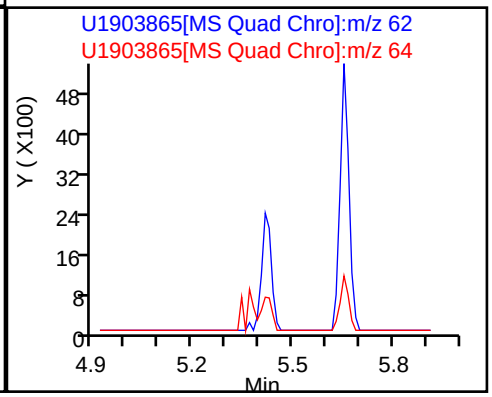












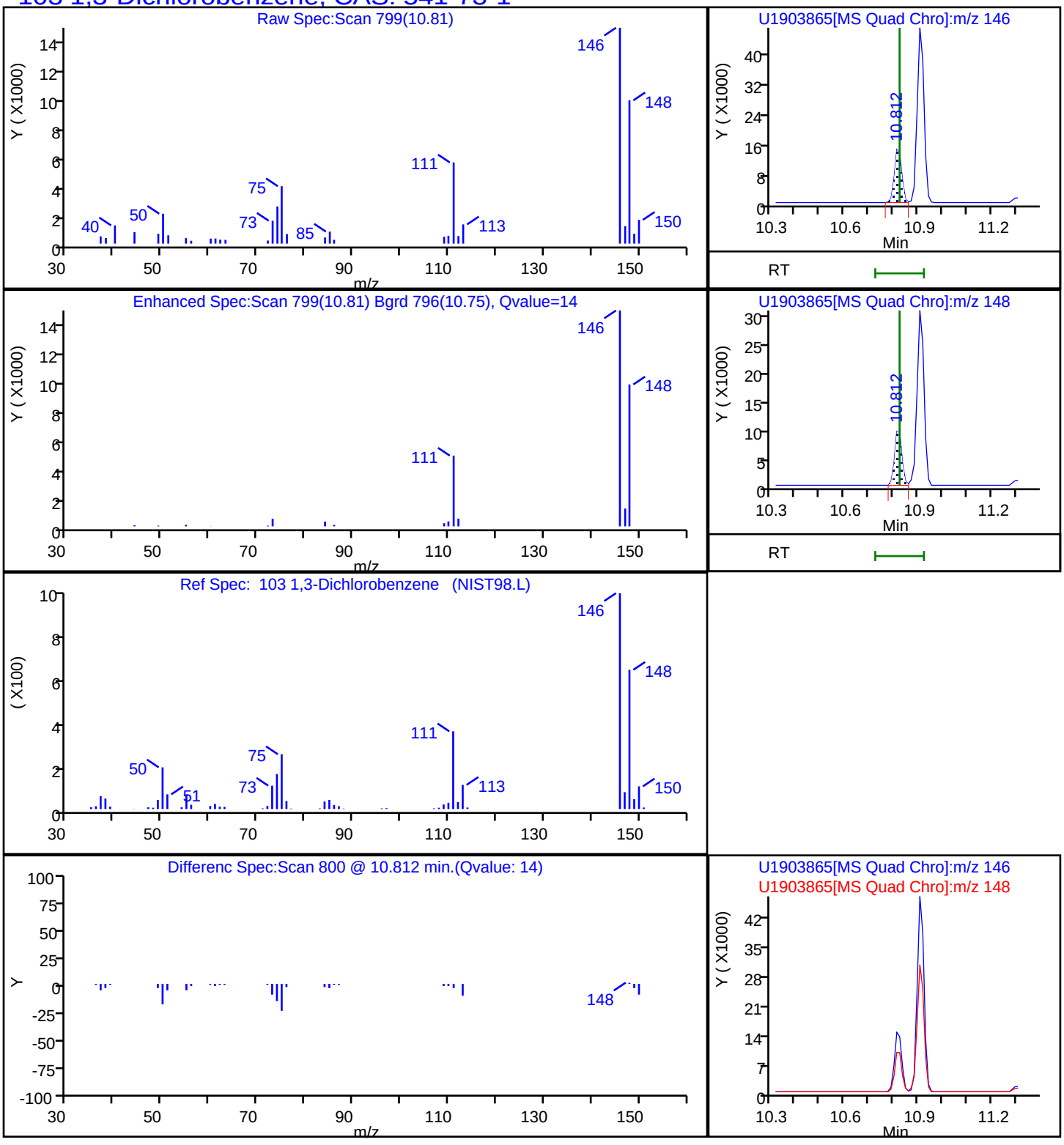
Report Date: 16-Nov-2018 14:19:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903865.d

Injection Date:	16-Nov-2018 04:44:27	Instrument ID:	A3UX19		
Lims ID:	240-104089-B-3	Lab Sample ID:	240-104089-3		
Client ID:	WC-FTCB-DEVW				
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	27
Injection Vol:	5.0 mL	Dil. Factor:	2.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

103 1,3-Dichlorobenzene, CAS: 541-73-1



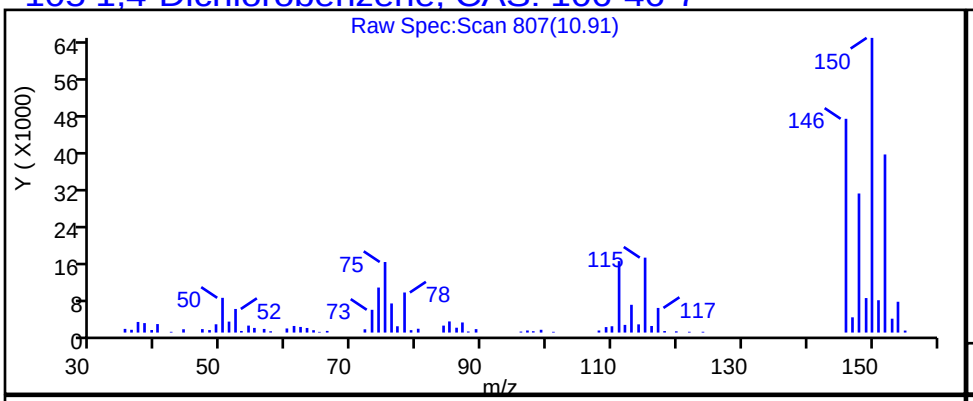
Report Date: 16-Nov-2018 14:19:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

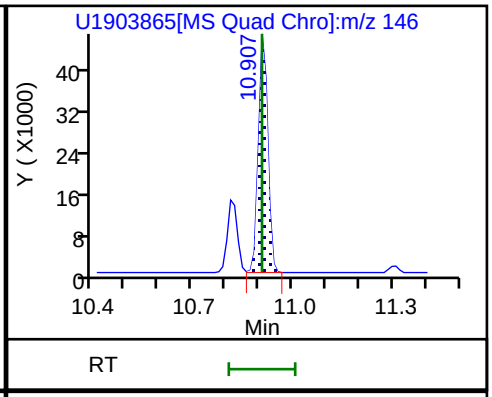
TestAmerica Canton

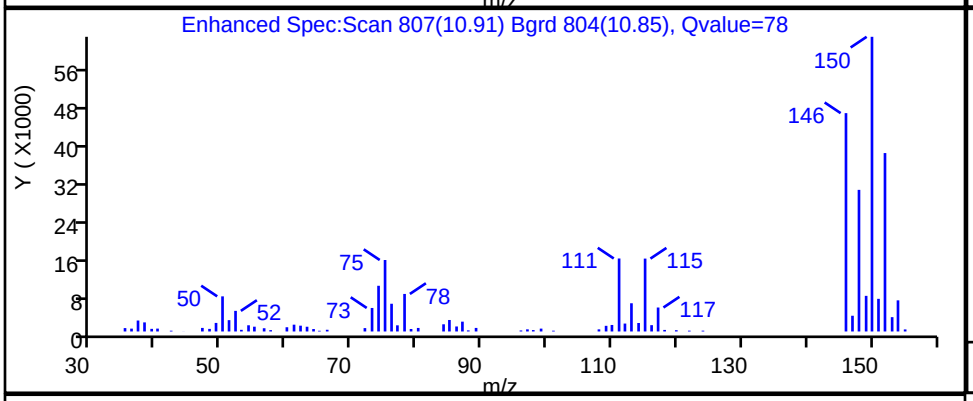
Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903865.d

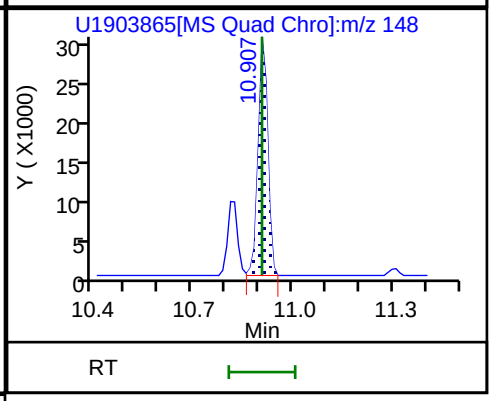
Injection Date:	16-Nov-2018 04:44:27	Instrument ID:	A3UX19		
Lims ID:	240-104089-B-3	Lab Sample ID:	240-104089-3		
Client ID:	WC-FTCB-DEVW				
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	27
Injection Vol:	5.0 mL	Dil. Factor:	2.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

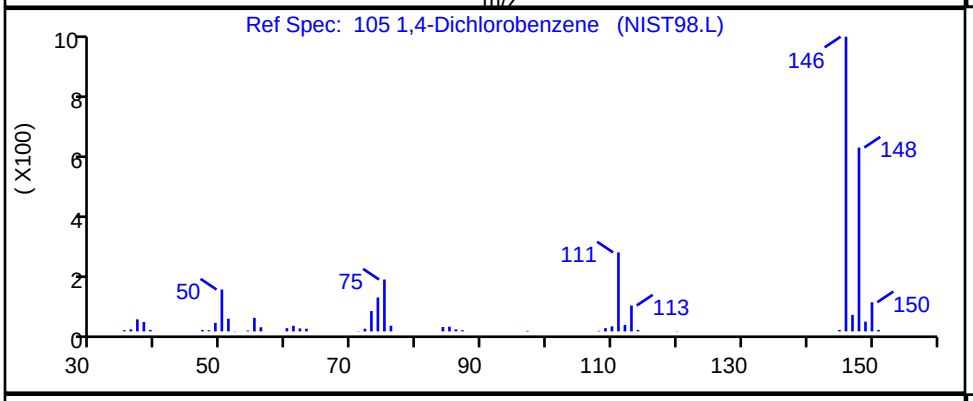
105 1,4-Dichlorobenzene, CAS: 106-46-7

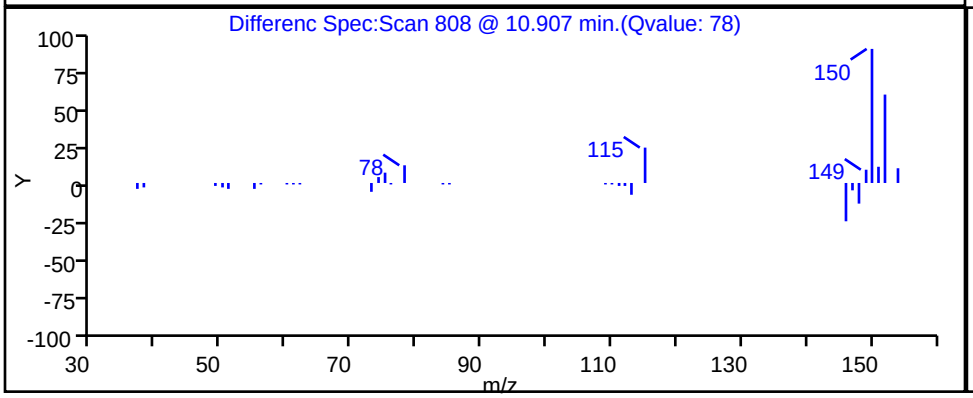


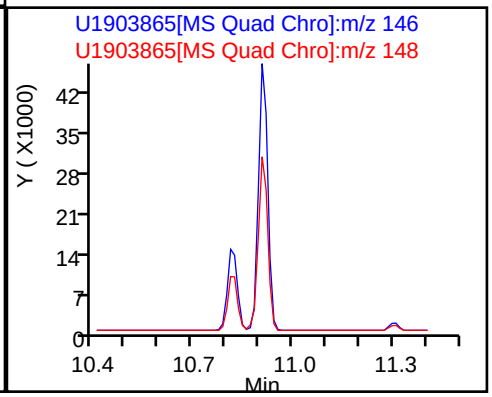












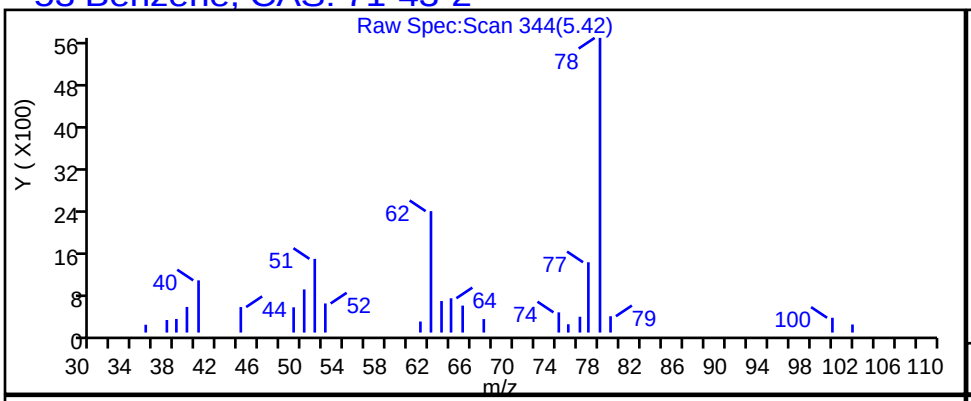
Report Date: 16-Nov-2018 14:19:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

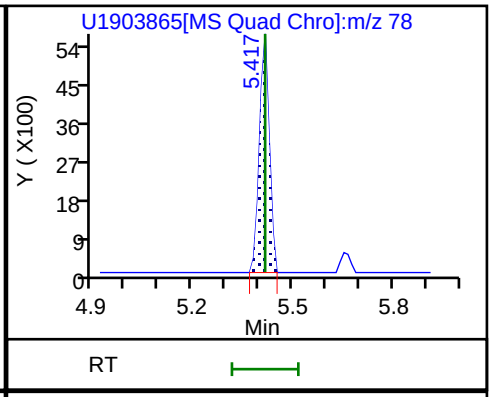
TestAmerica Canton

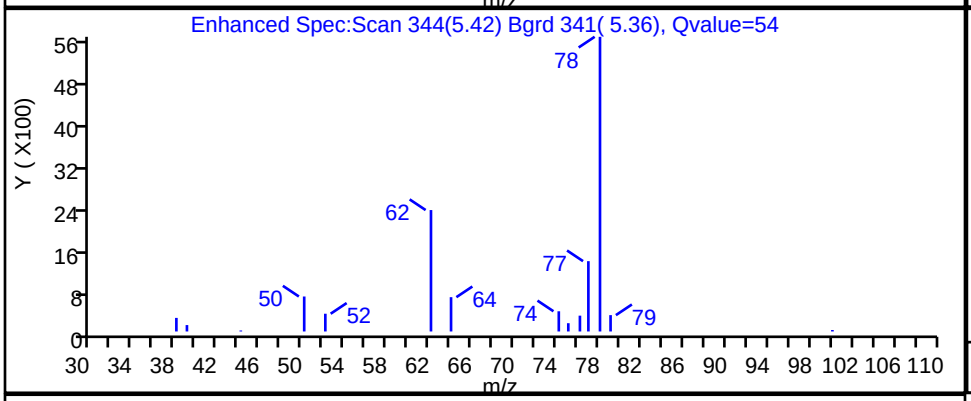
Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903865.d

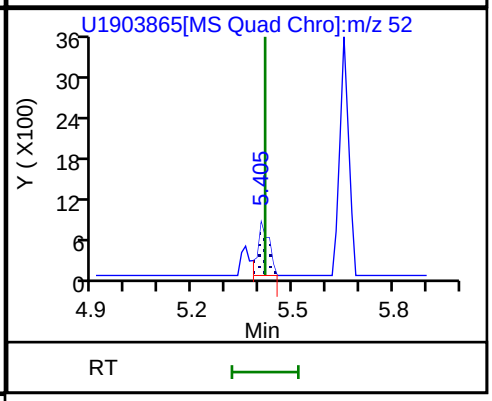
Injection Date:	16-Nov-2018 04:44:27	Instrument ID:	A3UX19		
Lims ID:	240-104089-B-3	Lab Sample ID:	240-104089-3		
Client ID:	WC-FTCB-DEVW				
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	27
Injection Vol:	5.0 mL	Dil. Factor:	2.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

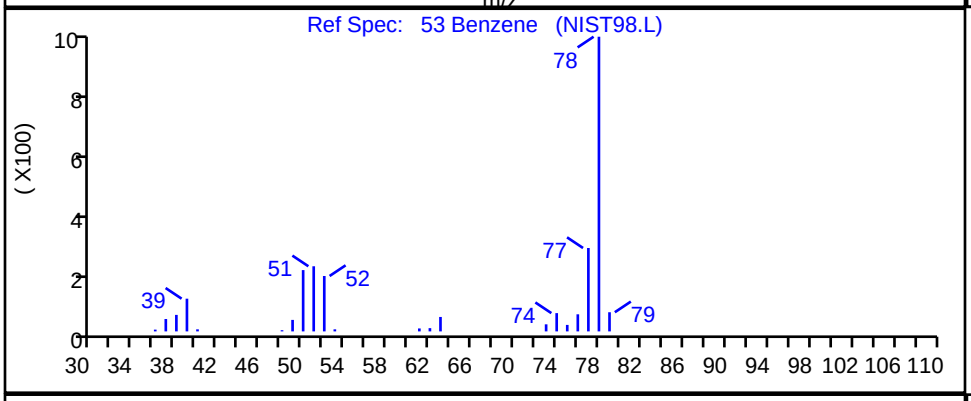
53 Benzene, CAS: 71-43-2

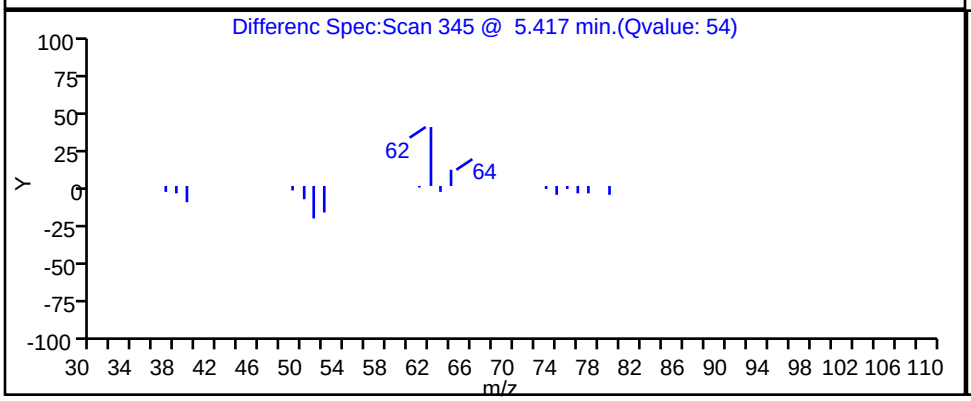


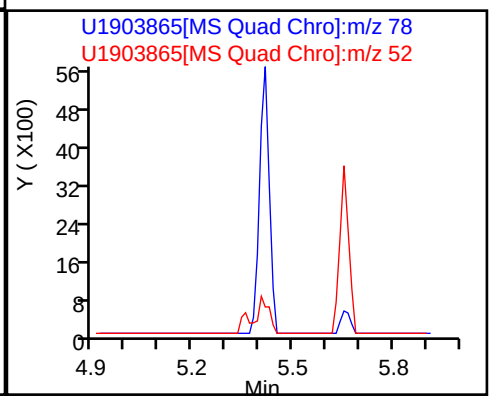












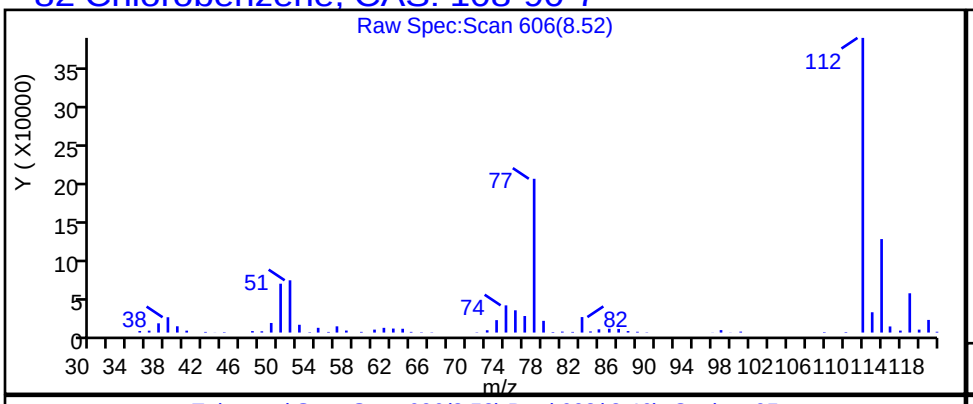
Report Date: 16-Nov-2018 14:19:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

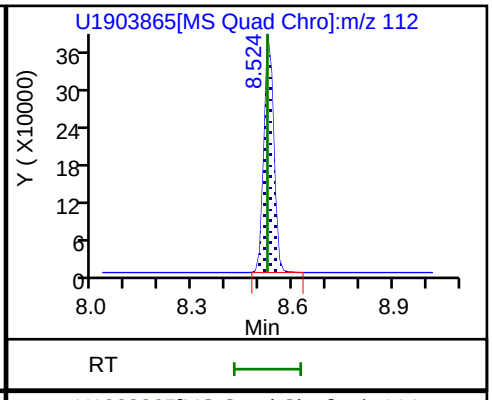
TestAmerica Canton

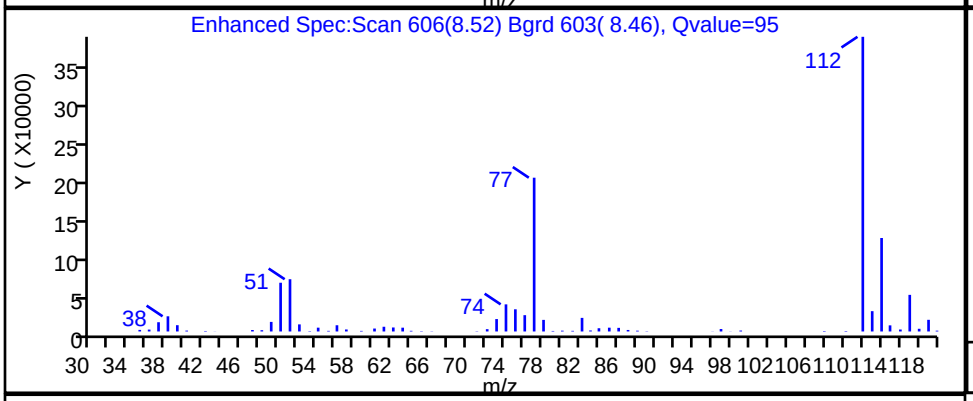
Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903865.d

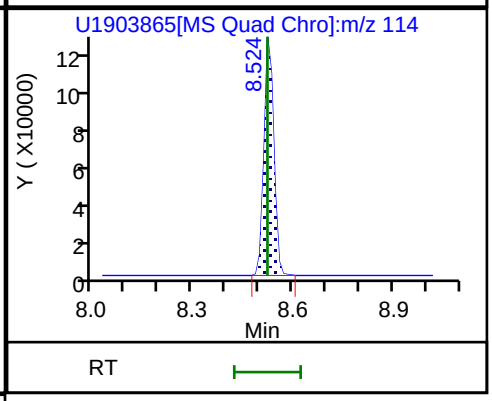
Injection Date:	16-Nov-2018 04:44:27	Instrument ID:	A3UX19		
Lims ID:	240-104089-B-3	Lab Sample ID:	240-104089-3		
Client ID:	WC-FTCB-DEVW				
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	27
Injection Vol:	5.0 mL	Dil. Factor:	2.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

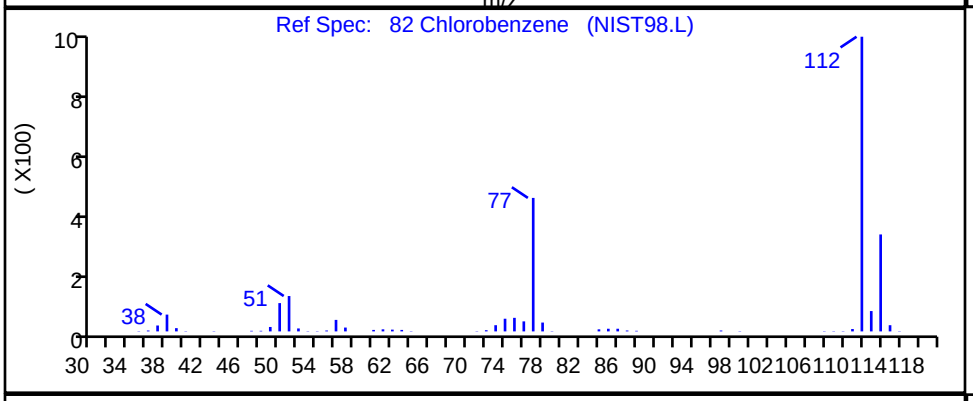
82 Chlorobenzene, CAS: 108-90-7

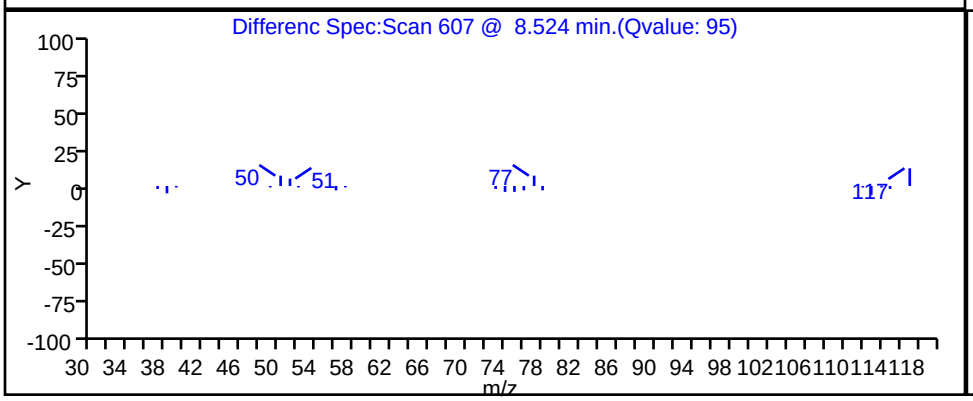


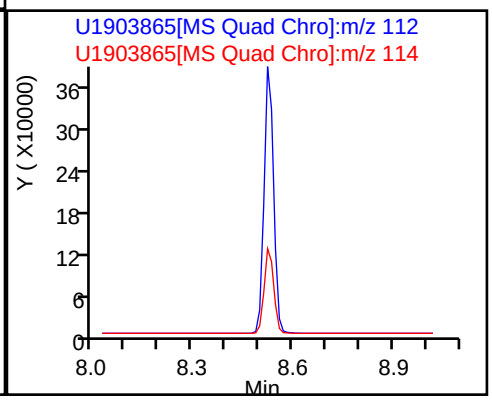












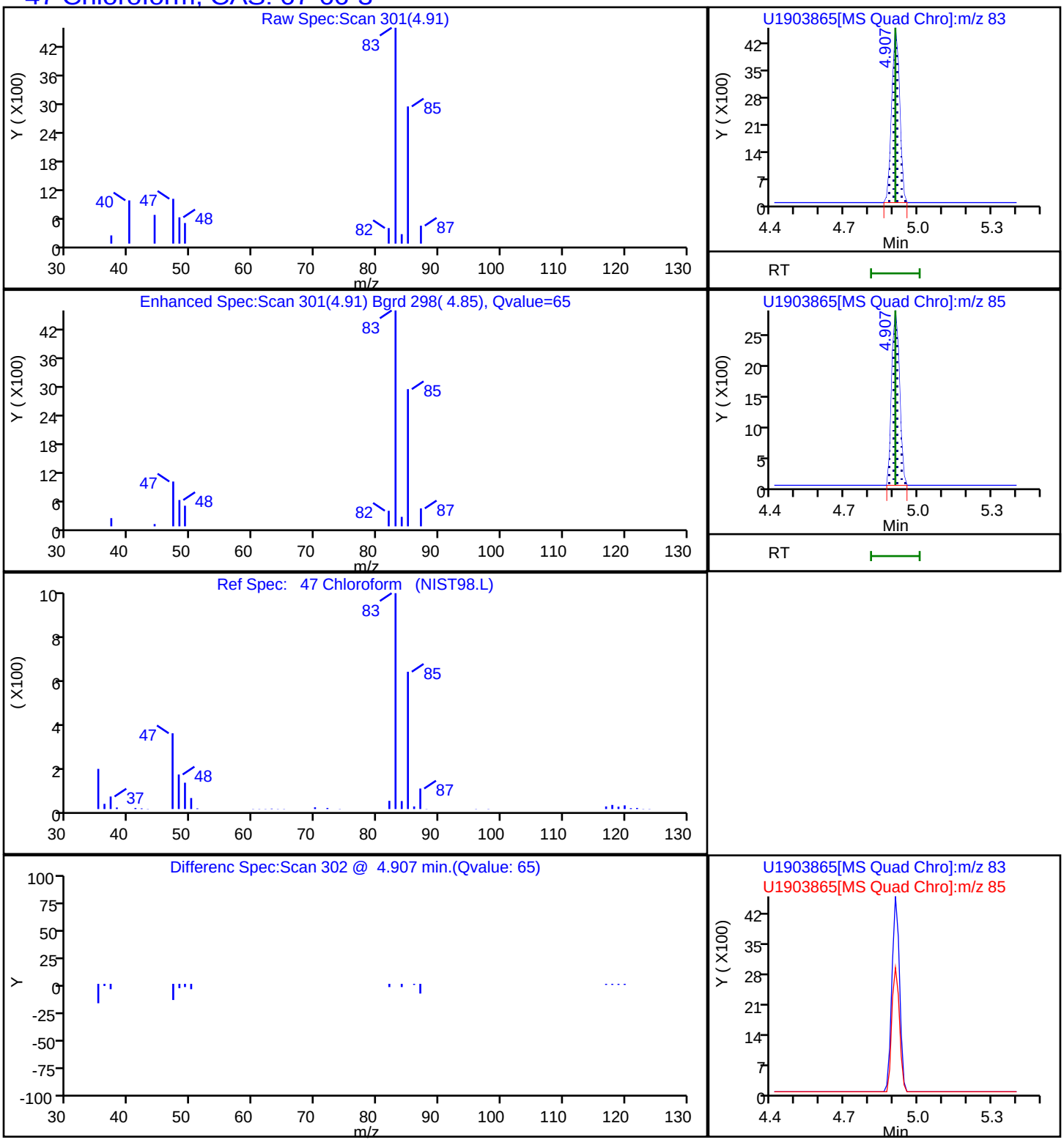
Report Date: 16-Nov-2018 14:19:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903865.d

Injection Date:	16-Nov-2018 04:44:27	Instrument ID:	A3UX19		
Lims ID:	240-104089-B-3	Lab Sample ID:	240-104089-3		
Client ID:	WC-FTCB-DEVW				
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	27
Injection Vol:	5.0 mL	Dil. Factor:	2.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

47 Chloroform, CAS: 67-66-3



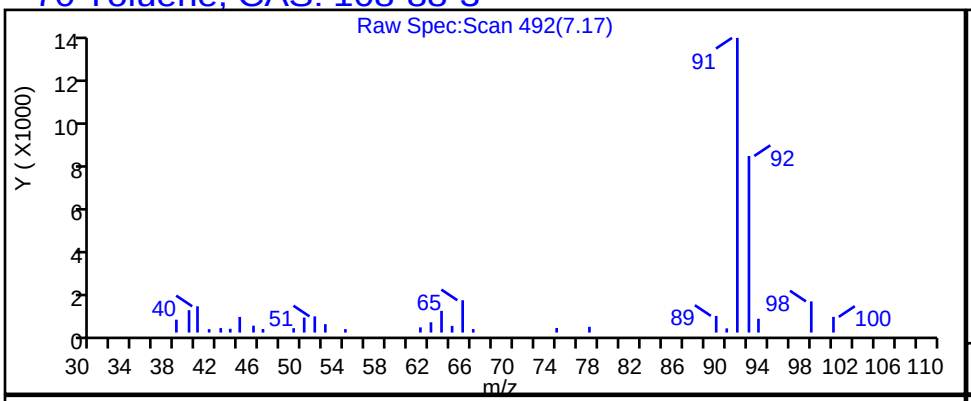
Report Date: 16-Nov-2018 14:19:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

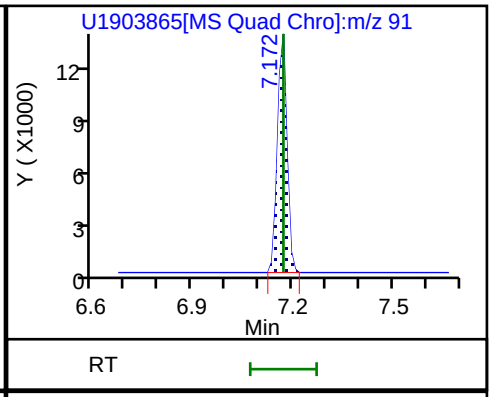
TestAmerica Canton

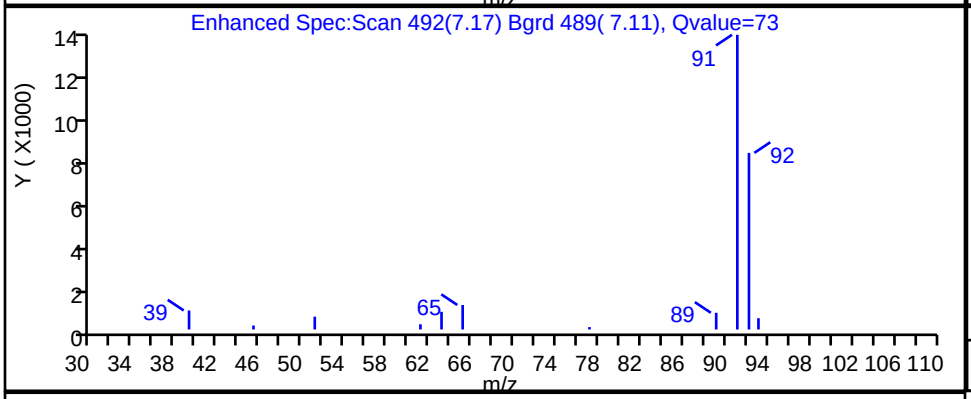
Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903865.d

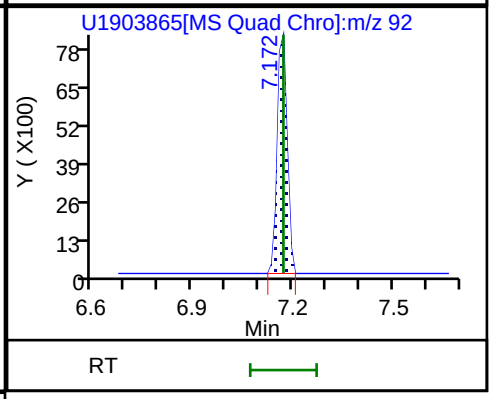
Injection Date:	16-Nov-2018 04:44:27	Instrument ID:	A3UX19
Lims ID:	240-104089-B-3	Lab Sample ID:	240-104089-3
Client ID:	WC-FTCB-DEVW		
Operator ID:	001904	ALS Bottle#:	0 Worklist Smp#: 27
Injection Vol:	5.0 mL	Dil. Factor:	2.0000
Method:	8260_19	Limit Group:	MSV 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

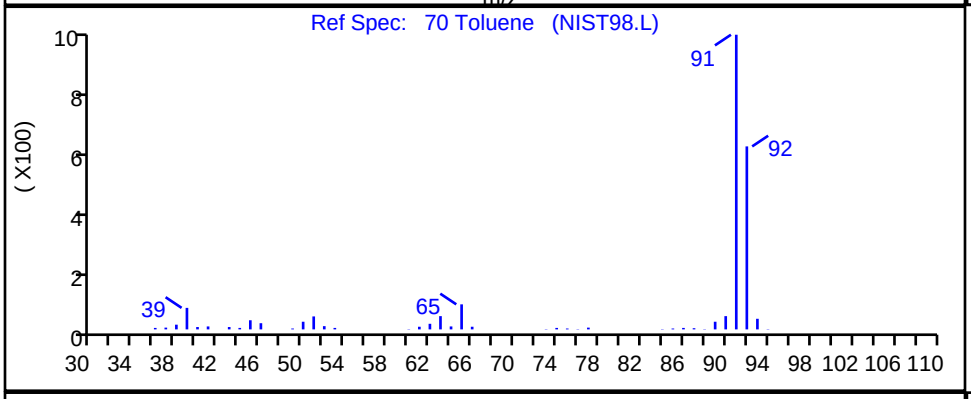
70 Toluene, CAS: 108-88-3

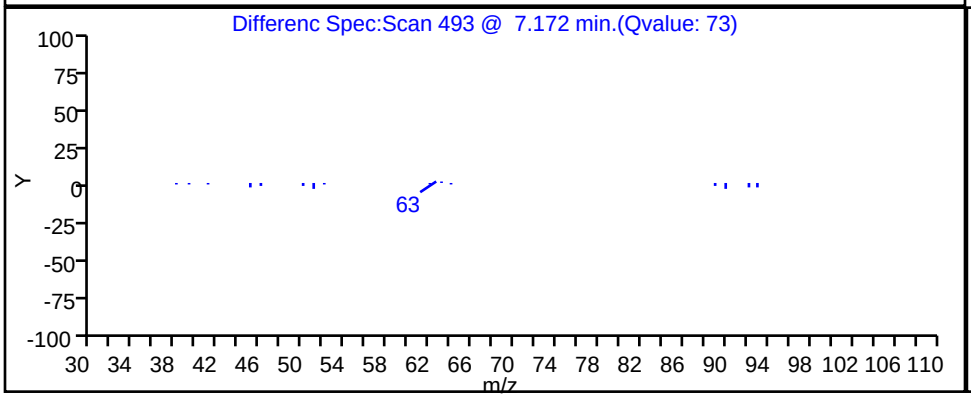


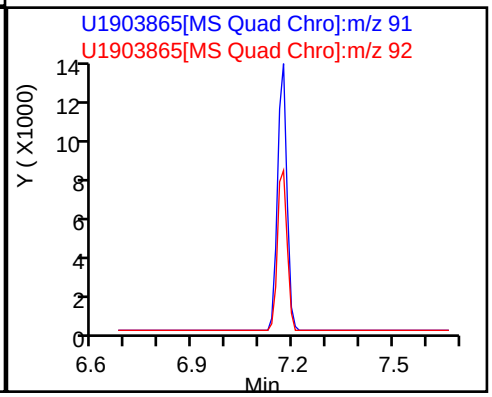












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-SOIL | Lab Sample ID: 240-104089-4

Matrix: Solid | Lab File ID: 1416890.D

Analysis Method: 8260C | Date Collected: 11/07/2018 10:15

Sample wt/vol: 5.3471(g) | Date Analyzed: 11/19/2018 18:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.6 | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.3	U	5.6	3.3
71-55-6	1,1,1-Trichloroethane	0.92	U	5.6	0.92
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U	5.6	1.6
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.4	U	5.6	1.4
75-34-3	1,1-Dichloroethane	0.78	U	5.6	0.78
75-35-4	1,1-Dichloroethene	1.0	U	5.6	1.0
563-58-6	1,1-Dichloropropene	1.1	U	5.6	1.1
87-61-6	1,2,3-Trichlorobenzene	0.68	J	5.6	0.64
96-18-4	1,2,3-Trichloropropane	1.8	U	5.6	1.8
526-73-8	1,2,3-Trimethylbenzene	2.0	U	5.6	2.0
120-82-1	1,2,4-Trichlorobenzene	2.6	J	5.6	0.64
95-63-6	1,2,4-Trimethylbenzene	1.1	U	5.6	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	4.0	U	11	4.0
95-50-1	1,2-Dichlorobenzene	1.2	U	5.6	1.2
107-06-2	1,2-Dichloroethane	0.87	U	5.6	0.87
78-87-5	1,2-Dichloropropane	0.95	U	5.6	0.95
541-73-1	1,3-Dichlorobenzene	0.91	U	5.6	0.91
142-28-9	1,3-Dichloropropane	1.1	U	5.6	1.1
106-46-7	1,4-Dichlorobenzene	0.99	U	5.6	0.99
594-20-7	2,2-Dichloropropane	1.3	U	5.6	1.3
78-93-3	2-Butanone (MEK)	4.0	U	22	4.0
110-75-8	2-Chloroethyl vinyl ether	10	U	56	10
95-49-8	2-Chlorotoluene	1.1	U	5.6	1.1
591-78-6	2-Hexanone	4.6	U	22	4.6
106-43-4	4-Chlorotoluene	0.97	U	5.6	0.97
99-87-6	p-Isopropyltoluene	3.3	U	5.6	3.3
108-10-1	4-Methyl-2-pentanone (MIBK)	4.2	U	22	4.2
67-64-1	Acetone	24	U	28	24
71-43-2	Benzene	0.78	U	5.6	0.78
108-86-1	Bromobenzene	1.3	U	5.6	1.3
75-25-2	Bromoform	2.7	U	5.6	2.7
74-83-9	Bromomethane	1.1	U	5.6	1.1
75-15-0	Carbon disulfide	1.3	U	5.6	1.3
56-23-5	Carbon tetrachloride	3.6	U	5.6	3.6
108-90-7	Chlorobenzene	1.0	U	5.6	1.0

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-SOIL | Lab Sample ID: 240-104089-4

Matrix: Solid | Lab File ID: 1416890.D

Analysis Method: 8260C | Date Collected: 11/07/2018 10:15

Sample wt/vol: 5.3471(g) | Date Analyzed: 11/19/2018 18:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.6 | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	3.1	U	5.6	3.1
75-00-3	Chloroethane	1.4	U	5.6	1.4
67-66-3	Chloroform	0.88	U	5.6	0.88
74-87-3	Chloromethane	1.2	U	5.6	1.2
156-59-2	cis-1,2-Dichloroethene	0.73	U	5.6	0.73
10061-01-5	cis-1,3-Dichloropropene	1.6	U	5.6	1.6
74-95-3	Dibromomethane	0.75	U	5.6	0.75
74-97-5	Bromochloromethane	0.67	U	5.6	0.67
75-71-8	Dichlorodifluoromethane	1.1	U	5.6	1.1
75-27-4	Bromodichloromethane	0.76	U	5.6	0.76
75-65-0	tert-Butyl alcohol (TBA)	19	U	220	19
100-41-4	Ethylbenzene	1.2	U	5.6	1.2
87-68-3	Hexachlorobutadiene	4.2	U	5.6	4.2
108-20-3	Diisopropyl ether	0.85	U	11	0.85
98-82-8	Isopropylbenzene	0.93	U	5.6	0.93
1634-04-4	Methyl tert-butyl ether	0.92	U	5.6	0.92
75-09-2	Methylene Chloride	13	U	28	13
179601-23-1	m-Xylene & p-Xylene	0.88	U	11	0.88
91-20-3	Naphthalene	3.0	U	5.6	3.0
104-51-8	n-Butylbenzene	3.9	U	5.6	3.9
103-65-1	N-Propylbenzene	0.82	U	5.6	0.82
95-47-6	o-Xylene	0.97	U	5.6	0.97
135-98-8	sec-Butylbenzene	0.97	U	5.6	0.97
100-42-5	Styrene	1.3	U	5.6	1.3
994-05-8	Tert-amyl methyl ether	2.5	U	5.6	2.5
637-92-3	Ethyl t-butyl ether	2.5	U	5.6	2.5
127-18-4	Tetrachloroethene	0.82	U	5.6	0.82
108-88-3	Toluene	0.87	U	5.6	0.87
156-60-5	trans-1,2-Dichloroethene	0.52	U	5.6	0.52
10061-02-6	trans-1,3-Dichloropropene	1.2	U	5.6	1.2
79-01-6	Trichloroethene	0.71	U	5.6	0.71
75-69-4	Trichlorofluoromethane	1.2	U	5.6	1.2
108-05-4	Vinyl acetate	2.4	U	11	2.4
75-01-4	Vinyl chloride	0.94	U	5.6	0.94
1330-20-7	Xylenes, Total	1.8	U	11	1.8
98-06-6	tert-Butylbenzene	1.0	U	5.6	1.0

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-SOIL | Lab Sample ID: 240-104089-4

Matrix: Solid | Lab File ID: 1416890.D

Analysis Method: 8260C | Date Collected: 11/07/2018 10:15

Sample wt/vol: 5.3471(g) | Date Analyzed: 11/19/2018 18:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.6 | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
106-93-4	1,2-Dibromoethane	0.86	U	5.6	0.86

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	95		62-135
1868-53-7	Dibromofluoromethane (Surr)	74		49-132
460-00-4	4-Bromofluorobenzene (Surr)	98		49-141
17060-07-0	1,2-Dichloroethane-d4 (Surr)	80		48-123

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416890.D
Lims ID: 240-104089-B-4-A
Client ID: WC-FTCB-SOIL
Sample Type: Client
Inject. Date: 19-Nov-2018 18:04:30 ALS Bottle#: 25 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-104089-b-4-a
Misc. Info.: 240-0082085-026
Operator ID: 002808 Instrument ID: A3UX14

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 20-Nov-2018 09:20:55

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	6.315	6.315	0.000	100	1041070	50.0	
*	2 Chlorobenzene-d5	117	9.285	9.285	0.000	97	669879	50.0	
*	3 1,4-Dichlorobenzene-d4	152	11.284	11.285	-0.001	98	268999	50.0	
$	4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	92	203678	36.9	
$	5 1,2-Dichloroethane-d4 (Sur	65	5.912	5.924	-0.012	93	249250	40.0	
$	6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	94	922171	47.5	
$	7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	291778	48.8	
	9 Dichlorodifluoromethane	85		1.061				ND	
	10 Chloromethane	50		1.191				ND	
	11 Vinyl chloride	62		1.286				ND	U
	13 Bromomethane	94		1.522				ND	
	15 Chloroethane	64		1.605				ND	
	17 Trichlorofluoromethane	101		1.806				ND	
	21 1,1-Dichloroethene	96		2.268				ND	
	22 1,1,2-Trichloro-1,2,2-trif	151		2.292				ND	
	24 Acetone	43	2.374	2.374	0.000	99	4949	2.55	
	26 Carbon disulfide	76		2.457				ND	
	30 Methylene Chloride	84		2.824				ND	
	31 2-Methyl-2-propanol	59		3.061				ND	
	32 trans-1,2-Dichloroethene	96		3.132				ND	
	33 Methyl tert-butyl ether	73		3.155				ND	
	36 1,1-Dichloroethane	63		3.735				ND	
	38 Isopropyl ether	87		3.877				ND	
	39 Vinyl acetate	86		3.889				ND	
	40 Tert-butyl ethyl ether	59		4.504				ND	
	41 2,2-Dichloropropane	97		4.682				ND	
	42 cis-1,2-Dichloroethene	96		4.717				ND	
	43 2-Butanone (MEK)	43		4.824				ND	U
	46 Chlorobromomethane	128		5.108				ND	
	49 Chloroform	83		5.273				ND	
	50 1,1,1-Trichloroethane	97		5.451				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
52 Carbon tetrachloride	117		5.652				ND	
53 1,1-Dichloropropene	75		5.676				ND	
54 Benzene	78		5.948				ND	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	90	1590	0.2177	
57 Tert-amyl methyl ether	73		6.137				ND	
59 Trichloroethene	130		6.729				ND	
63 1,2-Dichloropropane	63		6.977				ND	
65 Dibromomethane	93		7.108				ND	
68 Dichlorobromomethane	83		7.297				ND	
70 2-Chloroethyl vinyl ether	63		7.640				ND	
71 cis-1,3-Dichloropropene	75		7.747				ND	
73 4-Methyl-2-pentanone (MIBK	43		7.924				ND	
74 Toluene	91	8.030	8.031	-0.001	93	2493	0.1172	
75 trans-1,3-Dichloropropene	75		8.291				ND	
78 Tetrachloroethene	164		8.528				ND	
79 1,3-Dichloropropane	76		8.587				ND	
80 2-Hexanone	43		8.693				ND	
82 Chlorodibromomethane	129		8.788				ND	
83 Ethylene Dibromide	107		8.871				ND	
85 Chlorobenzene	112	9.308	9.308	0.000	93	1877	0.1363	
86 1,1,1,2-Tetrachloroethane	131		9.391				ND	
87 Ethylbenzene	106	9.403	9.415	-0.012	1	230	0.0319	7a
88 m-Xylene & p-Xylene	106		9.510				ND	
89 o-Xylene	106		9.853				ND	
90 Styrene	104		9.876				ND	
91 Bromoform	173		10.030				ND	
92 Isopropylbenzene	105		10.172				ND	
94 Bromobenzene	156		10.421				ND	
95 1,1,2,2-Tetrachloroethane	83		10.456				ND	
96 1,2,3-Trichloropropane	110		10.492				ND	
98 N-Propylbenzene	120		10.527				ND	
99 2-Chlorotoluene	126		10.586				ND	
101 4-Chlorotoluene	126		10.693				ND	
103 tert-Butylbenzene	119		10.953				ND	
105 1,2,4-Trimethylbenzene	105		10.989				ND	
107 sec-Butylbenzene	105		11.131				ND	
108 1,3-Dichlorobenzene	146		11.225				ND	Ua
109 4-Isopropyltoluene	119		11.261				ND	
110 1,4-Dichlorobenzene	146		11.296				ND	
111 1,2,3-Trimethylbenzene	105		11.344				ND	
113 n-Butylbenzene	91		11.604				ND	
114 1,2-Dichlorobenzene	146		11.616				ND	
115 1,2-Dibromo-3-Chloropropan	157		12.279				ND	
117 1,2,4-Trichlorobenzene	180	12.965	12.953	0.012	95	12880	2.32	
118 Hexachlorobutadiene	225		13.095				ND	
119 Naphthalene	128		13.166				ND	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	94	3177	0.6048	
S 134 Xylenes, Total	106		16.530				ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

VM250SS_00050	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00132	Amount Added:	0.00	Units:	Run Reagent
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00010	Amount Added:	0.00	Units:	Run Reagent

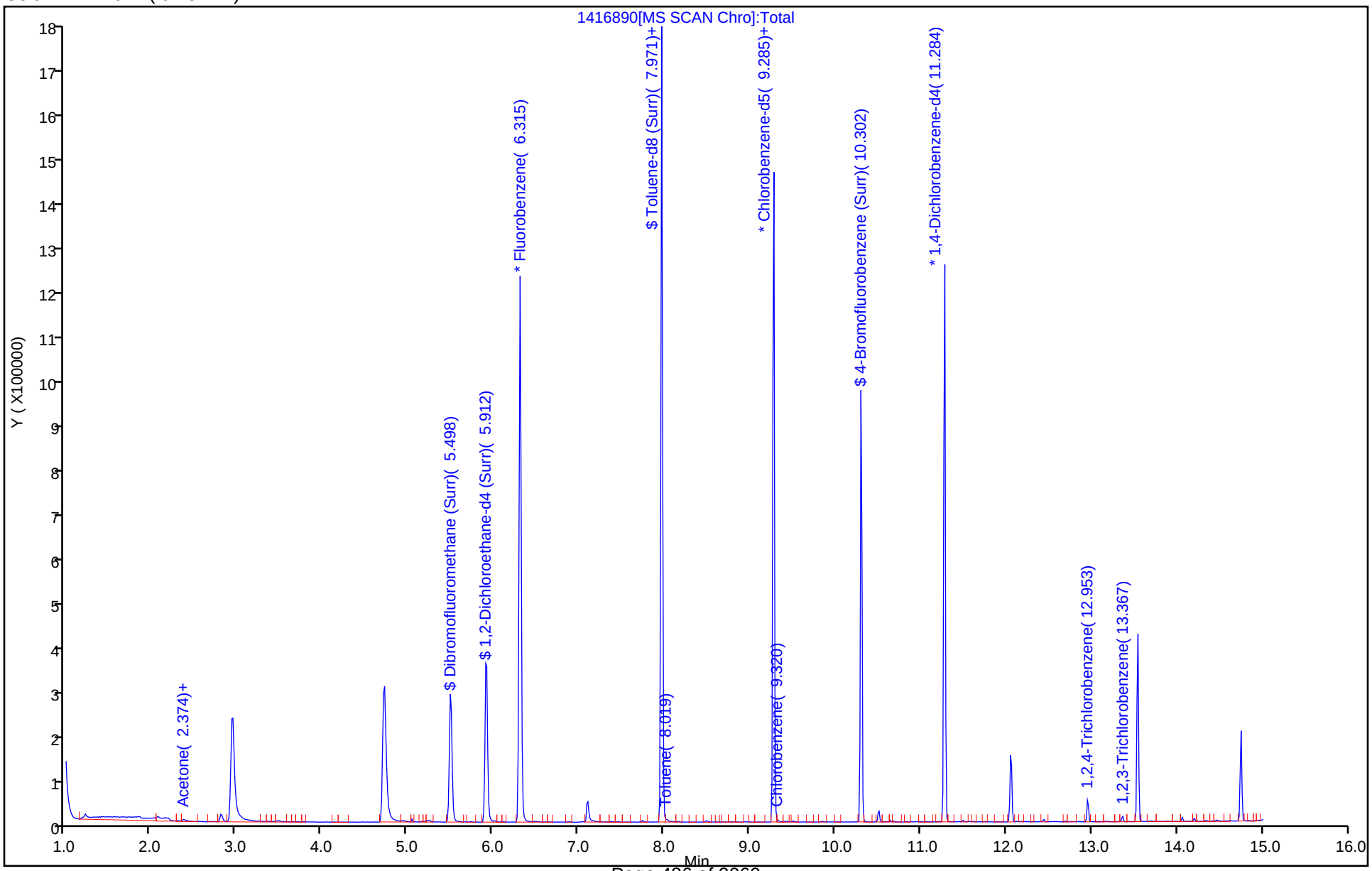
Report Date: 20-Nov-2018 09:44:38 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416890.D

Injection Date:	19-Nov-2018 18:04:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	240-104089-B-4-A	Lab Sample ID:	240-104089-4	Worklist Smp#:	26
Client ID:	WC-FTCB-SOIL				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416890.D
Lims ID: 240-104089-B-4-A
Client ID: WC-FTCB-SOIL
Sample Type: Client
Inject. Date: 19-Nov-2018 18:04:30 ALS Bottle#: 25 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-104089-b-4-a
Misc. Info.: 240-0082085-026
Operator ID: 002808 Instrument ID: A3UX14

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 20-Nov-2018 09:20:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	36.9	73.80
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	40.0	80.03
$ 6 Toluene-d8 (Surr)	50.0	47.5	94.97
$ 7 4-Bromofluorobenzene (Surr)	50.0	48.8	97.56

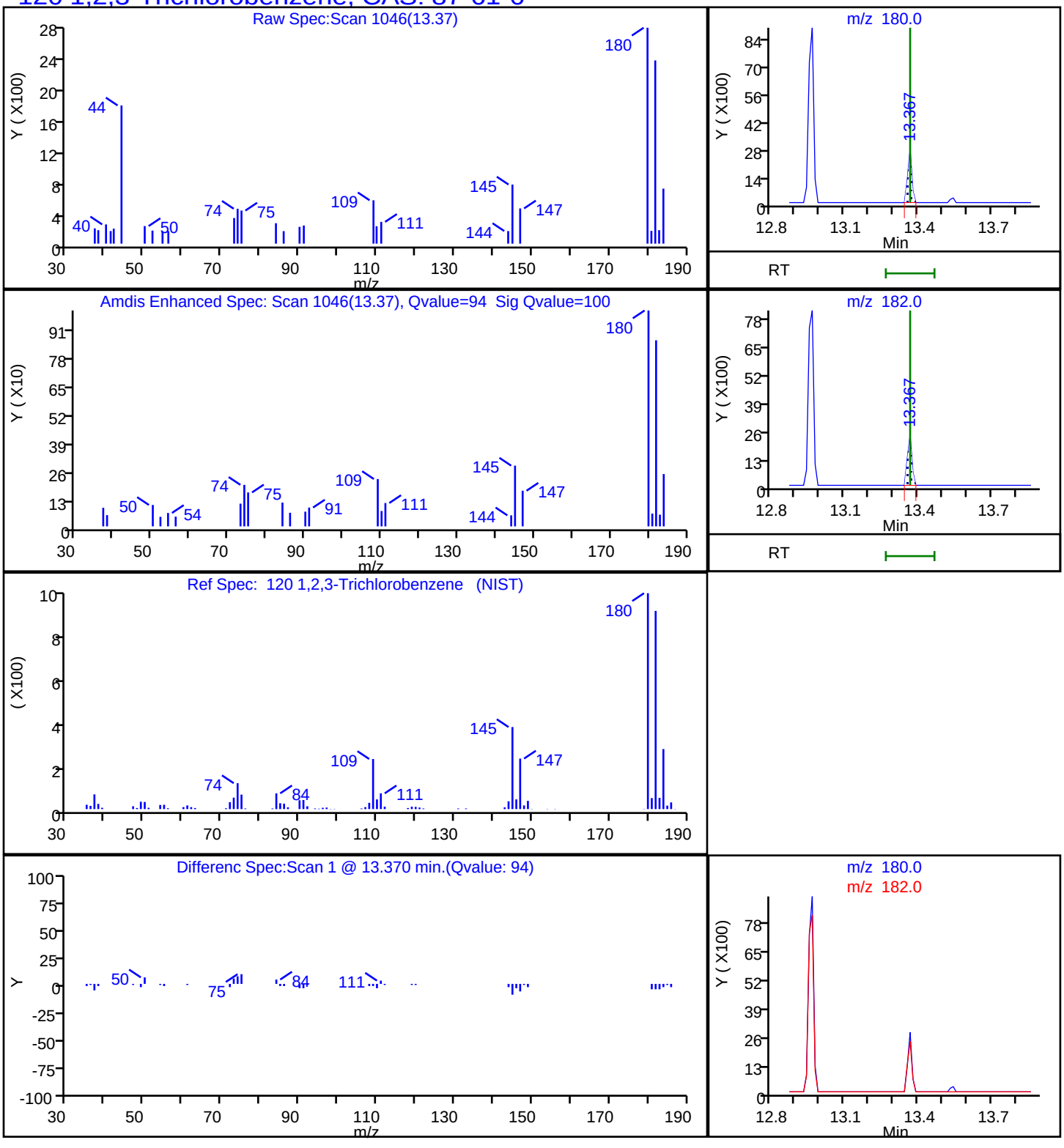
Report Date: 20-Nov-2018 09:44:39 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416890.D

Injection Date:	19-Nov-2018 18:04:30	Instrument ID:	A3UX14		
Lims ID:	240-104089-B-4-A	Lab Sample ID:	240-104089-4		
Client ID:	WC-FTCB-SOIL				
Operator ID:	002808	ALS Bottle#:	25	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_14	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

120 1,2,3-Trichlorobenzene, CAS: 87-61-6



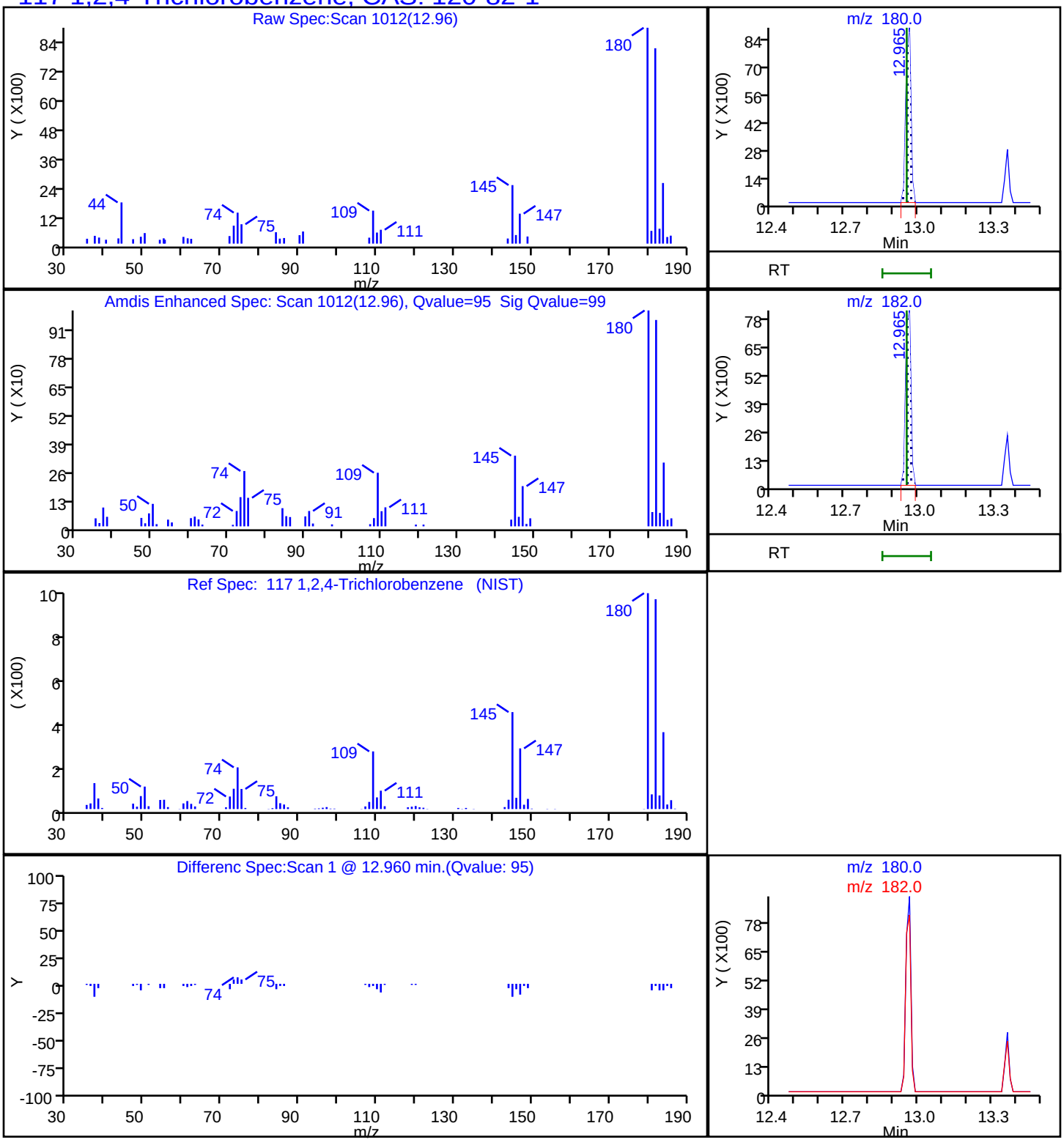
Report Date: 20-Nov-2018 09:44:39 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416890.D

Injection Date:	19-Nov-2018 18:04:30	Instrument ID:	A3UX14		
Lims ID:	240-104089-B-4-A	Lab Sample ID:	240-104089-4		
Client ID:	WC-FTCB-SOIL				
Operator ID:	002808	ALS Bottle#:	25	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_14	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

117 1,2,4-Trichlorobenzene, CAS: 120-82-1



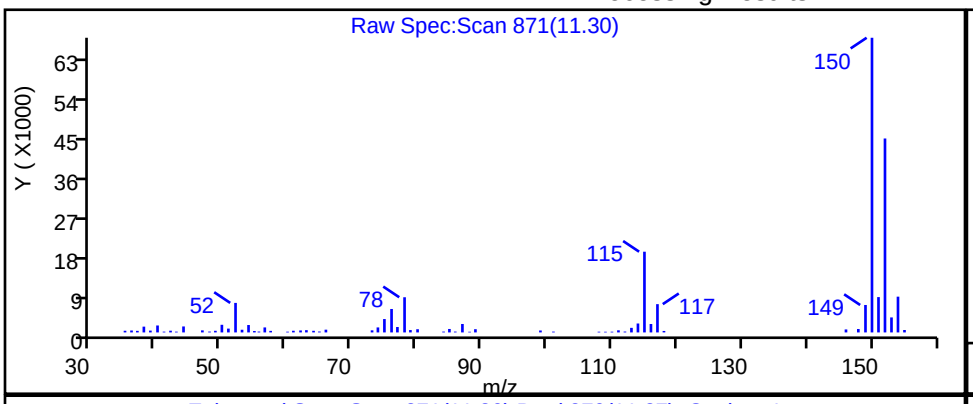
User Disabled Compound Report

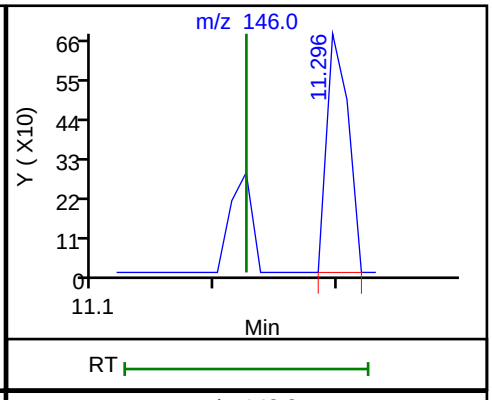
TestAmerica Canton

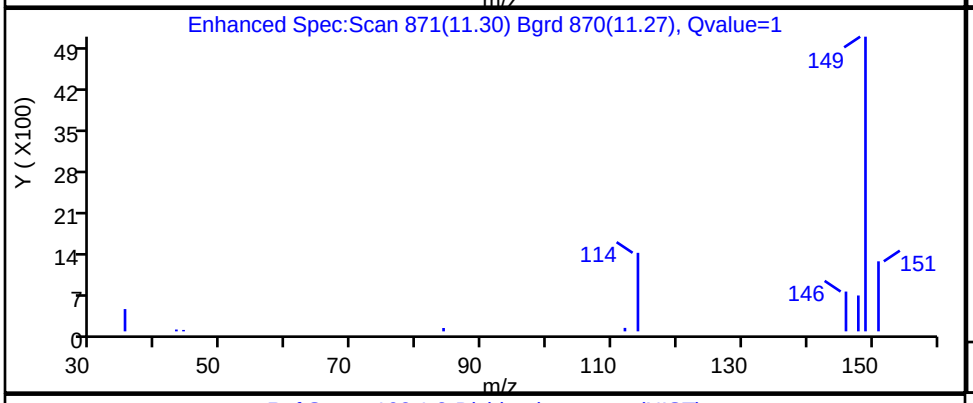
Data File:	\\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416890.D				
Injection Date:	19-Nov-2018 18:04:30	Instrument ID:	A3UX14		
Lims ID:	240-104089-B-4-A	Lab Sample ID:	240-104089-4		
Client ID:	WC-FTCB-SOIL				
Operator ID:	002808	ALS Bottle#:	25	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_14	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

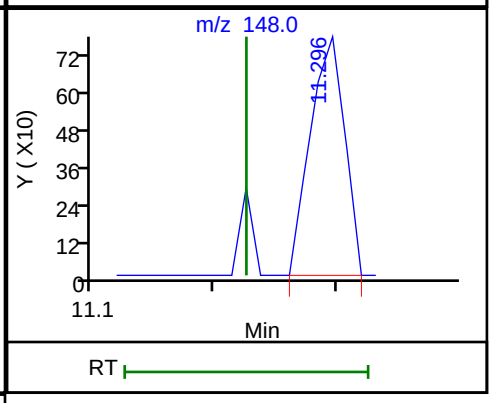
108 1,3-Dichlorobenzene, CAS: 541-73-1

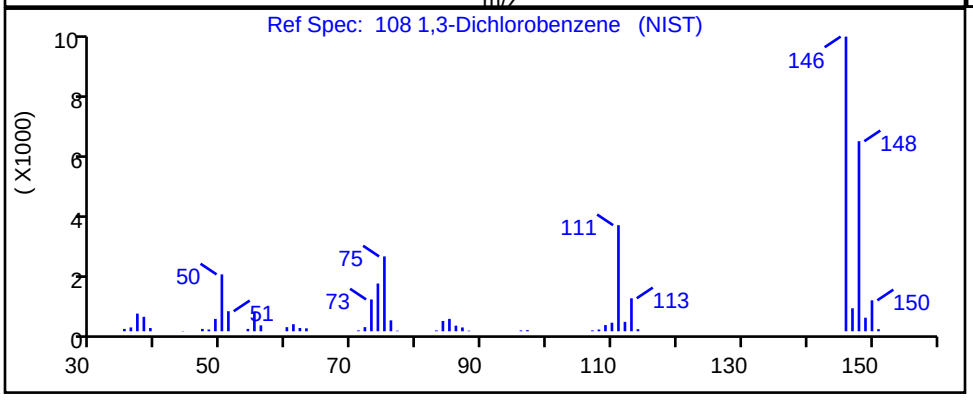
Processing Results











RT	Mass	Response	Amount
11.30	146.00	831	0.094331
11.30	148.00	1512	

Reviewer: macenczaks, 20-Nov-2018 09:20:51

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

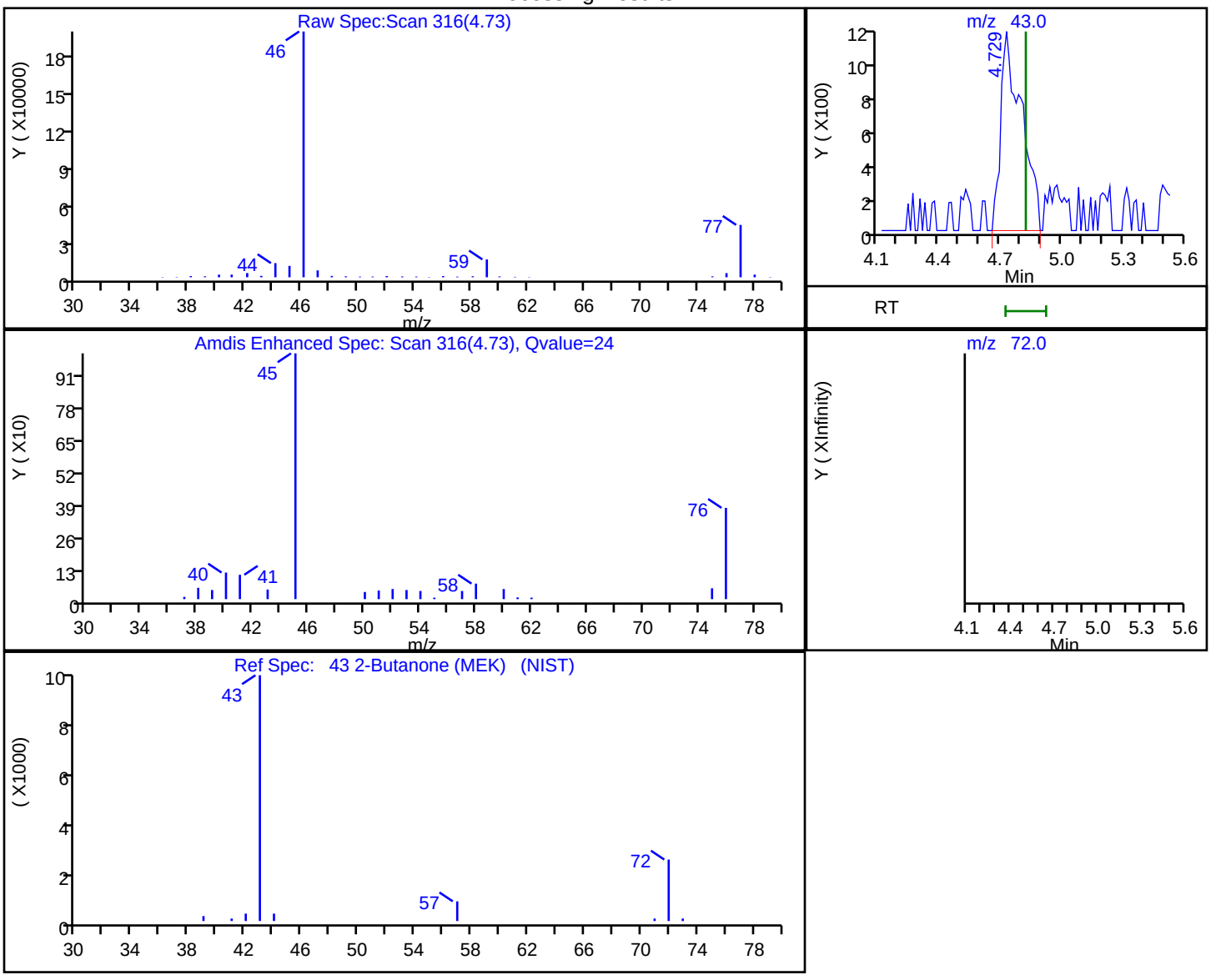
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416890.D				
Injection Date:	19-Nov-2018 18:04:30	Instrument ID:	A3UX14		
Lims ID:	240-104089-B-4-A	Lab Sample ID:	240-104089-4		
Client ID:	WC-FTCB-SOIL				
Operator ID:	002808	ALS Bottle#:	25	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_14	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

43 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
4.73	43.00	7993	2.543421
4.82	72.00	0	

Reviewer: macenczaks, 20-Nov-2018 09:20:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

TestAmerica Canton

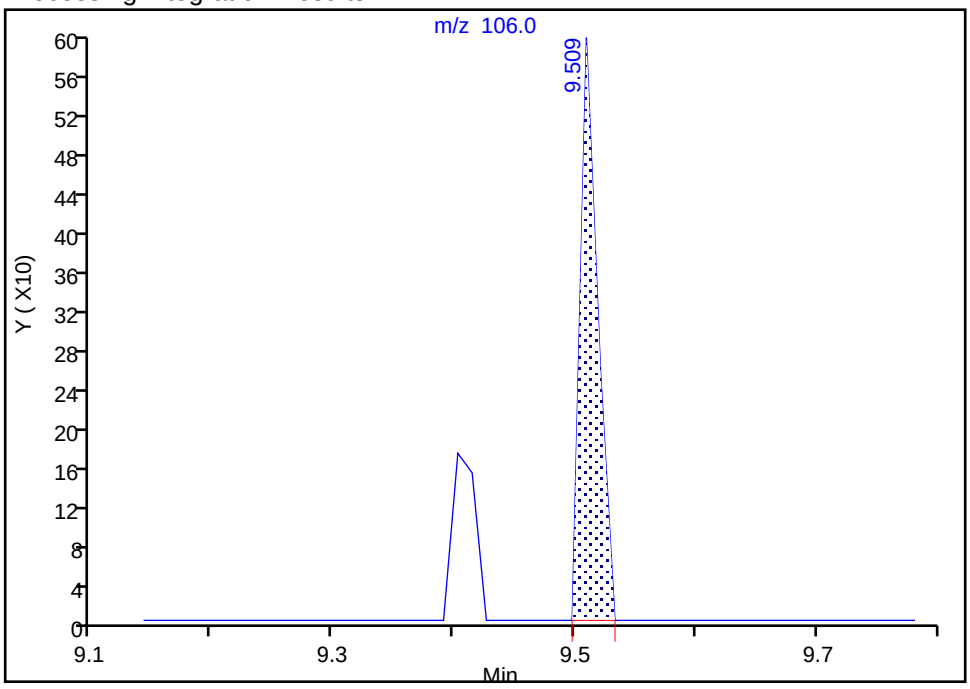
Data File:	\\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416890.D				
Injection Date:	19-Nov-2018 18:04:30	Instrument ID:	A3UX14		
Lims ID:	240-104089-B-4-A	Lab Sample ID:	240-104089-4		
Client ID:	WC-FTCB-SOIL				
Operator ID:	002808	ALS Bottle#:	25	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_14	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

87 Ethylbenzene, CAS: 100-41-4

Signal: 1

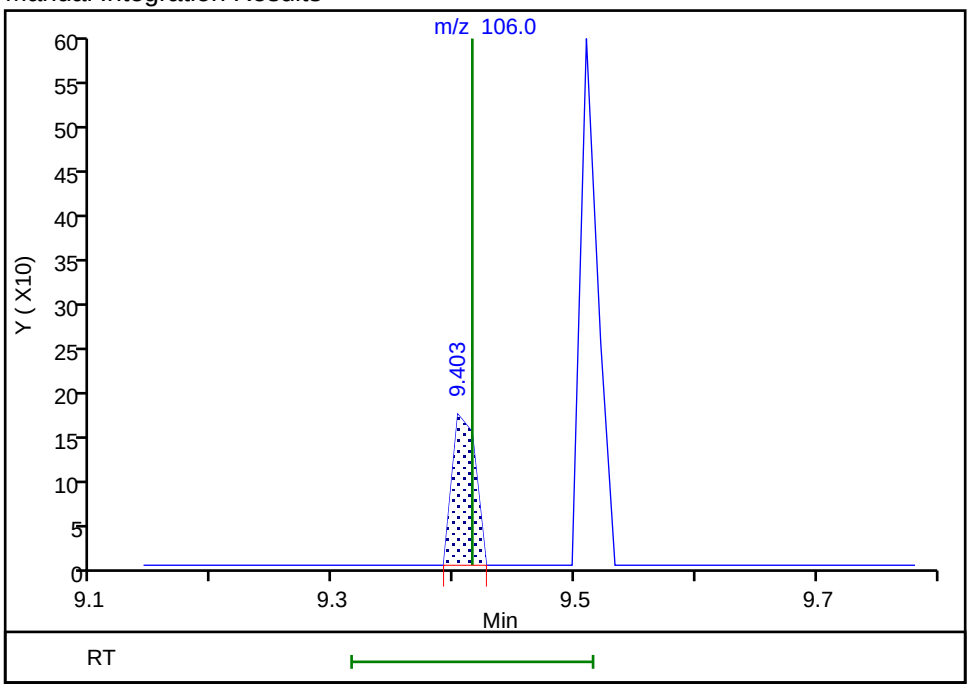
Processing Integration Results

RT: 9.51
Area: 606
Amount: 0.083966
Amount Units: ug/l



Manual Integration Results

RT: 9.40
Area: 230
Amount: 0.031868
Amount Units: ug/l



Reviewer: macenczaks, 20-Nov-2018 09:20:26

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

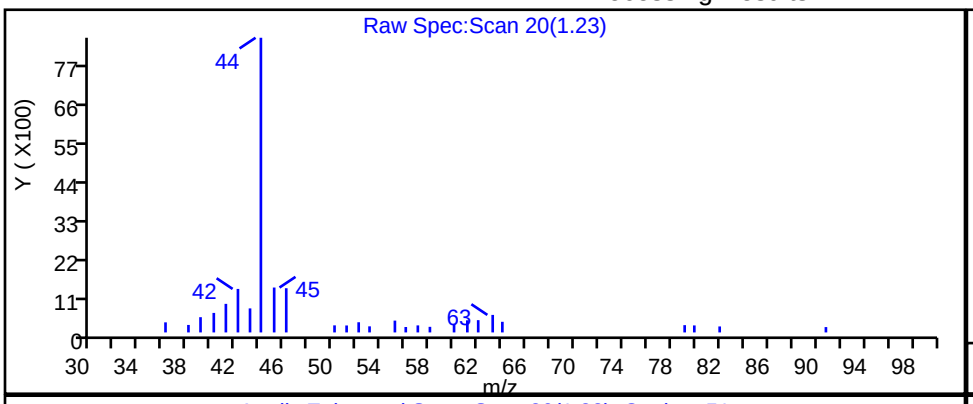
User Disabled Compound Report

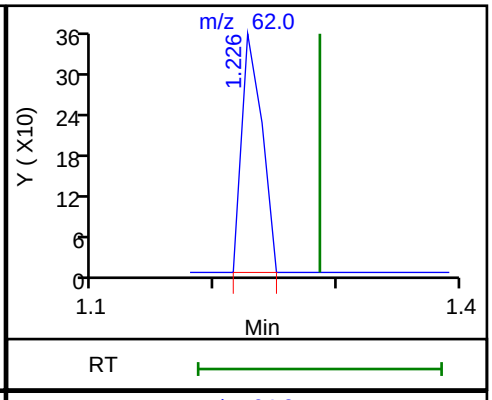
TestAmerica Canton

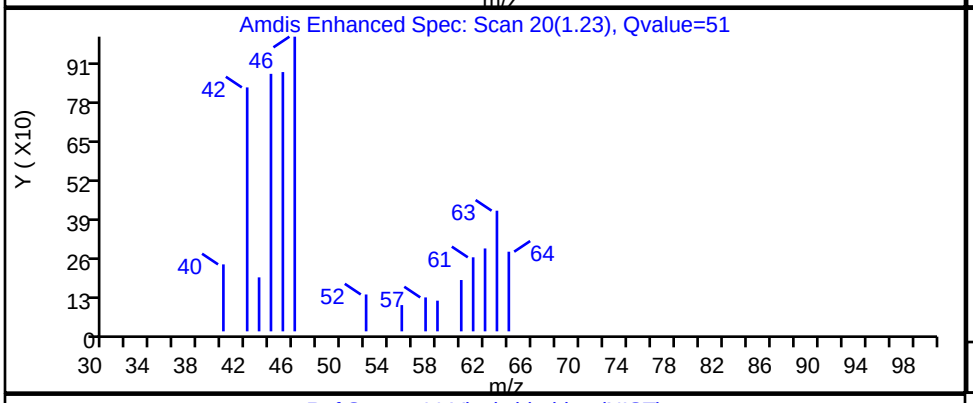
Data File:	\\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416890.D				
Injection Date:	19-Nov-2018 18:04:30	Instrument ID:	A3UX14		
Lims ID:	240-104089-B-4-A	Lab Sample ID:	240-104089-4		
Client ID:	WC-FTCB-SOIL				
Operator ID:	002808	ALS Bottle#:	25	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_14	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

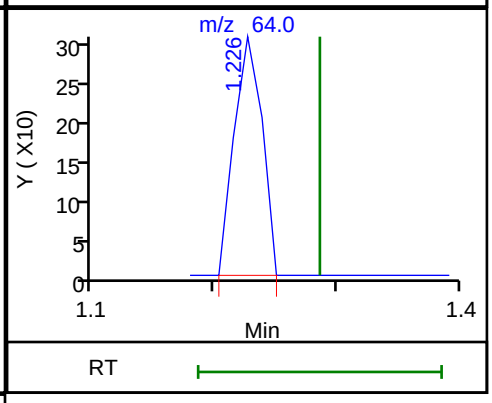
11 Vinyl chloride, CAS: 75-01-4

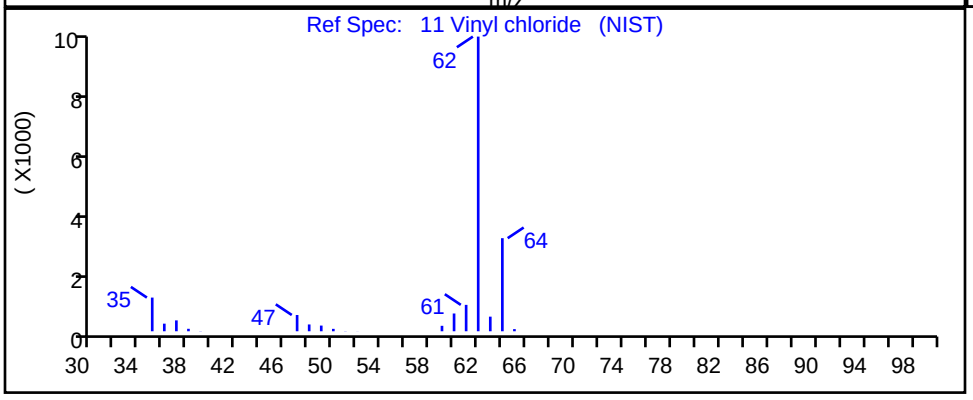
Processing Results











RT	Mass	Response	Amount
1.23	62.00	405	0.089841
1.23	64.00	483	

Reviewer: macenczaks, 20-Nov-2018 09:20:05

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-DECON | Lab Sample ID: 240-104089-5

Matrix: Water | Lab File ID: U1903866.d

Analysis Method: 8260C | Date Collected: 11/07/2018 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 11/16/2018 05:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
78-93-3	2-Butanone (MEK)	1.6	J	10	1.2
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	p-Isopropyltoluene	0.13	U	1.0	0.13
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
67-64-1	Acetone	19		10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
108-86-1	Bromobenzene	0.12	U	1.0	0.12
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-DECON | Lab Sample ID: 240-104089-5

Matrix: Water | Lab File ID: U1903866.d

Analysis Method: 8260C | Date Collected: 11/07/2018 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 11/16/2018 05:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	0.39	U	1.0	0.39
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.85	J	1.0	0.13
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
74-95-3	Dibromomethane	0.090	U	1.0	0.090
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-65-0	tert-Butyl alcohol (TBA)	1.7	U	50	1.7
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
108-20-3	Diisopropyl ether	0.17	U	10	0.17
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
179601-23-1	m-Xylene & p-Xylene	0.080	U	2.0	0.080
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
95-47-6	o-Xylene	0.090	U	1.0	0.090
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
100-42-5	Styrene	0.10	U	1.0	0.10
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
637-92-3	Ethyl t-butyl ether	0.15	U	5.0	0.15
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-DECON | Lab Sample ID: 240-104089-5

Matrix: Water | Lab File ID: U1903866.d

Analysis Method: 8260C | Date Collected: 11/07/2018 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 11/16/2018 05:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	100		70-123
1868-53-7	Dibromofluoromethane (Surr)	100		75-128
460-00-4	4-Bromofluorobenzene (Surr)	95		59-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		70-121

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903866.d
Lims ID: 240-104089-B-5
Client ID: WC-FTCB-DECON
Sample Type: Client
Inject. Date: 16-Nov-2018 05:06:40 ALS Bottle#: 0 Worklist Smp#: 28
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 028
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 16-Nov-2018 14:20:06 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: laveyt Date: 16-Nov-2018 14:20:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.653	0.001	99	757978	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.499	0.001	83	607030	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	93	323857	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	58	204796	20.1	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	97	236599	20.2	
$ 6 Toluene-d8 (Surr)	98	7.112	7.100	0.012	92	725035	19.9	
$ 7 4-Bromofluorobenzene (Surr	95	9.685	9.673	0.012	96	261073	19.1	
9 Dichlorodifluoromethane	85		1.598				ND	
10 Chloromethane	50		1.811				ND	
11 Vinyl chloride	62		1.906				ND	
13 Bromomethane	94		2.226				ND	
14 Chloroethane	64		2.309				ND	
16 Trichlorofluoromethane	101		2.558				ND	
20 1,1,2-Trichloro-1,2,2-trif	101		3.056				ND	
21 1,1-Dichloroethene	61		3.056				ND	
22 Acetone	43	3.080	3.068	0.012	98	56860	19.1	
24 Carbon disulfide	76		3.282				ND	
28 Methylene Chloride	49		3.495				ND	
29 2-Methyl-2-propanol	59	3.578	3.578	0.000	7	504	0.4911	
32 trans-1,2-Dichloroethene	61		3.732				ND	
31 Methyl tert-butyl ether	73		3.732				ND	
34 1,1-Dichloroethane	63		4.112				ND	
35 Vinyl acetate	43		4.147				ND	
36 Isopropyl ether	87		4.171				ND	
38 Tert-butyl ethyl ether	59		4.491				ND	
40 cis-1,2-Dichloroethene	96		4.634				ND	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	88	2895	1.62	
39 2,2-Dichloropropane	77		4.634				ND	
45 Chlorobromomethane	49		4.835				ND	U
47 Chloroform	83	4.906	4.906	0.000	86	14244	0.8478	
48 1,1,1-Trichloroethane	97		5.084				ND	
50 1,1-Dichloropropene	75		5.227				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 Carbon tetrachloride	117		5.238				ND	
53 Benzene	78		5.416				ND	
54 1,2-Dichloroethane	62		5.416				ND	
55 Tert-amyl methyl ether	73		5.499				ND	
58 Trichloroethene	130		5.985				ND	
61 1,2-Dichloropropane	63		6.187				ND	
63 Dibromomethane	174		6.294				ND	
65 Dichlorobromomethane	83		6.436				ND	
67 2-Chloroethyl vinyl ether	63		6.697				ND	
68 cis-1,3-Dichloropropene	75		6.839				ND	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	51	4453	0.3668	
70 Toluene	91		7.171				ND	
71 trans-1,3-Dichloropropene	75		7.361				ND	
75 Tetrachloroethene	166		7.693				ND	
76 1,3-Dichloropropane	76		7.705				ND	
77 2-Hexanone	43	7.764	7.764	0.000	60	3254	0.3405	
79 Chlorodibromomethane	129		7.930				ND	
80 Ethylene Dibromide	107		8.049				ND	
82 Chlorobenzene	112		8.523				ND	
83 1,1,1,2-Tetrachloroethane	131		8.606				ND	
84 Ethylbenzene	106		8.630				ND	
85 m-Xylene & p-Xylene	106		8.749				ND	
86 o-Xylene	106		9.152				ND	
87 Styrene	104		9.164				ND	
88 Bromoform	173		9.353				ND	
89 Isopropylbenzene	105		9.519				ND	
91 1,1,2,2-Tetrachloroethane	83		9.816				ND	
92 Bromobenzene	156		9.840				ND	
93 1,2,3-Trichloropropane	110		9.863				ND	
95 N-Propylbenzene	120		9.946				ND	
96 2-Chlorotoluene	126		10.041				ND	
98 4-Chlorotoluene	126		10.148				ND	
99 tert-Butylbenzene	119		10.468				ND	
101 1,2,4-Trimethylbenzene	105		10.515				ND	
102 sec-Butylbenzene	105		10.693				ND	
103 1,3-Dichlorobenzene	146		10.824				ND	
104 4-Isopropyltoluene	119		10.848				ND	
105 1,4-Dichlorobenzene	146		10.907				ND	
106 1,2,3-Trimethylbenzene	105		10.966				ND	
108 n-Butylbenzene	91		11.286				ND	
109 1,2-Dichlorobenzene	146		11.298				ND	
110 1,2-Dibromo-3-Chloropropan	157		12.128				ND	
112 1,2,4-Trichlorobenzene	180		13.018				ND	
113 Hexachlorobutadiene	225		13.207				ND	
114 Naphthalene	128		13.279				ND	
115 1,2,3-Trichlorobenzene	180		13.539				ND	
S 126 Xylenes, Total	106		16.520				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

vm50ss_stk_00078	Amount Added:	2.00	Units: uL	Run Reagent
vmDist_H2o_00133	Amount Added:	0.00	Units:	Run Reagent
vm50is_stk_A_00002	Amount Added:	2.00	Units: uL	Run Reagent

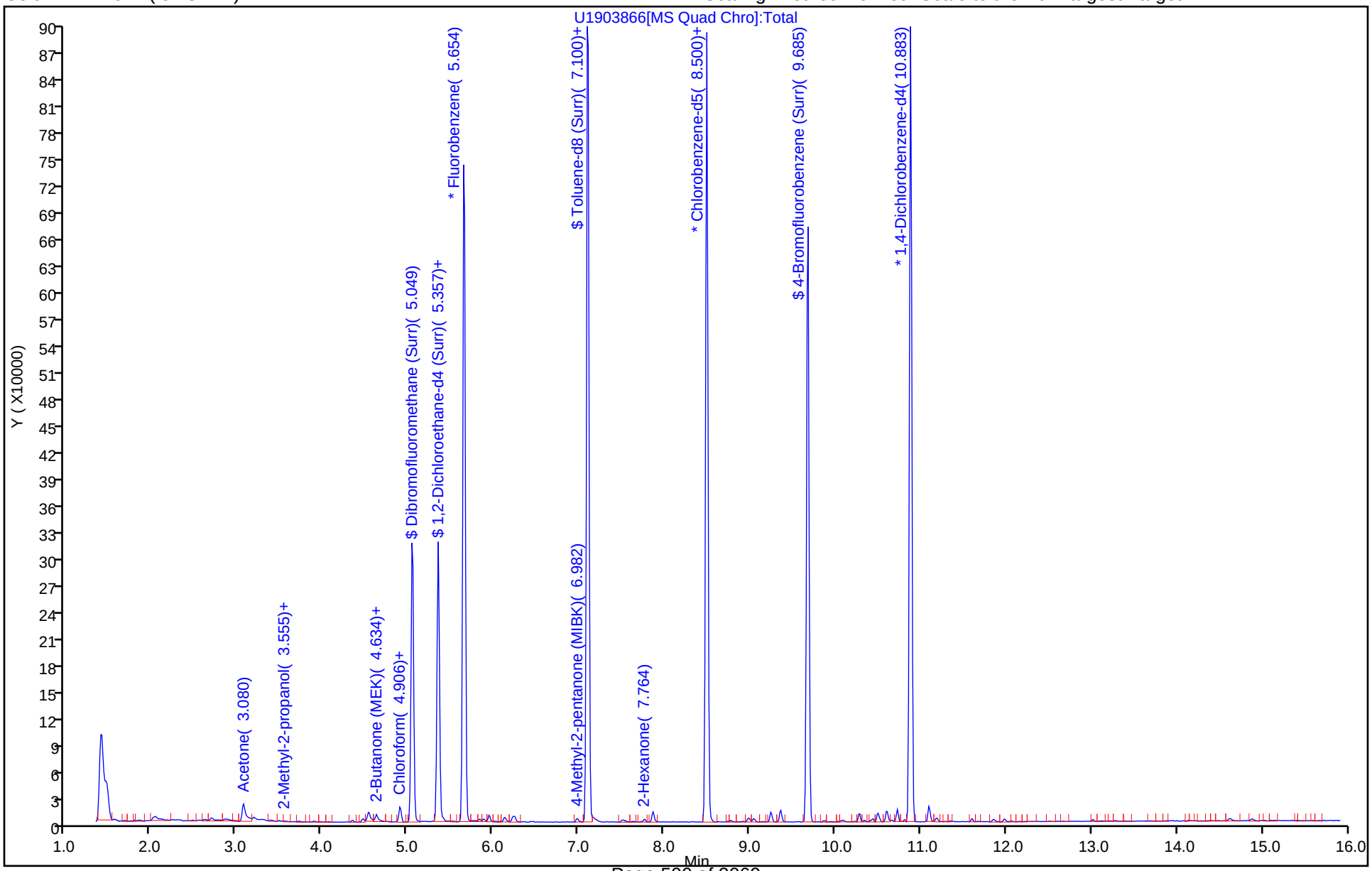
Report Date: 16-Nov-2018 14:20:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903866.d

Injection Date:	16-Nov-2018 05:06:40	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	240-104089-B-5	Lab Sample ID:	240-104089-5	Worklist Smp#:	28
Client ID:	WC-FTCB-DECON				
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903866.d
Lims ID: 240-104089-B-5
Client ID: WC-FTCB-DECON
Sample Type: Client
Inject. Date: 16-Nov-2018 05:06:40 ALS Bottle#: 0 Worklist Smp#: 28
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 028
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 16-Nov-2018 14:20:06 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0318

First Level Reviewer: laveyt Date: 16-Nov-2018 14:20:06

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	20.0	20.1	100.37
$ 5 1,2-Dichloroethane-d4 (Surr)	20.0	20.2	100.95
$ 6 Toluene-d8 (Surr)	20.0	19.9	99.59
$ 7 4-Bromofluorobenzene (Surr)	20.0	19.1	95.30

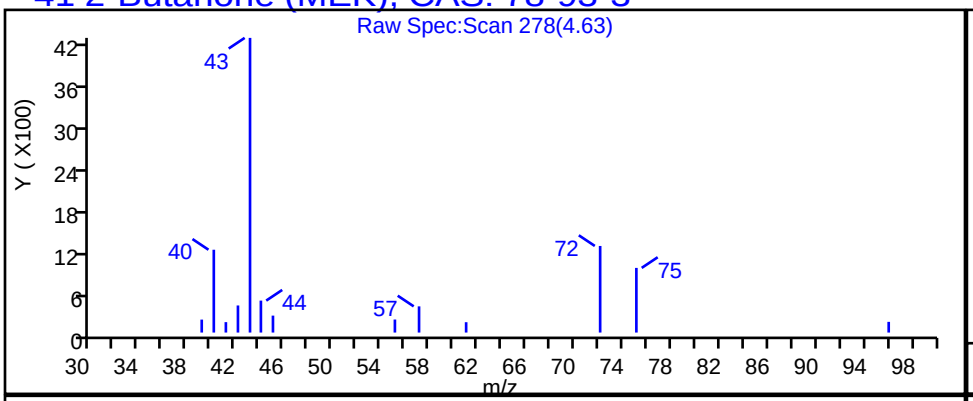
Report Date: 16-Nov-2018 14:20:07 Chrom Revision: 2.3 12-Oct-2018 08:24:38

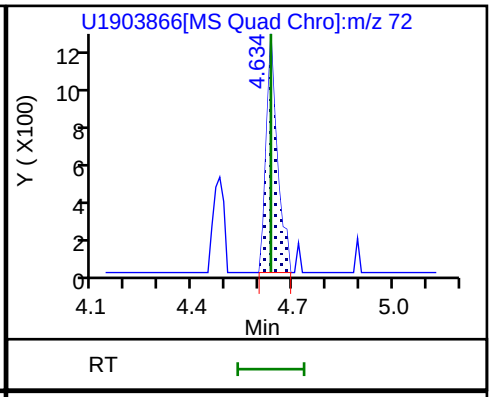
TestAmerica Canton

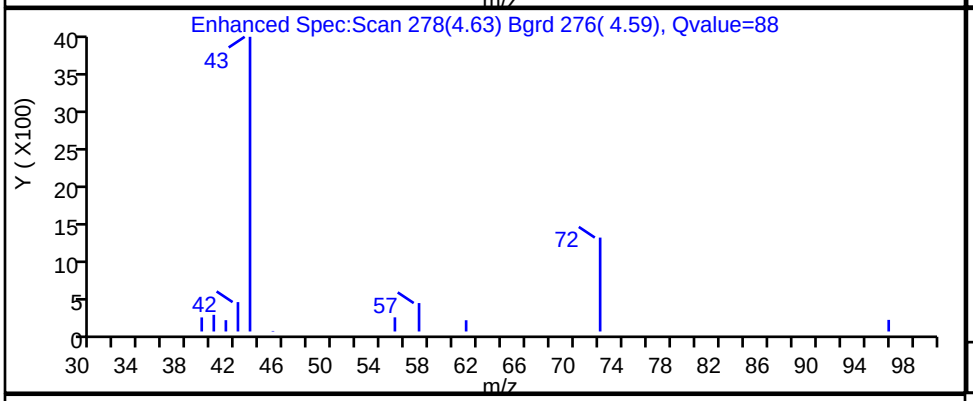
Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903866.d

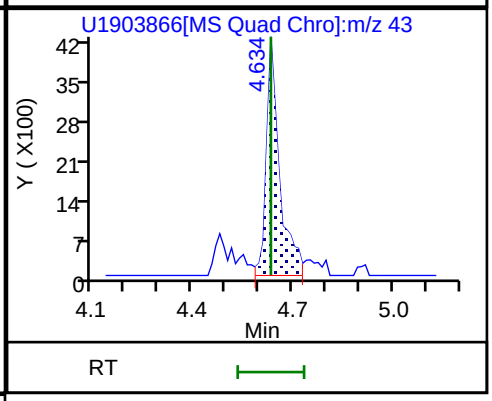
Injection Date:	16-Nov-2018 05:06:40	Instrument ID:	A3UX19		
Lims ID:	240-104089-B-5	Lab Sample ID:	240-104089-5		
Client ID:	WC-FTCB-DECON				
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	28
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

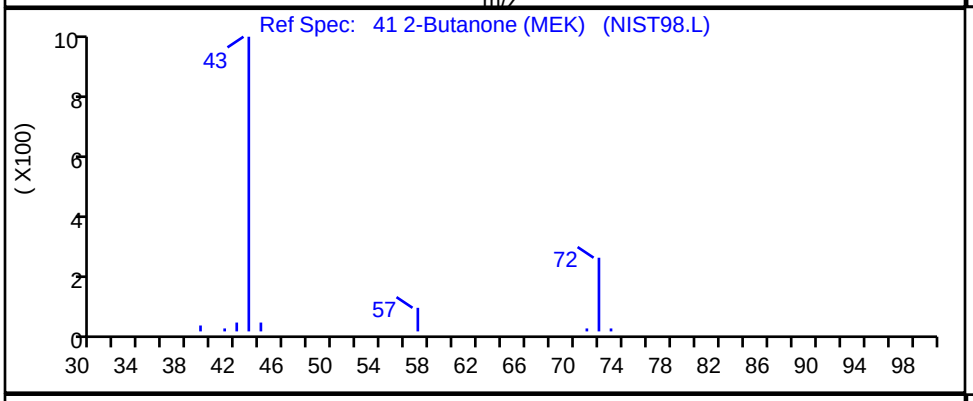
41 2-Butanone (MEK), CAS: 78-93-3

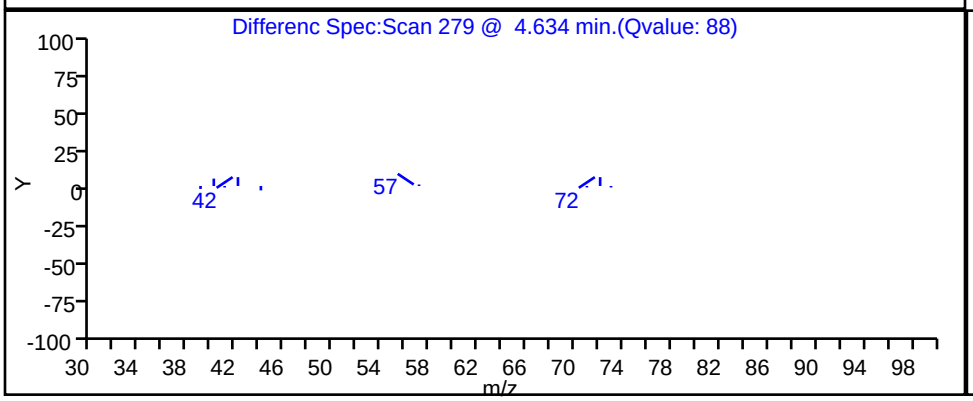


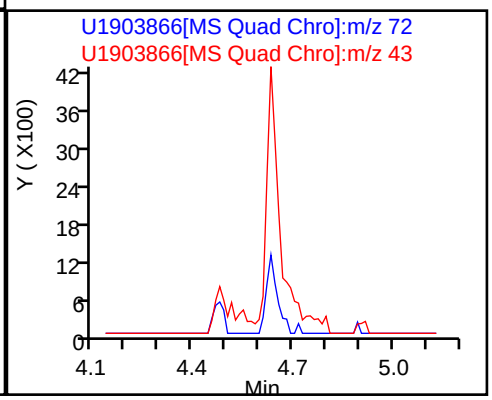












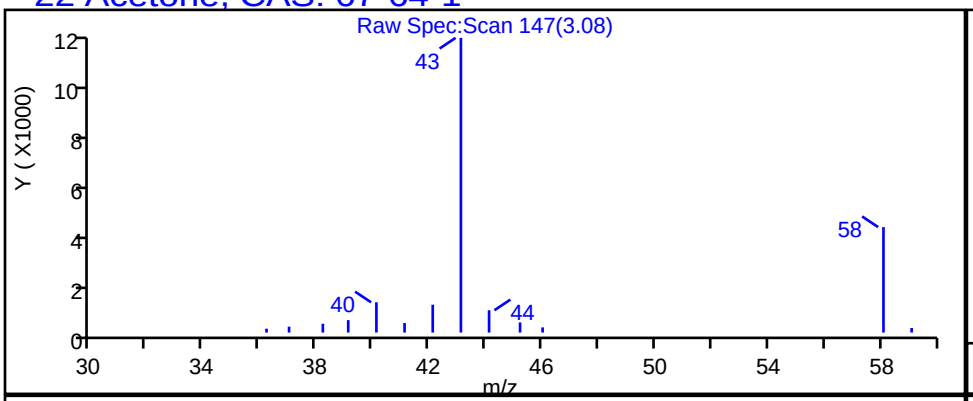
Report Date: 16-Nov-2018 14:20:07 Chrom Revision: 2.3 12-Oct-2018 08:24:38

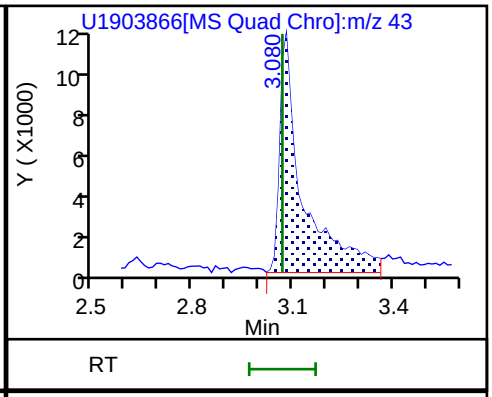
TestAmerica Canton

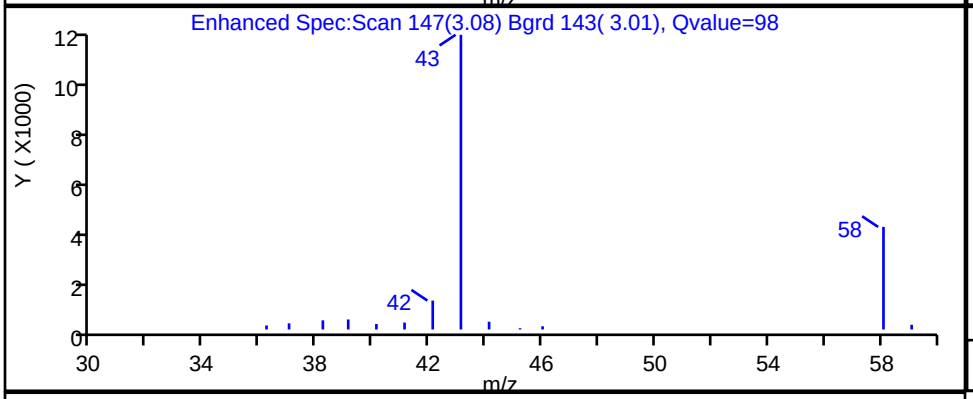
Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903866.d

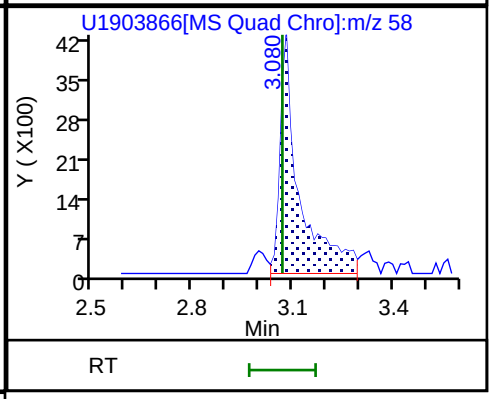
Injection Date:	16-Nov-2018 05:06:40	Instrument ID:	A3UX19		
Lims ID:	240-104089-B-5	Lab Sample ID:	240-104089-5		
Client ID:	WC-FTCB-DECON				
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	28
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

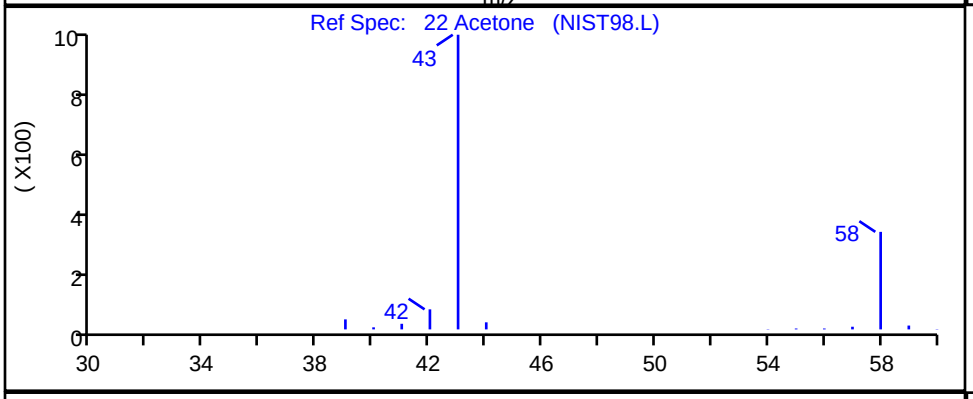
22 Acetone, CAS: 67-64-1

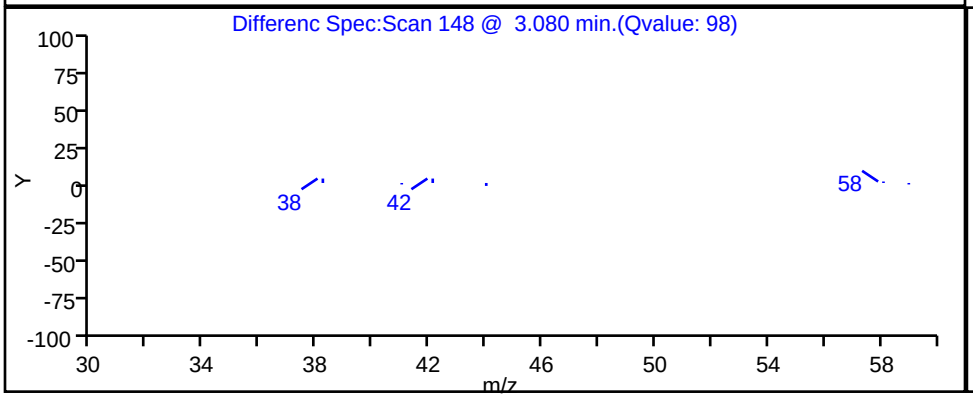


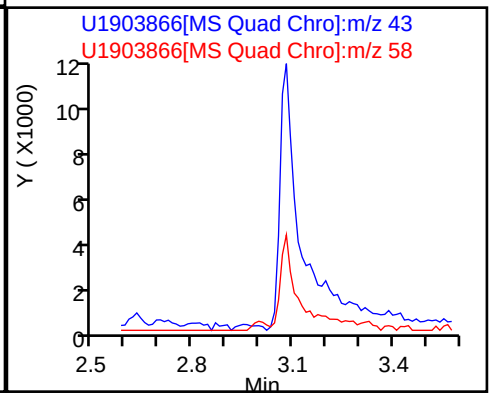












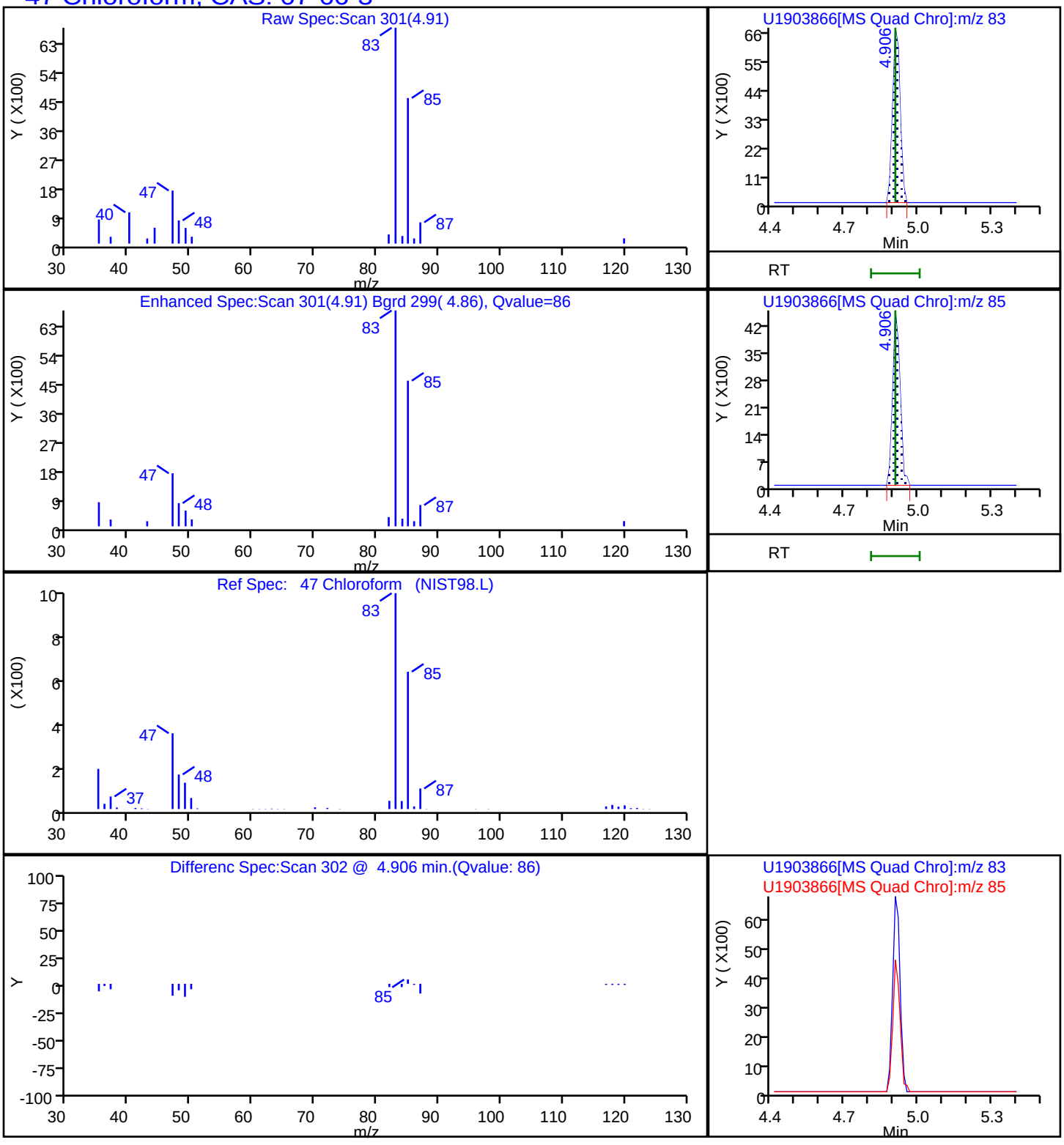
Report Date: 16-Nov-2018 14:20:07 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903866.d

Injection Date:	16-Nov-2018 05:06:40	Instrument ID:	A3UX19		
Lims ID:	240-104089-B-5	Lab Sample ID:	240-104089-5		
Client ID:	WC-FTCB-DECON				
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	28
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

47 Chloroform, CAS: 67-66-3



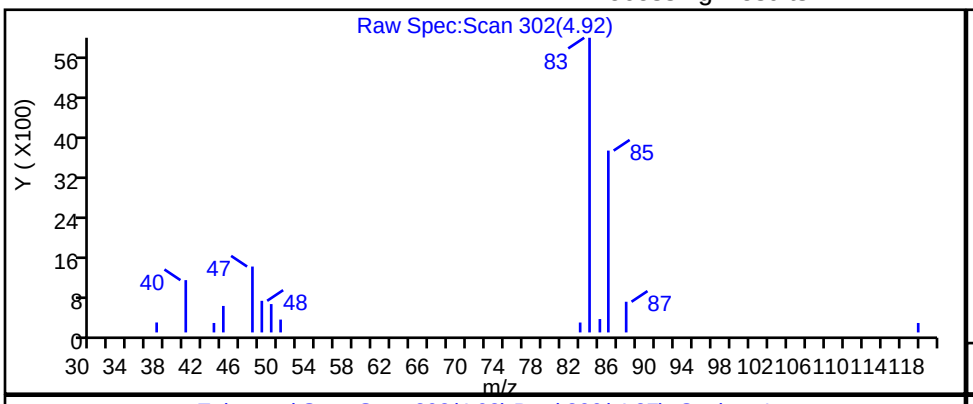
User Disabled Compound Report

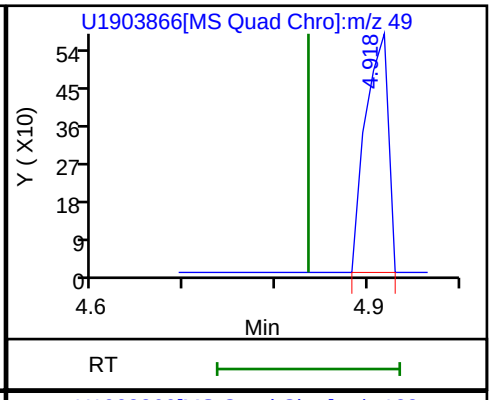
TestAmerica Canton

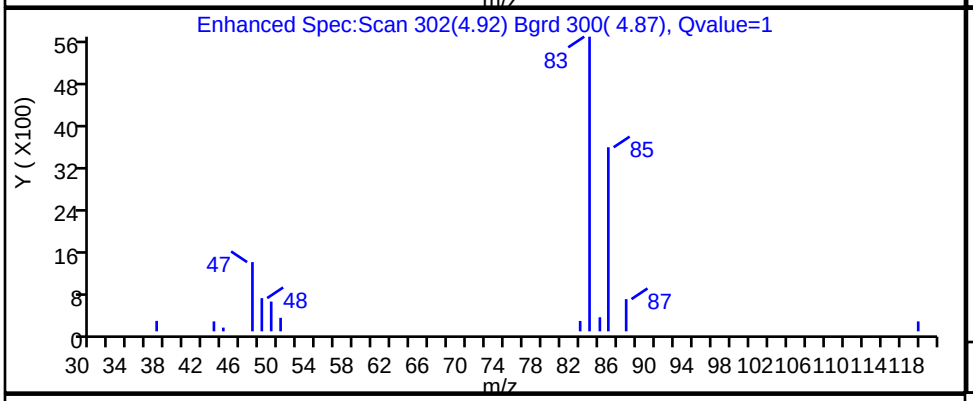
Data File:	\\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903866.d				
Injection Date:	16-Nov-2018 05:06:40	Instrument ID:	A3UX19		
Lims ID:	240-104089-B-5	Lab Sample ID:	240-104089-5		
Client ID:	WC-FTCB-DECON				
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	28
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

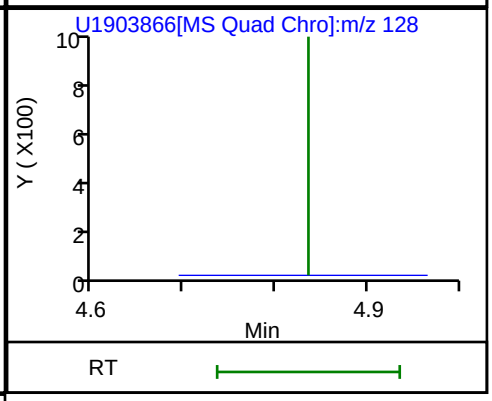
45 Chlorobromomethane, CAS: 74-97-5

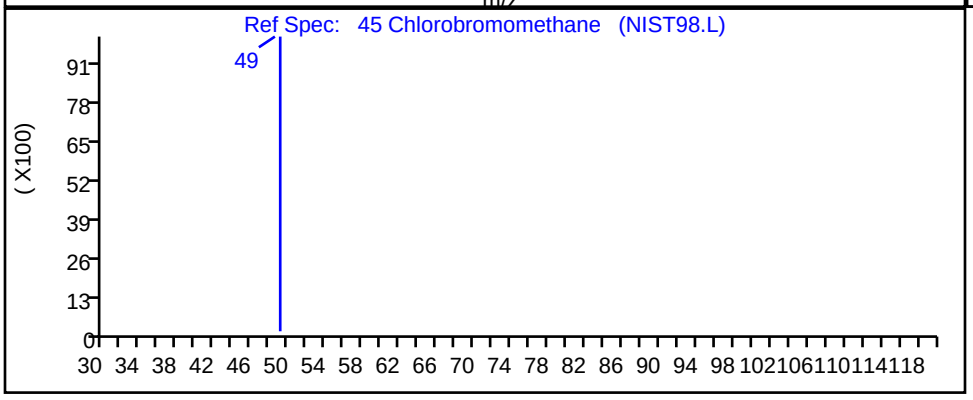
Processing Results











RT	Mass	Response	Amount
4.92	49.00	996	0.135091
4.84	128.00	0	

Reviewer: laveyt, 16-Nov-2018 14:19:49

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 355881

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/16/2018 16:59 Calibration End Date: 11/16/2018 19:51 Calibration ID: 48073

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 240-355881/11	1416828.D
Level 2	IC 240-355881/10	1416827.D
Level 3	IC 240-355881/9	1416826.D
Level 4	IC 240-355881/8	1416825.D
Level 5	IC 240-355881/7	1416824.D
Level 6	ICIS 240-355881/6	1416823.D
Level 7	IC 240-355881/5	1416822.D
Level 8	IC 240-355881/4	1416821.D
Level 9	IC 240-355881/3	1416820.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1336 0.1838	0.1495 0.1824	0.1769 0.1851	0.1766 0.1710	0.1758	Ave		0.1705			0.1000	10.2		20.0			
Chloromethane	0.3223 0.2706	0.2714 0.2631	0.2766 0.2622	0.2736 0.2444	0.2628	Ave		0.2719			0.1000	7.8		20.0			
Vinyl chloride	+++++ 0.2166	+++++ 0.2110	0.2247 0.2160	0.2204 +++++	0.2104	Ave		0.2165			0.1000	2.5		20.0			
Butadiene	0.2064 0.2349	0.2062 0.2308	0.2407 0.2297	0.2349 0.2072	0.2261	Ave		0.2241				6.1		20.0			
Bromomethane	0.1243 +++++	0.1225 +++++	0.1202 +++++	0.1142 +++++	0.0999	Ave		0.1162			0.0500	8.5		20.0			
Chloroethane	0.1238 0.0933	0.1248 +++++	0.1201 +++++	0.1202 +++++	0.1071	Ave		0.1149			0.0500	10.7		20.0			
Dichlorofluoromethane	0.2387 0.2436	0.3125 0.2057	0.2979 +++++	0.2928 +++++	0.2567	Ave		0.2640				14.5		20.0			
Trichlorofluoromethane	0.1917 0.2366	0.2230 0.2078	0.2573 0.1718	0.2602 +++++	0.2428	Ave		0.2239			0.1000	14.1		20.0			
Ethyl ether	+++++ 0.2223	+++++ 0.2091	0.2508 0.1808	0.2562 0.1634	0.2274	Ave		0.2157				15.9		20.0			
Acrolein	0.0498 0.0522	0.0463 0.0526	0.0415 0.0473	0.0463 0.0443	0.0482	Ave		0.0476				7.5		20.0			
1,1-Dichloroethene	0.1844 0.2570	0.1885 0.2471	0.2218 0.2257	0.2603 0.1993	0.2479	Ave		0.2258			0.1000	13.0		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 0.1515	+++++ 0.1448	0.1358 0.1350	0.1485 +++++	0.1463	Ave		0.1436			0.0500	4.7		20.0			
Acetone	+++++ 0.0885	+++++ 0.0927	0.1121 0.0850	0.0992 0.0842	0.0914	Ave		0.0933			0.0100	10.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 355881

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/16/2018 16:59 Calibration End Date: 11/16/2018 19:51 Calibration ID: 48073

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Iodomethane	0.3409 0.4357	0.3508 0.4239	0.3572 0.3875	0.4357 0.3481	0.4229	Ave		0.3892				10.4		20.0			
Carbon disulfide	+++++ 0.7973	+++++ 0.7932	0.5917 0.7466	0.7339 0.6795	0.7502	Ave		0.7275			0.1000	9.9		20.0			
3-Chloro-1-propene	0.1468 0.1843	0.1420 0.1841	0.1535 0.1799	0.1743 0.1700	0.1759	Ave		0.1679				9.7		20.0			
Methyl acetate	0.2995 0.2492	0.2537 0.2564	0.2394 0.2436	0.2457 0.2426	0.2469	Ave		0.2530			0.1000	7.2		20.0			
Methylene Chloride	+++++ 0.3169	+++++ 0.3003	0.4735 0.2765	0.4167 0.2560	0.3449	Lin1	1.3340	0.2665			0.1000	12.1			0.9960		0.9900
tert-Butyl alcohol (TBA)	0.0270 0.0255	0.0297 0.0285	0.0239 0.0274	0.0251 0.0273	0.0241	Ave		0.0265				7.5		20.0			
trans-1,2-Dichloroethene	0.2862 0.3084	0.2721 0.3025	0.2864 0.2931	0.3112 0.2753	0.2980	Ave		0.2926			0.1000	4.7		20.0			
Methyl tert-butyl ether	0.6704 0.6569	0.6443 0.6863	0.6102 0.6518	0.6766 0.6161	0.6420	Ave		0.6505			0.1000	4.0		20.0			
Acrylonitrile	0.1213 0.1143	0.1137 0.1170	0.1091 0.1077	0.1142 0.1040	0.1121	Ave		0.1126				4.6		20.0			
Hexane	+++++ 0.0887	+++++ 0.0858	0.0793 0.0859	0.0835 0.0826	0.0850	Ave		0.0844				3.5		20.0			
1,1-Dichloroethane	0.4659 0.5335	0.4746 0.5363	0.4690 0.5244	0.5266 0.4996	0.5197	Ave		0.5055			0.2000	5.7		20.0			
Vinyl acetate	0.0450 0.0571	0.0491 0.0557	0.0517 0.0560	0.0521 0.0559	0.0557	Ave		0.0531				7.6		20.0			
2,2-Dichloropropane	0.0644 0.0728	0.0607 0.0713	0.0627 0.0665	0.0739 0.0594	0.0719	Ave		0.0671				8.3		20.0			
cis-1,2-Dichloroethene	0.3412 0.3434	0.3230 0.3379	0.3068 0.3234	0.3473 0.3053	0.3401	Ave		0.3298			0.1000	4.8		20.0			
2-Butanone (MEK)	0.1874 0.1438	0.1741 0.1461	0.1438 0.1390	0.1409 0.1399	0.1434	Ave		0.1509			0.0100	11.5		20.0			
Bromochloromethane	0.1576 0.1596	0.1480 0.1576	0.1460 0.1486	0.1554 0.1399	0.1529	Ave		0.1517				4.3		20.0			
Tetrahydrofuran	0.1069 0.0970	0.1006 0.0993	0.0946 0.0929	0.0963 0.0944	0.0965	Ave		0.0976				4.3		20.0			
Chloroform	0.4159 0.4482	0.3883 0.4424	0.3866 0.4296	0.4421 0.4094	0.4364	Ave		0.4221			0.2000	5.5		20.0			
1,1,1-Trichloroethane	0.2398 0.3487	0.2469 0.3439	0.2883 0.3320	0.3354 0.3104	0.3360	Ave		0.3090			0.1000	13.4		20.0			
Cyclohexane	+++++ 0.5528	+++++ 0.5384	0.4617 0.5248	0.5336 0.4857	0.5302	Ave		0.5182			0.1000	6.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 355881

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/16/2018 16:59 Calibration End Date: 11/16/2018 19:51 Calibration ID: 48073

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Carbon tetrachloride	+++++ 0.3108	+++++ 0.3086	0.2421 0.3024	0.2843 0.2844	0.2920	Ave		0.2892			0.1000	8.1		20.0			
1,1-Dichloropropene	0.2769 0.3787	0.2735 0.3765	0.3345 0.3691	0.3739 0.3501	0.3679	Ave		0.3446				12.1		20.0			
Benzene	1.1722 1.1647	1.0956 1.1338	1.0753 1.0875	1.1567 1.0088	1.1398	Ave		1.1149			0.5000	4.7		20.0			
1,2-Dichloroethane	0.3396 0.3616	0.3491 0.3637	0.3440 0.3549	0.3490 0.3421	0.3536	Ave		0.3509			0.1000	2.4		20.0			
Isobutyl alcohol	0.0096 0.0104	0.0101 0.0103	0.0094 0.0098	0.0096 0.0098	0.0100	Ave		0.0099				3.4		20.0			
n-Heptane	+++++ 0.0942	+++++ 0.0897	0.0858 0.0908	0.0879 0.0855	0.0918	Ave		0.0894				3.6		20.0			
Trichloroethene	0.2683 0.3136	0.2672 0.3041	0.2838 0.2872	0.3127 0.2630	0.3079	Ave		0.2897			0.1500	7.1		20.0			
Methylcyclohexane	+++++ 0.5202	+++++ 0.5038	0.4487 0.4778	0.5080 0.4414	0.5074	Ave		0.4868			0.1000	6.4		20.0			
1,2-Dichloropropane	0.2737 0.3030	0.2889 0.2977	0.2790 0.2940	0.2841 0.2784	0.2928	Ave		0.2880			0.1000	3.4		20.0			
Dibromomethane	0.1688 0.1650	0.1609 0.1616	0.1537 0.1517	0.1579 0.1435	0.1619	Ave		0.1583				4.8		20.0			
1,4-Dioxane	0.0031 0.0027	0.0028 0.0025	0.0028 0.0024	0.0026 0.0023	0.0027	Ave		0.0027				8.8		20.0			
Bromodichloromethane	0.2293 0.3238	0.2439 0.3301	0.2473 0.3263	0.2793 0.3080	0.2998	Ave		0.2875			0.1500	13.6		20.0			
2-Chloroethyl vinyl ether	0.1682 0.1818	0.1751 0.1767	0.1640 0.1751	0.1568 0.1693	0.1716	Ave		0.1710				4.4		20.0			
cis-1,3-Dichloropropene	0.3580 0.4341	0.3561 0.4281	0.3674 0.4191	0.3745 0.3977	0.4072	Ave		0.3936			0.1500	7.7		20.0			
4-Methyl-2-pentanone (MIBK)	0.3995 0.4200	0.3768 0.4223	0.3874 0.4015	0.4029 0.4007	0.4192	Ave		0.4034			0.0500	3.8		20.0			
Toluene	1.6391 1.6506	1.5787 1.6175	1.5344 1.5705	1.6325 1.4303	1.6417	Ave		1.5884			0.4000	4.5		20.0			
trans-1,3-Dichloropropene	0.3956 0.5165	0.3863 0.5225	0.4159 0.5298	0.4405 0.5196	0.4883	Ave		0.4683			0.1000	12.5		20.0			
Ethyl methacrylate	0.4313 0.4492	0.4151 0.4409	0.4113 0.4417	0.4161 0.4426	0.4498	Ave		0.4331				3.5		20.0			
1,1,2-Trichloroethane	0.3423 0.3258	0.3238 0.3177	0.3092 0.3104	0.3094 0.2995	0.3184	Ave		0.3174			0.1000	3.9		20.0			
Tetrachloroethene	0.2536 0.3387	0.2707 0.3236	0.3124 0.3110	0.3345 0.2842	0.3405	Ave		0.3077			0.1500	10.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 355881

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/16/2018 16:59 Calibration End Date: 11/16/2018 19:51 Calibration ID: 48073

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,3-Dichloropropane	0.5163 0.5573	0.5560 0.5462	0.5113 0.5443	0.5152 0.5237	0.5417	Ave		0.5347				3.4		20.0			
2-Hexanone	0.2509 0.2699	0.2543 0.2629	0.2591 0.2538	0.2434 0.2629	0.2687	Ave		0.2584			0.0500	3.3		20.0			
Dibromochloromethane	+++++ 0.3364	+++++ 0.3417	0.2329 0.3355	0.2779 0.3212	0.3040	Ave		0.3071				12.9		20.0			
1,2-Dibromoethane	0.3002 0.3228	0.3032 0.3162	0.2970 0.3083	0.3070 0.2927	0.3184	Ave		0.3073				3.3		20.0			
Chlorobenzene	1.1249 1.0629	1.0784 1.0043	1.0177 0.9527	1.0730 0.8683	1.0701	Ave		1.0280			0.3000	7.6		20.0			
1,1,1,2-Tetrachloroethane	0.2711 0.3597	0.2623 0.3453	0.2883 0.3152	0.3398 0.2847	0.3435	Ave		0.3122				11.7		20.0			
Ethylbenzene	0.5327 0.5783	0.5293 0.5469	0.5329 0.5145	0.5702 0.4708	0.5729	Ave		0.5387				6.3		20.0			
m-Xylene & p-Xylene	0.6390 0.6955	0.6273 0.6541	0.6384 0.6233	0.6858 0.5702	0.6897	Ave		0.6470				6.2		20.0			
o-Xylene	0.6158 0.6766	0.6375 0.6332	0.6217 0.5821	0.6909 0.5173	0.6747	Ave		0.6278				8.6		20.0			
Styrene	1.0478 1.1127	1.0152 1.0511	1.0126 0.9738	1.0875 0.8737	1.1086	Ave		1.0315			0.3000	7.3		20.0			
Bromoform	+++++ 0.1976	+++++ 0.2027	0.1319 0.1947	0.1534 0.1870	0.1765	Ave		0.1777			0.1000	14.7		20.0			
Isopropylbenzene	1.2979 1.6177	1.3475 1.5161	1.4699 1.3524	1.6534 1.1950	1.6357	Ave		1.4540			0.1000	11.3		20.0			
Bromobenzene	0.9789 0.9574	0.9191 0.9316	0.8951 0.9107	0.9191 0.8336	0.9105	Ave		0.9173				4.4		20.0			
1,1,2,2-Tetrachloroethane	0.7309 0.8368	0.7042 0.8212	0.7339 0.8034	0.7668 0.7782	0.7871	Ave		0.7736			0.3000	5.7		20.0			
1,2,3-Trichloropropane	0.2713 0.2529	0.2727 0.2504	0.2356 0.2432	0.2414 0.2351	0.2409	Ave		0.2493				5.7		20.0			
trans-1,4-Dichloro-2-butene	0.3017 0.3050	0.2768 0.3016	0.2482 0.3065	0.2578 0.3096	0.2739	Ave		0.2868				8.1		20.0			
N-Propylbenzene	0.8915 1.0626	0.8773 1.0320	0.9500 1.0013	1.0249 +++++	1.0276	Ave		0.9834				7.0		20.0			
2-Chlorotoluene	0.7913 0.8922	0.7760 0.8671	0.7941 0.8357	0.8555 0.7618	0.8671	Ave		0.8268				5.7		20.0			
1,3,5-Trimethylbenzene	2.3159 2.8086	2.3582 2.7033	2.4339 2.5002	2.6594 2.2252	2.6954	Ave		2.5222				8.0		20.0			
4-Chlorotoluene	0.9456 0.8920	0.8581 0.8381	0.8492 0.7950	0.8904 0.7142	0.8633	Ave		0.8495				7.7		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 355881

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/16/2018 16:59 Calibration End Date: 11/16/2018 19:51 Calibration ID: 48073

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
tert-Butylbenzene	1.9389 2.5479	1.9676 2.4426	2.1826 2.3354	2.4135 2.0955	2.4030	Ave		2.2586				9.7		20.0			
1,2,4-Trimethylbenzene	2.6008 2.8626	2.3690 2.7353	2.4935 2.6791	2.7847 2.4229	2.7457	Ave		2.6326				6.5		20.0			
sec-Butylbenzene	2.6913 3.6290	2.7542 3.4512	3.1551 3.3706	3.4933 2.9988	3.4780	Ave		3.2246				10.6		20.0			
1,3-Dichlorobenzene	1.8352 1.6920	1.6951 1.5895	1.6192 1.5502	1.6724 1.4186	1.6648	Ave		1.6374			0.6000	7.0		20.0			
p-Isopropyltoluene	2.3160 3.0354	2.3834 2.8530	2.6590 2.7668	2.9370 2.5032	2.9402	Ave		2.7104				9.6		20.0			
1,4-Dichlorobenzene	1.9214 1.7074	1.7909 1.6034	1.6678 1.5521	1.6980 1.4338	1.6525	Ave		1.6697			0.5000	8.3		20.0			
n-Butylbenzene	2.0504 2.7294	2.0554 2.6244	2.3802 2.5366	2.6110 2.2820	2.6096	Ave		2.4310				10.4		20.0			
1,2-Dichlorobenzene	1.6562 1.5440	1.5067 1.4281	1.5147 1.3487	1.5943 1.2164	1.5105	Ave		1.4799			0.4000	9.0		20.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.1498	+++++ 0.1623	0.1005 0.1722	0.1204 0.1760	0.1276	Lin1	-0.527	0.1734			0.0500	10.5			0.9980		0.9900
1,2,4-Trichlorobenzene	1.1527 1.0176	1.0448 1.0262	0.9799 1.0572	1.0581 0.9806	0.9811	Ave		1.0331			0.2000	5.3		20.0			
Hexachlorobutadiene	+++++ 0.4926	+++++ 0.4940	0.4019 0.5302	0.4824 0.4912	0.4736	Ave		0.4808				8.1		20.0			
Naphthalene	3.0454 2.4896	2.6863 2.5932	2.4155 2.6240	2.5791 2.4379	2.4138	Ave		2.5872				7.6		20.0			
1,2,3-Trichlorobenzene	1.0799 0.9524	0.9762 0.9845	0.9246 1.0149	1.0030 0.9303	0.9220	Ave		0.9764				5.3		20.0			
Dibromofluoromethane (Surr)	+++++ 0.2657	+++++ 0.2596	0.3035 0.2509	0.2748 0.2361	0.2651	Ave		0.2651				7.9		20.0			
1,2-Dichloroethane-d4 (Surr)	+++++ 0.2899	+++++ 0.2888	0.3579 0.2852	0.3058 0.2741	0.2924	Ave		0.2992				9.2		20.0			
Toluene-d8 (Surr)	+++++ 1.4148	+++++ 1.3484	1.8164 1.3184	1.5697 1.2151	1.4635	Ave		1.4495				13.6		20.0			
4-Bromofluorobenzene (Surr)	+++++ 1.0631	+++++ 1.0165	1.4646 1.0403	1.1570 0.9738	1.0674	Ave		1.1118				14.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 355881

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/16/2018 16:59 Calibration End Date: 11/16/2018 19:51 Calibration ID: 48073

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 240-355881/11	1416828.D
Level 2	IC 240-355881/10	1416827.D
Level 3	IC 240-355881/9	1416826.D
Level 4	IC 240-355881/8	1416825.D
Level 5	IC 240-355881/7	1416824.D
Level 6	ICIS 240-355881/6	1416823.D
Level 7	IC 240-355881/5	1416822.D
Level 8	IC 240-355881/4	1416821.D
Level 9	IC 240-355881/3	1416820.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Ave	4665 370572	10425 767694	32479 1595647	66090 2068853	140168	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Chloromethane	FB	Ave	11254 545545	18926 1107689	50788 2260671	102404 2955892	209569	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Vinyl chloride	FB	Ave	+++++ 436616	+++++ 888313	41264 1862314	82495 +++++	167746	+++++ 50.0	+++++ 100	5.00 200	10.0 +++++	20.0
Butadiene	FB	Ave	7208 473404	14382 971492	44207 1980566	87918 2506212	180312	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromomethane	FB	Ave	4342 +++++	8542 +++++	22075 +++++	42761 +++++	79663	1.00 +++++	2.00 +++++	5.00 +++++	10.0 +++++	20.0
Chloroethane	FB	Ave	4323 188168	8704 +++++	22050 +++++	45002 +++++	85434	1.00 50.0	2.00 +++++	5.00 +++++	10.0 +++++	20.0
Dichlorofluoromethane	FB	Ave	8334 490993	21797 866137	54702 +++++	109602 +++++	204723	1.00 50.0	2.00 100	5.00 +++++	10.0 +++++	20.0
Trichlorofluoromethane	FB	Ave	6694 477025	15555 874655	47259 1481064	97403 +++++	193585	1.00 50.0	2.00 100	5.00 200	10.0 +++++	20.0
Ethyl ether	FB	Ave	+++++ 448078	+++++ 880396	46052 1558849	95901 1976992	181358	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Acrolein	FB	Ave	8693 526131	16145 1107173	38117 2038699	86640 2676657	191985	5.00 250	10.0 500	25.0 1000	50.0 1250	100
1,1-Dichloroethene	FB	Ave	6439 518018	13145 1040410	40742 1945723	97428 2410191	197708	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,2-Trichloro-1,2,2-trifluoroetha ne	FB	Ave	+++++ 305298	+++++ 609712	24948 1163731	55589 +++++	116654	+++++ 50.0	+++++ 100	5.00 200	10.0 +++++	20.0
Acetone	FB	Ave	+++++ 356859	+++++ 780578	41159 1466041	74265 2036254	145699	+++++ 100	+++++ 200	10.0 400	20.0 500	40.0
Iodomethane	FB	Ave	11903 878363	24462 1784761	65596 3341655	163087 4210520	337232	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 355881

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/16/2018 16:59 Calibration End Date: 11/16/2018 19:51 Calibration ID: 48073

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Carbon disulfide	FB	Ave	+++++ 1607079	+++++ 3339284	108660 6438127	274719 8218323	598199	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
3-Chloro-1-propene	FB	Ave	5126 371564	9905 774950	28198 1550957	65251 2056460	140281	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Methyl acetate	FB	Ave	20915 1004468	35393 2159066	87932 4201619	183972 5869172	393728	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Methylene Chloride	FB	Lin1	+++++ 638794	+++++ 1264142	86954 2383761	155978 3096399	275047	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
tert-Butyl alcohol (TBA)	FB	Ave	9426 514837	20720 1198680	43812 2361484	93873 3299343	192394	10.0 500	20.0 1000	50.0 2000	100 2500	200
trans-1,2-Dichloroethene	FB	Ave	9995 621705	18978 1273571	52588 2527453	116480 3330131	237616	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Methyl tert-butyl ether	FB	Ave	23408 1324120	44935 2889360	112064 5620032	253267 7452622	511950	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Acrylonitrile	FB	Ave	42369 2304074	79324 4925872	200439 9288692	427432 12581203	893761	10.0 500	20.0 1000	50.0 2000	100 2500	200
Hexane	FB	Ave	+++++ 178730	+++++ 361021	14556 741044	31246 999001	67749	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
1,1-Dichloroethane	FB	Ave	16269 1075358	33099 2257904	86133 4522188	197120 6042403	414420	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Vinyl acetate	FB	Ave	1571 115150	3422 234378	9500 482706	19497 675894	44424	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2,2-Dichloropropane	FB	Ave	2250 146746	4231 300301	11508 573775	27659 718572	57323	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
cis-1,2-Dichloroethene	FB	Ave	11914 692117	22526 1422391	56350 2788338	130006 3693245	271155	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Butanone (MEK)	FB	Ave	13089 579651	24286 1230446	52812 2397397	105452 3383274	228719	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Bromochloromethane	FB	Ave	5504 321615	10323 663397	26807 1281329	58167 1692095	121916	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Tetrahydrofuran	FB	Ave	7467 391182	14038 836087	34751 1601673	72125 2283628	153871	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Chloroform	FB	Ave	14522 903417	27083 1862658	70998 3704076	165499 4952158	347959	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,1-Trichloroethane	FB	Ave	8374 702839	17222 1447738	52940 2862549	125558 3754081	267927	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Cyclohexane	FB	Ave	+++++ 1114338	+++++ 2266517	84795 4524968	199738 5875135	422779	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Carbon tetrachloride	FB	Ave	+++++ 626559	+++++ 1299377	44466 2607418	106418 3439787	232862	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
1,1-Dichloropropene	FB	Ave	9669 763422	19077 1585182	61436 3182496	139939 4235042	293365	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 355881

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/16/2018 16:59 Calibration End Date: 11/16/2018 19:51 Calibration ID: 48073

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Benzene	FB	Ave	40932 2347780	76406 4773170	197468 9377262	432966 12202452	908835	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2-Dichloroethane	FB	Ave	11859 728953	24344 1531356	63172 3060297	130630 4137804	281991	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Isobutyl alcohol	FB	Ave	8366 524231	17649 1084166	43327 2120776	89709 2965480	199307	25.0 1250	50.0 2500	125 5000	250 6250	500
n-Heptane	FB	Ave	+++++ 189817	+++++ 377597	15751 783025	32893 1033835	73222	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Trichloroethene	FB	Ave	9370 632095	18634 1280082	52118 2476172	117049 3180583	245521	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Methylcyclohexane	FB	Ave	+++++ 1048682	+++++ 2120967	82403 4119843	190164 5338976	404571	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
1,2-Dichloropropane	FB	Ave	9557 610809	20147 1253139	51244 2535179	106349 3367886	233493	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Dibromomethane	FB	Ave	5896 332549	11222 680386	28220 1308037	59119 1735502	129072	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,4-Dioxane	FB	Ave	2170 106844	3880 212722	10406 413196	19788 564135	43591	20.0 1000	40.0 2000	100 4000	200 5000	400
Bromodichloromethane	FB	Ave	8007 652653	17007 1389550	45411 2813957	104528 3724964	239095	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Chloroethyl vinyl ether	FB	Ave	11748 732825	24423 1487821	60219 3020011	117393 4096297	273640	2.00 100	4.00 200	10.0 400	20.0 500	40.0
cis-1,3-Dichloropropene	FB	Ave	12502 875010	24834 1802163	67469 3613891	140164 4809929	324694	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
4-Methyl-2-pentanone (MIBK)	CBNZ d5	Ave	19824 1186690	37515 2453091	103142 4632194	204425 6357140	464477	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Toluene	CBNZ d5	Ave	40672 2331750	78586 4698311	204232 9059537	414193 11346748	909465	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	9816 729624	19230 1517674	55362 3056498	111748 4121761	270497	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Ethyl methacrylate	CBNZ d5	Ave	10703 634581	20662 1280719	54752 2548287	105572 3510818	249207	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,2-Trichloroethane	CBNZ d5	Ave	8494 460224	16117 922757	41152 1790638	78504 2375602	176377	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Tetrachloroethene	CBNZ d5	Ave	6293 478485	13477 940118	41588 1794067	84868 2254296	188611	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,3-Dichloropropane	CBNZ d5	Ave	12811 787335	27679 1586612	68055 3139855	130706 4154302	300087	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Hexanone	CBNZ d5	Ave	12450 762623	25315 1527091	68985 2928602	123518 4170930	297693	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Dibromochloromethane	CBNZ d5	Ave	+++++ 475262	+++++ 992681	30999 1935650	70517 2548041	168420	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 355881

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/16/2018 16:59 Calibration End Date: 11/16/2018 19:51 Calibration ID: 48073

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2-Dibromoethane	CBNZ d5	Ave	7449 455975	15093 918369	39532 1778715	77900 2321848	176402	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Chlorobenzene	CBNZ d5	Ave	27911 1501560	53681 2917129	135457 5495695	272233 6888260	592845	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	6727 508079	13055 1002866	38381 1818225	86208 2258932	190292	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Ethylbenzene	CBNZ d5	Ave	13217 816895	26346 1588465	70930 2968033	144666 3734527	317352	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
m-Xylene & p-Xylene	CBNZ d5	Ave	15856 982569	31228 1899922	84971 3595780	174003 4523678	382080	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
o-Xylene	CBNZ d5	Ave	15280 955759	31732 1839210	82754 3358040	175279 4104156	373788	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Styrene	CBNZ d5	Ave	26000 1571943	50533 3053077	134779 5617719	275920 6931480	614144	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromoform	CBNZ d5	Ave	+++++ 279077	+++++ 588755	17558 1123253	38907 1483756	97795	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Isopropylbenzene	CBNZ d5	Ave	32204 2285322	67076 4403888	195649 7801890	419483 9479930	906147	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromobenzene	DCBd 4	Ave	11586 607760	21988 1165554	55927 2128077	111889 2651250	240989	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	8651 531180	16847 1027462	45855 1877327	93357 2475000	208322	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2,3-Trichloropropane	DCBd 4	Ave	3211 160528	6524 313337	14723 568207	29386 747646	63764	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	3571 193636	6623 377341	15510 716246	31386 984751	72498	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
N-Propylbenzene	DCBd 4	Ave	10552 674578	20989 1291256	59357 2339728	124777 +++++	271983	1.00 50.0	2.00 100	5.00 200	10.0 +++++	20.0
2-Chlorotoluene	DCBd 4	Ave	9366 566385	18565 1084852	49616 1952780	104146 2422893	229521	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	27411 1782896	56417 3382296	152072 5842072	323753 7077313	713447	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
4-Chlorotoluene	DCBd 4	Ave	11192 566249	20530 1048576	53060 1857574	108399 2271348	228493	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
tert-Butylbenzene	DCBd 4	Ave	22948 1617419	47072 3056118	136375 5456979	293825 6664796	636047	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	30783 1817215	56676 3422263	155799 6260162	339016 7705815	726741	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
sec-Butylbenzene	DCBd 4	Ave	31854 2303693	65892 4317970	197137 7875899	425278 9537522	920570	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	21721 1074084	40553 1988750	101170 3622213	203600 4511957	440642	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 355881

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/16/2018 16:59 Calibration End Date: 11/16/2018 19:51 Calibration ID: 48073

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
p-Isopropyltoluene	DCBd 4	Ave	27412 1926872	57020 3569535	166140 6465172	357553 7961510	778242	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,4-Dichlorobenzene	DCBd 4	Ave	22741 1083868	42846 2006145	104208 3626686	206712 4560313	437393	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
n-Butylbenzene	DCBd 4	Ave	24268 1732655	49173 3283593	148721 5927258	317862 7257955	690719	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2-Dichlorobenzene	DCBd 4	Ave	19602 980158	36046 1786821	94640 3151432	194096 3868606	399810	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin1	+++++ 95070	+++++ 203058	6280 402429	14654 559897	33766	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	13643 645996	24996 1283899	61224 2470221	128820 3118694	259688	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Hexachlorobutadiene	DCBd 4	Ave	+++++ 312692	+++++ 618044	25110 1238955	58722 1562174	125348	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Naphthalene	DCBd 4	Ave	36045 1580427	64266 3244576	150925 6131517	313982 7753542	638901	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	12781 604570	23355 1231821	57768 2371472	122110 2958884	244041	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Dibromofluoromethane (Surr)	FB	Ave	+++++ 535568	+++++ 1092995	55734 2163061	102873 2855568	211419	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	+++++ 584325	+++++ 1215943	65722 2459471	114474 3315686	233185	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Toluene-d8 (Surr)	CBNZ d5	Ave	+++++ 1998711	+++++ 3916785	241774 7605492	398243 9639112	810731	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	+++++ 674893	+++++ 1271802	91511 2430759	140849 3097115	282515	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 355881

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/16/2018 16:59 Calibration End Date: 11/16/2018 19:51 Calibration ID: 48073

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 240-355881/11	1416828.D
Level 2	IC 240-355881/10	1416827.D
Level 3	IC 240-355881/9	1416826.D
Level 4	IC 240-355881/8	1416825.D
Level 5	IC 240-355881/7	1416824.D
Level 6	ICIS 240-355881/6	1416823.D
Level 7	IC 240-355881/5	1416822.D
Level 8	IC 240-355881/4	1416821.D
Level 9	IC 240-355881/3	1416820.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4	LVL 5	LVL 6
Methylene Chloride	+++++	+++++	-22.5						50			
1,2-Dibromo-3-Chloropropane	+++++	+++++	18.8						50			

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416820.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 16-Nov-2018 16:59:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082038-003
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub81

Method: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 19-Nov-2018 10:56:38 Calib Date: 16-Nov-2018 19:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416828.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: macenczaks Date: 18-Nov-2018 10:31:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	96	2419107	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	97	1586612	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.284	0.000	98	636095	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	94	2855568	250.0	222.6	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	96	3315686	250.0	229.1	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	9639112	250.0	209.6	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	3097115	250.0	219.0	
9 Dichlorodifluoromethane	85	1.061	1.061	0.000	99	2068853	250.0	250.8	
10 Chloromethane	50	1.191	1.191	0.000	99	2955892	250.0	224.7	
11 Vinyl chloride	62	1.274	1.274	0.000	98	2378384	250.0	227.1	
12 Butadiene	54	1.298	1.298	0.000	97	2506212	250.0	231.2	
13 Bromomethane	94	1.511	1.522	-0.012	91	388250	250.0	69.0	
15 Chloroethane	64	1.593	1.605	-0.012	99	323967	250.0	58.3	
16 Dichlorofluoromethane	67	1.783	1.783	0.000	98	1519009	250.0	118.9	
17 Trichlorofluoromethane	101	1.795	1.806	-0.012	97	1687299	250.0	155.8	
18 Ethyl ether	59	2.078	2.078	0.000	97	1976992	250.0	189.4	
19 Acrolein	56	2.220	2.209	0.011	100	2676657	1250.0	1162.3	
21 1,1-Dichloroethene	96	2.268	2.268	0.000	96	2410191	250.0	220.6	
22 1,1,2-Trichloro-1,2,2-trif	151	2.291	2.291	0.000	94	1422568	250.0	204.7	
24 Acetone	43	2.386	2.374	0.012	99	2036254	500.0	451.1	
25 Iodomethane	142	2.410	2.410	0.000	96	4210520	250.0	223.6	
26 Carbon disulfide	76	2.457	2.457	0.000	100	8218323	250.0	233.5	
27 3-Chloro-1-propene	76	2.658	2.670	-0.012	91	2056460	250.0	253.2	
29 Methyl acetate	43	2.741	2.729	0.012	99	5869172	500.0	479.5	
30 Methylene Chloride	84	2.812	2.812	0.000	99	3096399	250.0	235.1	
31 2-Methyl-2-propanol	59	3.108	3.061	0.047	100	3299343	2500.0	2573.9	
32 trans-1,2-Dichloroethene	96	3.132	3.132	0.000	97	3330131	250.0	235.2	
33 Methyl tert-butyl ether	73	3.167	3.155	0.012	98	7452622	250.0	236.8	
34 Acrylonitrile	53	3.179	3.167	0.012	98	12581203	2500.0	2309.1	
35 Hexane	86	3.487	3.487	0.000	96	999001	250.0	244.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.723	3.723	0.000	96	6042403	250.0	247.1	
39 Vinyl acetate	86	3.889	3.877	0.012	97	675894	250.0	262.9	
41 2,2-Dichloropropane	97	4.682	4.682	0.000	97	718572	250.0	221.4	
42 cis-1,2-Dichloroethene	96	4.717	4.717	0.000	83	3693245	250.0	231.4	
43 2-Butanone (MEK)	43	4.836	4.824	0.012	99	3383274	500.0	463.3	
46 Chlorobromomethane	128	5.108	5.108	0.000	95	1692095	250.0	230.5	
48 Tetrahydrofuran	42	5.167	5.167	0.000	92	2283628	500.0	483.5	
49 Chloroform	83	5.273	5.273	0.000	96	4952158	250.0	242.5	
50 1,1,1-Trichloroethane	97	5.451	5.439	0.012	98	3754081	250.0	251.1	
51 Cyclohexane	56	5.475	5.475	0.001	94	5875135	250.0	234.3	
52 Carbon tetrachloride	117	5.652	5.652	0.000	96	3439787	250.0	245.8	
53 1,1-Dichloropropene	75	5.676	5.676	0.000	92	4235042	250.0	254.0	
54 Benzene	78	5.948	5.948	0.000	98	12202452	250.0	226.2	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	96	4137804	250.0	243.8	
55 Isobutyl alcohol	41	6.078	6.066	0.012	95	2965480	6250.0	6192.9	
58 n-Heptane	100	6.315	6.315	0.000	95	1033835	250.0	239.1	
59 Trichloroethene	130	6.729	6.729	0.000	97	3180583	250.0	226.9	
62 Methylcyclohexane	83	6.894	6.894	0.000	95	5338976	250.0	226.7	
63 1,2-Dichloropropane	63	6.977	6.977	0.000	94	3367886	250.0	241.7	
65 Dibromomethane	93	7.107	7.107	0.000	96	1735502	250.0	226.6	
67 1,4-Dioxane	88	7.155	7.155	0.000	99	564135	5000.0	4371.9	
68 Dichlorobromomethane	83	7.297	7.297	0.000	98	3724964	250.0	267.8	
70 2-Chloroethyl vinyl ether	63	7.640	7.628	0.012	93	4096297	500.0	495.3	
71 cis-1,3-Dichloropropene	75	7.746	7.735	0.011	96	4809929	250.0	252.6	
73 4-Methyl-2-pentanone (MIBK	43	7.924	7.924	0.000	98	6357140	500.0	496.7	
74 Toluene	91	8.030	8.030	0.000	98	11346748	250.0	225.1	
75 trans-1,3-Dichloropropene	75	8.291	8.279	0.012	97	4121761	250.0	277.4	
76 Ethyl methacrylate	69	8.385	8.385	0.000	94	3510818	250.0	255.4	
77 1,1,2-Trichloroethane	97	8.445	8.445	0.000	91	2375602	250.0	235.9	
78 Tetrachloroethene	164	8.527	8.527	0.000	98	2254296	250.0	230.9	
79 1,3-Dichloropropane	76	8.587	8.587	0.000	97	4154302	250.0	244.9	
80 2-Hexanone	43	8.693	8.693	0.000	98	4170930	500.0	508.6	
82 Chlorodibromomethane	129	8.788	8.788	0.000	91	2548041	250.0	261.5	
83 Ethylene Dibromide	107	8.871	8.871	0.000	98	2321848	250.0	238.1	
85 Chlorobenzene	112	9.308	9.308	0.000	93	6888260	250.0	211.2	
86 1,1,1,2-Tetrachloroethane	131	9.391	9.391	0.000	97	2258932	250.0	228.0	
87 Ethylbenzene	106	9.415	9.415	0.000	98	3734527	250.0	218.5	
88 m-Xylene & p-Xylene	106	9.510	9.510	0.000	98	4523678	250.0	220.3	
89 o-Xylene	106	9.853	9.853	0.000	97	4104156	250.0	206.0	
90 Styrene	104	9.876	9.876	0.000	96	6931480	250.0	211.8	
91 Bromoform	173	10.030	10.030	0.000	98	1483756	250.0	263.2	
92 Isopropylbenzene	105	10.172	10.172	0.000	97	9479930	250.0	205.5	
94 Bromobenzene	156	10.433	10.421	0.012	96	2651250	250.0	227.2	
95 1,1,2,2-Tetrachloroethane	83	10.456	10.456	0.000	95	2475000	250.0	251.5	
96 1,2,3-Trichloropropane	110	10.492	10.492	0.000	87	747646	250.0	235.8	
97 trans-1,4-Dichloro-2-buten	53	10.504	10.504	0.000	85	984751	250.0	269.9	
98 N-Propylbenzene	120		10.527				ND	ND	U
99 2-Chlorotoluene	126	10.598	10.586	0.012	97	2422893	250.0	230.4	a
100 1,3,5-Trimethylbenzene	105	10.681	10.681	0.000	96	7077313	250.0	220.6	
101 4-Chlorotoluene	126	10.693	10.693	0.000	98	2271348	250.0	210.2	
103 tert-Butylbenzene	119	10.953	10.953	0.000	94	6664796	250.0	232.0	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	97	7705815	250.0	230.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 sec-Butylbenzene	105	11.131	11.131	0.000	95	9537522	250.0	232.5	
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	98	4511957	250.0	216.6	
109 4-Isopropyltoluene	119	11.261	11.261	0.000	96	7961510	250.0	230.9	
110 1,4-Dichlorobenzene	146	11.308	11.296	0.012	95	4560313	250.0	214.7	
113 n-Butylbenzene	91	11.604	11.604	0.000	97	7257955	250.0	234.7	
114 1,2-Dichlorobenzene	146	11.616	11.616	0.000	97	3868606	250.0	205.5	
115 1,2-Dibromo-3-Chloropropan	157	12.278	12.278	0.000	87	559897	250.0	256.8	
117 1,2,4-Trichlorobenzene	180	12.965	12.965	0.000	95	3118694	250.0	237.3	
118 Hexachlorobutadiene	225	13.095	13.095	0.000	98	1562174	250.0	255.4	
119 Naphthalene	128	13.166	13.166	0.000	97	7753542	250.0	235.6	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	96	2958884	250.0	238.2	
S 132 1,2-Dichloroethene, Total	96				0			466.7	
S 133 1,3-Dichloropropene, Total	75				0			530.0	
S 134 Xylenes, Total	106				0		500.0	426.4	
S 157 Total BTEX	1				0		1250.0	1096.2	
S 135 Trihalomethanes, Total	1				0		1000.0	1034.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

VMAROLISTDW_00273	Amount Added:	25.00	Units: uL
VMRGAS_00270	Amount Added:	25.00	Units: uL
VMRPRIMW_00309	Amount Added:	25.00	Units: uL
VM568718_00013	Amount Added:	1.00	Units: uL
vm50ss_00343	Amount Added:	25.00	Units: uL

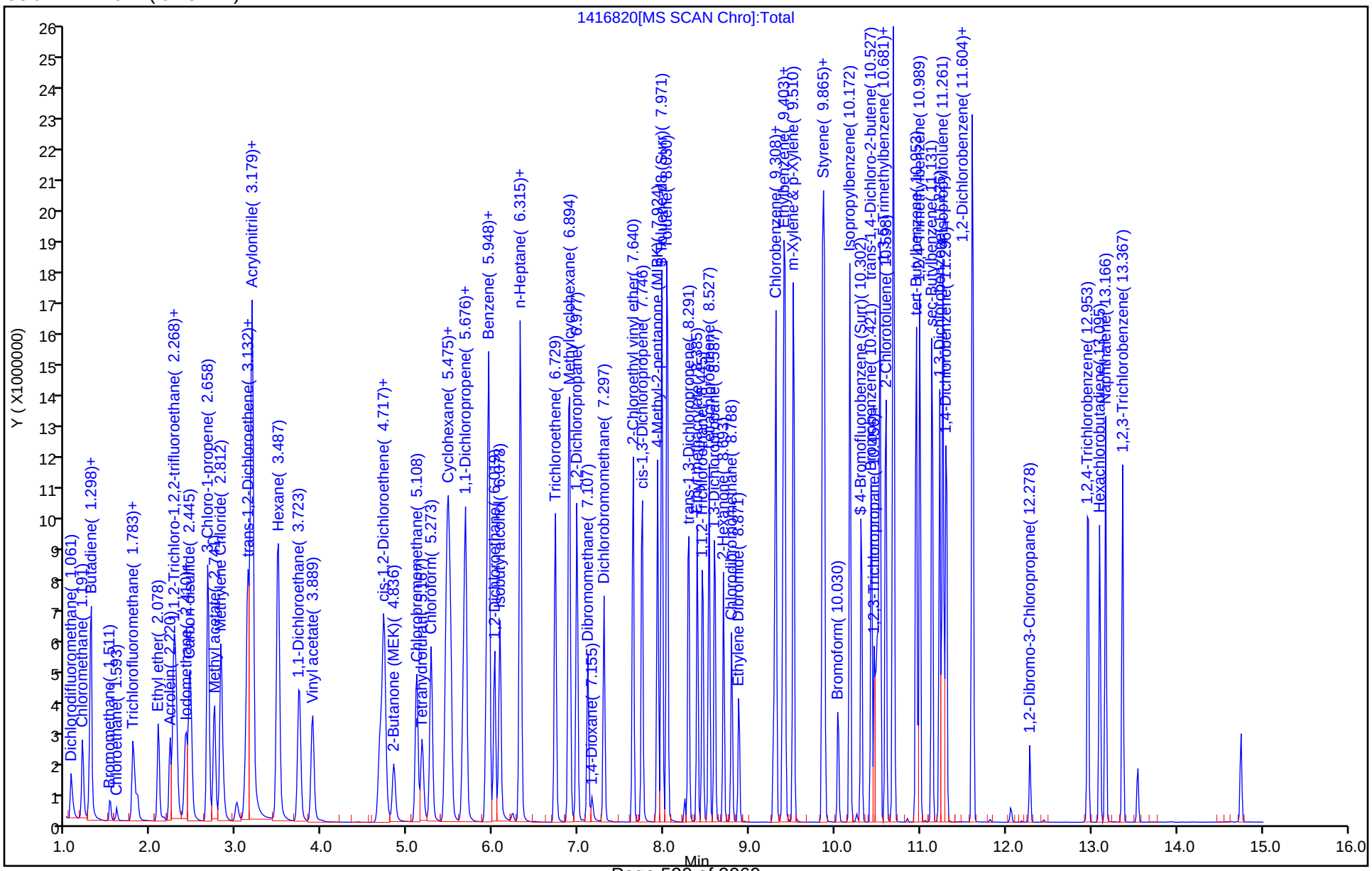
Report Date: 19-Nov-2018 10:56:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416820.D

Injection Date:	16-Nov-2018 16:59:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

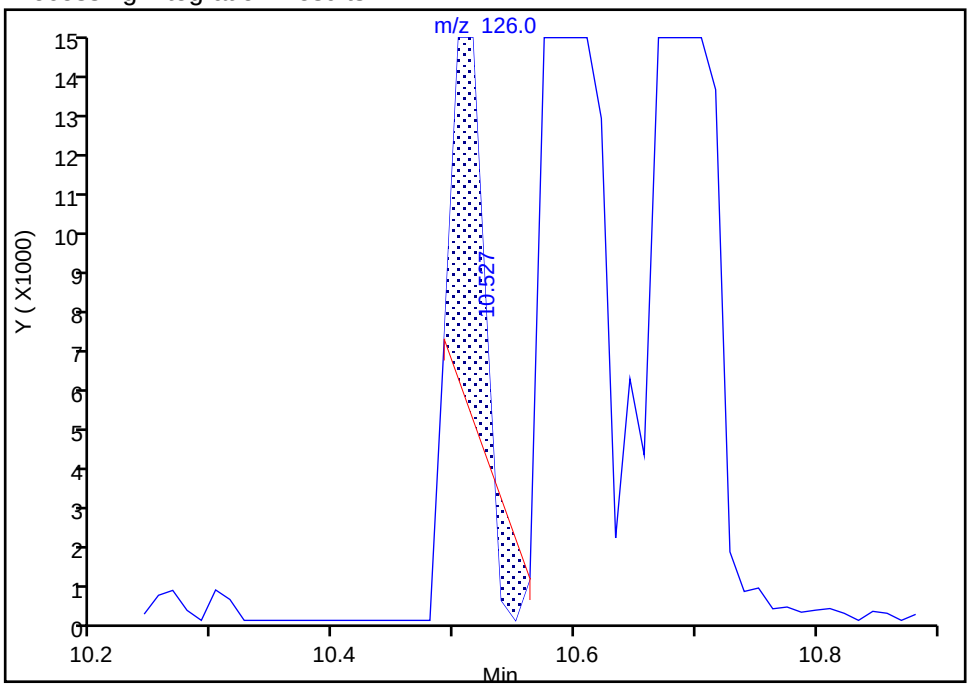
Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416820.D
Injection Date: 16-Nov-2018 16:59:30 Instrument ID: A3UX14
Lims ID: ic
Client ID:
Operator ID: 002808 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_14 Limit Group: MSV 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

99 2-Chlorotoluene, CAS: 95-49-8

Signal: 1

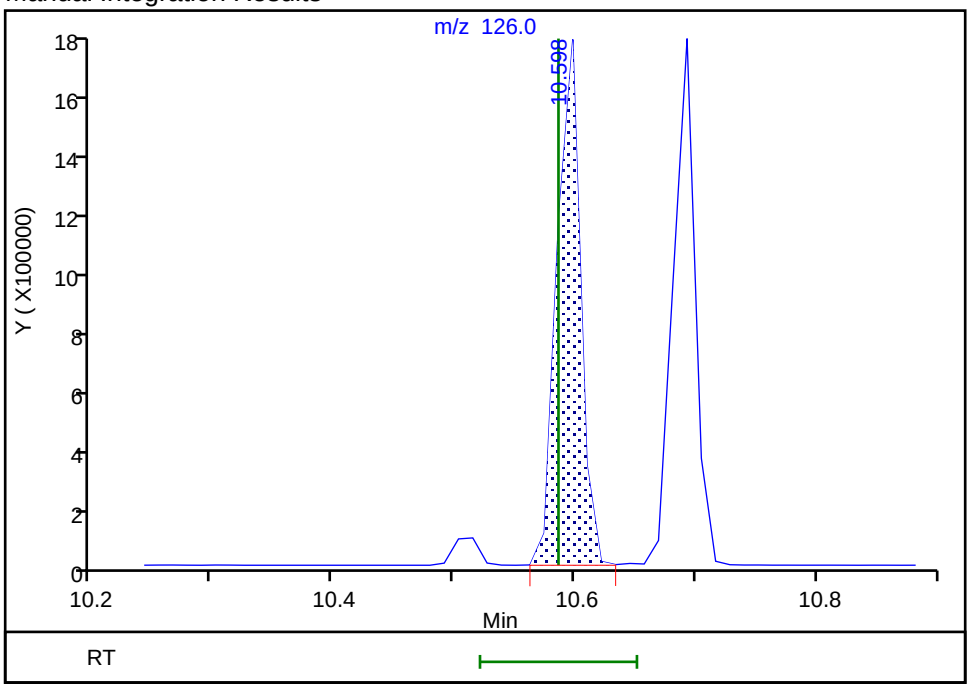
Processing Integration Results

RT: 10.53
Area: 120154
Amount: 12.655125
Amount Units: ug/l



Manual Integration Results

RT: 10.60
Area: 2422893
Amount: 230.3583
Amount Units: ug/l



Reviewer: macenczaks, 18-Nov-2018 10:31:30
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

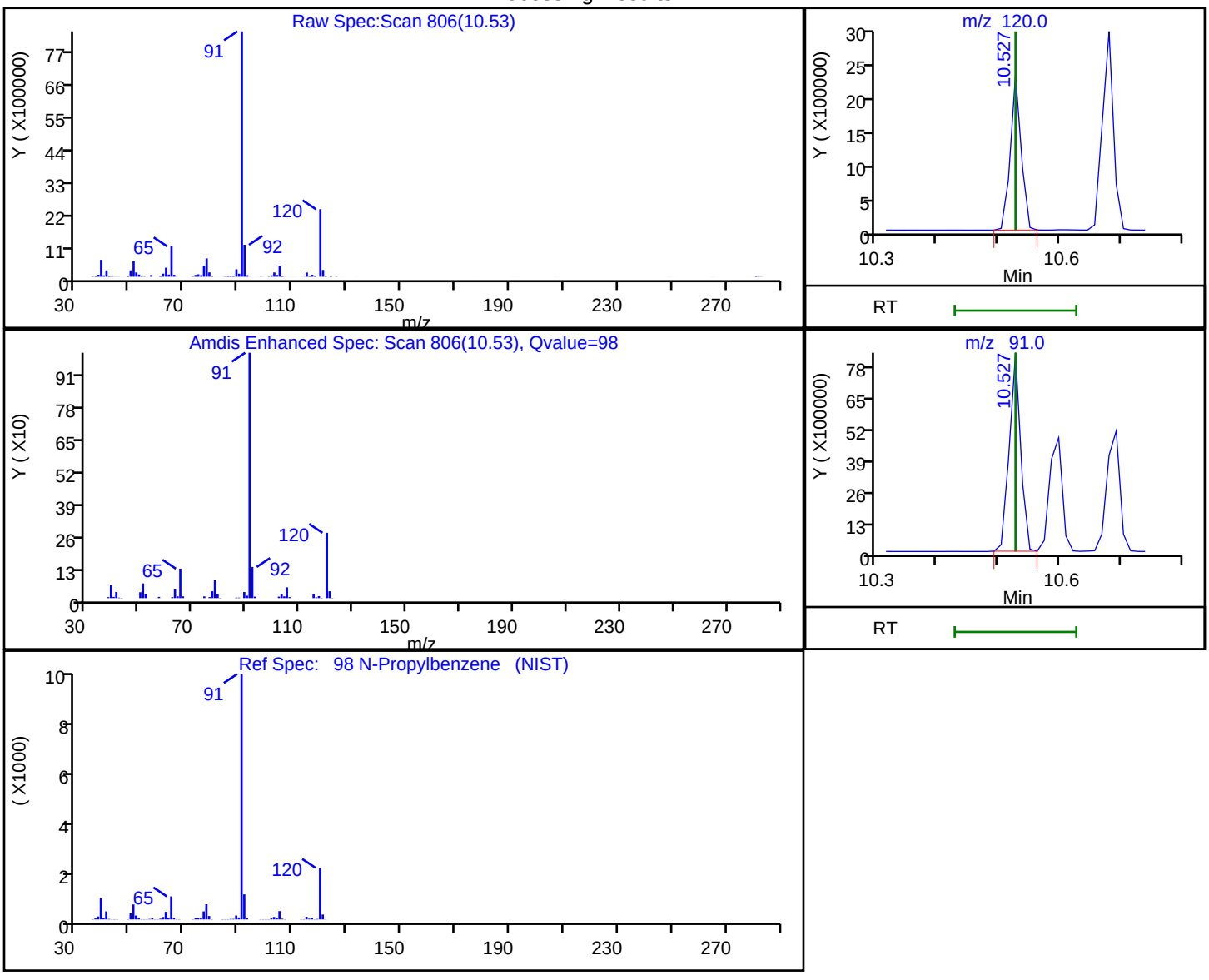
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416820.D
Injection Date: 16-Nov-2018 16:59:30 Instrument ID: A3UX14
Lims ID: ic
Client ID:
Operator ID: 002808 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_14 Limit Group: MSV 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

98 N-Propylbenzene, CAS: 103-65-1

Processing Results



RT	Mass	Response	Amount
10.53	120.00	2844385	229.6637
10.53	91.00	10888161	

Reviewer: macenczaks, 18-Nov-2018 10:31:37
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416821.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 16-Nov-2018 17:20:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082038-004
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub81

Method: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 19-Nov-2018 10:56:47 Calib Date: 16-Nov-2018 19:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416828.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: macenczaks Date: 18-Nov-2018 10:37:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	96	2155685	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	97	1442179	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.284	0.000	99	584166	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	94	2163061	200.0	189.3	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	96	2459471	200.0	190.7	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	7605492	200.0	181.9	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	2430759	200.0	187.1	
9 Dichlorodifluoromethane	85	1.061	1.061	0.000	99	1595647	200.0	217.1	
10 Chloromethane	50	1.191	1.191	0.000	99	2260671	200.0	192.9	
11 Vinyl chloride	62	1.274	1.274	0.000	98	1862314	200.0	199.5	
12 Butadiene	54	1.297	1.298	-0.001	97	1980566	200.0	205.0	
13 Bromomethane	94	1.522	1.522	0.000	91	308127	200.0	61.5	
15 Chloroethane	64	1.593	1.605	-0.012	99	316020	200.0	63.8	
16 Dichlorofluoromethane	67	1.783	1.783	0.000	98	1393516	200.0	122.4	
17 Trichlorofluoromethane	101	1.806	1.806	0.000	97	1481064	200.0	153.4	
18 Ethyl ether	59	2.078	2.078	0.000	96	1558849	200.0	167.6	
19 Acrolein	56	2.220	2.209	0.011	100	2038699	1000.0	993.4	
21 1,1-Dichloroethene	96	2.268	2.268	0.000	97	1945723	200.0	199.9	
22 1,1,2-Trichloro-1,2,2-trif	151	2.291	2.291	0.000	94	1163731	200.0	187.9	
24 Acetone	43	2.386	2.374	0.012	99	1466041	400.0	364.5	
25 Iodomethane	142	2.410	2.410	0.000	96	3341655	200.0	199.1	
26 Carbon disulfide	76	2.457	2.457	0.000	100	6438127	200.0	205.3	
27 3-Chloro-1-propene	76	2.670	2.670	0.000	91	1550957	200.0	214.3	
29 Methyl acetate	43	2.729	2.729	0.000	99	4201619	400.0	385.2	
30 Methylene Chloride	84	2.812	2.812	0.000	99	2383761	200.0	202.4	
31 2-Methyl-2-propanol	59	3.096	3.061	0.035	99	2361484	2000.0	2067.4	
32 trans-1,2-Dichloroethene	96	3.131	3.132	-0.001	97	2527453	200.0	200.4	
33 Methyl tert-butyl ether	73	3.167	3.155	0.012	99	5620032	200.0	200.4	
34 Acrylonitrile	53	3.179	3.167	0.012	99	9288692	2000.0	1913.1	
35 Hexane	86	3.486	3.487	-0.001	96	741044	200.0	203.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.735	3.723	0.012	96	4522188	200.0	207.5	
39 Vinyl acetate	86	3.889	3.877	0.012	97	482706	200.0	210.7	
41 2,2-Dichloropropane	97	4.682	4.682	0.000	96	573775	200.0	198.4	
42 cis-1,2-Dichloroethene	96	4.717	4.717	0.000	82	2788338	200.0	196.1	
43 2-Butanone (MEK)	43	4.835	4.824	0.011	99	2397397	400.0	368.4	
46 Chlorobromomethane	128	5.108	5.108	0.000	95	1281329	200.0	195.9	
48 Tetrahydrofuran	42	5.167	5.167	0.000	91	1601673	400.0	380.5	
49 Chloroform	83	5.273	5.273	0.000	96	3704076	200.0	203.5	
50 1,1,1-Trichloroethane	97	5.451	5.439	0.012	98	2862549	200.0	214.8	
51 Cyclohexane	56	5.474	5.475	0.000	94	4524968	200.0	202.5	
52 Carbon tetrachloride	117	5.652	5.652	0.000	96	2607418	200.0	209.1	
53 1,1-Dichloropropene	75	5.676	5.676	0.000	91	3182496	200.0	214.2	
54 Benzene	78	5.948	5.948	0.000	98	9377262	200.0	195.1	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	96	3060297	200.0	202.3	
55 Isobutyl alcohol	41	6.078	6.066	0.012	95	2120776	5000.0	4970.1	
58 n-Heptane	100	6.315	6.315	0.000	96	783025	200.0	203.2	
59 Trichloroethene	130	6.729	6.729	0.000	97	2476172	200.0	198.2	
62 Methylcyclohexane	83	6.894	6.894	0.000	95	4119843	200.0	196.3	
63 1,2-Dichloropropane	63	6.977	6.977	0.000	94	2535179	200.0	204.2	
65 Dibromomethane	93	7.107	7.107	0.000	95	1308037	200.0	191.6	
67 1,4-Dioxane	88	7.155	7.155	0.000	99	413196	4000.0	3593.5	
68 Dichlorobromomethane	83	7.297	7.297	0.000	98	2813957	200.0	227.0	
70 2-Chloroethyl vinyl ether	63	7.640	7.628	0.012	93	3020011	400.0	409.7	
71 cis-1,3-Dichloropropene	75	7.746	7.735	0.011	92	3613891	200.0	213.0	
73 4-Methyl-2-pentanone (MIBK	43	7.924	7.924	0.000	98	4632194	400.0	398.1	
74 Toluene	91	8.030	8.030	0.000	99	9059537	200.0	197.7	
75 trans-1,3-Dichloropropene	75	8.291	8.279	0.012	97	3056498	200.0	226.3	
76 Ethyl methacrylate	69	8.385	8.385	0.000	94	2548287	200.0	204.0	
77 1,1,2-Trichloroethane	97	8.444	8.445	-0.001	90	1790638	200.0	195.6	
78 Tetrachloroethene	164	8.527	8.527	0.000	98	1794067	200.0	202.1	
79 1,3-Dichloropropane	76	8.586	8.587	-0.001	98	3139855	200.0	203.6	
80 2-Hexanone	43	8.693	8.693	0.000	98	2928602	400.0	392.9	
82 Chlorodibromomethane	129	8.788	8.788	0.000	91	1935650	200.0	218.5	
83 Ethylene Dibromide	107	8.870	8.871	-0.001	98	1778715	200.0	200.7	
85 Chlorobenzene	112	9.308	9.308	0.000	94	5495695	200.0	185.3	
86 1,1,1,2-Tetrachloroethane	131	9.391	9.391	0.000	97	1818225	200.0	201.9	
87 Ethylbenzene	106	9.415	9.415	0.000	98	2968033	200.0	191.0	
88 m-Xylene & p-Xylene	106	9.509	9.510	-0.001	98	3595780	200.0	192.7	
89 o-Xylene	106	9.853	9.853	0.000	98	3358040	200.0	185.5	
90 Styrene	104	9.876	9.876	0.000	96	5617719	200.0	188.8	
91 Bromoform	173	10.042	10.030	0.012	99	1123253	200.0	219.2	
92 Isopropylbenzene	105	10.172	10.172	0.000	97	7801890	200.0	186.0	
94 Bromobenzene	156	10.432	10.421	0.011	95	2128077	200.0	198.6	
95 1,1,2,2-Tetrachloroethane	83	10.456	10.456	0.000	95	1877327	200.0	207.7	
96 1,2,3-Trichloropropane	110	10.492	10.492	0.000	86	568207	200.0	195.1	
97 trans-1,4-Dichloro-2-buten	53	10.503	10.504	-0.001	86	716246	200.0	213.8	
98 N-Propylbenzene	120	10.527	10.527	0.000	98	2339728	200.0	203.6	
99 2-Chlorotoluene	126	10.598	10.586	0.012	98	1952780	200.0	202.2	
100 1,3,5-Trimethylbenzene	105	10.681	10.681	0.000	96	5842072	200.0	198.3	
101 4-Chlorotoluene	126	10.693	10.693	0.000	98	1857574	200.0	187.2	
103 tert-Butylbenzene	119	10.953	10.953	0.000	94	5456979	200.0	206.8	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	97	6260162	200.0	203.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 sec-Butylbenzene	105	11.131	11.131	0.000	95	7875899	200.0	209.1	
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	98	3622213	200.0	189.3	
109 4-Isopropyltoluene	119	11.261	11.261	0.000	97	6465172	200.0	204.2	
110 1,4-Dichlorobenzene	146	11.308	11.296	0.012	95	3626686	200.0	185.9	
113 n-Butylbenzene	91	11.604	11.604	0.000	97	5927258	200.0	208.7	
114 1,2-Dichlorobenzene	146	11.616	11.616	0.000	97	3151432	200.0	182.3	
115 1,2-Dibromo-3-Chloropropan	157	12.278	12.278	0.000	87	402429	200.0	201.7	
117 1,2,4-Trichlorobenzene	180	12.965	12.965	0.000	95	2470221	200.0	204.7	
118 Hexachlorobutadiene	225	13.095	13.095	0.000	98	1238955	200.0	220.5	
119 Naphthalene	128	13.166	13.166	0.000	97	6131517	200.0	202.8	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	96	2371472	200.0	207.9	
S 132 1,2-Dichloroethene, Total	96				0			396.5	
S 133 1,3-Dichloropropene, Total	75				0			439.3	
S 134 Xylenes, Total	106				0		400.0	378.1	
S 135 Trihalomethanes, Total	1				0		800.0	868.2	
S 157 Total BTEX	1				0		1000.0	962.0	

Reagents:

VM568718_00013	Amount Added:	1.00	Units: uL
VMAROLISTDW_00273	Amount Added:	20.00	Units: uL
VMRGAS_00270	Amount Added:	20.00	Units: uL
VMRPRIMW_00309	Amount Added:	20.00	Units: uL
vm50ss_00343	Amount Added:	20.00	Units: uL

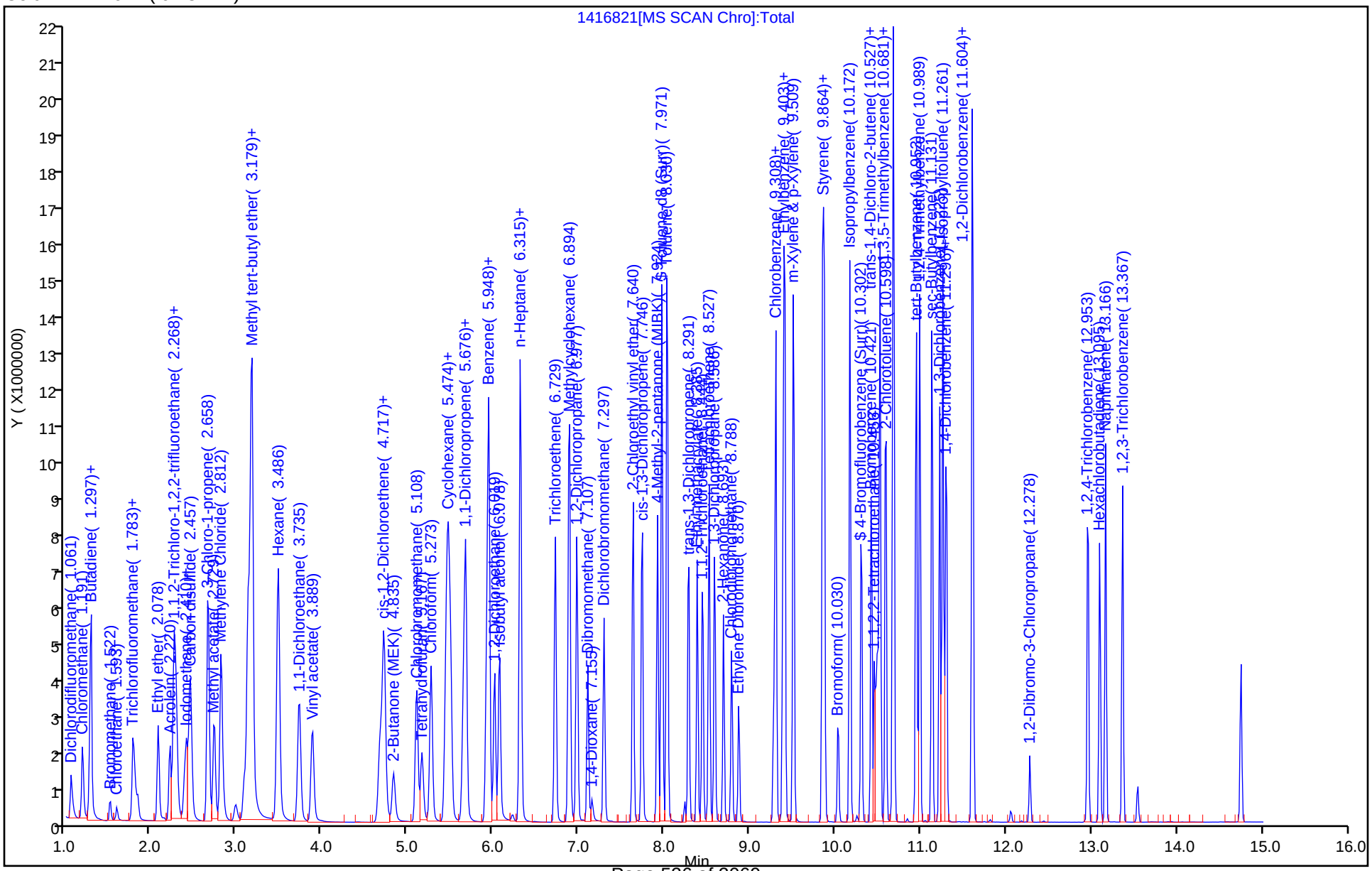
Report Date: 19-Nov-2018 10:56:48 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416821.D

Injection Date:	16-Nov-2018 17:20:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416822.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 16-Nov-2018 17:42:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082038-005
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub81

Method: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 19-Nov-2018 10:56:53 Calib Date: 16-Nov-2018 19:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416828.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: macenczaks Date: 18-Nov-2018 10:37:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	90	2104963	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	96	1452373	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.284	0.000	97	625584	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	94	1092995	100.0	97.9	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	96	1215943	100.0	96.5	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	3916785	100.0	93.0	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	1271802	100.0	91.4	
9 Dichlorodifluoromethane	85	1.061	1.061	0.000	99	767694	100.0	106.9	
10 Chloromethane	50	1.191	1.191	0.000	99	1107689	100.0	96.8	
11 Vinyl chloride	62	1.274	1.274	0.000	98	888313	100.0	97.5	
12 Butadiene	54	1.286	1.298	-0.012	95	971492	100.0	103.0	
13 Bromomethane	94	1.522	1.522	0.000	91	181722	100.0	37.1	
15 Chloroethane	64	1.605	1.605	0.000	98	289102	100.0	59.8	
16 Dichlorofluoromethane	67	1.783	1.783	0.000	98	866137	100.0	77.9	
17 Trichlorofluoromethane	101	1.806	1.806	0.000	98	874655	100.0	92.8	
18 Ethyl ether	59	2.078	2.078	0.000	96	880396	100.0	96.9	
19 Acrolein	56	2.209	2.209	0.000	100	1107173	500.0	552.5	
21 1,1-Dichloroethene	96	2.268	2.268	0.000	97	1040410	100.0	109.5	
22 1,1,2-Trichloro-1,2,2-trif	151	2.291	2.291	0.000	91	609712	100.0	100.8	
24 Acetone	43	2.374	2.374	0.000	99	780578	200.0	198.8	
25 Iodomethane	142	2.410	2.410	0.000	96	1784761	100.0	108.9	
26 Carbon disulfide	76	2.457	2.457	0.000	100	3339284	100.0	109.0	
27 3-Chloro-1-propene	76	2.670	2.670	0.000	91	774950	100.0	109.6	
29 Methyl acetate	43	2.729	2.729	0.000	99	2159066	200.0	202.7	
30 Methylene Chloride	84	2.812	2.812	0.000	99	1264142	100.0	107.6	
31 2-Methyl-2-propanol	59	3.072	3.061	0.011	99	1198680	1000.0	1074.7	
32 trans-1,2-Dichloroethene	96	3.132	3.132	0.000	97	1273571	100.0	103.4	
33 Methyl tert-butyl ether	73	3.155	3.155	0.000	99	2889360	100.0	105.5	
34 Acrylonitrile	53	3.167	3.167	0.000	99	4925872	1000.0	1039.0	
35 Hexane	86	3.487	3.487	0.000	95	361021	100.0	101.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.723	3.723	0.000	96	2257904	100.0	106.1	
39 Vinyl acetate	86	3.889	3.877	0.012	97	234378	100.0	104.8	
41 2,2-Dichloropropane	97	4.682	4.682	0.000	94	300301	100.0	106.4	
42 cis-1,2-Dichloroethene	96	4.717	4.717	0.000	87	1422391	100.0	102.4	
43 2-Butanone (MEK)	43	4.824	4.824	0.000	99	1230446	200.0	193.6	
46 Chlorobromomethane	128	5.108	5.108	0.000	96	663397	100.0	103.9	
48 Tetrahydrofuran	42	5.167	5.167	0.000	91	836087	200.0	203.4	
49 Chloroform	83	5.273	5.273	0.000	96	1862658	100.0	104.8	
50 1,1,1-Trichloroethane	97	5.451	5.439	0.012	99	1447738	100.0	111.3	
51 Cyclohexane	56	5.474	5.475	0.000	94	2266517	100.0	103.9	
52 Carbon tetrachloride	117	5.652	5.652	0.000	97	1299377	100.0	106.7	
53 1,1-Dichloropropene	75	5.676	5.676	0.000	91	1585182	100.0	109.3	
54 Benzene	78	5.948	5.948	0.000	98	4773170	100.0	101.7	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	96	1531356	100.0	103.7	
55 Isobutyl alcohol	41	6.066	6.066	0.000	95	1084166	2500.0	2602.0	
58 n-Heptane	100	6.315	6.315	0.000	95	377597	100.0	100.4	
59 Trichloroethene	130	6.729	6.729	0.000	96	1280082	100.0	104.9	
62 Methylcyclohexane	83	6.894	6.894	0.000	95	2120967	100.0	103.5	
63 1,2-Dichloropropane	63	6.977	6.977	0.000	94	1253139	100.0	103.4	
65 Dibromomethane	93	7.107	7.107	0.000	94	680386	100.0	102.1	
67 1,4-Dioxane	88	7.155	7.155	0.000	98	212722	2000.0	1894.6	
68 Dichlorobromomethane	83	7.297	7.297	0.000	98	1389550	100.0	114.8	
70 2-Chloroethyl vinyl ether	63	7.640	7.628	0.012	93	1487821	200.0	206.7	
71 cis-1,3-Dichloropropene	75	7.735	7.735	0.000	92	1802163	100.0	108.8	
73 4-Methyl-2-pentanone (MIBK	43	7.924	7.924	0.000	99	2453091	200.0	209.4	
74 Toluene	91	8.030	8.030	0.000	98	4698311	100.0	101.8	
75 trans-1,3-Dichloropropene	75	8.279	8.279	0.000	97	1517674	100.0	111.6	
76 Ethyl methacrylate	69	8.385	8.385	0.000	94	1280719	100.0	101.8	
77 1,1,2-Trichloroethane	97	8.445	8.445	-0.001	90	922757	100.0	100.1	
78 Tetrachloroethene	164	8.527	8.527	0.000	98	940118	100.0	105.2	
79 1,3-Dichloropropane	76	8.587	8.587	-0.001	98	1586612	100.0	102.2	
80 2-Hexanone	43	8.693	8.693	0.000	98	1527091	200.0	203.4	
82 Chlorodibromomethane	129	8.788	8.788	0.000	91	992681	100.0	111.3	
83 Ethylene Dibromide	107	8.870	8.871	-0.001	98	918369	100.0	102.9	
85 Chlorobenzene	112	9.308	9.308	0.000	96	2917129	100.0	97.7	
86 1,1,1,2-Tetrachloroethane	131	9.391	9.391	0.000	97	1002866	100.0	110.6	
87 Ethylbenzene	106	9.415	9.415	0.000	98	1588465	100.0	101.5	
88 m-Xylene & p-Xylene	106	9.509	9.510	-0.001	99	1899922	100.0	101.1	
89 o-Xylene	106	9.853	9.853	0.000	98	1839210	100.0	100.9	
90 Styrene	104	9.876	9.876	0.000	97	3053077	100.0	101.9	
91 Bromoform	173	10.030	10.030	0.000	98	588755	100.0	114.1	
92 Isopropylbenzene	105	10.172	10.172	0.000	96	4403888	100.0	104.3	
94 Bromobenzene	156	10.421	10.421	0.000	95	1165554	100.0	101.6	
95 1,1,2,2-Tetrachloroethane	83	10.456	10.456	0.000	94	1027462	100.0	106.2	
96 1,2,3-Trichloropropane	110	10.492	10.492	0.000	88	313337	100.0	100.5	
97 trans-1,4-Dichloro-2-buten	53	10.503	10.504	-0.001	81	377341	100.0	105.2	
98 N-Propylbenzene	120	10.527	10.527	0.000	99	1291256	100.0	104.9	
99 2-Chlorotoluene	126	10.586	10.586	0.000	97	1084852	100.0	104.9	
100 1,3,5-Trimethylbenzene	105	10.681	10.681	0.000	96	3382296	100.0	107.2	
101 4-Chlorotoluene	126	10.693	10.693	0.000	98	1048576	100.0	98.7	
103 tert-Butylbenzene	119	10.953	10.953	0.000	93	3056118	100.0	108.1	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	97	3422263	100.0	103.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 sec-Butylbenzene	105	11.131	11.131	0.000	95	4317970	100.0	107.0	
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	98	1988750	100.0	97.1	
109 4-Isopropyltoluene	119	11.261	11.261	0.000	97	3569535	100.0	105.3	
110 1,4-Dichlorobenzene	146	11.296	11.296	0.000	95	2006145	100.0	96.0	
113 n-Butylbenzene	91	11.604	11.604	0.000	97	3283593	100.0	108.0	
114 1,2-Dichlorobenzene	146	11.616	11.616	0.000	98	1786821	100.0	96.5	
115 1,2-Dibromo-3-Chloropropan	157	12.278	12.278	0.000	87	203058	100.0	96.6	
117 1,2,4-Trichlorobenzene	180	12.965	12.965	0.000	95	1283899	100.0	99.3	
118 Hexachlorobutadiene	225	13.095	13.095	0.000	98	618044	100.0	102.7	
119 Naphthalene	128	13.166	13.166	0.000	97	3244576	100.0	100.2	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	96	1231821	100.0	100.8	
S 132 1,2-Dichloroethene, Total	96				0			205.8	
S 133 1,3-Dichloropropene, Total	75				0			220.3	
S 134 Xylenes, Total	106				0		200.0	201.9	
S 157 Total BTEX	1				0		500.0	507.0	
S 135 Trihalomethanes, Total	1				0		400.0	445.0	

Reagents:

VM568718_00013	Amount Added:	1.00	Units: uL
VMRPRIMW_00309	Amount Added:	10.00	Units: uL
VMRGAS_00270	Amount Added:	10.00	Units: uL
VMAROLISTDW_00273	Amount Added:	10.00	Units: uL
vm50ss_00343	Amount Added:	10.00	Units: uL

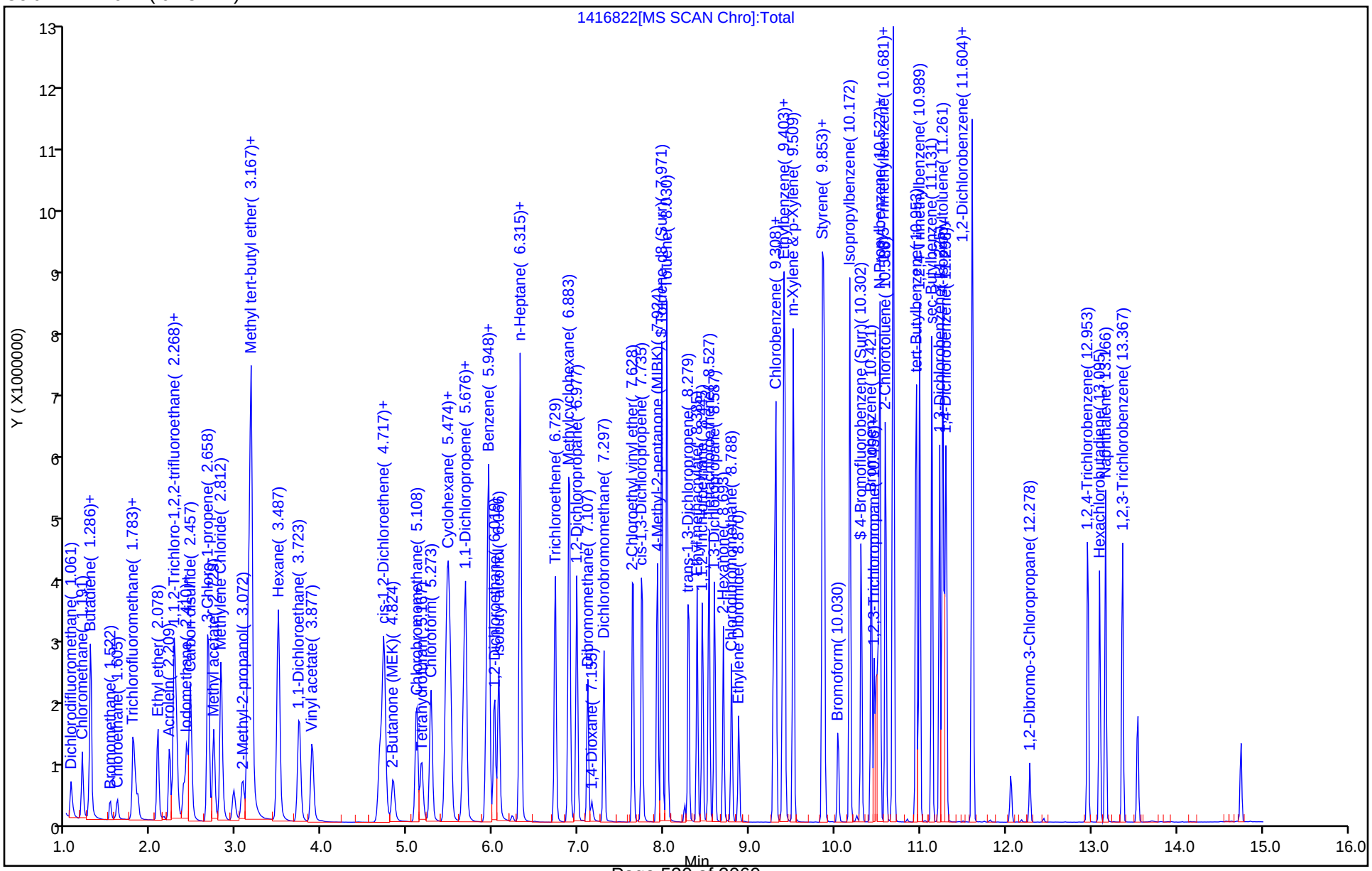
Report Date: 19-Nov-2018 10:56:55 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416822.D

Injection Date:	16-Nov-2018 17:42:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416823.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 16-Nov-2018 18:03:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icis
Misc. Info.: 240-0082038-006
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub81

Method: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 19-Nov-2018 10:57:00 Calib Date: 16-Nov-2018 19:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416828.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: macenczaks Date: 18-Nov-2018 10:38:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	95	2015750	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	1412675	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.284	0.000	99	634809	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	94	535568	50.0	50.1	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	96	584325	50.0	48.4	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	1998711	50.0	48.8	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	674893	50.0	47.8	
9 Dichlorodifluoromethane	85	1.061	1.061	0.000	99	370572	50.0	53.9	
10 Chloromethane	50	1.191	1.191	0.000	99	545545	50.0	49.8	
11 Vinyl chloride	62	1.274	1.274	0.000	98	436616	50.0	50.0	
12 Butadiene	54	1.298	1.298	0.000	97	473404	50.0	52.4	
13 Bromomethane	94	1.522	1.522	0.000	91	148985	50.0	31.8	
15 Chloroethane	64	1.605	1.605	0.000	98	188168	50.0	40.6	
16 Dichlorofluoromethane	67	1.783	1.783	0.000	98	490993	50.0	46.1	
17 Trichlorofluoromethane	101	1.806	1.806	0.000	98	477025	50.0	52.8	
18 Ethyl ether	59	2.078	2.078	0.000	96	448078	50.0	51.5	
19 Acrolein	56	2.209	2.209	0.000	100	526131	250.0	274.2	
21 1,1-Dichloroethene	96	2.268	2.268	0.000	98	518018	50.0	56.9	
22 1,1,2-Trichloro-1,2,2-trif	151	2.291	2.291	0.000	92	305298	50.0	52.7	
24 Acetone	43	2.374	2.374	0.000	99	356859	100.0	94.9	
25 Iodomethane	142	2.410	2.410	0.000	95	878363	50.0	56.0	
26 Carbon disulfide	76	2.457	2.457	0.000	100	1607079	50.0	54.8	
27 3-Chloro-1-propene	76	2.670	2.670	0.000	91	371564	50.0	54.9	
29 Methyl acetate	43	2.729	2.729	0.000	99	1004468	100.0	98.5	
30 Methylene Chloride	84	2.812	2.812	0.000	99	638794	50.0	54.4	
31 2-Methyl-2-propanol	59	3.061	3.061	0.000	99	514837	500.0	482.0	
32 trans-1,2-Dichloroethene	96	3.132	3.132	0.000	98	621705	50.0	52.7	
33 Methyl tert-butyl ether	73	3.155	3.155	0.000	99	1324120	50.0	50.5	
34 Acrylonitrile	53	3.167	3.167	0.000	99	2304074	500.0	507.5	
35 Hexane	86	3.487	3.487	0.000	94	178730	50.0	52.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.723	3.723	0.000	96	1075358	50.0	52.8	
39 Vinyl acetate	86	3.877	3.877	0.000	97	115150	50.0	53.8	
41 2,2-Dichloropropane	97	4.682	4.682	0.000	93	146746	50.0	54.3	
42 cis-1,2-Dichloroethene	96	4.717	4.717	0.000	82	692117	50.0	52.1	
43 2-Butanone (MEK)	43	4.824	4.824	0.000	99	579651	100.0	95.3	
46 Chlorobromomethane	128	5.108	5.108	0.000	96	321615	50.0	52.6	
48 Tetrahydrofuran	42	5.167	5.167	0.000	92	391182	100.0	99.4	
49 Chloroform	83	5.273	5.273	0.000	96	903417	50.0	53.1	
50 1,1,1-Trichloroethane	97	5.439	5.439	0.000	99	702839	50.0	56.4	
51 Cyclohexane	56	5.475	5.475	0.000	94	1114338	50.0	53.3	
52 Carbon tetrachloride	117	5.652	5.652	0.000	97	626559	50.0	53.7	
53 1,1-Dichloropropene	75	5.676	5.676	0.000	91	763422	50.0	55.0	
54 Benzene	78	5.948	5.948	0.000	98	2347780	50.0	52.2	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	96	728953	50.0	51.5	
55 Isobutyl alcohol	41	6.066	6.066	0.000	95	524231	1250.0	1313.8	
58 n-Heptane	100	6.315	6.315	0.000	71	189817	50.0	52.7	
59 Trichloroethene	130	6.729	6.729	0.000	96	632095	50.0	54.1	
62 Methylcyclohexane	83	6.894	6.894	0.000	94	1048682	50.0	53.4	
63 1,2-Dichloropropane	63	6.977	6.977	0.000	94	610809	50.0	52.6	
65 Dibromomethane	93	7.107	7.107	0.000	94	332549	50.0	52.1	
67 1,4-Dioxane	88	7.155	7.155	0.000	99	106844	1000.0	993.7	
68 Dichlorobromomethane	83	7.297	7.297	0.000	98	652653	50.0	56.3	
70 2-Chloroethyl vinyl ether	63	7.628	7.628	0.000	93	732825	100.0	106.3	
71 cis-1,3-Dichloropropene	75	7.735	7.735	0.000	92	875010	50.0	55.1	
73 4-Methyl-2-pentanone (MIBK	43	7.924	7.924	0.000	98	1186690	100.0	104.1	
74 Toluene	91	8.030	8.030	0.000	98	2331750	50.0	52.0	
75 trans-1,3-Dichloropropene	75	8.279	8.279	0.000	97	729624	50.0	55.1	
76 Ethyl methacrylate	69	8.385	8.385	0.000	94	634581	50.0	51.9	
77 1,1,2-Trichloroethane	97	8.445	8.445	0.000	90	460224	50.0	51.3	
78 Tetrachloroethene	164	8.527	8.527	0.000	97	478485	50.0	55.0	
79 1,3-Dichloropropane	76	8.587	8.587	0.000	98	787335	50.0	52.1	
80 2-Hexanone	43	8.693	8.693	0.000	98	762623	100.0	104.4	
82 Chlorodibromomethane	129	8.788	8.788	0.000	91	475262	50.0	54.8	
83 Ethylene Dibromide	107	8.871	8.871	0.000	99	455975	50.0	52.5	
85 Chlorobenzene	112	9.308	9.308	0.000	97	1501560	50.0	51.7	
86 1,1,1,2-Tetrachloroethane	131	9.391	9.391	0.000	97	508079	50.0	57.6	
87 Ethylbenzene	106	9.415	9.415	0.000	98	816895	50.0	53.7	
88 m-Xylene & p-Xylene	106	9.510	9.510	0.000	99	982569	50.0	53.7	
89 o-Xylene	106	9.853	9.853	0.000	97	955759	50.0	53.9	
90 Styrene	104	9.876	9.876	0.000	97	1571943	50.0	53.9	
91 Bromoform	173	10.030	10.030	0.000	99	279077	50.0	55.6	
92 Isopropylbenzene	105	10.172	10.172	0.000	95	2285322	50.0	55.6	
94 Bromobenzene	156	10.421	10.421	0.000	95	607760	50.0	52.2	
95 1,1,2,2-Tetrachloroethane	83	10.456	10.456	0.000	93	531180	50.0	54.1	
96 1,2,3-Trichloropropane	110	10.492	10.492	0.000	80	160528	50.0	50.7	
97 trans-1,4-Dichloro-2-buten	53	10.504	10.504	0.000	82	193636	50.0	53.2	
98 N-Propylbenzene	120	10.527	10.527	0.000	99	674578	50.0	54.0	
99 2-Chlorotoluene	126	10.586	10.586	0.000	97	566385	50.0	54.0	
100 1,3,5-Trimethylbenzene	105	10.681	10.681	0.000	96	1782896	50.0	55.7	
101 4-Chlorotoluene	126	10.693	10.693	0.000	98	566249	50.0	52.5	
103 tert-Butylbenzene	119	10.953	10.953	0.000	93	1617419	50.0	56.4	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	96	1817215	50.0	54.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 sec-Butylbenzene	105	11.131	11.131	0.000	94	2303693	50.0	56.3	
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	98	1074084	50.0	51.7	
109 4-Isopropyltoluene	119	11.261	11.261	0.000	97	1926872	50.0	56.0	
110 1,4-Dichlorobenzene	146	11.296	11.296	0.000	96	1083868	50.0	51.1	
113 n-Butylbenzene	91	11.604	11.604	0.000	97	1732655	50.0	56.1	
114 1,2-Dichlorobenzene	146	11.616	11.616	0.000	99	980158	50.0	52.2	
115 1,2-Dibromo-3-Chloropropan	157	12.278	12.278	0.000	87	95070	50.0	46.2	
117 1,2,4-Trichlorobenzene	180	12.965	12.965	0.000	95	645996	50.0	49.2	
118 Hexachlorobutadiene	225	13.095	13.095	0.000	97	312692	50.0	51.2	
119 Naphthalene	128	13.166	13.166	0.000	96	1580427	50.0	48.1	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	97	604570	50.0	48.8	
S 134 Xylenes, Total	106				0		100.0	107.6	
S 135 Trihalomethanes, Total	1				0		200.0	219.8	
S 157 Total BTEX	1				0		250.0	265.5	

Reagents:

VM568718_00013	Amount Added:	1.00	Units: uL
VMRPRIMW_00309	Amount Added:	5.00	Units: uL
VMRGAS_00270	Amount Added:	5.00	Units: uL
VMAROLISTDW_00273	Amount Added:	5.00	Units: uL
vm50ss_00343	Amount Added:	5.00	Units: uL

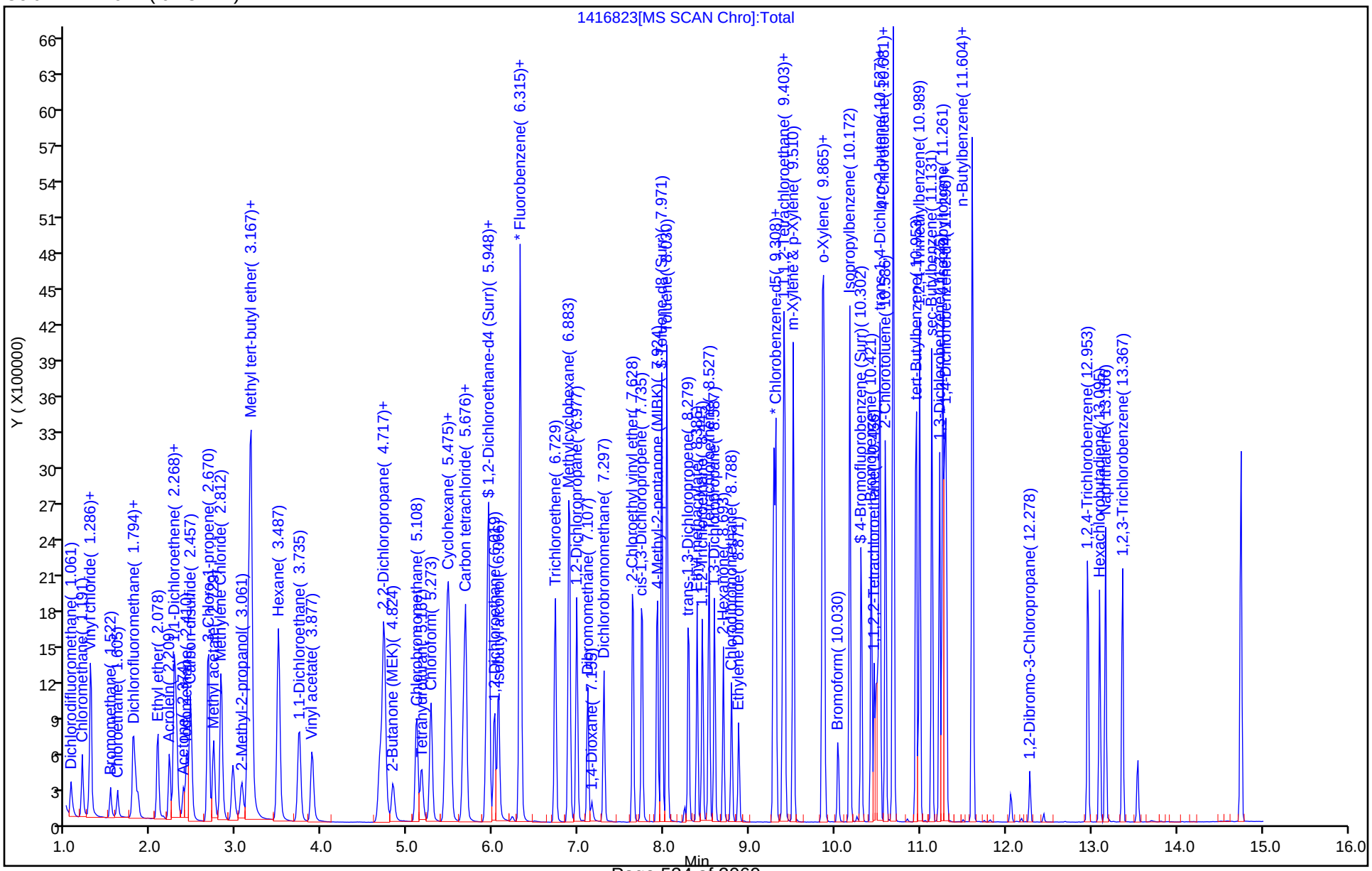
Report Date: 19-Nov-2018 10:57:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416823.D

Injection Date:	16-Nov-2018 18:03:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	icis			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416824.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 16-Nov-2018 18:25:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082038-007
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub81

Method: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 19-Nov-2018 10:57:09 Calib Date: 16-Nov-2018 19:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416828.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: macenczaks Date: 18-Nov-2018 10:39:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	98	1993493	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	96	1384965	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.285	11.284	0.001	99	661716	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	94	211419	20.0	20.0	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	95	233185	20.0	19.5	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	810731	20.0	20.2	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	282515	20.0	19.2	
9 Dichlorodifluoromethane	85	1.061	1.061	0.000	99	140168	20.0	20.6	
10 Chloromethane	50	1.191	1.191	0.000	99	209569	20.0	19.3	
11 Vinyl chloride	62	1.274	1.274	0.000	98	167746	20.0	19.4	
12 Butadiene	54	1.298	1.298	0.000	96	180312	20.0	20.2	
13 Bromomethane	94	1.522	1.522	0.000	90	79663	20.0	17.2	
15 Chloroethane	64	1.605	1.605	0.000	98	85434	20.0	18.6	
16 Dichlorofluoromethane	67	1.783	1.783	0.000	98	204723	20.0	19.5	
17 Trichlorofluoromethane	101	1.806	1.806	0.000	98	193585	20.0	21.7	
18 Ethyl ether	59	2.079	2.078	0.001	96	181358	20.0	21.1	
19 Acrolein	56	2.209	2.209	0.000	99	191985	100.0	101.2	
21 1,1-Dichloroethene	96	2.268	2.268	0.000	98	197708	20.0	22.0	
22 1,1,2-Trichloro-1,2,2-trif	151	2.303	2.291	0.012	92	116654	20.0	20.4	
24 Acetone	43	2.374	2.374	0.000	99	145699	40.0	39.2	
25 Iodomethane	142	2.422	2.410	0.012	95	337232	20.0	21.7	
26 Carbon disulfide	76	2.457	2.457	0.000	100	598199	20.0	20.6	
27 3-Chloro-1-propene	76	2.670	2.670	0.000	91	140281	20.0	21.0	
29 Methyl acetate	43	2.729	2.729	0.000	99	393728	40.0	39.0	
30 Methylene Chloride	84	2.824	2.812	0.012	99	275047	20.0	20.9	
31 2-Methyl-2-propanol	59	3.061	3.061	0.000	99	192394	200.0	182.1	
32 trans-1,2-Dichloroethene	96	3.132	3.132	0.000	98	237616	20.0	20.4	
33 Methyl tert-butyl ether	73	3.155	3.155	0.000	99	511950	20.0	19.7	
34 Acrylonitrile	53	3.167	3.167	0.000	99	893761	200.0	199.1	
35 Hexane	86	3.487	3.487	0.000	94	67749	20.0	20.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.735	3.723	0.012	96	414420	20.0	20.6	
39 Vinyl acetate	86	3.889	3.877	0.012	97	44424	20.0	21.0	
41 2,2-Dichloropropane	97	4.682	4.682	0.000	94	57323	20.0	21.4	
42 cis-1,2-Dichloroethene	96	4.717	4.717	0.000	82	271155	20.0	20.6	
43 2-Butanone (MEK)	43	4.824	4.824	0.000	99	228719	40.0	38.0	
46 Chlorobromomethane	128	5.108	5.108	0.000	96	121916	20.0	20.2	
48 Tetrahydrofuran	42	5.167	5.167	0.000	92	153871	40.0	39.5	
49 Chloroform	83	5.273	5.273	0.000	96	347959	20.0	20.7	
50 1,1,1-Trichloroethane	97	5.451	5.439	0.012	99	267927	20.0	21.7	
51 Cyclohexane	56	5.475	5.475	0.001	94	422779	20.0	20.5	
52 Carbon tetrachloride	117	5.652	5.652	0.000	96	232862	20.0	20.2	
53 1,1-Dichloropropene	75	5.676	5.676	0.000	92	293365	20.0	21.4	
54 Benzene	78	5.948	5.948	0.000	98	908835	20.0	20.4	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	96	281991	20.0	20.2	
55 Isobutyl alcohol	41	6.054	6.066	-0.012	95	199307	500.0	505.1	
58 n-Heptane	100	6.315	6.315	0.000	50	73222	20.0	20.5	
59 Trichloroethene	130	6.729	6.729	0.000	96	245521	20.0	21.3	
62 Methylcyclohexane	83	6.895	6.894	0.001	93	404571	20.0	20.8	
63 1,2-Dichloropropane	63	6.977	6.977	0.000	93	233493	20.0	20.3	
65 Dibromomethane	93	7.108	7.107	0.001	94	129072	20.0	20.4	
67 1,4-Dioxane	88	7.155	7.155	0.000	98	43591	400.0	409.9	
68 Dichlorobromomethane	83	7.297	7.297	0.000	98	239095	20.0	20.9	
70 2-Chloroethyl vinyl ether	63	7.628	7.628	0.000	94	273640	40.0	40.1	
71 cis-1,3-Dichloropropene	75	7.747	7.735	0.012	92	324694	20.0	20.7	
73 4-Methyl-2-pentanone (MIBK	43	7.924	7.924	0.000	98	464477	40.0	41.6	
74 Toluene	91	8.031	8.030	0.001	98	909465	20.0	20.7	
75 trans-1,3-Dichloropropene	75	8.279	8.279	0.000	97	270497	20.0	20.9	
76 Ethyl methacrylate	69	8.386	8.385	0.001	93	249207	20.0	20.8	
77 1,1,2-Trichloroethane	97	8.445	8.445	0.000	90	176377	20.0	20.1	
78 Tetrachloroethene	164	8.528	8.527	0.001	96	188611	20.0	22.1	
79 1,3-Dichloropropane	76	8.587	8.587	0.000	98	300087	20.0	20.3	
80 2-Hexanone	43	8.693	8.693	0.000	97	297693	40.0	41.6	
82 Chlorodibromomethane	129	8.788	8.788	0.000	91	168420	20.0	19.8	
83 Ethylene Dibromide	107	8.871	8.871	0.000	99	176402	20.0	20.7	
85 Chlorobenzene	112	9.308	9.308	0.000	97	592845	20.0	20.8	
86 1,1,1,2-Tetrachloroethane	131	9.391	9.391	0.000	97	190292	20.0	22.0	
87 Ethylbenzene	106	9.403	9.415	-0.012	98	317352	20.0	21.3	
88 m-Xylene & p-Xylene	106	9.510	9.510	0.000	99	382080	20.0	21.3	
89 o-Xylene	106	9.853	9.853	0.000	97	373788	20.0	21.5	
90 Styrene	104	9.876	9.876	0.000	98	614144	20.0	21.5	
91 Bromoform	173	10.030	10.030	0.000	98	97795	20.0	19.9	
92 Isopropylbenzene	105	10.172	10.172	0.000	95	906147	20.0	22.5	
94 Bromobenzene	156	10.421	10.421	0.000	94	240989	20.0	19.9	
95 1,1,2,2-Tetrachloroethane	83	10.456	10.456	0.000	93	208322	20.0	20.3	
96 1,2,3-Trichloropropane	110	10.480	10.492	-0.012	85	63764	20.0	19.3	
97 trans-1,4-Dichloro-2-buten	53	10.504	10.504	0.000	83	72498	20.0	19.1	
98 N-Propylbenzene	120	10.527	10.527	0.000	99	271983	20.0	20.9	
99 2-Chlorotoluene	126	10.586	10.586	0.000	97	229521	20.0	21.0	
100 1,3,5-Trimethylbenzene	105	10.681	10.681	0.000	96	713447	20.0	21.4	
101 4-Chlorotoluene	126	10.693	10.693	0.000	98	228493	20.0	20.3	
103 tert-Butylbenzene	119	10.953	10.953	0.000	92	636047	20.0	21.3	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	96	726741	20.0	20.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 sec-Butylbenzene	105	11.131	11.131	0.000	94	920570	20.0	21.6	
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	98	440642	20.0	20.3	
109 4-Isopropyltoluene	119	11.261	11.261	0.000	97	778242	20.0	21.7	
110 1,4-Dichlorobenzene	146	11.296	11.296	0.000	94	437393	20.0	19.8	
113 n-Butylbenzene	91	11.604	11.604	0.000	97	690719	20.0	21.5	
114 1,2-Dichlorobenzene	146	11.616	11.616	0.000	99	399810	20.0	20.4	
115 1,2-Dibromo-3-Chloropropan	157	12.279	12.278	0.001	84	33766	20.0	17.8	
117 1,2,4-Trichlorobenzene	180	12.953	12.965	-0.012	95	259688	20.0	19.0	
118 Hexachlorobutadiene	225	13.095	13.095	0.000	96	125348	20.0	19.7	
119 Naphthalene	128	13.166	13.166	0.000	96	638901	20.0	18.7	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	96	244041	20.0	18.9	
S 132 1,2-Dichloroethene, Total	96				0			41.0	
S 133 1,3-Dichloropropene, Total	75				0			41.5	
S 134 Xylenes, Total	106				0		40.0	42.8	
S 157 Total BTEX	1				0		100.0	105.2	
S 135 Trihalomethanes, Total	1				0		80.0	81.2	

Reagents:

VM568718_00013	Amount Added:	1.00	Units: uL
VMAROLISTDW_00273	Amount Added:	2.00	Units: uL
VMRGAS_00270	Amount Added:	2.00	Units: uL
VMRPRIMW_00309	Amount Added:	2.00	Units: uL
vm50ss_00343	Amount Added:	2.00	Units: uL

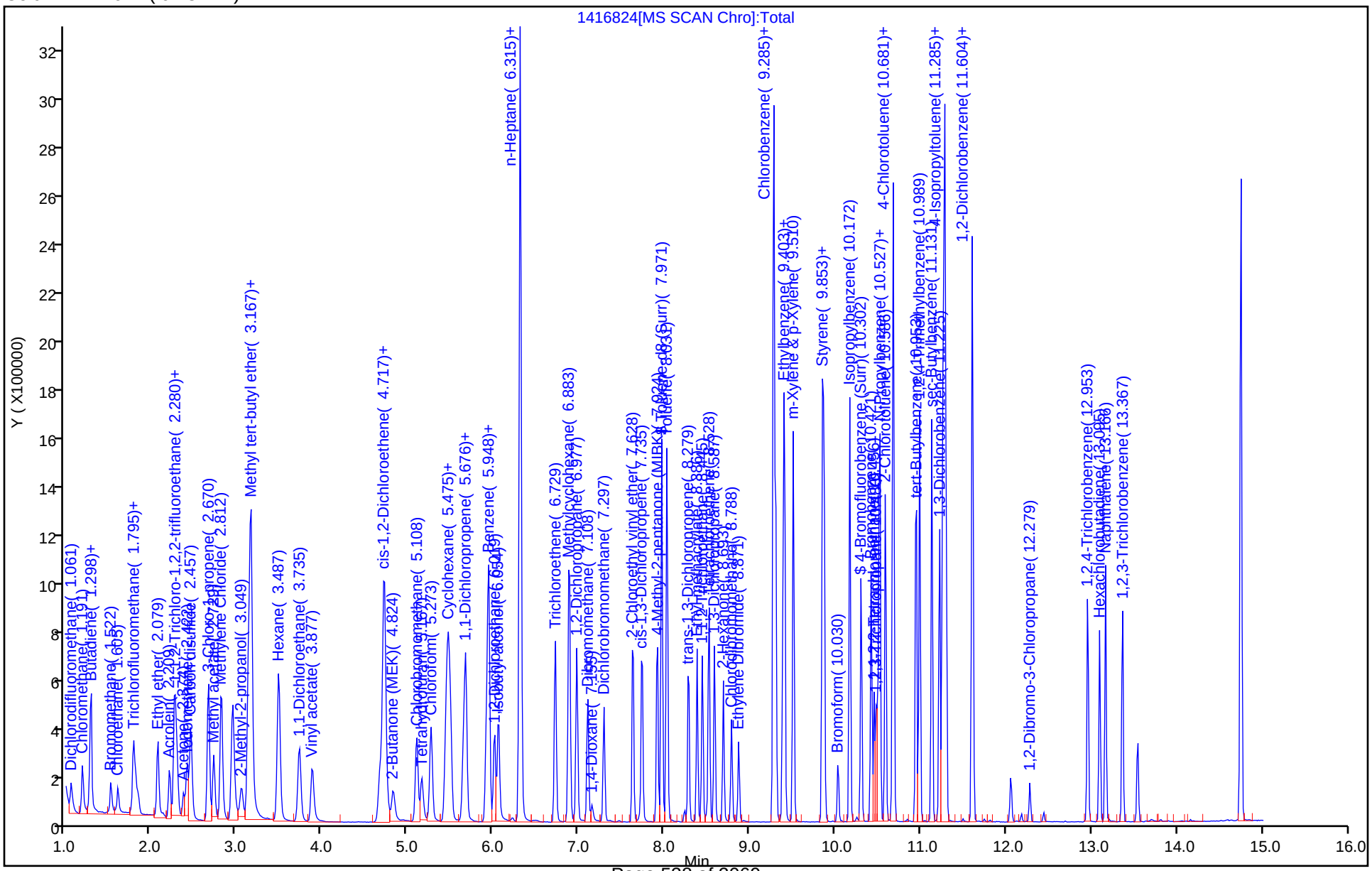
Report Date: 19-Nov-2018 10:57:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416824.D

Injection Date:	16-Nov-2018 18:25:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416825.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 16-Nov-2018 18:46:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082038-008
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub81

Method: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 19-Nov-2018 10:57:16 Calib Date: 16-Nov-2018 19:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416828.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: macenczaks Date: 18-Nov-2018 10:39:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	99	1871558	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	1268558	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.285	11.284	0.001	99	608706	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	94	102873	10.0	10.4	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	95	114474	10.0	10.2	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	398243	10.0	10.8	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	140849	10.0	10.4	
9 Dichlorodifluoromethane	85	1.061	1.061	0.000	99	66090	10.0	10.4	
10 Chloromethane	50	1.191	1.191	0.000	99	102404	10.0	10.1	
11 Vinyl chloride	62	1.286	1.274	0.012	98	82495	10.0	10.2	
12 Butadiene	54	1.298	1.298	0.000	96	87918	10.0	10.5	
13 Bromomethane	94	1.522	1.522	0.000	90	42761	10.0	9.83	
15 Chloroethane	64	1.605	1.605	0.000	99	45002	10.0	10.5	
16 Dichlorofluoromethane	67	1.795	1.783	0.012	97	109602	10.0	11.1	
17 Trichlorofluoromethane	101	1.806	1.806	0.000	98	97403	10.0	11.6	
18 Ethyl ether	59	2.079	2.078	0.001	95	95901	10.0	11.9	
19 Acrolein	56	2.209	2.209	0.000	99	86640	50.0	48.6	
21 1,1-Dichloroethene	96	2.268	2.268	0.000	98	97428	10.0	11.5	
22 1,1,2-Trichloro-1,2,2-trif	151	2.303	2.291	0.012	92	55589	10.0	10.3	
24 Acetone	43	2.374	2.374	0.000	100	74265	20.0	21.3	
25 Iodomethane	142	2.422	2.410	0.012	95	163087	10.0	11.2	
26 Carbon disulfide	76	2.457	2.457	0.000	100	274719	10.0	10.1	
27 3-Chloro-1-propene	76	2.670	2.670	0.000	91	65251	10.0	10.4	
29 Methyl acetate	43	2.729	2.729	0.000	99	183972	20.0	19.4	
30 Methylene Chloride	84	2.824	2.812	0.012	99	155978	10.0	10.6	
31 2-Methyl-2-propanol	59	3.049	3.061	-0.012	98	93873	100.0	94.7	
32 trans-1,2-Dichloroethene	96	3.132	3.132	0.000	98	116480	10.0	10.6	
33 Methyl tert-butyl ether	73	3.155	3.155	0.000	99	253267	10.0	10.4	
34 Acrylonitrile	53	3.167	3.167	0.000	99	427432	100.0	101.4	
35 Hexane	86	3.498	3.487	0.011	94	31246	10.0	9.89	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.735	3.723	0.012	96	197120	10.0	10.4	
39 Vinyl acetate	86	3.889	3.877	0.012	97	19497	10.0	9.80	
41 2,2-Dichloropropane	97	4.682	4.682	0.000	93	27659	10.0	11.0	
42 cis-1,2-Dichloroethene	96	4.717	4.717	0.000	84	130006	10.0	10.5	
43 2-Butanone (MEK)	43	4.836	4.824	0.012	99	105452	20.0	18.7	
46 Chlorobromomethane	128	5.108	5.108	0.000	96	58167	10.0	10.2	
48 Tetrahydrofuran	42	5.167	5.167	0.000	92	72125	20.0	19.7	
49 Chloroform	83	5.273	5.273	0.000	96	165499	10.0	10.5	
50 1,1,1-Trichloroethane	97	5.451	5.439	0.012	99	125558	10.0	10.9	
51 Cyclohexane	56	5.475	5.475	0.001	94	199738	10.0	10.3	
52 Carbon tetrachloride	117	5.652	5.652	0.000	96	106418	10.0	9.83	
53 1,1-Dichloropropene	75	5.676	5.676	0.000	92	139939	10.0	10.8	
54 Benzene	78	5.948	5.948	0.000	98	432966	10.0	10.4	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	95	130630	10.0	9.95	
55 Isobutyl alcohol	41	6.066	6.066	0.000	94	89709	250.0	242.1	
58 n-Heptane	100	6.315	6.315	0.000	43	32893	10.0	9.83	
59 Trichloroethene	130	6.729	6.729	0.000	95	117049	10.0	10.8	
62 Methylcyclohexane	83	6.895	6.894	0.000	93	190164	10.0	10.4	
63 1,2-Dichloropropane	63	6.977	6.977	0.000	95	106349	10.0	9.87	
65 Dibromomethane	93	7.108	7.107	0.001	94	59119	10.0	9.98	
67 1,4-Dioxane	88	7.155	7.155	0.000	97	19788	200.0	198.2	
68 Dichlorobromomethane	83	7.297	7.297	0.000	98	104528	10.0	9.71	
70 2-Chloroethyl vinyl ether	63	7.640	7.628	0.012	93	117393	20.0	18.3	
71 cis-1,3-Dichloropropene	75	7.746	7.735	0.011	92	140164	10.0	9.51	
73 4-Methyl-2-pentanone (MIBK	43	7.924	7.924	0.000	98	204425	20.0	20.0	
74 Toluene	91	8.030	8.030	0.000	99	414193	10.0	10.3	
75 trans-1,3-Dichloropropene	75	8.291	8.279	0.012	97	111748	10.0	9.40	
76 Ethyl methacrylate	69	8.385	8.385	0.000	93	105572	10.0	9.61	
77 1,1,2-Trichloroethane	97	8.445	8.445	0.000	90	78504	10.0	9.75	
78 Tetrachloroethene	164	8.527	8.527	0.000	97	84868	10.0	10.9	
79 1,3-Dichloropropane	76	8.587	8.587	0.000	98	130706	10.0	9.64	
80 2-Hexanone	43	8.693	8.693	0.000	98	123518	20.0	18.8	
82 Chlorodibromomethane	129	8.788	8.788	0.000	91	70517	10.0	9.05	
83 Ethylene Dibromide	107	8.871	8.871	0.000	98	77900	10.0	10.0	
85 Chlorobenzene	112	9.308	9.308	0.000	97	272233	10.0	10.4	
86 1,1,1,2-Tetrachloroethane	131	9.391	9.391	0.000	96	86208	10.0	10.9	
87 Ethylbenzene	106	9.415	9.415	0.000	98	144666	10.0	10.6	
88 m-Xylene & p-Xylene	106	9.510	9.510	0.000	99	174003	10.0	10.6	
89 o-Xylene	106	9.853	9.853	0.000	97	175279	10.0	11.0	
90 Styrene	104	9.876	9.876	0.000	97	275920	10.0	10.5	
91 Bromoform	173	10.030	10.030	0.000	99	38907	10.0	8.63	
92 Isopropylbenzene	105	10.172	10.172	0.000	95	419483	10.0	11.4	
94 Bromobenzene	156	10.421	10.421	0.000	94	111889	10.0	10.0	
95 1,1,2,2-Tetrachloroethane	83	10.456	10.456	0.000	94	93357	10.0	9.91	
96 1,2,3-Trichloropropane	110	10.492	10.492	0.000	81	29386	10.0	9.68	
97 trans-1,4-Dichloro-2-buten	53	10.504	10.504	0.000	74	31386	10.0	8.99	
98 N-Propylbenzene	120	10.527	10.527	0.000	98	124777	10.0	10.4	
99 2-Chlorotoluene	126	10.586	10.586	0.000	97	104146	10.0	10.3	
100 1,3,5-Trimethylbenzene	105	10.681	10.681	0.000	96	323753	10.0	10.5	
101 4-Chlorotoluene	126	10.693	10.693	0.000	97	108399	10.0	10.5	
103 tert-Butylbenzene	119	10.953	10.953	0.000	92	293825	10.0	10.7	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	96	339016	10.0	10.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 sec-Butylbenzene	105	11.131	11.131	0.000	94	425278	10.0	10.8	
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	97	203600	10.0	10.2	
109 4-Isopropyltoluene	119	11.261	11.261	0.000	97	357553	10.0	10.8	
110 1,4-Dichlorobenzene	146	11.296	11.296	0.000	94	206712	10.0	10.2	
113 n-Butylbenzene	91	11.604	11.604	0.000	97	317862	10.0	10.7	
114 1,2-Dichlorobenzene	146	11.616	11.616	0.000	99	194096	10.0	10.8	
115 1,2-Dibromo-3-Chloropropan	157	12.278	12.278	0.000	81	14654	10.0	9.98	
117 1,2,4-Trichlorobenzene	180	12.953	12.965	-0.012	95	128820	10.0	10.2	
118 Hexachlorobutadiene	225	13.095	13.095	0.000	97	58722	10.0	10.0	
119 Naphthalene	128	13.166	13.166	0.000	96	313982	10.0	9.97	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	97	122110	10.0	10.3	
S 132 1,2-Dichloroethene, Total	96				0			21.2	
S 133 1,3-Dichloropropene, Total	75				0			18.9	
S 134 Xylenes, Total	106				0		20.0	21.6	
S 135 Trihalomethanes, Total	1				0		40.0	37.9	
S 157 Total BTEX	1				0		50.0	52.8	

Reagents:

VM568718_00013	Amount Added:	1.00	Units: uL
VMAROLISTDW_00273	Amount Added:	1.00	Units: uL
VMRGAS_00270	Amount Added:	1.00	Units: uL
VMRPRIMW_00309	Amount Added:	1.00	Units: uL
vm50ss_00343	Amount Added:	1.00	Units: uL

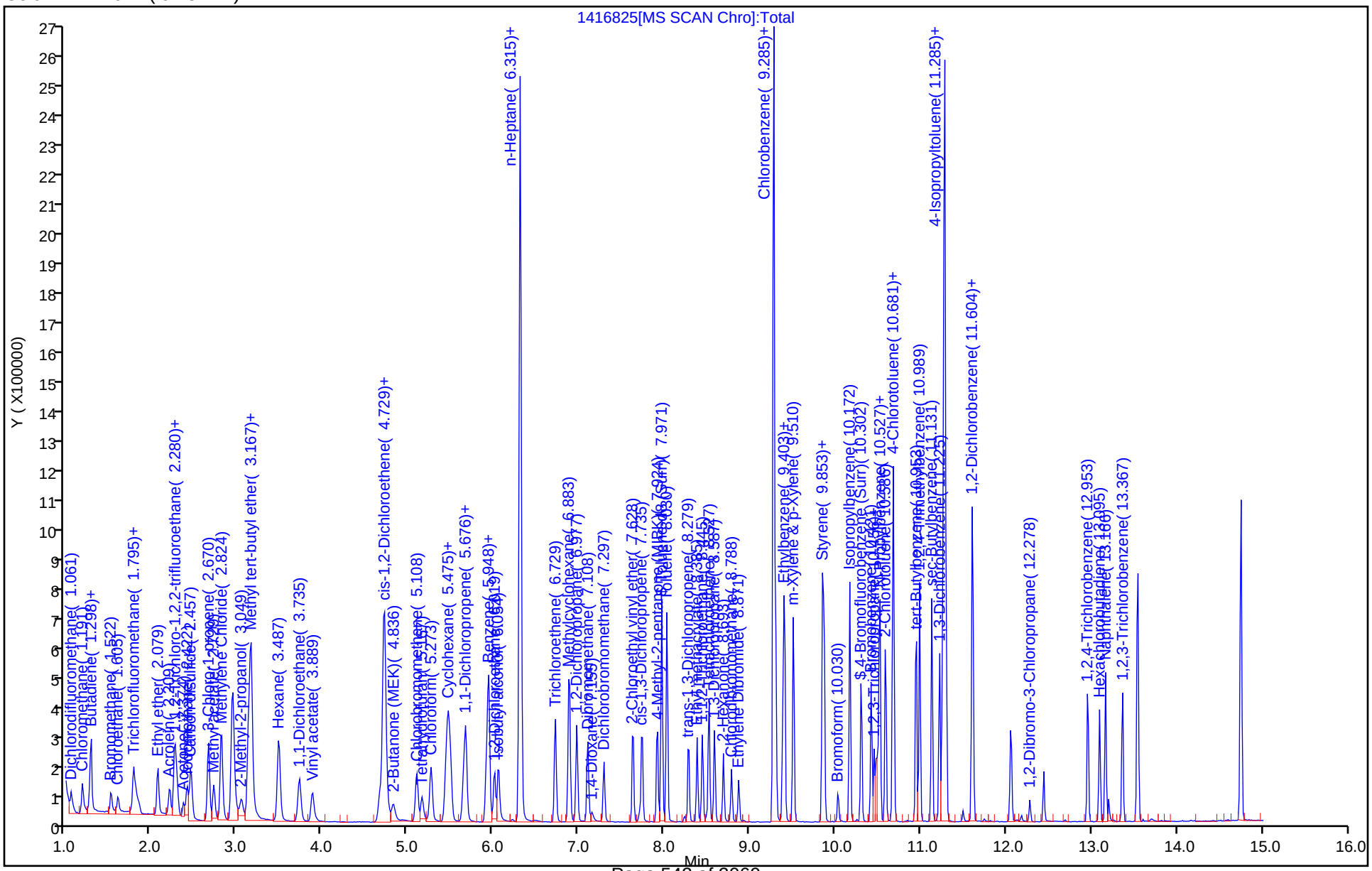
Report Date: 19-Nov-2018 10:57:17 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416825.D

Injection Date:	16-Nov-2018 18:46:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	8
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)


1416825[MS SCAN Chro]:Total
Y (X100000)
Min
n-Heptane(6.315)+
Chlorobenzene(9.285)+
4-Isopropyltoluene(11.285)+
1,2-Dichlorobenzene(11.604)+
Ethylbenzene(9.403)+
m-Xylene & p-Xylene(9.510)+
Styrene(9.853)+
Bromoform(10.030)
Isopropylbenzene(10.172)
4-Chlorotoluene(10.681)+
tert-Butylbenzene(10.989)
1,3-Dichlorobenzene(11.131)
1,2-Dibromo-3-Chloropropane(12.278)
1,2,4-Trichlorobenzene(12.953)
Hexachlorobutadiene(13.095)
1,2,3-Trichlorobenzene(13.367)
2-Butanone (MEK)(4.836)
cis-1,2-Dichloroethene(4.729)+
Trichloroethene(6.729)
Cyclohexane(5.475)+
1,1-Dichloropropene(5.676)+
Hexane(3.487)
1,1-Dichloroethane(3.735)
Vinyl acetate(3.889)
Methyl tert-butyl ether(3.167)+
2-Methyl-2-propanol(3.049)
Methylene Chloride(2.824)
Ethyl ether(2.079)
Trichlorofluoromethane(1.795)+
Dichlorodifluoromethane(1.061)
Chloromethane(1.191)
Butadiene(1.298)+
Bromomethane(1.605)
Chloroethane(1.522)
Acrolein(2.422)
Acetone(2.457)
Methyl Acetate(2.670)
Tetrahydrofuran(5.108)
Chloroform(5.273)
Dibromofluoromethane (Surr)(7.735)
1,2-Dichloroethane-d4 (Surr)(7.971)
Toluene-d8 (Surr)(8.279)
4-Bromofluorobenzene (Surr)(10.302)
1,2-Dichlorobenzene-d4 (Surr)(10.527)+
Dichlorobromomethane(7.297)
1,4-Dioxane(7.199)
Methylcyclohexane(6.883)
1,2-Dichloropropane(7.108)
2-Chloroethyl vinyl ether(7.628)
cis-1,3-Dichloropropene(7.835)
4-Methyl-2-pentanone (MIBK)(8.024)
trans-1,3-Dichloropropene(8.445)
1,1,2-Trichloroethane(8.587)
Toluene(8.788)
2-Hexanone(8.871)
Dibromochloromethane(8.964)
Ethylene Dibromide(8.964)
1,1,1,2-Tetrachloroethane(9.947)
Chlorobenzene-d5 (IS)(10.586)
1,1,1-Trichloroethane(10.586)
1,3-Dichloropropane(10.586)
Ethylbenzene-d10 (Surr)(11.225)
1,2-Dichloroethane-d4 (Surr)(10.586)
Dibromofluoromethane (Surr)(10.586)
1,2-Dichloropropane(10.586)
Bromodichloromethane(10.586)
Dibromomethane(10.586)
cis-1,3-Dichloropropene(10.586)
Toluene-d8 (Surr)(10.586)
4-Methyl-2-pentanone (MIBK)(10.586)
trans-1,3-Dichloropropene(10.586)
1,1,2-Trichloroethane(10.586)
Tetrachloroethene(10.586)
1,3-Dichloropropane(10.586)
2-Hexanone(10.586)
Dibromochloromethane(10.586)
Ethylene Dibromide(10.586)
Chlorobenzene-d5 (IS)(10.586)
1,1,1,2-Tetrachloroethane(10.586)
Ethylbenzene-d10 (Surr)(10.586)
1,1,1-Trichloroethane(10.586

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416826.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 16-Nov-2018 19:08:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082038-009
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub81

Method: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 19-Nov-2018 10:57:23 Calib Date: 16-Nov-2018 19:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416828.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: macenczaks Date: 18-Nov-2018 10:40:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	99	1836477	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	1331060	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.284	0.000	98	624818	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	94	55734	5.00	5.72	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	95	65722	5.00	5.98	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	241774	5.00	6.27	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	91511	5.00	6.59	
9 Dichlorodifluoromethane	85	1.061	1.061	0.000	99	32479	5.00	5.19	
10 Chloromethane	50	1.191	1.191	0.000	99	50788	5.00	5.09	
11 Vinyl chloride	62	1.286	1.274	0.012	98	41264	5.00	5.19	
12 Butadiene	54	1.297	1.298	-0.001	97	44207	5.00	5.37	
13 Bromomethane	94	1.522	1.522	0.000	91	22075	5.00	5.17	
15 Chloroethane	64	1.605	1.605	0.000	99	22050	5.00	5.22	
16 Dichlorofluoromethane	67	1.794	1.783	0.011	97	54702	5.00	5.64	
17 Trichlorofluoromethane	101	1.818	1.806	0.012	96	47259	5.00	5.75	
18 Ethyl ether	59	2.078	2.078	0.000	95	46052	5.00	5.81	
19 Acrolein	56	2.209	2.209	0.000	99	38117	25.0	21.8	
21 1,1-Dichloroethene	96	2.268	2.268	0.000	97	40742	5.00	4.91	
22 1,1,2-Trichloro-1,2,2-trif	151	2.303	2.291	0.012	92	24948	5.00	4.73	
24 Acetone	43	2.374	2.374	0.000	99	41159	10.0	12.0	
25 Iodomethane	142	2.422	2.410	0.012	97	65596	5.00	4.59	
26 Carbon disulfide	76	2.469	2.457	0.012	100	108660	5.00	4.07	
27 3-Chloro-1-propene	76	2.670	2.670	0.000	91	28198	5.00	4.57	
29 Methyl acetate	43	2.729	2.729	0.000	99	87932	10.0	9.46	
30 Methylene Chloride	84	2.824	2.812	0.012	98	86954	5.00	3.88	
31 2-Methyl-2-propanol	59	3.060	3.061	-0.001	99	43812	50.0	45.0	
32 trans-1,2-Dichloroethene	96	3.131	3.132	-0.001	99	52588	5.00	4.89	
33 Methyl tert-butyl ether	73	3.155	3.155	0.000	99	112064	5.00	4.69	
34 Acrylonitrile	53	3.167	3.167	0.000	100	200439	50.0	48.5	
35 Hexane	86	3.486	3.487	-0.001	94	14556	5.00	4.70	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.735	3.723	0.012	96	86133	5.00	4.64	
39 Vinyl acetate	86	3.889	3.877	0.012	97	9500	5.00	4.87	
41 2,2-Dichloropropane	97	4.682	4.682	0.000	86	11508	5.00	4.67	
42 cis-1,2-Dichloroethene	96	4.717	4.717	0.000	81	56350	5.00	4.65	
43 2-Butanone (MEK)	43	4.835	4.824	0.011	99	52812	10.0	9.53	
46 Chlorobromomethane	128	5.108	5.108	0.000	97	26807	5.00	4.81	
48 Tetrahydrofuran	42	5.167	5.167	0.000	92	34751	10.0	9.69	
49 Chloroform	83	5.273	5.273	0.000	96	70998	5.00	4.58	
50 1,1,1-Trichloroethane	97	5.439	5.439	0.000	98	52940	5.00	4.66	
51 Cyclohexane	56	5.474	5.475	0.000	94	84795	5.00	4.46	
52 Carbon tetrachloride	117	5.652	5.652	0.000	96	44466	5.00	4.19	
53 1,1-Dichloropropene	75	5.676	5.676	0.000	92	61436	5.00	4.85	
54 Benzene	78	5.948	5.948	0.000	97	197468	5.00	4.82	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	95	63172	5.00	4.90	
55 Isobutyl alcohol	41	6.066	6.066	0.000	95	43327	125.0	119.2	
58 n-Heptane	100	6.315	6.315	0.000	39	15751	5.00	4.80	
59 Trichloroethene	130	6.729	6.729	0.000	95	52118	5.00	4.90	
62 Methylcyclohexane	83	6.894	6.894	0.000	93	82403	5.00	4.61	
63 1,2-Dichloropropane	63	6.977	6.977	0.000	93	51244	5.00	4.84	
65 Dibromomethane	93	7.107	7.107	0.000	60	28220	5.00	4.85	
67 1,4-Dioxane	88	7.155	7.155	0.000	94	10406	100.0	106.2	
68 Dichlorobromomethane	83	7.297	7.297	0.000	97	45411	5.00	4.30	
70 2-Chloroethyl vinyl ether	63	7.628	7.628	0.000	94	60219	10.0	9.59	
71 cis-1,3-Dichloropropene	75	7.746	7.735	0.011	93	67469	5.00	4.67	
73 4-Methyl-2-pentanone (MIBK	43	7.924	7.924	0.000	98	103142	10.0	9.61	
74 Toluene	91	8.030	8.030	0.000	98	204232	5.00	4.83	
75 trans-1,3-Dichloropropene	75	8.291	8.279	0.012	98	55362	5.00	4.44	
76 Ethyl methacrylate	69	8.385	8.385	0.000	92	54752	5.00	4.75	
77 1,1,2-Trichloroethane	97	8.444	8.445	-0.001	90	41152	5.00	4.87	
78 Tetrachloroethene	164	8.527	8.527	0.000	95	41588	5.00	5.08	
79 1,3-Dichloropropane	76	8.586	8.587	-0.001	98	68055	5.00	4.78	
80 2-Hexanone	43	8.693	8.693	0.000	98	68985	10.0	10.0	
82 Chlorodibromomethane	129	8.788	8.788	0.000	92	30999	5.00	3.79	
83 Ethylene Dibromide	107	8.870	8.871	-0.001	97	39532	5.00	4.83	
85 Chlorobenzene	112	9.308	9.308	0.000	97	135457	5.00	4.95	
86 1,1,1,2-Tetrachloroethane	131	9.391	9.391	0.000	96	38381	5.00	4.62	
87 Ethylbenzene	106	9.415	9.415	0.000	98	70930	5.00	4.95	
88 m-Xylene & p-Xylene	106	9.509	9.510	-0.001	99	84971	5.00	4.93	
89 o-Xylene	106	9.853	9.853	0.000	97	82754	5.00	4.95	
90 Styrene	104	9.876	9.876	0.000	96	134779	5.00	4.91	
91 Bromoform	173	10.030	10.030	0.000	97	17558	5.00	3.71	
92 Isopropylbenzene	105	10.172	10.172	0.000	95	195649	5.00	5.05	
94 Bromobenzene	156	10.421	10.421	0.000	93	55927	5.00	4.88	
95 1,1,2,2-Tetrachloroethane	83	10.456	10.456	0.000	94	45855	5.00	4.74	
96 1,2,3-Trichloropropane	110	10.492	10.492	0.000	82	14723	5.00	4.73	
97 trans-1,4-Dichloro-2-buten	53	10.503	10.504	-0.001	72	15510	5.00	4.33	
98 N-Propylbenzene	120	10.527	10.527	0.000	99	59357	5.00	4.83	
99 2-Chlorotoluene	126	10.586	10.586	0.000	97	49616	5.00	4.80	
100 1,3,5-Trimethylbenzene	105	10.681	10.681	0.000	96	152072	5.00	4.82	
101 4-Chlorotoluene	126	10.693	10.693	0.000	98	53060	5.00	5.00	
103 tert-Butylbenzene	119	10.953	10.953	0.000	91	136375	5.00	4.83	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	96	155799	5.00	4.74	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 sec-Butylbenzene	105	11.131	11.131	0.000	94	197137	5.00	4.89	
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	98	101170	5.00	4.94	
109 4-Isopropyltoluene	119	11.261	11.261	0.000	96	166140	5.00	4.91	
110 1,4-Dichlorobenzene	146	11.296	11.296	0.000	96	104208	5.00	4.99	
113 n-Butylbenzene	91	11.604	11.604	0.000	97	148721	5.00	4.90	
114 1,2-Dichlorobenzene	146	11.616	11.616	0.000	98	94640	5.00	5.12	
115 1,2-Dibromo-3-Chloropropan	157	12.278	12.278	0.000	75	6280	5.00	5.94	
117 1,2,4-Trichlorobenzene	180	12.965	12.965	0.000	95	61224	5.00	4.74	
118 Hexachlorobutadiene	225	13.095	13.095	0.000	97	25110	5.00	4.18	
119 Naphthalene	128	13.166	13.166	0.000	96	150925	5.00	4.67	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	96	57768	5.00	4.73	
S 132 1,2-Dichloroethene, Total	96				0			9.55	
S 133 1,3-Dichloropropene, Total	75				0			9.11	
S 134 Xylenes, Total	106				0		10.0	9.88	
S 157 Total BTEX	1				0		25.0	24.5	
S 135 Trihalomethanes, Total	1				0		20.0	16.4	

Reagents:

VM568718_00013	Amount Added:	1.00	Units: uL
VMRPRIMW_00309	Amount Added:	0.50	Units: uL
VMRGAS_00270	Amount Added:	0.50	Units: uL
VMAROLISTDW_00273	Amount Added:	0.50	Units: uL
vm50ss_00343	Amount Added:	0.50	Units: uL

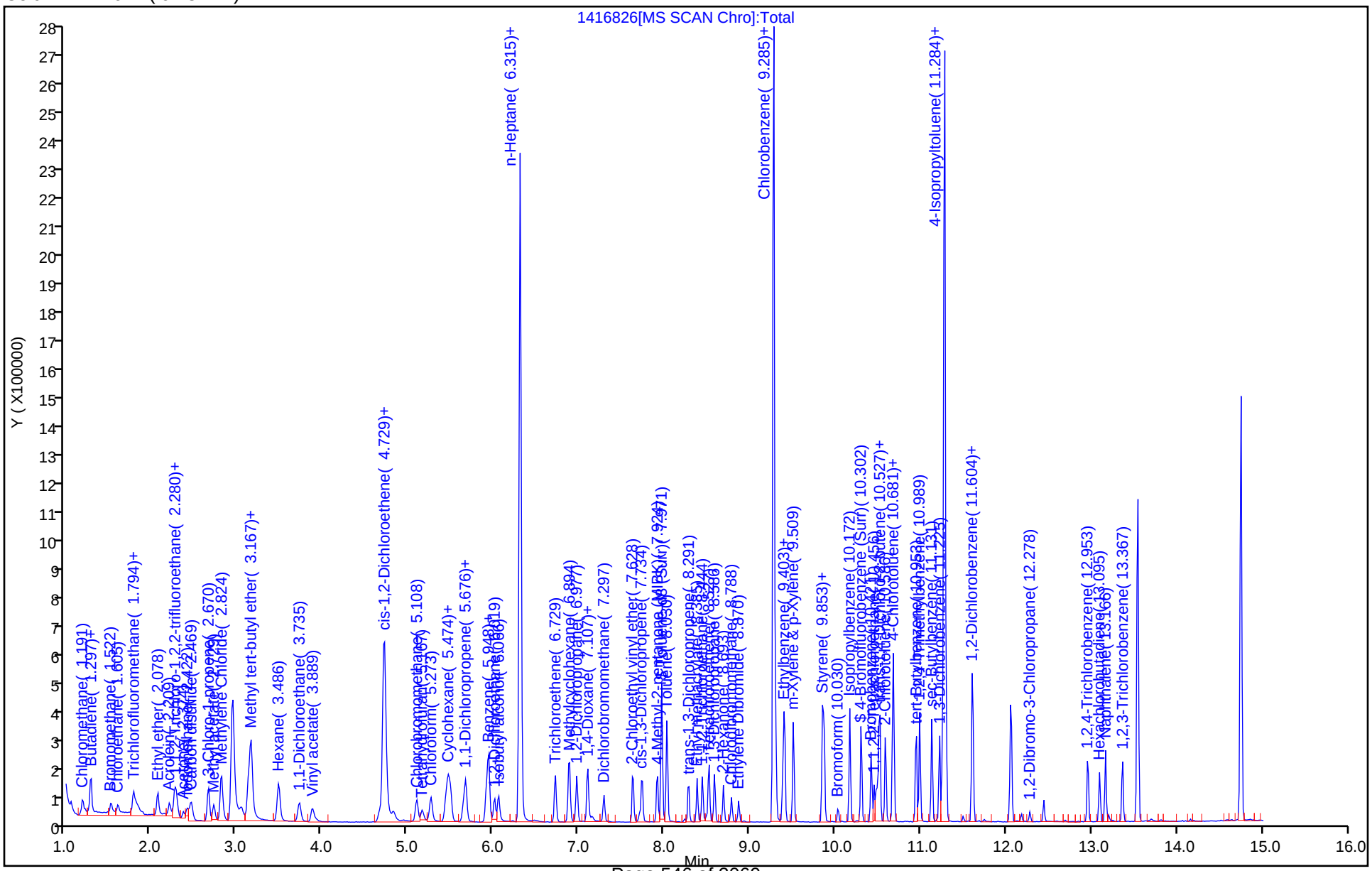
Report Date: 19-Nov-2018 10:57:24 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416826.D

Injection Date:	16-Nov-2018 19:08:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	9
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416827.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 16-Nov-2018 19:29:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082038-010
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub81

Method: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 19-Nov-2018 10:57:30 Calib Date: 16-Nov-2018 19:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416828.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: macenczaks Date: 18-Nov-2018 10:40:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1743521	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	1244457	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.284	0.000	98	598101	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	93	25959	2.00	2.81	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	93	32652	2.00	3.13	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	121192	2.00	3.36	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	47265	2.00	3.55	
9 Dichlorodifluoromethane	85	1.061	1.061	0.000	98	10425	2.00	1.75	
10 Chloromethane	50	1.203	1.191	0.012	98	18926	2.00	2.00	
11 Vinyl chloride	62	1.286	1.274	0.012	97	13808	2.00	1.83	
12 Butadiene	54	1.297	1.298	-0.001	98	14382	2.00	1.84	
13 Bromomethane	94	1.534	1.522	0.012	88	8542	2.00	2.11	
15 Chloroethane	64	1.605	1.605	0.000	98	8704	2.00	2.17	
16 Dichlorofluoromethane	67	1.794	1.783	0.011	97	21797	2.00	2.37	
17 Trichlorofluoromethane	101	1.818	1.806	0.012	97	15555	2.00	1.99	
18 Ethyl ether	59	2.078	2.078	0.000	95	20330	2.00	2.70	
19 Acrolein	56	2.209	2.209	0.000	99	16145	10.0	9.73	
21 1,1-Dichloroethene	96	2.280	2.268	0.012	97	13145	2.00	1.67	
22 1,1,2-Trichloro-1,2,2-trif	151	2.303	2.291	0.012	92	6356	2.00	1.27	
24 Acetone	43	2.374	2.374	0.000	99	20479	4.00	6.30	
25 Iodomethane	142	2.422	2.410	0.012	95	24462	2.00	1.80	
26 Carbon disulfide	76	2.469	2.457	0.012	100	34749	2.00	1.37	
27 3-Chloro-1-propene	76	2.670	2.670	0.000	91	9905	2.00	1.69	
29 Methyl acetate	43	2.729	2.729	0.000	99	35393	4.00	4.01	
30 Methylene Chloride	84	2.824	2.812	0.012	98	57999	2.00	1.24	
31 2-Methyl-2-propanol	59	3.061	3.061	0.000	98	20720	20.0	22.4	
32 trans-1,2-Dichloroethene	96	3.132	3.132	0.000	98	18978	2.00	1.86	
33 Methyl tert-butyl ether	73	3.155	3.155	0.000	98	44935	2.00	1.98	
34 Acrylonitrile	53	3.167	3.167	0.000	99	79324	20.0	20.2	
35 Hexane	86	3.487	3.487	0.000	93	3712	2.00	1.26	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.735	3.723	0.012	96	33099	2.00	1.88	
39 Vinyl acetate	86	3.889	3.877	0.012	97	3422	2.00	1.85	
41 2,2-Dichloropropane	97	4.682	4.682	0.000	58	4231	2.00	1.81	
42 cis-1,2-Dichloroethene	96	4.717	4.717	0.000	86	22526	2.00	1.96	
43 2-Butanone (MEK)	43	4.835	4.824	0.011	100	24286	4.00	4.61	
46 Chlorobromomethane	128	5.108	5.108	0.000	96	10323	2.00	1.95	
48 Tetrahydrofuran	42	5.179	5.167	0.012	92	14038	4.00	4.12	
49 Chloroform	83	5.273	5.273	0.000	96	27083	2.00	1.84	
50 1,1,1-Trichloroethane	97	5.451	5.439	0.012	97	17222	2.00	1.60	
51 Cyclohexane	56	5.474	5.475	0.000	94	24802	2.00	1.37	
52 Carbon tetrachloride	117	5.652	5.652	0.000	95	12918	2.00	1.28	
53 1,1-Dichloropropene	75	5.676	5.676	0.000	91	19077	2.00	1.59	
54 Benzene	78	5.948	5.948	0.000	97	76406	2.00	1.97	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	95	24344	2.00	1.99	
55 Isobutyl alcohol	41	6.066	6.066	0.000	95	17649	50.0	51.1	
58 n-Heptane	100	6.315	6.315	0.000	37	4069	2.00	1.31	
59 Trichloroethene	130	6.729	6.729	0.000	96	18634	2.00	1.84	
62 Methylcyclohexane	83	6.894	6.894	0.000	91	22035	2.00	1.30	
63 1,2-Dichloropropane	63	6.977	6.977	0.000	94	20147	2.00	2.01	
65 Dibromomethane	93	7.107	7.107	0.000	39	11222	2.00	2.03	
67 1,4-Dioxane	88	7.155	7.155	0.000	94	3880	40.0	41.7	
68 Dichlorobromomethane	83	7.297	7.297	0.000	96	17007	2.00	1.70	
70 2-Chloroethyl vinyl ether	63	7.640	7.628	0.012	92	24423	4.00	4.10	
71 cis-1,3-Dichloropropene	75	7.746	7.735	0.011	93	24834	2.00	1.81	
73 4-Methyl-2-pentanone (MIBK	43	7.924	7.924	0.000	98	37515	4.00	3.74	
74 Toluene	91	8.030	8.030	0.000	98	78586	2.00	1.99	
75 trans-1,3-Dichloropropene	75	8.291	8.279	0.012	96	19230	2.00	1.65	
76 Ethyl methacrylate	69	8.385	8.385	0.000	93	20662	2.00	1.92	
77 1,1,2-Trichloroethane	97	8.445	8.445	0.000	88	16117	2.00	2.04	
78 Tetrachloroethene	164	8.527	8.527	0.000	96	13477	2.00	1.76	
79 1,3-Dichloropropane	76	8.587	8.587	0.000	97	27679	2.00	2.08	
80 2-Hexanone	43	8.693	8.693	0.000	96	25315	4.00	3.94	
82 Chlorodibromomethane	129	8.788	8.788	0.000	90	11107	2.00	1.45	
83 Ethylene Dibromide	107	8.871	8.871	-0.001	97	15093	2.00	1.97	
85 Chlorobenzene	112	9.308	9.308	0.000	98	53681	2.00	2.10	
86 1,1,1,2-Tetrachloroethane	131	9.391	9.391	0.000	94	13055	2.00	1.68	
87 Ethylbenzene	106	9.403	9.415	-0.012	98	26346	2.00	1.97	
88 m-Xylene & p-Xylene	106	9.509	9.510	-0.001	99	31228	2.00	1.94	
89 o-Xylene	106	9.853	9.853	0.000	97	31732	2.00	2.03	
90 Styrene	104	9.876	9.876	0.000	96	50533	2.00	1.97	
91 Bromoform	173	10.030	10.030	0.000	97	5828	2.00	1.32	
92 Isopropylbenzene	105	10.172	10.172	0.000	95	67076	2.00	1.85	
94 Bromobenzene	156	10.421	10.421	0.000	94	21988	2.00	2.00	
95 1,1,2,2-Tetrachloroethane	83	10.456	10.456	0.000	94	16847	2.00	1.82	
96 1,2,3-Trichloropropane	110	10.492	10.492	0.000	80	6524	2.00	2.19	
97 trans-1,4-Dichloro-2-buten	53	10.503	10.504	-0.001	62	6623	2.00	1.93	
98 N-Propylbenzene	120	10.527	10.527	0.000	99	20989	2.00	1.78	
99 2-Chlorotoluene	126	10.586	10.586	0.000	96	18565	2.00	1.88	
100 1,3,5-Trimethylbenzene	105	10.681	10.681	0.000	96	56417	2.00	1.87	
101 4-Chlorotoluene	126	10.693	10.693	0.000	98	20530	2.00	2.02	
103 tert-Butylbenzene	119	10.953	10.953	0.000	90	47072	2.00	1.74	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	96	56676	2.00	1.80	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 sec-Butylbenzene	105	11.131	11.131	0.000	93	65892	2.00	1.71	
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	97	40553	2.00	2.07	
109 4-Isopropyltoluene	119	11.261	11.261	0.000	95	57020	2.00	1.76	
110 1,4-Dichlorobenzene	146	11.296	11.296	0.000	97	42846	2.00	2.15	
113 n-Butylbenzene	91	11.604	11.604	0.000	97	49173	2.00	1.69	
114 1,2-Dichlorobenzene	146	11.616	11.616	0.000	99	36046	2.00	2.04	
115 1,2-Dibromo-3-Chloropropan	157	12.278	12.278	0.000	84	2378	2.00	4.19	
117 1,2,4-Trichlorobenzene	180	12.965	12.965	0.000	95	24996	2.00	2.02	
118 Hexachlorobutadiene	225	13.095	13.095	0.000	94	8894	2.00	1.55	
119 Naphthalene	128	13.166	13.166	0.000	96	64266	2.00	2.08	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	96	23355	2.00	2.00	
S 132 1,2-Dichloroethene, Total	96				0			3.82	
S 133 1,3-Dichloropropene, Total	75				0			3.46	
S 134 Xylenes, Total	106				0		4.00	3.97	
S 135 Trihalomethanes, Total	1				0		8.00	6.31	
S 157 Total BTEX	1				0		10.0	9.89	

Reagents:

VM568718_00013	Amount Added:	1.00	Units: uL
VMAROLISTDW_00273	Amount Added:	0.20	Units: uL
VMRGAS_00270	Amount Added:	0.20	Units: uL
VMRPRIMW_00309	Amount Added:	0.20	Units: uL
vm50ss_00343	Amount Added:	0.20	Units: uL

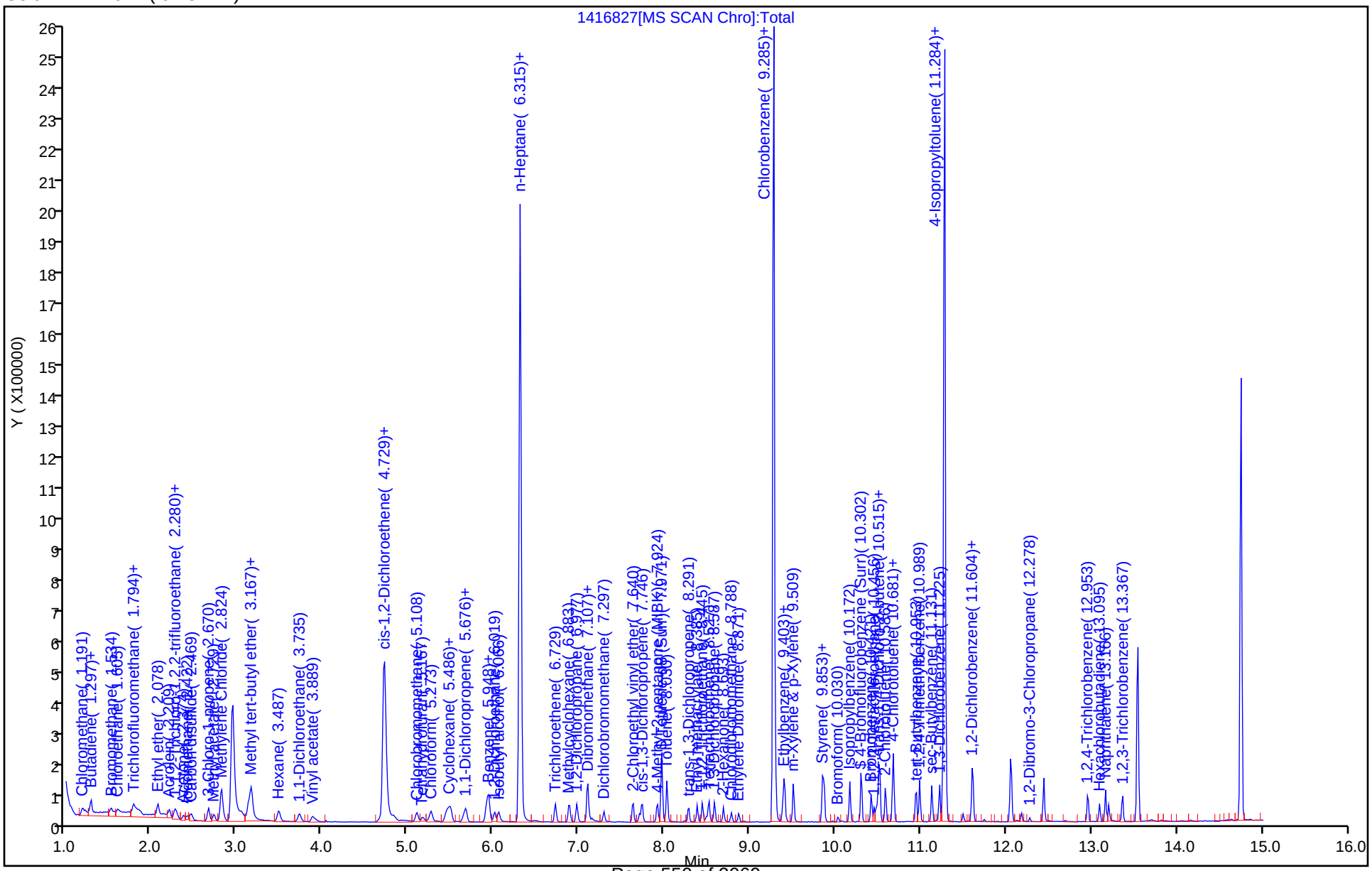
Report Date: 19-Nov-2018 10:57:31 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416827.D

Injection Date:	16-Nov-2018 19:29:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	10
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416828.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 16-Nov-2018 19:51:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082038-011
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub81

Method: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 19-Nov-2018 10:57:36 Calib Date: 16-Nov-2018 19:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416828.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: macenczaks Date: 18-Nov-2018 10:56:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1745940	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	1240645	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.284	0.000	98	591793	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	94	17277	1.00	1.87	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	95	22768	1.00	2.18	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	92	83694	1.00	2.33	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	32959	1.00	2.50	
9 Dichlorodifluoromethane	85	1.061	1.061	0.000	98	4665	1.00	0.7835	
10 Chloromethane	50	1.191	1.191	0.000	99	11254	1.00	1.19	
11 Vinyl chloride	62	1.286	1.274	0.012	66	5671	1.00	0.7501	
12 Butadiene	54	1.298	1.298	0.000	94	7208	1.00	0.9211	
13 Bromomethane	94	1.534	1.522	0.012	91	4342	1.00	1.07	
15 Chloroethane	64	1.605	1.605	0.000	98	4323	1.00	1.08	
16 Dichlorofluoromethane	67	1.783	1.783	0.000	97	8334	1.00	0.9041	
17 Trichlorofluoromethane	101	1.818	1.806	0.012	96	6694	1.00	0.8562	
18 Ethyl ether	59	2.078	2.078	0.000	93	12471	1.00	1.66	
19 Acrolein	56	2.209	2.209	0.000	98	8693	5.00	5.23	
21 1,1-Dichloroethene	96	2.280	2.268	0.012	96	6439	1.00	0.8167	
22 1,1,2-Trichloro-1,2,2-trif	151	2.303	2.291	0.012	91	3087	1.00	0.6154	
24 Acetone	43	2.374	2.374	0.000	99	12817	2.00	3.93	
25 Iodomethane	142	2.422	2.410	0.012	95	11903	1.00	0.8758	
26 Carbon disulfide	76	2.469	2.457	0.012	99	17476	1.00	0.6880	
27 3-Chloro-1-propene	76	2.670	2.670	0.000	92	5126	1.00	0.8744	
29 Methyl acetate	43	2.729	2.729	0.000	99	20915	2.00	2.37	
30 Methylene Chloride	84	2.824	2.812	0.012	98	45517	1.00	-0.1143	
31 2-Methyl-2-propanol	59	3.061	3.061	0.000	100	9426	10.0	10.2	
32 trans-1,2-Dichloroethene	96	3.132	3.132	0.000	98	9995	1.00	0.9783	
33 Methyl tert-butyl ether	73	3.155	3.155	0.000	98	23408	1.00	1.03	
34 Acrylonitrile	53	3.167	3.167	0.000	100	42369	10.0	10.8	
35 Hexane	86	3.487	3.487	0.000	92	1907	1.00	0.6472	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.735	3.723	0.012	95	16269	1.00	0.9216	
39 Vinyl acetate	86	3.889	3.877	0.012	97	1571	1.00	0.8467	
41 2,2-Dichloropropane	97	4.682	4.682	0.000	70	2250	1.00	0.9607	
42 cis-1,2-Dichloroethene	96	4.729	4.717	0.012	71	11914	1.00	1.03	
43 2-Butanone (MEK)	43	4.836	4.824	0.012	99	13089	2.00	2.48	
46 Chlorobromomethane	128	5.108	5.108	0.000	96	5504	1.00	1.04	
48 Tetrahydrofuran	42	5.179	5.167	0.012	91	7467	2.00	2.19	
49 Chloroform	83	5.273	5.273	0.000	95	14522	1.00	0.9853	
50 1,1,1-Trichloroethane	97	5.451	5.439	0.012	97	8374	1.00	0.7760	
51 Cyclohexane	56	5.475	5.475	0.001	89	10433	1.00	0.5766	
52 Carbon tetrachloride	117	5.652	5.652	0.000	92	6443	1.00	0.6379	
53 1,1-Dichloropropene	75	5.676	5.676	0.000	89	9669	1.00	0.8036	
54 Benzene	78	5.948	5.948	0.000	97	40932	1.00	1.05	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	95	11859	1.00	0.9680	
55 Isobutyl alcohol	41	6.066	6.066	0.000	96	8366	25.0	24.2	
58 n-Heptane	100	6.315	6.315	0.000	37	1749	1.00	0.5604	
59 Trichloroethene	130	6.729	6.729	0.000	95	9370	1.00	0.9261	
62 Methylcyclohexane	83	6.894	6.894	0.000	92	10595	1.00	0.6233	
63 1,2-Dichloropropane	63	6.977	6.977	0.000	91	9557	1.00	0.9504	
65 Dibromomethane	93	7.107	7.107	0.000	29	5896	1.00	1.07	
67 1,4-Dioxane	88	7.155	7.155	0.000	93	2170	20.0	23.3	
68 Dichlorobromomethane	83	7.297	7.297	0.000	96	8007	1.00	0.7975	
70 2-Chloroethyl vinyl ether	63	7.640	7.628	0.012	95	11748	2.00	1.97	
71 cis-1,3-Dichloropropene	75	7.746	7.735	0.011	93	12502	1.00	0.9097	
73 4-Methyl-2-pentanone (MIBK	43	7.924	7.924	0.000	98	19824	2.00	1.98	
74 Toluene	91	8.030	8.030	0.000	99	40672	1.00	1.03	
75 trans-1,3-Dichloropropene	75	8.291	8.279	0.012	97	9816	1.00	0.8447	
76 Ethyl methacrylate	69	8.385	8.385	0.000	92	10703	1.00	1.00	
77 1,1,2-Trichloroethane	97	8.445	8.445	0.000	90	8494	1.00	1.08	
78 Tetrachloroethene	164	8.527	8.527	0.000	96	6293	1.00	0.8242	
79 1,3-Dichloropropane	76	8.587	8.587	0.000	95	12811	1.00	0.9657	
80 2-Hexanone	43	8.693	8.693	0.000	95	12450	2.00	1.94	
82 Chlorodibromomethane	129	8.788	8.788	0.000	93	5238	1.00	0.6874	
83 Ethylene Dibromide	107	8.871	8.871	0.000	99	7449	1.00	0.9769	
85 Chlorobenzene	112	9.308	9.308	0.000	96	27911	1.00	1.09	
86 1,1,1,2-Tetrachloroethane	131	9.391	9.391	0.000	94	6727	1.00	0.8684	
87 Ethylbenzene	106	9.415	9.415	0.000	98	13217	1.00	0.9888	
88 m-Xylene & p-Xylene	106	9.510	9.510	0.000	98	15856	1.00	0.9876	
89 o-Xylene	106	9.853	9.853	0.000	96	15280	1.00	0.9810	
90 Styrene	104	9.876	9.876	0.000	96	26000	1.00	1.02	
91 Bromoform	173	10.030	10.030	0.000	95	2901	1.00	0.6580	
92 Isopropylbenzene	105	10.172	10.172	0.000	94	32204	1.00	0.8927	
94 Bromobenzene	156	10.421	10.421	0.000	94	11586	1.00	1.07	
95 1,1,2,2-Tetrachloroethane	83	10.456	10.456	0.000	95	8651	1.00	0.9448	
96 1,2,3-Trichloropropane	110	10.492	10.492	0.000	82	3211	1.00	1.09	
97 trans-1,4-Dichloro-2-buten	53	10.504	10.504	0.000	62	3571	1.00	1.05	
98 N-Propylbenzene	120	10.527	10.527	0.000	97	10552	1.00	0.9066	
99 2-Chlorotoluene	126	10.586	10.586	0.000	97	9366	1.00	0.9571	
100 1,3,5-Trimethylbenzene	105	10.681	10.681	0.000	97	27411	1.00	0.9182	
101 4-Chlorotoluene	126	10.693	10.693	0.000	97	11192	1.00	1.11	
103 tert-Butylbenzene	119	10.953	10.953	0.000	90	22948	1.00	0.8584	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	95	30783	1.00	0.9879	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 sec-Butylbenzene	105	11.131	11.131	0.000	93	31854	1.00	0.8346	
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	97	21721	1.00	1.12	
109 4-Isopropyltoluene	119	11.261	11.261	0.000	93	27412	1.00	0.8545	
110 1,4-Dichlorobenzene	146	11.296	11.296	0.000	92	22741	1.00	1.15	
113 n-Butylbenzene	91	11.604	11.604	0.000	97	24268	1.00	0.8434	
114 1,2-Dichlorobenzene	146	11.616	11.616	0.000	98	19602	1.00	1.12	
115 1,2-Dibromo-3-Chloropropan	157	12.278	12.278	0.000	85	1188	1.00	3.62	
117 1,2,4-Trichlorobenzene	180	12.965	12.965	0.000	94	13643	1.00	1.12	
118 Hexachlorobutadiene	225	13.095	13.095	0.000	96	3886	1.00	0.6828	
119 Naphthalene	128	13.166	13.166	0.000	96	36045	1.00	1.18	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	96	12781	1.00	1.11	
S 132 1,2-Dichloroethene, Total	96				0			2.01	
S 133 1,3-Dichloropropene, Total	75				0			1.75	
S 134 Xylenes, Total	106				0		2.00	1.97	
S 157 Total BTEX	1				0		5.00	5.04	
S 135 Trihalomethanes, Total	1				0		4.00	3.13	

Reagents:

VM568718_00013	Amount Added:	1.00	Units: uL
VMRPRIMW_00309	Amount Added:	0.10	Units: uL
VMAROLISTDW_00273	Amount Added:	0.10	Units: uL
VMRGAS_00270	Amount Added:	0.10	Units: uL
vm50ss_00343	Amount Added:	0.10	Units: uL

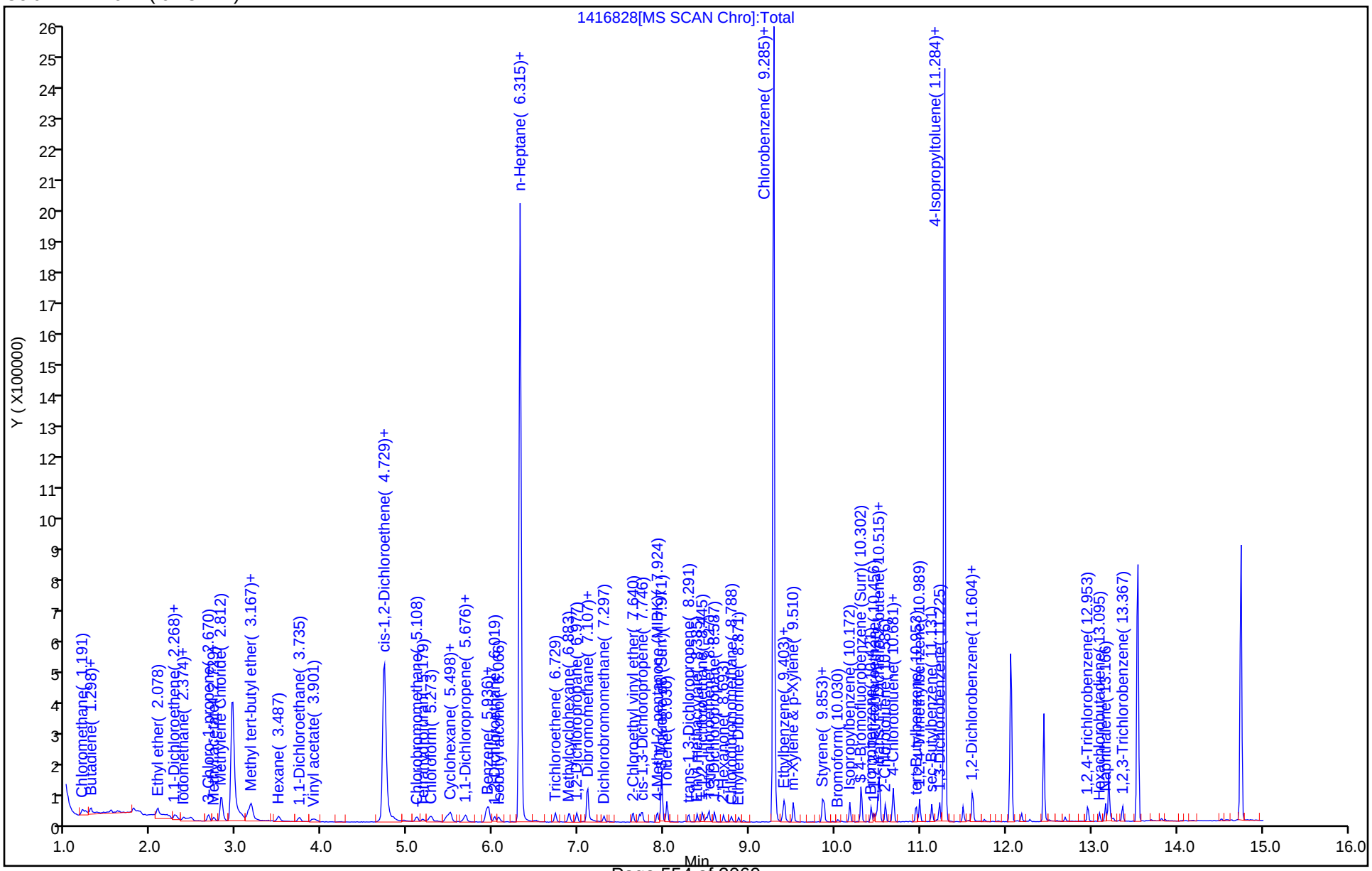
Report Date: 19-Nov-2018 10:57:37 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416828.D

Injection Date:	16-Nov-2018 19:51:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 356055

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/19/2018 10:32 Calibration End Date: 11/19/2018 13:24 Calibration ID: 48077

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 240-356055/13	1416877.D
Level 2	IC 240-356055/12	1416876.D
Level 3	IC 240-356055/11	1416875.D
Level 4	IC 240-356055/10	1416874.D
Level 5	IC 240-356055/9	1416873.D
Level 6	IC 240-356055/8	1416872.D
Level 7	IC 240-356055/7	1416871.D
Level 8	IC 240-356055/6	1416870.D
Level 9	IC 240-356055/5	1416869.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Acetonitrile	0.0421 0.0358	0.0360 0.0339	0.0372 0.0348	0.0352 0.0356	0.0347	Ave		0.0361				6.7		20.0			
2-Chloro-1,3-butadiene	0.3202 0.4600	0.3588 0.4735	0.4050 0.4840	0.4400 0.5064	0.4470	Ave		0.4328				14.1		20.0			
Diisopropyl ether	0.2258 0.2567	0.2235 0.2491	0.2357 0.2469	0.2584 0.2536	0.2526	Ave		0.2447				5.4		20.0			
Ethyl t-butyl ether	0.7858 0.8723	0.7978 0.8479	0.8161 0.8188	0.8819 0.8575	0.8678	Ave		0.8384				4.1		20.0			
Propionitrile	0.0403 0.0421	0.0423 0.0403	0.0417 0.0409	0.0417 0.0415	0.0414	Ave		0.0414				1.8		20.0			
Ethyl acetate	0.2952 0.2877	0.2681 0.2732	0.2785 0.2811	0.2711 0.2813	0.2719	Ave		0.2787				3.1		20.0			
Methacrylonitrile	0.1771 0.1945	0.1858 0.1932	0.1875 0.2023	0.1911 0.2016	0.1898	Ave		0.1914				4.1		20.0			
Tert-amyl methyl ether	0.7354 0.8769	0.7816 0.8457	0.8319 0.8250	0.8546 0.8624	0.8657	Ave		0.8310				5.5		20.0			
n-Butanol	0.0098 0.0127	0.0103 0.0129	0.0112 0.0134	0.0113 0.0143	0.0119	Ave		0.0120				12.3		20.0			
Ethyl acrylate	0.2590 0.3595	0.2872 0.3360	0.3113 0.3525	0.3030 0.3296	0.3116	Ave		0.3166				10.0		20.0			
Methyl methacrylate	0.2031 0.2654	0.2184 0.2534	0.2350 0.2727	0.2296 0.2586	0.2372	Ave		0.2415				9.5		20.0			
2-Nitropropane	+++++ 0.0641	+++++ 0.0664	0.0464 0.0735	0.0440 0.0729	0.0488	Lin1	-0.472	0.0726				15.7			0.9970		0.9900
n-Butyl acetate	0.5953 0.6542	0.5967 0.6392	0.6418 0.6444	0.6032 0.6533	0.6156	Ave		0.6271				3.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 356055

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/19/2018 10:32 Calibration End Date: 11/19/2018 13:24 Calibration ID: 48077

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1-Chlorohexane	0.4561 0.5186	0.4410 0.5239	0.4885 0.5190	0.5072 0.5163	0.5034	Ave		0.4971				6.0		20.0			
Cyclohexanone	0.0107 0.0127	0.0155 0.0129	0.0139 0.0131	0.0137 0.0139	0.0131	Ave		0.0133				9.5		20.0			
Pentachloroethane	+++++ 0.4160	0.2374 0.4907	0.2938 0.4536	0.3407 0.4503	0.3909	Lin1	-1.326	0.4579				12.4			0.9980		0.9900
1,2,3-Trimethylbenzene	2.3913 3.0024	2.5775 2.9865	2.9031 2.9170	2.9324 2.8701	2.9760	Ave		2.8396				7.4		20.0			
Benzyl chloride	+++++ 0.3140	+++++ 0.3562	0.1651 0.3839	0.2025 0.4027	0.2577	Lin1	-1.694	0.3916				15.3			0.9960		0.9900
1,3,5-Trichlorobenzene	0.9920 1.1226	1.0621 1.1590	1.0735 1.1393	1.1137 1.1317	1.1060	Ave		1.1000				4.6		20.0			
2-Methylnaphthalene	1.6417 2.0198	1.7629 1.9811	1.7563 1.8899	1.7775 1.8485	1.8811	Ave		1.8399				6.5		20.0			
1-Chloro-1-fluoroethane TIC	0.2409 0.2389	0.2383 0.2239	0.2601 0.1794	0.2729 0.1657	0.2573	Ave		0.2308				15.7		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 356055

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/19/2018 10:32 Calibration End Date: 11/19/2018 13:24 Calibration ID: 48077

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 240-356055/13	1416877.D
Level 2	IC 240-356055/12	1416876.D
Level 3	IC 240-356055/11	1416875.D
Level 4	IC 240-356055/10	1416874.D
Level 5	IC 240-356055/9	1416873.D
Level 6	IC 240-356055/8	1416872.D
Level 7	IC 240-356055/7	1416871.D
Level 8	IC 240-356055/6	1416870.D
Level 9	IC 240-356055/5	1416869.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acetonitrile	FB	Ave	10876 512402	19485 1001815	50299 2071861	96042 2671347	194916	10.0 500	20.0 1000	50.0 2000	100 2500	200
2-Chloro-1,3-butadiene	FB	Ave	8281 658066	19400 1400297	54777 2881992	120116 3796918	251345	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Diisopropyl ether	FB	Ave	5839 367262	12086 736723	31876 1469809	70554 1901625	142062	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Ethyl t-butyl ether	FB	Ave	20323 1247815	43139 2507679	110372 4875198	240756 6429690	487976	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Propionitrile	FB	Ave	10433 602354	22890 1192152	56415 2432515	113938 3114454	232548	10.0 500	20.0 1000	50.0 2000	100 2500	200
Ethyl acetate	FB	Ave	15267 822935	28994 1616133	75325 3347875	148022 4217962	305740	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Methacrylonitrile	FB	Ave	45813 2782382	100464 5712657	253654 12043179	521711 15115677	1067046	10.0 500	20.0 1000	50.0 2000	100 2500	200
Tert-amyl methyl ether	FB	Ave	19019 1254402	42261 2501361	112512 4912021	233313 6466425	486776	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
n-Butanol	CBNZ d5	Ave	4149 310545	9118 630819	25206 1343341	50499 1721244	112416	25.0 1250	50.0 2500	125 5000	250 6250	500
Ethyl acrylate	FB	Ave	6698 514252	15531 993845	42097 2099048	82718 2471440	175194	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Methyl methacrylate	FB	Ave	10507 759394	23617 1498874	63556 3247525	125361 3877896	266762	2.00 100	4.00 200	10.0 400	20.0 500	40.0
2-Nitropropane	FB	Lin1	+++++ 183252	+++++ 392994	12561 875260	24023 1093848	54889	+++++ 100	+++++ 200	10.0 400	20.0 500	40.0
n-Butyl acetate	CBNZ d5	Ave	10112 639336	21127 1251052	57598 2582036	107840 3149515	232831	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1-Chlorohexane	CBNZ d5	Ave	7748 506794	15614 1025411	43837 2079762	90687 2489255	190390	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 356055

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/19/2018 10:32 Calibration End Date: 11/19/2018 13:24 Calibration ID: 48077

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Cyclohexanone	CBNZ d5	Ave	1823 124482	5478 252585	12452 523299	24473 669718	49587	10.0 500	20.0 1000	50.0 2000	100 2500	200
Pentachloroethane	DCBd 4	Lin1	+++++ 356072	7526 849144	23301 1552792	55880 1916854	132261	+++++ 100	4.00 200	10.0 400	20.0 500	40.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	18234 1285004	40854 2583924	115111 4992514	240461 6108266	503508	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Benzyl chloride	DCBd 4	Lin1	+++++ 134370	+++++ 308219	6547 657095	16601 857143	43600	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	7564 480456	16834 1002803	42565 1949982	91326 2408467	187122	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Methylnaphthalene	DCBd 4	Ave	25037 1728882	55884 3428205	139277 6469396	291505 7868040	636533	2.00 100	4.00 200	10.0 400	20.0 500	40.0
1-Chloro-1-fluoroethane TIC	FB	Ave	6231 341674	12884 662119	35173 1067987	74506 1242614	144665	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 356055

SDG No.:

Instrument ID: A3UX14 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/19/2018 10:32 Calibration End Date: 11/19/2018 13:24 Calibration ID: 48077

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 240-356055/13	1416877.D
Level 2	IC 240-356055/12	1416876.D
Level 3	IC 240-356055/11	1416875.D
Level 4	IC 240-356055/10	1416874.D
Level 5	IC 240-356055/9	1416873.D
Level 6	IC 240-356055/8	1416872.D
Level 7	IC 240-356055/7	1416871.D
Level 8	IC 240-356055/6	1416870.D
Level 9	IC 240-356055/5	1416869.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4	LVL 5	LVL 6
2-Nitropropane	+++++	+++++	29.0						50			
Pentachloroethane	+++++	24.2						50				
Benzyl chloride	+++++	+++++	28.7						50			

Report Date: 20-Nov-2018 09:43:46 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416869.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 19-Nov-2018 10:32:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082085-005
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub82

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:43:45 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 10:55:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1499617	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	96	964217	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.285	11.285	0.000	99	425647	50.0	50.0	
156 1-Chloro-1-fluoroethane TI	47	1.546	1.546	0.000	100	1242614	250.0	179.5	
28 Acetonitrile	41	2.694	2.694	0.000	99	2671347	2500.0	2464.7	
37 2-Chloro-1,3-butadiene	53	3.854	3.853	0.001	93	3796918	250.0	292.5	
38 Isopropyl ether	87	3.889	3.877	0.012	95	1901625	250.0	259.1	
40 Tert-butyl ethyl ether	59	4.504	4.504	0.000	99	6429690	250.0	255.7	
44 Propionitrile	54	4.966	4.954	0.012	99	3114454	2500.0	2510.4	
45 Ethyl acetate	43	4.966	4.954	0.012	99	4217962	500.0	504.7	
47 Methacrylonitrile	41	5.179	5.155	0.024	95	15115677	2500.0	2632.7	
57 Tert-amyl methyl ether	73	6.137	6.137	0.000	90	6466425	250.0	259.4	
60 n-Butanol	56	6.824	6.824	0.000	90	1721244	6250.0	7452.8	
61 Ethyl acrylate	55	6.942	6.942	0.000	100	2471440	250.0	260.2	
66 Methyl methacrylate	41	7.167	7.167	0.000	94	3877896	500.0	535.4	
69 2-Nitropropane	41	7.557	7.557	0.000	97	1093848	500.0	509.1	
81 n-Butyl acetate	43	8.812	8.811	0.001	98	3149515	250.0	260.5	
84 1-Chlorohexane	91	9.308	9.308	0.000	88	2489255	250.0	259.7	
93 Cyclohexanone	55	10.267	10.267	0.000	95	669718	2500.0	2616.2	
104 Pentachloroethane	167	10.977	10.965	0.012	96	1916854	500.0	494.7	
111 1,2,3-Trimethylbenzene	105	11.344	11.344	0.000	99	6108266	250.0	252.7	
112 Benzyl chloride	126	11.427	11.427	0.000	99	857143	250.0	261.5	
116 1,3,5-Trichlorobenzene	180	12.444	12.444	0.000	98	2408467	250.0	257.2	
121 2-Methylnaphthalene	142	14.065	14.065	0.000	93	7868040	500.0	502.3	

Reagents:

VMRA9W_00273	Amount Added: 25.00	Units: uL
VM568718_00013	Amount Added: 1.00	Units: uL

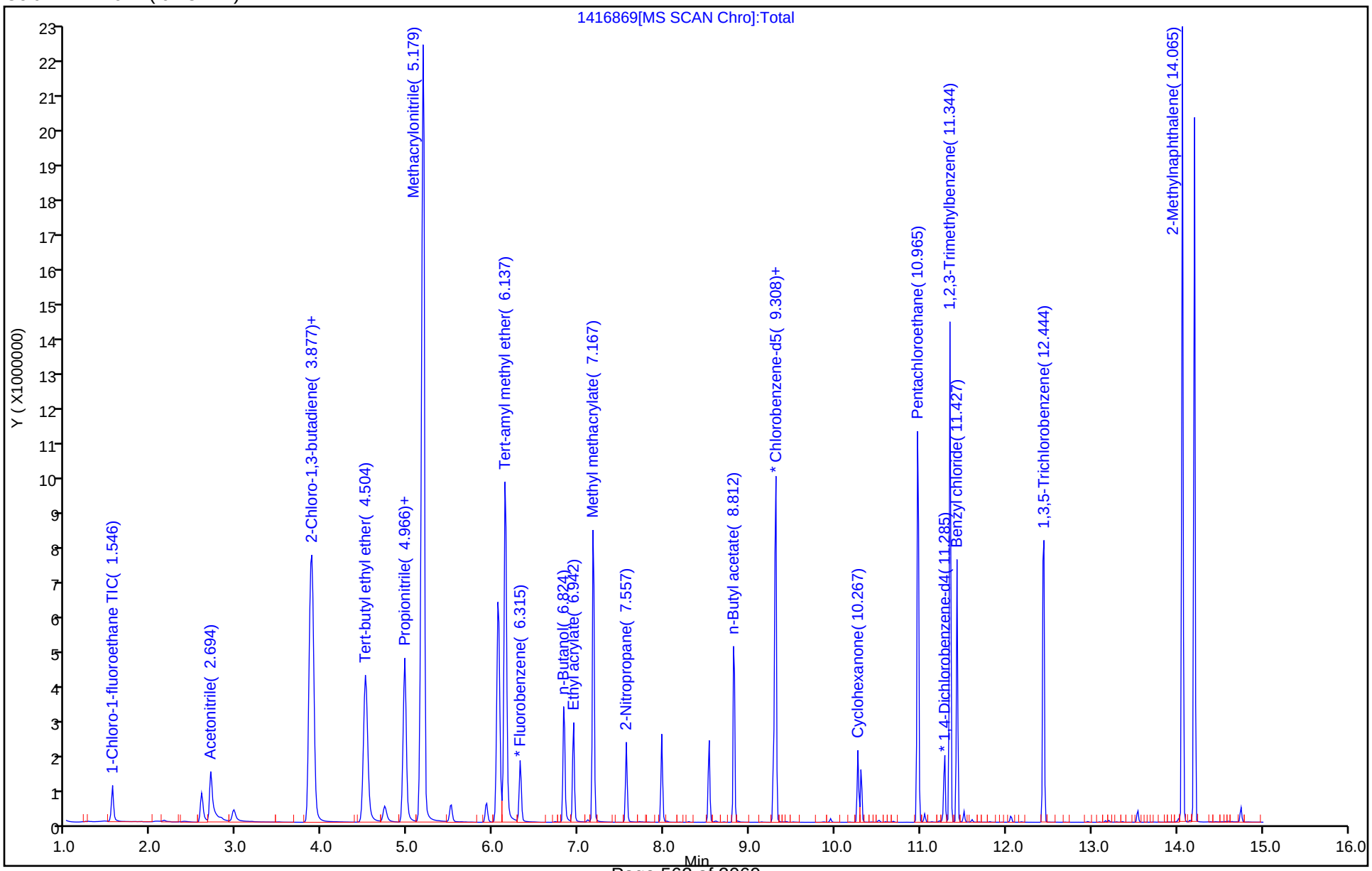
Report Date: 20-Nov-2018 09:43:46 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416869.D

Injection Date:	19-Nov-2018 10:32:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416870.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 19-Nov-2018 10:54:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082085-006
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub82

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:43:47 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 12:15:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1488561	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	94	1001774	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.285	-0.001	98	427886	50.0	50.0	
156 1-Chloro-1-fluoroethane TI	47	1.546	1.546	0.000	100	1067987	200.0	155.4	
28 Acetonitrile	41	2.694	2.694	0.000	99	2071861	2000.0	1925.8	
37 2-Chloro-1,3-butadiene	53	3.853	3.853	0.000	93	2881992	200.0	223.7	
38 Isopropyl ether	87	3.877	3.877	0.000	95	1469809	200.0	201.8	
40 Tert-butyl ethyl ether	59	4.504	4.504	0.000	98	4875198	200.0	195.3	
45 Ethyl acetate	43	4.966	4.954	0.012	99	3347875	400.0	403.5	
44 Propionitrile	54	4.954	4.954	0.000	99	2432515	2000.0	1975.3	
47 Methacrylonitrile	41	5.179	5.155	0.024	95	12043179	2000.0	2113.2	
57 Tert-amyl methyl ether	73	6.137	6.137	0.000	90	4912021	200.0	198.5	
60 n-Butanol	56	6.823	6.824	-0.001	89	1343341	5000.0	5598.5	
61 Ethyl acrylate	55	6.942	6.942	0.000	100	2099048	200.0	222.7	
66 Methyl methacrylate	41	7.167	7.167	0.000	94	3247525	400.0	451.7	
69 2-Nitropropane	41	7.557	7.557	0.000	97	875260	400.0	411.6	
81 n-Butyl acetate	43	8.811	8.811	0.000	98	2582036	200.0	205.5	
84 1-Chlorohexane	91	9.308	9.308	0.000	87	2079762	200.0	208.8	
93 Cyclohexanone	55	10.267	10.267	0.000	95	523299	2000.0	1967.6	
104 Pentachloroethane	167	10.977	10.965	0.012	96	1552792	400.0	399.2	
111 1,2,3-Trimethylbenzene	105	11.344	11.344	0.000	99	4992514	200.0	205.5	
112 Benzyl chloride	126	11.426	11.427	-0.001	99	657095	200.0	200.4	
116 1,3,5-Trichlorobenzene	180	12.444	12.444	0.000	98	1949982	200.0	207.2	
121 2-Methylnaphthalene	142	14.065	14.065	0.000	93	6469396	400.0	410.9	

Reagents:

VMRA9W_00273	Amount Added: 20.00	Units: uL
VM568718_00013	Amount Added: 1.00	Units: uL

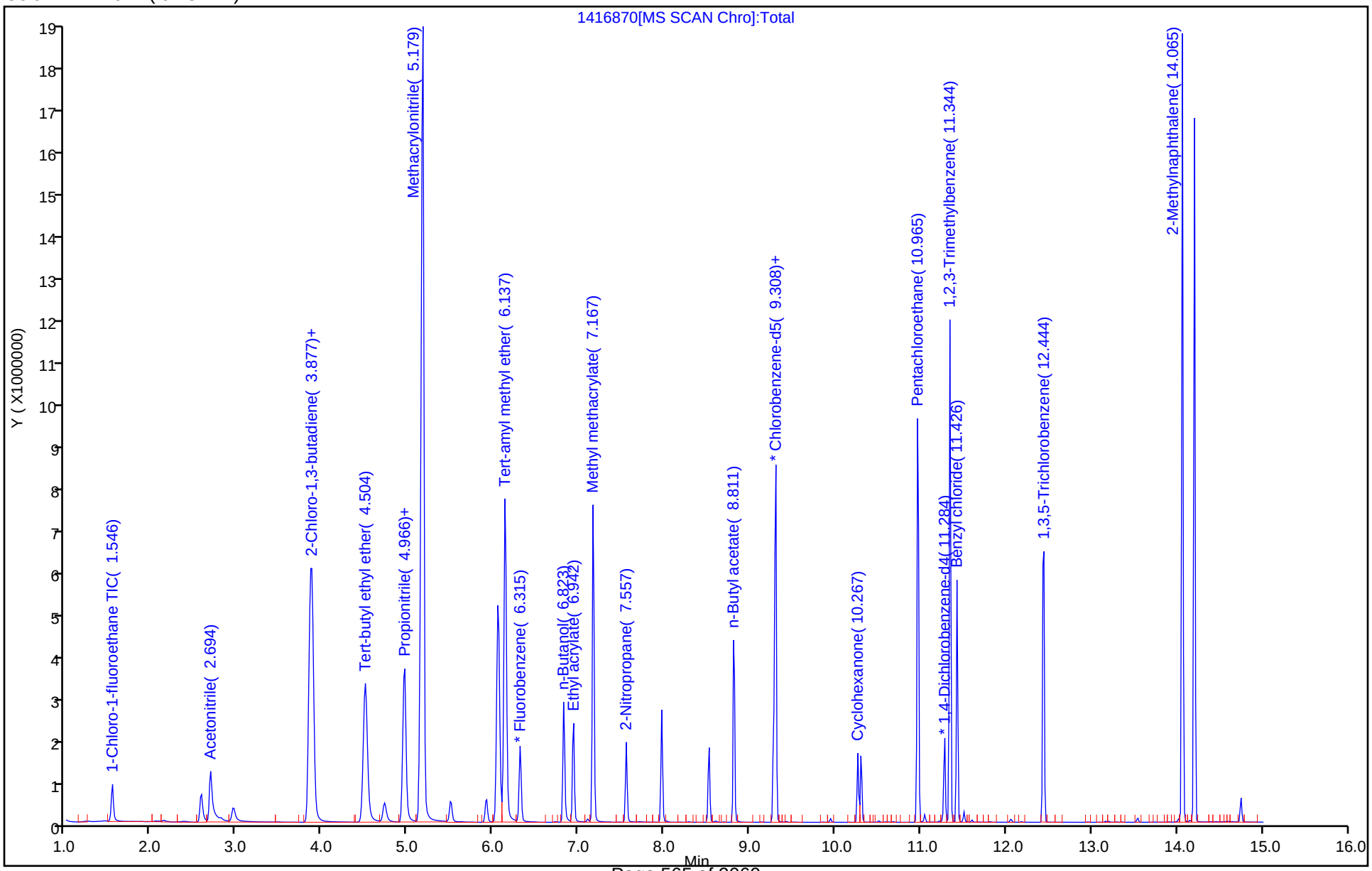
Report Date: 20-Nov-2018 09:43:48 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416870.D

Injection Date:	19-Nov-2018 10:54:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416871.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 19-Nov-2018 11:15:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082085-007
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub82

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:43:49 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 12:16:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1478806	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	94	978543	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.285	-0.001	99	432604	50.0	50.0	
156 1-Chloro-1-fluoroethane TI	47	1.546	1.546	0.000	100	662119	100.0	97.0	
28 Acetonitrile	41	2.694	2.694	0.000	99	1001815	1000.0	937.3	
37 2-Chloro-1,3-butadiene	53	3.853	3.853	0.000	92	1400297	100.0	109.4	
38 Isopropyl ether	87	3.877	3.877	0.000	98	736723	100.0	101.8	
40 Tert-butyl ethyl ether	59	4.504	4.504	0.000	98	2507679	100.0	101.1	
44 Propionitrile	54	4.954	4.954	0.000	99	1192152	1000.0	974.5	
45 Ethyl acetate	43	4.966	4.954	0.012	99	1616133	200.0	196.1	
47 Methacrylonitrile	41	5.167	5.155	0.012	96	5712657	1000.0	1009.0	
57 Tert-amyl methyl ether	73	6.137	6.137	0.000	91	2501361	100.0	101.8	
60 n-Butanol	56	6.823	6.824	-0.001	89	630819	2500.0	2691.4	
61 Ethyl acrylate	55	6.942	6.942	0.000	100	993845	100.0	106.1	
66 Methyl methacrylate	41	7.167	7.167	-0.001	95	1498874	200.0	209.9	
69 2-Nitropropane	41	7.557	7.557	0.000	98	392994	200.0	189.6	
81 n-Butyl acetate	43	8.811	8.811	0.000	98	1251052	100.0	101.9	
84 1-Chlorohexane	91	9.308	9.308	0.000	84	1025411	100.0	105.4	
93 Cyclohexanone	55	10.267	10.267	0.000	95	252585	1000.0	972.3	
104 Pentachloroethane	167	10.977	10.965	0.012	95	849144	200.0	217.3	
111 1,2,3-Trimethylbenzene	105	11.344	11.344	0.000	98	2583924	100.0	105.2	
112 Benzyl chloride	126	11.426	11.427	-0.001	100	308219	100.0	95.3	
116 1,3,5-Trichlorobenzene	180	12.444	12.444	0.000	98	1002803	100.0	105.4	
121 2-Methylnaphthalene	142	14.065	14.065	0.000	94	3428205	200.0	215.4	

Reagents:

VMRA9W_00273	Amount Added: 10.00	Units: uL
VM568718_00013	Amount Added: 1.00	Units: uL

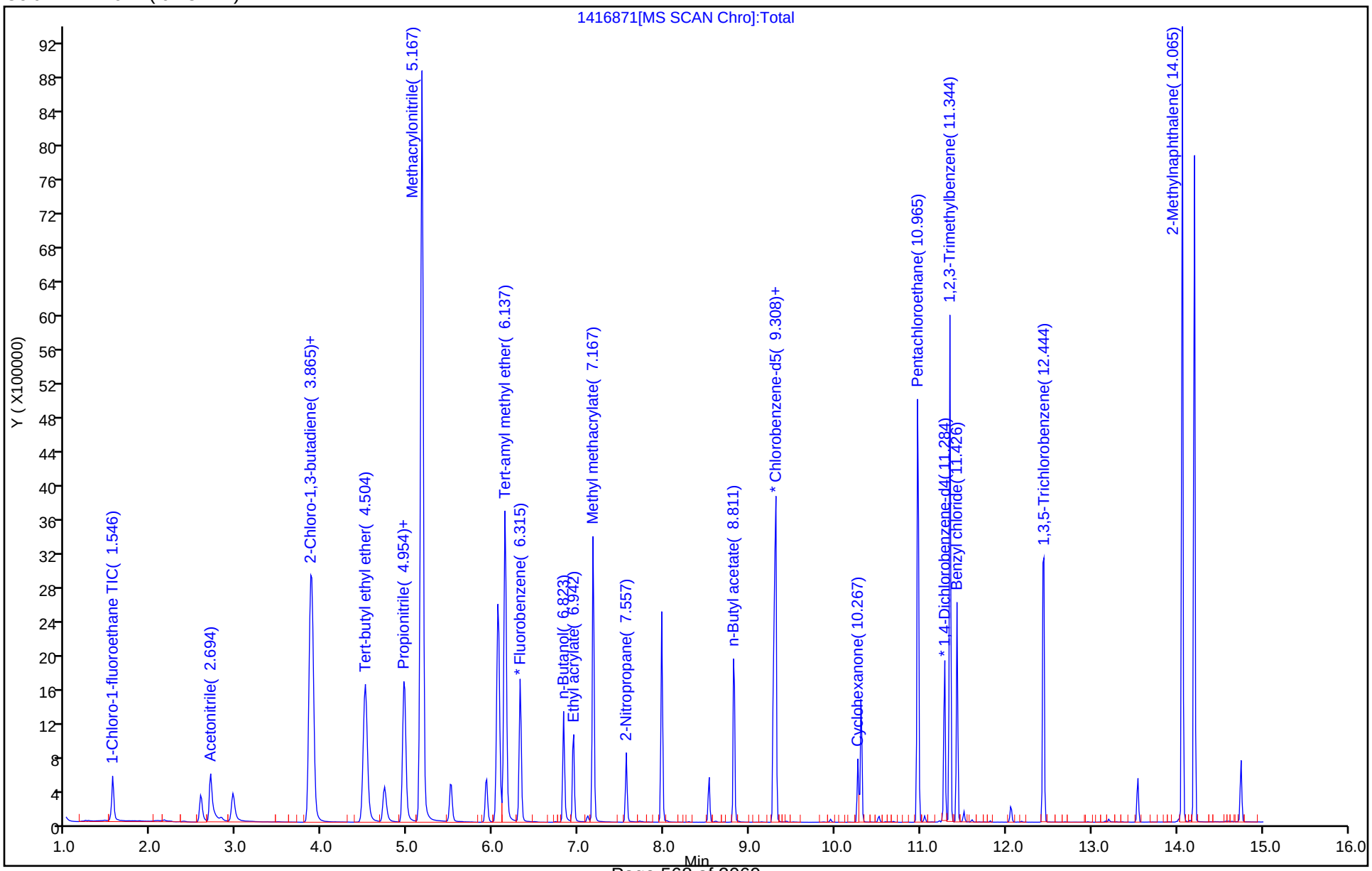
Report Date: 20-Nov-2018 09:43:50 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416871.D

Injection Date:	19-Nov-2018 11:15:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416872.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 19-Nov-2018 11:37:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082085-008
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub82

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:43:52 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 12:17:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1430440	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	977300	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.285	11.285	0.000	98	427987	50.0	50.0	
156 1-Chloro-1-fluoroethane TI	47	1.546	1.546	0.000	100	341674	50.0	51.7	
28 Acetonitrile	41	2.694	2.694	0.000	98	512402	500.0	495.6	
37 2-Chloro-1,3-butadiene	53	3.853	3.853	0.000	92	658066	50.0	53.2	
38 Isopropyl ether	87	3.877	3.877	0.000	95	367262	50.0	52.5	
40 Tert-butyl ethyl ether	59	4.504	4.504	0.000	98	1247815	50.0	52.0	
45 Ethyl acetate	43	4.954	4.954	0.000	99	822935	100.0	103.2	
44 Propionitrile	54	4.954	4.954	0.000	99	602354	500.0	509.0	
47 Methacrylonitrile	41	5.155	5.155	0.000	96	2782382	500.0	508.1	
57 Tert-amyl methyl ether	73	6.137	6.137	0.000	92	1254402	50.0	52.8	
60 n-Butanol	56	6.824	6.824	0.000	89	310545	1250.0	1326.6	
61 Ethyl acrylate	55	6.942	6.942	0.000	100	514252	50.0	56.8	
66 Methyl methacrylate	41	7.167	7.167	0.000	95	759394	100.0	109.9	
69 2-Nitropropane	41	7.557	7.557	0.000	97	183252	100.0	94.8	
81 n-Butyl acetate	43	8.811	8.811	0.000	98	639336	50.0	52.2	
84 1-Chlorohexane	91	9.308	9.308	0.000	83	506794	50.0	52.2	
93 Cyclohexanone	55	10.267	10.267	0.000	94	124482	500.0	479.8	
104 Pentachloroethane	167	10.965	10.965	0.000	90	356072	100.0	93.8	
111 1,2,3-Trimethylbenzene	105	11.344	11.344	0.000	98	1285004	50.0	52.9	
112 Benzyl chloride	126	11.427	11.427	0.000	100	134370	50.0	44.4	
116 1,3,5-Trichlorobenzene	180	12.444	12.444	0.000	98	480456	50.0	51.0	
121 2-Methylnaphthalene	142	14.065	14.065	0.000	94	1728882	100.0	109.8	

Reagents:

VMRA9W_00273	Amount Added:	5.00	Units: uL
VM568718_00013	Amount Added:	1.00	Units: uL

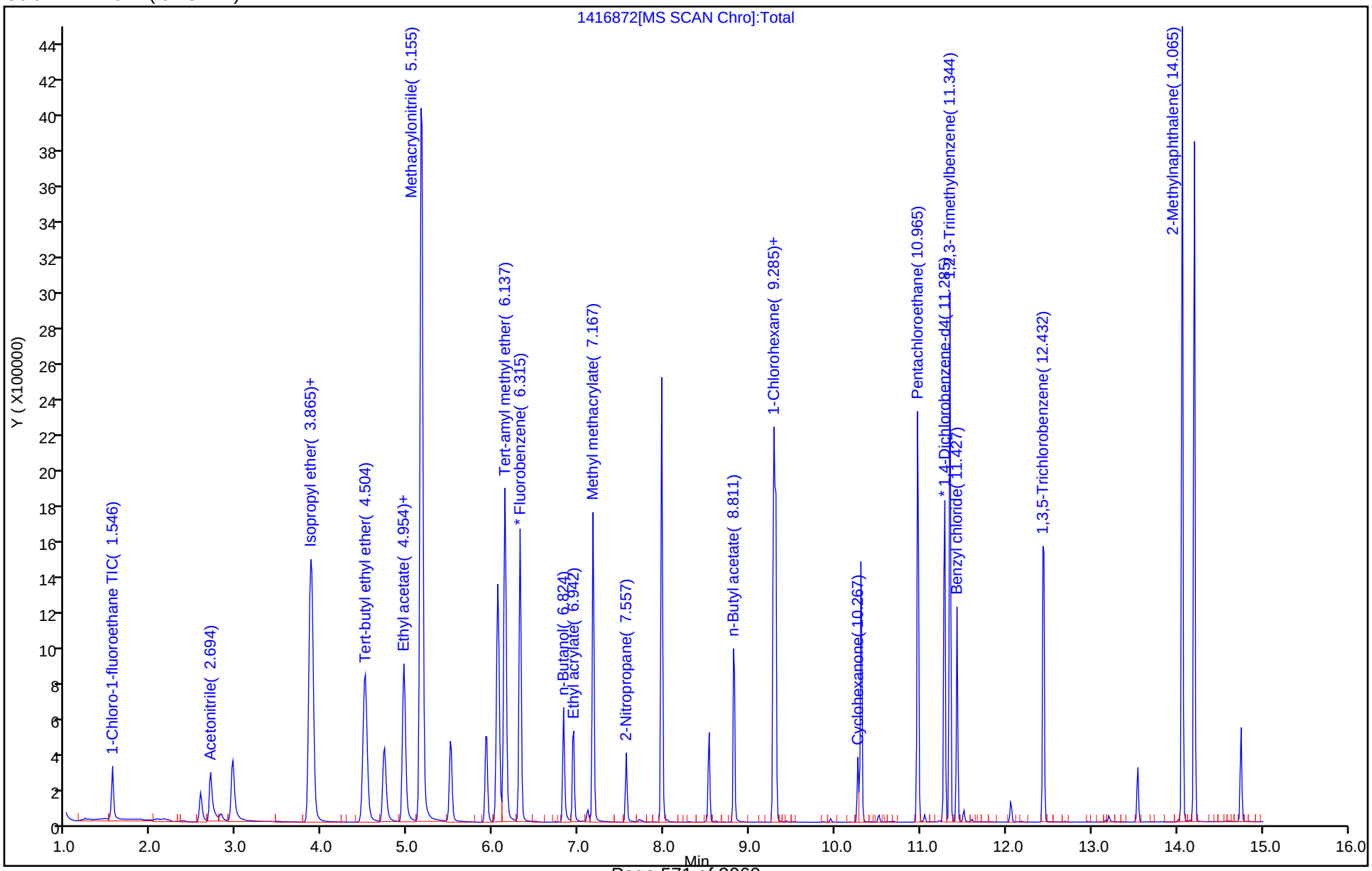
Report Date: 20-Nov-2018 09:43:53 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416872.D

Injection Date:	19-Nov-2018 11:37:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	8
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416873.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 19-Nov-2018 11:58:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082085-009
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub82

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:43:54 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 14:06:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1405805	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	96	945564	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.285	-0.001	98	422971	50.0	50.0	
156 1-Chloro-1-fluoroethane TI	47	1.546	1.546	0.000	100	144665	20.0	22.3	
28 Acetonitrile	41	2.694	2.694	0.000	99	194916	200.0	191.8	
37 2-Chloro-1,3-butadiene	53	3.853	3.853	0.000	92	251345	20.0	20.7	
38 Isopropyl ether	87	3.877	3.877	0.000	95	142062	20.0	20.6	
40 Tert-butyl ethyl ether	59	4.504	4.504	0.000	98	487976	20.0	20.7	
44 Propionitrile	54	4.954	4.954	0.000	99	232548	200.0	200.0	
45 Ethyl acetate	43	4.966	4.954	0.012	99	305740	40.0	39.0	
47 Methacrylonitrile	41	5.155	5.155	0.000	95	1067046	200.0	198.3	
57 Tert-amyl methyl ether	73	6.137	6.137	0.000	91	486776	20.0	20.8	
60 n-Butanol	56	6.823	6.824	-0.001	90	112416	500.0	496.4	
61 Ethyl acrylate	55	6.942	6.942	0.000	100	175194	20.0	19.7	
66 Methyl methacrylate	41	7.167	7.167	0.000	95	266762	40.0	39.3	
69 2-Nitropropane	41	7.557	7.557	0.000	98	54889	40.0	33.4	
81 n-Butyl acetate	43	8.811	8.811	0.000	98	232831	20.0	19.6	
84 1-Chlorohexane	91	9.308	9.308	0.000	83	190390	20.0	20.3	
93 Cyclohexanone	55	10.267	10.267	0.000	95	49587	200.0	197.5	
104 Pentachloroethane	167	10.977	10.965	0.012	96	132261	40.0	37.0	
111 1,2,3-Trimethylbenzene	105	11.344	11.344	0.000	98	503508	20.0	21.0	
112 Benzyl chloride	126	11.426	11.427	-0.001	100	43600	20.0	17.5	
116 1,3,5-Trichlorobenzene	180	12.444	12.444	0.000	98	187122	20.0	20.1	
121 2-Methylnaphthalene	142	14.065	14.065	0.000	94	636533	40.0	40.9	

Reagents:

VMRA9W_00273	Amount Added:	2.00	Units: uL
VM568718_00013	Amount Added:	1.00	Units: uL

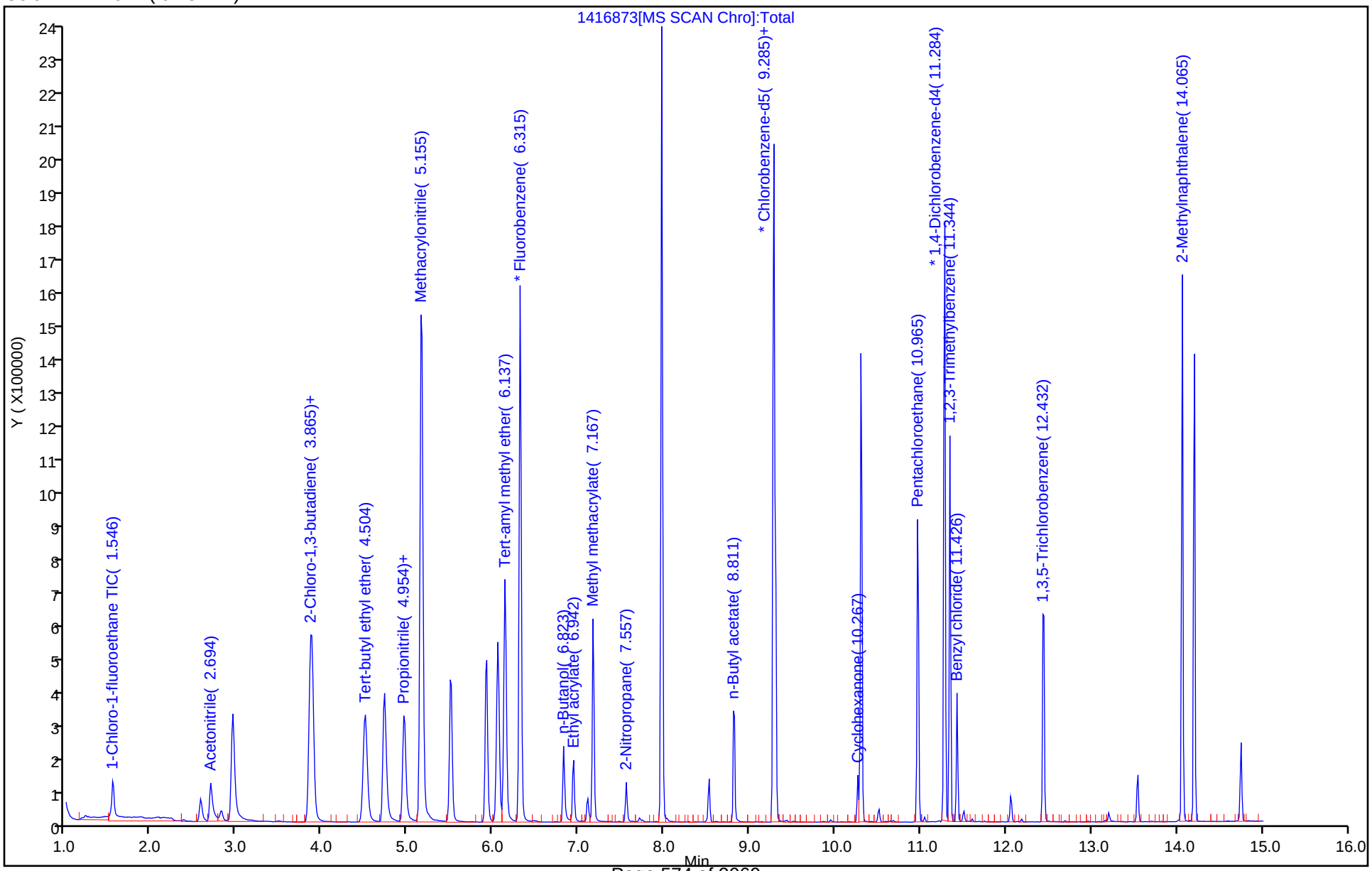
Report Date: 20-Nov-2018 09:43:55 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416873.D

Injection Date:	19-Nov-2018 11:58:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	9
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416874.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 19-Nov-2018 12:20:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082085-010
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub82

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:43:56 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 14:06:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1365026	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	893952	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.285	11.285	0.000	99	410002	50.0	50.0	
156 1-Chloro-1-fluoroethane TI	47	1.546	1.546	0.000	100	74506	10.0	11.8	
28 Acetonitrile	41	2.694	2.694	0.000	98	96042	100.0	97.3	
37 2-Chloro-1,3-butadiene	53	3.854	3.853	0.001	92	120116	10.0	10.2	
38 Isopropyl ether	87	3.877	3.877	0.000	95	70554	10.0	10.6	
40 Tert-butyl ethyl ether	59	4.504	4.504	0.000	99	240756	10.0	10.5	
45 Ethyl acetate	43	4.966	4.954	0.012	100	148022	20.0	19.5	
44 Propionitrile	54	4.954	4.954	0.000	99	113938	100.0	100.9	
47 Methacrylonitrile	41	5.155	5.155	0.000	95	521711	100.0	99.8	
57 Tert-amyl methyl ether	73	6.137	6.137	0.000	91	233313	10.0	10.3	
60 n-Butanol	56	6.824	6.824	0.000	91	50499	250.0	235.8	
61 Ethyl acrylate	55	6.942	6.942	0.000	100	82718	10.0	9.57	
66 Methyl methacrylate	41	7.167	7.167	0.000	94	125361	20.0	19.0	
69 2-Nitropropane	41	7.557	7.557	0.000	99	24023	20.0	18.6	
81 n-Butyl acetate	43	8.812	8.811	0.001	98	107840	10.0	9.62	
84 1-Chlorohexane	91	9.309	9.308	0.000	85	90687	10.0	10.2	
93 Cyclohexanone	55	10.267	10.267	0.000	93	24473	100.0	103.1	
104 Pentachloroethane	167	10.977	10.965	0.012	92	55880	20.0	17.8	
111 1,2,3-Trimethylbenzene	105	11.344	11.344	0.000	98	240461	10.0	10.3	
112 Benzyl chloride	126	11.427	11.427	0.000	100	16601	10.0	9.50	
116 1,3,5-Trichlorobenzene	180	12.444	12.444	0.000	98	91326	10.0	10.1	
121 2-Methylnaphthalene	142	14.065	14.065	0.000	94	291505	20.0	19.3	

Reagents:

VMRA9W_00273	Amount Added:	1.00	Units: uL
VM568718_00013	Amount Added:	1.00	Units: uL

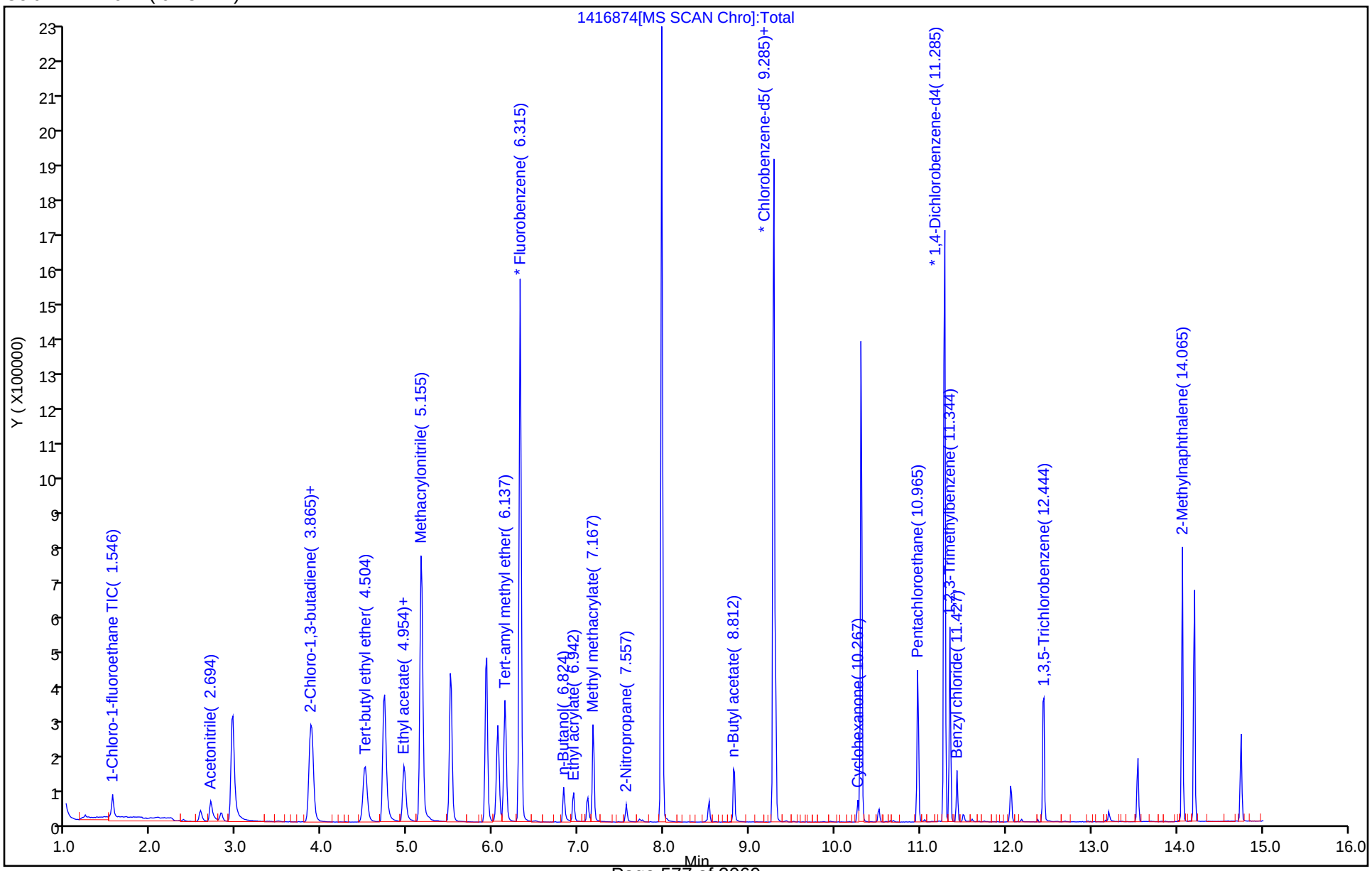
Report Date: 20-Nov-2018 09:43:57 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416874.D

Injection Date:	19-Nov-2018 12:20:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	10
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416875.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 19-Nov-2018 12:41:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082085-011
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub82

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:43:58 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 14:06:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1352485	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	897424	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.285	-0.001	99	396517	50.0	50.0	
156 1-Chloro-1-fluoroethane TI	47	1.546	1.546	0.000	100	35173	5.00	5.63	
28 Acetonitrile	41	2.694	2.694	0.000	100	50299	50.0	51.5	
37 2-Chloro-1,3-butadiene	53	3.853	3.853	0.000	92	54777	5.00	4.68	
38 Isopropyl ether	87	3.877	3.877	0.000	95	31876	5.00	4.82	
40 Tert-butyl ethyl ether	59	4.504	4.504	0.000	97	110372	5.00	4.87	
44 Propionitrile	54	4.954	4.954	0.000	96	56415	50.0	50.4	
45 Ethyl acetate	43	4.966	4.954	0.012	99	75325	10.0	10.0	
47 Methacrylonitrile	41	5.155	5.155	0.000	95	253654	50.0	49.0	
57 Tert-amyl methyl ether	73	6.137	6.137	0.000	91	112512	5.00	5.01	
60 n-Butanol	56	6.823	6.824	-0.001	92	25206	125.0	117.3	
61 Ethyl acrylate	55	6.942	6.942	0.000	100	42097	5.00	4.92	
66 Methyl methacrylate	41	7.167	7.167	0.000	95	63556	10.0	9.73	
69 2-Nitropropane	41	7.557	7.557	0.000	98	12561	10.0	12.9	
81 n-Butyl acetate	43	8.811	8.811	0.000	98	57598	5.00	5.12	
84 1-Chlorohexane	91	9.308	9.308	0.000	84	43837	5.00	4.91	
93 Cyclohexanone	55	10.267	10.267	0.000	94	12452	50.0	52.3	
104 Pentachloroethane	167	10.977	10.965	0.012	88	23301	10.0	9.31	
111 1,2,3-Trimethylbenzene	105	11.344	11.344	0.000	97	115111	5.00	5.11	
112 Benzyl chloride	126	11.426	11.427	-0.001	99	6547	5.00	6.43	
116 1,3,5-Trichlorobenzene	180	12.444	12.444	0.000	98	42565	5.00	4.88	
121 2-Methylnaphthalene	142	14.065	14.065	0.000	94	139277	10.0	9.55	

Reagents:

VMRA9W_00273	Amount Added:	0.50	Units: uL
VM568718_00013	Amount Added:	1.00	Units: uL

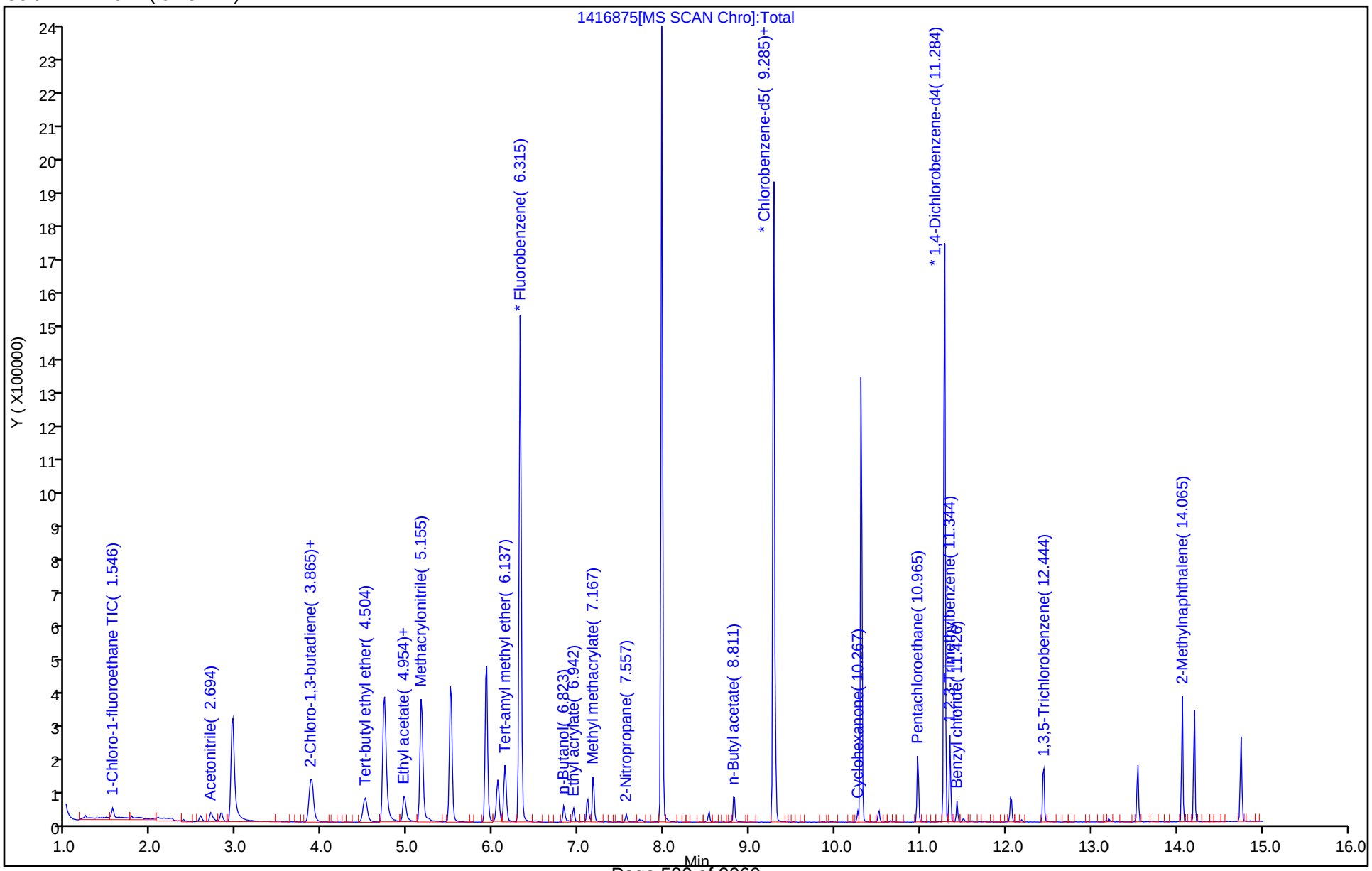
Report Date: 20-Nov-2018 09:43:59 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416875.D

Injection Date:	19-Nov-2018 12:41:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416876.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 19-Nov-2018 13:03:30 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082085-012
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub82

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:01 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 14:05:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1351831	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	885181	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.285	11.285	0.000	98	396260	50.0	50.0	
156 1-Chloro-1-fluoroethane TI	47	1.546	1.546	0.000	99	12884	2.00	2.06	
28 Acetonitrile	41	2.694	2.694	0.000	98	19485	20.0	19.9	
37 2-Chloro-1,3-butadiene	53	3.853	3.853	0.000	93	19400	2.00	1.66	
38 Isopropyl ether	87	3.877	3.877	0.000	95	12086	2.00	1.83	
40 Tert-butyl ethyl ether	59	4.504	4.504	0.000	97	43139	2.00	1.90	
45 Ethyl acetate	43	4.966	4.954	0.012	99	28994	4.00	3.85	
44 Propionitrile	54	4.954	4.954	0.000	79	22890	20.0	20.5	
47 Methacrylonitrile	41	5.155	5.155	0.000	95	100464	20.0	19.4	
57 Tert-amyl methyl ether	73	6.137	6.137	0.000	91	42261	2.00	1.88	
60 n-Butanol	56	6.824	6.824	0.000	93	9118	50.0	43.0	
61 Ethyl acrylate	55	6.942	6.942	0.000	99	15531	2.00	1.81	
66 Methyl methacrylate	41	7.167	7.167	0.000	93	23617	4.00	3.62	
69 2-Nitropropane	41	7.557	7.557	0.000	98	4925	4.00	9.02	
81 n-Butyl acetate	43	8.811	8.811	0.000	98	21127	2.00	1.90	
84 1-Chlorohexane	91	9.308	9.308	0.000	84	15614	2.00	1.77	
93 Cyclohexanone	55	10.267	10.267	0.000	87	5478	20.0	23.3	
104 Pentachloroethane	167	10.965	10.965	0.000	70	7526	4.00	4.97	
111 1,2,3-Trimethylbenzene	105	11.344	11.344	0.000	98	40854	2.00	1.82	
112 Benzyl chloride	126	11.427	11.427	0.000	97	2333	2.00	5.08	
116 1,3,5-Trichlorobenzene	180	12.444	12.444	0.000	96	16834	2.00	1.93	
121 2-Methylnaphthalene	142	14.065	14.065	0.000	95	55884	4.00	3.83	

Reagents:

VMRA9W_00273	Amount Added:	0.20	Units: uL
VM568718_00013	Amount Added:	1.00	Units: uL

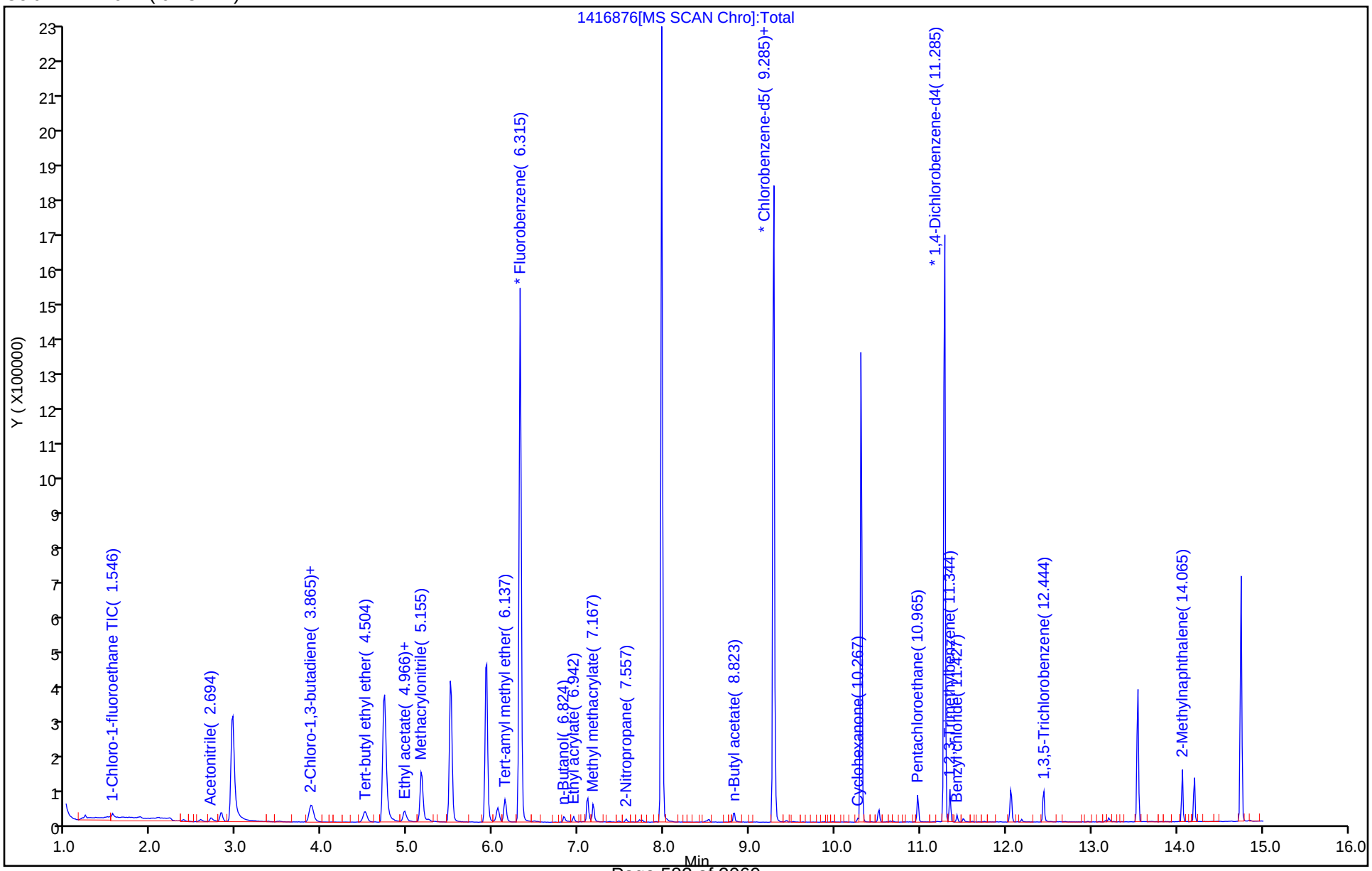
Report Date: 20-Nov-2018 09:44:02 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416876.D

Injection Date:	19-Nov-2018 13:03:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D
Lims ID: ic
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 19-Nov-2018 13:24:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ic
Misc. Info.: 240-0082085-013
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub82

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 14:05:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1293068	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	849376	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.285	11.285	0.000	98	381261	50.0	50.0	
156 1-Chloro-1-fluoroethane TI	47	1.546	1.546	0.000	100	6231	1.00	1.04	
28 Acetonitrile	41	2.706	2.694	0.012	99	10876	10.0	11.6	
37 2-Chloro-1,3-butadiene	53	3.853	3.853	0.000	91	8281	1.00	0.7399	
38 Isopropyl ether	87	3.877	3.877	0.000	96	5839	1.00	0.9227	
40 Tert-butyl ethyl ether	59	4.504	4.504	0.000	98	20323	1.00	0.9373	
44 Propionitrile	54	4.966	4.954	0.012	78	10433	10.0	9.75	
45 Ethyl acetate	43	4.966	4.954	0.012	99	15267	2.00	2.12	
47 Methacrylonitrile	41	5.167	5.155	0.012	95	45813	10.0	9.25	
57 Tert-amyl methyl ether	73	6.137	6.137	0.000	91	19019	1.00	0.8850	
60 n-Butanol	56	6.835	6.824	0.011	93	4149	25.0	20.4	
61 Ethyl acrylate	55	6.942	6.942	0.000	99	6698	1.00	0.8180	
66 Methyl methacrylate	41	7.167	7.167	0.000	95	10507	2.00	1.68	
69 2-Nitropropane	41	7.557	7.557	0.000	92	2245	2.00	7.70	
81 n-Butyl acetate	43	8.823	8.811	0.012	97	10112	1.00	0.9493	
84 1-Chlorohexane	91	9.308	9.308	0.000	82	7748	1.00	0.9175	
93 Cyclohexanone	55	10.267	10.267	0.000	82	1823	10.0	8.08	
104 Pentachloroethane	167	10.965	10.965	0.000	68	3093	2.00	3.78	
111 1,2,3-Trimethylbenzene	105	11.344	11.344	0.000	99	18234	1.00	0.8421	
112 Benzyl chloride	126	11.427	11.427	-0.001	98	772	1.00	4.58	
116 1,3,5-Trichlorobenzene	180	12.444	12.444	0.000	95	7564	1.00	0.9018	
121 2-Methylnaphthalene	142	14.065	14.065	0.000	94	25037	2.00	1.78	

Reagents:

VMRA9W_00273	Amount Added:	0.10	Units: uL
VM568718_00013	Amount Added:	1.00	Units: uL

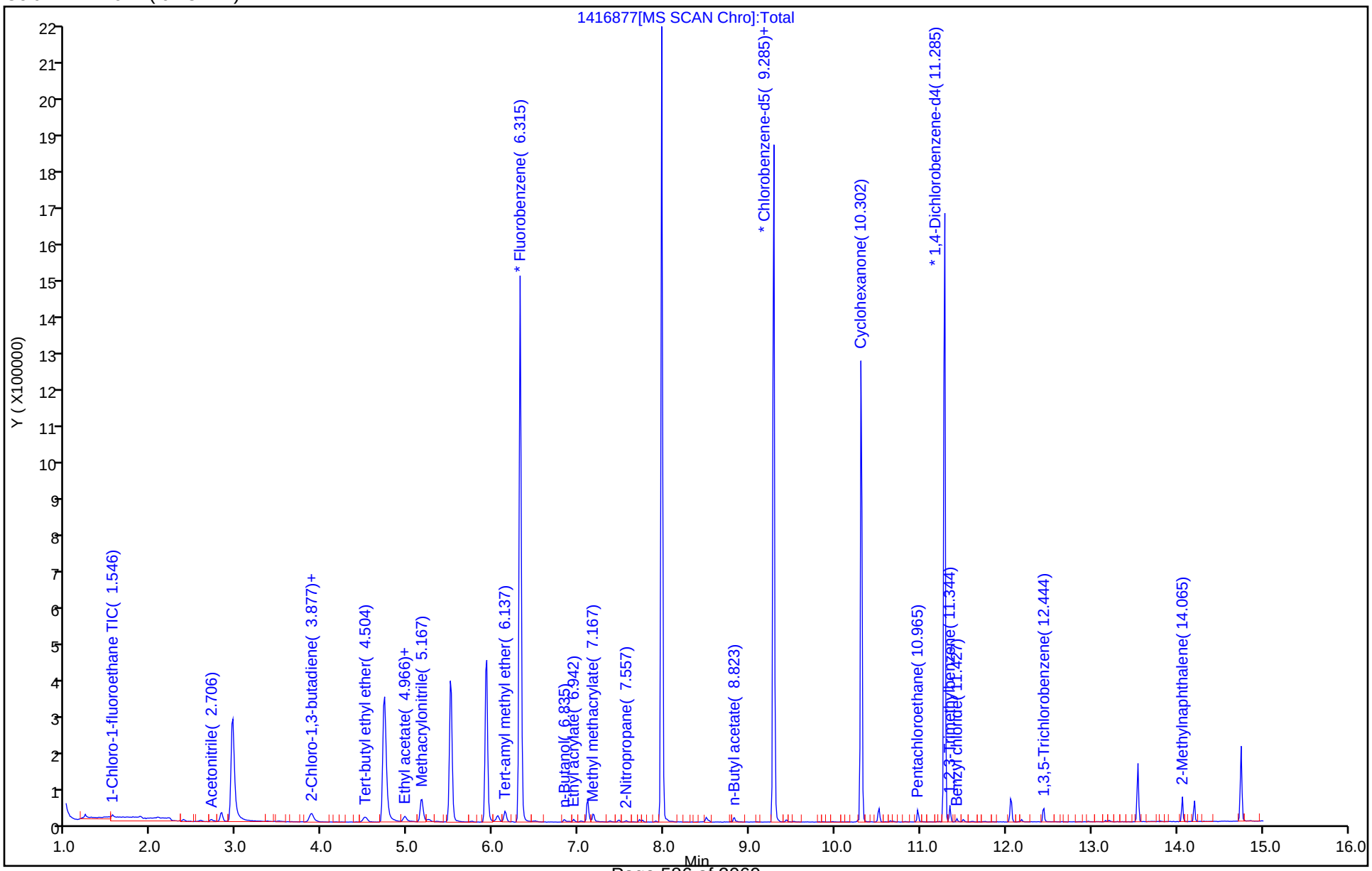
Report Date: 20-Nov-2018 09:44:04 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Injection Date:	19-Nov-2018 13:24:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	ic			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337766

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-337766/13	U1900794.d
Level 2	STD8260 240-337766/12	U1900793.d
Level 3	STD8260 240-337766/11	U1900792.d
Level 4	ICIS 240-337766/10	U1900791.d
Level 5	STD8260 240-337766/9	U1900790.d
Level 6	STD8260 240-337766/3	U1900784.d
Level 7	STD8260 240-337766/2	U1900783.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2985 0.3869	0.3275 0.3899	0.3189	0.3531	0.3613	Ave		0.3480			0.1000	10.0		20.0			
Chloromethane	0.3558 0.3258	0.3705 0.3191	0.3263	0.3392	0.3223	Ave		0.3370			0.1000	5.8		20.0			
Butadiene	0.3408 0.3374	0.3424 0.3377	0.2895	0.3248	0.3219	Ave		0.3278				5.7		20.0			
Vinyl chloride	0.2746 0.3390	0.3544 0.3374	0.3113	0.3366	0.3288	Ave		0.3260			0.1000	8.0		20.0			
Bromomethane	0.2749 0.2254	0.2866 0.2173	0.2405	0.2466	0.2251	Ave		0.2452			0.0500	10.8		20.0			
Chloroethane	0.2109 0.1921	0.2097 0.1854	0.1960	0.2032	0.1901	Ave		0.1982			0.0500	5.0		20.0			
Dichlorofluoromethane	0.5221 0.4475	0.4917 0.4372	0.4526	0.4727	0.4486	Ave		0.4675				6.5		20.0			
Trichlorofluoromethane	0.4494 0.4561	0.4680 0.4427	0.3932	0.4472	0.4396	Ave		0.4423			0.1000	5.3		20.0			
Ethyl ether	0.2193 0.1979	0.2111 0.1891	0.1902	0.1939	0.1890	Ave		0.1987				6.0		20.0			
Acrolein	0.0586 0.0546	0.0507 0.0535	0.0446	0.0490	0.0542	Ave		0.0522				8.7		20.0			
1,1-Dichloroethene	0.3808 0.3850	0.3828 0.3735	0.3902	0.3740	0.3655	Ave		0.3788			0.1000	2.2		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2602 0.2706	0.2860 0.2683	0.2820	0.2661	0.2580	Ave		0.2702			0.0500	3.9		20.0			
Acetone	+++++ 0.0784	0.0790 0.0643	0.0549	0.0580	0.0606	Ave		0.0659			0.0100	15.8		20.0			
Iodomethane	0.4645 0.4649	0.4824 0.4542	0.4796	0.4736	0.4610	Ave		0.4686				2.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337766

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon disulfide	1.0264 0.7904	0.9769 0.7703	0.8143	0.7839	0.7630	Ave		0.8465			0.1000	12.8		20.0			
3-Chloro-1-propene	0.4236 0.3955	0.4245 0.3845	0.3864	0.3828	0.3812	Ave		0.3969				4.8		20.0			
Methyl acetate	0.2893 0.2388	0.2199 0.2093	0.2069	0.2105	0.2113	Ave		0.2266			0.1000	13.1		20.0			
Methylene Chloride	+++++ 0.2977	0.3380 0.2854	0.3031	0.3009	0.2892	Ave		0.3024			0.1000	6.2		20.0			
2-Methyl-2-propanol	+++++ 0.0272	0.0286 +++++	0.0233	0.0231	0.0210	Ave		0.0246				12.8		20.0			
Acrylonitrile	0.1149 0.1149	0.0936 0.0991	0.0942	0.0985	0.1008	Ave		0.1023				8.8		20.0			
trans-1,2-Dichloroethene	0.4272 0.3621	0.3980 0.3508	0.3681	0.3544	0.3490	Ave		0.3728			0.1000	7.8		20.0			
Methyl tert-butyl ether	0.6889 0.7038	0.7226 0.6502	0.7037	0.7046	0.6888	Ave		0.6946			0.1000	3.3		20.0			
Hexane	0.4016 0.4127	0.4088 0.4136	0.4369	0.3839	0.3905	Ave		0.4069				4.3		20.0			
1,1-Dichloroethane	0.4297 0.4479	0.4309 0.4358	0.4483	0.4451	0.4391	Ave		0.4395			0.2000	1.8		20.0			
Vinyl acetate	0.4180 0.4211	0.3784 0.4083	0.3943	0.3850	0.3928	Ave		0.3997				4.1		20.0			
cis-1,2-Dichloroethene	0.3259 0.3058	0.3308 0.2928	0.3020	0.3030	0.2971	Ave		0.3082			0.1000	4.7		20.0			
2-Butanone (MEK)	+++++ 0.0411	0.0357 0.0381	0.0358	0.0358	0.0391	Ave		0.0376			0.0100	6.0		20.0			
2,2-Dichloropropane	0.2667 0.2404	0.2856 0.2633	0.2822	0.2661	0.2457	Ave		0.2643				6.4		20.0			
Chlorobromomethane	0.2447 0.2004	0.2207 0.1830	0.1878	0.1937	0.1884	Ave		0.2027				11.0		20.0			
Tetrahydrofuran	0.0995 0.1054	0.1040 0.0940	0.0907	0.0913	0.0950	Ave		0.0971				6.1		20.0			
Chloroform	0.4629 0.4616	0.4798 0.4429	0.4485	0.4541	0.4433	Ave		0.4561			0.2000	2.9		20.0			
1,1,1-Trichloroethane	0.3956 0.4177	0.3988 0.4154	0.4324	0.4070	0.4089	Ave		0.4108			0.1000	3.0		20.0			
Cyclohexane	0.4246 0.4364	0.4382 0.4292	0.4507	0.4156	0.4161	Ave		0.4301			0.1000	3.0		20.0			
1,1-Dichloropropene	0.3755 0.3758	0.3903 0.3692	0.3840	0.3595	0.3614	Ave		0.3737				3.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337766

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon tetrachloride	0.3639 0.3981	0.3846 0.3917	0.3944	0.3722	0.3729	Ave		0.3825			0.1000	3.4		20.0			
Isobutyl alcohol	0.0095 0.0104	0.0071 0.0087	0.0088	0.0079	0.0092	Ave		0.0088				12.2		20.0			
Benzene	0.9890 1.0452	1.0827 1.0051	1.0373	1.0007	1.0215	Ave		1.0259			0.5000	3.1		20.0			
1,2-Dichloroethane	0.3674 0.3257	0.3549 0.3127	0.3205	0.3110	0.3150	Ave		0.3296			0.1000	6.8		20.0			
n-Heptane	+++++ 0.2252	0.7970 0.2266	0.2839	0.2324	0.2217	Lin1	0.5799	0.2147				4.3			0.9990		0.9900
Trichloroethene	0.3122 0.3167	0.3258 0.3140	0.3258	0.3068	0.3105	Ave		0.3160			0.1500	2.3		20.0			
Methylcyclohexane	0.4985 0.5342	0.5073 0.5200	0.5394	0.4970	0.4957	Ave		0.5132			0.1000	3.6		20.0			
1,2-Dichloropropane	0.2050 0.2404	0.2394 0.2326	0.2309	0.2270	0.2376	Ave		0.2304			0.1000	5.3		20.0			
Dibromomethane	0.2379 0.2151	0.2154 0.2010	0.2009	0.2115	0.2105	Ave		0.2132				5.8		20.0			
1,4-Dioxane	+++++ 0.0024	0.0017 0.0024	0.0024	0.0024	0.0023	Ave		0.0023				13.5		20.0			
Dichlorobromomethane	0.3232 0.3408	0.3027 0.3295	0.3203	0.3127	0.3310	Ave		0.3229			0.1500	3.9		20.0			
2-Chloroethyl vinyl ether	0.1601 0.1755	0.1580 0.1783	0.1797	0.1698	0.1774	Ave		0.1713				5.2		20.0			
cis-1,3-Dichloropropene	0.3599 0.3873	0.3811 0.3872	0.3686	0.3735	0.3865	Ave		0.3777			0.1500	2.8		20.0			
4-Methyl-2-pentanone (MIBK)	0.2834 0.3221	0.2998 0.3046	0.3240	0.2983	0.3095	Ave		0.3059			0.0500	4.6		20.0			
Toluene	1.5618 1.4027	1.4672 1.4180	1.4098	1.3276	1.3894	Ave		1.4252			0.4000	5.1		20.0			
trans-1,3-Dichloropropene	0.4760 0.4702	0.4587 0.4631	0.4478	0.4252	0.4649	Ave		0.4580			0.1000	3.7		20.0			
Ethyl methacrylate	0.4185 0.4604	0.4061 0.4531	0.4309	0.4112	0.4583	Ave		0.4341				5.3		20.0			
1,1,2-Trichloroethane	0.2547 0.2895	0.2773 0.2862	0.2834	0.2725	0.2908	Ave		0.2792			0.1000	4.5		20.0			
Tetrachloroethene	0.4086 0.4320	0.4228 0.4317	0.4309	0.4048	0.4173	Ave		0.4212			0.1500	2.7		20.0			
1,3-Dichloropropane	0.4853 0.4890	0.5028 0.4855	0.4893	0.4635	0.4865	Ave		0.4860				2.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337766

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Hexanone	0.2860 0.3061	0.2740 0.2989	0.3048	0.2770	0.2999	Ave		0.2924			0.0500	4.5		20.0			
Chlorodibromomethane	0.3153 0.3531	0.3347 0.3456	0.3254	0.3197	0.3424	Ave		0.3337				4.2		20.0			
Ethylene Dibromide	0.3316 0.3186	0.3371 0.3125	0.3153	0.3013	0.3163	Ave		0.3190				3.8		20.0			
Chlorobenzene	0.9988 0.9439	1.0195 0.9268	0.9392	0.9052	0.9346	Ave		0.9526			0.3000	4.3		20.0			
1,1,1,2-Tetrachloroethane	0.2852 0.3466	0.3288 0.3341	0.3290	0.3310	0.3341	Ave		0.3270				5.9		20.0			
Ethylbenzene	0.4594 0.5246	0.5226 0.5211	0.5127	0.4996	0.5108	Ave		0.5073				4.5		20.0			
m-Xylene & p-Xylene	0.6169 0.6437	0.6148 0.6359	0.6355	0.6137	0.6232	Ave		0.6262				1.9		20.0			
o-Xylene	0.5941 0.6233	0.5896 0.6029	0.6245	0.6014	0.5968	Ave		0.6047				2.3		20.0			
Styrene	0.9580 1.0545	0.9583 1.0320	1.0135	0.9872	1.0201	Ave		1.0034			0.3000	3.7		20.0			
Bromoform	+++++ 0.2846	0.2440 0.2826	0.2606	0.2566	0.2726	Ave		0.2668			0.1000	6.0		20.0			
Isopropylbenzene	1.5546 1.6483	1.5581 1.6164	1.6482	1.5866	1.5868	Ave		1.5999			0.1000	2.4		20.0			
1,1,2,2-Tetrachloroethane	0.7561 0.8073	0.8321 0.7913	0.8175	0.7659	0.8099	Ave		0.7972			0.3000	3.5		20.0			
Bromobenzene	0.8153 0.7490	0.7267 0.7427	0.7731	0.7237	0.7577	Ave		0.7555				4.2		20.0			
1,2,3-Trichloropropane	0.3160 0.2796	0.2566 0.2769	0.2966	0.2651	0.2852	Ave		0.2823				7.0		20.0			
trans-1,4-Dichloro-2-butene	0.2699 0.2473	0.2213 0.2516	0.2435	0.2261	0.2517	Ave		0.2445				6.7		20.0			
N-Propylbenzene	0.7798 0.8210	0.7523 0.8202	0.8514	0.7731	0.8029	Ave		0.8001				4.2		20.0			
2-Chlorotoluene	0.6509 0.6957	0.7125 0.6833	0.7132	0.6770	0.6858	Ave		0.6883				3.1		20.0			
1,3,5-Trimethylbenzene	2.0585 2.3418	2.1282 2.3386	2.4321	2.2627	2.2905	Ave		2.2646				5.7		20.0			
4-Chlorotoluene	0.7199 0.7173	0.7260 0.7141	0.7528	0.6936	0.7171	Ave		0.7201				2.4		20.0			
tert-Butylbenzene	2.0893 2.2086	2.2305 2.1805	2.3049	2.0958	2.1272	Ave		2.1767				3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337766

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,4-Trimethylbenzene	2.3016 2.3641	2.3139 2.3974	2.4350	2.3225	2.3165	Ave		2.3501				2.1		20.0			
sec-Butylbenzene	2.8312 3.0965	2.8639 3.1341	3.2011	2.9684	2.9595	Ave		3.0078				4.6		20.0			
1,3-Dichlorobenzene	1.6206 1.4203	1.5501 1.4165	1.4543	1.3821	1.4074	Ave		1.4645			0.6000	6.0		20.0			
4-Isopropyltoluene	2.3868 2.6740	2.3755 2.7456	2.7383	2.5786	2.5586	Ave		2.5796				5.9		20.0			
1,4-Dichlorobenzene	1.7882 1.4335	1.6574 1.4328	1.4853	1.4002	1.4320	Ave		1.5185			0.5000	9.7		20.0			
n-Butylbenzene	2.0220 2.3242	2.1252 2.3914	2.3447	2.2111	2.1782	Ave		2.2281				5.9		20.0			
1,2-Dichlorobenzene	1.3936 1.3079	1.4283 1.3217	1.3446	1.2913	1.2861	Ave		1.3391			0.4000	4.0		20.0			
1,2-Dibromo-3-Chloropropane	0.2394 0.2501	0.2225 0.2556	0.2287	0.2293	0.2369	Ave		0.2375			0.0500	5.0		20.0			
1,2,4-Trichlorobenzene	1.0063 0.8577	1.0084 0.9508	0.8893	0.8765	0.8484	Ave		0.9196			0.2000	7.4		20.0			
Hexachlorobutadiene	0.4988 0.4431	0.5134 0.5128	0.4874	0.4604	0.4444	Ave		0.4800				6.4		20.0			
Naphthalene	2.5280 2.5374	2.6896 2.7560	2.5594	2.5256	2.5586	Ave		2.5935				3.5		20.0			
1,2,3-Trichlorobenzene	0.8270 0.7867	0.8451 0.9084	0.8355	0.8114	0.8072	Ave		0.8316				4.7		20.0			
Dibromofluoromethane (Surr)	0.2924 0.2586	0.2650 0.2453	0.2515	0.2531	0.2466	Ave		0.2589				6.3		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3213 0.2669	0.3001 0.2485	0.2625	0.2659	0.2555	Ave		0.2744				9.6		20.0			
Toluene-d8 (Surr)	1.2522 1.2151	1.2033 1.2031	1.2111	1.1433	1.2004	Ave		1.2041				2.7		20.0			
4-Bromofluorobenzene (Surr)	0.5696 0.4390	0.4918 0.4279	0.4472	0.4315	0.4318	Ave		0.4627				11.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337766

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-337766/13	U1900794.d
Level 2	STD8260 240-337766/12	U1900793.d
Level 3	STD8260 240-337766/11	U1900792.d
Level 4	ICIS 240-337766/10	U1900791.d
Level 5	STD8260 240-337766/9	U1900790.d
Level 6	STD8260 240-337766/3	U1900784.d
Level 7	STD8260 240-337766/2	U1900783.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	6894 1134505	14647 1522047	151920	328230	708511	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Chloromethane	FB	Ave	8217 955231	16570 1245553	155433	315290	632033	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Butadiene	FB	Ave	7871 989374	15313 1318121	137925	301883	631099	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Vinyl chloride	FB	Ave	6342 993940	15847 1317064	148293	312915	644632	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Bromomethane	FB	Ave	6350 660888	12818 848050	114577	229239	441425	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Chloroethane	FB	Ave	4872 563348	9377 723733	93395	188891	372825	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Dichlorofluoromethane	FB	Ave	12059 1312016	21989 1706469	215631	439391	879608	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Trichlorofluoromethane	FB	Ave	10381 1337225	20928 1728039	187339	415720	861954	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethyl ether	FB	Ave	5066 580370	9442 738330	90620	180269	370565	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Acrolein	FB	Ave	6772 800130	11339 1043418	106196	227879	531628	2.50 300	5.00 400	50.0	100	200
1,1-Dichloroethene	FB	Ave	8796 1128785	17119 1458107	185910	347690	716665	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	6009 793296	12789 1047375	134365	247358	505930	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Acetone	FB	Ave	+++++ 459712	7064 501797	52355	107763	237768	+++++ 120	2.00 160	20.0	40.0	80.0
Iodomethane	FB	Ave	10728 1363038	21574 1772860	228493	440198	903919	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Carbon disulfide	FB	Ave	23708 2317545	43688 3006958	387941	728690	1496184	0.500 60.0	1.00 80.0	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337766

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
3-Chloro-1-propene	FB	Ave	9784 1159498	18985 1500878	184068	355801	747474	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Methyl acetate	FB	Ave	13362 1400331	19667 1633788	197122	391356	828794	1.00 120	2.00 160	20.0	40.0	80.0
Methylene Chloride	FB	Ave	+++++ 872855	15117 1113978	144386	279726	566982	+++++ 60.0	1.00 80.0	10.0	20.0	40.0
2-Methyl-2-propanol	FB	Ave	+++++ 798354	12788 +++++	110777	215092	411966	+++++ 600	10.0 +++++	100	200	400
Acrylonitrile	FB	Ave	26540 3368428	41875 3868018	448754	915892	1977138	5.00 600	10.0 800	100	200	400
trans-1,2-Dichloroethene	FB	Ave	9868 1061569	17800 1369327	175373	329454	684359	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Methyl tert-butyl ether	FB	Ave	15911 2063462	32315 2537900	335243	654948	1350698	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Hexane	FB	Ave	9277 1210166	18280 1614587	208123	356826	765779	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1-Dichloroethane	FB	Ave	9924 1313347	19272 1701003	213583	413734	860929	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Vinyl acetate	FB	Ave	9654 1234805	16923 1593713	187841	357825	770166	0.500 60.0	1.00 80.0	10.0	20.0	40.0
cis-1,2-Dichloroethene	FB	Ave	7528 896669	14795 1142993	143871	281663	582599	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Butanone (MEK)	FB	Ave	+++++ 241145	3193 297238	34072	66486	153177	+++++ 120	2.00 160	20.0	40.0	80.0
2,2-Dichloropropane	FB	Ave	6159 704769	12773 1027916	134434	247316	481767	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Chlorobromomethane	FB	Ave	5651 587580	9868 714392	89489	180080	369472	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Tetrahydrofuran	FB	Ave	4596 618274	9301 734202	86462	169823	372381	1.00 120	2.00 160	20.0	40.0	80.0
Chloroform	FB	Ave	10692 1353439	21458 1728769	213657	422069	869181	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,1-Trichloroethane	FB	Ave	9137 1224716	17835 1621508	206006	378348	801860	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Cyclohexane	FB	Ave	9806 1279473	19597 1675220	214696	386296	815868	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1-Dichloropropene	FB	Ave	8674 1102013	17455 1441115	182947	334178	708682	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Carbon tetrachloride	FB	Ave	8406 1167256	17198 1528972	187898	345961	731238	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Isobutyl alcohol	FB	Ave	5482 758926	7910 849021	105355	183028	449380	12.5 1500	25.0 2000	250	500	1000

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337766

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	22844 3064496	48419 3923346	494183	930203	2003056	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichloroethane	FB	Ave	8485 954899	15873 1220640	152677	289097	617748	0.500 60.0	1.00 80.0	10.0	20.0	40.0
n-Heptane	FB	Lin1	+++++ 660181	35642 884598	135257	216048	434651	+++++ 60.0	1.00 80.0	10.0	20.0	40.0
Trichloroethene	FB	Ave	7211 928718	14571 1225880	155201	285190	608912	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Methylcyclohexane	FB	Ave	11515 1566351	22689 2029926	256970	461990	972024	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichloropropane	FB	Ave	4734 704987	10704 908144	110015	210992	465852	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Dibromomethane	FB	Ave	5496 630606	9635 784539	95707	196594	412829	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,4-Dioxane	FB	Ave	+++++ 142512	1478 187742	23290	43840	91591	+++++ 1200	20.0 1600	200	400	800
Dichlorobromomethane	FB	Ave	7466 999127	13539 1286301	152581	290639	649042	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Chloroethyl vinyl ether	FB	Ave	7395 1029389	14128 1392220	171233	315645	695808	1.00 120	2.00 160	20.0	40.0	80.0
cis-1,3-Dichloropropene	FB	Ave	8313 1135535	17042 1511629	175580	347181	757793	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	13091 1889071	26811 2377711	308673	554613	1213622	1.00 120	2.00 160	20.0	40.0	80.0
Toluene	CBNZ d5	Ave	28549 3229981	51989 4260144	544060	985962	2123092	0.500 60.0	1.00 80.0	10.0	20.0	40.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	8702 1082760	16254 1391341	172822	315763	710372	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethyl methacrylate	CBNZ d5	Ave	7650 1060082	14391 1361372	166277	305349	700245	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,2-Trichloroethane	CBNZ d5	Ave	4656 666583	9825 859718	109350	202390	444369	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Tetrachloroethene	CBNZ d5	Ave	7470 994717	14983 1297004	166266	300622	637692	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,3-Dichloropropane	CBNZ d5	Ave	8871 1126088	17817 1458618	188817	344194	743433	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Hexanone	CBNZ d5	Ave	10457 1409861	19416 1795814	235229	411400	916606	1.00 120	2.00 160	20.0	40.0	80.0
Chlorodibromomethane	CBNZ d5	Ave	5763 813124	11860 1038431	125585	237418	523153	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethylene Dibromide	CBNZ d5	Ave	6061 733594	11944 938884	121691	223763	483377	0.500 60.0	1.00 80.0	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337766

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorobenzene	CBNZ d5	Ave	18258 2173534	36126 2784427	362449	672294	1428038	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	5213 798193	11650 1003714	126948	245845	510579	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethylbenzene	CBNZ d5	Ave	8398 1207976	18517 1565528	197845	371072	780525	0.500 60.0	1.00 80.0	10.0	20.0	40.0
m-Xylene & p-Xylene	CBNZ d5	Ave	11276 1482266	21784 1910562	245222	455770	952249	0.500 60.0	1.00 80.0	10.0	20.0	40.0
o-Xylene	CBNZ d5	Ave	10860 1435324	20892 1811249	240986	446659	911893	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Styrene	CBNZ d5	Ave	17512 2428268	33956 3100442	391122	733164	1558780	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Bromoform	CBNZ d5	Ave	+++++ 655265	8645 849153	100560	190577	416502	+++++ 60.0	1.00 80.0	10.0	20.0	40.0
Isopropylbenzene	CBNZ d5	Ave	28418 3795594	55210 4856288	636049	1178300	2424662	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	8105 1065677	17817 1352703	173948	331847	686661	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Bromobenzene	DCBd 4	Ave	8740 988831	15559 1269533	164497	313555	642419	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2,3-Trichloropropane	DCBd 4	Ave	3387 369092	5494 473318	63108	114884	241838	0.500 60.0	1.00 80.0	10.0	20.0	40.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	2893 326498	4738 430124	51819	97955	213375	0.500 60.0	1.00 80.0	10.0	20.0	40.0
N-Propylbenzene	DCBd 4	Ave	8359 1083875	16107 1402046	181166	334963	680756	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Chlorotoluene	DCBd 4	Ave	6977 918378	15255 1168008	151745	293354	581507	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	22067 3091430	45567 3997648	517511	980405	1942019	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Chlorotoluene	DCBd 4	Ave	7717 946982	15545 1220622	160173	300515	607997	0.500 60.0	1.00 80.0	10.0	20.0	40.0
tert-Butylbenzene	DCBd 4	Ave	22397 2915643	47758 3727392	490442	908078	1803602	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	24672 3120829	49545 4098181	518127	1006317	1964040	0.500 60.0	1.00 80.0	10.0	20.0	40.0
sec-Butylbenzene	DCBd 4	Ave	30350 4087764	61320 5357379	681132	1286147	2509293	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,3-Dichlorobenzene	DCBd 4	Ave	17372 1874897	33191 2421314	309437	598840	1193296	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Isopropyltoluene	DCBd 4	Ave	25586 3530033	50862 4693383	582655	1117286	2169356	0.500 60.0	1.00 80.0	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337766

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,4-Dichlorobenzene	DCBd 4	Ave	19169 1892443	35488 2449293	316046	606688	1214157	0.500 60.0	1.00 80.0	10.0	20.0	40.0
n-Butylbenzene	DCBd 4	Ave	21675 3068191	45503 4087812	498908	958018	1846843	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichlorobenzene	DCBd 4	Ave	14939 1726550	30581 2259323	286113	559506	1090448	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	2566 330105	4764 436864	48670	99335	200822	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	10787 1132196	21592 1625332	189226	379757	719342	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Hexachlorobutadiene	DCBd 4	Ave	5347 584967	10992 876579	103707	199490	376786	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Naphthalene	DCBd 4	Ave	27099 3349616	57589 4711177	544587	1094286	2169342	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	8865 1038523	18094 1552764	177768	351575	684438	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Dibromofluoromethane (Surr)	FB	Ave	6754 758227	11849 957680	119809	235239	483501	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	7422 782592	13421 970142	125069	247201	501017	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Toluene-d8 (Surr)	CBNZ d5	Ave	22890 2798059	42636 3614422	467380	849081	1834190	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	10413 1010844	17427 1285631	172585	320453	659738	0.500 60.0	1.00 80.0	10.0	20.0	40.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337766

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/24/2018 17:50 Calibration End Date: 07/24/2018 20:04 Calibration ID: 46235

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-337766/13	U1900794.d
Level 2	STD8260 240-337766/12	U1900793.d
Level 3	STD8260 240-337766/11	U1900792.d
Level 4	ICIS 240-337766/10	U1900791.d
Level 5	STD8260 240-337766/9	U1900790.d
Level 6	STD8260 240-337766/3	U1900784.d
Level 7	STD8260 240-337766/2	U1900783.d

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
n-Heptane	+++++	1.1						50				

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900783.d
Lims ID: std8260 L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 24-Jul-2018 17:50:49 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078277-002
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 10:13:29 Calib Date: 24-Jul-2018 20:04:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: laveyt Date: 25-Jul-2018 09:42:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	94	975875	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	80	751089	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	65	427349	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.037	5.049	-0.012	62	957680	80.0	75.8	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.357	-0.012	90	970142	80.0	72.5	
$ 6 Toluene-d8 (Surr)	98	7.100	7.101	-0.001	92	3614422	80.0	79.9	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	92	1285631	80.0	74.0	
9 Dichlorodifluoromethane	85	1.610	1.622	-0.012	88	1522047	80.0	89.6	
10 Chloromethane	50	1.811	1.823	-0.012	81	1245553	80.0	75.7	
12 Butadiene	54	1.894	1.906	-0.012	88	1318121	80.0	82.4	
11 Vinyl chloride	62	1.918	1.930	-0.012	82	1317064	80.0	82.8	
13 Bromomethane	94	2.203	2.227	-0.024	90	848050	80.0	70.9	
14 Chloroethane	64	2.286	2.310	-0.024	86	723733	80.0	74.8	
15 Dichlorofluoromethane	67	2.487	2.511	-0.024	83	1706469	80.0	74.8	
16 Trichlorofluoromethane	101	2.559	2.582	-0.023	88	1728039	80.0	80.1	
17 Ethyl ether	59	2.796	2.820	-0.024	91	738330	80.0	76.2	
18 Acrolein	56	2.914	2.938	-0.024	93	1043418	400.0	409.9	
21 1,1-Dichloroethene	61	3.021	3.033	-0.012	90	1458107	80.0	78.9	
20 1,1,2-Trichloro-1,2,2-trif	101	3.045	3.057	-0.012	83	1047375	80.0	79.5	
22 Acetone	43	3.068	3.080	-0.012	74	501797	160.0	156.1	
23 Iodomethane	142	3.175	3.199	-0.024	98	1772860	80.0	77.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.246	3.258	-0.012	98	3006958	80.0	72.8	
26 3-Chloro-1-propene	41	3.353	3.365	-0.012	83	1500878	80.0	77.5	
27 Methyl acetate	43	3.377	3.389	-0.012	97	1633788	160.0	147.8	
28 Methylene Chloride	49	3.472	3.484	-0.012	54	1113978	80.0	75.5	
29 2-Methyl-2-propanol	59	3.578	3.579	0.000	76	741744	800.0	616.8	
30 Acrylonitrile	53	3.685	3.697	-0.012	97	3868018	800.0	774.9	
32 trans-1,2-Dichloroethene	61	3.721	3.733	-0.012	80	1369327	80.0	75.3	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	69	2537900	80.0	74.9	
33 Hexane	57	3.970	3.982	-0.012	91	1614587	80.0	81.3	
34 1,1-Dichloroethane	63	4.100	4.112	-0.012	85	1701003	80.0	79.3	
35 Vinyl acetate	43	4.136	4.148	-0.012	97	1593713	80.0	81.7	
41 2-Butanone (MEK)	72	4.622	4.634	-0.012	64	297238	160.0	162.1	
39 2,2-Dichloropropane	77	4.622	4.634	-0.012	58	1027916	80.0	79.7	
40 cis-1,2-Dichloroethene	96	4.622	4.634	-0.012	68	1142993	80.0	76.0	
45 Chlorobromomethane	49	4.835	4.836	-0.001	71	714392	80.0	72.2	
46 Tetrahydrofuran	42	4.883	4.883	0.000	83	734202	160.0	154.9	
47 Chloroform	83	4.895	4.907	-0.012	68	1728769	80.0	77.7	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	89	1621508	80.0	80.9	
49 Cyclohexane	84	5.132	5.144	-0.012	87	1675220	80.0	79.8	
50 1,1-Dichloropropene	75	5.215	5.227	-0.012	92	1441115	80.0	79.0	
51 Carbon tetrachloride	117	5.227	5.239	-0.012	69	1528972	80.0	81.9	
52 Isobutyl alcohol	41	5.298	5.298	0.000	84	849021	2000.0	1980.1	
53 Benzene	78	5.405	5.417	-0.012	94	3923346	80.0	78.4	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	43	1220640	80.0	75.9	
56 n-Heptane	57	5.630	5.642	-0.012	91	884598	80.0	81.7	
58 Trichloroethene	130	5.986	5.986	0.000	90	1225880	80.0	79.5	
60 Methylcyclohexane	83	6.164	6.176	-0.012	90	2029926	80.0	81.1	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	88	908144	80.0	80.8	
63 Dibromomethane	174	6.294	6.294	0.000	85	784539	80.0	75.4	
64 1,4-Dioxane	88	6.294	6.306	-0.012	33	187742	1600.0	1694.3	
65 Dichlorobromomethane	83	6.424	6.436	-0.012	94	1286301	80.0	81.6	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	91	1392220	160.0	166.6	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	93	1511629	80.0	82.0	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	89	2377711	160.0	159.3	
70 Toluene	91	7.160	7.172	-0.012	94	4260144	80.0	79.6	
71 trans-1,3-Dichloropropene	75	7.349	7.361	-0.012	82	1391341	80.0	80.9	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	88	1361372	80.0	83.5	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	67	859718	80.0	82.0	
75 Tetrachloroethene	166	7.693	7.693	0.000	91	1297004	80.0	82.0	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	87	1458618	80.0	79.9	
77 2-Hexanone	43	7.764	7.765	-0.001	79	1795814	160.0	163.5	
79 Chlorodibromomethane	129	7.919	7.931	-0.012	88	1038431	80.0	82.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.037	8.049	-0.012	97	938884	80.0	78.4	
82 Chlorobenzene	112	8.523	8.524	-0.001	96	2784427	80.0	77.8	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	79	1003714	80.0	81.7	
84 Ethylbenzene	106	8.630	8.630	0.000	97	1565528	80.0	82.2	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	1910562	80.0	81.2	
87 Styrene	104	9.152	9.152	0.000	90	3100442	80.0	82.3	
86 o-Xylene	106	9.140	9.152	-0.012	93	1811249	80.0	79.8	
88 Bromoform	173	9.354	9.354	0.000	99	849153	80.0	84.7	
89 Isopropylbenzene	105	9.520	9.520	0.000	95	4856288	80.0	80.8	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	83	1352703	80.0	79.4	
92 Bromobenzene	156	9.840	9.840	0.000	80	1269533	80.0	78.6	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	68	473318	80.0	78.5	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	52	430124	80.0	82.3	
95 N-Propylbenzene	120	9.946	9.947	-0.001	91	1402046	80.0	82.0	
96 2-Chlorotoluene	126	10.041	10.041	0.000	96	1168008	80.0	79.4	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	3997648	80.0	82.6	
98 4-Chlorotoluene	126	10.148	10.148	0.000	97	1220622	80.0	79.3	
99 tert-Butylbenzene	119	10.468	10.468	0.000	77	3727392	80.0	80.1	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	70	4098181	80.0	81.6	
102 sec-Butylbenzene	105	10.694	10.694	0.000	94	5357379	80.0	83.4	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	96	2421314	80.0	77.4	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	4693383	80.0	85.1	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	95	2449293	80.0	75.5	
108 n-Butylbenzene	91	11.275	11.275	0.000	97	4087812	80.0	85.9	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	98	2259323	80.0	79.0	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	94	436864	80.0	86.1	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	92	1625332	80.0	82.7	
113 Hexachlorobutadiene	225	13.208	13.196	0.012	86	876579	80.0	85.5	
114 Naphthalene	128	13.279	13.279	0.000	96	4711177	80.0	85.0	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	94	1552764	80.0	87.4	
S 164 Total BTEX	1				0		400.0	401.2	
S 127 Trihalomethanes, Total	1				0		320.0	326.9	
S 124 1,2-Dichloroethene, Total	96				0			151.3	
S 125 1,3-Dichloropropene, Total	75				0			162.9	
S 126 Xylenes, Total	106				0		160.0	161.0	

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmrgas_00255	Amount Added:	64.00	Units: uL
vmarolistdw_00256	Amount Added:	64.00	Units: uL
vmrprimw_00292	Amount Added:	64.00	Units: uL
vm50ss_00329	Amount Added:	64.00	Units: uL

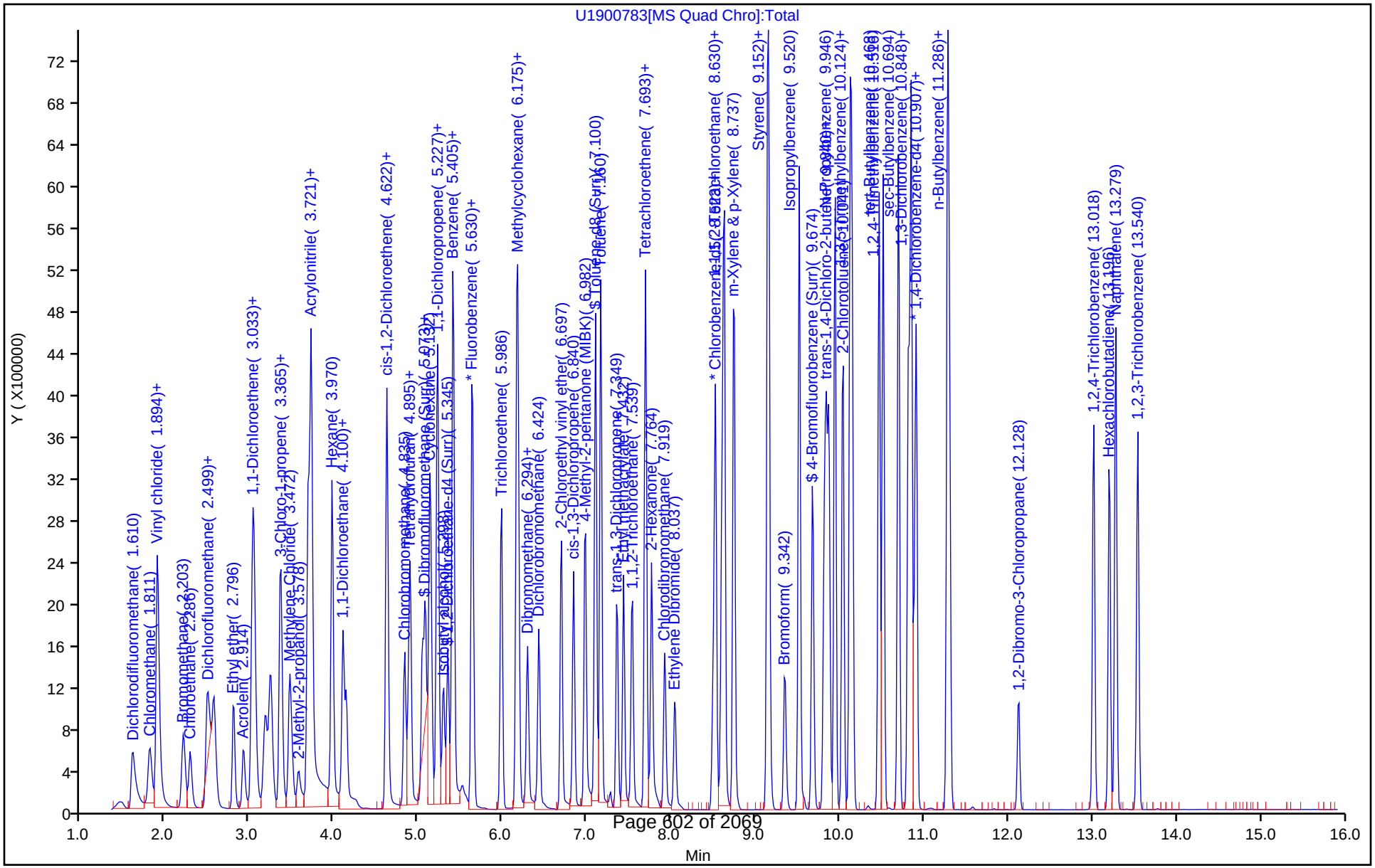
Report Date: 25-Jul-2018 10:13:31 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900783.d

Injection Date:	24-Jul-2018 17:50:49	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	std8260 L7			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 25-Jul-2018 10:13:37 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900784.d
Lims ID: std8260 L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 24-Jul-2018 18:13:04 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078277-003
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 10:13:35 Calib Date: 24-Jul-2018 20:04:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: laveyt Date: 25-Jul-2018 09:44:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	92	977352	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	767566	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.884	10.883	0.001	73	440038	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	63	758227	60.0	59.9	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	98	782592	60.0	58.4	
$ 6 Toluene-d8 (Surr)	98	7.101	7.101	0.000	89	2798059	60.0	60.6	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	92	1010844	60.0	56.9	
9 Dichlorodifluoromethane	85	1.622	1.622	0.000	87	1134505	60.0	66.7	
10 Chloromethane	50	1.824	1.823	0.001	78	955231	60.0	58.0	
12 Butadiene	54	1.907	1.906	0.000	88	989374	60.0	61.8	
11 Vinyl chloride	62	1.930	1.930	0.000	82	993940	60.0	62.4	
13 Bromomethane	94	2.227	2.227	0.000	91	660888	60.0	55.2	
14 Chloroethane	64	2.310	2.310	0.000	87	563348	60.0	58.2	
15 Dichlorofluoromethane	67	2.511	2.511	0.000	83	1312016	60.0	57.4	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	87	1337225	60.0	61.9	
17 Ethyl ether	59	2.808	2.820	-0.012	90	580370	60.0	59.8	
18 Acrolein	56	2.926	2.938	-0.012	96	800130	300.0	313.8	
21 1,1-Dichloroethene	61	3.045	3.033	0.012	89	1128785	60.0	61.0	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	74	793296	60.0	60.1	
22 Acetone	43	3.081	3.080	0.001	88	459712	120.0	142.8	
23 Iodomethane	142	3.199	3.199	0.000	97	1363038	60.0	59.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	98	2317545	60.0	56.0	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	79	1159498	60.0	59.8	
27 Methyl acetate	43	3.389	3.389	0.000	96	1400331	120.0	126.5	
28 Methylene Chloride	49	3.484	3.484	0.000	51	872855	60.0	59.1	
29 2-Methyl-2-propanol	59	3.579	3.579	0.001	88	798354	600.0	662.9	
30 Acrylonitrile	53	3.697	3.697	0.000	99	3368428	600.0	673.8	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	47	2063462	60.0	60.8	
32 trans-1,2-Dichloroethene	61	3.733	3.733	0.000	71	1061569	60.0	58.3	
33 Hexane	57	3.982	3.982	0.000	89	1210166	60.0	60.9	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	84	1313347	60.0	61.1	
35 Vinyl acetate	43	4.148	4.148	0.000	97	1234805	60.0	63.2	
40 cis-1,2-Dichloroethene	96	4.634	4.634	0.000	67	896669	60.0	59.5	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	59	704769	60.0	54.6	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	79	241145	120.0	131.3	
45 Chlorobromomethane	49	4.836	4.836	0.000	75	587580	60.0	59.3	
46 Tetrahydrofuran	42	4.883	4.883	0.000	87	618274	120.0	130.2	
47 Chloroform	83	4.907	4.907	0.000	70	1353439	60.0	60.7	
48 1,1,1-Trichloroethane	97	5.085	5.085	0.000	81	1224716	60.0	61.0	
49 Cyclohexane	84	5.144	5.144	0.000	85	1279473	60.0	60.9	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	91	1102013	60.0	60.3	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	1167256	60.0	62.4	
52 Isobutyl alcohol	41	5.298	5.298	0.000	83	758926	1500.0	1767.3	
54 1,2-Dichloroethane	62	5.417	5.417	0.000	46	954899	60.0	59.3	
53 Benzene	78	5.417	5.417	0.000	94	3064496	60.0	61.1	
56 n-Heptane	57	5.642	5.642	0.000	89	660181	60.0	60.2	
58 Trichloroethene	130	5.986	5.986	0.000	92	928718	60.0	60.1	
60 Methylcyclohexane	83	6.176	6.176	0.000	89	1566351	60.0	62.5	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	86	704987	60.0	62.6	
63 Dibromomethane	174	6.294	6.294	0.000	88	630606	60.0	60.5	
64 1,4-Dioxane	88	6.306	6.306	0.000	34	142512	1200.0	1284.2	
65 Dichlorobromomethane	83	6.437	6.436	0.000	93	999127	60.0	63.3	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	86	1029389	120.0	123.0	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	95	1135535	60.0	61.5	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	93	1889071	120.0	126.4	
70 Toluene	91	7.172	7.172	0.000	94	3229981	60.0	59.1	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	80	1082760	60.0	61.6	
72 Ethyl methacrylate	69	7.433	7.433	0.000	87	1060082	60.0	63.6	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	73	666583	60.0	62.2	
75 Tetrachloroethene	166	7.694	7.693	0.001	92	994717	60.0	61.5	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	87	1126088	60.0	60.4	
77 2-Hexanone	43	7.765	7.765	0.000	79	1409861	120.0	125.6	
79 Chlorodibromomethane	129	7.919	7.931	-0.012	88	813124	60.0	63.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	99	733594	60.0	59.9	
82 Chlorobenzene	112	8.524	8.524	0.000	96	2173534	60.0	59.5	
83 1,1,1,2-Tetrachloroethane	131	8.607	8.607	0.000	85	798193	60.0	63.6	
84 Ethylbenzene	106	8.630	8.630	0.000	97	1207976	60.0	62.1	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	1482266	60.0	61.7	
86 o-Xylene	106	9.140	9.152	-0.012	93	1435324	60.0	61.9	
87 Styrene	104	9.152	9.152	0.000	90	2428268	60.0	63.1	
88 Bromoform	173	9.354	9.354	0.000	99	655265	60.0	64.0	
89 Isopropylbenzene	105	9.520	9.520	0.000	95	3795594	60.0	61.8	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	83	1065677	60.0	60.8	
92 Bromobenzene	156	9.840	9.840	0.000	80	988831	60.0	59.5	
93 1,2,3-Trichloropropane	110	9.864	9.864	0.000	67	369092	60.0	59.4	
94 trans-1,4-Dichloro-2-buten	53	9.876	9.875	0.001	52	326498	60.0	60.7	
95 N-Propylbenzene	120	9.947	9.947	0.000	95	1083875	60.0	61.6	
96 2-Chlorotoluene	126	10.042	10.041	0.001	96	918378	60.0	60.6	
97 1,3,5-Trimethylbenzene	105	10.125	10.124	0.001	93	3091430	60.0	62.0	
98 4-Chlorotoluene	126	10.148	10.148	0.000	97	946982	60.0	59.8	
99 tert-Butylbenzene	119	10.468	10.468	0.000	76	2915643	60.0	60.9	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	70	3120829	60.0	60.4	
102 sec-Butylbenzene	105	10.694	10.694	0.000	93	4087764	60.0	61.8	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	90	1874897	60.0	58.2	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	3530033	60.0	62.2	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	94	1892443	60.0	56.6	
108 n-Butylbenzene	91	11.275	11.275	0.000	97	3068191	60.0	62.6	
109 1,2-Dichlorobenzene	146	11.299	11.298	0.001	98	1726550	60.0	58.6	
110 1,2-Dibromo-3-Chloropropan	157	12.129	12.129	0.000	94	330105	60.0	63.2	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	92	1132196	60.0	56.0	
113 Hexachlorobutadiene	225	13.196	13.196	0.000	92	584967	60.0	55.4	
114 Naphthalene	128	13.279	13.279	0.000	96	3349616	60.0	58.7	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	94	1038523	60.0	56.8	
S 127 Trihalomethanes, Total	1				0		240.0	251.5	
S 164 Total BTEX	1				0		300.0	305.8	
S 124 1,2-Dichloroethene, Total	96				0			117.8	
S 125 1,3-Dichloropropene, Total	75				0			123.1	
S 126 Xylenes, Total	106				0		120.0	123.5	

Reagents:

vmarolistdw_00256	Amount Added:	48.00	Units: uL
vmrgas_00255	Amount Added:	48.00	Units: uL
vmrprimw_00292	Amount Added:	48.00	Units: uL
vm50ss_00329	Amount Added:	48.00	Units: uL
vm50is_stk_A_00001	Amount Added:	2.00	Units: uL

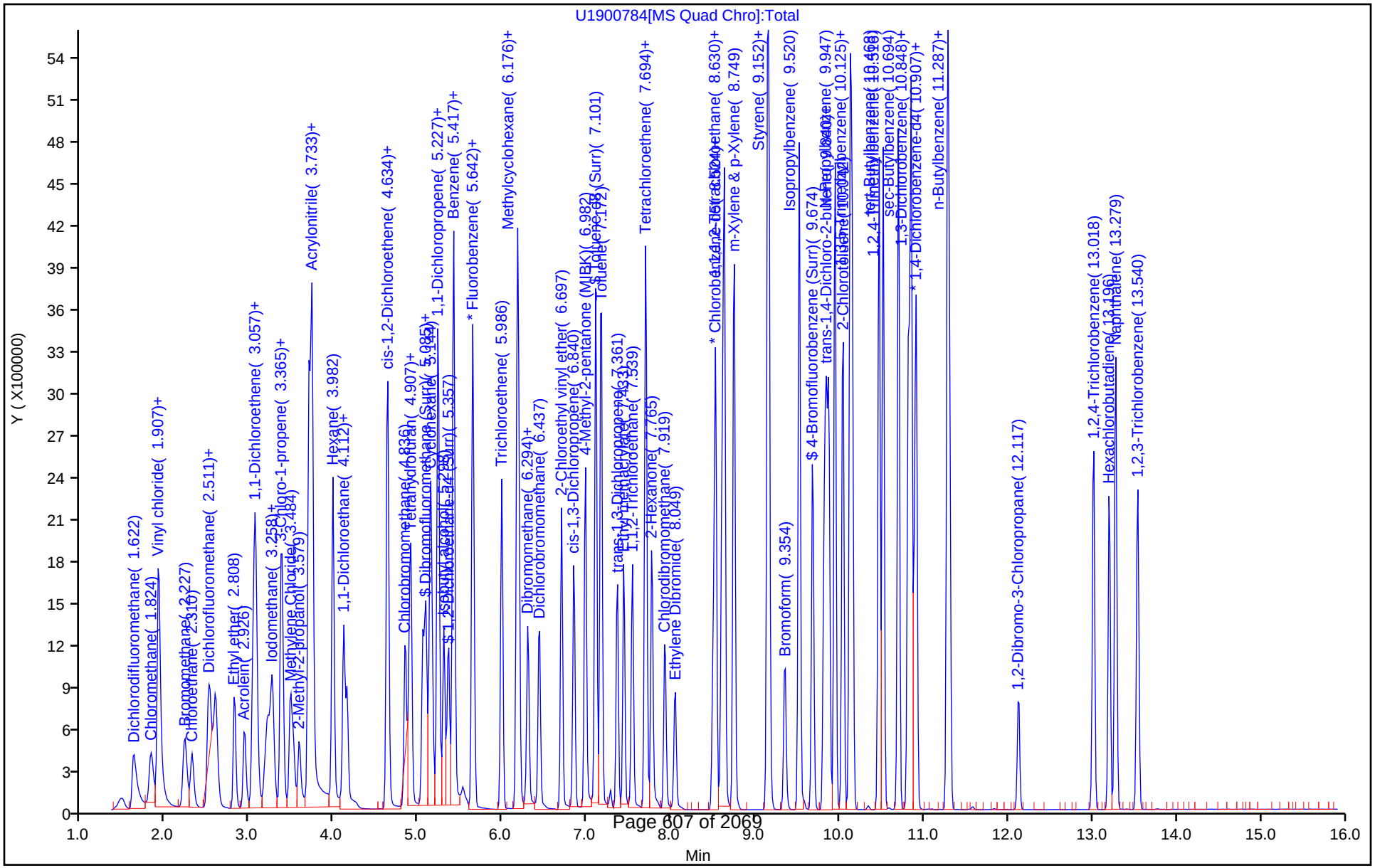
Report Date: 25-Jul-2018 10:13:37 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900784.d

Injection Date:	24-Jul-2018 18:13:04	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	std8260 L6			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 25-Jul-2018 10:13:43 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900790.d
Lims ID: std8260 L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 24-Jul-2018 18:35:32 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078277-009
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 10:13:42 Calib Date: 24-Jul-2018 20:04:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: laveyt Date: 25-Jul-2018 09:45:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	95	980424	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	764018	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	76	423933	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	60	483501	40.0	38.1	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.357	-0.012	99	501017	40.0	37.2	
$ 6 Toluene-d8 (Surr)	98	7.100	7.101	-0.001	92	1834190	40.0	39.9	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	91	659738	40.0	37.3	
9 Dichlorodifluoromethane	85	1.610	1.622	-0.012	88	708511	40.0	41.5	
10 Chloromethane	50	1.811	1.823	-0.012	78	632033	40.0	38.3	
12 Butadiene	54	1.894	1.906	-0.012	87	631099	40.0	39.3	
11 Vinyl chloride	62	1.918	1.930	-0.012	83	644632	40.0	40.3	
13 Bromomethane	94	2.215	2.227	-0.012	90	441425	40.0	36.7	
14 Chloroethane	64	2.298	2.310	-0.012	86	372825	40.0	38.4	
15 Dichlorofluoromethane	67	2.499	2.511	-0.012	83	879608	40.0	38.4	
16 Trichlorofluoromethane	101	2.570	2.582	-0.012	87	861954	40.0	39.8	
17 Ethyl ether	59	2.808	2.820	-0.012	88	370565	40.0	38.0	
18 Acrolein	56	2.926	2.938	-0.012	92	531628	200.0	207.9	
21 1,1-Dichloroethene	61	3.033	3.033	0.000	89	716665	40.0	38.6	
20 1,1,2-Trichloro-1,2,2-trif	101	3.045	3.057	-0.012	76	505930	40.0	38.2	
22 Acetone	43	3.068	3.080	-0.012	63	237768	80.0	73.6	
23 Iodomethane	142	3.187	3.199	-0.012	96	903919	40.0	39.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.246	3.258	-0.012	98	1496184	40.0	36.1	
26 3-Chloro-1-propene	41	3.353	3.365	-0.012	81	747474	40.0	38.4	
27 Methyl acetate	43	3.377	3.389	-0.012	96	828794	80.0	74.6	
28 Methylene Chloride	49	3.472	3.484	-0.012	53	566982	40.0	38.3	
29 2-Methyl-2-propanol	59	3.578	3.579	0.000	9	411966	400.0	341.0	
30 Acrylonitrile	53	3.697	3.697	0.000	99	1977138	400.0	394.3	
32 trans-1,2-Dichloroethene	61	3.721	3.733	-0.012	78	684359	40.0	37.4	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	88	1350698	40.0	39.7	
33 Hexane	57	3.982	3.982	0.000	90	765779	40.0	38.4	
34 1,1-Dichloroethane	63	4.100	4.112	-0.012	85	860929	40.0	40.0	
35 Vinyl acetate	43	4.148	4.148	0.000	96	770166	40.0	39.3	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	74	153177	80.0	83.1	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	64	481767	40.0	37.2	
40 cis-1,2-Dichloroethene	96	4.622	4.634	-0.012	62	582599	40.0	38.6	
45 Chlorobromomethane	49	4.835	4.836	-0.001	89	369472	40.0	37.2	
46 Tetrahydrofuran	42	4.883	4.883	0.000	87	372381	80.0	78.2	
47 Chloroform	83	4.907	4.907	0.000	70	869181	40.0	38.9	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	89	801860	40.0	39.8	
49 Cyclohexane	84	5.144	5.144	0.000	75	815868	40.0	38.7	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	90	708682	40.0	38.7	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	731238	40.0	39.0	
52 Isobutyl alcohol	41	5.298	5.298	0.000	70	449380	1000.0	1043.2	
53 Benzene	78	5.405	5.417	-0.012	93	2003056	40.0	39.8	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	47	617748	40.0	38.2	
56 n-Heptane	57	5.642	5.642	0.000	86	434651	40.0	38.6	
58 Trichloroethene	130	5.986	5.986	0.000	92	608912	40.0	39.3	
60 Methylcyclohexane	83	6.175	6.176	-0.001	90	972024	40.0	38.6	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	86	465852	40.0	41.2	
63 Dibromomethane	174	6.294	6.294	0.000	90	412829	40.0	39.5	
64 1,4-Dioxane	88	6.306	6.306	0.000	32	91591	800.0	822.7	
65 Dichlorobromomethane	83	6.424	6.436	-0.012	94	649042	40.0	41.0	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	86	695808	80.0	82.9	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	93	757793	40.0	40.9	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	92	1213622	80.0	80.9	
70 Toluene	91	7.160	7.172	-0.012	94	2123092	40.0	39.0	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	80	710372	40.0	40.6	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	87	700245	40.0	42.2	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	73	444369	40.0	41.7	
75 Tetrachloroethene	166	7.693	7.693	0.000	91	637692	40.0	39.6	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	87	743433	40.0	40.0	
77 2-Hexanone	43	7.764	7.765	-0.001	79	916606	80.0	82.1	
79 Chlorodibromomethane	129	7.919	7.931	-0.012	88	523153	40.0	41.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	99	483377	40.0	39.7	
82 Chlorobenzene	112	8.523	8.524	-0.001	96	1428038	40.0	39.2	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	85	510579	40.0	40.9	
84 Ethylbenzene	106	8.630	8.630	0.000	98	780525	40.0	40.3	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	952249	40.0	39.8	
87 Styrene	104	9.152	9.152	0.000	89	1558780	40.0	40.7	
86 o-Xylene	106	9.152	9.152	0.000	86	911893	40.0	39.5	
88 Bromoform	173	9.354	9.354	0.000	99	416502	40.0	40.9	
89 Isopropylbenzene	105	9.520	9.520	0.000	95	2424662	40.0	39.7	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	87	686661	40.0	40.6	
92 Bromobenzene	156	9.840	9.840	0.000	87	642419	40.0	40.1	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	68	241838	40.0	40.4	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	59	213375	40.0	41.2	
95 N-Propylbenzene	120	9.946	9.947	-0.001	95	680756	40.0	40.1	
96 2-Chlorotoluene	126	10.041	10.041	0.000	96	581507	40.0	39.9	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	1942019	40.0	40.5	
98 4-Chlorotoluene	126	10.148	10.148	0.000	97	607997	40.0	39.8	
99 tert-Butylbenzene	119	10.468	10.468	0.000	77	1803602	40.0	39.1	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	70	1964040	40.0	39.4	
102 sec-Butylbenzene	105	10.694	10.694	0.000	94	2509293	40.0	39.4	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	89	1193296	40.0	38.4	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	2169356	40.0	39.7	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	94	1214157	40.0	37.7	
108 n-Butylbenzene	91	11.275	11.275	0.000	97	1846843	40.0	39.1	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	98	1090448	40.0	38.4	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	93	200822	40.0	39.9	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	92	719342	40.0	36.9	
113 Hexachlorobutadiene	225	13.208	13.196	0.012	86	376786	40.0	37.0	
114 Naphthalene	128	13.279	13.279	0.000	96	2169342	40.0	39.5	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	94	684438	40.0	38.8	
S 164 Total BTEX	1				0		200.0	198.4	
S 127 Trihalomethanes, Total	1				0		160.0	161.8	
S 124 1,2-Dichloroethene, Total	96				0			76.0	
S 125 1,3-Dichloropropene, Total	75				0			81.5	
S 126 Xylenes, Total	106				0		80.0	79.3	

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmrgas_00255	Amount Added:	32.00	Units: uL
vmarolistdw_00256	Amount Added:	32.00	Units: uL
vmrprimw_00292	Amount Added:	32.00	Units: uL
vm50ss_00329	Amount Added:	32.00	Units: uL

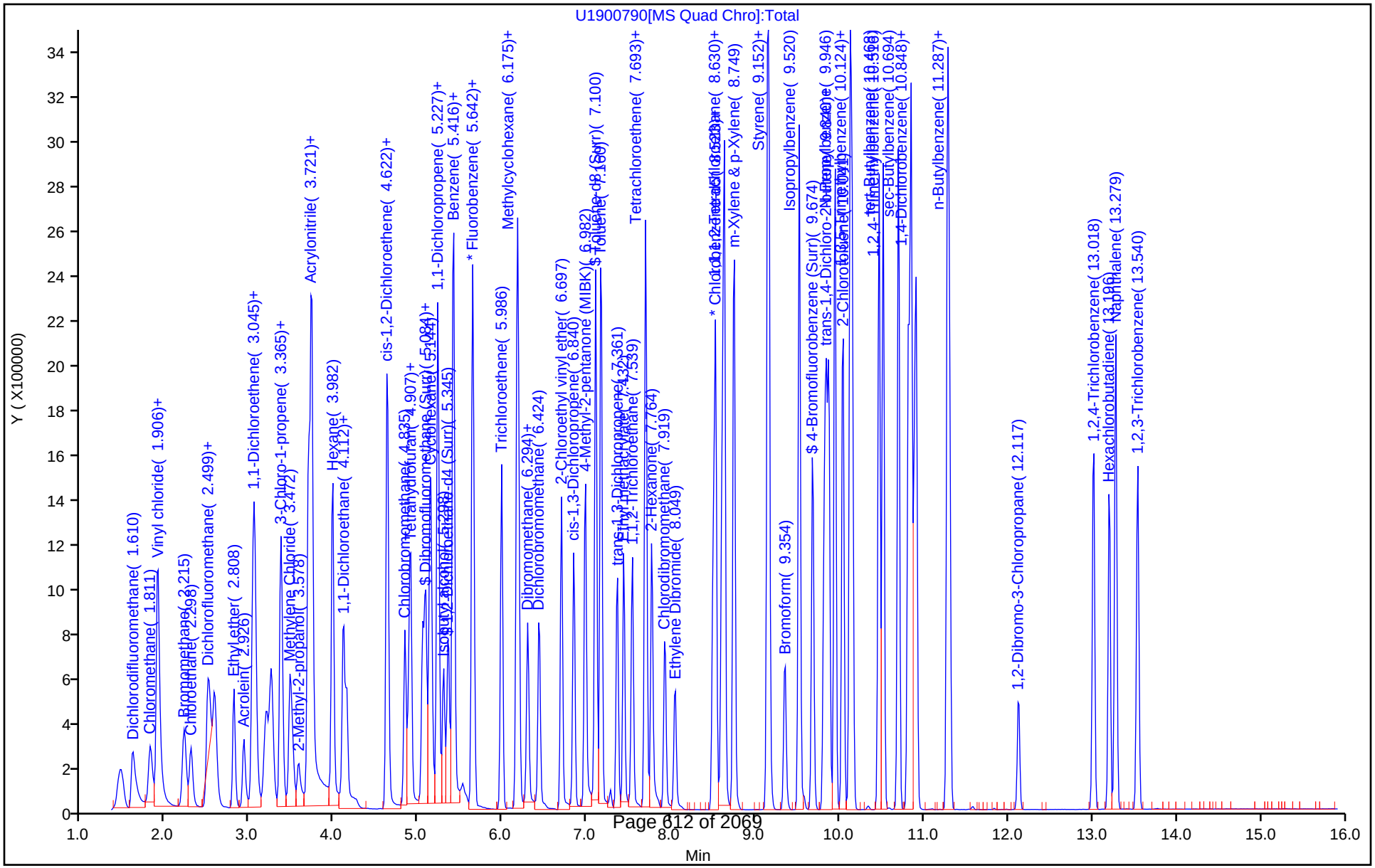
Report Date: 25-Jul-2018 10:13:44 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900790.d

Injection Date:	24-Jul-2018 18:35:32	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	std8260 L5			Worklist Smp#:	9
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 25-Jul-2018 10:13:50 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900791.d
Lims ID: ICIS L4
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 24-Jul-2018 18:57:47 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078277-010
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 10:13:48 Calib Date: 24-Jul-2018 20:04:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: laveyt Date: 25-Jul-2018 09:47:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	96	929533	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	84	742668	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	89	433286	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	59	235239	20.0	19.5	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	98	247201	20.0	19.4	
$ 6 Toluene-d8 (Surr)	98	7.101	7.101	0.000	84	849081	20.0	19.0	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	91	320453	20.0	18.7	
9 Dichlorodifluoromethane	85	1.622	1.622	0.000	87	328230	20.0	20.3	
10 Chloromethane	50	1.823	1.823	0.000	89	315290	20.0	20.1	
12 Butadiene	54	1.906	1.906	0.000	86	301883	20.0	19.8	
11 Vinyl chloride	62	1.930	1.930	0.000	74	312915	20.0	20.7	
13 Bromomethane	94	2.227	2.227	0.000	90	229239	20.0	20.1	
14 Chloroethane	64	2.310	2.310	0.000	94	188891	20.0	20.5	
15 Dichlorofluoromethane	67	2.511	2.511	0.000	83	439391	20.0	20.2	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	86	415720	20.0	20.2	
17 Ethyl ether	59	2.820	2.820	0.000	89	180269	20.0	19.5	
18 Acrolein	56	2.938	2.938	0.000	95	227879	100.0	94.0	
21 1,1-Dichloroethene	61	3.033	3.033	0.000	90	347690	20.0	19.7	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	83	247358	20.0	19.7	
22 Acetone	43	3.080	3.080	0.000	74	107763	40.0	35.2	
23 Iodomethane	142	3.199	3.199	0.000	98	440198	20.0	20.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	98	728690	20.0	18.5	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	82	355801	20.0	19.3	
27 Methyl acetate	43	3.389	3.389	0.000	96	391356	40.0	37.2	
28 Methylene Chloride	49	3.484	3.484	0.000	51	279726	20.0	19.9	
29 2-Methyl-2-propanol	59	3.579	3.579	0.000	7	215092	200.0	187.8	
30 Acrylonitrile	53	3.697	3.697	0.000	99	915892	200.0	192.6	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	88	654948	20.0	20.3	
32 trans-1,2-Dichloroethene	61	3.733	3.733	0.000	72	329454	20.0	19.0	
33 Hexane	57	3.982	3.982	0.000	91	356826	20.0	18.9	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	85	413734	20.0	20.3	
35 Vinyl acetate	43	4.148	4.148	0.000	97	357825	20.0	19.3	
40 cis-1,2-Dichloroethene	96	4.634	4.634	0.000	67	281663	20.0	19.7	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	61	247316	20.0	20.1	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	69	66486	40.0	38.1	
45 Chlorobromomethane	49	4.836	4.836	0.000	72	180080	20.0	19.1	
46 Tetrahydrofuran	42	4.883	4.883	0.000	87	169823	40.0	37.6	
47 Chloroform	83	4.907	4.907	0.000	70	422069	20.0	19.9	
48 1,1,1-Trichloroethane	97	5.085	5.085	0.000	56	378348	20.0	19.8	
49 Cyclohexane	84	5.144	5.144	0.000	85	386296	20.0	19.3	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	92	334178	20.0	19.2	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	345961	20.0	19.5	
52 Isobutyl alcohol	41	5.298	5.298	0.000	69	183028	500.0	448.2	
54 1,2-Dichloroethane	62	5.417	5.417	0.000	45	289097	20.0	18.9	
53 Benzene	78	5.417	5.417	0.000	94	930203	20.0	19.5	
56 n-Heptane	57	5.642	5.642	0.000	84	216048	20.0	18.9	
58 Trichloroethene	130	5.986	5.986	0.000	92	285190	20.0	19.4	
60 Methylcyclohexane	83	6.176	6.176	0.000	89	461990	20.0	19.4	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	84	210992	20.0	19.7	
63 Dibromomethane	174	6.294	6.294	0.000	93	196594	20.0	19.8	
64 1,4-Dioxane	88	6.306	6.306	0.000	33	43840	400.0	415.4	
65 Dichlorobromomethane	83	6.436	6.436	0.000	93	290639	20.0	19.4	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	91	315645	40.0	39.7	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	91	347181	20.0	19.8	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	93	554613	40.0	39.0	
70 Toluene	91	7.172	7.172	0.000	94	985962	20.0	18.6	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	82	315763	20.0	18.6	
72 Ethyl methacrylate	69	7.433	7.433	0.000	87	305349	20.0	18.9	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	74	202390	20.0	19.5	
75 Tetrachloroethene	166	7.693	7.693	0.000	97	300622	20.0	19.2	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	87	344194	20.0	19.1	
77 2-Hexanone	43	7.765	7.765	0.000	79	411400	40.0	37.9	
79 Chlorodibromomethane	129	7.931	7.931	0.000	87	237418	20.0	19.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	99	223763	20.0	18.9	
82 Chlorobenzene	112	8.524	8.524	0.000	96	672294	20.0	19.0	
83 1,1,1,2-Tetrachloroethane	131	8.607	8.607	0.000	86	245845	20.0	20.2	
84 Ethylbenzene	106	8.630	8.630	0.000	97	371072	20.0	19.7	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	455770	20.0	19.6	
86 o-Xylene	106	9.152	9.152	0.000	87	446659	20.0	19.9	
87 Styrene	104	9.152	9.152	0.000	88	733164	20.0	19.7	
88 Bromoform	173	9.354	9.354	0.000	98	190577	20.0	19.2	
89 Isopropylbenzene	105	9.520	9.520	0.000	95	1178300	20.0	19.8	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	87	331847	20.0	19.2	
92 Bromobenzene	156	9.840	9.840	0.000	80	313555	20.0	19.2	
93 1,2,3-Trichloropropane	110	9.864	9.864	0.000	68	114884	20.0	18.8	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	52	97955	20.0	18.5	
95 N-Propylbenzene	120	9.947	9.947	0.000	91	334963	20.0	19.3	
96 2-Chlorotoluene	126	10.041	10.041	0.000	94	293354	20.0	19.7	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	980405	20.0	20.0	
98 4-Chlorotoluene	126	10.148	10.148	0.000	97	300515	20.0	19.3	
99 tert-Butylbenzene	119	10.468	10.468	0.000	76	908078	20.0	19.3	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	70	1006317	20.0	19.8	
102 sec-Butylbenzene	105	10.694	10.694	0.000	94	1286147	20.0	19.7	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	84	598840	20.0	18.9	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	1117286	20.0	20.0	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	93	606688	20.0	18.4	
108 n-Butylbenzene	91	11.275	11.275	0.000	98	958018	20.0	19.8	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	97	559506	20.0	19.3	
110 1,2-Dibromo-3-Chloropropan	157	12.129	12.129	0.000	92	99335	20.0	19.3	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	90	379757	20.0	19.1	
113 Hexachlorobutadiene	225	13.196	13.196	0.000	92	199490	20.0	19.2	
114 Naphthalene	128	13.279	13.279	0.000	96	1094286	20.0	19.5	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	94	351575	20.0	19.5	
S 127 Trihalomethanes, Total	1				0		80.0	77.7	
S 164 Total BTEX	1				0		100.0	97.3	
S 126 Xylenes, Total	106				0		40.0	39.5	

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmrgas_00255	Amount Added:	16.00	Units: uL
vmarolistdw_00256	Amount Added:	16.00	Units: uL
vmrprimw_00292	Amount Added:	16.00	Units: uL
vm50ss_00329	Amount Added:	16.00	Units: uL

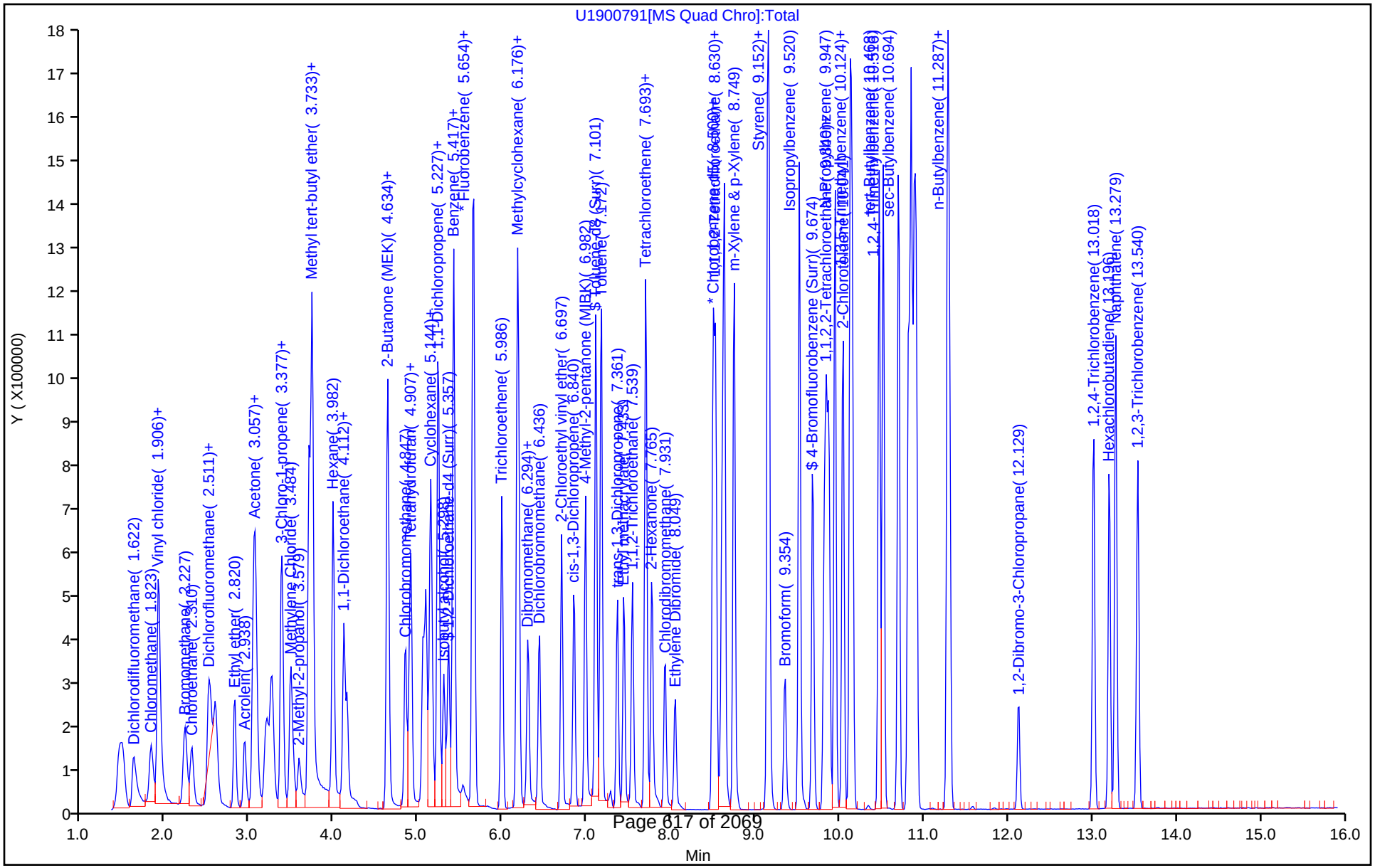
Report Date: 25-Jul-2018 10:13:50 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900791.d

Injection Date:	24-Jul-2018 18:57:47	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	ICIS L4			Worklist Smp#:	10
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 25-Jul-2018 10:13:56 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900792.d
Lims ID: std8260 L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 24-Jul-2018 19:20:02 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078277-011
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 10:13:54 Calib Date: 24-Jul-2018 20:04:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: laveyt Date: 25-Jul-2018 09:49:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.653	5.654	-0.001	98	952790	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	771801	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	92	425561	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	60	119809	10.0	9.71	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	90	125069	10.0	9.57	
$ 6 Toluene-d8 (Surr)	98	7.100	7.101	-0.001	89	467380	10.0	10.1	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	91	172585	10.0	9.67	
9 Dichlorodifluoromethane	85	1.598	1.622	-0.024	86	151920	10.0	9.16	
10 Chloromethane	50	1.811	1.823	-0.012	78	155433	10.0	9.68	
12 Butadiene	54	1.894	1.906	-0.012	88	137925	10.0	8.83	
11 Vinyl chloride	62	1.918	1.930	-0.012	73	148293	10.0	9.55	
13 Bromomethane	94	2.214	2.227	-0.013	91	114577	10.0	9.81	
14 Chloroethane	64	2.297	2.310	-0.013	94	93395	10.0	9.89	
15 Dichlorofluoromethane	67	2.499	2.511	-0.012	82	215631	10.0	9.68	
16 Trichlorofluoromethane	101	2.570	2.582	-0.012	98	187339	10.0	8.89	
17 Ethyl ether	59	2.807	2.820	-0.013	87	90620	10.0	9.57	
18 Acrolein	56	2.926	2.938	-0.012	95	106196	50.0	42.7	
21 1,1-Dichloroethene	61	3.033	3.033	0.000	90	185910	10.0	10.3	
20 1,1,2-Trichloro-1,2,2-trif	101	3.045	3.057	-0.012	76	134365	10.0	10.4	
22 Acetone	43	3.068	3.080	-0.012	55	52355	20.0	16.7	
23 Iodomethane	142	3.187	3.199	-0.012	97	228493	10.0	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.246	3.258	-0.012	98	387941	10.0	9.62	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	82	184068	10.0	9.73	
27 Methyl acetate	43	3.377	3.389	-0.012	84	197122	20.0	18.3	
28 Methylene Chloride	49	3.471	3.484	-0.013	57	144386	10.0	10.0	
29 2-Methyl-2-propanol	59	3.578	3.579	0.000	32	110777	100.0	94.4	
30 Acrylonitrile	53	3.697	3.697	0.000	99	448754	100.0	92.1	
32 trans-1,2-Dichloroethene	61	3.732	3.733	-0.001	71	175373	10.0	9.87	
31 Methyl tert-butyl ether	73	3.732	3.733	-0.001	88	335243	10.0	10.1	
33 Hexane	57	3.981	3.982	-0.001	90	208123	10.0	10.7	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	97	213583	10.0	10.2	
35 Vinyl acetate	43	4.147	4.148	-0.001	96	187841	10.0	9.87	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	71	34072	20.0	19.0	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	65	134434	10.0	10.7	
40 cis-1,2-Dichloroethene	96	4.622	4.634	-0.012	69	143871	10.0	9.80	
45 Chlorobromomethane	49	4.835	4.836	-0.001	84	89489	10.0	9.27	
46 Tetrahydrofuran	42	4.883	4.883	0.000	87	86462	20.0	18.7	
47 Chloroform	83	4.906	4.907	-0.001	70	213657	10.0	9.83	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	90	206006	10.0	10.5	
49 Cyclohexane	84	5.144	5.144	0.000	85	214696	10.0	10.5	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	93	182947	10.0	10.3	
51 Carbon tetrachloride	117	5.238	5.239	-0.001	69	187898	10.0	10.3	
52 Isobutyl alcohol	41	5.298	5.298	0.000	69	105355	250.0	251.7	
53 Benzene	78	5.416	5.417	-0.001	94	494183	10.0	10.1	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	46	152677	10.0	9.72	
56 n-Heptane	57	5.642	5.642	0.000	60	135257	10.0	10.5	
58 Trichloroethene	130	5.985	5.986	-0.001	91	155201	10.0	10.3	
60 Methylcyclohexane	83	6.175	6.176	-0.001	89	256970	10.0	10.5	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	84	110015	10.0	10.0	
63 Dibromomethane	174	6.294	6.294	0.000	91	95707	10.0	9.42	
64 1,4-Dioxane	88	6.306	6.306	0.000	33	23290	200.0	215.3	
65 Dichlorobromomethane	83	6.436	6.436	0.000	93	152581	10.0	9.92	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	86	171233	20.0	21.0	
68 cis-1,3-Dichloropropene	75	6.839	6.840	-0.001	93	175580	10.0	9.76	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	93	308673	20.0	21.2	
70 Toluene	91	7.171	7.172	-0.001	94	544060	10.0	9.89	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	85	172822	10.0	9.78	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	88	166277	10.0	9.93	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	80	109350	10.0	10.1	
75 Tetrachloroethene	166	7.693	7.693	0.000	91	166266	10.0	10.2	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	87	188817	10.0	10.1	
77 2-Hexanone	43	7.764	7.765	-0.001	80	235229	20.0	20.8	
79 Chlorodibromomethane	129	7.930	7.931	-0.001	86	125585	10.0	9.75	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	98	121691	10.0	9.89	
82 Chlorobenzene	112	8.523	8.524	-0.001	97	362449	10.0	9.86	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	80	126948	10.0	10.1	
84 Ethylbenzene	106	8.630	8.630	0.000	98	197845	10.0	10.1	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	245222	10.0	10.1	
87 Styrene	104	9.152	9.152	0.000	88	391122	10.0	10.1	
86 o-Xylene	106	9.152	9.152	0.000	87	240986	10.0	10.3	
88 Bromoform	173	9.353	9.354	-0.001	98	100560	10.0	9.77	
89 Isopropylbenzene	105	9.519	9.520	-0.001	95	636049	10.0	10.3	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	88	173948	10.0	10.3	
92 Bromobenzene	156	9.840	9.840	0.000	87	164497	10.0	10.2	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	69	63108	10.0	10.5	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	64	51819	10.0	9.96	
95 N-Propylbenzene	120	9.946	9.947	-0.001	96	181166	10.0	10.6	
96 2-Chlorotoluene	126	10.041	10.041	0.000	96	151745	10.0	10.4	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	517511	10.0	10.7	
98 4-Chlorotoluene	126	10.148	10.148	0.000	97	160173	10.0	10.5	
99 tert-Butylbenzene	119	10.468	10.468	0.000	77	490442	10.0	10.6	
101 1,2,4-Trimethylbenzene	105	10.515	10.516	-0.001	70	518127	10.0	10.4	
102 sec-Butylbenzene	105	10.693	10.694	-0.001	94	681132	10.0	10.6	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	82	309437	10.0	9.93	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	91	582655	10.0	10.6	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	91	316046	10.0	9.78	
108 n-Butylbenzene	91	11.274	11.275	-0.001	97	498908	10.0	10.5	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	97	286113	10.0	10.0	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	88	48670	10.0	9.63	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	92	189226	10.0	9.67	
113 Hexachlorobutadiene	225	13.207	13.196	0.011	85	103707	10.0	10.2	
114 Naphthalene	128	13.279	13.279	0.000	96	544587	10.0	9.87	
115 1,2,3-Trichlorobenzene	180	13.539	13.540	-0.001	96	177768	10.0	10.0	
S 164 Total BTEX	1				0		50.0	50.6	
S 127 Trihalomethanes, Total	1				0		40.0	39.3	
S 124 1,2-Dichloroethene, Total	96				0			19.7	
S 125 1,3-Dichloropropene, Total	75				0			19.5	
S 126 Xylenes, Total	106				0		20.0	20.5	

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmrgas_00255	Amount Added:	8.00	Units: uL
vmarolistdw_00256	Amount Added:	8.00	Units: uL
vmrprimw_00292	Amount Added:	8.00	Units: uL
vm50ss_00329	Amount Added:	8.00	Units: uL

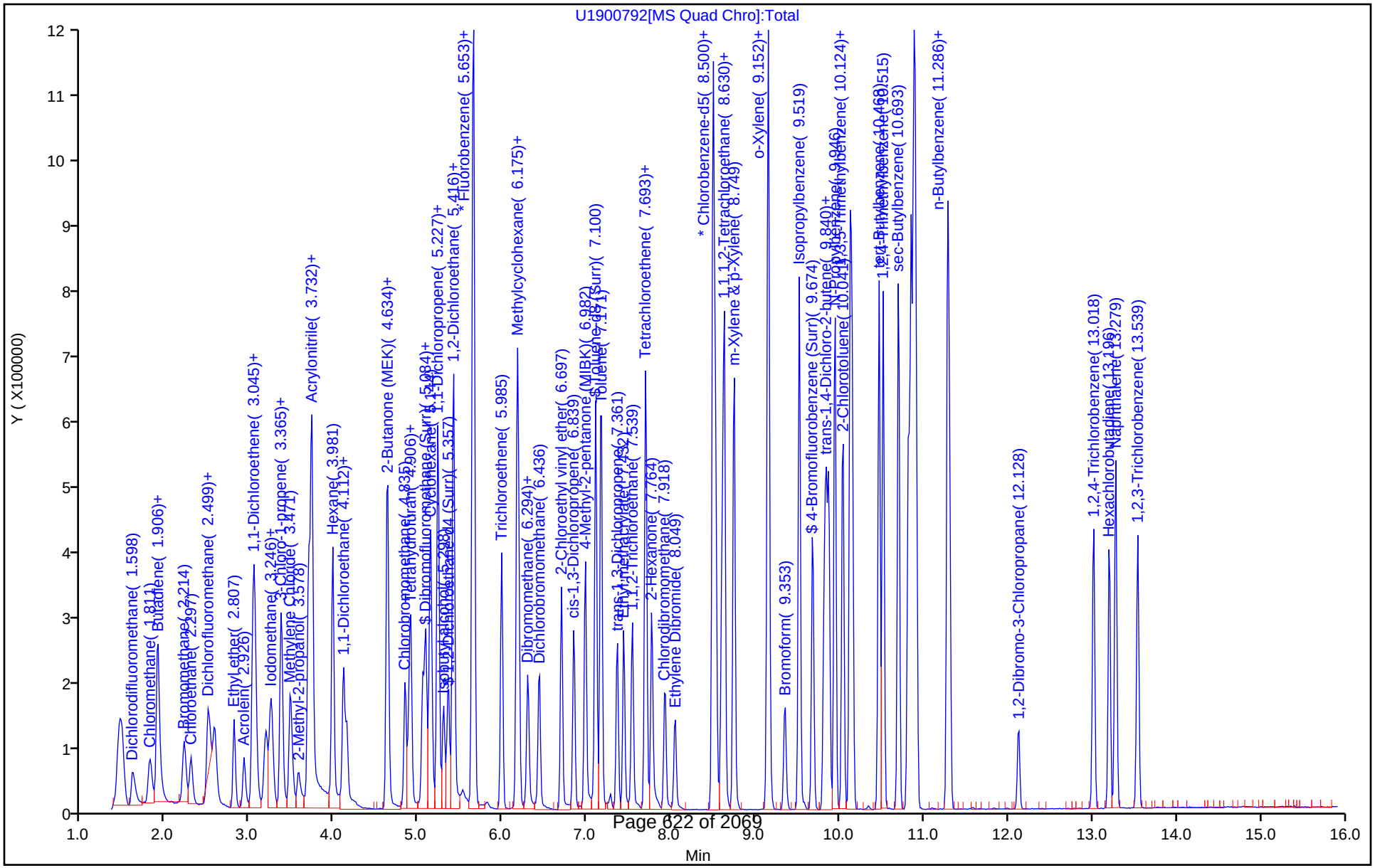
Report Date: 25-Jul-2018 10:13:56 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900792.d

Injection Date:	24-Jul-2018 19:20:02	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	std8260 L3			Worklist Smp#:	11
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 25-Jul-2018 10:14:02 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900793.d
Lims ID: std8260 L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 24-Jul-2018 19:42:05 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078277-012
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 10:14:00 Calib Date: 24-Jul-2018 20:04:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: laveyt Date: 25-Jul-2018 09:51:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	894422	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	708670	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.884	10.883	0.001	93	428230	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	60	11849	1.00	1.02	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	88	13421	1.00	1.09	
$ 6 Toluene-d8 (Surr)	98	7.101	7.101	0.000	87	42636	1.00	1.00	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	86	17427	1.00	1.06	
9 Dichlorodifluoromethane	85	1.610	1.622	-0.012	74	14647	1.00	0.9411	
10 Chloromethane	50	1.812	1.823	-0.011	89	16570	1.00	1.10	
12 Butadiene	54	1.895	1.906	-0.011	88	15313	1.00	1.04	
11 Vinyl chloride	62	1.930	1.930	0.000	70	15847	1.00	1.09	
13 Bromomethane	94	2.215	2.227	-0.012	77	12818	1.00	1.17	
14 Chloroethane	64	2.298	2.310	-0.012	70	9377	1.00	1.06	
15 Dichlorofluoromethane	67	2.499	2.511	-0.012	82	21989	1.00	1.05	
16 Trichlorofluoromethane	101	2.559	2.582	-0.023	73	20928	1.00	1.06	
17 Ethyl ether	59	2.808	2.820	-0.012	80	9442	1.00	1.06	
18 Acrolein	56	2.926	2.938	-0.012	86	11339	5.00	4.86	
21 1,1-Dichloroethene	61	3.033	3.033	0.000	92	17119	1.00	1.01	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	63	12789	1.00	1.06	
22 Acetone	43	3.069	3.080	-0.011	66	7064	2.00	2.40	
23 Iodomethane	142	3.187	3.199	-0.012	96	21574	1.00	1.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.247	3.258	-0.011	96	43688	1.00	1.15	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	84	18985	1.00	1.07	
27 Methyl acetate	43	3.389	3.389	0.000	92	19667	2.00	1.94	
28 Methylene Chloride	49	3.472	3.484	-0.012	75	15117	1.00	1.12	
29 2-Methyl-2-propanol	59	3.579	3.579	0.001	70	12788	10.0	11.6	
30 Acrylonitrile	53	3.697	3.697	0.000	100	41875	10.0	9.15	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	87	32315	1.00	1.04	
32 trans-1,2-Dichloroethene	61	3.733	3.733	0.000	73	17800	1.00	1.07	
33 Hexane	57	3.982	3.982	0.000	92	18280	1.00	1.00	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	83	19272	1.00	0.9804	
35 Vinyl acetate	43	4.148	4.148	0.000	95	16923	1.00	0.9468	
40 cis-1,2-Dichloroethene	96	4.622	4.634	-0.012	78	14795	1.00	1.07	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	56	12773	1.00	1.08	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	60	3193	2.00	1.90	
45 Chlorobromomethane	49	4.836	4.836	0.000	67	9868	1.00	1.09	
46 Tetrahydrofuran	42	4.883	4.883	0.000	84	9301	2.00	2.14	
47 Chloroform	83	4.907	4.907	0.000	66	21458	1.00	1.05	
48 1,1,1-Trichloroethane	97	5.085	5.085	0.000	80	17835	1.00	0.9707	
49 Cyclohexane	84	5.144	5.144	0.000	82	19597	1.00	1.02	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	87	17455	1.00	1.04	
51 Carbon tetrachloride	117	5.239	5.239	0.000	75	17198	1.00	1.01	
52 Isobutyl alcohol	41	5.298	5.298	0.000	89	7910	25.0	20.1	
54 1,2-Dichloroethane	62	5.417	5.417	0.000	50	15873	1.00	1.08	
53 Benzene	78	5.417	5.417	0.000	94	48419	1.00	1.06	
56 n-Heptane	57	5.654	5.642	0.012	38	35642	1.00	1.01	
58 Trichloroethene	130	5.986	5.986	0.000	84	14571	1.00	1.03	
60 Methylcyclohexane	83	6.176	6.176	0.000	88	22689	1.00	0.9886	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	79	10704	1.00	1.04	
63 Dibromomethane	174	6.294	6.294	0.000	82	9635	1.00	1.01	
64 1,4-Dioxane	88	6.318	6.306	0.012	1	1478	20.0	14.6	
65 Dichlorobromomethane	83	6.425	6.436	-0.011	87	13539	1.00	0.9376	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	82	14128	2.00	1.84	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	76	17042	1.00	1.01	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	91	26811	2.00	1.96	
70 Toluene	91	7.172	7.172	0.000	93	51989	1.00	1.03	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	75	16254	1.00	1.00	
72 Ethyl methacrylate	69	7.433	7.433	0.000	77	14391	1.00	0.9357	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	74	9825	1.00	0.99	
75 Tetrachloroethene	166	7.694	7.693	0.001	89	14983	1.00	1.00	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	77	17817	1.00	1.03	
77 2-Hexanone	43	7.777	7.765	0.012	67	19416	2.00	1.87	
79 Chlorodibromomethane	129	7.931	7.931	0.000	74	11860	1.00	1.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	85	11944	1.00	1.06	
82 Chlorobenzene	112	8.524	8.524	0.000	65	36126	1.00	1.07	
83 1,1,1,2-Tetrachloroethane	131	8.607	8.607	0.000	59	11650	1.00	1.01	
84 Ethylbenzene	106	8.630	8.630	0.000	96	18517	1.00	1.03	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	21784	1.00	0.9817	
86 o-Xylene	106	9.140	9.152	-0.012	91	20892	1.00	0.9751	
87 Styrene	104	9.152	9.152	0.000	88	33956	1.00	0.9551	
88 Bromoform	173	9.354	9.354	0.000	82	8645	1.00	0.9144	
89 Isopropylbenzene	105	9.520	9.520	0.000	91	55210	1.00	0.9739	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	77	17817	1.00	1.04	
92 Bromobenzene	156	9.840	9.840	0.000	89	15559	1.00	0.9619	
93 1,2,3-Trichloropropane	110	9.864	9.864	0.000	70	5494	1.00	0.9090	
94 trans-1,4-Dichloro-2-buten	53	9.864	9.875	-0.011	44	4738	1.00	0.9051	
95 N-Propylbenzene	120	9.947	9.947	0.000	94	16107	1.00	0.9402	
96 2-Chlorotoluene	126	10.042	10.041	0.001	93	15255	1.00	1.04	
97 1,3,5-Trimethylbenzene	105	10.125	10.124	0.001	93	45567	1.00	0.9397	
98 4-Chlorotoluene	126	10.148	10.148	0.000	94	15545	1.00	1.01	
99 tert-Butylbenzene	119	10.468	10.468	0.000	88	47758	1.00	1.02	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	68	49545	1.00	0.9846	
102 sec-Butylbenzene	105	10.694	10.694	0.000	90	61320	1.00	0.9521	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	11	33191	1.00	1.06	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	82	50862	1.00	0.9208	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	52	35488	1.00	1.09	
108 n-Butylbenzene	91	11.275	11.275	0.000	94	45503	1.00	0.9538	
109 1,2-Dichlorobenzene	146	11.299	11.298	0.001	94	30581	1.00	1.07	
110 1,2-Dibromo-3-Chloropropan	157	12.129	12.129	0.000	47	4764	1.00	0.9369	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	82	21592	1.00	1.10	
113 Hexachlorobutadiene	225	13.208	13.196	0.012	66	10992	1.00	1.07	
114 Naphthalene	128	13.279	13.279	0.000	93	57589	1.00	1.04	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	86	18094	1.00	1.02	
S 127 Trihalomethanes, Total	1				0		4.00	3.91	
S 164 Total BTEX	1				0		5.00	5.07	
S 124 1,2-Dichloroethene, Total	96				0			2.14	
S 125 1,3-Dichloropropene, Total	75				0			2.01	
S 126 Xylenes, Total	106				0		2.00	1.96	

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmrgas_00255	Amount Added:	0.80	Units: uL
vmarolistdw_00256	Amount Added:	0.80	Units: uL
vmrprimw_00292	Amount Added:	0.80	Units: uL
vm50ss_00329	Amount Added:	0.80	Units: uL

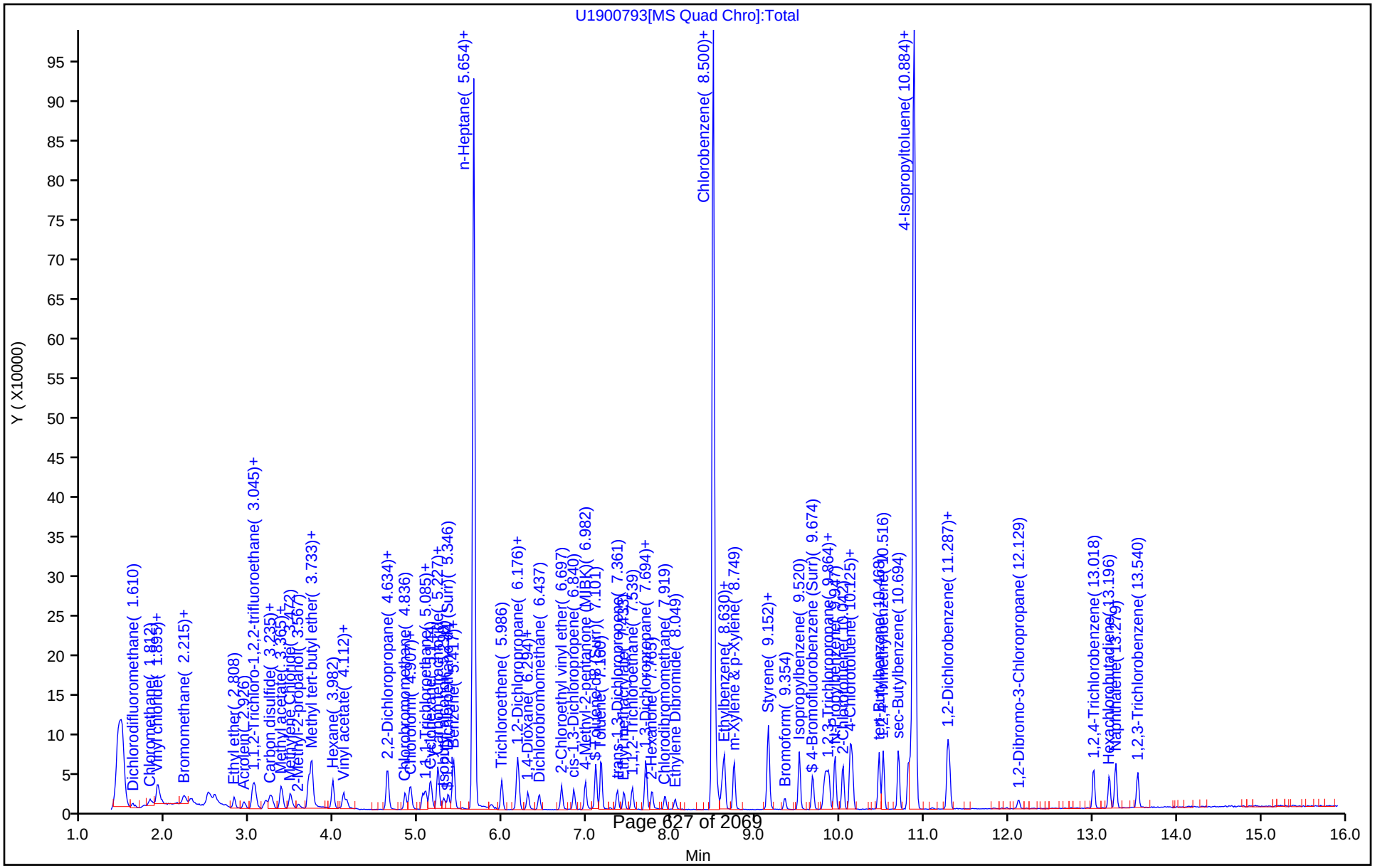
Report Date: 25-Jul-2018 10:14:02 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900793.d

Injection Date:	24-Jul-2018 19:42:05	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	std8260 L2			Worklist Smp#:	12
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 25-Jul-2018 10:14:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d
Lims ID: std8260 L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 24-Jul-2018 20:04:28 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078277-013
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 10:14:09 Calib Date: 24-Jul-2018 20:04:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: laveyt Date: 25-Jul-2018 09:56:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	923893	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	84	731189	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	93	428789	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	56	6754	0.5000	0.5647	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	75	7422	0.5000	0.5855	
$ 6 Toluene-d8 (Surr)	98	7.100	7.101	-0.001	74	22890	0.5000	0.5200	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	79	10413	0.5000	0.6156	
9 Dichlorodifluoromethane	85	1.633	1.622	0.011	62	6894	0.5000	0.4288	
10 Chloromethane	50	1.823	1.823	0.000	71	8217	0.5000	0.5278	
12 Butadiene	54	1.906	1.906	0.000	82	7871	0.5000	0.5198	
11 Vinyl chloride	62	1.930	1.930	0.000	64	6342	0.5000	0.4211	
13 Bromomethane	94	2.238	2.227	0.011	71	6350	0.5000	0.5606	
14 Chloroethane	64	2.309	2.310	-0.001	60	4872	0.5000	0.5321	
15 Dichlorofluoromethane	67	2.511	2.511	0.000	53	12059	0.5000	0.5584	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	75	10381	0.5000	0.5081	
17 Ethyl ether	59	2.819	2.820	-0.001	67	5066	0.5000	0.5520	
18 Acrolein	56	2.938	2.938	0.000	82	6772	2.50	2.81	
21 1,1-Dichloroethene	61	3.045	3.033	0.012	68	8796	0.5000	0.5026	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	-0.001	56	6009	0.5000	0.4815	
22 Acetone	43		3.080				ND	ND	U
23 Iodomethane	142	3.187	3.199	-0.012	82	10728	0.5000	0.4956	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.246	3.258	-0.012	95	23708	0.5000	0.6063	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	77	9784	0.5000	0.5336	
27 Methyl acetate	43	3.389	3.389	0.000	86	13362	1.00	1.28	
28 Methylene Chloride	49		3.484				ND	ND	U
29 2-Methyl-2-propanol	59		3.579				ND	ND	U
30 Acrylonitrile	53	3.697	3.697	0.000	99	26540	5.00	5.62	
32 trans-1,2-Dichloroethene	61	3.732	3.733	-0.001	74	9868	0.5000	0.5730	
31 Methyl tert-butyl ether	73	3.732	3.733	-0.001	83	15911	0.5000	0.4958	
33 Hexane	57	3.981	3.982	-0.001	90	9277	0.5000	0.4936	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	54	9924	0.5000	0.4888	
35 Vinyl acetate	43	4.148	4.148	0.000	95	9654	0.5000	0.5229	
41 2-Butanone (MEK)	72		4.634				ND	ND	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	46	6159	0.5000	0.5045	
40 cis-1,2-Dichloroethene	96	4.634	4.634	0.000	56	7528	0.5000	0.5287	
45 Chlorobromomethane	49	4.835	4.836	-0.001	65	5651	0.5000	0.6036	
46 Tetrahydrofuran	42	4.895	4.883	0.012	78	4596	1.00	1.02	
47 Chloroform	83	4.906	4.907	-0.001	60	10692	0.5000	0.5074	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	72	9137	0.5000	0.4814	
49 Cyclohexane	84	5.144	5.144	0.000	79	9806	0.5000	0.4936	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	85	8674	0.5000	0.5025	
51 Carbon tetrachloride	117	5.239	5.239	-0.001	69	8406	0.5000	0.4757	
52 Isobutyl alcohol	41	5.298	5.298	0.000	73	5482	12.5	13.5	
53 Benzene	78	5.416	5.417	-0.001	94	22844	0.5000	0.4820	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	40	8485	0.5000	0.5573	
56 n-Heptane	57		5.642				ND	ND	U
58 Trichloroethene	130	5.986	5.986	0.000	83	7211	0.5000	0.4940	
60 Methylcyclohexane	83	6.175	6.176	-0.001	83	11515	0.5000	0.4857	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	62	4734	0.5000	0.4448	
63 Dibromomethane	174	6.306	6.294	0.012	67	5496	0.5000	0.5580	
64 1,4-Dioxane	88		6.306				ND	ND	U
65 Dichlorobromomethane	83	6.436	6.436	0.000	71	7466	0.5000	0.5005	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	76	7395	1.00	0.9347	
68 cis-1,3-Dichloropropene	75	6.839	6.840	-0.001	66	8313	0.5000	0.4764	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	86	13091	1.00	0.9263	
70 Toluene	91	7.171	7.172	-0.001	90	28549	0.5000	0.5479	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	72	8702	0.5000	0.5197	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	67	7650	0.5000	0.4821	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	65	4656	0.5000	0.4562	
75 Tetrachloroethene	166	7.693	7.693	0.000	89	7470	0.5000	0.4851	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	73	8871	0.5000	0.4993	
77 2-Hexanone	43	7.764	7.765	-0.001	87	10457	1.00	0.9783	
79 Chlorodibromomethane	129	7.919	7.931	-0.012	51	5763	0.5000	0.4723	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	69	6061	0.5000	0.5198	
82 Chlorobenzene	112	8.523	8.524	-0.001	47	18258	0.5000	0.5243	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	47	5213	0.5000	0.4361	
84 Ethylbenzene	106	8.630	8.630	0.000	92	8398	0.5000	0.4528	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	96	11276	0.5000	0.4925	
87 Styrene	104	9.152	9.152	0.000	84	17512	0.5000	0.4774	
86 o-Xylene	106	9.152	9.152	0.000	82	10860	0.5000	0.4913	
88 Bromoform	173		9.354				ND	ND	U
89 Isopropylbenzene	105	9.519	9.520	-0.001	87	28418	0.5000	0.4859	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	49	8105	0.5000	0.4742	
92 Bromobenzene	156	9.840	9.840	0.000	80	8740	0.5000	0.5396	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	57	3387	0.5000	0.5596	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	36	2893	0.5000	0.5519	
95 N-Propylbenzene	120	9.946	9.947	-0.001	90	8359	0.5000	0.4873	
96 2-Chlorotoluene	126	10.041	10.041	0.000	86	6977	0.5000	0.4728	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	88	22067	0.5000	0.4545	
98 4-Chlorotoluene	126	10.148	10.148	0.000	89	7717	0.5000	0.4998	
99 tert-Butylbenzene	119	10.468	10.468	0.000	82	22397	0.5000	0.4799	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	62	24672	0.5000	0.4897	
102 sec-Butylbenzene	105	10.693	10.694	-0.001	78	30350	0.5000	0.4706	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	1	17372	0.5000	0.5533	a
104 4-Isopropyltoluene	119	10.848	10.848	0.000	80	25586	0.5000	0.4626	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	42	19169	0.5000	0.5888	
108 n-Butylbenzene	91	11.275	11.275	0.000	91	21675	0.5000	0.4537	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	87	14939	0.5000	0.5204	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	24	2566	0.5000	0.5040	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	65	10787	0.5000	0.5471	
113 Hexachlorobutadiene	225	13.196	13.196	0.000	52	5347	0.5000	0.5195	
114 Naphthalene	128	13.279	13.279	0.000	81	27099	0.5000	0.4874	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	60	8865	0.5000	0.4972	
S 164 Total BTEX	1				0		2.50	2.47	
S 127 Trihalomethanes, Total	1				0		2.00	1.48	
S 124 1,2-Dichloroethene, Total	96				0			1.10	
S 125 1,3-Dichloropropene, Total	75				0			1.00	
S 126 Xylenes, Total	106				0		1.00	0.9838	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmrgas_00255	Amount Added:	0.40	Units: uL
vmarolistdw_00256	Amount Added:	0.40	Units: uL
vmrprimw_00292	Amount Added:	0.40	Units: uL
vm50ss_00329	Amount Added:	0.40	Units: uL

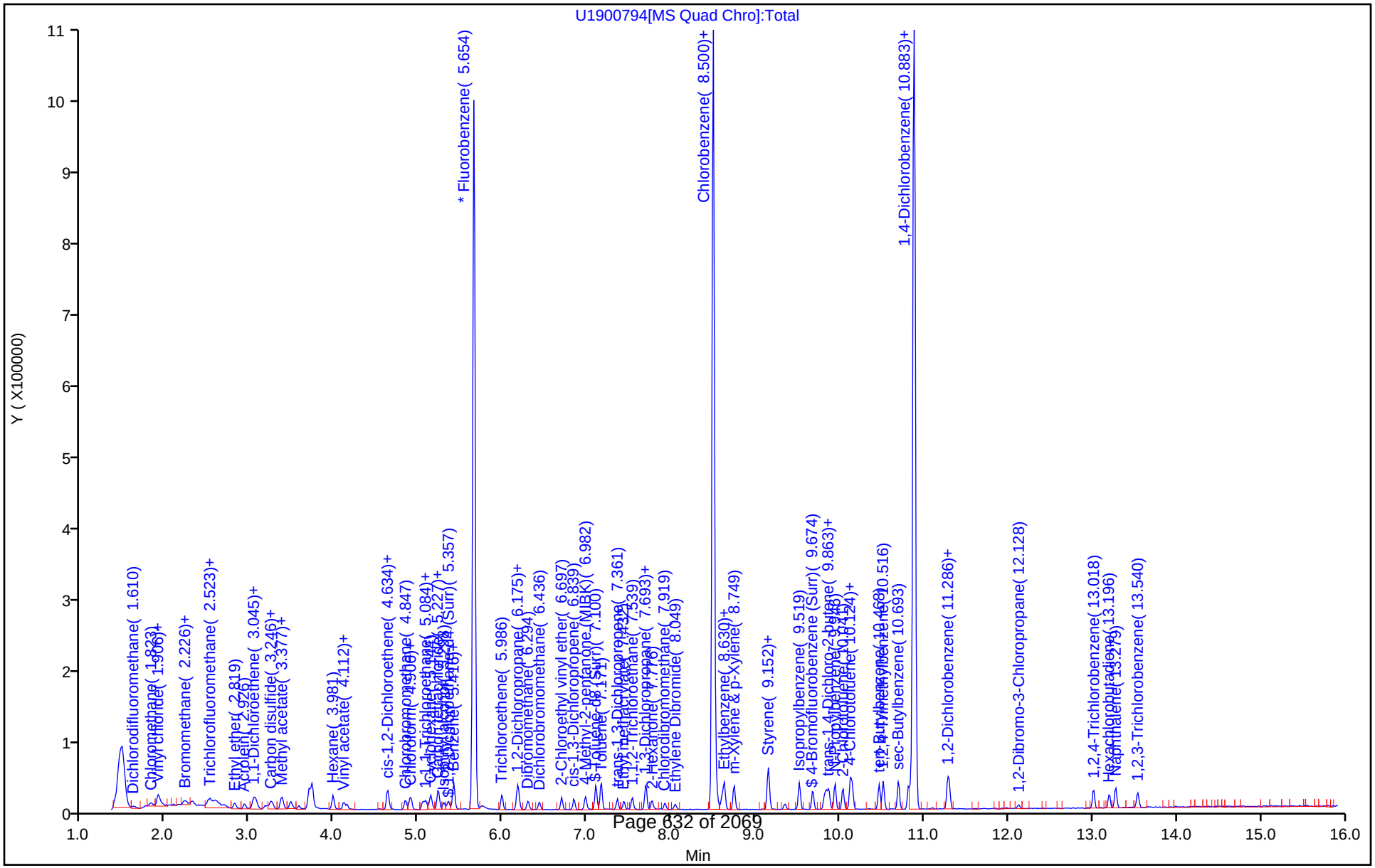
Report Date: 25-Jul-2018 10:14:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d

Injection Date:	24-Jul-2018 20:04:28	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	std8260 L1			Worklist Smp#:	13
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

TestAmerica Canton

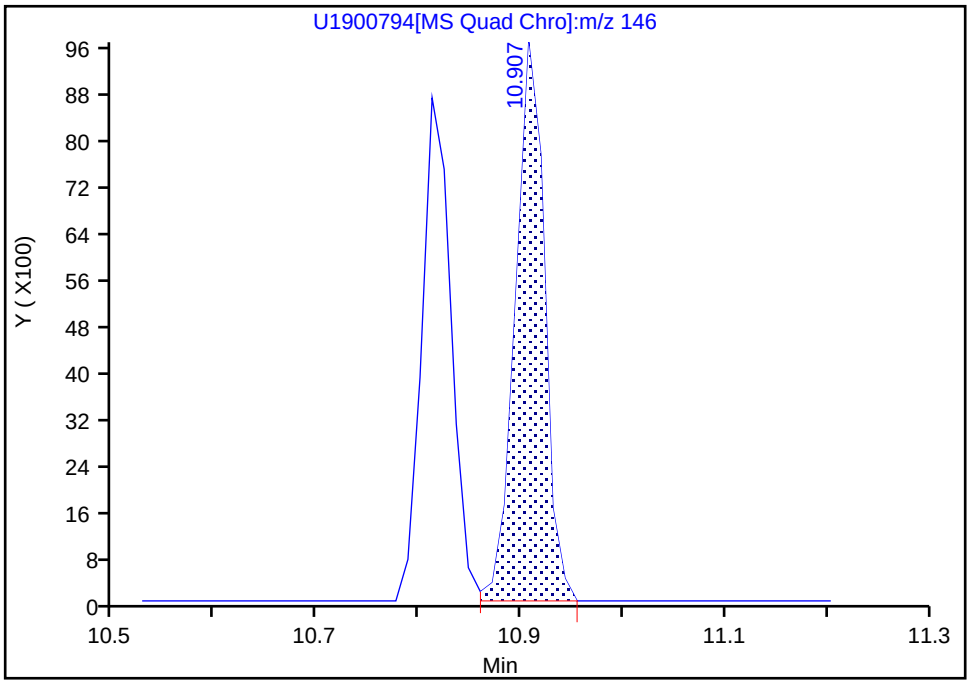
Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d				
Injection Date:	24-Jul-2018 20:04:28	Instrument ID:	A3UX19		
Lims ID:	std8260 L1				
Client ID:					
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

103 1,3-Dichlorobenzene, CAS: 541-73-1

Signal: 1

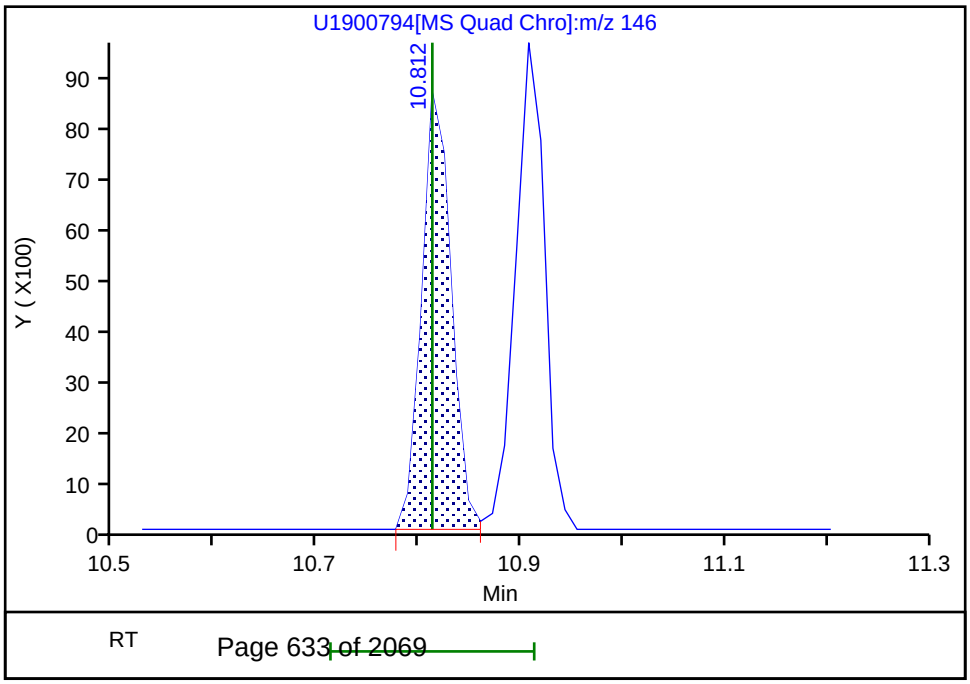
Processing Integration Results

RT: 10.91
Area: 19169
Amount: 0.600710
Amount Units: ug/l



Manual Integration Results

RT: 10.81
Area: 17372
Amount: 0.553299
Amount Units: ug/l



Reviewer: laveyt, 25-Jul-2018 09:51:37

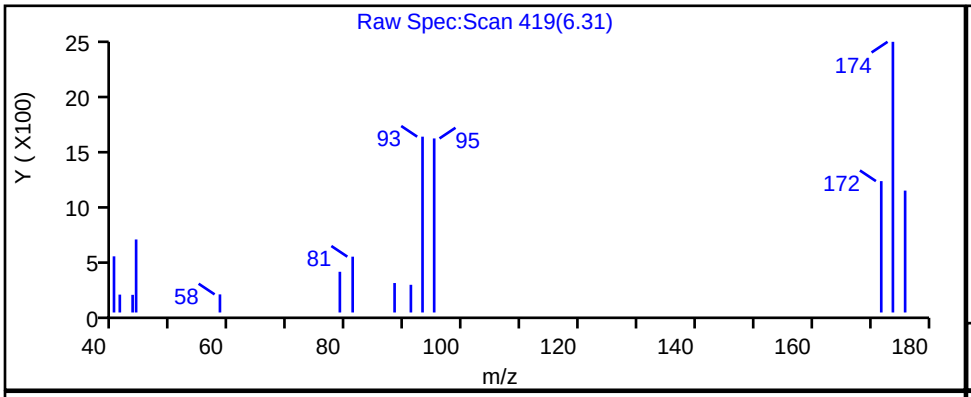
User Disabled Compound Report

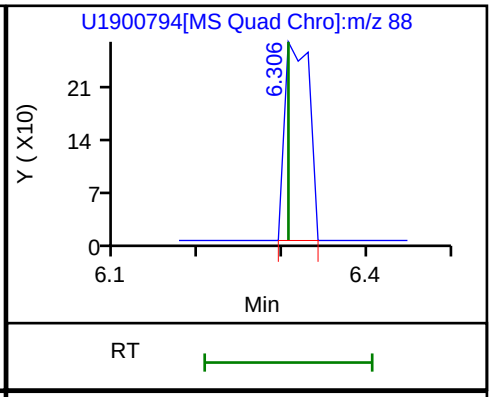
TestAmerica Canton

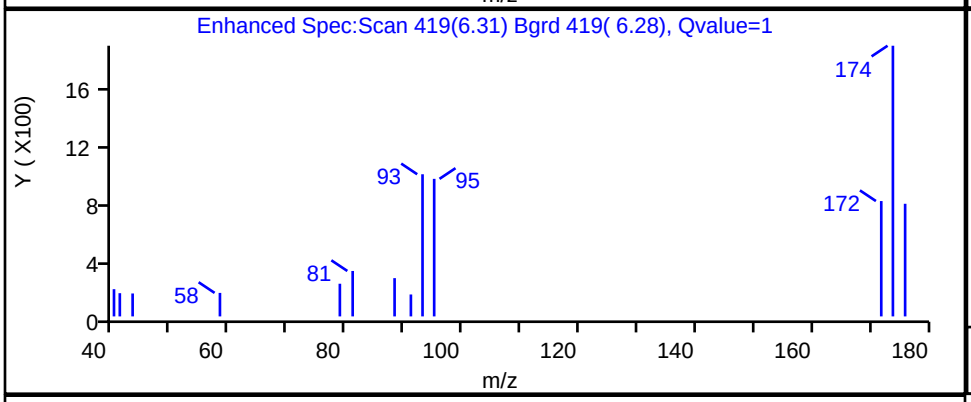
Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d				
Injection Date:	24-Jul-2018 20:04:28	Instrument ID:	A3UX19		
Lims ID:	std8260 L1				
Client ID:					
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

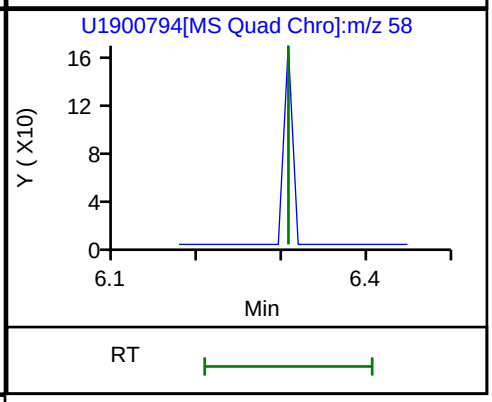
64 1,4-Dioxane, CAS: 123-91-1

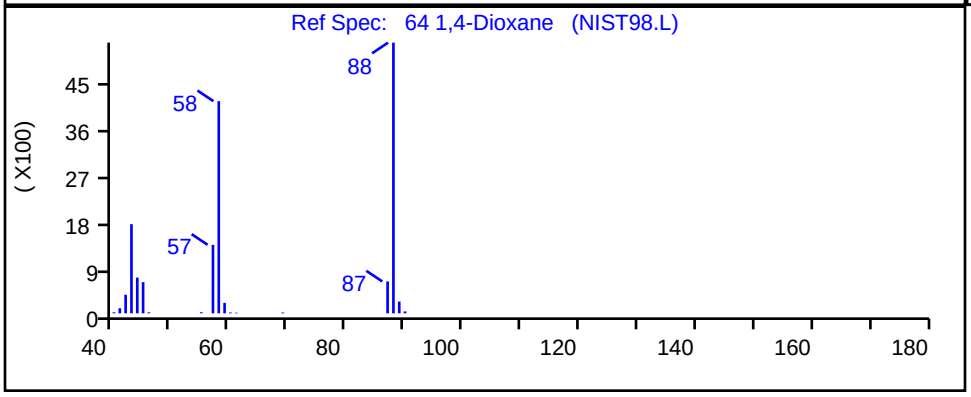
Processing Results











RT	Mass	Response	Amount
6.31	88.00	541	10.248924
6.31	58.00	0	

Reviewer: laveyt, 25-Jul-2018 10:11:40

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

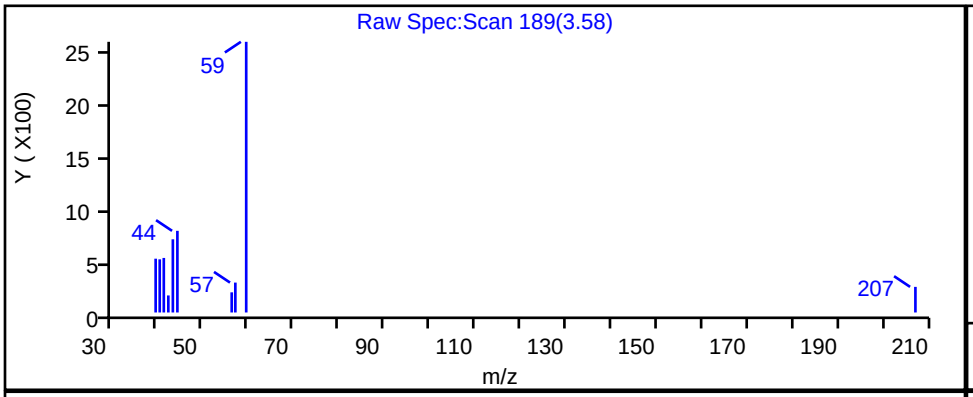
User Disabled Compound Report

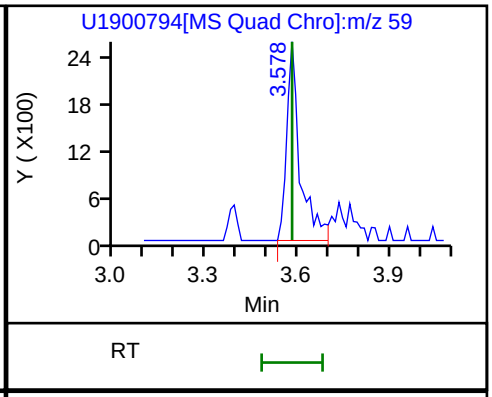
TestAmerica Canton

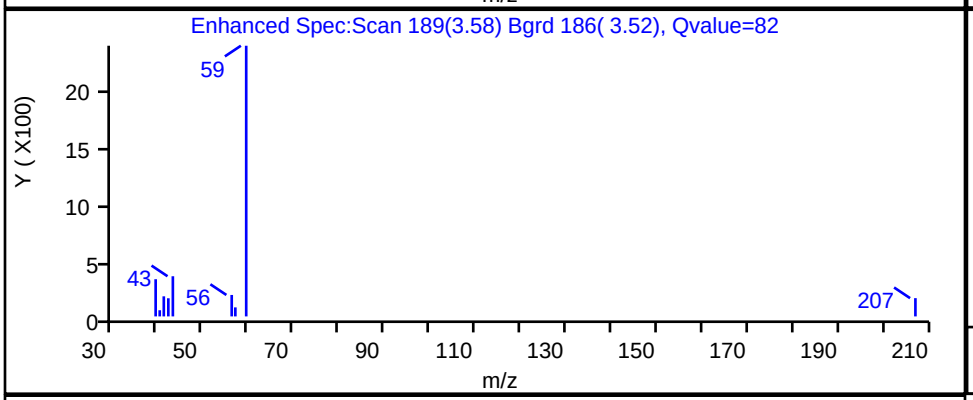
Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d				
Injection Date:	24-Jul-2018 20:04:28	Instrument ID:	A3UX19		
Lims ID:	std8260 L1				
Client ID:					
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

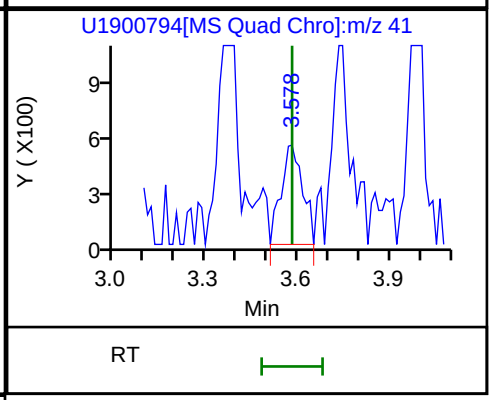
29 2-Methyl-2-propanol, CAS: 75-65-0

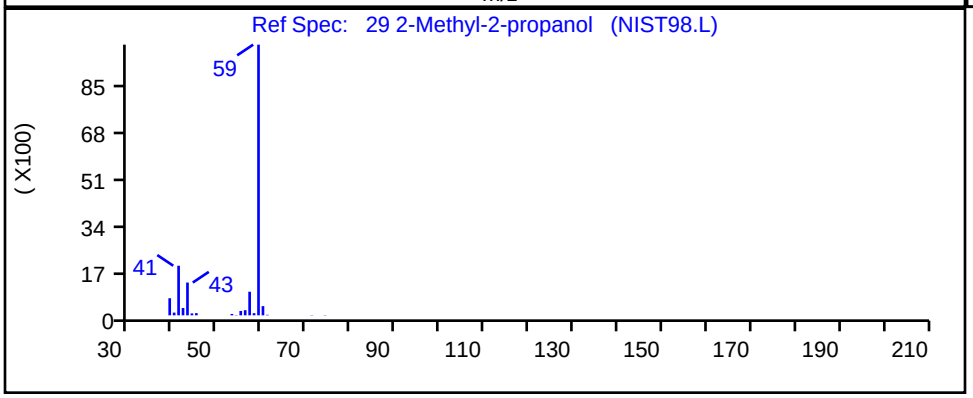
Processing Results











RT	Mass	Response	Amount
3.58	59.00	7655	6.614472
3.58	41.00	2500	

Reviewer: laveyt, 25-Jul-2018 09:53:00

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

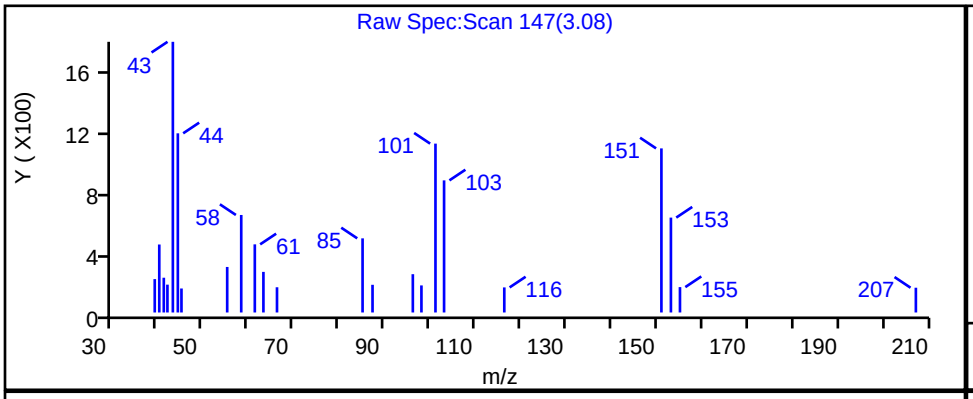
User Disabled Compound Report

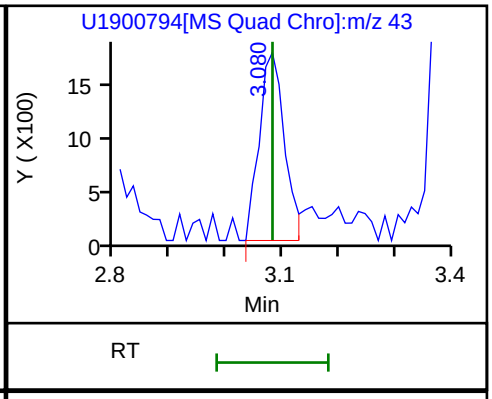
TestAmerica Canton

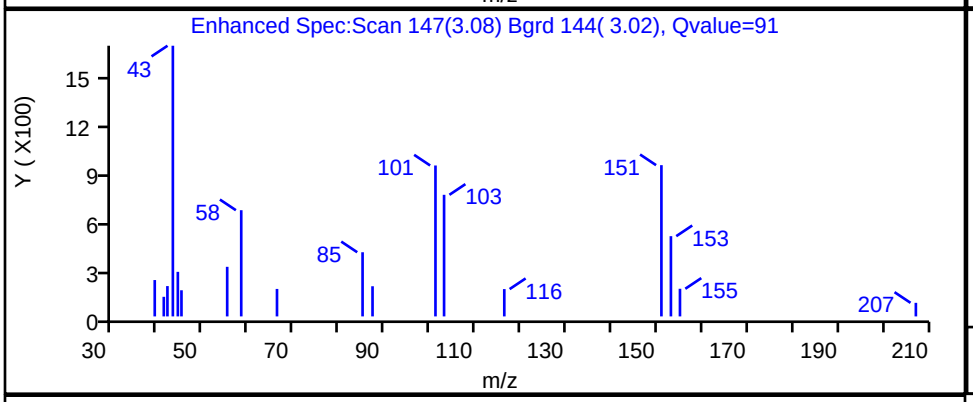
Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d				
Injection Date:	24-Jul-2018 20:04:28	Instrument ID:	A3UX19		
Lims ID:	std8260 L1				
Client ID:					
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

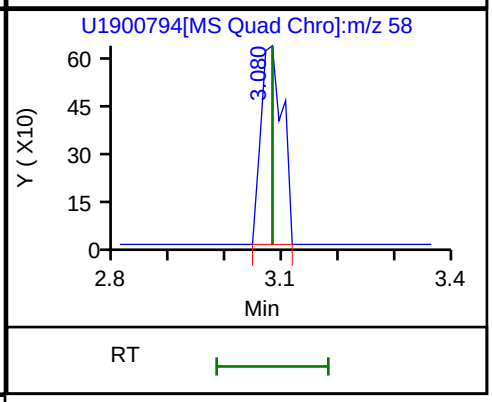
22 Acetone, CAS: 67-64-1

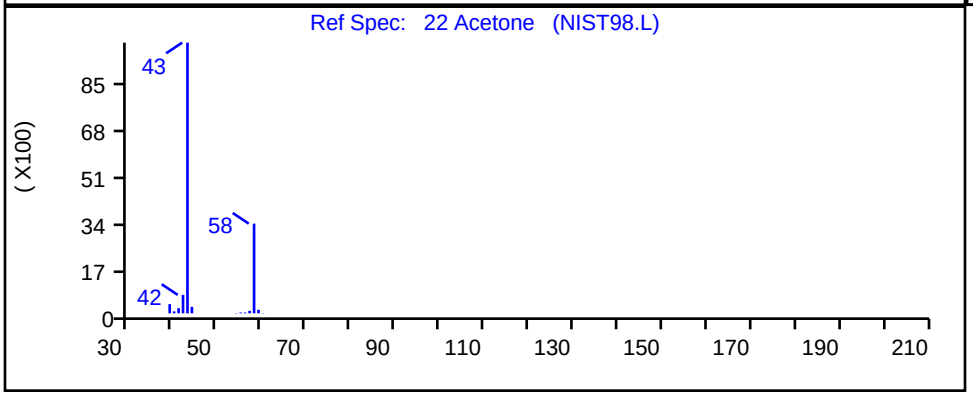
Processing Results











RT	Mass	Response	Amount
3.08	43.00	5518	1.624733
3.08	58.00	1707	

Reviewer: laveyt, 25-Jul-2018 09:52:16

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

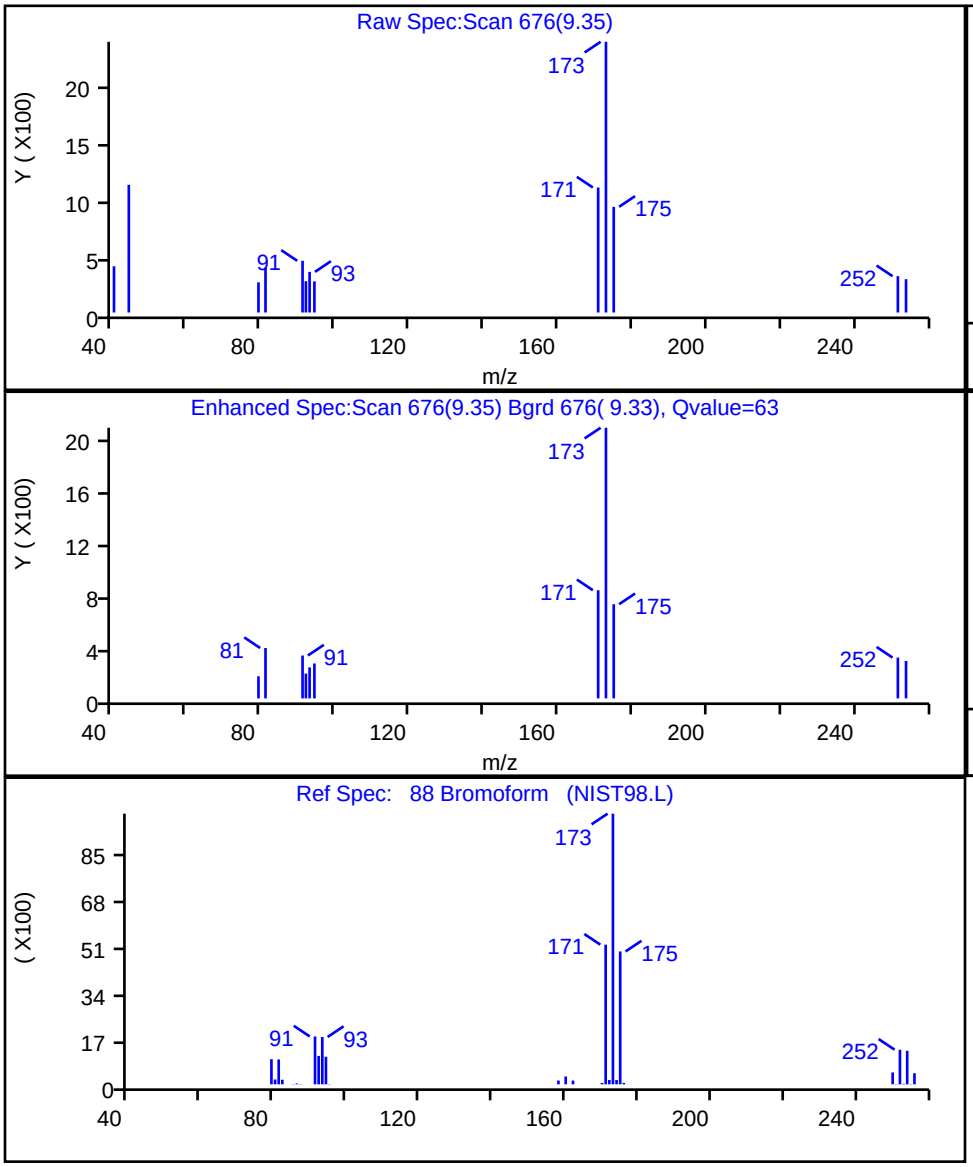
User Disabled Compound Report

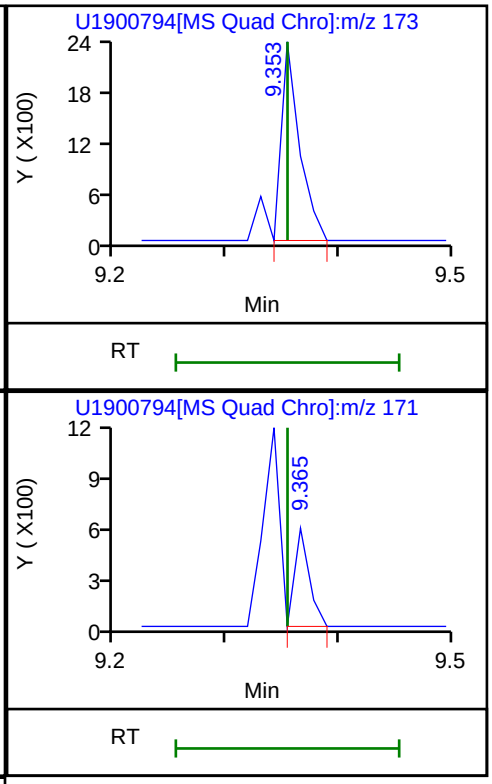
TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d				
Injection Date:	24-Jul-2018 20:04:28	Instrument ID:	A3UX19		
Lims ID:	std8260 L1				
Client ID:					
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

88 Bromoform, CAS: 75-25-2

Processing Results





RT	Mass	Response	Amount
9.35	173.00	2603	0.492517
9.37	171.00	513	

Reviewer: laveyt, 25-Jul-2018 09:54:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

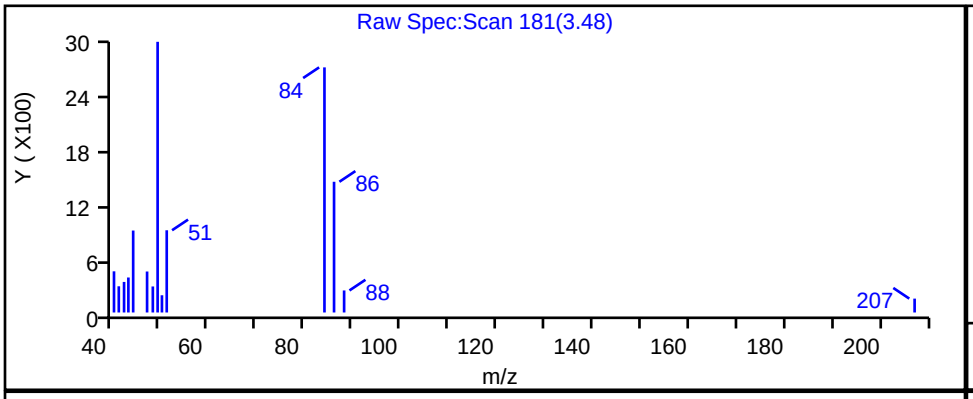
User Disabled Compound Report

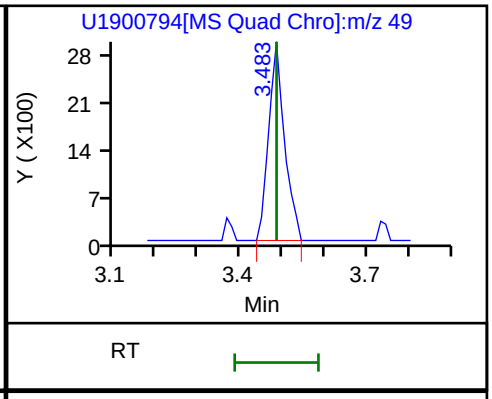
TestAmerica Canton

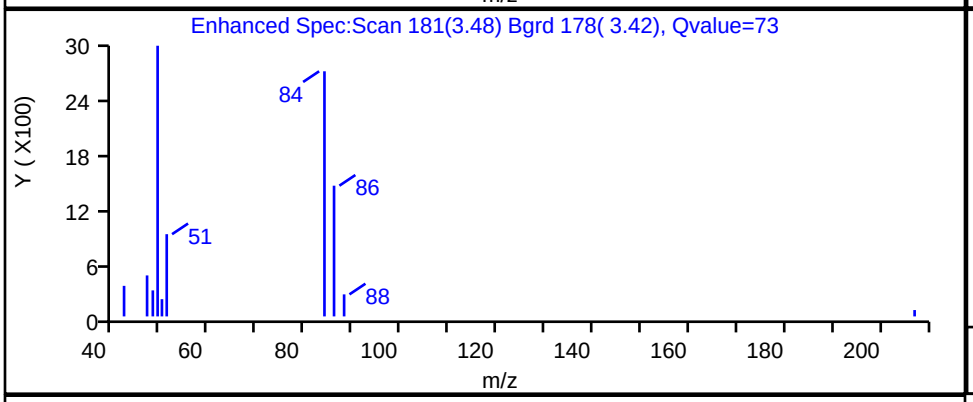
Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d				
Injection Date:	24-Jul-2018 20:04:28	Instrument ID:	A3UX19		
Lims ID:	std8260 L1				
Client ID:					
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

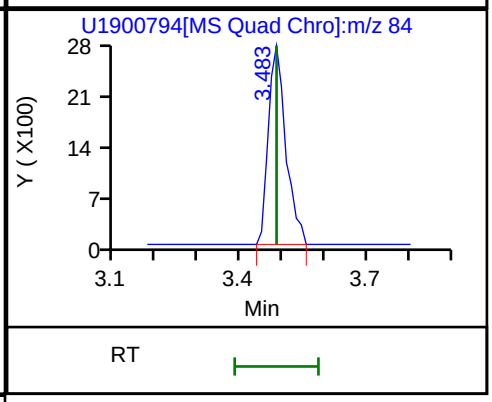
28 Methylene Chloride, CAS: 75-09-2

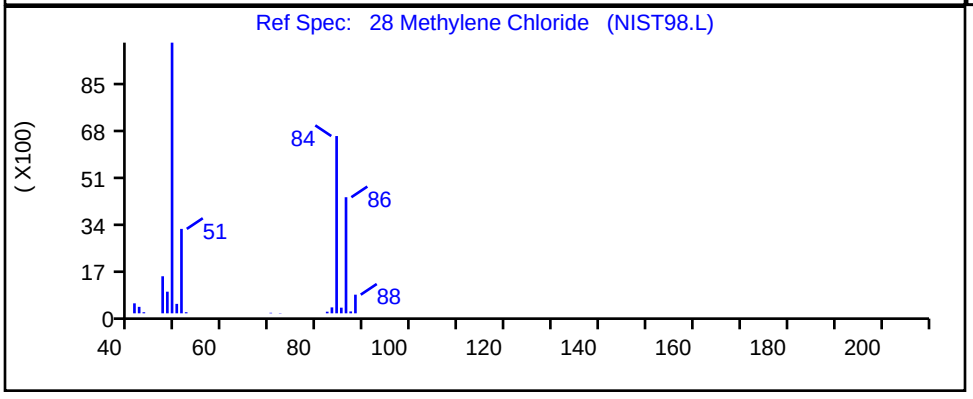
Processing Results











RT	Mass	Response	Amount
3.48	49.00	7846	0.551972
3.48	84.00	7835	

Reviewer: laveyt, 25-Jul-2018 09:52:25

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 25-Jul-2018 10:14:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

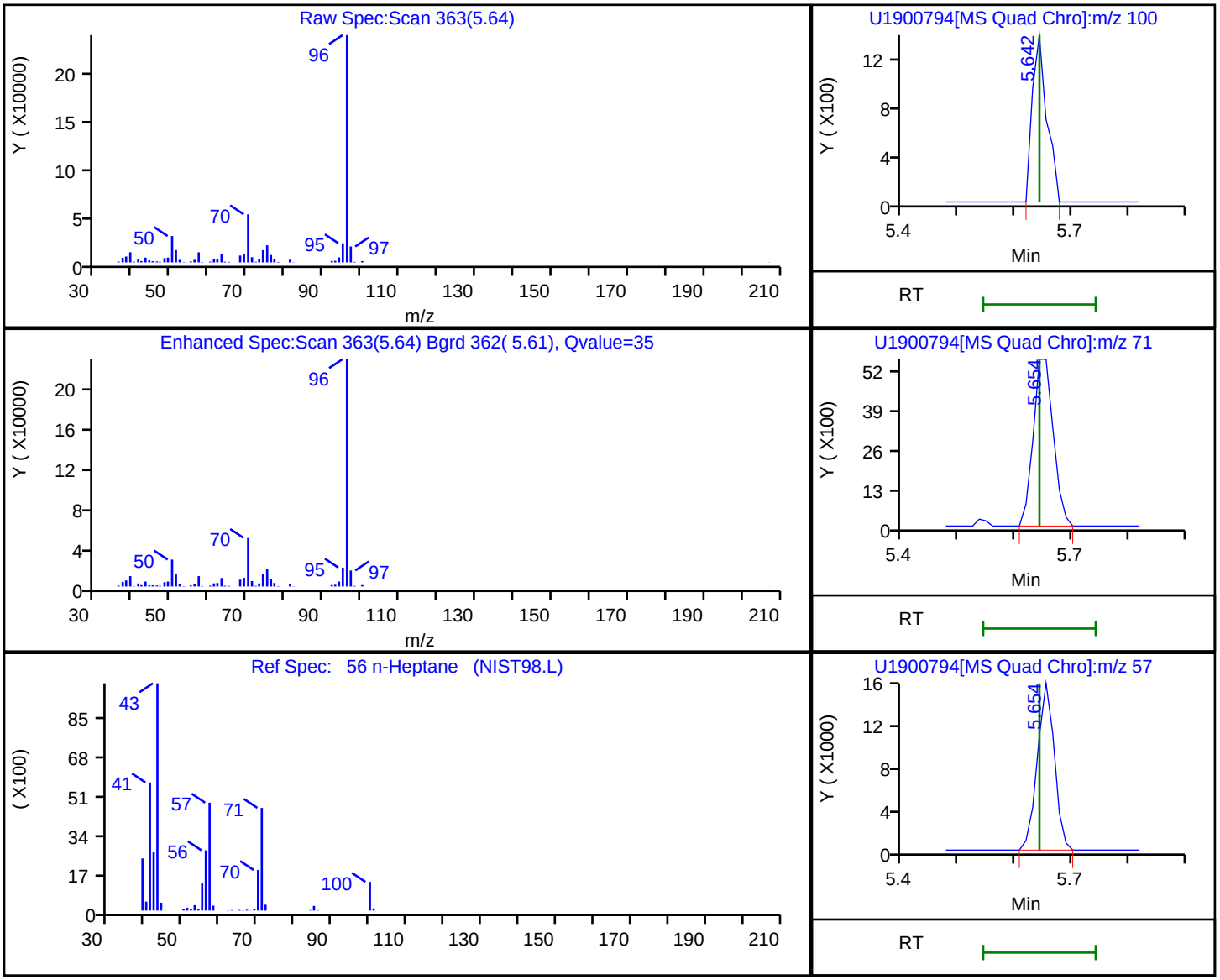
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\U1900794.d				
Injection Date:	24-Jul-2018 20:04:28	Instrument ID:	A3UX19		
Lims ID:	std8260 L1				
Client ID:					
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

56 n-Heptane, CAS: 142-82-5

Processing Results



RT	Mass	Response	Amount
5.64	100.00	2448	
5.65	71.00	13746	
5.65	57.00	32874	0.539419

Reviewer: laveyt, 25-Jul-2018 09:54:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337917

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/25/2018 13:24 Calibration End Date: 07/25/2018 15:15 Calibration ID: 46243

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-337917/13	U1900807.d
Level 2	STDA9 240-337917/12	U1900806.d
Level 3	STDA9 240-337917/11	U1900805.d
Level 4	STDA9 240-337917/10	U1900804.d
Level 5	STDA9 240-337917/9	U1900803.d
Level 6	STDA9 240-337917/8	U1900802.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0267 0.0420	0.0243	0.0339	0.0383	0.0393	Lin1	-0.123	0.0406				15.8			0.9970		0.9900
Diisopropyl ether	0.2480 0.2295	0.2266	0.2186	0.2314	0.2335	Ave		0.2313				4.2		20.0			
2-Chloro-1,3-butadiene	0.4103 0.4183	0.3468	0.3861	0.4073	0.4185	Ave		0.3979				7.0		20.0			
Ethyl t-butyl ether	0.6986 0.7570	0.7116	0.6979	0.7473	0.7423	Ave		0.7258				3.6		20.0			
Ethyl acetate	0.3112 0.3333	0.2920	0.2787	0.2931	0.2963	Ave		0.3007				6.3		20.0			
Propionitrile	0.0310 0.0489	0.0345	0.0381	0.0469	0.0451	Ave		0.0408				17.8		20.0			
Methacrylonitrile	0.1725 0.1953	0.1825	0.1747	0.1831	0.1889	Ave		0.1828				4.7		20.0			
Tert-amyl methyl ether	0.7358 0.8075	0.7777	0.7365	0.7842	0.7786	Ave		0.7700				3.7		20.0			
n-Butanol	0.0093 0.0103	0.0088	0.0085	0.0096	0.0096	Ave		0.0094				7.2		20.0			
Ethyl acrylate	0.3503 0.4100	0.3368	0.3674	0.3811	0.3761	Ave		0.3703				6.9		20.0			
Methyl methacrylate	0.2597 0.2591	0.2305	0.2383	0.2454	0.2423	Ave		0.2459				4.7		20.0			
2-Nitropropane	0.0701 0.0817	0.0670	0.0681	0.0750	0.0735	Ave		0.0726				7.5		20.0			
n-Butyl acetate	0.5119 0.5820	0.5042	0.5279	0.5447	0.5478	Ave		0.5364				5.3		20.0			
1-Chlorohexane	0.5172 0.4745	0.4432	0.4302	0.4451	0.4558	Ave		0.4610				6.8		20.0			
Cyclohexanone	0.0133 0.0157	0.0130	0.0126	0.0136	0.0138	Ave		0.0137				7.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337917

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/25/2018 13:24 Calibration End Date: 07/25/2018 15:15 Calibration ID: 46243

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.3347 0.3690	0.3068	0.3632	0.3574	0.3461	Ave		0.3462				6.6		20.0			
1,2,3-Trimethylbenzene	2.1501 2.3751	2.2616	2.2092	2.3745	2.2840	Ave		2.2757				3.9		20.0			
Benzyl chloride	1.0405 1.5547	1.1450	1.1839	1.3693	1.4244	Ave		1.2863				15.1		20.0			
1,3,5-Trichlorobenzene	1.0658 1.0430	1.1076	0.9448	1.0009	0.9668	Ave		1.0215				6.1		20.0			
2-Methylnaphthalene	1.2994 1.8015	1.3689	1.2543	1.3185	1.5534	Ave		1.4327				14.6		20.0			
1-Chloro-1-fluoroethane TIC	0.2622 0.2664	0.2640	0.2502	0.2645	0.2646	Ave		0.2620				2.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337917

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/25/2018 13:24 Calibration End Date: 07/25/2018 15:15 Calibration ID: 46243

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-337917/13	U1900807.d
Level 2	STDA9 240-337917/12	U1900806.d
Level 3	STDA9 240-337917/11	U1900805.d
Level 4	STDA9 240-337917/10	U1900804.d
Level 5	STDA9 240-337917/9	U1900803.d
Level 6	STDA9 240-337917/8	U1900802.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Lin1	6053 1541995	10939	154933	344974	710013	5.00 800	10.0	100	200	400
Diisopropyl ether	FB	Ave	5629 842560	10198	100050	208654	422081	0.500 80.0	1.00	10.0	20.0	40.0
2-Chloro-1,3-butadiene	FB	Ave	9314 1535298	15609	176705	367286	756317	0.500 80.0	1.00	10.0	20.0	40.0
Ethyl t-butyl ether	FB	Ave	15860 2778668	32026	319412	673922	1341567	0.500 80.0	1.00	10.0	20.0	40.0
Ethyl acetate	FB	Ave	14128 2446844	26280	255115	528543	1070993	1.00 160	2.00	20.0	40.0	80.0
Propionitrile	FB	Ave	7042 1793207	15532	174314	423266	816037	5.00 800	10.0	100	200	400
Methacrylonitrile	FB	Ave	39164 7168171	82133	799457	1651014	3414371	5.00 800	10.0	100	200	400
Tert-amyl methyl ether	FB	Ave	16704 2963984	35001	337094	707156	1407333	0.500 80.0	1.00	10.0	20.0	40.0
n-Butanol	FB	Ave	5296 949589	9875	96861	216043	435974	12.5 2000	25.0	250	500	1000
Ethyl acrylate	FB	Ave	7952 1504928	15158	168159	343646	679802	0.500 80.0	1.00	10.0	20.0	40.0
Methyl methacrylate	FB	Ave	11793 1902368	20747	218113	442524	875995	1.00 160	2.00	20.0	40.0	80.0
2-Nitropropane	FB	Ave	3185 599949	6028	62364	135288	265523	1.00 160	2.00	20.0	40.0	80.0
n-Butyl acetate	CBNZ d5	Ave	9641 1740666	17906	199107	397090	794623	0.500 80.0	1.00	10.0	20.0	40.0
1-Chlorohexane	CBNZ d5	Ave	9741 1419019	15739	162266	324476	661168	0.500 80.0	1.00	10.0	20.0	40.0
Cyclohexanone	CBNZ d5	Ave	2498 468992	4617	47625	99504	200187	5.00 800	10.0	100	200	400
Pentachloroethane	DCBd 4	Ave	7164 1229564	12769	154980	304359	585743	1.00 160	2.00	20.0	40.0	80.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337917

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/25/2018 13:24 Calibration End Date: 07/25/2018 15:15 Calibration ID: 46243

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCBd 4	Ave	23009 3957298	47067	471355	1010948	1932917	0.500 80.0	1.00	10.0	20.0	40.0
Benzyl chloride	DCBd 4	Ave	11135 2590360	23829	252607	582984	1205410	0.500 80.0	1.00	10.0	20.0	40.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	11406 1737829	23051	201583	426143	818176	0.500 80.0	1.00	10.0	20.0	40.0
2-Methylnaphthalene	DCBd 4	Ave	27811 6003075	56979	535247	1122673	2629143	1.00 160	2.00	20.0	40.0	80.0
1-Chloro-1-fluoroethane TIC	FB	Ave	5953 977727	11883	114539	238507	478166	0.500 80.0	1.00	10.0	20.0	40.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 337917

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/25/2018 13:24 Calibration End Date: 07/25/2018 15:15 Calibration ID: 46243

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-337917/13	U1900807.d
Level 2	STDA9 240-337917/12	U1900806.d
Level 3	STDA9 240-337917/11	U1900805.d
Level 4	STDA9 240-337917/10	U1900804.d
Level 5	STDA9 240-337917/9	U1900803.d
Level 6	STDA9 240-337917/8	U1900802.d

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Acetonitrile	26.1						50					

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900802.d
Lims ID: stdA9 L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 25-Jul-2018 13:24:03 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078311-008
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub3

Method: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 16:29:55 Calib Date: 25-Jul-2018 15:15:13
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900807.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: laveyt Date: 25-Jul-2018 14:10:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	917631	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	66	747699	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	69	416540	20.0	20.0	
165 1-Chloro-1-fluoroethane TI	47	2.215	2.226	-0.011	93	977727	80.0	81.3	
25 Acetonitrile	41	3.329	3.329	0.000	99	1541995	800.0	831.3	
36 Isopropyl ether	87	4.171	4.171	0.000	94	842560	80.0	79.4	
37 2-Chloro-1,3-butadiene	53	4.195	4.195	0.000	87	1535298	80.0	84.1	
38 Tert-butyl ethyl ether	59	4.491	4.491	0.000	96	2778668	80.0	83.4	
42 Ethyl acetate	43	4.681	4.681	0.000	97	2446844	160.0	177.3	
43 Propionitrile	54	4.681	4.681	0.000	59	1793207	800.0	958.9	
44 Methacrylonitrile	41	4.823	4.823	0.000	91	7168171	800.0	854.5	
55 Tert-amyl methyl ether	73	5.499	5.499	0.000	90	2963984	80.0	83.9	
57 n-Butanol	56	5.891	5.891	0.000	85	949589	2000.0	2211.5	
59 Ethyl acrylate	55	6.057	6.057	0.000	99	1504928	80.0	88.6	
62 Methyl methacrylate	41	6.270	6.270	0.000	91	1902368	160.0	168.6	
66 2-Nitropropane	41	6.638	6.638	0.000	95	599949	160.0	180.2	
78 n-Butyl acetate	43	7.883	7.883	0.000	99	1740666	80.0	86.8	
81 1-Chlorohexane	91	8.488	8.488	0.000	96	1419019	80.0	82.3	
90 Cyclohexanone	55	9.614	9.614	0.000	92	468992	800.0	917.7	
100 Pentachloroethane	167	10.492	10.492	0.000	88	1229564	160.0	170.5	
106 1,2,3-Trimethylbenzene	105	10.966	10.966	0.000	96	3957298	80.0	83.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 Benzyl chloride	91	11.049	11.049	0.000	97	2590360	80.0	96.7	
111 1,3,5-Trichlorobenzene	180	12.354	12.354	0.000	97	1737829	80.0	81.7	
116 2-Methylnaphthalene	142	14.619	14.619	0.000	89	6003075	160.0	201.2	

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmra9w_00259	Amount Added: 64.00	Units: uL

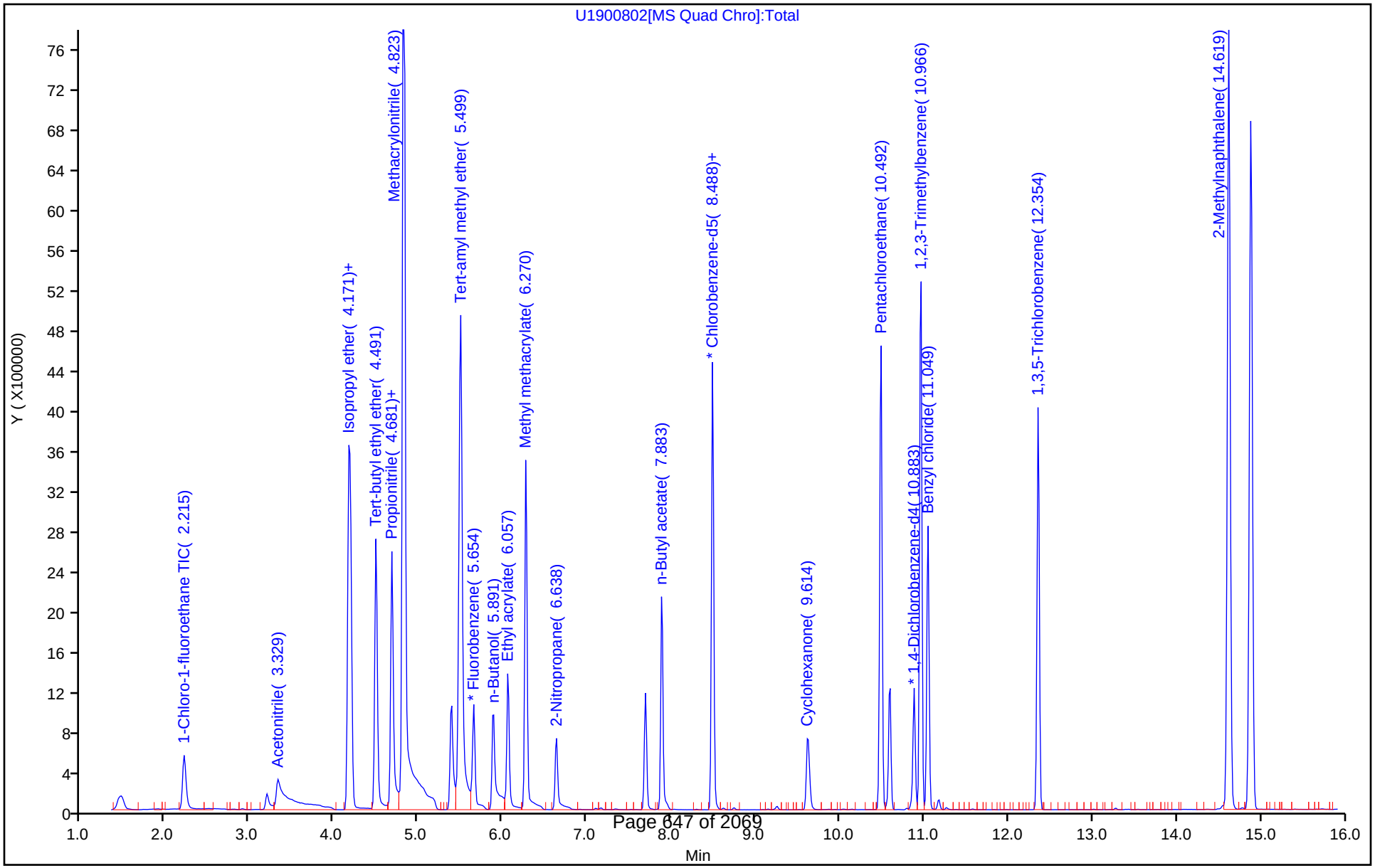
Report Date: 25-Jul-2018 16:29:56 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900802.d

Injection Date:	25-Jul-2018 13:24:03	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	stdA9 L6			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 25-Jul-2018 16:29:59 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900803.d
Lims ID: stdA9 L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 25-Jul-2018 13:46:28 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078311-009
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub3

Method: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 16:29:58 Calib Date: 25-Jul-2018 15:15:13
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900807.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: laveyt Date: 25-Jul-2018 14:11:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	903705	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	81	725276	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	74	423134	20.0	20.0	
165 1-Chloro-1-fluoroethane TI	47	2.227	2.226	0.001	94	478166	40.0	40.4	
25 Acetonitrile	41	3.329	3.329	0.000	99	710013	400.0	390.3	
36 Isopropyl ether	87	4.171	4.171	0.000	94	422081	40.0	40.4	
37 2-Chloro-1,3-butadiene	53	4.195	4.195	0.000	87	756317	40.0	42.1	
38 Tert-butyl ethyl ether	59	4.492	4.491	0.001	87	1341567	40.0	40.9	
43 Propionitrile	54	4.681	4.681	0.000	62	816037	400.0	443.1	
42 Ethyl acetate	43	4.681	4.681	0.000	97	1070993	80.0	78.8	
44 Methacrylonitrile	41	4.824	4.823	0.001	91	3414371	400.0	413.3	
55 Tert-amyl methyl ether	73	5.511	5.499	0.012	92	1407333	40.0	40.4	
57 n-Butanol	56	5.891	5.891	0.000	85	435974	1000.0	1031.0	
59 Ethyl acrylate	55	6.057	6.057	0.000	93	679802	40.0	40.6	
62 Methyl methacrylate	41	6.270	6.270	0.000	92	875995	80.0	78.8	
66 2-Nitropropane	41	6.638	6.638	0.000	96	265523	80.0	81.0	
78 n-Butyl acetate	43	7.883	7.883	0.000	99	794623	40.0	40.8	
81 1-Chlorohexane	91	8.488	8.488	0.000	96	661168	40.0	39.6	
90 Cyclohexanone	55	9.615	9.614	0.001	91	200187	400.0	403.8	
100 Pentachloroethane	167	10.492	10.492	0.000	87	585743	80.0	80.0	
106 1,2,3-Trimethylbenzene	105	10.966	10.966	0.000	94	1932917	40.0	40.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 Benzyl chloride	91	11.049	11.049	0.000	97	1205410	40.0	44.3	
111 1,3,5-Trichlorobenzene	180	12.354	12.354	0.000	97	818176	40.0	37.9	
116 2-Methylnaphthalene	142	14.619	14.619	0.000	90	2629143	80.0	86.7	

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmra9w_00259	Amount Added: 32.00	Units: uL

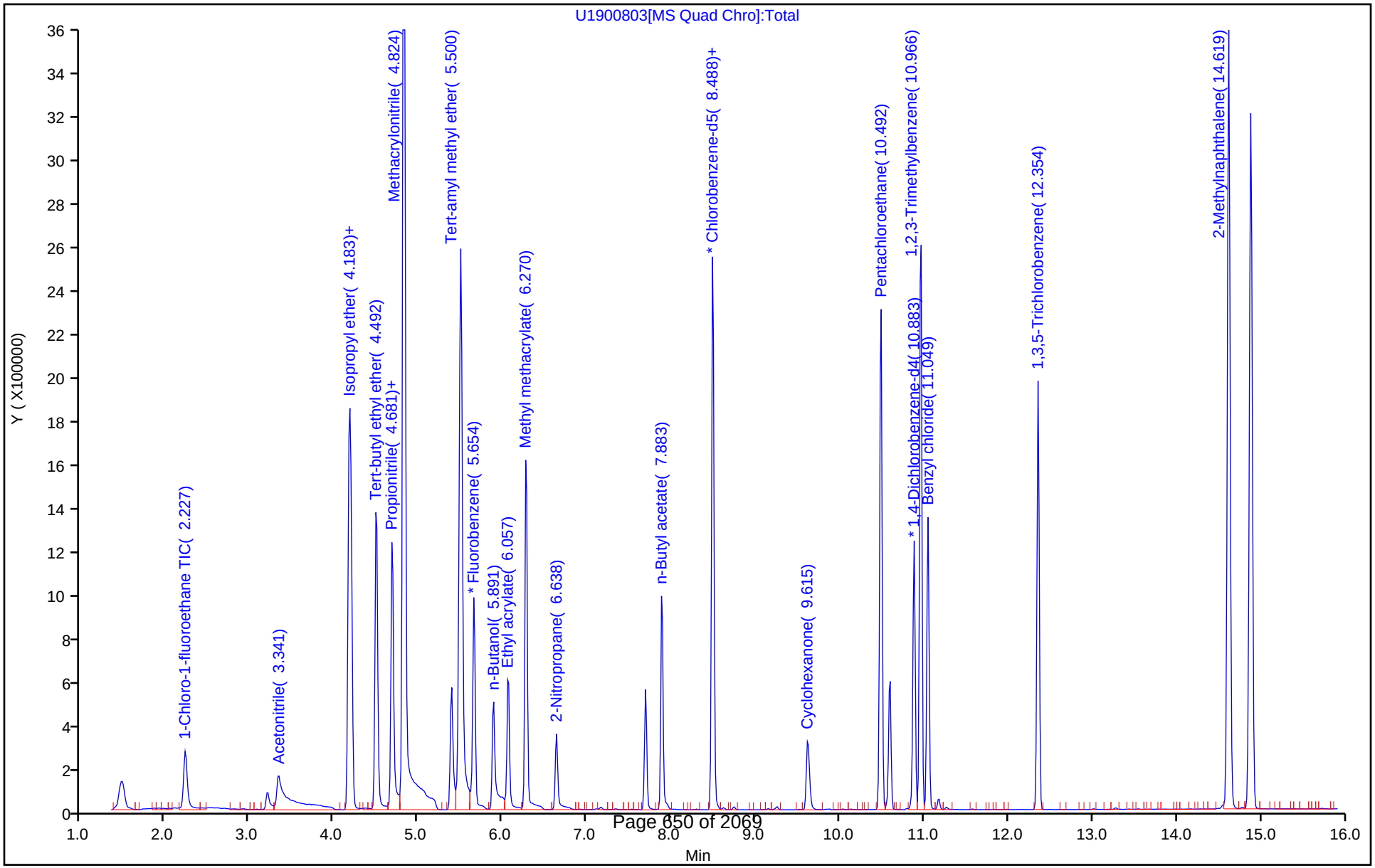
Report Date: 25-Jul-2018 16:29:59 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900803.d

Injection Date:	25-Jul-2018 13:46:28	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	stdA9 L5			Worklist Smp#:	9
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900804.d
Lims ID: stdA9 L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 25-Jul-2018 14:08:31 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078311-010
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub3

Method: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 16:30:08 Calib Date: 25-Jul-2018 15:15:13
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900807.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: laveyt Date: 25-Jul-2018 14:50:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	901786	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	728980	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	83	425754	20.0	20.0	
165 1-Chloro-1-fluoroethane TI	47	2.226	2.226	0.000	93	238507	20.0	20.2	
25 Acetonitrile	41	3.329	3.329	0.000	99	344974	200.0	191.6	
36 Isopropyl ether	87	4.171	4.171	0.000	94	208654	20.0	20.0	
37 2-Chloro-1,3-butadiene	53	4.195	4.195	0.000	90	367286	20.0	20.5	
38 Tert-butyl ethyl ether	59	4.491	4.491	0.000	98	673922	20.0	20.6	
42 Ethyl acetate	43	4.681	4.681	0.000	96	528543	40.0	39.0	
43 Propionitrile	54	4.681	4.681	0.000	66	423266	200.0	230.3	
44 Methacrylonitrile	41	4.823	4.823	0.000	91	1651014	200.0	200.3	
55 Tert-amyl methyl ether	73	5.499	5.499	0.000	90	707156	20.0	20.4	
57 n-Butanol	56	5.891	5.891	0.000	85	216043	500.0	512.0	
59 Ethyl acrylate	55	6.057	6.057	0.000	92	343646	20.0	20.6	
62 Methyl methacrylate	41	6.270	6.270	0.000	92	442524	40.0	39.9	
66 2-Nitropropane	41	6.638	6.638	0.000	98	135288	40.0	41.3	
78 n-Butyl acetate	43	7.883	7.883	0.000	99	397090	20.0	20.3	
81 1-Chlorohexane	91	8.488	8.488	0.000	74	324476	20.0	19.3	
90 Cyclohexanone	55	9.614	9.614	0.000	91	99504	200.0	199.7	
100 Pentachloroethane	167	10.492	10.492	0.000	86	304359	40.0	41.3	
106 1,2,3-Trimethylbenzene	105	10.966	10.966	0.000	86	1010948	20.0	20.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 Benzyl chloride	91	11.049	11.049	0.000	97	582984	20.0	21.3	
111 1,3,5-Trichlorobenzene	180	12.354	12.354	0.000	97	426143	20.0	19.6	
116 2-Methylnaphthalene	142	14.619	14.619	0.000	89	1122673	40.0	36.8	

Reagents:

vm50is_stk_A_00001	Amount Added: 2.00	Units: uL
vmra9w_00259	Amount Added: 16.00	Units: uL

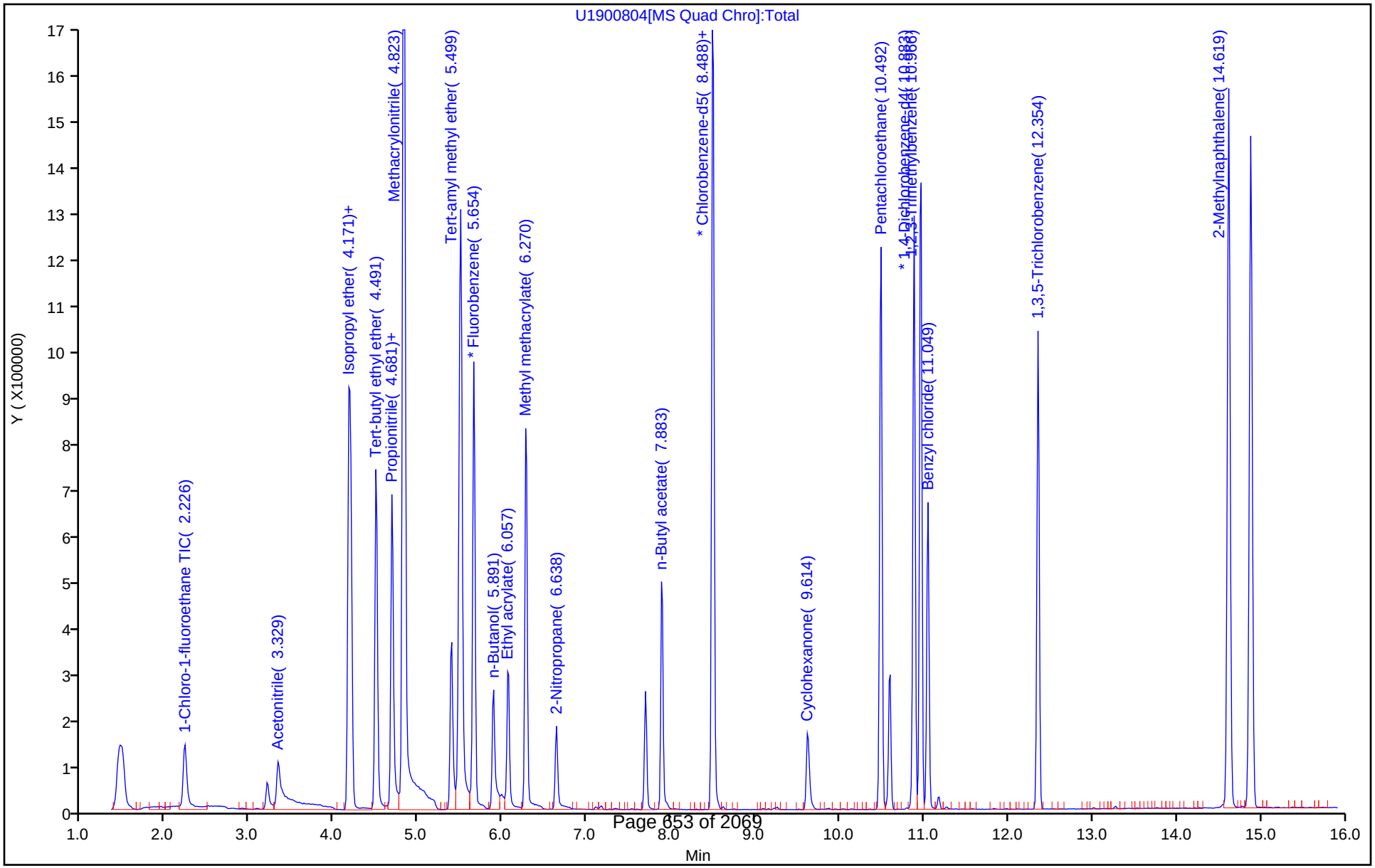
Report Date: 25-Jul-2018 16:30:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900804.d

Injection Date:	25-Jul-2018 14:08:31	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	stdA9 L4			Worklist Smp#:	10
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 25-Jul-2018 16:30:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900805.d
Lims ID: stdA9 L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 25-Jul-2018 14:30:45 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078311-011
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub3

Method: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 16:30:13 Calib Date: 25-Jul-2018 15:15:13
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900807.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: laveyt Date: 25-Jul-2018 14:49:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	915400	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	754374	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	85	426728	20.0	20.0	
165 1-Chloro-1-fluoroethane TI	47	2.215	2.226	-0.011	93	114539	10.0	9.55	
25 Acetonitrile	41	3.329	3.329	0.000	98	154933	100.0	86.5	
36 Isopropyl ether	87	4.171	4.171	0.000	93	100050	10.0	9.45	
37 2-Chloro-1,3-butadiene	53	4.195	4.195	0.000	87	176705	10.0	9.70	
38 Tert-butyl ethyl ether	59	4.491	4.491	0.000	83	319412	10.0	9.62	
43 Propionitrile	54	4.681	4.681	0.000	52	174314	100.0	93.4	
42 Ethyl acetate	43	4.681	4.681	0.000	96	255115	20.0	18.5	
44 Methacrylonitrile	41	4.823	4.823	0.000	91	799457	100.0	95.5	
55 Tert-amyl methyl ether	73	5.499	5.499	0.000	89	337094	10.0	9.56	
57 n-Butanol	56	5.891	5.891	0.000	85	96861	250.0	226.1	
59 Ethyl acrylate	55	6.057	6.057	0.000	99	168159	10.0	9.92	
62 Methyl methacrylate	41	6.270	6.270	0.000	90	218113	20.0	19.4	
66 2-Nitropropane	41	6.638	6.638	0.000	96	62364	20.0	18.8	
78 n-Butyl acetate	43	7.883	7.883	0.000	99	199107	10.0	9.84	
81 1-Chlorohexane	91	8.488	8.488	0.000	54	162266	10.0	9.33	
90 Cyclohexanone	55	9.614	9.614	0.000	90	47625	100.0	92.4	
100 Pentachloroethane	167	10.492	10.492	0.000	86	154980	20.0	21.0	
106 1,2,3-Trimethylbenzene	105	10.966	10.966	0.000	72	471355	10.0	9.71	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 Benzyl chloride	91	11.049	11.049	0.000	97	252607	10.0	9.20	
111 1,3,5-Trichlorobenzene	180	12.354	12.354	0.000	97	201583	10.0	9.25	
116 2-Methylnaphthalene	142	14.619	14.619	0.000	90	535247	20.0	17.5	

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmra9w_00259	Amount Added:	8.00	Units: uL

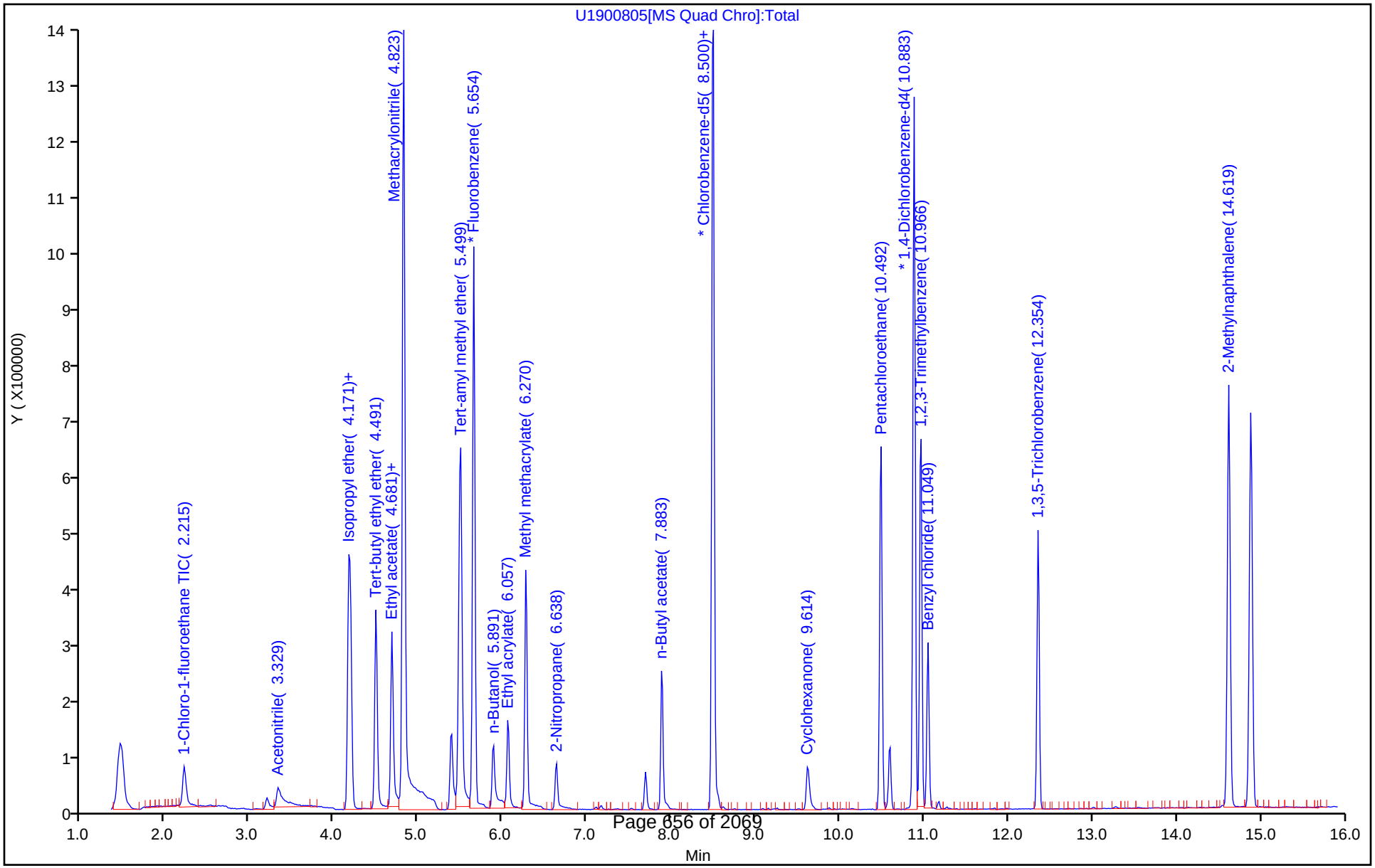
Report Date: 25-Jul-2018 16:30:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900805.d

Injection Date:	25-Jul-2018 14:30:45	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	stdA9 L3			Worklist Smp#:	11
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900806.d
Lims ID: stdA9 L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 25-Jul-2018 14:52:59 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078311-012
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub3

Method: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 16:30:17 Calib Date: 25-Jul-2018 15:15:13
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900807.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: laveyt Date: 25-Jul-2018 15:15:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	900144	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	710298	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	92	416233	20.0	20.0	
165 1-Chloro-1-fluoroethane TI	47	2.227	2.226	0.001	86	11883	1.00	1.01	
25 Acetonitrile	41	3.341	3.329	0.012	88	10939	10.0	9.01	
36 Isopropyl ether	87	4.183	4.171	0.012	93	10198	1.00	0.9798	
37 2-Chloro-1,3-butadiene	53	4.195	4.195	0.000	82	15609	1.00	0.8717	
38 Tert-butyl ethyl ether	59	4.503	4.491	0.012	96	32026	1.00	0.9804	
42 Ethyl acetate	43	4.693	4.681	0.012	95	26280	2.00	1.94	
43 Propionitrile	54	4.693	4.681	0.012	62	15532	10.0	8.47	
44 Methacrylonitrile	41	4.824	4.823	0.001	92	82133	10.0	9.98	
55 Tert-amyl methyl ether	73	5.511	5.499	0.012	88	35001	1.00	1.01	
57 n-Butanol	56	5.891	5.891	0.000	65	9875	25.0	23.4	
59 Ethyl acrylate	55	6.069	6.057	0.012	85	15158	1.00	0.9096	
62 Methyl methacrylate	41	6.270	6.270	0.000	88	20747	2.00	1.87	
66 2-Nitropropane	41	6.638	6.638	0.000	82	6028	2.00	1.85	
78 n-Butyl acetate	43	7.883	7.883	0.000	90	17906	1.00	0.9399	
81 1-Chlorohexane	91	8.488	8.488	0.000	33	15739	1.00	0.9613	
90 Cyclohexanone	55	9.614	9.614	0.000	63	4617	10.0	9.51	
100 Pentachloroethane	167	10.492	10.492	0.000	76	12769	2.00	1.77	
106 1,2,3-Trimethylbenzene	105	10.966	10.966	0.000	67	47067	1.00	0.99	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 Benzyl chloride	91	11.049	11.049	0.000	84	23829	1.00	0.8901	
111 1,3,5-Trichlorobenzene	180	12.354	12.354	0.000	91	23051	1.00	1.08	
116 2-Methylnaphthalene	142	14.619	14.619	0.000	90	56979	2.00	1.91	

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmra9w_00259	Amount Added:	0.80	Units: uL

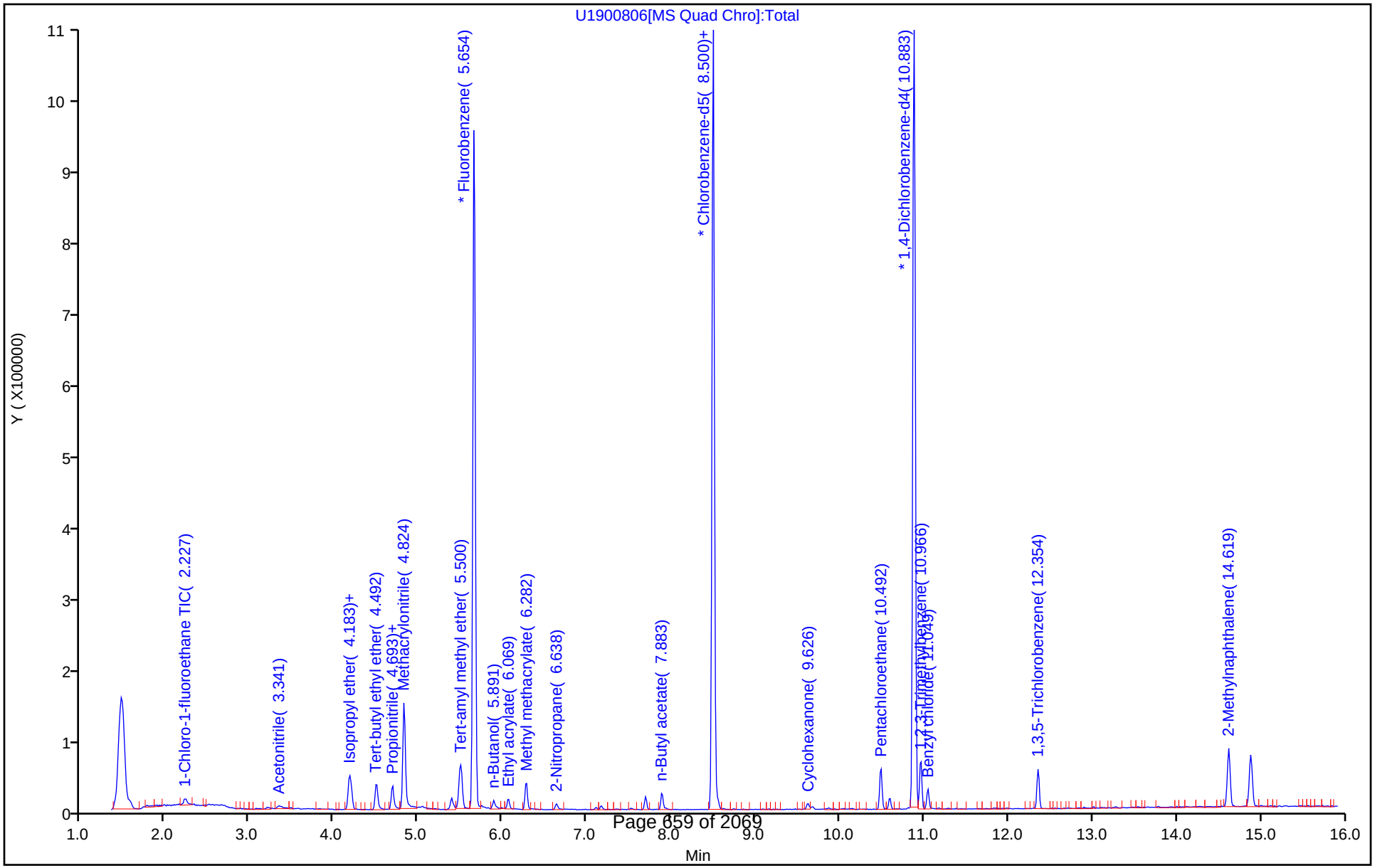
Report Date: 25-Jul-2018 16:30:18 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900806.d

Injection Date:	25-Jul-2018 14:52:59	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	stdA9 L2			Worklist Smp#:	12
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900807.d
Lims ID: stdA9 L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 25-Jul-2018 15:15:13 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078311-013
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub3

Method: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 16:30:24 Calib Date: 25-Jul-2018 15:15:13
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900807.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: laveyt Date: 25-Jul-2018 15:46:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	908077	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	84	753378	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	92	428059	20.0	20.0	
165 1-Chloro-1-fluoroethane TI	47	2.226	2.226	0.000	78	5953	0.5000	0.5005	
25 Acetonitrile	41	3.341	3.329	0.012	88	6053	5.00	6.31	
36 Isopropyl ether	87	4.171	4.171	0.000	86	5629	0.5000	0.5361	
37 2-Chloro-1,3-butadiene	53	4.195	4.195	0.000	71	9314	0.5000	0.5156	
38 Tert-butyl ethyl ether	59	4.491	4.491	0.000	92	15860	0.5000	0.4813	
43 Propionitrile	54	4.681	4.681	0.000	58	7042	5.00	3.81	
42 Ethyl acetate	43	4.681	4.681	0.000	90	14128	1.00	1.03	
44 Methacrylonitrile	41	4.823	4.823	0.000	89	39164	5.00	4.72	
55 Tert-amyl methyl ether	73	5.511	5.499	0.012	90	16704	0.5000	0.4778	
57 n-Butanol	56	5.891	5.891	0.000	79	5296	12.5	12.5	
59 Ethyl acrylate	55	6.069	6.057	0.012	84	7952	0.5000	0.4730	
62 Methyl methacrylate	41	6.270	6.270	0.000	84	11793	1.00	1.06	
66 2-Nitropropane	41	6.638	6.638	0.000	74	3185	1.00	0.9666	
78 n-Butyl acetate	43	7.895	7.883	0.012	86	9641	0.5000	0.4771	
81 1-Chlorohexane	91	8.488	8.488	0.000	32	9741	0.5000	0.5610	
90 Cyclohexanone	55	9.626	9.614	0.012	50	2498	5.00	4.85	
100 Pentachloroethane	167	10.492	10.492	0.000	68	7164	1.00	0.9669	
106 1,2,3-Trimethylbenzene	105	10.966	10.966	0.000	62	23009	0.5000	0.4724	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 Benzyl chloride	91	11.049	11.049	0.000	72	11135	0.5000	0.4045	
111 1,3,5-Trichlorobenzene	180	12.354	12.354	0.000	67	11406	0.5000	0.5217	
116 2-Methylnaphthalene	142	14.619	14.619	0.000	81	27811	1.00	0.9070	

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmra9w_00259	Amount Added:	0.40	Units: uL

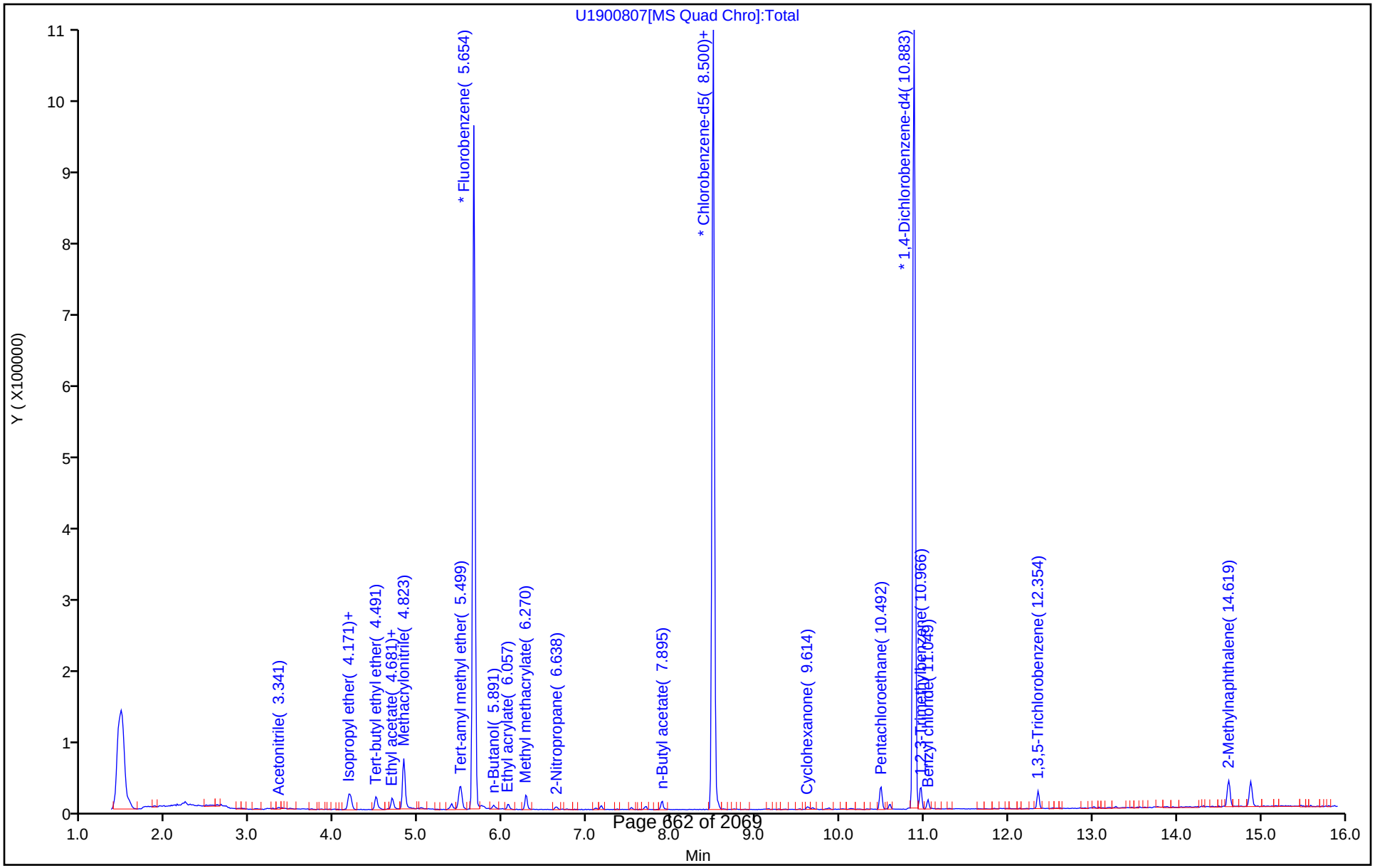
Report Date: 25-Jul-2018 16:30:25 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900807.d

Injection Date:	25-Jul-2018 15:15:13	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	stdA9 L1			Worklist Smp#:	13
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 342719

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-342719/13	U1901329.d
Level 2	STD8260 240-342719/12	U1901328.d
Level 3	STD8260 240-342719/11	U1901327.d
Level 4	ICIS 240-342719/10	U1901326.d
Level 5	STD8260 240-342719/9	U1901325.d
Level 6	STD8260 240-342719/8	U1901324.d
Level 7	STD8260 240-342719/7	U1901323.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3252 0.4073	0.3858 0.4041	0.3902	0.3772	0.4052	Ave		0.3850			0.1000	7.5		20.0			
Chloromethane	0.3476 0.2860	0.2731 0.2757	0.2817	0.2748	0.2796	Ave		0.2883			0.1000	9.2		20.0			
Butadiene	0.2863 0.2923	0.2971 0.2827	0.2967	0.2831	0.2826	Ave		0.2887				2.3		20.0			
Vinyl chloride	0.2799 0.3039	0.3000 0.2955	0.3102	0.2950	0.3013	Ave		0.2980			0.1000	3.2		20.0			
Bromomethane	0.2530 0.2308	0.2391 0.2251	0.2340	0.2259	0.2264	Ave		0.2335			0.0500	4.3		20.0			
Chloroethane	0.2052 0.1842	0.1766 0.1812	0.1882	0.1779	0.1807	Ave		0.1848			0.0500	5.3		20.0			
Dichlorofluoromethane	0.4944 0.4514	0.4567 0.4411	0.4677	0.4468	0.4490	Ave		0.4581				3.9		20.0			
Trichlorofluoromethane	0.4941 0.5030	0.4893 0.4931	0.5122	0.4967	0.5003	Ave		0.4984			0.1000	1.5		20.0			
Ethyl ether	0.1731 0.1798	0.1898 0.1760	0.1849	0.1771	0.1791	Ave		0.1800				3.1		20.0			
Acrolein	0.0495 0.0430	0.0446 0.0441	0.0420	0.0454	0.0427	Ave		0.0445				5.6		20.0			
1,1-Dichloroethene	0.3476 0.3661	0.3473 0.3597	0.3727	0.3582	0.3610	Ave		0.3589			0.1000	2.6		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2493 0.2658	0.2366 0.2616	0.2651	0.2563	0.2622	Ave		0.2567			0.0500	4.1		20.0			
Acetone	+++++ 0.0747	0.0941 0.0735	0.0766	0.0752	0.0764	Ave		0.0784			0.0100	9.9		20.0			
Iodomethane	0.4872 0.4597	0.4730 0.4538	0.4730	0.4575	0.4539	Ave		0.4655				2.7		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 342719

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon disulfide	0.8746 0.7168	0.8257 0.7023	0.7362	0.7031	0.7015	Ave		0.7515			0.1000	9.3		20.0			
3-Chloro-1-propene	0.3735 0.3489	0.3837 0.3396	0.3586	0.3361	0.3385	Ave		0.3541				5.3		20.0			
Methyl acetate	0.2638 0.2201	0.2366 0.2157	0.2398	0.2267	0.2267	Ave		0.2328			0.1000	6.9		20.0			
Methylene Chloride	+++++ 0.2751	0.3184 0.2694	0.2925	0.2792	0.2733	Ave		0.2846			0.1000	6.5		20.0			
tert-Butyl alcohol (TBA)	0.0302 0.0245	0.0277 0.0251	0.0284	0.0260	0.0277	Ave		0.0271				7.4		20.0			
Acrylonitrile	0.1006 0.0983	0.1046 0.0951	0.1079	0.0977	0.0997	Ave		0.1006				4.3		20.0			
trans-1,2-Dichloroethene	0.3568 0.3338	0.3540 0.3216	0.3508	0.3269	0.3267	Ave		0.3387			0.1000	4.4		20.0			
Methyl tert-butyl ether	0.6459 0.7174	0.6970 0.7172	0.7178	0.6715	0.6899	Ave		0.6938			0.1000	3.9		20.0			
Hexane	0.3287 0.3643	0.3216 0.3693	0.3652	0.3577	0.3600	Ave		0.3524				5.4		20.0			
1,1-Dichloroethane	0.3877 0.4112	0.4141 0.3990	0.4182	0.3989	0.4043	Ave		0.4048			0.2000	2.6		20.0			
Vinyl acetate	0.4652 0.4557	0.4582 0.4625	0.4853	0.4584	0.4619	Ave		0.4639				2.1		20.0			
cis-1,2-Dichloroethene	0.3057 0.2869	0.2992 0.2782	0.2948	0.2801	0.2786	Ave		0.2891			0.1000	3.8		20.0			
2,2-Dichloropropane	0.2469 0.2502	0.2497 0.2458	0.2443	0.2181	0.2515	Ave		0.2438				4.8		20.0			
2-Butanone (MEK)	0.0487 0.0444	0.0481 0.0466	0.0506	0.0457	0.0465	Ave		0.0472			0.0100	4.3		20.0			
Bromochloromethane	0.2347 0.1831	0.2161 0.1713	0.1973	0.1804	0.1790	Ave		0.1945				11.9		20.0			
Tetrahydrofuran	+++++ 0.0978	0.2111 0.0981	0.1202	0.1027	0.1037	Lin1	0.2460	0.0976				7.4			0.9990		0.9900
Chloroform	0.4336 0.4423	0.4430 0.4326	0.4702	0.4398	0.4415	Ave		0.4433			0.2000	2.8		20.0			
1,1,1-Trichloroethane	0.3739 0.4296	0.4106 0.4262	0.4442	0.4096	0.4275	Ave		0.4174			0.1000	5.4		20.0			
Cyclohexane	0.3499 0.3999	0.3515 0.3986	0.3944	0.3825	0.3967	Ave		0.3819			0.1000	5.8		20.0			
1,1-Dichloropropene	0.3411 0.3565	0.3509 0.3499	0.3664	0.3469	0.3516	Ave		0.3519				2.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 342719

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon tetrachloride	0.3818 0.4136	0.3781 0.4121	0.4219	0.3956	0.4130	Ave		0.4023			0.1000	4.3		20.0			
Isobutyl alcohol	0.0122 0.0101	0.0118 0.0103	0.0107	0.0108	0.0111	Ave		0.0110				7.0		20.0			
Benzene	0.9270 0.9480	0.9546 0.9366	1.0106	0.9431	0.9423	Ave		0.9518			0.5000	2.9		20.0			
1,2-Dichloroethane	0.3794 0.3459	0.3845 0.3369	0.3743	0.3513	0.3479	Ave		0.3600			0.1000	5.2		20.0			
n-Heptane	+++++ 0.1978	0.8214 0.1912	0.2589	0.2169	0.2053	Lin1	0.6437	0.1861				3.4			1.0000		0.9900
Trichloroethene	0.3334 0.3137	0.3081 0.3106	0.3277	0.3076	0.3109	Ave		0.3160			0.1500	3.3		20.0			
Methylcyclohexane	0.4282 0.4825	0.4267 0.4698	0.4724	0.4580	0.4751	Ave		0.4590			0.1000	5.0		20.0			
1,2-Dichloropropane	0.2171 0.2187	0.2141 0.2164	0.2362	0.2209	0.2218	Ave		0.2208			0.1000	3.3		20.0			
Dibromomethane	0.2410 0.2204	0.2408 0.2155	0.2336	0.2191	0.2191	Ave		0.2271				4.9		20.0			
1,4-Dioxane	+++++ 0.0025	0.0016 0.0027	0.0021	0.0026	0.0028	Ave		0.0024				17.9		20.0			
Bromodichloromethane	0.3399 0.3440	0.3630 0.3379	0.3620	0.3462	0.3426	Ave		0.3479			0.1500	3.0		20.0			
2-Chloroethyl vinyl ether	0.1593 0.1741	0.1654 0.1828	0.1943	0.1818	0.1815	Ave		0.1770				6.6		20.0			
cis-1,3-Dichloropropene	0.3743 0.3841	0.3867 0.3870	0.4032	0.3827	0.3872	Ave		0.3865			0.1500	2.2		20.0			
4-Methyl-2-pentanone (MIBK)	0.3150 0.3064	0.3110 0.3144	0.3487	0.3229	0.3240	Ave		0.3203			0.0500	4.4		20.0			
Toluene	1.3762 1.3312	1.3706 1.3223	1.4018	1.3282	1.3309	Ave		1.3516			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4999 0.4712	0.5033 0.4805	0.4835	0.4641	0.4704	Ave		0.4818			0.1000	3.1		20.0			
Ethyl methacrylate	0.3824 0.4408	0.4001 0.4600	0.4577	0.4462	0.4540	Ave		0.4344				7.1		20.0			
1,1,2-Trichloroethane	0.2808 0.2823	0.2821 0.2821	0.2973	0.2798	0.2847	Ave		0.2842			0.1000	2.1		20.0			
Tetrachloroethene	0.4234 0.4375	0.4194 0.4317	0.4508	0.4248	0.4314	Ave		0.4313			0.1500	2.4		20.0			
1,3-Dichloropropane	0.4988 0.4724	0.4733 0.4772	0.5009	0.4686	0.4705	Ave		0.4802				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 342719

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Hexanone	0.2781 0.3092	0.3020 0.3219	0.3438	0.3247	0.3245	Ave		0.3149			0.0500	6.6		20.0			
Dibromochloromethane	0.3308 0.3663	0.3497 0.3646	0.3736	0.3604	0.3630	Ave		0.3583				3.9		20.0			
1,2-Dibromoethane	0.3770 0.3214	0.3321 0.3219	0.3422	0.3286	0.3194	Ave		0.3346				6.1		20.0			
Chlorobenzene	0.9370 0.9055	0.9832 0.8914	0.9544	0.9002	0.9056	Ave		0.9253			0.3000	3.7		20.0			
1,1,1,2-Tetrachloroethane	0.3225 0.3380	0.3313 0.3315	0.3490	0.3282	0.3347	Ave		0.3336				2.5		20.0			
Ethylbenzene	0.4566 0.4899	0.4640 0.4838	0.5159	0.4863	0.4886	Ave		0.4836				4.0		20.0			
m-Xylene & p-Xylene	0.5709 0.5980	0.5535 0.5943	0.6142	0.5959	0.5965	Ave		0.5890				3.4		20.0			
o-Xylene	0.5188 0.5706	0.5578 0.5579	0.5806	0.5638	0.5683	Ave		0.5597				3.5		20.0			
Styrene	0.8915 0.9829	0.9056 0.9730	1.0088	0.9699	0.9794	Ave		0.9588			0.3000	4.5		20.0			
Bromoform	0.2892 0.2933	0.2907 0.2979	0.3020	0.2847	0.2951	Ave		0.2933			0.1000	2.0		20.0			
Isopropylbenzene	1.3694 1.5447	1.4922 1.4942	1.5808	1.5060	1.5314	Ave		1.5027			0.1000	4.4		20.0			
1,1,2,2-Tetrachloroethane	0.7123 0.7674	0.7872 0.7661	0.8261	0.7624	0.7730	Ave		0.7706			0.3000	4.4		20.0			
Bromobenzene	0.7562 0.7639	0.7920 0.7473	0.8125	0.7532	0.7575	Ave		0.7690				3.1		20.0			
1,2,3-Trichloropropane	0.2805 0.2866	0.2903 0.2882	0.3178	0.2884	0.2929	Ave		0.2921				4.1		20.0			
trans-1,4-Dichloro-2-butene	+++++ 0.2667	0.2763 0.2751	0.2902	0.2665	0.2675	Ave		0.2737				3.3		20.0			
N-Propylbenzene	0.7009 0.7973	0.7492 0.7772	0.8251	0.7710	0.7894	Ave		0.7729				5.1		20.0			
2-Chlorotoluene	0.6131 0.6732	0.6212 0.6509	0.7079	0.6539	0.6587	Ave		0.6541				4.9		20.0			
1,3,5-Trimethylbenzene	2.1099 2.2883	2.1099 2.2183	2.3988	2.1936	2.2594	Ave		2.2255				4.6		20.0			
4-Chlorotoluene	0.7307 0.7048	0.6944 0.6840	0.7470	0.7010	0.6888	Ave		0.7072				3.3		20.0			
tert-Butylbenzene	1.9093 2.2037	2.0260 2.1009	2.2785	2.0983	2.1715	Ave		2.1126				5.7		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 342719

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,4-Trimethylbenzene	2.0996 2.3002	2.2590 2.2368	2.3762	2.2406	2.2826	Ave		2.2564				3.7		20.0			
sec-Butylbenzene	2.5921 3.0046	2.6994 2.8685	2.9965	2.8235	2.9285	Ave		2.8447				5.4		20.0			
1,3-Dichlorobenzene	1.4791 1.3933	1.5035 1.3394	1.4385	1.3676	1.3647	Ave		1.4123			0.6000	4.4		20.0			
p-Isopropyltoluene	2.2955 2.5970	2.3910 2.5362	2.6099	2.4625	2.5496	Ave		2.4917				4.6		20.0			
1,4-Dichlorobenzene	1.6054 1.4113	1.5675 1.3669	1.4816	1.3825	1.3984	Ave		1.4591			0.5000	6.5		20.0			
n-Butylbenzene	1.8944 2.1259	2.0232 2.0712	2.1091	2.0276	2.0953	Ave		2.0495				3.8		20.0			
1,2-Dichlorobenzene	1.3437 1.2534	1.3687 1.2318	1.3105	1.2348	1.2330	Ave		1.2823			0.4000	4.5		20.0			
1,2-Dibromo-3-Chloropropane	0.2630 0.2491	0.2219 0.2547	0.2430	0.2371	0.2465	Ave		0.2450			0.0500	5.4		20.0			
1,2,4-Trichlorobenzene	0.9409 0.8412	0.9494 0.8737	0.8099	0.7792	0.7909	Ave		0.8550			0.2000	8.1		20.0			
Hexachlorobutadiene	0.4751 0.4459	0.4859 0.4196	0.4201	0.4076	0.4202	Ave		0.4392				7.0		20.0			
Naphthalene	+++++ 2.4081	2.5248 2.5673	2.2519	2.1428	2.2829	Ave		2.3630				7.0		20.0			
1,2,3-Trichlorobenzene	0.7893 0.7724	0.8277 0.8517	0.7383	0.6846	0.7103	Ave		0.7677				7.9		20.0			
Dibromofluoromethane (Surr)	0.2950 0.2630	0.2820 0.2531	0.2707	0.2587	0.2619	Ave		0.2692				5.5		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3515 0.2903	0.3408 0.2779	0.3137	0.2940	0.2963	Ave		0.3092				8.9		20.0			
Toluene-d8 (Surr)	1.2799 1.1805	1.2018 1.1653	1.2236	1.1594	1.1844	Ave		1.1993				3.5		20.0			
4-Bromofluorobenzene (Surr)	0.5295 0.4325	0.4716 0.4172	0.4467	0.4309	0.4307	Ave		0.4513				8.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 342719

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-342719/13	U1901329.d
Level 2	STD8260 240-342719/12	U1901328.d
Level 3	STD8260 240-342719/11	U1901327.d
Level 4	ICIS 240-342719/10	U1901326.d
Level 5	STD8260 240-342719/9	U1901325.d
Level 6	STD8260 240-342719/8	U1901324.d
Level 7	STD8260 240-342719/7	U1901323.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	7625 1180992	18328 1552738	186223	366772	792590	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Chloromethane	FB	Ave	8152 829233	12972 1059365	134420	267203	546909	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Butadiene	FB	Ave	6713 847603	14115 1086231	141609	275330	552757	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Vinyl chloride	FB	Ave	6564 881108	14250 1135494	148037	286894	589426	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Bromomethane	FB	Ave	5934 669257	11360 864872	111689	219651	442826	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Chloroethane	FB	Ave	4812 533953	8387 696179	89838	172968	353502	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Dichlorofluoromethane	FB	Ave	11593 1308784	21694 1694878	223205	434465	878380	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Trichlorofluoromethane	FB	Ave	11587 1458414	23241 1894654	244417	483006	978643	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethyl ether	FB	Ave	4060 521372	9015 676475	88252	172224	350377	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Acrolein	FB	Ave	5804 622965	10600 846753	100203	220720	417769	2.50 300	5.00 400	50.0	100	200
1,1-Dichloroethene	FB	Ave	8152 1061526	16498 1382045	177882	348307	706289	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,2-Trichloro-1,2,2-trifluoroetha ne	FB	Ave	5847 770733	11240 1005400	126531	249289	512861	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Acetone	FB	Ave	+++++ 433055	8941 564923	73077	146204	298968	+++++ 120	2.00 160	20.0	40.0	80.0
Iodomethane	FB	Ave	11424 1332936	22471 1743886	225726	444884	888035	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Carbon disulfide	FB	Ave	20511 2078244	39223 2698750	351356	683722	1372316	0.500 60.0	1.00 80.0	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 342719

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
3-Chloro-1-propene	FB	Ave	8759 1011692	18227 1304832	171118	326833	662138	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Methyl acetate	FB	Ave	12374 1276471	22480 1658043	228841	440913	886871	1.00 120	2.00 160	20.0	40.0	80.0
Methylene Chloride	FB	Ave	+++++ 797526	15126 1035294	139613	271471	534613	+++++ 60.0	1.00 80.0	10.0	20.0	40.0
tert-Butyl alcohol (TBA)	FB	Ave	7089 709594	13140 963916	135517	252801	542388	5.00 600	10.0 800	100	200	400
Acrylonitrile	FB	Ave	23600 2849701	49680 3654042	514757	950386	1951040	5.00 600	10.0 800	100	200	400
trans-1,2-Dichloroethene	FB	Ave	8368 967924	16818 1235776	167419	317885	639131	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Methyl tert-butyl ether	FB	Ave	15146 2079947	33109 2755910	342568	653045	1349603	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Hexane	FB	Ave	7709 1056328	15276 1419117	174299	347875	704185	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1-Dichloroethane	FB	Ave	9092 1192355	19673 1533220	199597	387941	790957	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Vinyl acetate	FB	Ave	10910 1321142	21765 1777280	231586	445770	903595	0.500 60.0	1.00 80.0	10.0	20.0	40.0
cis-1,2-Dichloroethene	FB	Ave	7168 831715	14212 1069027	140685	272438	545012	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2,2-Dichloropropane	FB	Ave	5791 725393	11860 944363	116583	212094	491954	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Butanone (MEK)	FB	Ave	2283 257675	4567 358198	48290	88909	181887	1.00 120	2.00 160	20.0	40.0	80.0
Bromochloromethane	FB	Ave	5503 530825	10266 658069	94139	175479	350082	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Tetrahydrofuran	FB	Lin1	+++++ 566965	20056 753652	114720	199816	405539	+++++ 120	2.00 160	20.0	40.0	80.0
Chloroform	FB	Ave	10169 1282514	21044 1662428	224371	427697	863672	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,1-Trichloroethane	FB	Ave	8767 1245609	19503 1637723	211997	398309	836381	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Cyclohexane	FB	Ave	8206 1159393	16696 1531667	188221	372006	776128	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1-Dichloropropene	FB	Ave	7998 1033663	16667 1344377	174842	337392	687882	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Carbon tetrachloride	FB	Ave	8954 1199313	17959 1583649	201366	384700	807965	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Isobutyl alcohol	FB	Ave	7140 731439	14010 985172	127213	263438	540692	12.5 1500	25.0 2000	250	500	1000

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 342719

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	21738 2748682	45349 3599104	482300	917150	1843426	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichloroethane	FB	Ave	8896 1002994	18266 1294416	178638	341638	680627	0.500 60.0	1.00 80.0	10.0	20.0	40.0
n-Heptane	FB	Lin1	+++++ 573367	39021 734621	123554	210893	401639	+++++ 60.0	1.00 80.0	10.0	20.0	40.0
Trichloroethene	FB	Ave	7819 909646	14636 1193487	156409	299123	608172	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Methylcyclohexane	FB	Ave	10042 1399000	20268 1805108	225444	445411	929492	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichloropropane	FB	Ave	5092 634222	10172 831616	112735	214790	433884	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Dibromomethane	FB	Ave	5652 638964	11437 828119	111478	213090	428543	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,4-Dioxane	FB	Ave	+++++ 147508	1560 204613	20257	50489	108387	+++++ 1200	20.0 1600	200	400	800
Bromodichloromethane	FB	Ave	7972 997303	17242 1298324	172767	336655	670319	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Chloroethyl vinyl ether	FB	Ave	7473 1009556	15714 1404589	185460	353595	710198	1.00 120	2.00 160	20.0	40.0	80.0
cis-1,3-Dichloropropene	FB	Ave	8778 1113655	18371 1486992	192411	372198	757475	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	14774 1776570	29549 2416341	332777	627983	1267570	1.00 120	2.00 160	20.0	40.0	80.0
Toluene	CBNZ d5	Ave	25413 3039879	50838 4036837	544474	1040131	2085055	0.500 60.0	1.00 80.0	10.0	20.0	40.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	9232 1076004	18668 1466824	187797	363416	737016	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethyl methacrylate	CBNZ d5	Ave	7062 1006534	14839 1404401	177753	349427	711262	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,2-Trichloroethane	CBNZ d5	Ave	5186 644677	10462 861140	115489	219105	445968	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Tetrachloroethene	CBNZ d5	Ave	7818 999011	15556 1317893	175104	332664	675866	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,3-Dichloropropane	CBNZ d5	Ave	9211 1078694	17554 1456758	194537	366944	737142	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Hexanone	CBNZ d5	Ave	10272 1411899	22402 1965782	267096	508487	1016835	1.00 120	2.00 160	20.0	40.0	80.0
Dibromochloromethane	CBNZ d5	Ave	6108 836499	12969 1113195	145120	282195	568645	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dibromoethane	CBNZ d5	Ave	6962 733806	12317 982631	132926	257341	500324	0.500 60.0	1.00 80.0	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 342719

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorobenzene	CBNZ d5	Ave	17303 2067581	36469 2721351	370702	704913	1418747	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	5956 771705	12290 1012040	135561	257026	524311	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Ethylbenzene	CBNZ d5	Ave	8431 1118678	17209 1476959	200390	380861	765441	0.500 60.0	1.00 80.0	10.0	20.0	40.0
m-Xylene & p-Xylene	CBNZ d5	Ave	10542 1365436	20530 1814431	238543	466651	934583	0.500 60.0	1.00 80.0	10.0	20.0	40.0
o-Xylene	CBNZ d5	Ave	9580 1302937	20689 1703380	225509	441487	890297	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Styrene	CBNZ d5	Ave	16463 2244503	33591 2970527	391834	759556	1534422	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Bromoform	CBNZ d5	Ave	5340 669771	10783 909465	117306	222929	462320	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Isopropylbenzene	CBNZ d5	Ave	25288 3527221	55346 4561888	613985	1179370	2399226	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	7218 951258	16261 1271933	172140	328526	660294	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Bromobenzene	DCBd 4	Ave	7663 946835	16361 1240722	169316	324573	647055	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2,3-Trichloropropane	DCBd 4	Ave	2842 355186	5997 478494	66218	124262	250203	0.500 60.0	1.00 80.0	10.0	20.0	40.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	+++++ 330637	5707 456736	60466	114842	228469	+++++ 60.0	1.00 80.0	10.0	20.0	40.0
N-Propylbenzene	DCBd 4	Ave	7103 988262	15476 1290307	171938	332244	674293	0.500 60.0	1.00 80.0	10.0	20.0	40.0
2-Chlorotoluene	DCBd 4	Ave	6213 834423	12831 1080636	147510	281753	562614	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	21381 2836427	43584 3682951	499875	945225	1929863	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Chlorotoluene	DCBd 4	Ave	7405 873575	14345 1135643	155656	302046	588358	0.500 60.0	1.00 80.0	10.0	20.0	40.0
tert-Butylbenzene	DCBd 4	Ave	19348 2731529	41850 3487952	474813	904165	1854784	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	21277 2851175	46663 3713592	495166	965487	1949684	0.500 60.0	1.00 80.0	10.0	20.0	40.0
sec-Butylbenzene	DCBd 4	Ave	26267 3724288	55760 4762339	624437	1216655	2501406	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,3-Dichlorobenzene	DCBd 4	Ave	14989 1726981	31057 2223773	299776	589299	1165661	0.500 60.0	1.00 80.0	10.0	20.0	40.0
p-Isopropyltoluene	DCBd 4	Ave	23262 3219084	49391 4210777	543873	1061108	2177763	0.500 60.0	1.00 80.0	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 342719

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,4-Dichlorobenzene	DCBd 4	Ave	16269 1749380	32379 2269476	308743	595729	1194426	0.500 60.0	1.00 80.0	10.0	20.0	40.0
n-Butylbenzene	DCBd 4	Ave	19197 2635155	41792 3438646	439518	873706	1789693	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichlorobenzene	DCBd 4	Ave	13617 1553579	28272 2045057	273092	532075	1053180	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	2665 308798	4583 422865	50642	102189	210526	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	9535 1042664	19612 1450610	168774	335760	675526	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Hexachlorobutadiene	DCBd 4	Ave	4814 552719	10037 696652	87534	175651	358938	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Naphthalene	DCBd 4	Ave	+++++ 2984863	52154 4262332	469280	923339	1949946	+++++ 60.0	1.00 80.0	10.0	20.0	40.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	7998 957428	17097 1414051	153843	295011	606712	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Dibromofluoromethane (Surr)	FB	Ave	6919 762443	13395 972724	129168	251584	512374	0.500 60.0	1.00 80.0	10.0	20.0	40.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	8242 841615	16187 1067780	149716	285917	579615	0.500 60.0	1.00 80.0	10.0	20.0	40.0
Toluene-d8 (Surr)	CBNZ d5	Ave	23636 2695636	44577 3557725	475254	907923	1855495	0.500 60.0	1.00 80.0	10.0	20.0	40.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	9778 987516	17494 1273707	173480	337411	674745	0.500 60.0	1.00 80.0	10.0	20.0	40.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 342719

SDG No.:

Instrument ID: A3UX19 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/27/2018 17:09 Calibration End Date: 08/27/2018 19:23 Calibration ID: 46687

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-342719/13	U1901329.d
Level 2	STD8260 240-342719/12	U1901328.d
Level 3	STD8260 240-342719/11	U1901327.d
Level 4	ICIS 240-342719/10	U1901326.d
Level 5	STD8260 240-342719/9	U1901325.d
Level 6	STD8260 240-342719/8	U1901324.d
Level 7	STD8260 240-342719/7	U1901323.d

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Tetrahydrofuran	+++++	-9.7						50				
n-Heptane	+++++	-4.5						50				

Report Date: 27-Aug-2018 21:27:50 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901323.d
Lims ID: std8260 L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 27-Aug-2018 17:09:10 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0079307-003
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 27-Aug-2018 21:27:48 Calib Date: 27-Aug-2018 19:23:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: laveyt Date: 27-Aug-2018 17:37:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	92	960659	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	763247	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	68	415062	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	63	972724	80.0	75.2	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.345	0.000	100	1067780	80.0	71.9	
$ 6 Toluene-d8 (Surr)	98	7.100	7.101	0.000	93	3557725	80.0	77.7	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	90	1273707	80.0	74.0	
9 Dichlorodifluoromethane	85	1.598	1.610	-0.012	88	1552738	80.0	84.0	
10 Chloromethane	50	1.811	1.812	-0.001	78	1059365	80.0	76.5	
12 Butadiene	54	1.894	1.906	-0.012	89	1086231	80.0	78.3	
11 Vinyl chloride	62	1.918	1.918	0.000	82	1135494	80.0	79.3	
13 Bromomethane	94	2.215	2.227	-0.013	84	864872	80.0	77.1	
14 Chloroethane	64	2.286	2.298	-0.012	86	696179	80.0	78.4	
15 Dichlorofluoromethane	67	2.499	2.499	0.000	83	1694878	80.0	77.0	
16 Trichlorofluoromethane	101	2.570	2.582	-0.012	87	1894654	80.0	79.1	
17 Ethyl ether	59	2.807	2.808	-0.001	88	676475	80.0	78.2	
18 Acrolein	56	2.926	2.926	0.000	91	846753	400.0	396.4	
21 1,1-Dichloroethene	61	3.033	3.045	-0.012	90	1382045	80.0	80.2	
20 1,1,2-Trichloro-1,2,2-trif	101	3.045	3.057	-0.012	78	1005400	80.0	81.5	
22 Acetone	43	3.068	3.069	-0.001	79	564923	160.0	150.0	
23 Iodomethane	142	3.187	3.199	-0.012	99	1743886	80.0	78.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	89	2698750	80.0	74.8	
26 3-Chloro-1-propene	41	3.353	3.365	-0.012	81	1304832	80.0	76.7	
27 Methyl acetate	43	3.377	3.377	0.000	96	1658043	160.0	148.3	
28 Methylene Chloride	49	3.483	3.495	-0.012	52	1035294	80.0	75.7	
29 2-Methyl-2-propanol	59	3.578	3.567	0.011	69	963916	800.0	741.0	
30 Acrylonitrile	53	3.685	3.685	0.000	98	3654042	800.0	756.5	
32 trans-1,2-Dichloroethene	61	3.721	3.721	0.000	79	1235776	80.0	76.0	
31 Methyl tert-butyl ether	73	3.732	3.733	-0.001	89	2755910	80.0	82.7	
33 Hexane	57	3.970	3.982	-0.012	93	1419117	80.0	83.8	
34 1,1-Dichloroethane	63	4.100	4.112	-0.012	85	1533220	80.0	78.9	
35 Vinyl acetate	43	4.147	4.148	-0.001	97	1777280	80.0	79.8	
40 cis-1,2-Dichloroethene	96	4.622	4.622	0.000	63	1069027	80.0	77.0	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	66	944363	80.0	80.7	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	96	358198	160.0	157.9	
45 Chlorobromomethane	49	4.835	4.836	-0.001	81	658069	80.0	70.4	
46 Tetrahydrofuran	42	4.883	4.883	0.000	83	753652	160.0	158.3	
47 Chloroform	83	4.906	4.907	-0.001	70	1662428	80.0	78.1	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	91	1637723	80.0	81.7	
49 Cyclohexane	84	5.144	5.144	0.000	75	1531667	80.0	83.5	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	89	1344377	80.0	79.5	
51 Carbon tetrachloride	117	5.238	5.239	-0.001	71	1583649	80.0	82.0	
52 Isobutyl alcohol	41	5.298	5.298	0.000	88	985172	2000.0	1867.6	
53 Benzene	78	5.404	5.417	-0.013	95	3599104	80.0	78.7	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	51	1294416	80.0	74.9	
56 n-Heptane	57	5.642	5.642	0.000	86	734621	80.0	78.7	
58 Trichloroethene	130	5.986	5.986	0.000	88	1193487	80.0	78.6	
60 Methylcyclohexane	83	6.175	6.176	-0.001	89	1805108	80.0	81.9	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	81	831616	80.0	78.4	
63 Dibromomethane	174	6.294	6.294	0.000	85	828119	80.0	75.9	
64 1,4-Dioxane	88	6.306	6.306	0.000	33	204613	1600.0	1782.8	
65 Dichlorobromomethane	83	6.424	6.436	-0.012	93	1298324	80.0	77.7	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	92	1404589	160.0	165.2	
68 cis-1,3-Dichloropropene	75	6.839	6.840	-0.001	91	1486992	80.0	80.1	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	83	2416341	160.0	157.0	
70 Toluene	91	7.171	7.172	-0.001	94	4036837	80.0	78.3	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	83	1466824	80.0	79.8	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	87	1404401	80.0	84.7	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	84	861140	80.0	79.4	
75 Tetrachloroethene	166	7.693	7.693	0.000	93	1317893	80.0	80.1	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	89	1456758	80.0	79.5	
77 2-Hexanone	43	7.764	7.765	-0.001	79	1965782	160.0	163.6	
79 Chlorodibromomethane	129	7.930	7.919	0.011	87	1113195	80.0	81.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	98	982631	80.0	76.9	
82 Chlorobenzene	112	8.523	8.524	-0.001	92	2721351	80.0	77.1	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	88	1012040	80.0	79.5	
84 Ethylbenzene	106	8.630	8.630	0.000	98	1476959	80.0	80.0	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	1814431	80.0	80.7	
86 o-Xylene	106	9.152	9.152	0.000	87	1703380	80.0	79.8	
87 Styrene	104	9.164	9.164	0.000	93	2970527	80.0	81.2	
88 Bromoform	173	9.353	9.354	-0.001	98	909465	80.0	81.3	
89 Isopropylbenzene	105	9.519	9.520	-0.001	95	4561888	80.0	79.6	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	84	1271933	80.0	79.5	
92 Bromobenzene	156	9.840	9.840	0.000	81	1240722	80.0	77.7	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	65	478494	80.0	78.9	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	62	456736	80.0	80.4	
95 N-Propylbenzene	120	9.946	9.947	-0.001	92	1290307	80.0	80.4	
96 2-Chlorotoluene	126	10.041	10.041	0.000	97	1080636	80.0	79.6	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	3682951	80.0	79.7	
98 4-Chlorotoluene	126	10.148	10.148	0.000	98	1135643	80.0	77.4	
99 tert-Butylbenzene	119	10.468	10.468	0.000	77	3487952	80.0	79.6	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	71	3713592	80.0	79.3	
102 sec-Butylbenzene	105	10.693	10.694	-0.001	94	4762339	80.0	80.7	
103 1,3-Dichlorobenzene	146	10.824	10.812	0.012	95	2223773	80.0	75.9	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	4210777	80.0	81.4	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	94	2269476	80.0	74.9	
108 n-Butylbenzene	91	11.286	11.287	-0.001	96	3438646	80.0	80.8	
109 1,2-Dichlorobenzene	146	11.310	11.298	0.012	98	2045057	80.0	76.9	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	92	422865	80.0	83.2	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	93	1450610	80.0	81.7	
113 Hexachlorobutadiene	225	13.207	13.208	-0.001	88	696652	80.0	76.4	
114 Naphthalene	128	13.279	13.279	0.000	97	4262332	80.0	86.9	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	94	1414051	80.0	88.7	
S 127 Trihalomethanes, Total	1				0		320.0	318.4	
S 164 Total BTEX	1				0		400.0	397.5	
S 124 1,2-Dichloroethene, Total	96				0			153.0	
S 125 1,3-Dichloropropene, Total	75				0			159.9	
S 126 Xylenes, Total	106				0		160.0	160.5	

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmrgas_00259	Amount Added:	64.00	Units: uL
vmarolistdw_00260	Amount Added:	64.00	Units: uL
vmrprimw_00297	Amount Added:	64.00	Units: uL
vm50ss_00333	Amount Added:	64.00	Units: uL

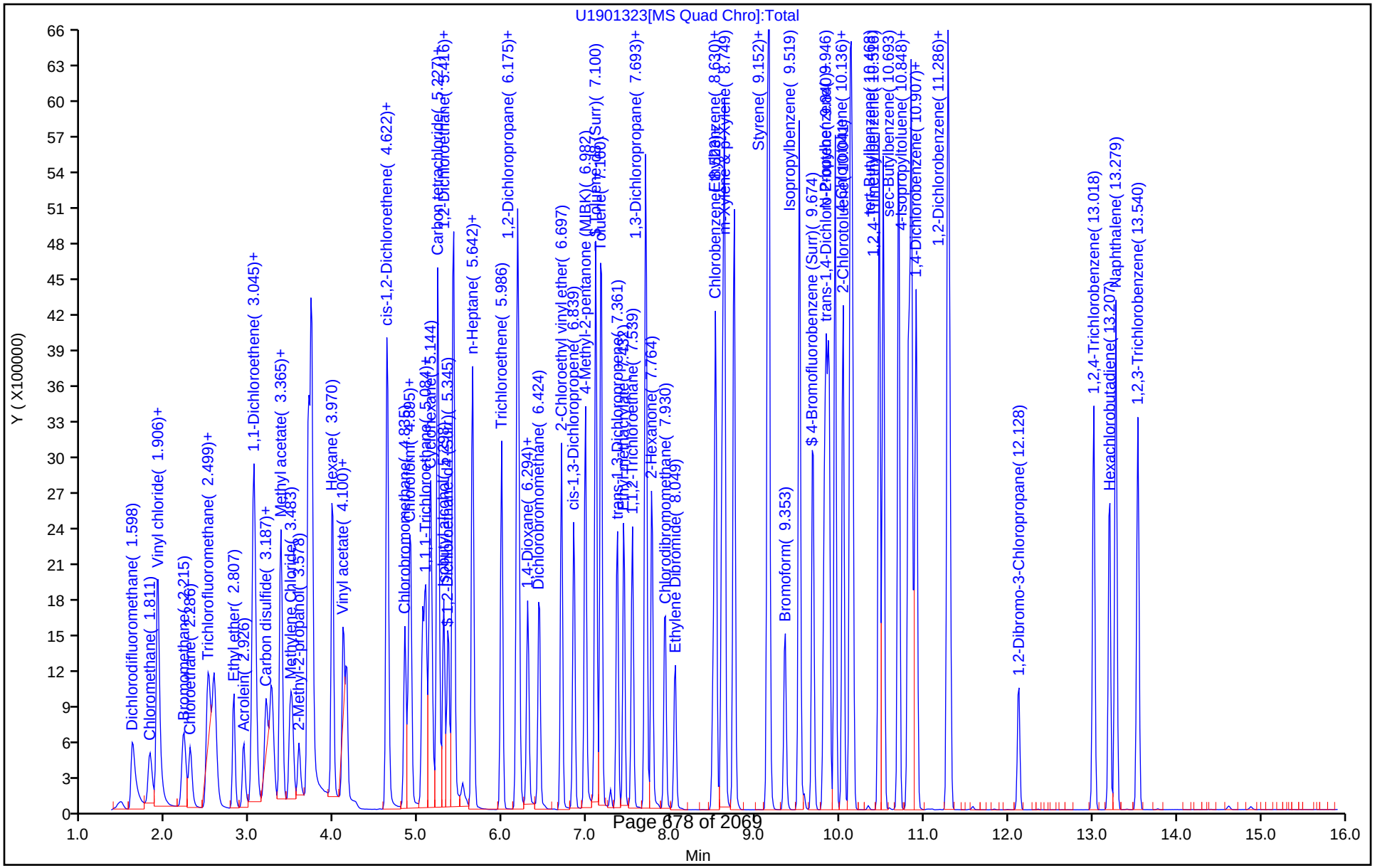
Report Date: 27-Aug-2018 21:27:50 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901323.d

Injection Date:	27-Aug-2018 17:09:10	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	std8260 L7			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901324.d
Lims ID: std8260 L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 27-Aug-2018 17:31:36 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0079307-004
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 27-Aug-2018 21:27:54 Calib Date: 27-Aug-2018 19:23:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: laveyt Date: 27-Aug-2018 18:08:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	92	966455	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	761160	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	74	413175	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	59	762443	60.0	58.6	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.345	0.012	99	841615	60.0	56.3	
$ 6 Toluene-d8 (Surr)	98	7.100	7.101	0.000	86	2695636	60.0	59.1	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	90	987516	60.0	57.5	
9 Dichlorodifluoromethane	85	1.610	1.610	0.000	80	1180992	60.0	63.5	
10 Chloromethane	50	1.823	1.812	0.011	77	829233	60.0	59.5	
12 Butadiene	54	1.906	1.906	0.000	88	847603	60.0	60.8	
11 Vinyl chloride	62	1.930	1.918	0.012	81	881108	60.0	61.2	
13 Bromomethane	94	2.226	2.227	-0.001	89	669257	60.0	59.3	
14 Chloroethane	64	2.298	2.298	0.000	94	533953	60.0	59.8	
15 Dichlorofluoromethane	67	2.511	2.499	0.012	82	1308784	60.0	59.1	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	88	1458414	60.0	60.6	
17 Ethyl ether	59	2.807	2.808	-0.001	90	521372	60.0	59.9	
18 Acrolein	56	2.926	2.926	0.000	95	622965	300.0	289.9	
21 1,1-Dichloroethene	61	3.045	3.045	0.000	89	1061526	60.0	61.2	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	79	770733	60.0	62.1	
22 Acetone	43	3.068	3.069	-0.001	64	433055	120.0	114.3	
23 Iodomethane	142	3.199	3.199	0.000	99	1332936	60.0	59.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	99	2078244	60.0	57.2	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	74	1011692	60.0	59.1	
27 Methyl acetate	43	3.377	3.377	0.000	96	1276471	120.0	113.5	
28 Methylene Chloride	49	3.483	3.495	-0.012	53	797526	60.0	58.0	
29 2-Methyl-2-propanol	59	3.578	3.567	0.011	86	709594	600.0	542.2	
30 Acrylonitrile	53	3.697	3.685	0.012	98	2849701	600.0	586.4	
32 trans-1,2-Dichloroethene	61	3.732	3.721	0.011	69	967924	60.0	59.1	
31 Methyl tert-butyl ether	73	3.732	3.733	-0.001	89	2079947	60.0	62.0	
33 Hexane	57	3.982	3.982	0.000	89	1056328	60.0	62.0	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	85	1192355	60.0	61.0	
35 Vinyl acetate	43	4.148	4.148	0.000	97	1321142	60.0	58.9	
40 cis-1,2-Dichloroethene	96	4.622	4.622	0.000	63	831715	60.0	59.5	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	90	257675	120.0	112.9	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	62	725393	60.0	61.6	
45 Chlorobromomethane	49	4.835	4.836	-0.001	68	530825	60.0	56.5	
46 Tetrahydrofuran	42	4.883	4.883	0.000	85	566965	120.0	117.7	
47 Chloroform	83	4.906	4.907	-0.001	70	1282514	60.0	59.9	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	89	1245609	60.0	61.8	
49 Cyclohexane	84	5.144	5.144	0.000	85	1159393	60.0	62.8	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	91	1033663	60.0	60.8	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	1199313	60.0	61.7	
52 Isobutyl alcohol	41	5.298	5.298	0.000	82	731439	1500.0	1378.3	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	49	1002994	60.0	57.7	
53 Benzene	78	5.416	5.417	-0.001	94	2748682	60.0	59.8	
56 n-Heptane	57	5.642	5.642	0.000	87	573367	60.0	60.3	
58 Trichloroethene	130	5.986	5.986	0.000	93	909646	60.0	59.6	
60 Methylcyclohexane	83	6.175	6.176	-0.001	89	1399000	60.0	63.1	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	79	634222	60.0	59.5	
63 Dibromomethane	174	6.294	6.294	0.000	86	638964	60.0	58.2	
64 1,4-Dioxane	88	6.306	6.306	0.000	32	147508	1200.0	1277.5	
65 Dichlorobromomethane	83	6.436	6.436	0.000	94	997303	60.0	59.3	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	92	1009556	120.0	118.0	
68 cis-1,3-Dichloropropene	75	6.839	6.840	-0.001	93	1113655	60.0	59.6	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	82	1776570	120.0	114.8	
70 Toluene	91	7.171	7.172	-0.001	94	3039879	60.0	59.1	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	87	1076004	60.0	58.7	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	88	1006534	60.0	60.9	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	84	644677	60.0	59.6	
75 Tetrachloroethene	166	7.693	7.693	0.000	93	999011	60.0	60.9	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	89	1078694	60.0	59.0	
77 2-Hexanone	43	7.764	7.765	-0.001	79	1411899	120.0	117.8	
79 Chlorodibromomethane	129	7.930	7.919	0.011	87	836499	60.0	61.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	99	733806	60.0	57.6	
82 Chlorobenzene	112	8.523	8.524	-0.001	95	2067581	60.0	58.7	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	88	771705	60.0	60.8	
84 Ethylbenzene	106	8.630	8.630	0.000	98	1118678	60.0	60.8	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	1365436	60.0	60.9	
86 o-Xylene	106	9.152	9.152	0.000	87	1302937	60.0	61.2	
87 Styrene	104	9.152	9.164	-0.012	88	2244503	60.0	61.5	
88 Bromoform	173	9.353	9.354	-0.001	98	669771	60.0	60.0	
89 Isopropylbenzene	105	9.519	9.520	-0.001	95	3527221	60.0	61.7	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	84	951258	60.0	59.8	
92 Bromobenzene	156	9.840	9.840	0.000	87	946835	60.0	59.6	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	63	355186	60.0	58.9	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	61	330637	60.0	58.5	
95 N-Propylbenzene	120	9.946	9.947	-0.001	91	988262	60.0	61.9	
96 2-Chlorotoluene	126	10.041	10.041	0.000	97	834423	60.0	61.7	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	2836427	60.0	61.7	
98 4-Chlorotoluene	126	10.148	10.148	0.000	98	873575	60.0	59.8	
99 tert-Butylbenzene	119	10.468	10.468	0.000	77	2731529	60.0	62.6	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	70	2851175	60.0	61.2	
102 sec-Butylbenzene	105	10.693	10.694	-0.001	94	3724288	60.0	63.4	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	90	1726981	60.0	59.2	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	3219084	60.0	62.5	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	94	1749380	60.0	58.0	
108 n-Butylbenzene	91	11.275	11.287	-0.012	98	2635155	60.0	62.2	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	97	1553579	60.0	58.6	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	91	308798	60.0	61.0	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	92	1042664	60.0	59.0	
113 Hexachlorobutadiene	225	13.208	13.208	0.000	88	552719	60.0	60.9	
114 Naphthalene	128	13.279	13.279	0.000	96	2984863	60.0	61.1	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	94	957428	60.0	60.4	
S 164 Total BTEX	1				0		300.0	301.7	
S 127 Trihalomethanes, Total	1				0		240.0	240.5	
S 124 1,2-Dichloroethene, Total	96				0			118.7	
S 125 1,3-Dichloropropene, Total	75				0			118.3	
S 126 Xylenes, Total	106				0		120.0	122.1	

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmrgas_00259	Amount Added:	48.00	Units: uL
vmarolistdw_00260	Amount Added:	48.00	Units: uL
vmrprimw_00297	Amount Added:	48.00	Units: uL
vm50ss_00333	Amount Added:	48.00	Units: uL

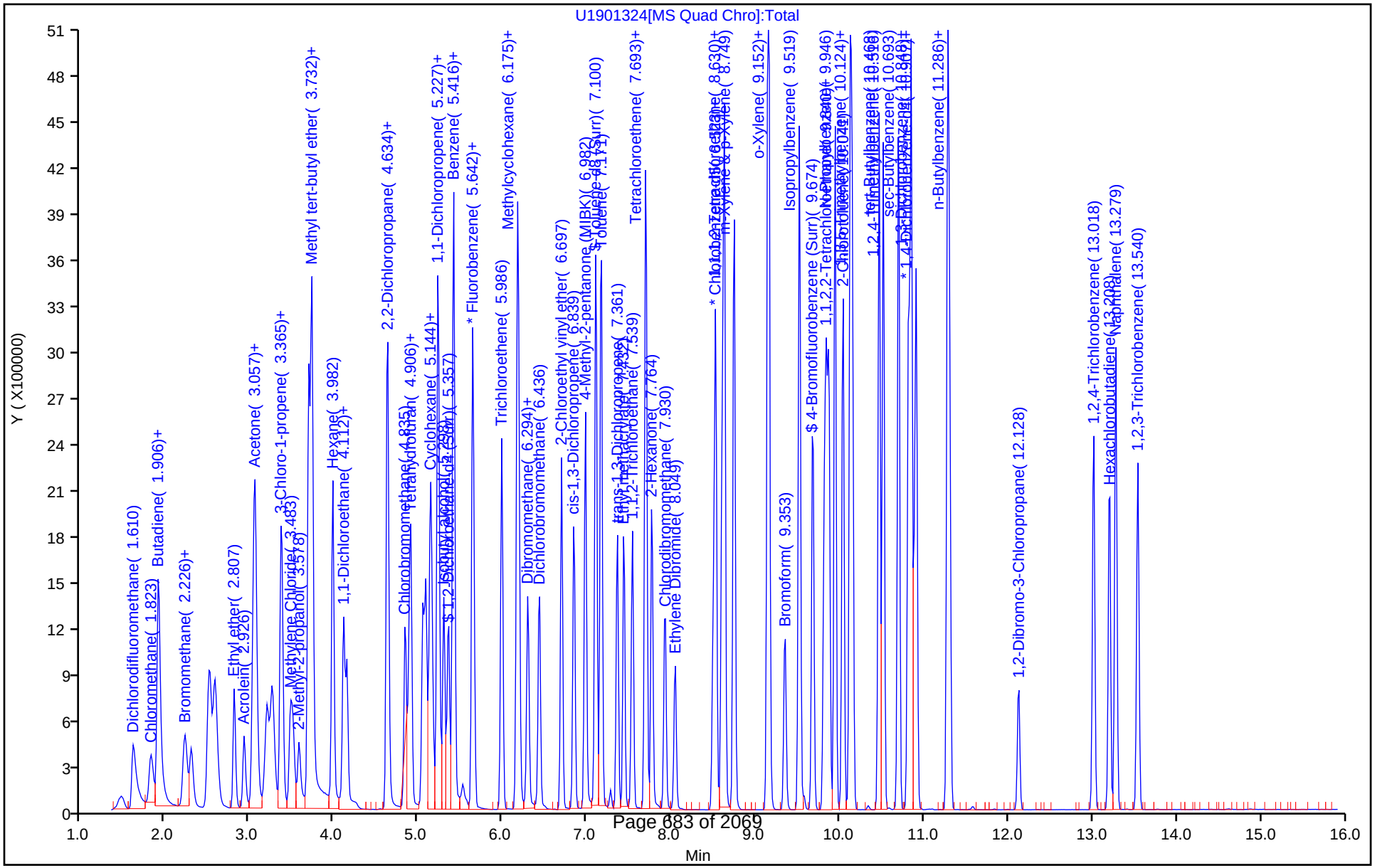
Report Date: 27-Aug-2018 21:27:59 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901324.d

Injection Date:	27-Aug-2018 17:31:36	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	std8260 L6			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901325.d
Lims ID: std8260 L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 27-Aug-2018 17:53:51 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0079307-009
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 27-Aug-2018 21:28:08 Calib Date: 27-Aug-2018 19:23:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: laveyt Date: 27-Aug-2018 18:49:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	95	978140	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	783329	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	75	427081	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	60	512374	40.0	38.9	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.345	0.000	100	579615	40.0	38.3	
$ 6 Toluene-d8 (Surr)	98	7.101	7.101	0.000	86	1855495	40.0	39.5	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	89	674745	40.0	38.2	
9 Dichlorodifluoromethane	85	1.598	1.610	-0.012	88	792590	40.0	42.1	
10 Chloromethane	50	1.812	1.812	0.000	78	546909	40.0	38.8	
12 Butadiene	54	1.895	1.906	-0.011	89	552757	40.0	39.2	
11 Vinyl chloride	62	1.918	1.918	0.000	83	589426	40.0	40.4	
13 Bromomethane	94	2.215	2.227	-0.012	85	442826	40.0	38.8	
14 Chloroethane	64	2.298	2.298	0.000	82	353502	40.0	39.1	
15 Dichlorofluoromethane	67	2.499	2.499	0.000	83	878380	40.0	39.2	
16 Trichlorofluoromethane	101	2.571	2.582	-0.012	87	978643	40.0	40.2	
17 Ethyl ether	59	2.808	2.808	0.000	88	350377	40.0	39.8	
18 Acrolein	56	2.926	2.926	0.000	95	417769	200.0	192.1	
21 1,1-Dichloroethene	61	3.033	3.045	-0.012	90	706289	40.0	40.2	
20 1,1,2-Trichloro-1,2,2-trif	101	3.045	3.057	-0.012	72	512861	40.0	40.8	
22 Acetone	43	3.069	3.069	0.000	82	298968	80.0	78.0	
23 Iodomethane	142	3.187	3.199	-0.012	99	888035	40.0	39.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	89	1372316	40.0	37.3	
26 3-Chloro-1-propene	41	3.353	3.365	-0.012	73	662138	40.0	38.2	
27 Methyl acetate	43	3.377	3.377	0.000	96	886871	80.0	77.9	
28 Methylene Chloride	49	3.484	3.495	-0.011	51	534613	40.0	38.4	
29 2-Methyl-2-propanol	59	3.578	3.567	0.011	69	542388	400.0	409.5	
30 Acrylonitrile	53	3.685	3.685	0.000	97	1951040	400.0	396.7	
32 trans-1,2-Dichloroethene	61	3.721	3.721	0.000	74	639131	40.0	38.6	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	87	1349603	40.0	39.8	
33 Hexane	57	3.982	3.982	0.000	92	704185	40.0	40.9	
34 1,1-Dichloroethane	63	4.100	4.112	-0.012	85	790957	40.0	40.0	
35 Vinyl acetate	43	4.148	4.148	0.000	97	903595	40.0	39.8	
40 cis-1,2-Dichloroethene	96	4.622	4.622	0.000	69	545012	40.0	38.6	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	66	491954	40.0	41.3	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	96	181887	80.0	78.7	
45 Chlorobromomethane	49	4.836	4.836	0.000	80	350082	40.0	36.8	
46 Tetrahydrofuran	42	4.883	4.883	0.000	84	405539	80.0	82.5	
47 Chloroform	83	4.907	4.907	0.000	68	863672	40.0	39.8	
48 1,1,1-Trichloroethane	97	5.085	5.085	0.000	90	836381	40.0	41.0	
49 Cyclohexane	84	5.144	5.144	0.000	75	776128	40.0	41.6	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	89	687882	40.0	40.0	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	807965	40.0	41.1	
52 Isobutyl alcohol	41	5.298	5.298	0.000	88	540692	1000.0	1006.7	
53 Benzene	78	5.405	5.417	-0.012	95	1843426	40.0	39.6	
54 1,2-Dichloroethane	62	5.417	5.417	0.000	51	680627	40.0	38.7	
56 n-Heptane	57	5.642	5.642	0.000	84	401639	40.0	40.7	
58 Trichloroethene	130	5.986	5.986	0.000	92	608172	40.0	39.4	
60 Methylcyclohexane	83	6.176	6.176	0.000	88	929492	40.0	41.4	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	80	433884	40.0	40.2	
63 Dibromomethane	174	6.294	6.294	0.000	86	428543	40.0	38.6	
64 1,4-Dioxane	88	6.306	6.306	0.000	35	108387	800.0	927.5	
65 Dichlorobromomethane	83	6.436	6.436	0.000	93	670319	40.0	39.4	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	92	710198	80.0	82.0	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	92	757475	40.0	40.1	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	82	1267570	80.0	80.9	
70 Toluene	91	7.172	7.172	0.000	95	2085055	40.0	39.4	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	83	737016	40.0	39.1	
72 Ethyl methacrylate	69	7.433	7.433	0.000	88	711262	40.0	41.8	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	84	445968	40.0	40.1	
75 Tetrachloroethene	166	7.693	7.693	0.000	92	675866	40.0	40.0	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	89	737142	40.0	39.2	
77 2-Hexanone	43	7.765	7.765	0.000	79	1016835	80.0	82.4	
79 Chlorodibromomethane	129	7.931	7.919	0.012	87	568645	40.0	40.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	99	500324	40.0	38.2	
82 Chlorobenzene	112	8.524	8.524	0.000	97	1418747	40.0	39.1	
83 1,1,1,2-Tetrachloroethane	131	8.607	8.607	0.000	87	524311	40.0	40.1	
84 Ethylbenzene	106	8.630	8.630	0.000	98	765441	40.0	40.4	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	934583	40.0	40.5	
86 o-Xylene	106	9.152	9.152	0.000	87	890297	40.0	40.6	
87 Styrene	104	9.164	9.164	0.000	93	1534422	40.0	40.9	
88 Bromoform	173	9.354	9.354	0.000	98	462320	40.0	40.2	
89 Isopropylbenzene	105	9.520	9.520	0.000	96	2399226	40.0	40.8	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	88	660294	40.0	40.1	
92 Bromobenzene	156	9.840	9.840	0.000	81	647055	40.0	39.4	
93 1,2,3-Trichloropropane	110	9.864	9.864	0.000	70	250203	40.0	40.1	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	61	228469	40.0	39.1	
95 N-Propylbenzene	120	9.947	9.947	0.000	91	674293	40.0	40.9	
96 2-Chlorotoluene	126	10.041	10.041	0.000	97	562614	40.0	40.3	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	1929863	40.0	40.6	
98 4-Chlorotoluene	126	10.148	10.148	0.000	98	588358	40.0	39.0	
99 tert-Butylbenzene	119	10.468	10.468	0.000	77	1854784	40.0	41.1	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	70	1949684	40.0	40.5	
102 sec-Butylbenzene	105	10.694	10.694	0.000	94	2501406	40.0	41.2	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	90	1165661	40.0	38.7	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	91	2177763	40.0	40.9	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	94	1194426	40.0	38.3	
108 n-Butylbenzene	91	11.287	11.287	0.000	97	1789693	40.0	40.9	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	96	1053180	40.0	38.5	
110 1,2-Dibromo-3-Chloropropan	157	12.129	12.129	0.000	92	210526	40.0	40.2	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	91	675526	40.0	37.0	
113 Hexachlorobutadiene	225	13.208	13.208	0.000	88	358938	40.0	38.3	
114 Naphthalene	128	13.279	13.279	0.000	96	1949946	40.0	38.6	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	93	606712	40.0	37.0	
S 127 Trihalomethanes, Total	1				0		160.0	160.0	
S 164 Total BTEX	1				0		200.0	200.5	
S 124 1,2-Dichloroethene, Total	96				0			77.1	
S 125 1,3-Dichloropropene, Total	75				0			79.1	
S 126 Xylenes, Total	106				0		80.0	81.1	

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmrgas_00259	Amount Added:	32.00	Units: uL
vmarolistdw_00260	Amount Added:	32.00	Units: uL
vmrprimw_00297	Amount Added:	32.00	Units: uL
vm50ss_00333	Amount Added:	32.00	Units: uL

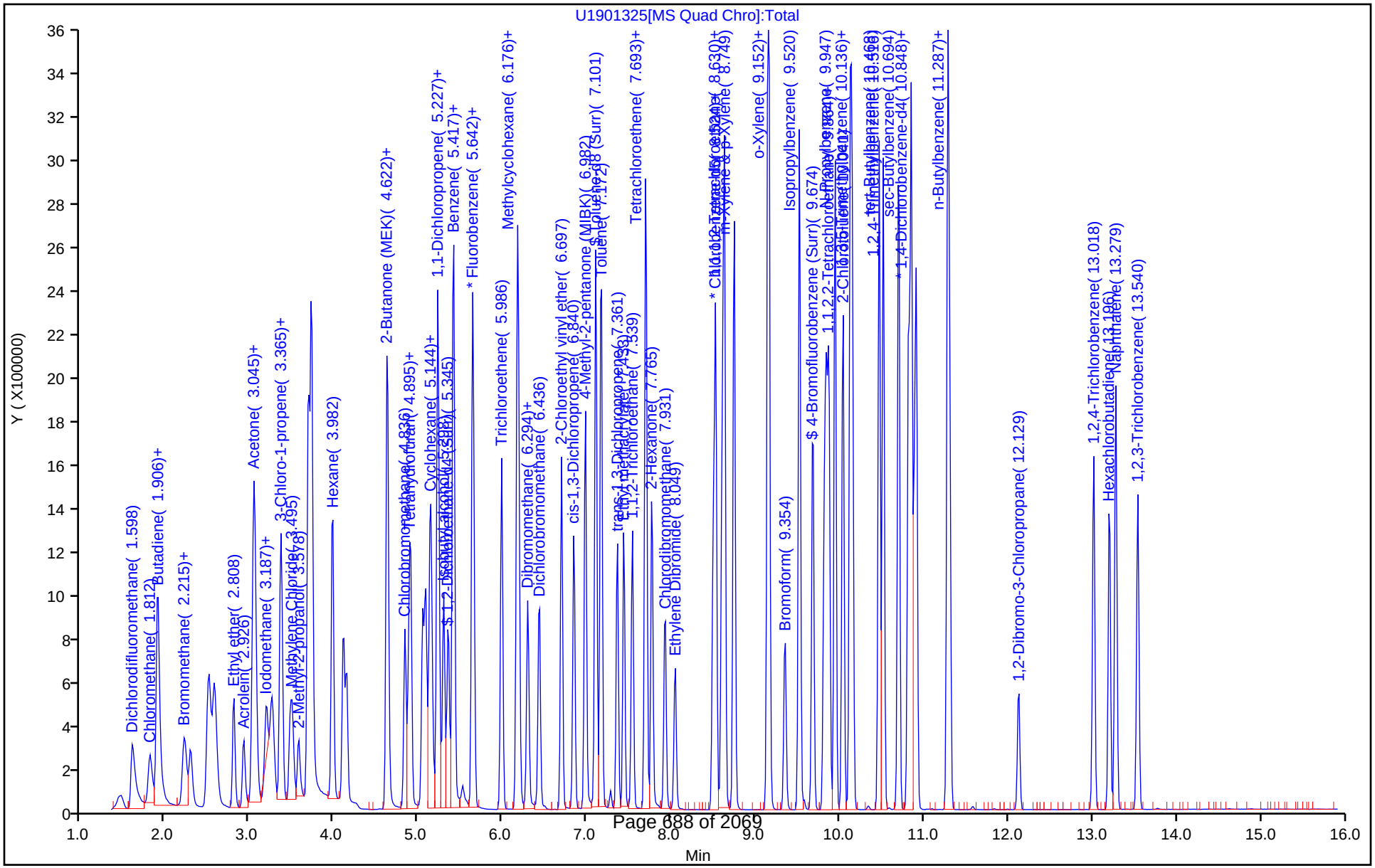
Report Date: 27-Aug-2018 21:28:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901325.d

Injection Date:	27-Aug-2018 17:53:51	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	std8260 L5			Worklist Smp#:	9
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901326.d
Lims ID: ICIS L4
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 27-Aug-2018 18:16:31 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0079307-010
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 27-Aug-2018 21:28:20 Calib Date: 27-Aug-2018 19:23:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: laveyt Date: 27-Aug-2018 18:47:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	97	972482	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	783101	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	86	430906	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	59	251584	20.0	19.2	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.345	0.000	99	285917	20.0	19.0	
$ 6 Toluene-d8 (Surr)	98	7.101	7.101	0.000	86	907923	20.0	19.3	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	90	337411	20.0	19.1	
9 Dichlorodifluoromethane	85	1.610	1.610	0.000	66	366772	20.0	19.6	
10 Chloromethane	50	1.812	1.812	0.000	77	267203	20.0	19.1	
12 Butadiene	54	1.906	1.906	0.000	88	275330	20.0	19.6	
11 Vinyl chloride	62	1.918	1.918	0.000	70	286894	20.0	19.8	
13 Bromomethane	94	2.227	2.227	0.000	90	219651	20.0	19.3	
14 Chloroethane	64	2.298	2.298	0.000	95	172968	20.0	19.2	
15 Dichlorofluoromethane	67	2.499	2.499	0.000	83	434465	20.0	19.5	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	86	483006	20.0	19.9	
17 Ethyl ether	59	2.808	2.808	0.000	88	172224	20.0	19.7	
18 Acrolein	56	2.926	2.926	0.000	95	220720	100.0	102.1	
21 1,1-Dichloroethene	61	3.045	3.045	0.000	89	348307	20.0	20.0	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	80	249289	20.0	20.0	
22 Acetone	43	3.069	3.069	0.000	68	146204	40.0	38.3	
23 Iodomethane	142	3.199	3.199	0.000	99	444884	20.0	19.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	99	683722	20.0	18.7	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	80	326833	20.0	19.0	
27 Methyl acetate	43	3.377	3.377	0.000	96	440913	40.0	39.0	
28 Methylene Chloride	49	3.495	3.495	0.000	55	271471	20.0	19.6	
29 2-Methyl-2-propanol	59	3.567	3.567	0.000	51	252801	200.0	192.0	
30 Acrylonitrile	53	3.685	3.685	0.000	98	950386	200.0	194.4	
32 trans-1,2-Dichloroethene	61	3.721	3.721	0.000	72	317885	20.0	19.3	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	78	653045	20.0	19.4	
33 Hexane	57	3.982	3.982	0.000	91	347875	20.0	20.3	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	85	387941	20.0	19.7	
35 Vinyl acetate	43	4.148	4.148	0.000	97	445770	20.0	19.8	
40 cis-1,2-Dichloroethene	96	4.622	4.622	0.000	69	272438	20.0	19.4	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	95	88909	40.0	38.7	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	63	212094	20.0	17.9	
45 Chlorobromomethane	49	4.836	4.836	0.000	81	175479	20.0	18.6	
46 Tetrahydrofuran	42	4.883	4.883	0.000	84	199816	40.0	39.6	
47 Chloroform	83	4.907	4.907	0.000	70	427697	20.0	19.8	
48 1,1,1-Trichloroethane	97	5.085	5.085	0.000	89	398309	20.0	19.6	
49 Cyclohexane	84	5.144	5.144	0.000	75	372006	20.0	20.0	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	90	337392	20.0	19.7	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	384700	20.0	19.7	
52 Isobutyl alcohol	41	5.298	5.298	0.000	88	263438	500.0	493.3	
54 1,2-Dichloroethane	62	5.417	5.417	0.000	51	341638	20.0	19.5	
53 Benzene	78	5.417	5.417	0.000	94	917150	20.0	19.8	
56 n-Heptane	57	5.642	5.642	0.000	76	210893	20.0	19.9	
58 Trichloroethene	130	5.986	5.986	0.000	92	299123	20.0	19.5	
60 Methylcyclohexane	83	6.176	6.176	0.000	88	445411	20.0	20.0	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	81	214790	20.0	20.0	
63 Dibromomethane	174	6.294	6.294	0.000	87	213090	20.0	19.3	
64 1,4-Dioxane	88	6.306	6.306	0.000	35	50489	400.0	434.6	
65 Dichlorobromomethane	83	6.436	6.436	0.000	93	336655	20.0	19.9	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	93	353595	40.0	41.1	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	92	372198	20.0	19.8	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	83	627983	40.0	40.3	
70 Toluene	91	7.172	7.172	0.000	94	1040131	20.0	19.7	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	85	363416	20.0	19.3	
72 Ethyl methacrylate	69	7.433	7.433	0.000	88	349427	20.0	20.5	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	86	219105	20.0	19.7	
75 Tetrachloroethene	166	7.693	7.693	0.000	92	332664	20.0	19.7	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	82	366944	20.0	19.5	
77 2-Hexanone	43	7.765	7.765	0.000	80	508487	40.0	41.2	
79 Chlorodibromomethane	129	7.919	7.919	0.000	89	282195	20.0	20.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	98	257341	20.0	19.6	
82 Chlorobenzene	112	8.524	8.524	0.000	97	704913	20.0	19.5	
83 1,1,1,2-Tetrachloroethane	131	8.607	8.607	0.000	87	257026	20.0	19.7	
84 Ethylbenzene	106	8.630	8.630	0.000	98	380861	20.0	20.1	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	466651	20.0	20.2	
86 o-Xylene	106	9.152	9.152	0.000	87	441487	20.0	20.1	
87 Styrene	104	9.164	9.164	0.000	93	759556	20.0	20.2	
88 Bromoform	173	9.354	9.354	0.000	98	222929	20.0	19.4	
89 Isopropylbenzene	105	9.520	9.520	0.000	95	1179370	20.0	20.0	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	88	328526	20.0	19.8	
92 Bromobenzene	156	9.840	9.840	0.000	88	324573	20.0	19.6	
93 1,2,3-Trichloropropane	110	9.864	9.864	0.000	71	124262	20.0	19.7	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	65	114842	20.0	19.5	
95 N-Propylbenzene	120	9.947	9.947	0.000	96	332244	20.0	20.0	
96 2-Chlorotoluene	126	10.041	10.041	0.000	96	281753	20.0	20.0	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	945225	20.0	19.7	
98 4-Chlorotoluene	126	10.148	10.148	0.000	98	302046	20.0	19.8	
99 tert-Butylbenzene	119	10.468	10.468	0.000	78	904165	20.0	19.9	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	72	965487	20.0	19.9	
102 sec-Butylbenzene	105	10.694	10.694	0.000	94	1216655	20.0	19.9	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	84	589299	20.0	19.4	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	1061108	20.0	19.8	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	92	595729	20.0	19.0	
108 n-Butylbenzene	91	11.287	11.287	0.000	96	873706	20.0	19.8	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	97	532075	20.0	19.3	
110 1,2-Dibromo-3-Chloropropan	157	12.129	12.129	0.000	91	102189	20.0	19.4	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	92	335760	20.0	18.2	
113 Hexachlorobutadiene	225	13.208	13.208	0.000	88	175651	20.0	18.6	
114 Naphthalene	128	13.279	13.279	0.000	96	923339	20.0	18.1	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	92	295011	20.0	17.8	
S 164 Total BTEX	1				0		100.0	100.0	
S 127 Trihalomethanes, Total	1				0		80.0	79.3	
S 126 Xylenes, Total	106				0		40.0	40.4	

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmrgas_00259	Amount Added:	16.00	Units: uL
vmarolistdw_00260	Amount Added:	16.00	Units: uL
vmrprimw_00297	Amount Added:	16.00	Units: uL
vm50ss_00333	Amount Added:	16.00	Units: uL

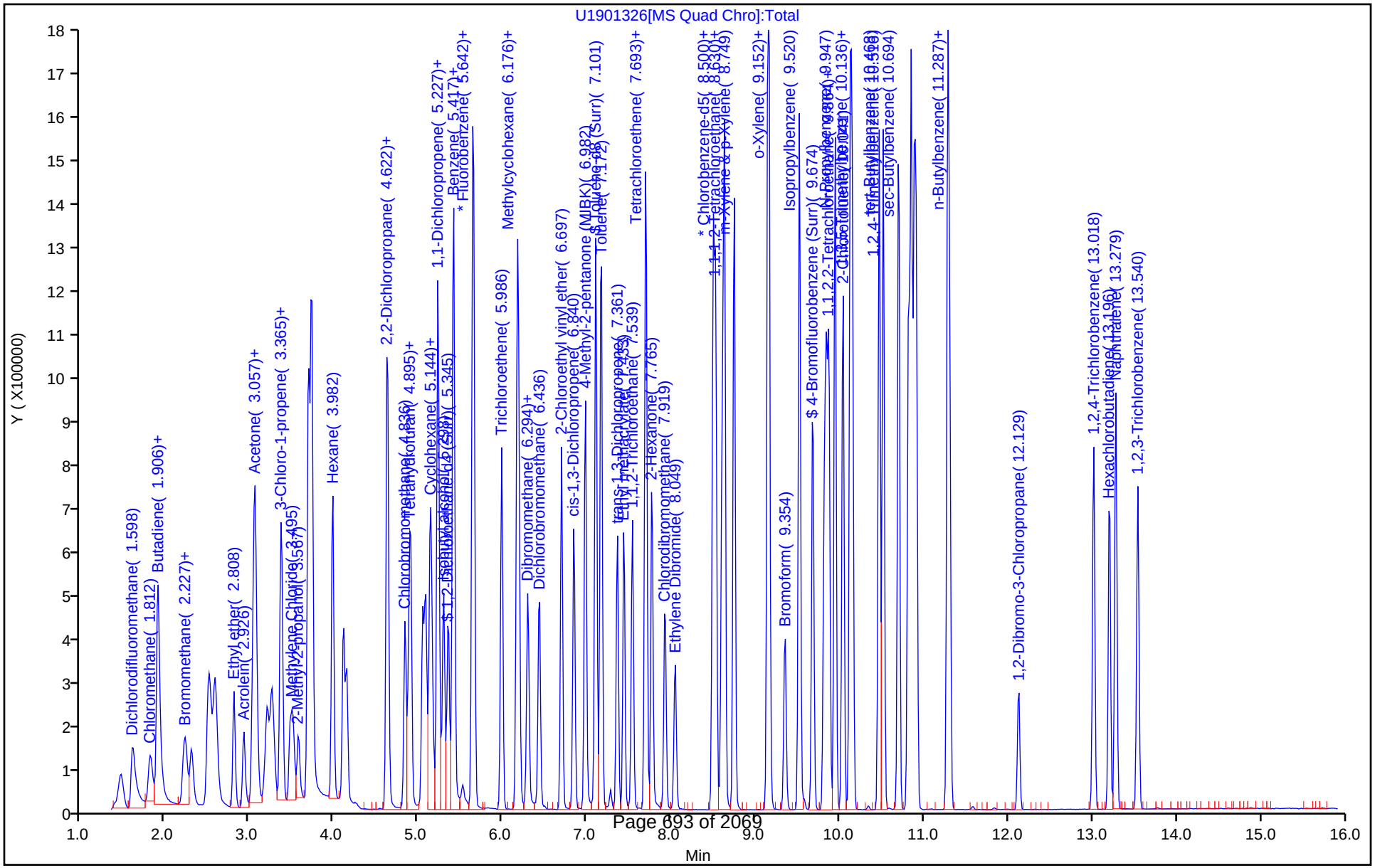
Report Date: 27-Aug-2018 21:28:24 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901326.d

Injection Date:	27-Aug-2018 18:16:31	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	ICIS L4			Worklist Smp#:	10
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901327.d
Lims ID: std8260 L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 27-Aug-2018 18:38:57 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info:
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 27-Aug-2018 21:28:30 Calib Date: 27-Aug-2018 19:23:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: laveyt Date: 27-Aug-2018 19:29:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	97	954461	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	776799	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	92	416777	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	59	129168	10.0	10.1	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.345	0.012	99	149716	10.0	10.1	
$ 6 Toluene-d8 (Surr)	98	7.101	7.101	0.001	86	475254	10.0	10.2	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	89	173480	10.0	9.90	
9 Dichlorodifluoromethane	85	1.610	1.610	0.000	66	186223	10.0	10.1	
10 Chloromethane	50	1.823	1.812	0.011	81	134420	10.0	9.77	
12 Butadiene	54	1.906	1.906	0.000	90	141609	10.0	10.3	
11 Vinyl chloride	62	1.930	1.918	0.012	82	148037	10.0	10.4	
13 Bromomethane	94	2.227	2.227	0.000	90	111689	10.0	10.0	
14 Chloroethane	64	2.310	2.298	0.012	94	89838	10.0	10.2	
15 Dichlorofluoromethane	67	2.511	2.499	0.012	83	223205	10.0	10.2	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	86	244417	10.0	10.3	
17 Ethyl ether	59	2.808	2.808	0.000	90	88252	10.0	10.3	
18 Acrolein	56	2.926	2.926	0.000	96	100203	50.0	47.2	
21 1,1-Dichloroethene	61	3.045	3.045	0.000	90	177882	10.0	10.4	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	78	126531	10.0	10.3	
22 Acetone	43	3.069	3.069	0.000	71	73077	20.0	19.5	
23 Iodomethane	142	3.199	3.199	0.000	99	225726	10.0	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.270	3.258	0.012	98	351356	10.0	9.80	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	76	171118	10.0	10.1	
27 Methyl acetate	43	3.377	3.377	0.000	95	228841	20.0	20.6	
28 Methylene Chloride	49	3.484	3.495	-0.011	73	139613	10.0	10.3	
29 2-Methyl-2-propanol	59	3.579	3.567	0.012	89	135517	100.0	104.9	
30 Acrylonitrile	53	3.697	3.685	0.012	98	514757	100.0	107.3	
32 trans-1,2-Dichloroethene	61	3.733	3.721	0.012	68	167419	10.0	10.4	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	89	342568	10.0	10.3	
33 Hexane	57	3.982	3.982	0.000	93	174299	10.0	10.4	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	85	199597	10.0	10.3	
35 Vinyl acetate	43	4.148	4.148	0.000	97	231586	10.0	10.5	
40 cis-1,2-Dichloroethene	96	4.634	4.622	0.012	68	140685	10.0	10.2	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	61	116583	10.0	10.0	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	92	48290	20.0	21.4	
45 Chlorobromomethane	49	4.836	4.836	0.000	68	94139	10.0	10.1	
46 Tetrahydrofuran	42	4.883	4.883	0.000	84	114720	20.0	22.1	
47 Chloroform	83	4.907	4.907	0.000	71	224371	10.0	10.6	
48 1,1,1-Trichloroethane	97	5.085	5.085	0.000	90	211997	10.0	10.6	
49 Cyclohexane	84	5.144	5.144	0.000	86	188221	10.0	10.3	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	92	174842	10.0	10.4	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	201366	10.0	10.5	
52 Isobutyl alcohol	41	5.298	5.298	0.000	68	127213	250.0	242.7	
53 Benzene	78	5.417	5.417	0.000	94	482300	10.0	10.6	
54 1,2-Dichloroethane	62	5.417	5.417	0.000	48	178638	10.0	10.4	
56 n-Heptane	57	5.642	5.642	0.000	64	123554	10.0	10.5	
58 Trichloroethene	130	5.986	5.986	0.000	92	156409	10.0	10.4	
60 Methylcyclohexane	83	6.176	6.176	0.000	87	225444	10.0	10.3	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	78	112735	10.0	10.7	
63 Dibromomethane	174	6.306	6.294	0.012	81	111478	10.0	10.3	
64 1,4-Dioxane	88	6.306	6.306	0.000	24	20257	200.0	177.6	
65 Dichlorobromomethane	83	6.436	6.436	0.000	93	172767	10.0	10.4	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	93	185460	20.0	22.0	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	93	192411	10.0	10.4	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	83	332777	20.0	21.8	
70 Toluene	91	7.172	7.172	0.000	95	544474	10.0	10.4	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	80	187797	10.0	10.0	
72 Ethyl methacrylate	69	7.433	7.433	0.000	88	177753	10.0	10.5	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	87	115489	10.0	10.5	
75 Tetrachloroethene	166	7.693	7.693	0.000	91	175104	10.0	10.5	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	89	194537	10.0	10.4	
77 2-Hexanone	43	7.765	7.765	0.000	79	267096	20.0	21.8	
79 Chlorodibromomethane	129	7.931	7.919	0.012	88	145120	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	97	132926	10.0	10.2	
82 Chlorobenzene	112	8.524	8.524	0.000	96	370702	10.0	10.3	
83 1,1,1,2-Tetrachloroethane	131	8.607	8.607	0.000	88	135561	10.0	10.5	
84 Ethylbenzene	106	8.630	8.630	0.000	98	200390	10.0	10.7	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	238543	10.0	10.4	
86 o-Xylene	106	9.152	9.152	0.000	88	225509	10.0	10.4	
87 Styrene	104	9.164	9.164	0.000	93	391834	10.0	10.5	
88 Bromoform	173	9.354	9.354	0.000	98	117306	10.0	10.3	
89 Isopropylbenzene	105	9.520	9.520	0.000	96	613985	10.0	10.5	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	90	172140	10.0	10.7	
92 Bromobenzene	156	9.840	9.840	0.000	88	169316	10.0	10.6	
93 1,2,3-Trichloropropane	110	9.864	9.864	0.000	71	66218	10.0	10.9	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	63	60466	10.0	10.6	
95 N-Propylbenzene	120	9.947	9.947	0.000	90	171938	10.0	10.7	
96 2-Chlorotoluene	126	10.042	10.041	0.001	97	147510	10.0	10.8	
97 1,3,5-Trimethylbenzene	105	10.125	10.124	0.000	93	499875	10.0	10.8	
98 4-Chlorotoluene	126	10.148	10.148	0.000	98	155656	10.0	10.6	
99 tert-Butylbenzene	119	10.468	10.468	0.000	78	474813	10.0	10.8	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	72	495166	10.0	10.5	
102 sec-Butylbenzene	105	10.694	10.694	0.000	94	624437	10.0	10.5	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	83	299776	10.0	10.2	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	543873	10.0	10.5	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	90	308743	10.0	10.2	
108 n-Butylbenzene	91	11.287	11.287	0.000	96	439518	10.0	10.3	
109 1,2-Dichlorobenzene	146	11.299	11.298	0.001	97	273092	10.0	10.2	
110 1,2-Dibromo-3-Chloropropan	157	12.129	12.129	0.000	89	50642	10.0	9.92	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	93	168774	10.0	9.47	
113 Hexachlorobutadiene	225	13.208	13.208	0.000	90	87534	10.0	9.56	
114 Naphthalene	128	13.279	13.279	0.000	97	469280	10.0	9.53	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	95	153843	10.0	9.62	
S 127 Trihalomethanes, Total	1				0		40.0	41.7	
S 164 Total BTEX	1				0		50.0	52.5	
S 124 1,2-Dichloroethene, Total	96				0			20.6	
S 125 1,3-Dichloropropene, Total	75				0			20.5	
S 126 Xylenes, Total	106				0		20.0	20.8	

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmrgas_00259	Amount Added:	8.00	Units: uL
vmarolistdw_00260	Amount Added:	8.00	Units: uL
vmrprimw_00297	Amount Added:	8.00	Units: uL
vm50ss_00333	Amount Added:	8.00	Units: uL

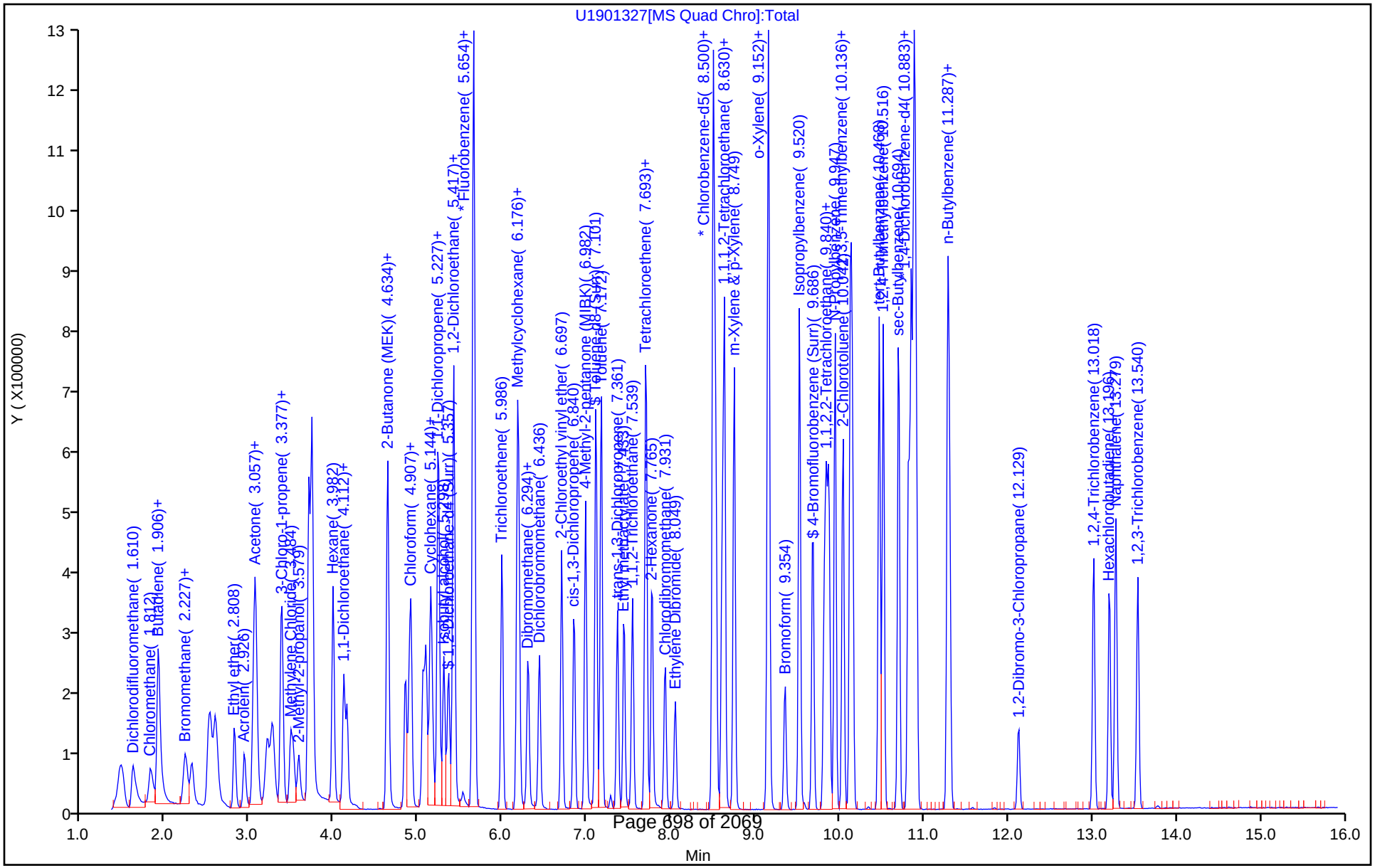
Report Date: 27-Aug-2018 21:28:34 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901327.d

Injection Date:	27-Aug-2018 18:38:57	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	std8260 L3			Worklist Smp#:	11
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 27-Aug-2018 21:28:46 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901328.d
Lims ID: std8260 L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 27-Aug-2018 19:01:13 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info:
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 27-Aug-2018 21:28:42 Calib Date: 27-Aug-2018 19:23:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: laveyt Date: 27-Aug-2018 19:32:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.653	5.654	-0.001	99	950066	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	741822	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	93	413134	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	60	13395	1.00	1.05	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.345	0.000	98	16187	1.00	1.10	
$ 6 Toluene-d8 (Surr)	98	7.100	7.101	0.000	84	44577	1.00	1.00	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	85	17494	1.00	1.05	
9 Dichlorodifluoromethane	85	1.598	1.610	-0.012	61	18328	1.00	1.00	
10 Chloromethane	50	1.811	1.812	-0.001	83	12972	1.00	0.9471	
12 Butadiene	54	1.894	1.906	-0.012	89	14115	1.00	1.03	
11 Vinyl chloride	62	1.918	1.918	0.000	47	14250	1.00	1.01	
13 Bromomethane	94	2.238	2.227	0.011	86	11360	1.00	1.02	
14 Chloroethane	64	2.297	2.298	-0.001	81	8387	1.00	0.9552	
15 Dichlorofluoromethane	67	2.511	2.499	0.012	76	21694	1.00	1.00	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	84	23241	1.00	0.9817	
17 Ethyl ether	59	2.807	2.808	-0.001	83	9015	1.00	1.05	
18 Acrolein	56	2.926	2.926	0.000	86	10600	5.00	5.02	
21 1,1-Dichloroethene	61	3.045	3.045	0.000	86	16498	1.00	0.9676	
20 1,1,2-Trichloro-1,2,2-trif	101	3.045	3.057	-0.012	67	11240	1.00	0.9217	
22 Acetone	43	3.068	3.069	-0.001	90	8941	2.00	2.40	
23 Iodomethane	142	3.187	3.199	-0.012	96	22471	1.00	1.02	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	97	39223	1.00	1.10	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	76	18227	1.00	1.08	
27 Methyl acetate	43	3.377	3.377	0.000	96	22480	2.00	2.03	
28 Methylene Chloride	49	3.483	3.495	-0.012	78	15126	1.00	1.12	
29 2-Methyl-2-propanol	59	3.566	3.567	-0.001	88	13140	10.0	10.2	
30 Acrylonitrile	53	3.697	3.685	0.012	99	49680	10.0	10.4	
32 trans-1,2-Dichloroethene	61	3.732	3.721	0.011	72	16818	1.00	1.05	
31 Methyl tert-butyl ether	73	3.732	3.733	-0.001	89	33109	1.00	1.00	
33 Hexane	57	3.981	3.982	-0.001	93	15276	1.00	0.9125	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	76	19673	1.00	1.02	
35 Vinyl acetate	43	4.147	4.148	-0.001	96	21765	1.00	0.9877	
40 cis-1,2-Dichloroethene	96	4.622	4.622	0.000	70	14212	1.00	1.03	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	91	4567	2.00	2.04	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	58	11860	1.00	1.02	
45 Chlorobromomethane	49	4.835	4.836	-0.001	64	10266	1.00	1.11	
46 Tetrahydrofuran	42	4.883	4.883	0.000	85	20056	2.00	1.81	
47 Chloroform	83	4.906	4.907	-0.001	67	21044	1.00	1.00	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	84	19503	1.00	0.9837	
49 Cyclohexane	84	5.144	5.144	0.000	85	16696	1.00	0.9202	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	88	16667	1.00	1.00	
51 Carbon tetrachloride	117	5.238	5.239	-0.001	77	17959	1.00	0.9397	
52 Isobutyl alcohol	41	5.298	5.298	0.000	78	14010	25.0	26.9	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	52	18266	1.00	1.07	
53 Benzene	78	5.416	5.417	-0.001	95	45349	1.00	1.00	
56 n-Heptane	57	5.653	5.642	0.011	38	39021	1.00	0.9553	
58 Trichloroethene	130	5.985	5.986	-0.001	90	14636	1.00	0.9750	
60 Methylcyclohexane	83	6.175	6.176	-0.001	87	20268	1.00	0.9296	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	78	10172	1.00	0.9700	
63 Dibromomethane	174	6.294	6.294	0.000	83	11437	1.00	1.06	
64 1,4-Dioxane	88	6.306	6.306	0.000	1	1560	20.0	13.7	
65 Dichlorobromomethane	83	6.424	6.436	-0.012	86	17242	1.00	1.04	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	90	15714	2.00	1.87	
68 cis-1,3-Dichloropropene	75	6.839	6.840	-0.001	72	18371	1.00	1.00	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	81	29549	2.00	1.94	
70 Toluene	91	7.171	7.172	-0.001	86	50838	1.00	1.01	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	79	18668	1.00	1.04	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	70	14839	1.00	0.9209	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	87	10462	1.00	0.99	
75 Tetrachloroethene	166	7.693	7.693	0.000	95	15556	1.00	0.9725	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	79	17554	1.00	0.9855	
77 2-Hexanone	43	7.764	7.765	-0.001	94	22402	2.00	1.92	
79 Chlorodibromomethane	129	7.930	7.919	0.011	80	12969	1.00	0.9758	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	85	12317	1.00	0.99	
82 Chlorobenzene	112	8.523	8.524	-0.001	60	36469	1.00	1.06	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	75	12290	1.00	0.99	
84 Ethylbenzene	106	8.630	8.630	0.000	97	17209	1.00	0.9594	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	20530	1.00	0.9397	
86 o-Xylene	106	9.152	9.152	0.000	87	20689	1.00	1.00	
87 Styrene	104	9.164	9.164	0.000	92	33591	1.00	0.9446	
88 Bromoform	173	9.353	9.354	-0.001	89	10783	1.00	0.99	
89 Isopropylbenzene	105	9.519	9.520	-0.001	93	55346	1.00	0.99	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	75	16261	1.00	1.02	
92 Bromobenzene	156	9.840	9.840	0.000	89	16361	1.00	1.03	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	66	5997	1.00	0.99	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	38	5707	1.00	1.01	
95 N-Propylbenzene	120	9.946	9.947	-0.001	95	15476	1.00	0.9694	
96 2-Chlorotoluene	126	10.041	10.041	0.000	92	12831	1.00	0.9496	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	91	43584	1.00	0.9481	
98 4-Chlorotoluene	126	10.148	10.148	0.000	97	14345	1.00	0.9819	
99 tert-Butylbenzene	119	10.468	10.468	0.000	73	41850	1.00	0.9590	
101 1,2,4-Trimethylbenzene	105	10.515	10.516	-0.001	67	46663	1.00	1.00	
102 sec-Butylbenzene	105	10.693	10.694	-0.001	92	55760	1.00	0.9489	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	11	31057	1.00	1.06	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	77	49391	1.00	0.9596	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	49	32379	1.00	1.07	
108 n-Butylbenzene	91	11.286	11.287	-0.001	95	41792	1.00	0.9871	
109 1,2-Dichlorobenzene	146	11.310	11.298	0.012	93	28272	1.00	1.07	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	57	4583	1.00	0.9054	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	83	19612	1.00	1.11	
113 Hexachlorobutadiene	225	13.207	13.208	-0.001	72	10037	1.00	1.11	
114 Naphthalene	128	13.279	13.279	0.000	94	52154	1.00	1.07	
115 1,2,3-Trichlorobenzene	180	13.539	13.540	-0.001	86	17097	1.00	1.08	
S 164 Total BTEX	1				0		5.00	4.91	
S 127 Trihalomethanes, Total	1				0		4.00	4.01	
S 124 1,2-Dichloroethene, Total	96				0			2.08	
S 125 1,3-Dichloropropene, Total	75				0			2.05	
S 126 Xylenes, Total	106				0		2.00	1.94	

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmrgas_00259	Amount Added:	0.80	Units: uL
vmarolistdw_00260	Amount Added:	0.80	Units: uL
vmrprimw_00297	Amount Added:	0.80	Units: uL
vm50ss_00333	Amount Added:	0.80	Units: uL

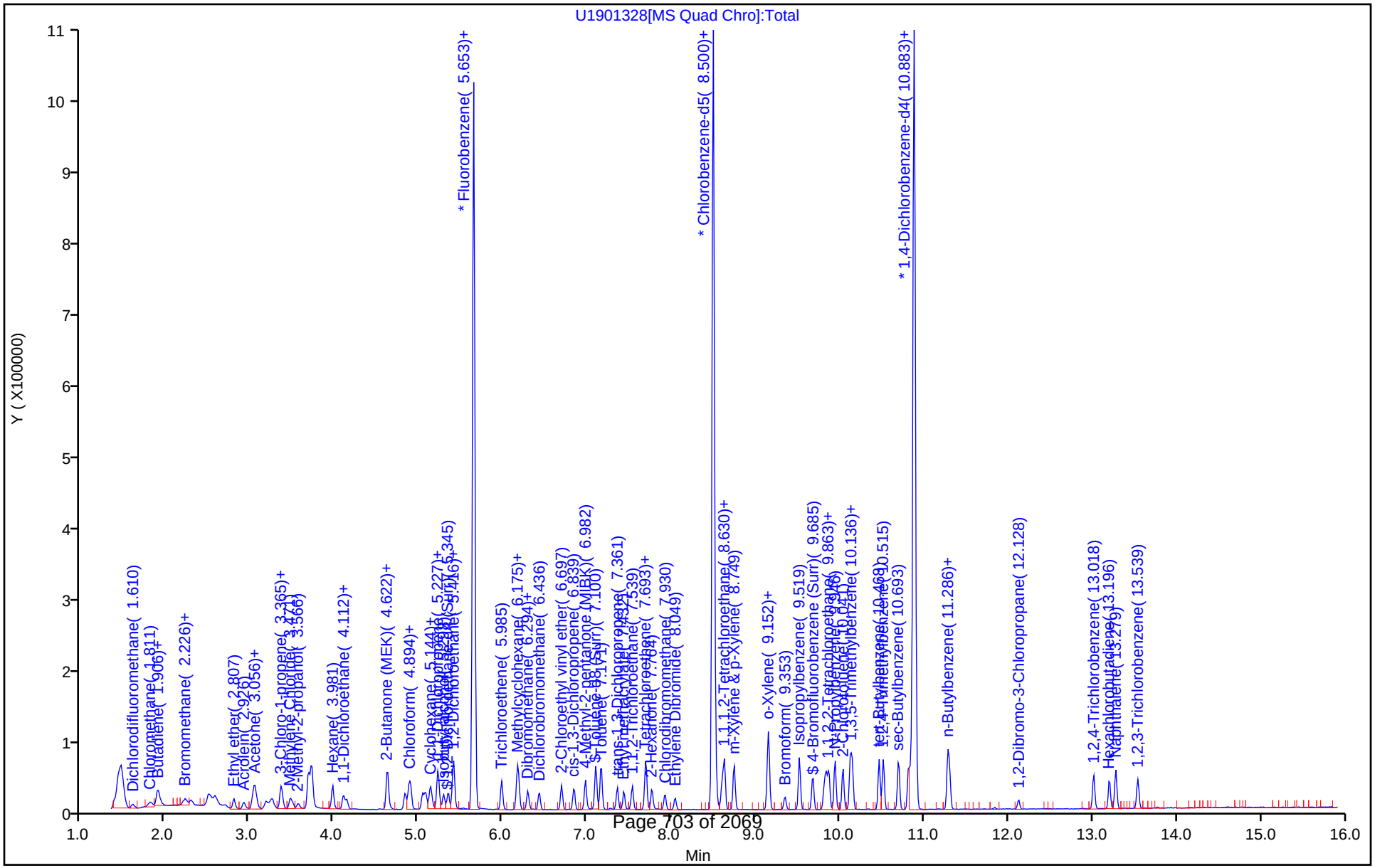
Report Date: 27-Aug-2018 21:28:46 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901328.d

Injection Date:	27-Aug-2018 19:01:13	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	std8260 L2			Worklist Smp#:	12
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d
Lims ID: std8260 L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 27-Aug-2018 19:23:28 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info:
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 27-Aug-2018 21:28:54 Calib Date: 27-Aug-2018 19:23:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: laveyt Date: 27-Aug-2018 19:52:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	938021	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	738667	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	93	405345	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	56	6919	0.5000	0.5480	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.345	0.012	94	8242	0.5000	0.5683	
$ 6 Toluene-d8 (Surr)	98	7.100	7.101	0.000	74	23636	0.5000	0.5336	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	82	9778	0.5000	0.5866	
9 Dichlorodifluoromethane	85	1.622	1.610	0.012	56	7625	0.5000	0.4223	
10 Chloromethane	50	1.812	1.812	0.000	70	8152	0.5000	0.6028	
12 Butadiene	54	1.906	1.906	0.000	92	6713	0.5000	0.4958	
11 Vinyl chloride	62	1.942	1.918	0.024	39	6564	0.5000	0.4697	
13 Bromomethane	94	2.227	2.227	0.000	83	5934	0.5000	0.5419	
14 Chloroethane	64	2.310	2.298	0.012	73	4812	0.5000	0.5551	
15 Dichlorofluoromethane	67	2.511	2.499	0.012	55	11593	0.5000	0.5395	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	76	11587	0.5000	0.4957	
17 Ethyl ether	59	2.808	2.808	0.000	84	4060	0.5000	0.4810	
18 Acrolein	56	2.938	2.926	0.012	73	5804	2.50	2.78	
21 1,1-Dichloroethene	61	3.045	3.045	0.000	72	8152	0.5000	0.4842	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	55	5847	0.5000	0.4856	
22 Acetone	43		3.069				ND	ND	U
23 Iodomethane	142	3.199	3.199	0.000	93	11424	0.5000	0.5233	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
24 Carbon disulfide	76	3.258	3.258	0.000	95	20511	0.5000	0.5820	
26 3-Chloro-1-propene	41	3.365	3.365	0.000	70	8759	0.5000	0.5274	
27 Methyl acetate	43	3.389	3.377	0.012	94	12374	1.00	1.13	
28 Methylene Chloride	49		3.495				ND	ND	U
29 2-Methyl-2-propanol	59	3.578	3.567	0.011	76	7089	5.00	5.58	
30 Acrylonitrile	53	3.697	3.685	0.012	98	23600	5.00	5.00	
32 trans-1,2-Dichloroethene	61	3.733	3.721	0.012	68	8368	0.5000	0.5268	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	83	15146	0.5000	0.4655	
33 Hexane	57	3.982	3.982	0.000	81	7709	0.5000	0.4664	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	57	9092	0.5000	0.4789	
35 Vinyl acetate	43	4.148	4.148	0.000	96	10910	0.5000	0.5015	
40 cis-1,2-Dichloroethene	96	4.634	4.622	0.012	63	7168	0.5000	0.5287	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	48	5791	0.5000	0.5065	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	82	2283	1.00	1.03	
45 Chlorobromomethane	49	4.847	4.836	0.011	57	5503	0.5000	0.6031	
46 Tetrahydrofuran	42		4.883				ND	ND	U
47 Chloroform	83	4.907	4.907	0.000	71	10169	0.5000	0.4891	
48 1,1,1-Trichloroethane	97	5.085	5.085	0.000	78	8767	0.5000	0.4479	
49 Cyclohexane	84	5.144	5.144	0.000	85	8206	0.5000	0.4581	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	80	7998	0.5000	0.4846	
51 Carbon tetrachloride	117	5.239	5.239	0.000	77	8954	0.5000	0.4745	
52 Isobutyl alcohol	41	5.298	5.298	0.000	52	7140	12.5	13.9	
53 Benzene	78	5.417	5.417	0.000	95	21738	0.5000	0.4870	
54 1,2-Dichloroethane	62	5.428	5.417	0.011	58	8896	0.5000	0.5268	
56 n-Heptane	57		5.642				ND	ND	U
58 Trichloroethene	130	5.986	5.986	0.000	77	7819	0.5000	0.5276	
60 Methylcyclohexane	83	6.176	6.176	0.000	85	10042	0.5000	0.4665	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	64	5092	0.5000	0.4918	
63 Dibromomethane	174	6.306	6.294	0.012	66	5652	0.5000	0.5307	
64 1,4-Dioxane	88		6.306				ND	ND	U
65 Dichlorobromomethane	83	6.436	6.436	0.000	75	7972	0.5000	0.4885	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	83	7473	1.00	0.9000	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	60	8778	0.5000	0.4843	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	90	14774	1.00	0.9834	
70 Toluene	91	7.172	7.172	0.000	94	25413	0.5000	0.5091	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	76	9232	0.5000	0.5188	
72 Ethyl methacrylate	69	7.433	7.433	0.000	70	7062	0.5000	0.4401	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	79	5186	0.5000	0.4942	
75 Tetrachloroethene	166	7.693	7.693	0.000	86	7818	0.5000	0.4908	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	72	9211	0.5000	0.5193	
77 2-Hexanone	43	7.765	7.765	0.000	88	10272	1.00	0.8832	
79 Chlorodibromomethane	129	7.931	7.919	0.012	54	6108	0.5000	0.4615	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
80 Ethylene Dibromide	107	8.049	8.049	0.000	74	6962	0.5000	0.5633	
82 Chlorobenzene	112	8.524	8.524	0.000	45	17303	0.5000	0.5063	
83 1,1,1,2-Tetrachloroethane	131	8.607	8.607	0.000	55	5956	0.5000	0.4834	
84 Ethylbenzene	106	8.630	8.630	0.000	94	8431	0.5000	0.4721	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	96	10542	0.5000	0.4846	
86 o-Xylene	106	9.140	9.152	-0.012	88	9580	0.5000	0.4635	
87 Styrene	104	9.164	9.164	0.000	83	16463	0.5000	0.4649	
88 Bromoform	173	9.354	9.354	0.000	77	5340	0.5000	0.4930	
89 Isopropylbenzene	105	9.520	9.520	0.000	90	25288	0.5000	0.4556	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	62	7218	0.5000	0.4621	
92 Bromobenzene	156	9.840	9.840	0.000	88	7663	0.5000	0.4917	
93 1,2,3-Trichloropropane	110	9.864	9.864	0.000	66	2842	0.5000	0.4801	
94 trans-1,4-Dichloro-2-buten	53		9.875				ND	ND	U
95 N-Propylbenzene	120	9.947	9.947	0.000	91	7103	0.5000	0.4535	
96 2-Chlorotoluene	126	10.041	10.041	0.000	82	6213	0.5000	0.4687	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	91	21381	0.5000	0.4740	
98 4-Chlorotoluene	126	10.148	10.148	0.000	91	7405	0.5000	0.5166	
99 tert-Butylbenzene	119	10.468	10.468	0.000	70	19348	0.5000	0.4519	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	63	21277	0.5000	0.4653	
102 sec-Butylbenzene	105	10.694	10.694	0.000	88	26267	0.5000	0.4556	
103 1,3-Dichlorobenzene	146	10.824	10.812	0.012	1	14989	0.5000	0.5237	a
104 4-Isopropyltoluene	119	10.848	10.848	0.000	68	23262	0.5000	0.4606	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	39	16269	0.5000	0.5502	
108 n-Butylbenzene	91	11.287	11.287	0.000	91	19197	0.5000	0.4622	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	87	13617	0.5000	0.5240	
110 1,2-Dibromo-3-Chloropropan	157	12.129	12.129	0.000	31	2665	0.5000	0.5366	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	63	9535	0.5000	0.5502	
113 Hexachlorobutadiene	225	13.208	13.208	0.000	55	4814	0.5000	0.5408	
114 Naphthalene	128		13.279				ND	ND	U
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	72	7998	0.5000	0.5140	
S 127 Trihalomethanes, Total	1				0		2.00	1.93	
S 164 Total BTEX	1				0		2.50	2.42	
S 124 1,2-Dichloroethene, Total	96				0			1.06	
S 125 1,3-Dichloropropene, Total	75				0			1.00	
S 126 Xylenes, Total	106				0		1.00	0.9480	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

vm50is_stk_A_00001	Amount Added:	2.00	Units: uL
vmrgas_00259	Amount Added:	0.40	Units: uL
vmarolistdw_00260	Amount Added:	0.40	Units: uL
vmrprimw_00297	Amount Added:	0.40	Units: uL
vm50ss_00333	Amount Added:	0.40	Units: uL

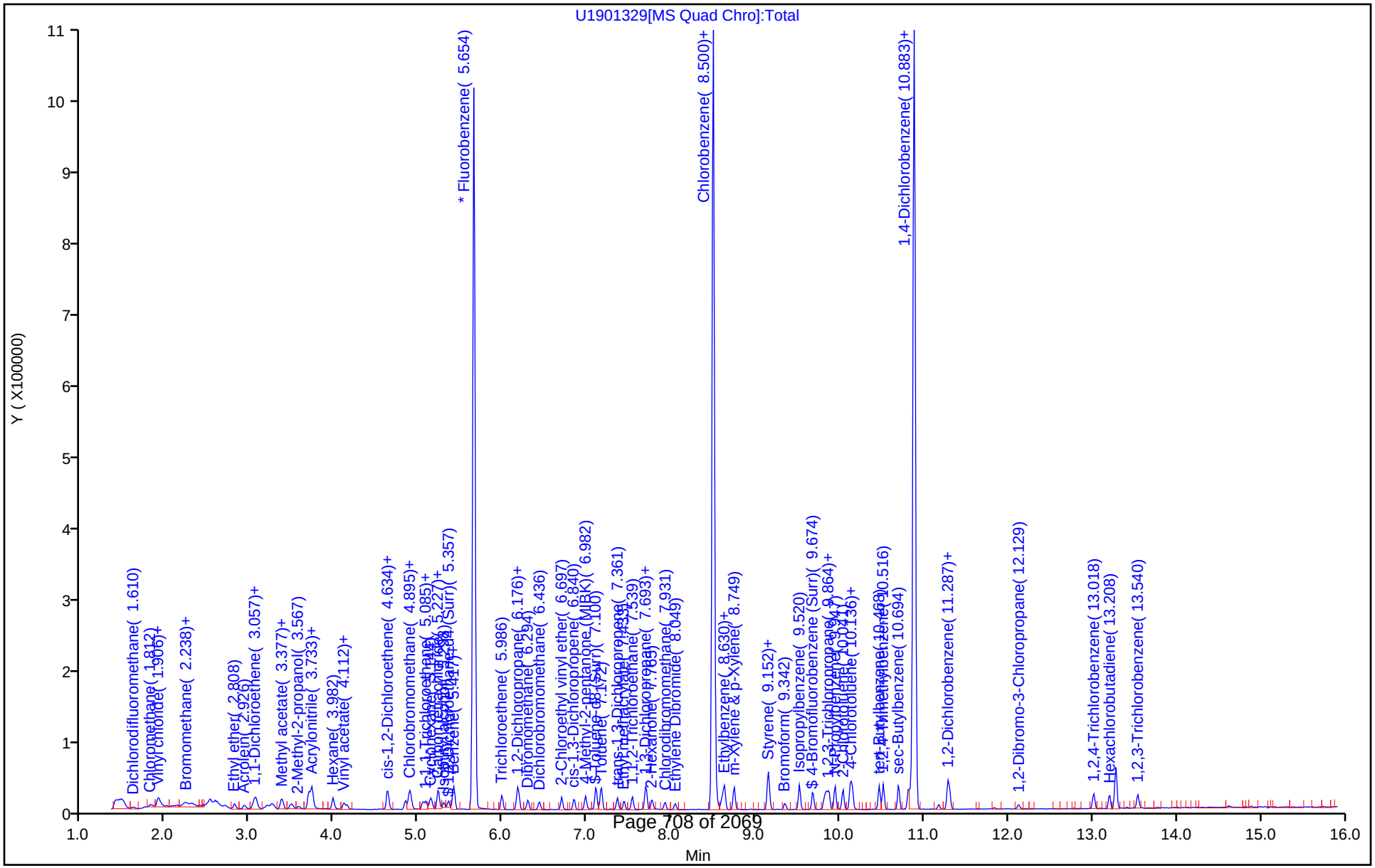
Report Date: 27-Aug-2018 21:29:03 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Injection Date:	27-Aug-2018 19:23:28	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	std8260 L1			Worklist Smp#:	13
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

TestAmerica Canton

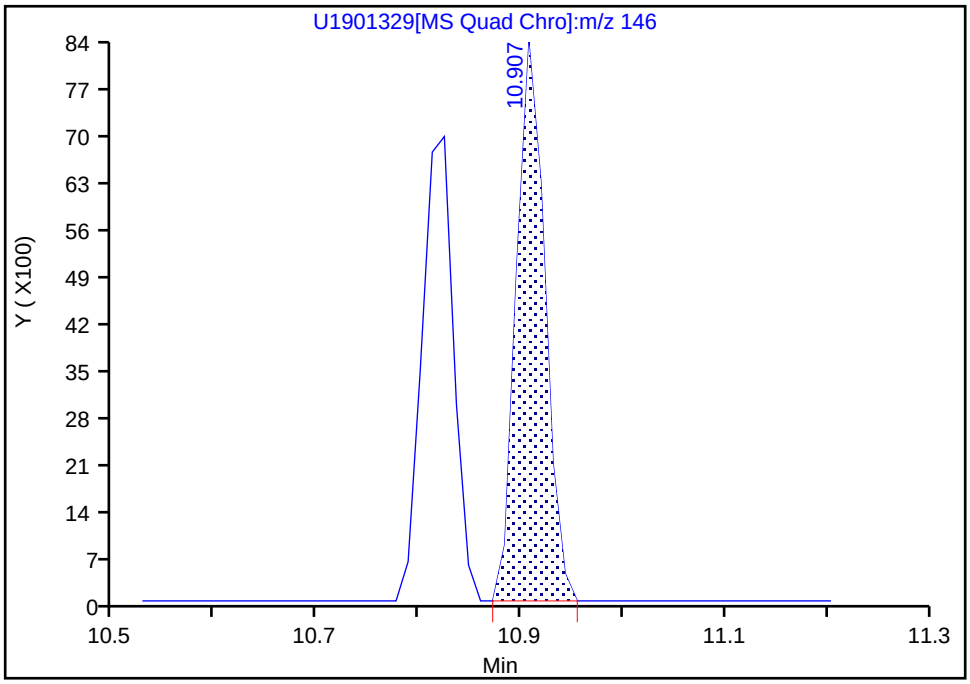
Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d				
Injection Date:	27-Aug-2018 19:23:28	Instrument ID:	A3UX19		
Lims ID:	std8260 L1				
Client ID:					
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

103 1,3-Dichlorobenzene, CAS: 541-73-1

Signal: 1

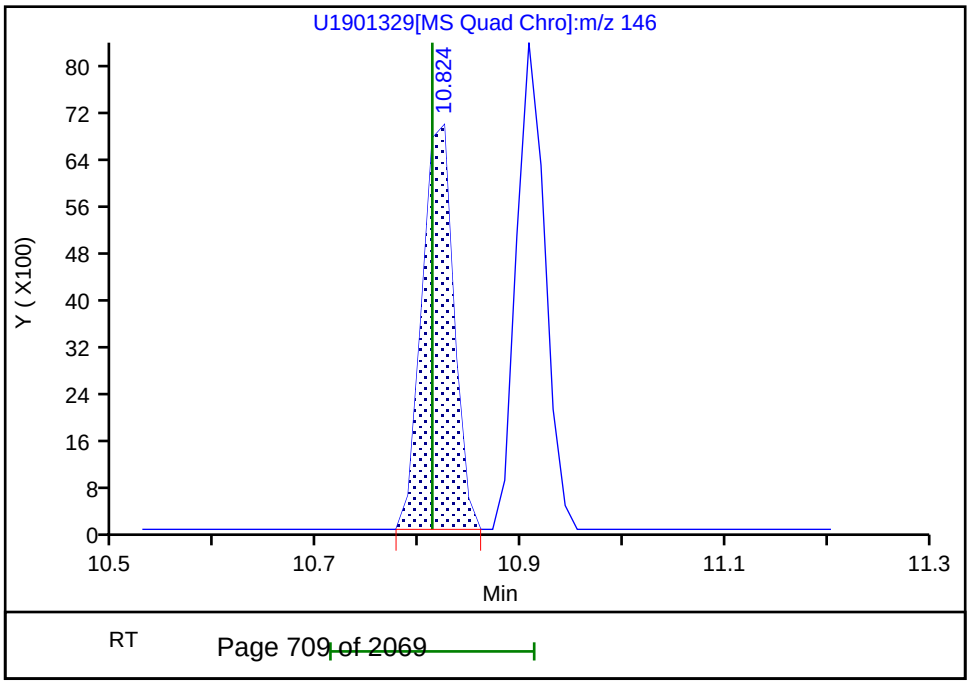
Processing Integration Results

RT: 10.91
Area: 16269
Amount: 0.561209
Amount Units: ug/l



Manual Integration Results

RT: 10.82
Area: 14989
Amount: 0.523661
Amount Units: ug/l



Reviewer: laveyt, 27-Aug-2018 19:47:35

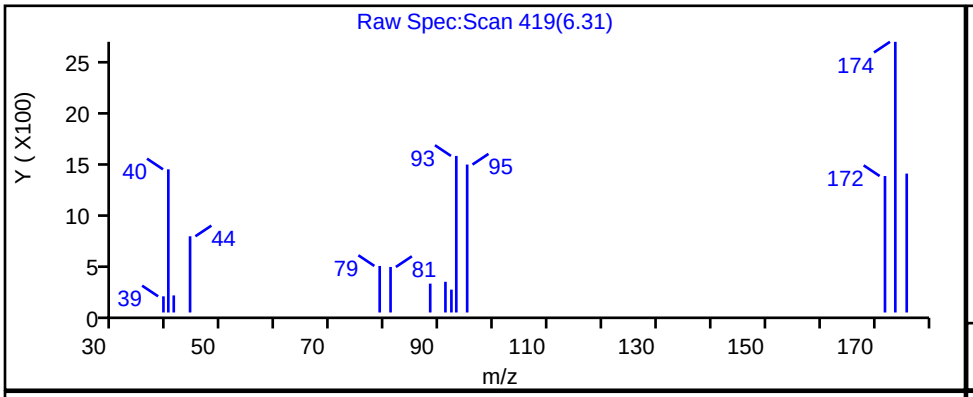
User Disabled Compound Report

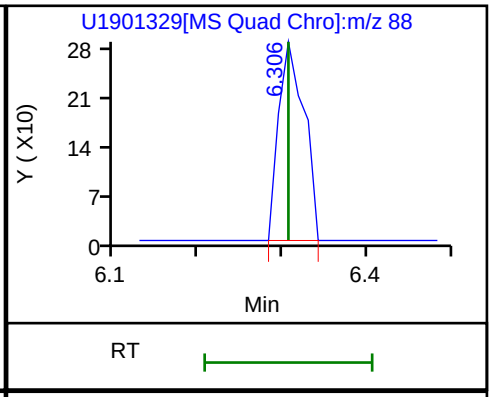
TestAmerica Canton

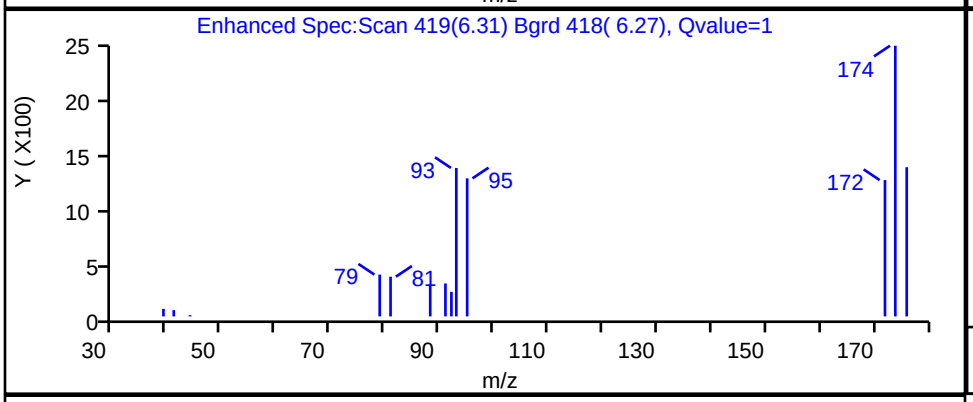
Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d				
Injection Date:	27-Aug-2018 19:23:28	Instrument ID:	A3UX19		
Lims ID:	std8260 L1				
Client ID:					
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

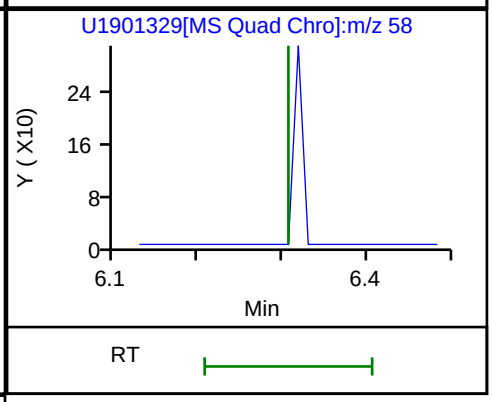
64 1,4-Dioxane, CAS: 123-91-1

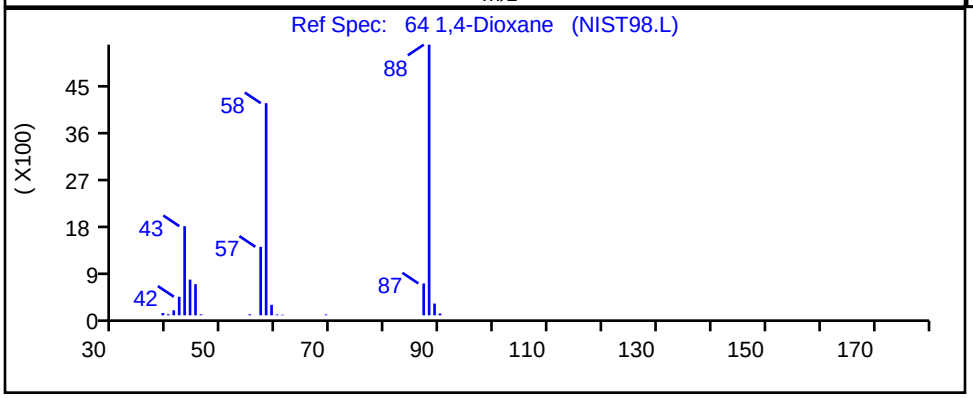
Processing Results











RT	Mass	Response	Amount
6.31	88.00	601	11.604682
6.31	58.00	0	

Reviewer: laveyt, 27-Aug-2018 19:49:09

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

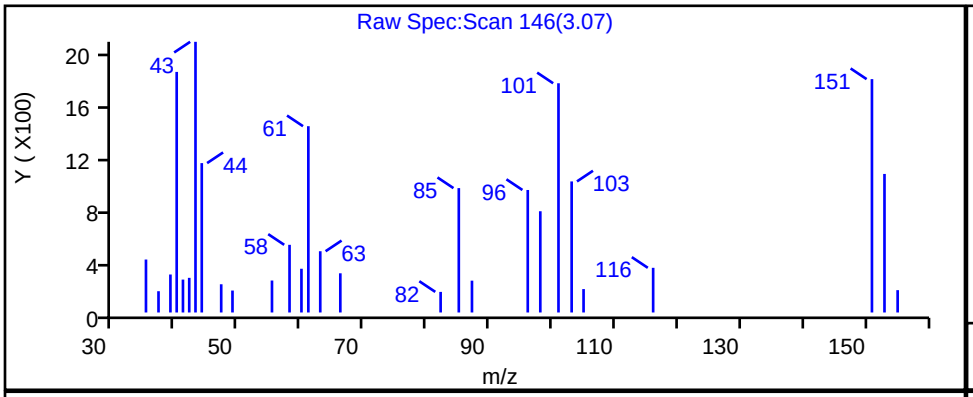
User Disabled Compound Report

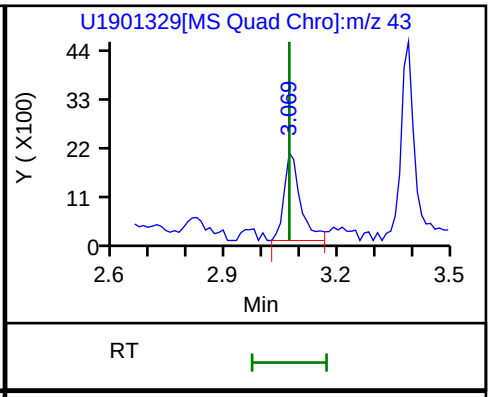
TestAmerica Canton

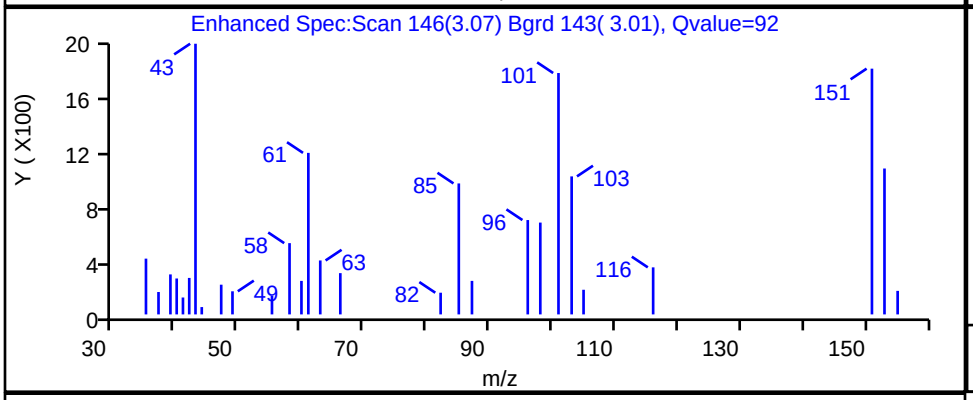
Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d				
Injection Date:	27-Aug-2018 19:23:28	Instrument ID:	A3UX19		
Lims ID:	std8260 L1				
Client ID:					
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

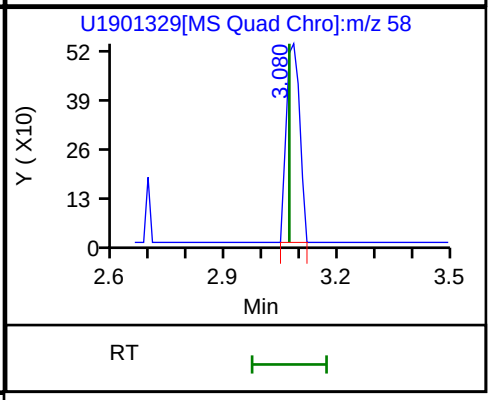
22 Acetone, CAS: 67-64-1

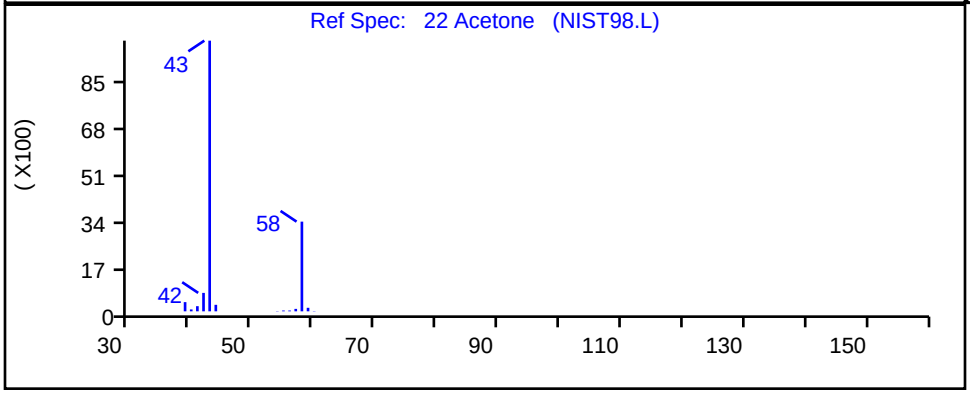
Processing Results











RT	Mass	Response	Amount
3.07	43.00	6224	1.077444
3.08	58.00	1333	

Reviewer: laveyt, 27-Aug-2018 19:48:05

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Injection Date: 27-Aug-2018 19:23:28 Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904 ALS Bottle#: 0 Worklist Smp#: 13

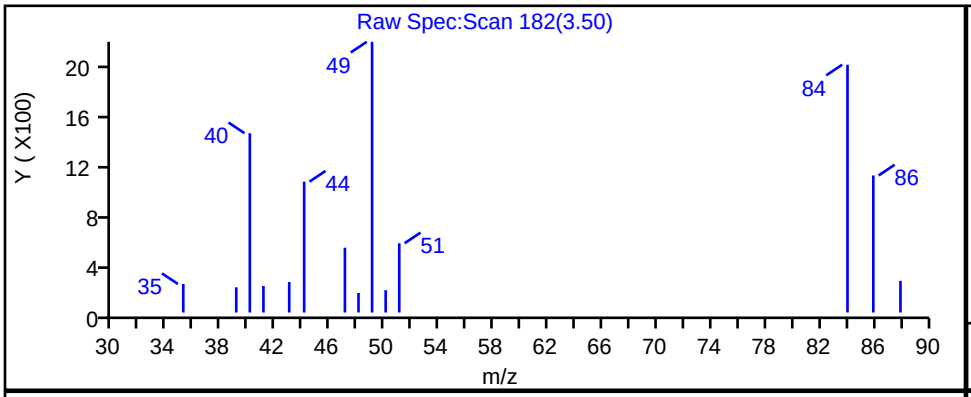
Injection Vol: 5.0 mL Dil. Factor: 1.0000

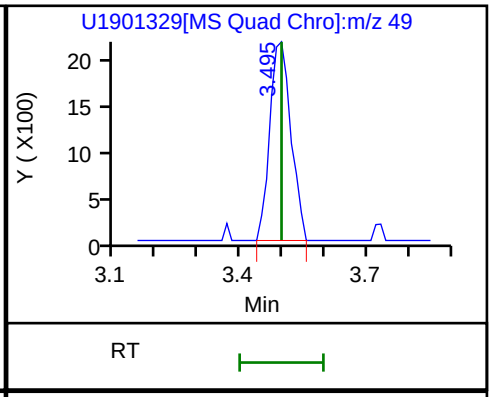
Method: 8260_19 Limit Group: MSV 8260C ICAL

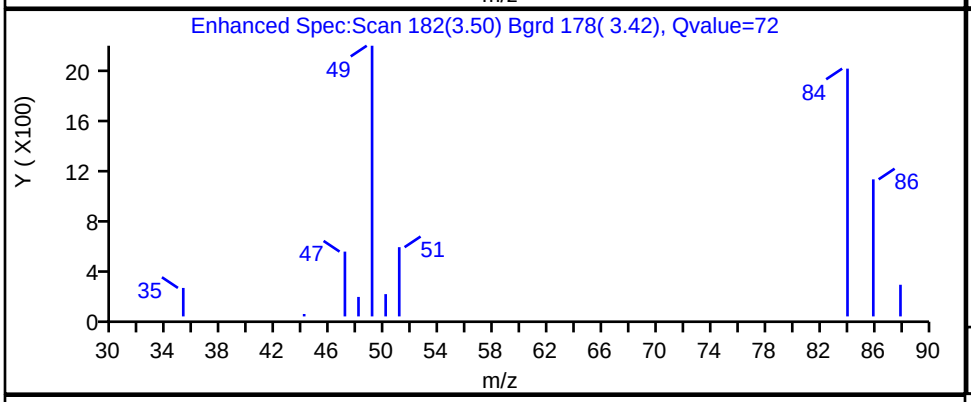
Column: DB-624 (0.18 mm) Detector MS SCAN

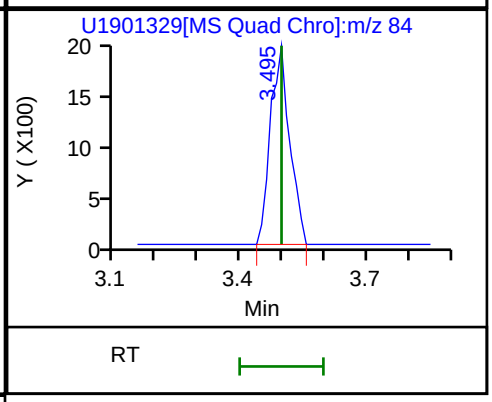
28 Methylene Chloride, CAS: 75-09-2

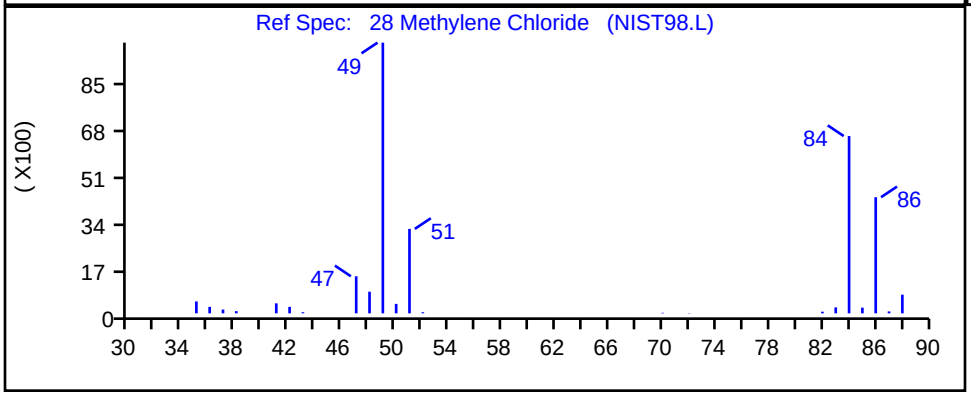
Processing Results











RT	Mass	Response	Amount
3.50	49.00	7484	0.551047
3.50	84.00	6258	

Reviewer: laveyt, 27-Aug-2018 19:48:14

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 27-Aug-2018 21:29:03 Chrom Revision: 2.3 19-Jul-2018 15:14:50

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Injection Date: 27-Aug-2018 19:23:28 Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904 ALS Bottle#: 0 Worklist Smp#: 13

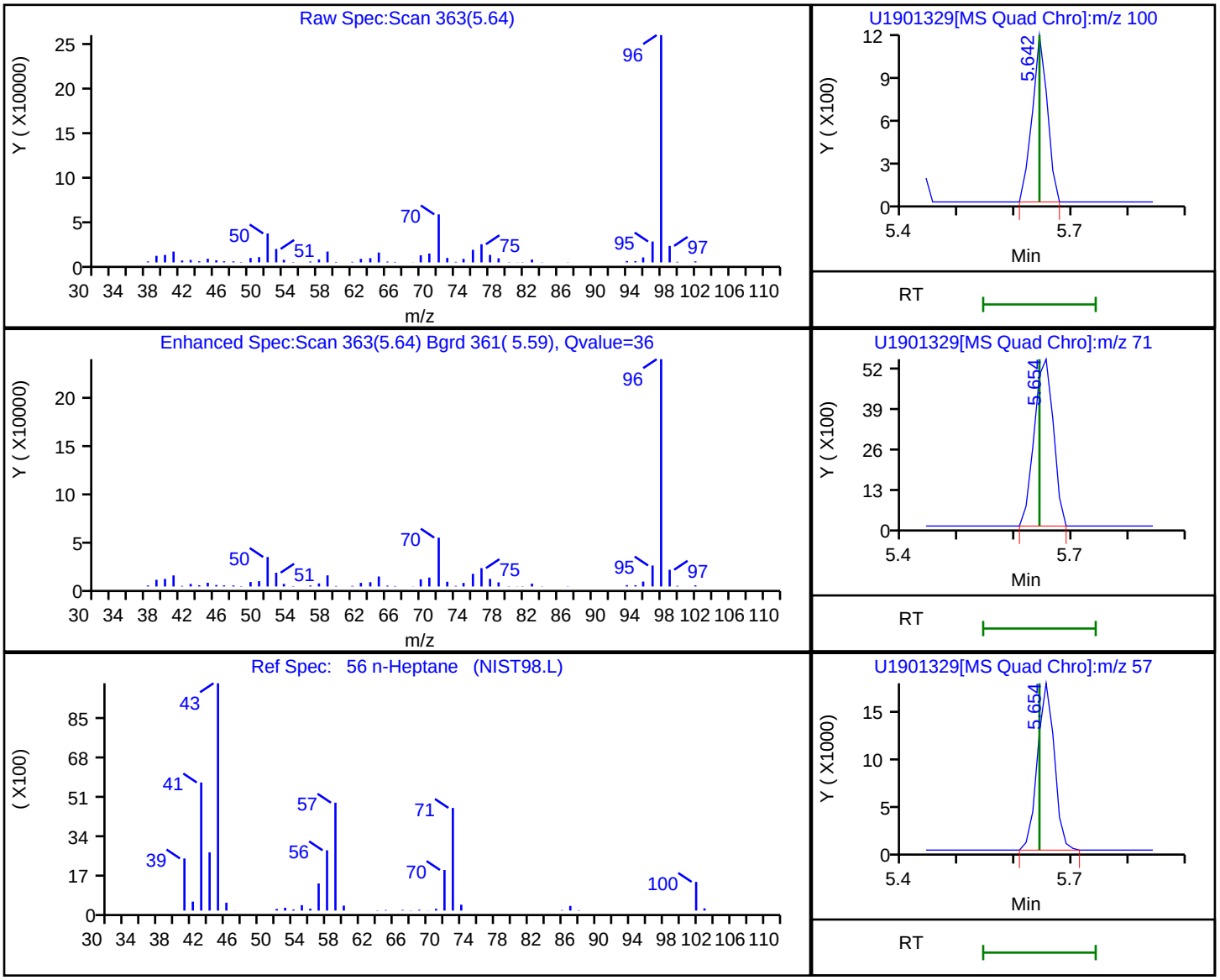
Injection Vol: 5.0 mL Dil. Factor: 1.0000

Method: 8260_19 Limit Group: MSV 8260C ICAL

Column: DB-624 (0.18 mm) Detector MS SCAN

56 n-Heptane, CAS: 142-82-5

Processing Results



RT	Mass	Response	Amount
5.64	100.00	2131	
5.65	71.00	12900	
5.65	57.00	35542	0.539390

Reviewer: laveyt, 27-Aug-2018 19:48:44

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

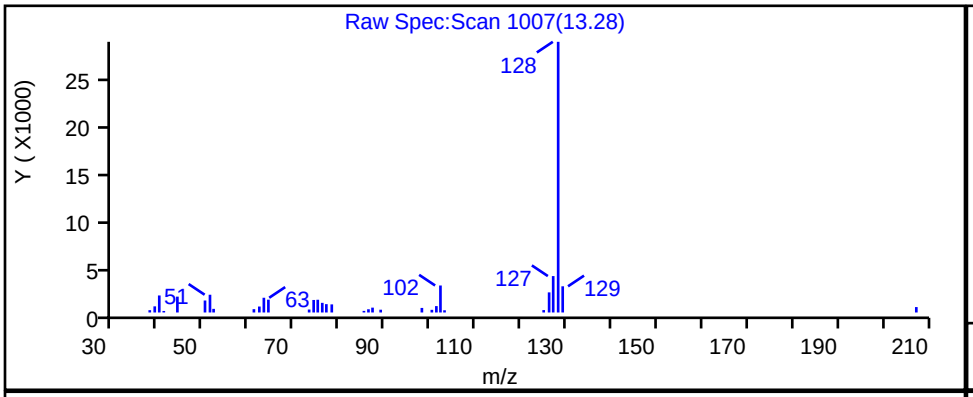
User Disabled Compound Report

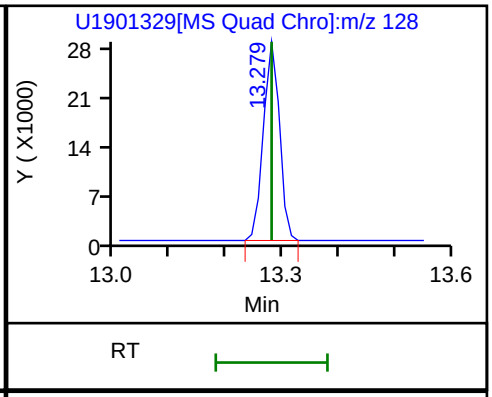
TestAmerica Canton

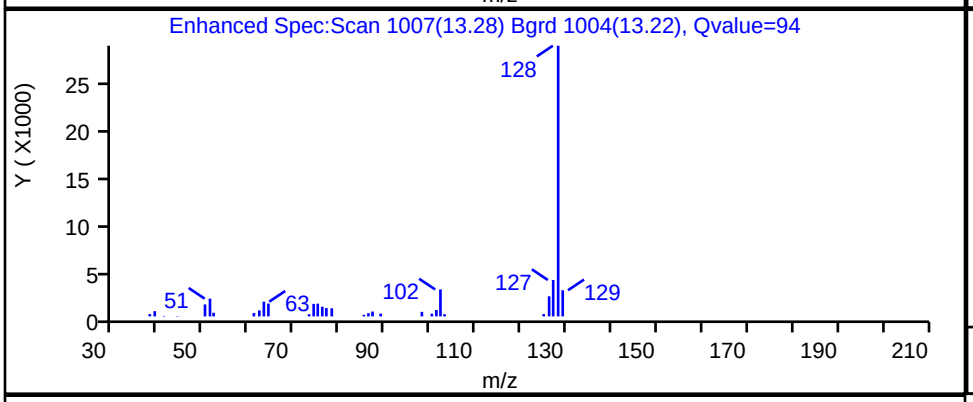
Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d				
Injection Date:	27-Aug-2018 19:23:28	Instrument ID:	A3UX19		
Lims ID:	std8260 L1				
Client ID:					
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

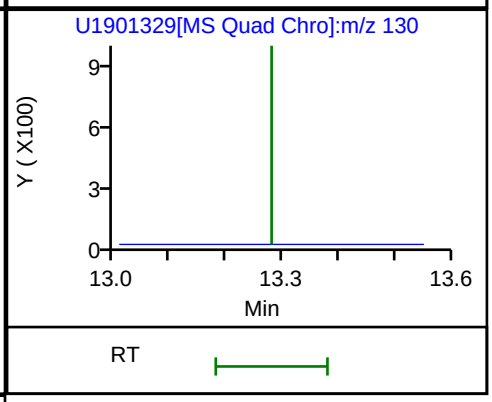
114 Naphthalene, CAS: 91-20-3

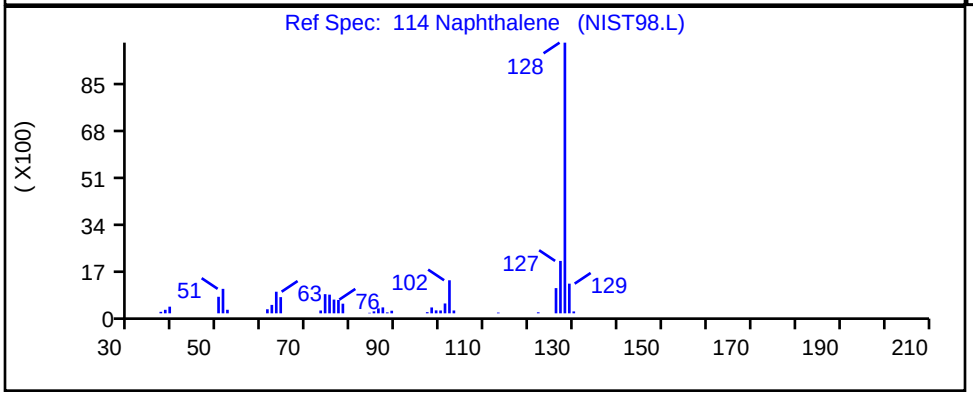
Processing Results











RT	Mass	Response	Amount
13.28	128.00	56279	0.769368
13.28	130.00	0	

Reviewer: laveyt, 27-Aug-2018 20:00:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

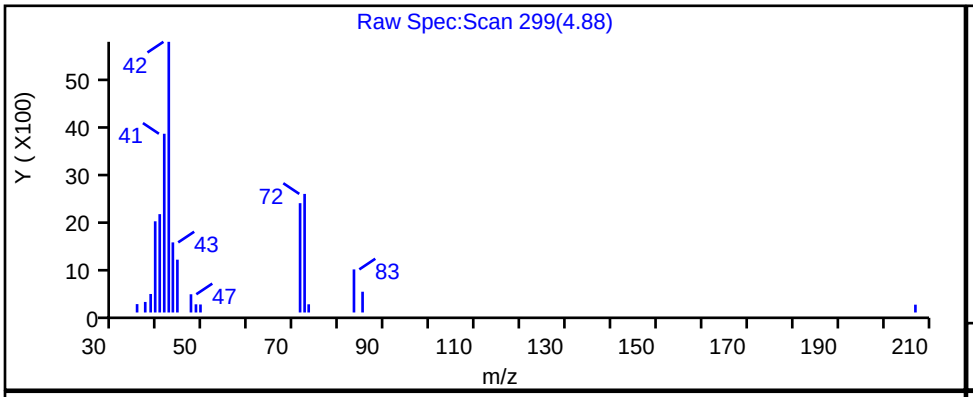
User Disabled Compound Report

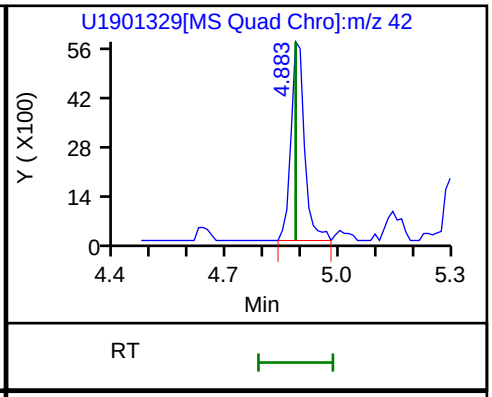
TestAmerica Canton

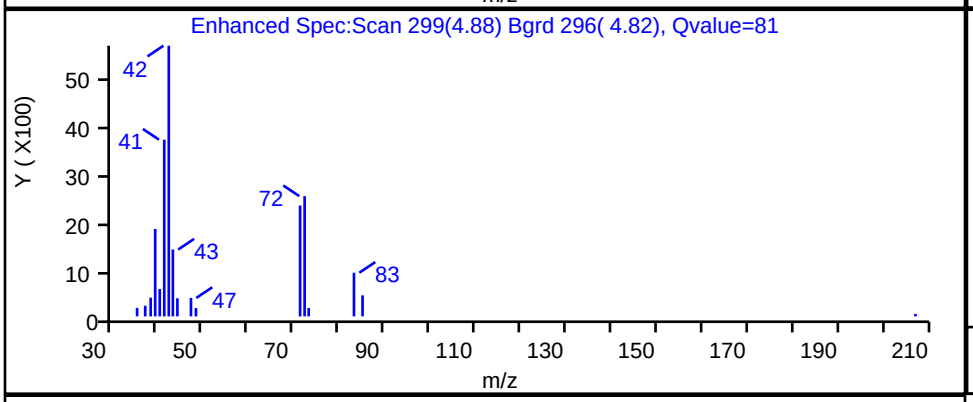
Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d				
Injection Date:	27-Aug-2018 19:23:28	Instrument ID:	A3UX19		
Lims ID:	std8260 L1				
Client ID:					
Operator ID:	001904	ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	8260_19	Limit Group:	MSV 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

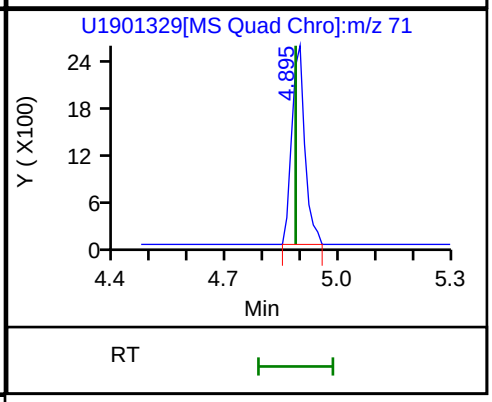
46 Tetrahydrofuran, CAS: 109-99-9

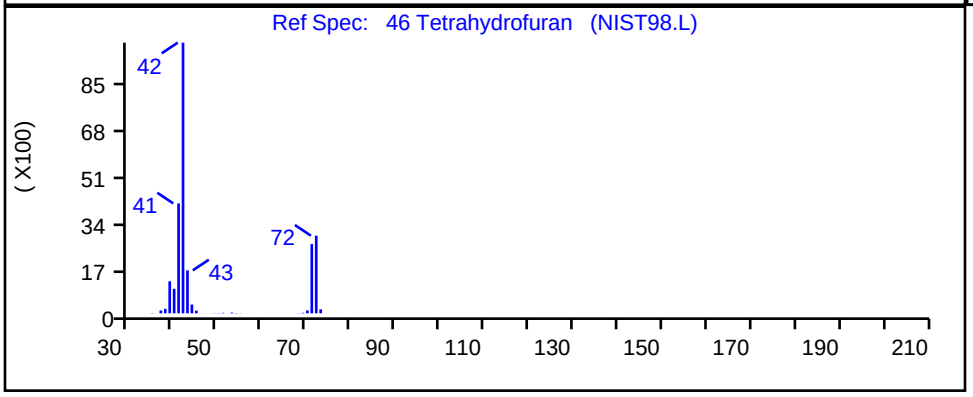
Processing Results











RT	Mass	Response	Amount
4.88	42.00	14557	0.882444
4.89	71.00	6288	

Reviewer: laveyt, 27-Aug-2018 19:48:29

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Injection Date: 27-Aug-2018 19:23:28 Instrument ID: A3UX19

Lims ID: std8260 L1

Client ID:

Operator ID: 001904 ALS Bottle#: 0 Worklist Smp#: 13

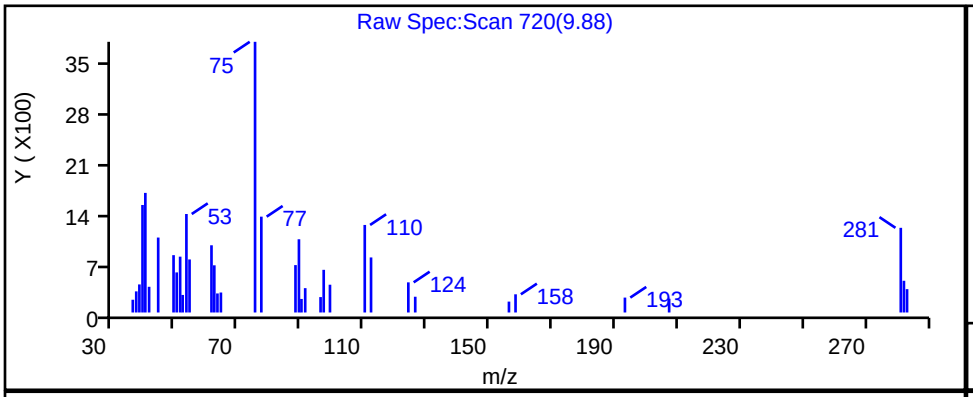
Injection Vol: 5.0 mL Dil. Factor: 1.0000

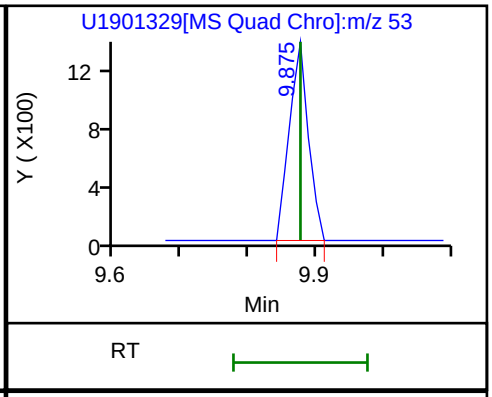
Method: 8260_19 Limit Group: MSV 8260C ICAL

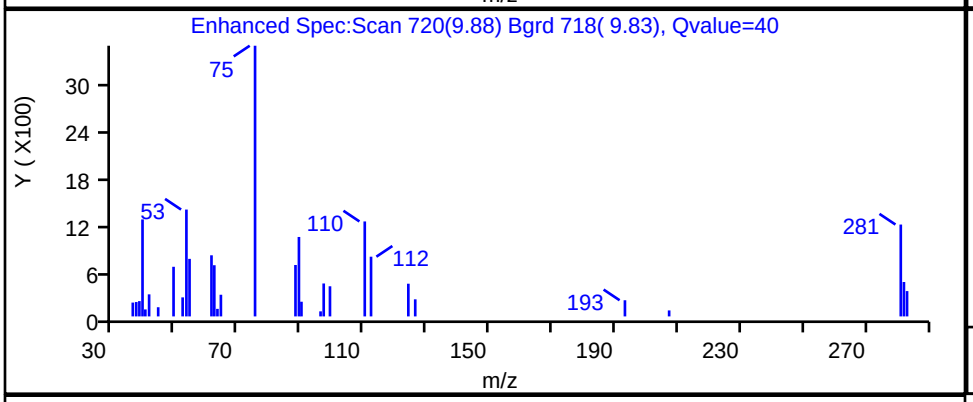
Column: DB-624 (0.18 mm) Detector MS SCAN

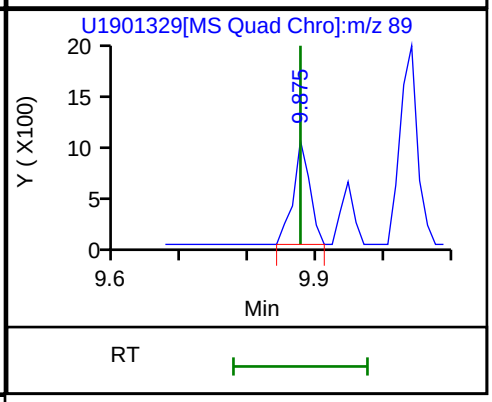
94 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

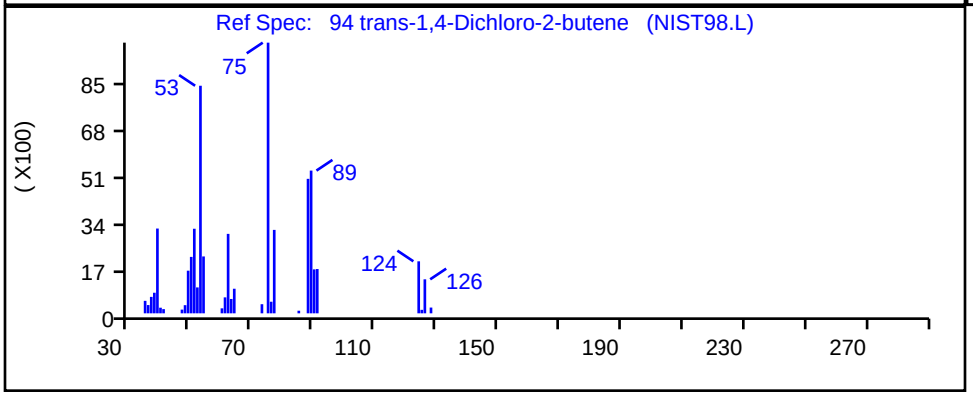
Processing Results











RT	Mass	Response	Amount
9.88	53.00	2712	0.490436
9.88	89.00	1752	

Reviewer: laveyt, 27-Aug-2018 19:50:09

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-355881/12 Calibration Date: 11/16/2018 20:13

Instrument ID: A3UX14 Calib Start Date: 11/16/2018 16:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/16/2018 19:51

Lab File ID: 1416829.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1705	0.1840	0.1000	0.0216	0.0200	7.9	30.0
Chloromethane	Ave	0.2719	0.2951	0.1000	0.0217	0.0200	8.5	30.0
Vinyl chloride	Ave	0.2165	0.2415	0.1000	0.0223	0.0200	11.5	30.0
Butadiene	Ave	0.2241	0.2243		0.0200	0.0200	0.1	30.0
Bromomethane	Ave	0.1162	0.1005	0.0500	0.0173	0.0200	-13.6	30.0
Chloroethane	Ave	0.1149	0.1101	0.0500	0.0192	0.0200	-4.2	30.0
Dichlorofluoromethane	Ave	0.2640	0.2952		0.0224	0.0200	11.8	30.0
Trichlorofluoromethane	Ave	0.2239	0.2483	0.1000	0.0222	0.0200	10.9	30.0
Ethyl ether	Ave	0.2157	0.2514		0.0583	0.0500	16.5	30.0
Acrolein	Ave	0.0476	0.0453		0.238	0.250	-4.8	50.0
1,1-Dichloroethene	Ave	0.2258	0.2160	0.1000	0.0478	0.0500	-4.3	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1436	0.1419	0.0500	0.0494	0.0500	-1.2	30.0
Acetone	Ave	0.0933	0.0857	0.0100	0.0918	0.100	-8.2	50.0
Iodomethane	Ave	0.3892	0.3732		0.0479	0.0500	-4.1	30.0
Carbon disulfide	Ave	0.7275	0.6153	0.1000	0.0423	0.0500	-15.4	30.0
3-Chloro-1-propene	Ave	0.1679	0.1680		0.0500	0.0500	0.0	30.0
Methyl acetate	Ave	0.2530	0.2369	0.1000	0.0936	0.100	-6.4	30.0
Methylene Chloride	Lin1		0.2856	0.1000	0.0486	0.0500	-2.9	50.0
tert-Butyl alcohol (TBA)	Ave	0.0265	0.0305		0.576	0.500	15.2	50.0
trans-1,2-Dichloroethene	Ave	0.2926	0.2907	0.1000	0.0497	0.0500	-0.7	30.0
Methyl tert-butyl ether	Ave	0.6505	0.6503	0.1000	0.0500	0.0500	-0.0	30.0
Acrylonitrile	Ave	0.1126	0.1153		0.512	0.500	2.4	30.0
Hexane	Ave	0.0844	0.0794		0.0471	0.0500	-5.9	30.0
1,1-Dichloroethane	Ave	0.5055	0.4985	0.2000	0.0493	0.0500	-1.4	30.0
Vinyl acetate	Ave	0.0531	0.0694		0.0653	0.0500	30.6	50.0
2,2-Dichloropropane	Ave	0.0671	0.0632		0.0471	0.0500	-5.7	30.0
cis-1,2-Dichloroethene	Ave	0.3298	0.3305	0.1000	0.0501	0.0500	0.2	30.0
2-Butanone (MEK)	Ave	0.1509	0.1491	0.0100	0.0988	0.100	-1.2	30.0
Bromochloromethane	Ave	0.1517	0.1582		0.0521	0.0500	4.3	30.0
Tetrahydrofuran	Ave	0.0976	0.1022		0.105	0.100	4.6	30.0
Chloroform	Ave	0.4221	0.4284	0.2000	0.0507	0.0500	1.5	30.0
1,1,1-Trichloroethane	Ave	0.3090	0.3190	0.1000	0.0516	0.0500	3.2	30.0
Cyclohexane	Ave	0.5182	0.4838	0.1000	0.0467	0.0500	-6.6	30.0
Carbon tetrachloride	Ave	0.2892	0.2771	0.1000	0.0479	0.0500	-4.2	30.0
1,1-Dichloropropene	Ave	0.3446	0.3476		0.0504	0.0500	0.9	30.0
Benzene	Ave	1.115	1.118	0.5000	0.0502	0.0500	0.3	30.0
1,2-Dichloroethane	Ave	0.3509	0.3532	0.1000	0.0503	0.0500	0.7	30.0
Isobutyl alcohol	Ave	0.0099	0.0113		1.43	1.25	14.6	30.0
n-Heptane	Ave	0.0894	0.0897		0.0502	0.0500	0.4	30.0
Trichloroethene	Ave	0.2897	0.2997	0.1500	0.0517	0.0500	3.4	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-355881/12 Calibration Date: 11/16/2018 20:13

Instrument ID: A3UX14 Calib Start Date: 11/16/2018 16:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/16/2018 19:51

Lab File ID: 1416829.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4868	0.4510	0.1000	0.0463	0.0500	-7.3	30.0
1,2-Dichloropropane	Ave	0.2880	0.3100	0.1000	0.0538	0.0500	7.7	30.0
Dibromomethane	Ave	0.1583	0.1651		0.0521	0.0500	4.2	30.0
1,4-Dioxane	Ave	0.0027	0.0031		1.16	1.00	16.0	50.0
Bromodichloromethane	Ave	0.2875	0.3188	0.1500	0.0554	0.0500	10.9	30.0
2-Chloroethyl vinyl ether	Ave	0.1710	0.1915		0.0560	0.0500	12.0	30.0
cis-1,3-Dichloropropene	Ave	0.3936	0.4536	0.1500	0.0576	0.0500	15.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4034	0.4209	0.0500	0.104	0.100	4.4	30.0
Toluene	Ave	1.588	1.581	0.4000	0.0498	0.0500	-0.5	30.0
trans-1,3-Dichloropropene	Ave	0.4683	0.5052	0.1000	0.0539	0.0500	7.9	30.0
Ethyl methacrylate	Ave	0.4331	0.4659		0.0538	0.0500	7.6	30.0
1,1,2-Trichloroethane	Ave	0.3174	0.3423	0.1000	0.0539	0.0500	7.9	30.0
Tetrachloroethene	Ave	0.3077	0.3108	0.1500	0.0505	0.0500	1.0	30.0
1,3-Dichloropropane	Ave	0.5347	0.5607		0.0524	0.0500	4.9	30.0
2-Hexanone	Ave	0.2584	0.2821	0.0500	0.109	0.100	9.2	30.0
Dibromochloromethane	Ave	0.3071	0.3390		0.0552	0.0500	10.4	30.0
1,2-Dibromoethane	Ave	0.3073	0.3343		0.0544	0.0500	8.8	30.0
Chlorobenzene	Ave	1.028	1.039	0.3000	0.0506	0.0500	1.1	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3122	0.3397		0.0544	0.0500	8.8	30.0
Ethylbenzene	Ave	0.5387	0.5507		0.0511	0.0500	2.2	30.0
m-Xylene & p-Xylene	Ave	0.6470	0.6608		0.0511	0.0500	2.1	30.0
o-Xylene	Ave	0.6278	0.6490		0.0517	0.0500	3.4	30.0
Styrene	Ave	1.031	1.082	0.3000	0.0525	0.0500	4.9	30.0
Bromoform	Ave	0.1777	0.2012	0.1000	0.0566	0.0500	13.2	30.0
Isopropylbenzene	Ave	1.454	1.520	0.1000	0.0523	0.0500	4.6	30.0
Bromobenzene	Ave	0.9173	0.9123		0.0497	0.0500	-0.5	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7736	0.8430	0.3000	0.0545	0.0500	9.0	30.0
1,2,3-Trichloropropane	Ave	0.2493	0.2621		0.0526	0.0500	5.1	30.0
trans-1,4-Dichloro-2-butene	Ave	0.2868	0.3016		0.0526	0.0500	5.2	30.0
N-Propylbenzene	Ave	0.9834	0.9781		0.0497	0.0500	-0.5	30.0
2-Chlorotoluene	Ave	0.8268	0.8316		0.0503	0.0500	0.6	30.0
1,3,5-Trimethylbenzene	Ave	2.522	2.525		0.0500	0.0500	0.0	30.0
4-Chlorotoluene	Ave	0.8495	0.8401		0.0494	0.0500	-1.1	30.0
tert-Butylbenzene	Ave	2.259	2.297		0.0508	0.0500	1.7	30.0
1,2,4-Trimethylbenzene	Ave	2.633	2.605		0.0495	0.0500	-1.0	30.0
sec-Butylbenzene	Ave	3.225	3.274		0.0508	0.0500	1.5	30.0
1,3-Dichlorobenzene	Ave	1.637	1.578	0.6000	0.0482	0.0500	-3.6	30.0
p-Isopropyltoluene	Ave	2.710	2.754		0.0508	0.0500	1.6	30.0
1,4-Dichlorobenzene	Ave	1.670	1.613	0.5000	0.0483	0.0500	-3.4	30.0
n-Butylbenzene	Ave	2.431	2.392		0.0492	0.0500	-1.6	30.0
1,2-Dichlorobenzene	Ave	1.480	1.493	0.4000	0.0504	0.0500	0.9	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-355881/12 Calibration Date: 11/16/2018 20:13

Instrument ID: A3UX14 Calib Start Date: 11/16/2018 16:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/16/2018 19:51

Lab File ID: 1416829.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Lin1		0.1464	0.0500	0.0453	0.0500	-9.5	50.0
1,2,4-Trichlorobenzene	Ave	1.033	0.9269	0.2000	0.0449	0.0500	-10.3	50.0
Hexachlorobutadiene	Ave	0.4808	0.4371		0.0455	0.0500	-9.1	30.0
Naphthalene	Ave	2.587	2.434		0.0470	0.0500	-5.9	50.0
1,2,3-Trichlorobenzene	Ave	0.9764	0.9055		0.0464	0.0500	-7.3	30.0
Dibromofluoromethane (Surr)	Ave	0.2651	0.2407		0.0454	0.0500	-9.2	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2992	0.2406		0.0402	0.0500	-19.6	30.0
Toluene-d8 (Surr)	Ave	1.449	1.328		0.0458	0.0500	-8.4	30.0
4-Bromofluorobenzene (Surr)	Ave	1.112	0.9474		0.0426	0.0500	-14.8	30.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416829.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 16-Nov-2018 20:13:30 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icv
Misc. Info.: 240-0082038-012
Operator ID: 002808 Instrument ID: A3UX14
Sublist:

Method: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 19-Nov-2018 10:57:36 Calib Date: 16-Nov-2018 19:51:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416828.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: macenczaks Date: 18-Nov-2018 11:05:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	99	1706502	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	97	1257902	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.284	0.000	98	590763	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.510	5.498	0.012	94	410805	50.0	45.4	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	95	410495	50.0	40.2	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	1670058	50.0	45.8	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	559699	50.0	42.6	
9 Dichlorodifluoromethane	85	1.061	1.061	0.000	99	125567	20.0	21.6	
10 Chloromethane	50	1.203	1.191	0.012	99	201451	20.0	21.7	
11 Vinyl chloride	62	1.286	1.274	0.012	98	164847	20.0	22.3	
12 Butadiene	54	1.297	1.298	-0.001	96	153121	20.0	20.0	
13 Bromomethane	94	1.522	1.522	0.000	90	68590	20.0	17.3	
15 Chloroethane	64	1.605	1.605	0.000	98	75122	20.0	19.2	
16 Dichlorofluoromethane	67	1.794	1.783	0.011	97	201468	20.0	22.4	
17 Trichlorofluoromethane	101	1.818	1.806	0.012	98	169471	20.0	22.2	
18 Ethyl ether	59	2.078	2.078	0.000	97	429008	50.0	58.3	
19 Acrolein	56	2.220	2.209	0.011	99	386717	250.0	238.0	
21 1,1-Dichloroethene	96	2.280	2.268	0.012	98	368661	50.0	47.8	
22 1,1,2-Trichloro-1,2,2-trif	151	2.303	2.291	0.012	92	242147	50.0	49.4	
24 Acetone	43	2.386	2.374	0.012	100	292391	100.0	91.8	
25 Iodomethane	142	2.422	2.410	0.012	96	636802	50.0	47.9	
26 Carbon disulfide	76	2.469	2.457	0.012	100	1050086	50.0	42.3	
27 3-Chloro-1-propene	76	2.670	2.670	0.000	91	286731	50.0	50.0	
29 Methyl acetate	43	2.729	2.729	0.000	99	808619	100.0	93.6	
30 Methylene Chloride	84	2.824	2.812	0.012	98	487397	50.0	48.6	
31 2-Methyl-2-propanol	59	3.061	3.061	0.000	99	521023	500.0	576.2	
32 trans-1,2-Dichloroethene	96	3.132	3.132	0.000	99	496010	50.0	49.7	
33 Methyl tert-butyl ether	73	3.155	3.155	0.000	99	1109731	50.0	50.0	
34 Acrylonitrile	53	3.167	3.167	0.000	99	1967823	500.0	512.0	
35 Hexane	86	3.498	3.487	0.011	94	135555	50.0	47.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.735	3.723	0.012	96	850654	50.0	49.3	
39 Vinyl acetate	86	3.889	3.877	0.012	97	118407	50.0	65.3	
41 2,2-Dichloropropane	97	4.682	4.682	0.000	94	107877	50.0	47.1	
42 cis-1,2-Dichloroethene	96	4.729	4.717	0.012	81	564035	50.0	50.1	
43 2-Butanone (MEK)	43	4.836	4.824	0.012	99	508958	100.0	98.8	
46 Chlorobromomethane	128	5.108	5.108	0.000	97	269957	50.0	52.1	
48 Tetrahydrofuran	42	5.167	5.167	0.000	91	348664	100.0	104.6	
49 Chloroform	83	5.273	5.273	0.000	96	730981	50.0	50.7	
50 1,1,1-Trichloroethane	97	5.451	5.439	0.012	99	544330	50.0	51.6	
51 Cyclohexane	56	5.474	5.475	0.000	93	825603	50.0	46.7	
52 Carbon tetrachloride	117	5.652	5.652	0.000	96	472909	50.0	47.9	
53 1,1-Dichloropropene	75	5.676	5.676	0.000	92	593160	50.0	50.4	
54 Benzene	78	5.948	5.948	0.000	97	1908711	50.0	50.2	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	95	602784	50.0	50.3	
55 Isobutyl alcohol	41	6.066	6.066	0.000	96	483925	1250.0	1432.6	
58 n-Heptane	100	6.326	6.315	0.011	94	153054	50.0	50.2	
59 Trichloroethene	130	6.729	6.729	0.000	95	511391	50.0	51.7	
62 Methylcyclohexane	83	6.894	6.894	0.000	93	769617	50.0	46.3	
63 1,2-Dichloropropane	63	6.977	6.977	0.000	95	529020	50.0	53.8	
65 Dibromomethane	93	7.107	7.107	0.000	94	281663	50.0	52.1	
67 1,4-Dioxane	88	7.155	7.155	0.000	98	105550	1000.0	1159.6	
68 Dichlorobromomethane	83	7.297	7.297	0.000	98	544044	50.0	55.4	
70 2-Chloroethyl vinyl ether	63	7.640	7.628	0.012	93	326751	50.0	56.0	
71 cis-1,3-Dichloropropene	75	7.746	7.735	0.011	93	773986	50.0	57.6	
73 4-Methyl-2-pentanone (MIBK	43	7.924	7.924	0.000	98	1058987	100.0	104.4	
74 Toluene	91	8.030	8.030	0.000	98	1988380	50.0	49.8	
75 trans-1,3-Dichloropropene	75	8.291	8.279	0.012	97	635428	50.0	53.9	
76 Ethyl methacrylate	69	8.385	8.385	0.000	93	586016	50.0	53.8	
77 1,1,2-Trichloroethane	97	8.445	8.445	0.000	90	430627	50.0	53.9	
78 Tetrachloroethene	164	8.527	8.527	0.000	97	390902	50.0	50.5	
79 1,3-Dichloropropane	76	8.587	8.587	0.000	98	705342	50.0	52.4	
80 2-Hexanone	43	8.693	8.693	0.000	98	709662	100.0	109.2	
82 Chlorodibromomethane	129	8.788	8.788	0.000	91	426426	50.0	55.2	
83 Ethylene Dibromide	107	8.871	8.871	0.000	98	420561	50.0	54.4	
85 Chlorobenzene	112	9.308	9.308	0.000	97	1307399	50.0	50.6	
86 1,1,1,2-Tetrachloroethane	131	9.391	9.391	0.000	97	427280	50.0	54.4	
87 Ethylbenzene	106	9.415	9.415	0.000	98	692707	50.0	51.1	
88 m-Xylene & p-Xylene	106	9.510	9.510	0.000	99	831160	50.0	51.1	
89 o-Xylene	106	9.853	9.853	0.000	97	816349	50.0	51.7	
90 Styrene	104	9.876	9.876	0.000	97	1361213	50.0	52.5	
91 Bromoform	173	10.042	10.030	0.012	98	253036	50.0	56.6	
92 Isopropylbenzene	105	10.172	10.172	0.000	95	1912587	50.0	52.3	
94 Bromobenzene	156	10.421	10.421	0.000	95	538947	50.0	49.7	
95 1,1,2,2-Tetrachloroethane	83	10.456	10.456	0.000	94	497994	50.0	54.5	
96 1,2,3-Trichloropropane	110	10.492	10.492	0.000	87	154832	50.0	52.6	
97 trans-1,4-Dichloro-2-buten	53	10.503	10.504	-0.001	82	178171	50.0	52.6	
98 N-Propylbenzene	120	10.527	10.527	0.000	99	577793	50.0	49.7	
99 2-Chlorotoluene	126	10.586	10.586	0.000	97	491255	50.0	50.3	
100 1,3,5-Trimethylbenzene	105	10.681	10.681	0.000	96	1491409	50.0	50.0	
101 4-Chlorotoluene	126	10.693	10.693	0.000	97	496280	50.0	49.4	
103 tert-Butylbenzene	119	10.953	10.953	0.000	92	1356797	50.0	50.8	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	96	1539129	50.0	49.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 sec-Butylbenzene	105	11.131	11.131	0.000	94	1934131	50.0	50.8	
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	98	932417	50.0	48.2	
109 4-Isopropyltoluene	119	11.261	11.261	0.000	97	1626966	50.0	50.8	
110 1,4-Dichlorobenzene	146	11.296	11.296	0.000	96	952768	50.0	48.3	
113 n-Butylbenzene	91	11.604	11.604	0.000	97	1412875	50.0	49.2	
114 1,2-Dichlorobenzene	146	11.616	11.616	0.000	99	882015	50.0	50.4	
115 1,2-Dibromo-3-Chloropropan	157	12.278	12.278	0.000	84	86510	50.0	45.3	
117 1,2,4-Trichlorobenzene	180	12.953	12.965	-0.012	96	547590	50.0	44.9	
118 Hexachlorobutadiene	225	13.095	13.095	0.000	97	258214	50.0	45.5	
119 Naphthalene	128	13.166	13.166	0.000	96	1437821	50.0	47.0	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	96	534928	50.0	46.4	
S 134 Xylenes, Total	106				0		100.0	102.7	
S 135 Trihalomethanes, Total	1				0		200.0	218.0	
S 157 Total BTEX	1				0		250.0	253.8	

Reagents:

VMFASAW_00256	Amount Added:	5.00	Units: uL	
VMFASGW_00283	Amount Added:	2.00	Units: uL	
VMFASPW_00275	Amount Added:	5.00	Units: uL	
VM250SS_00050	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00132	Amount Added:	0.00	Units:	Run Reagent
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00010	Amount Added:	0.00	Units:	Run Reagent

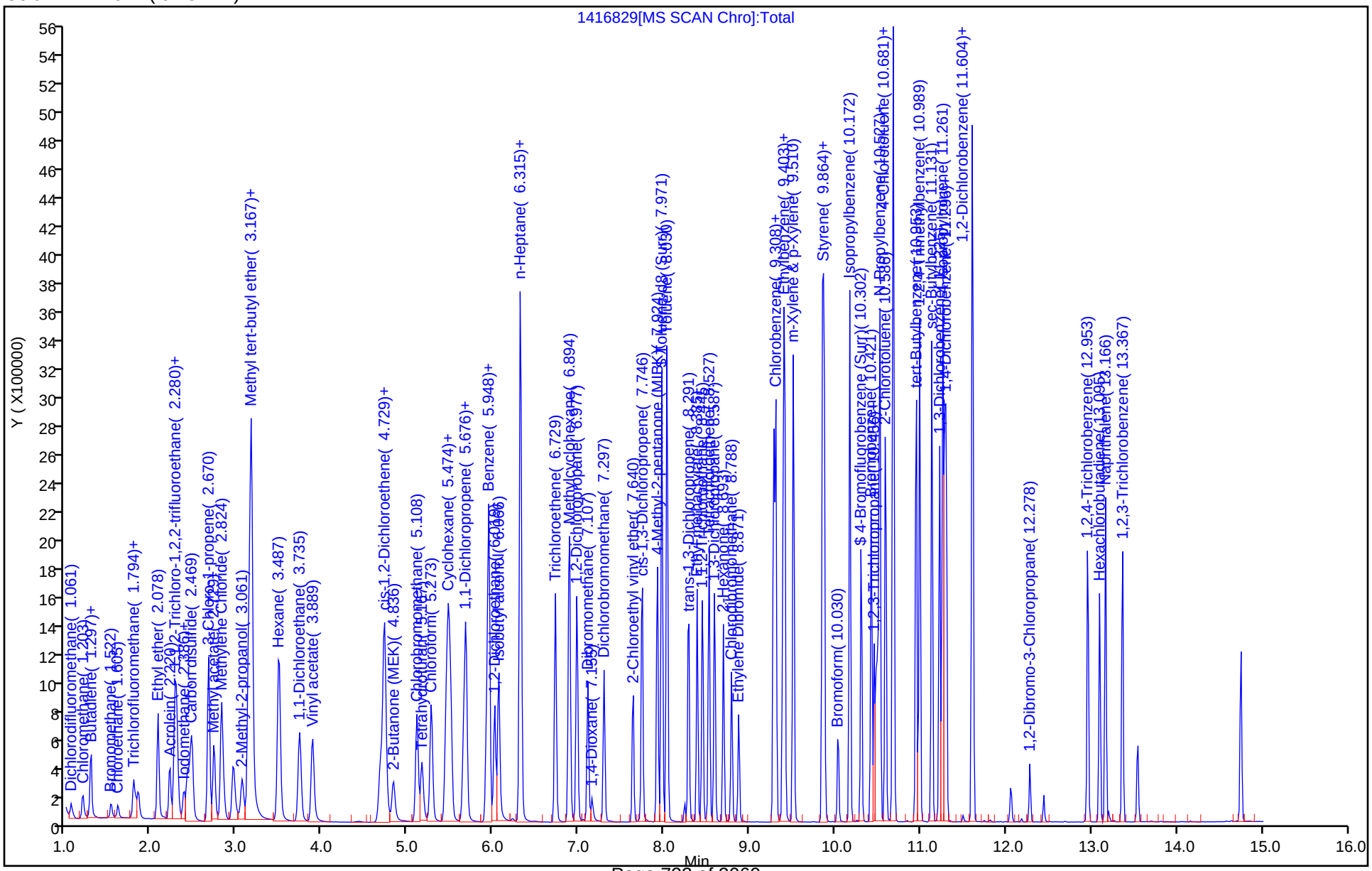
Report Date: 19-Nov-2018 10:57:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416829.D

Injection Date:	16-Nov-2018 20:13:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	icv			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCVIS 240-356055/3 Calibration Date: 11/19/2018 09:49

Instrument ID: A3UX14 Calib Start Date: 11/16/2018 16:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/16/2018 19:51

Lab File ID: 1416867.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1705	0.1652	0.1000	0.00969	0.0100	-3.1	20.0
Chloromethane	Ave	0.2719	0.2805	0.1000	0.0103	0.0100	3.2	20.0
Vinyl chloride	Ave	0.2165	0.2359	0.1000	0.0109	0.0100	8.9	20.0
Butadiene	Ave	0.2241	0.2551		0.0114	0.0100	13.8	20.0
Bromomethane	Ave	0.1162	0.1034	0.0500	0.00889	0.0100	-11.1	20.0
Chloroethane	Ave	0.1149	0.1221	0.0500	0.0106	0.0100	6.3	20.0
Dichlorofluoromethane	Ave	0.2640	0.2949		0.0112	0.0100	11.7	20.0
Trichlorofluoromethane	Ave	0.2239	0.2777	0.1000	0.0124	0.0100	24.0*	20.0
Ethyl ether	Ave	0.2157	0.2520		0.0584	0.0500	16.8	20.0
Acrolein	Ave	0.0476	0.0456		0.239	0.250	-4.3	50.0
1,1-Dichloroethene	Ave	0.2258	0.2506	0.1000	0.0555	0.0500	11.0	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1436	0.1364	0.0500	0.0475	0.0500	-5.1	20.0
Acetone	Ave	0.0933	0.0820	0.0100	0.0879	0.100	-12.1	50.0
Iodomethane	Ave	0.3892	0.3919		0.0504	0.0500	0.7	20.0
Carbon disulfide	Ave	0.7275	0.7556	0.1000	0.0519	0.0500	3.9	20.0
3-Chloro-1-propene	Ave	0.1679	0.1734		0.0517	0.0500	3.3	20.0
Methyl acetate	Ave	0.2530	0.2305	0.1000	0.0911	0.100	-8.9	20.0
Methylene Chloride	Lin1		0.3003	0.1000	0.0513	0.0500	2.6	50.0
tert-Butyl alcohol (TBA)	Ave	0.0265	0.0239		0.451	0.500	-9.7	50.0
trans-1,2-Dichloroethene	Ave	0.2926	0.3008	0.1000	0.0514	0.0500	2.8	20.0
Methyl tert-butyl ether	Ave	0.6505	0.6334	0.1000	0.0487	0.0500	-2.6	20.0
Acrylonitrile	Ave	0.1126	0.1049		0.466	0.500	-6.9	20.0
Hexane	Ave	0.0844	0.0815		0.0483	0.0500	-3.4	20.0
1,1-Dichloroethane	Ave	0.5055	0.5075	0.2000	0.0502	0.0500	0.4	20.0
Vinyl acetate	Ave	0.0531	0.0464		0.0436	0.0500	-12.7	50.0
2,2-Dichloropropane	Ave	0.0671	0.0685		0.0511	0.0500	2.1	20.0
cis-1,2-Dichloroethene	Ave	0.3298	0.3328	0.1000	0.0505	0.0500	0.9	20.0
2-Butanone (MEK)	Ave	0.1509	0.1265	0.0100	0.0838	0.100	-16.2	20.0
Bromochloromethane	Ave	0.1517	0.1423		0.0469	0.0500	-6.2	20.0
Tetrahydrofuran	Ave	0.0976	0.0876		0.0897	0.100	-10.3	20.0
Chloroform	Ave	0.4221	0.4285	0.2000	0.0508	0.0500	1.5	20.0
1,1,1-Trichloroethane	Ave	0.3090	0.3240	0.1000	0.0524	0.0500	4.8	20.0
Cyclohexane	Ave	0.5182	0.5055	0.1000	0.0488	0.0500	-2.4	20.0
Carbon tetrachloride	Ave	0.2892	0.2894	0.1000	0.0500	0.0500	0.0	20.0
1,1-Dichloropropene	Ave	0.3446	0.3598		0.0522	0.0500	4.4	20.0
Benzene	Ave	1.115	1.108	0.5000	0.0497	0.0500	-0.7	20.0
1,2-Dichloroethane	Ave	0.3509	0.3243	0.1000	0.0462	0.0500	-7.6	20.0
Isobutyl alcohol	Ave	0.0099	0.0095		1.20	1.25	-4.1	20.0
n-Heptane	Ave	0.0894	0.0821		0.0460	0.0500	-8.1	20.0
Trichloroethene	Ave	0.2897	0.2875	0.1500	0.0496	0.0500	-0.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCVIS 240-356055/3 Calibration Date: 11/19/2018 09:49

Instrument ID: A3UX14 Calib Start Date: 11/16/2018 16:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/16/2018 19:51

Lab File ID: 1416867.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4868	0.4987	0.1000	0.0512	0.0500	2.4	20.0
1,2-Dichloropropane	Ave	0.2880	0.2721	0.1000	0.0472	0.0500	-5.5	20.0
Dibromomethane	Ave	0.1583	0.1513		0.0478	0.0500	-4.4	20.0
1,4-Dioxane	Ave	0.0027	0.0025		0.950	1.00	-5.0	50.0
Bromodichloromethane	Ave	0.2875	0.2925	0.1500	0.0509	0.0500	1.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1710	0.1453		0.0850	0.100	-15.0	20.0
cis-1,3-Dichloropropene	Ave	0.3936	0.3724	0.1500	0.0473	0.0500	-5.4	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4034	0.3946	0.0500	0.0978	0.100	-2.2	20.0
Toluene	Ave	1.588	1.668	0.4000	0.0525	0.0500	5.0	20.0
trans-1,3-Dichloropropene	Ave	0.4683	0.4647	0.1000	0.0496	0.0500	-0.8	20.0
Ethyl methacrylate	Ave	0.4331	0.4265		0.0492	0.0500	-1.5	20.0
1,1,2-Trichloroethane	Ave	0.3174	0.3202	0.1000	0.0504	0.0500	0.9	20.0
Tetrachloroethene	Ave	0.3077	0.3173	0.1500	0.0516	0.0500	3.1	20.0
1,3-Dichloropropane	Ave	0.5347	0.5351		0.0500	0.0500	0.0	20.0
2-Hexanone	Ave	0.2584	0.2572	0.0500	0.0995	0.100	-0.5	20.0
Dibromochloromethane	Ave	0.3071	0.3146		0.0512	0.0500	2.4	20.0
1,2-Dibromoethane	Ave	0.3073	0.3171		0.0516	0.0500	3.2	20.0
Chlorobenzene	Ave	1.028	1.064	0.3000	0.0518	0.0500	3.5	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3122	0.3627		0.0581	0.0500	16.2	20.0
Ethylbenzene	Ave	0.5387	0.5868		0.0545	0.0500	8.9	20.0
m-Xylene & p-Xylene	Ave	0.6470	0.7001		0.0541	0.0500	8.2	20.0
o-Xylene	Ave	0.6278	0.6991		0.0557	0.0500	11.4	20.0
Styrene	Ave	1.031	1.153	0.3000	0.0559	0.0500	11.7	20.0
Bromoform	Ave	0.1777	0.1833	0.1000	0.0516	0.0500	3.2	20.0
Isopropylbenzene	Ave	1.454	1.681	0.1000	0.0578	0.0500	15.6	20.0
Bromobenzene	Ave	0.9173	0.8947		0.0488	0.0500	-2.5	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7736	0.8180	0.3000	0.0529	0.0500	5.7	20.0
1,2,3-Trichloropropane	Ave	0.2493	0.2476		0.0497	0.0500	-0.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2868	0.2703		0.0471	0.0500	-5.8	20.0
N-Propylbenzene	Ave	0.9834	1.056		0.0537	0.0500	7.4	20.0
2-Chlorotoluene	Ave	0.8268	0.8590		0.0520	0.0500	3.9	20.0
1,3,5-Trimethylbenzene	Ave	2.522	2.800		0.0555	0.0500	11.0	20.0
4-Chlorotoluene	Ave	0.8495	0.8907		0.0524	0.0500	4.8	20.0
tert-Butylbenzene	Ave	2.259	2.483		0.0550	0.0500	9.9	20.0
1,2,4-Trimethylbenzene	Ave	2.633	2.854		0.0542	0.0500	8.4	20.0
sec-Butylbenzene	Ave	3.225	3.628		0.0562	0.0500	12.5	20.0
1,3-Dichlorobenzene	Ave	1.637	1.597	0.6000	0.0488	0.0500	-2.5	20.0
p-Isopropyltoluene	Ave	2.710	3.005		0.0554	0.0500	10.9	20.0
1,4-Dichlorobenzene	Ave	1.670	1.636	0.5000	0.0490	0.0500	-2.0	20.0
n-Butylbenzene	Ave	2.431	2.724		0.0560	0.0500	12.1	20.0
1,2-Dichlorobenzene	Ave	1.480	1.516	0.4000	0.0512	0.0500	2.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCVIS 240-356055/3 Calibration Date: 11/19/2018 09:49

Instrument ID: A3UX14 Calib Start Date: 11/16/2018 16:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/16/2018 19:51

Lab File ID: 1416867.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Lin1		0.1259	0.0500	0.0393	0.0500	-21.3	50.0
1,2,4-Trichlorobenzene	Ave	1.033	0.9336	0.2000	0.0452	0.0500	-9.6	50.0
Hexachlorobutadiene	Ave	0.4808	0.4420		0.0460	0.0500	-8.1	20.0
Naphthalene	Ave	2.587	2.348		0.0454	0.0500	-9.3	50.0
1,2,3-Trichlorobenzene	Ave	0.9764	0.8812		0.0451	0.0500	-9.7	20.0
Dibromofluoromethane (Surr)	Ave	0.2651	0.2361		0.0445	0.0500	-10.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2992	0.2383		0.0398	0.0500	-20.3*	20.0
Toluene-d8 (Surr)	Ave	1.449	1.359		0.0469	0.0500	-6.3	20.0
4-Bromofluorobenzene (Surr)	Ave	1.112	0.9457		0.0425	0.0500	-14.9	20.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416867.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 19-Nov-2018 09:49:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ccvis
Misc. Info.: 240-0082085-003
Operator ID: 002808 Instrument ID: A3UX14
Sublist: chrom-8260_14*sub81

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:43:37 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 10:08:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	96	1596566	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	1020361	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.285	11.285	0.000	99	483261	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	94	377015	50.0	44.5	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	95	380465	50.0	39.8	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	1386192	50.0	46.9	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	457012	50.0	42.5	
9 Dichlorodifluoromethane	85	1.061	1.061	0.000	99	52763	10.0	9.69	
10 Chloromethane	50	1.191	1.191	0.000	99	89560	10.0	10.3	
11 Vinyl chloride	62	1.286	1.286	0.000	97	75315	10.0	10.9	
12 Butadiene	54	1.298	1.298	0.000	96	81448	10.0	11.4	
13 Bromomethane	94	1.522	1.522	0.000	91	33001	10.0	8.89	
15 Chloroethane	64	1.605	1.605	0.000	99	39002	10.0	10.6	
16 Dichlorofluoromethane	67	1.795	1.795	0.000	97	94170	10.0	11.2	
17 Trichlorofluoromethane	101	1.806	1.806	0.000	98	88662	10.0	12.4	
18 Ethyl ether	59	2.079	2.079	0.000	96	402250	50.0	58.4	
19 Acrolein	56	2.209	2.209	0.000	100	363820	250.0	239.4	
21 1,1-Dichloroethene	96	2.268	2.268	0.000	98	400068	50.0	55.5	
22 1,1,2-Trichloro-1,2,2-trif	151	2.292	2.292	0.000	93	217693	50.0	47.5	
24 Acetone	43	2.374	2.374	0.000	100	261931	100.0	87.9	
25 Iodomethane	142	2.422	2.422	0.000	96	625757	50.0	50.4	
26 Carbon disulfide	76	2.457	2.457	0.000	100	1206384	50.0	51.9	
27 3-Chloro-1-propene	76	2.670	2.670	0.000	91	276881	50.0	51.7	
29 Methyl acetate	43	2.729	2.729	0.000	99	736002	100.0	91.1	
30 Methylene Chloride	84	2.824	2.824	0.000	97	479411	50.0	51.3	
31 2-Methyl-2-propanol	59	3.061	3.061	0.000	99	381960	500.0	451.5	
32 trans-1,2-Dichloroethene	96	3.132	3.132	0.000	99	480220	50.0	51.4	
33 Methyl tert-butyl ether	73	3.155	3.155	0.000	99	1011233	50.0	48.7	
34 Acrylonitrile	53	3.167	3.167	0.000	99	1674051	500.0	465.5	
35 Hexane	86	3.487	3.487	0.000	94	130176	50.0	48.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 1,1-Dichloroethane	63	3.735	3.735	0.000	96	810177	50.0	50.2	
39 Vinyl acetate	86	3.889	3.889	0.000	97	74036	50.0	43.6	
41 2,2-Dichloropropane	97	4.682	4.682	0.000	94	109348	50.0	51.1	
42 cis-1,2-Dichloroethene	96	4.717	4.717	0.000	82	531317	50.0	50.5	
43 2-Butanone (MEK)	43	4.824	4.824	0.000	100	404067	100.0	83.8	
46 Chlorobromomethane	128	5.108	5.108	0.000	96	227151	50.0	46.9	
48 Tetrahydrofuran	42	5.167	5.167	0.000	90	279672	100.0	89.7	
49 Chloroform	83	5.273	5.273	0.000	96	684124	50.0	50.8	
50 1,1,1-Trichloroethane	97	5.451	5.451	0.000	99	517205	50.0	52.4	
51 Cyclohexane	56	5.475	5.475	0.000	93	807085	50.0	48.8	
52 Carbon tetrachloride	117	5.652	5.652	0.000	96	462004	50.0	50.0	
53 1,1-Dichloropropene	75	5.676	5.676	0.000	93	574482	50.0	52.2	
54 Benzene	78	5.948	5.948	0.000	98	1768332	50.0	49.7	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	95	517745	50.0	46.2	
55 Isobutyl alcohol	41	6.066	6.066	0.000	95	378947	1250.0	1199.1	
58 n-Heptane	100	6.315	6.315	0.000	66	131144	50.0	46.0	
59 Trichloroethene	130	6.729	6.729	0.000	97	458953	50.0	49.6	
62 Methylcyclohexane	83	6.895	6.895	0.000	92	796186	50.0	51.2	
63 1,2-Dichloropropane	63	6.977	6.977	0.000	96	434426	50.0	47.2	
65 Dibromomethane	93	7.108	7.108	0.000	96	241585	50.0	47.8	
67 1,4-Dioxane	88	7.155	7.155	0.000	96	80938	1000.0	950.4	
68 Dichlorobromomethane	83	7.297	7.297	0.000	98	466960	50.0	50.9	
70 2-Chloroethyl vinyl ether	63	7.640	7.640	0.000	93	464028	100.0	85.0	
71 cis-1,3-Dichloropropene	75	7.747	7.747	0.000	93	594558	50.0	47.3	
73 4-Methyl-2-pentanone (MIBK	43	7.924	7.924	0.000	97	805256	100.0	97.8	
74 Toluene	91	8.031	8.031	0.000	98	1701700	50.0	52.5	
75 trans-1,3-Dichloropropene	75	8.291	8.291	0.000	96	474169	50.0	49.6	
76 Ethyl methacrylate	69	8.386	8.386	0.000	92	435207	50.0	49.2	
77 1,1,2-Trichloroethane	97	8.445	8.445	0.000	89	326749	50.0	50.4	
78 Tetrachloroethene	164	8.528	8.528	0.000	98	323751	50.0	51.6	
79 1,3-Dichloropropane	76	8.587	8.587	0.000	96	545979	50.0	50.0	
80 2-Hexanone	43	8.693	8.693	0.000	97	524783	100.0	99.5	
82 Chlorodibromomethane	129	8.788	8.788	0.000	91	320987	50.0	51.2	
83 Ethylene Dibromide	107	8.871	8.871	0.000	98	323528	50.0	51.6	
85 Chlorobenzene	112	9.308	9.308	0.000	97	1085916	50.0	51.8	
86 1,1,1,2-Tetrachloroethane	131	9.391	9.391	0.000	97	370126	50.0	58.1	
87 Ethylbenzene	106	9.415	9.415	0.000	98	598707	50.0	54.5	
88 m-Xylene & p-Xylene	106	9.510	9.510	0.000	99	714366	50.0	54.1	
89 o-Xylene	106	9.853	9.853	0.000	97	713337	50.0	55.7	
90 Styrene	104	9.876	9.876	0.000	97	1176035	50.0	55.9	
91 Bromoform	173	10.030	10.030	0.000	97	187014	50.0	51.6	
92 Isopropylbenzene	105	10.172	10.172	0.000	95	1715507	50.0	57.8	
94 Bromobenzene	156	10.421	10.421	0.000	97	432374	50.0	48.8	
95 1,1,2,2-Tetrachloroethane	83	10.456	10.456	0.000	95	395283	50.0	52.9	
96 1,2,3-Trichloropropane	110	10.492	10.492	0.000	85	119666	50.0	49.7	
97 trans-1,4-Dichloro-2-buten	53	10.504	10.504	0.000	81	130602	50.0	47.1	
98 N-Propylbenzene	120	10.527	10.527	0.000	99	510386	50.0	53.7	
99 2-Chlorotoluene	126	10.586	10.586	0.000	97	415137	50.0	52.0	
100 1,3,5-Trimethylbenzene	105	10.681	10.681	0.000	96	1352950	50.0	55.5	
101 4-Chlorotoluene	126	10.693	10.693	0.000	98	430417	50.0	52.4	
103 tert-Butylbenzene	119	10.953	10.953	0.000	92	1200072	50.0	55.0	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	96	1379341	50.0	54.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
107 sec-Butylbenzene	105	11.131	11.131	0.000	94	1753067	50.0	56.2	
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	98	771740	50.0	48.8	
109 4-Isopropyltoluene	119	11.261	11.261	0.000	97	1452033	50.0	55.4	
110 1,4-Dichlorobenzene	146	11.296	11.296	0.000	95	790848	50.0	49.0	
113 n-Butylbenzene	91	11.604	11.604	0.000	97	1316517	50.0	56.0	
114 1,2-Dichlorobenzene	146	11.616	11.616	0.000	99	732521	50.0	51.2	
115 1,2-Dibromo-3-Chloropropan	157	12.279	12.279	0.000	83	60858	50.0	39.3	
117 1,2,4-Trichlorobenzene	180	12.953	12.953	0.000	96	451173	50.0	45.2	
118 Hexachlorobutadiene	225	13.095	13.095	0.000	97	213623	50.0	46.0	
119 Naphthalene	128	13.166	13.166	0.000	96	1134530	50.0	45.4	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	96	425869	50.0	45.1	
S 134 Xylenes, Total	106				0		100.0	109.8	
S 135 Trihalomethanes, Total	1				0		200.0	204.4	
S 157 Total BTEX	1				0		250.0	266.4	

Reagents:

VMRPRIMW_00309	Amount Added:	5.00	Units: uL	
VMRGAS_00270	Amount Added:	1.00	Units: uL	
VMAROLISTDW_00273	Amount Added:	5.00	Units: uL	
VM250SS_00050	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00132	Amount Added:	0.00	Units:	Run Reagent
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00010	Amount Added:	0.00	Units:	Run Reagent

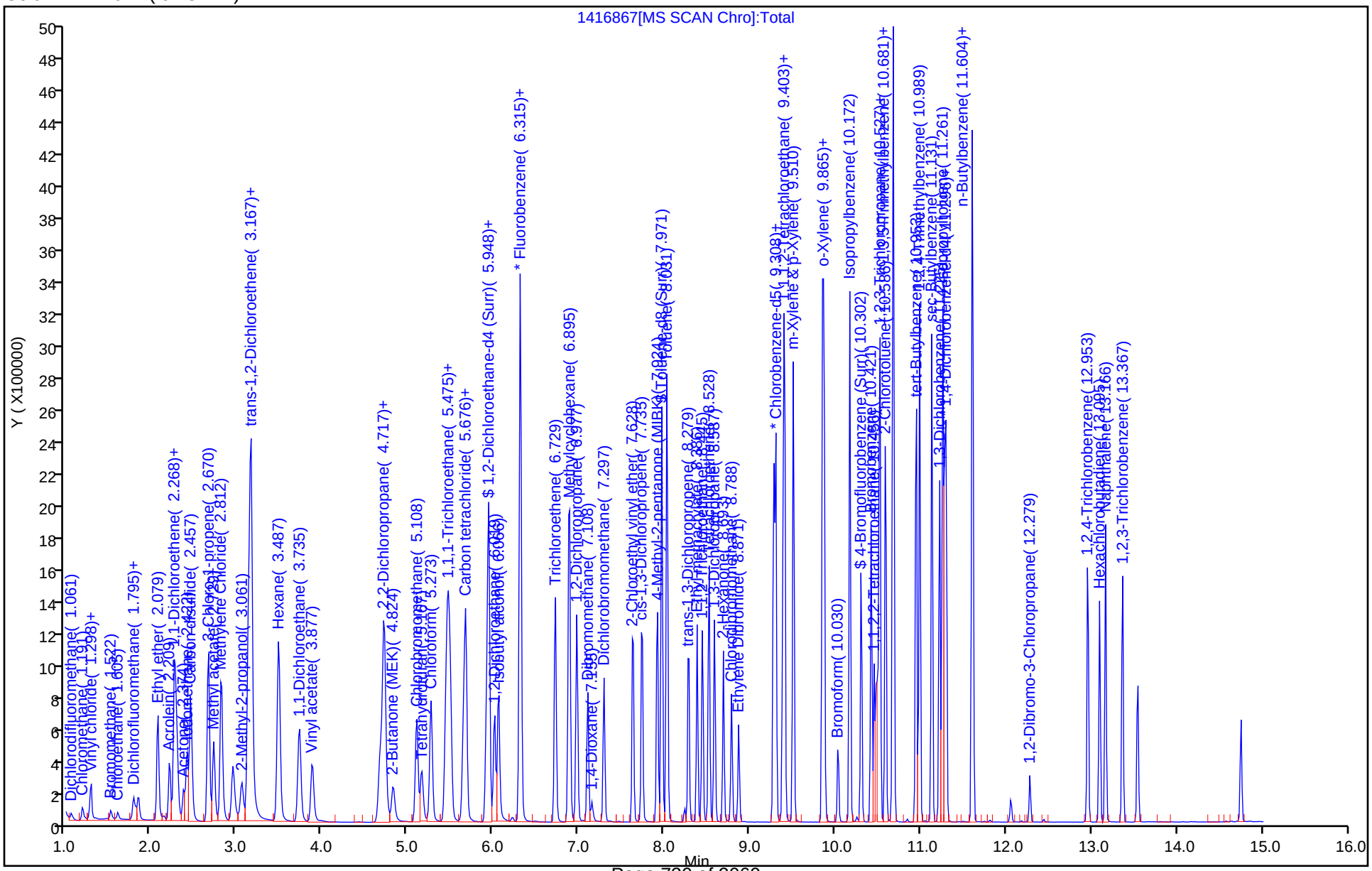
Report Date: 20-Nov-2018 09:43:38 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416867.D

Injection Date:	19-Nov-2018 09:49:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	CCVIS			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-356055/14 Calibration Date: 11/19/2018 13:46

Instrument ID: A3UX14 Calib Start Date: 11/16/2018 16:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/16/2018 19:51

Lab File ID: 1416878.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2651	0.2161		0.0408	0.0500	-18.5	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2992	0.2294		0.0383	0.0500	-23.3	30.0
Toluene-d8 (Surr)	Ave	1.449	1.375		0.0474	0.0500	-5.1	30.0
4-Bromofluorobenzene (Surr)	Ave	1.112	1.039		0.0467	0.0500	-6.6	30.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416878.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 19-Nov-2018 13:46:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icv
Misc. Info.: 240-0082085-014
Operator ID: 002808 Instrument ID: A3UX14
Sublist:

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 14:12:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1345960	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	882023	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.285	11.285	0.000	98	384870	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	93	290844	50.0	40.8	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.912	5.924	-0.012	94	308744	50.0	38.3	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	1213045	50.0	47.4	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	399729	50.0	46.7	
28 Acetonitrile	41	2.694	2.694	0.000	99	437836	500.0	450.1	
37 2-Chloro-1,3-butadiene	53	3.854	3.853	0.001	92	641028	50.0	55.0	
38 Isopropyl ether	87	3.877	3.877	0.000	95	346331	50.0	52.6	
40 Tert-butyl ethyl ether	59	4.504	4.504	0.000	99	1127741	50.0	50.0	
45 Ethyl acetate	43	4.954	4.954	0.000	99	732094	100.0	97.6	
44 Propionitrile	54	4.954	4.954	0.000	99	535972	500.0	481.3	
47 Methacrylonitrile	41	5.155	5.155	0.000	95	2446850	500.0	474.8	
57 Tert-amyl methyl ether	73	6.137	6.137	0.000	92	1097054	50.0	49.0	
60 n-Butanol	56	6.824	6.824	0.000	90	260477	1250.0	1232.9	
61 Ethyl acrylate	55	6.942	6.942	0.000	100	432943	50.0	50.8	
66 Methyl methacrylate	41	7.167	7.167	0.000	95	666707	100.0	102.6	
69 2-Nitropropane	41	7.557	7.557	0.000	98	146674	100.0	81.6	
81 n-Butyl acetate	43	8.811	8.811	0.000	98	552930	50.0	50.0	
84 1-Chlorohexane	91	9.308	9.308	0.000	83	495676	50.0	56.5	
93 Cyclohexanone	55	10.267	10.267	0.000	94	111996	500.0	478.3	
104 Pentachloroethane	167	10.965	10.965	0.000	90	372303	100.0	108.5	
111 1,2,3-Trimethylbenzene	105	11.344	11.344	0.000	98	1237245	50.0	56.6	
112 Benzyl chloride	126	11.427	11.427	0.000	100	111968	50.0	41.5	
116 1,3,5-Trichlorobenzene	180	12.444	12.444	0.000	98	441839	50.0	52.2	
121 2-Methylnaphthalene	142	14.065	14.065	0.000	94	1369562	100.0	96.7	

Reagents:

VMFASA9W_00209	Amount Added:	5.00	Units: uL	
VM250SS_00050	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00132	Amount Added:	0.00	Units:	Run Reagent
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00010	Amount Added:	0.00	Units:	Run Reagent

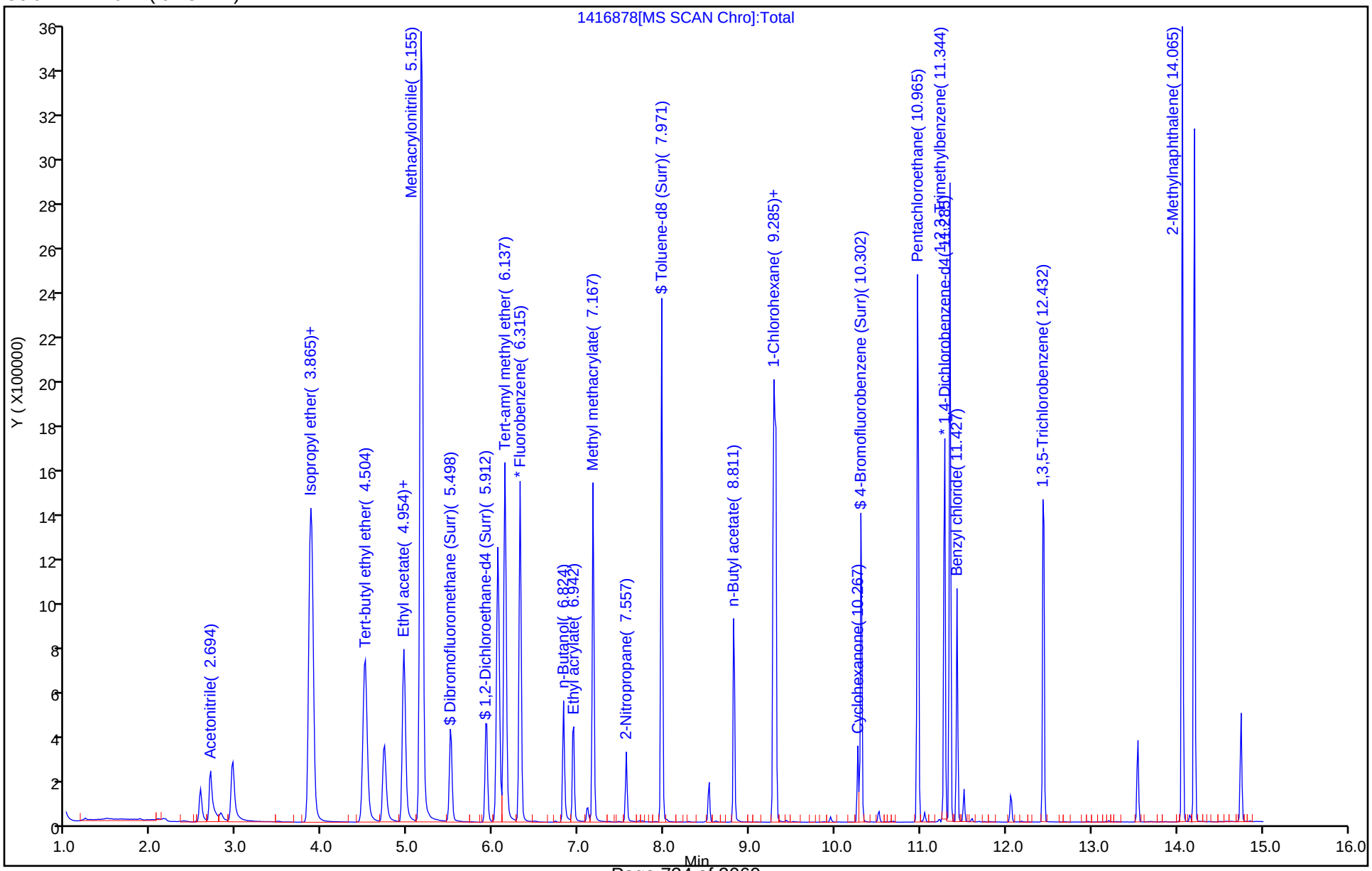
Report Date: 20-Nov-2018 09:44:07 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416878.D

Injection Date:	19-Nov-2018 13:46:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	icv			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-356055/14 Calibration Date: 11/19/2018 13:46

Instrument ID: A3UX14 Calib Start Date: 11/19/2018 10:32

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/19/2018 13:24

Lab File ID: 1416878.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0361	0.0325		0.450	0.500	-10.0	30.0
2-Chloro-1,3-butadiene	Ave	0.4328	0.4763		0.0550	0.0500	10.1	30.0
Diisopropyl ether	Ave	0.2447	0.2573		0.0526	0.0500	5.2	30.0
Ethyl t-butyl ether	Ave	0.8384	0.8379		0.0500	0.0500	-0.0	30.0
Ethyl acetate	Ave	0.2787	0.2720		0.0976	0.100	-2.4	50.0
Propionitrile	Ave	0.0414	0.0398		0.481	0.500	-3.7	30.0
Methacrylonitrile	Ave	0.1914	0.1818		0.475	0.500	-5.0	30.0
Tert-amyl methyl ether	Ave	0.8310	0.8151		0.0490	0.0500	-1.9	30.0
n-Butanol	Ave	0.0120	0.0118		1.23	1.25	-1.4	30.0
Ethyl acrylate	Ave	0.3166	0.3217		0.0508	0.0500	1.6	30.0
Methyl methacrylate	Ave	0.2415	0.2477		0.103	0.100	2.6	30.0
2-Nitropropane	Lin1		0.0545		0.0816	0.100	-18.4	30.0
n-Butyl acetate	Ave	0.6271	0.6269		0.0500	0.0500	-0.0	30.0
1-Chlorohexane	Ave	0.4971	0.5620		0.0565	0.0500	13.0	30.0
Cyclohexanone	Ave	0.0133	0.0127		0.478	0.500	-4.3	30.0
Pentachloroethane	Lin1		0.4837		0.109	0.100	8.5	30.0
1,2,3-Trimethylbenzene	Ave	2.840	3.215		0.0566	0.0500	13.2	30.0
Benzyl chloride	Lin1		0.2909		0.0415	0.0500	-17.1	30.0
1,3,5-Trichlorobenzene	Ave	1.100	1.148		0.0522	0.0500	4.4	30.0
2-Methylnaphthalene	Ave	1.840	1.779		0.0967	0.100	-3.3	30.0

Report Date: 20-Nov-2018 09:44:07 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416878.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 19-Nov-2018 13:46:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: icv
Misc. Info.: 240-0082085-014
Operator ID: 002808 Instrument ID: A3UX14
Sublist:

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 14:12:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1345960	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	882023	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.285	11.285	0.000	98	384870	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	93	290844	50.0	40.8	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.912	5.924	-0.012	94	308744	50.0	38.3	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	1213045	50.0	47.4	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	399729	50.0	46.7	
28 Acetonitrile	41	2.694	2.694	0.000	99	437836	500.0	450.1	
37 2-Chloro-1,3-butadiene	53	3.854	3.853	0.001	92	641028	50.0	55.0	
38 Isopropyl ether	87	3.877	3.877	0.000	95	346331	50.0	52.6	
40 Tert-butyl ethyl ether	59	4.504	4.504	0.000	99	1127741	50.0	50.0	
45 Ethyl acetate	43	4.954	4.954	0.000	99	732094	100.0	97.6	
44 Propionitrile	54	4.954	4.954	0.000	99	535972	500.0	481.3	
47 Methacrylonitrile	41	5.155	5.155	0.000	95	2446850	500.0	474.8	
57 Tert-amyl methyl ether	73	6.137	6.137	0.000	92	1097054	50.0	49.0	
60 n-Butanol	56	6.824	6.824	0.000	90	260477	1250.0	1232.9	
61 Ethyl acrylate	55	6.942	6.942	0.000	100	432943	50.0	50.8	
66 Methyl methacrylate	41	7.167	7.167	0.000	95	666707	100.0	102.6	
69 2-Nitropropane	41	7.557	7.557	0.000	98	146674	100.0	81.6	
81 n-Butyl acetate	43	8.811	8.811	0.000	98	552930	50.0	50.0	
84 1-Chlorohexane	91	9.308	9.308	0.000	83	495676	50.0	56.5	
93 Cyclohexanone	55	10.267	10.267	0.000	94	111996	500.0	478.3	
104 Pentachloroethane	167	10.965	10.965	0.000	90	372303	100.0	108.5	
111 1,2,3-Trimethylbenzene	105	11.344	11.344	0.000	98	1237245	50.0	56.6	
112 Benzyl chloride	126	11.427	11.427	0.000	100	111968	50.0	41.5	
116 1,3,5-Trichlorobenzene	180	12.444	12.444	0.000	98	441839	50.0	52.2	
121 2-Methylnaphthalene	142	14.065	14.065	0.000	94	1369562	100.0	96.7	

Reagents:

VMFASA9W_00209	Amount Added:	5.00	Units: uL	
VM250SS_00050	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00132	Amount Added:	0.00	Units:	Run Reagent
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00010	Amount Added:	0.00	Units:	Run Reagent

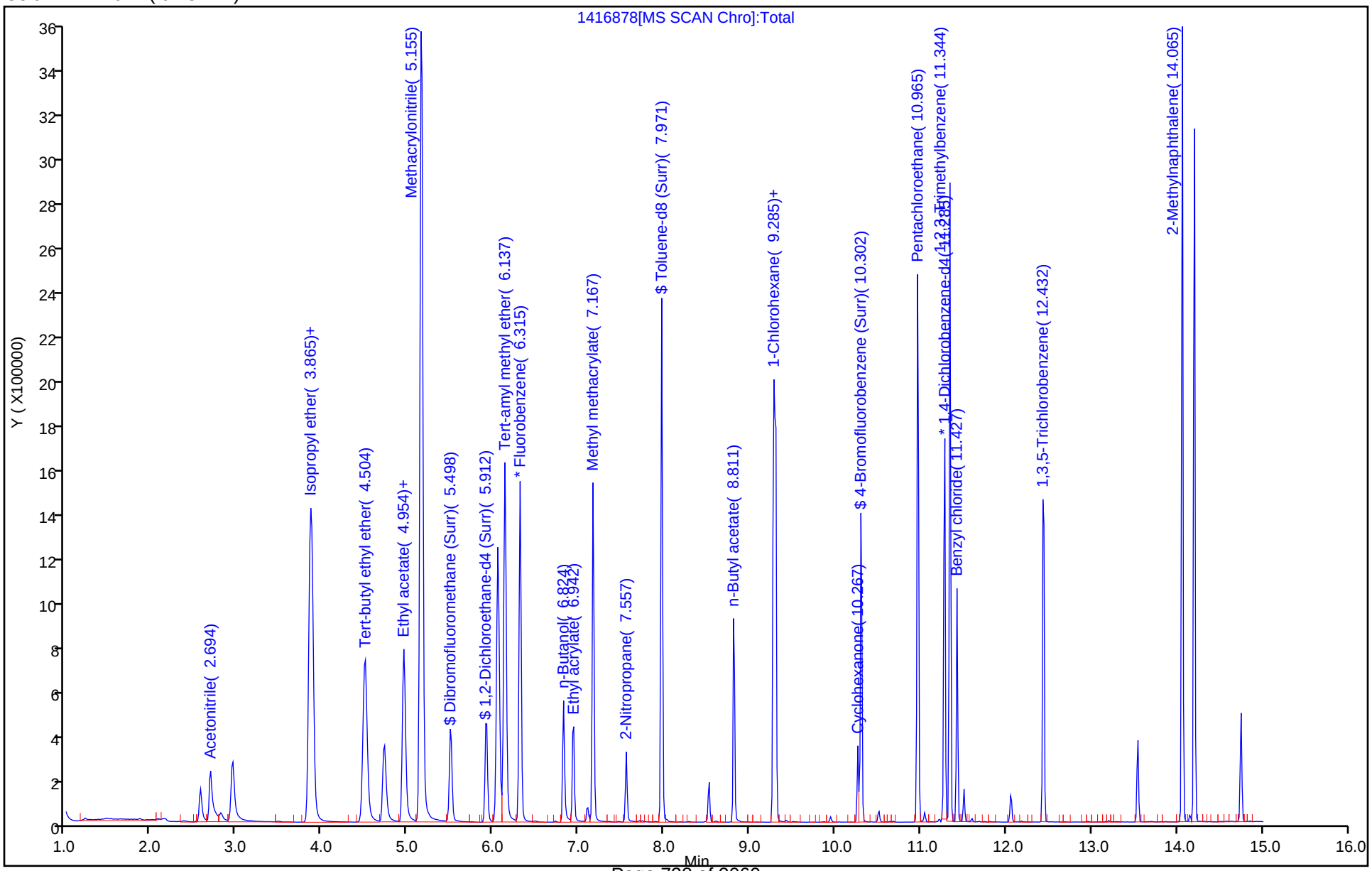
Report Date: 20-Nov-2018 09:44:07 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416878.D

Injection Date:	19-Nov-2018 13:46:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	icv			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-337917/14 Calibration Date: 07/25/2018 15:37

Instrument ID: A3UX19 Calib Start Date: 07/24/2018 17:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 07/24/2018 20:04

Lab File ID: U1900808.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2589	0.2758		0.0213	0.0200	6.5	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2744	0.2888		0.0211	0.0200	5.3	30.0
Toluene-d8 (Surr)	Ave	1.204	1.258		0.0209	0.0200	4.5	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4627	0.4749		0.0205	0.0200	2.6	30.0

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900808.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 25-Jul-2018 15:37:29 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078311-014
Operator ID: 001904 Instrument ID: A3UX19
Sublist:

Method: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 16:30:24 Calib Date: 25-Jul-2018 15:15:13
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900807.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	882991	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	707956	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	83	413254	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	84	243481	20.0	21.3	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.357	-0.012	96	255028	20.0	21.1	
$ 6 Toluene-d8 (Surr)	98	7.100	7.100	0.000	93	890649	20.0	20.9	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	90	336222	20.0	20.5	
25 Acetonitrile	41	3.329	3.329	0.000	100	288916	200.0	164.3	
36 Isopropyl ether	87	4.171	4.171	0.000	94	210236	20.0	20.6	
37 2-Chloro-1,3-butadiene	53	4.195	4.195	0.000	86	354575	20.0	20.2	
38 Tert-butyl ethyl ether	59	4.492	4.491	0.001	97	657887	20.0	20.5	
42 Ethyl acetate	43	4.681	4.681	0.000	96	486199	40.0	36.6	
43 Propionitrile	54	4.681	4.681	0.000	59	348995	200.0	193.9	
44 Methacrylonitrile	41	4.824	4.823	0.001	91	1700375	200.0	210.7	
55 Tert-amyl methyl ether	73	5.500	5.499	0.001	91	691178	20.0	20.3	
57 n-Butanol	56	5.891	5.891	0.000	85	188747	500.0	456.8	
59 Ethyl acrylate	55	6.057	6.057	0.000	99	329918	20.0	20.2	
62 Methyl methacrylate	41	6.270	6.270	0.000	91	440657	40.0	40.6	
66 2-Nitropropane	41	6.638	6.638	0.000	98	128315	40.0	40.0	
78 n-Butyl acetate	43	7.883	7.883	0.000	99	386791	20.0	20.4	
81 1-Chlorohexane	91	8.488	8.488	0.000	74	315130	20.0	19.3	
90 Cyclohexanone	55	9.615	9.614	0.000	91	97723	200.0	202.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
100 Pentachloroethane	167	10.492	10.492	0.000	86	279031	40.0	39.0	
106 1,2,3-Trimethylbenzene	105	10.966	10.966	0.000	86	994788	20.0	21.2	
107 Benzyl chloride	91	11.049	11.049	0.000	97	499238	20.0	18.8	
111 1,3,5-Trichlorobenzene	180	12.354	12.354	0.000	97	414514	20.0	19.6	
116 2-Methylnaphthalene	142	14.619	14.619	0.000	89	1147583	40.0	38.8	

Reagents:

VMFASA9W_00194	Amount Added: 16.00	Units: uL	
vm50ss_stk_00077	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00121	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00001	Amount Added: 2.00	Units: uL	Run Reagent

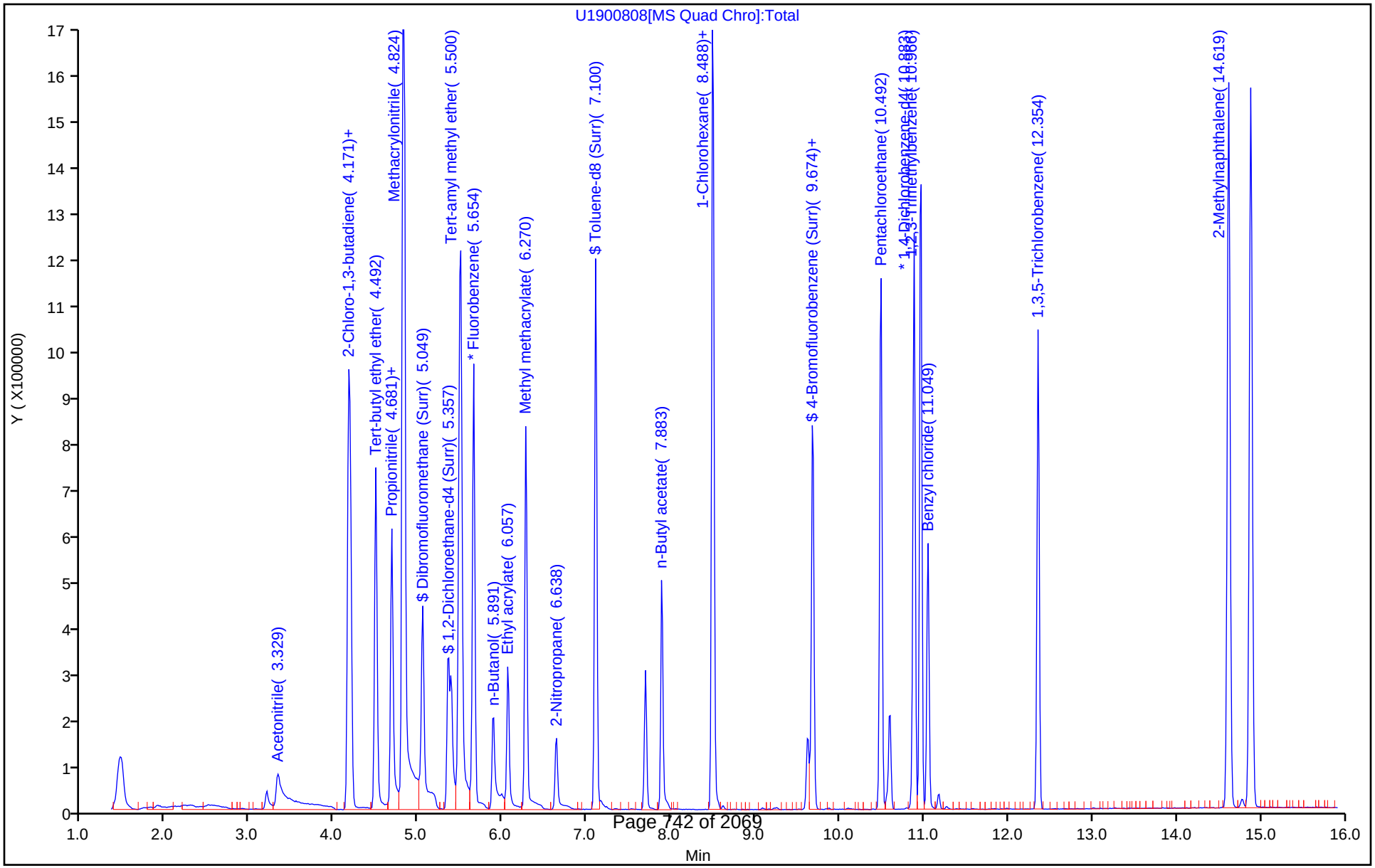
Report Date: 25-Jul-2018 16:30:33 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900808.d

Injection Date:	25-Jul-2018 15:37:29	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	ICV			Worklist Smp#:	14
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-337917/14 Calibration Date: 07/25/2018 15:37

Instrument ID: A3UX19 Calib Start Date: 07/25/2018 13:24

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 07/25/2018 15:15

Lab File ID: U1900808.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Lin1		0.0327		0.164	0.200	-17.8	30.0
Diisopropyl ether	Ave	0.2313	0.2381		0.0206	0.0200	3.0	30.0
2-Chloro-1,3-butadiene	Ave	0.3979	0.4016		0.0202	0.0200	0.9	30.0
Ethyl t-butyl ether	Ave	0.7258	0.7451		0.0205	0.0200	2.7	30.0
Ethyl acetate	Ave	0.3007	0.2753		0.0366	0.0400	-8.5	50.0
Propionitrile	Ave	0.0408	0.0395		0.194	0.200	-3.0	30.0
Methacrylonitrile	Ave	0.1828	0.1926		0.211	0.200	5.3	30.0
Tert-amyl methyl ether	Ave	0.7700	0.7828		0.0203	0.0200	1.7	30.0
n-Butanol	Ave	0.0094	0.0086		0.457	0.500	-8.6	30.0
Ethyl acrylate	Ave	0.3703	0.3736		0.0202	0.0200	0.9	30.0
Methyl methacrylate	Ave	0.2459	0.2495		0.0406	0.0400	1.5	30.0
2-Nitropropane	Ave	0.0726	0.0727		0.0400	0.0400	0.1	30.0
n-Butyl acetate	Ave	0.5364	0.5464		0.0204	0.0200	1.9	30.0
1-Chlorohexane	Ave	0.4610	0.4451		0.0193	0.0200	-3.4	30.0
Cyclohexanone	Ave	0.0137	0.0138		0.202	0.200	1.0	30.0
Pentachloroethane	Ave	0.3462	0.3376		0.0390	0.0400	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.276	2.407		0.0212	0.0200	5.8	30.0
Benzyl chloride	Ave	1.286	1.208		0.0188	0.0200	-6.1	30.0
1,3,5-Trichlorobenzene	Ave	1.021	1.003		0.0196	0.0200	-1.8	30.0
2-Methylnaphthalene	Ave	1.433	1.388		0.0388	0.0400	-3.1	30.0

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900808.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 25-Jul-2018 15:37:29 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0078311-014
Operator ID: 001904 Instrument ID: A3UX19
Sublist:

Method: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 25-Jul-2018 16:30:24 Calib Date: 25-Jul-2018 15:15:13
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900807.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK026

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	882991	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	82	707956	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	83	413254	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	84	243481	20.0	21.3	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.345	5.357	-0.012	96	255028	20.0	21.1	
$ 6 Toluene-d8 (Surr)	98	7.100	7.100	0.000	93	890649	20.0	20.9	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	90	336222	20.0	20.5	
25 Acetonitrile	41	3.329	3.329	0.000	100	288916	200.0	164.3	
36 Isopropyl ether	87	4.171	4.171	0.000	94	210236	20.0	20.6	
37 2-Chloro-1,3-butadiene	53	4.195	4.195	0.000	86	354575	20.0	20.2	
38 Tert-butyl ethyl ether	59	4.492	4.491	0.001	97	657887	20.0	20.5	
42 Ethyl acetate	43	4.681	4.681	0.000	96	486199	40.0	36.6	
43 Propionitrile	54	4.681	4.681	0.000	59	348995	200.0	193.9	
44 Methacrylonitrile	41	4.824	4.823	0.001	91	1700375	200.0	210.7	
55 Tert-amyl methyl ether	73	5.500	5.499	0.001	91	691178	20.0	20.3	
57 n-Butanol	56	5.891	5.891	0.000	85	188747	500.0	456.8	
59 Ethyl acrylate	55	6.057	6.057	0.000	99	329918	20.0	20.2	
62 Methyl methacrylate	41	6.270	6.270	0.000	91	440657	40.0	40.6	
66 2-Nitropropane	41	6.638	6.638	0.000	98	128315	40.0	40.0	
78 n-Butyl acetate	43	7.883	7.883	0.000	99	386791	20.0	20.4	
81 1-Chlorohexane	91	8.488	8.488	0.000	74	315130	20.0	19.3	
90 Cyclohexanone	55	9.615	9.614	0.000	91	97723	200.0	202.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
100 Pentachloroethane	167	10.492	10.492	0.000	86	279031	40.0	39.0	
106 1,2,3-Trimethylbenzene	105	10.966	10.966	0.000	86	994788	20.0	21.2	
107 Benzyl chloride	91	11.049	11.049	0.000	97	499238	20.0	18.8	
111 1,3,5-Trichlorobenzene	180	12.354	12.354	0.000	97	414514	20.0	19.6	
116 2-Methylnaphthalene	142	14.619	14.619	0.000	89	1147583	40.0	38.8	

Reagents:

VMFASA9W_00194	Amount Added: 16.00	Units: uL	
vm50ss_stk_00077	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00121	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00001	Amount Added: 2.00	Units: uL	Run Reagent

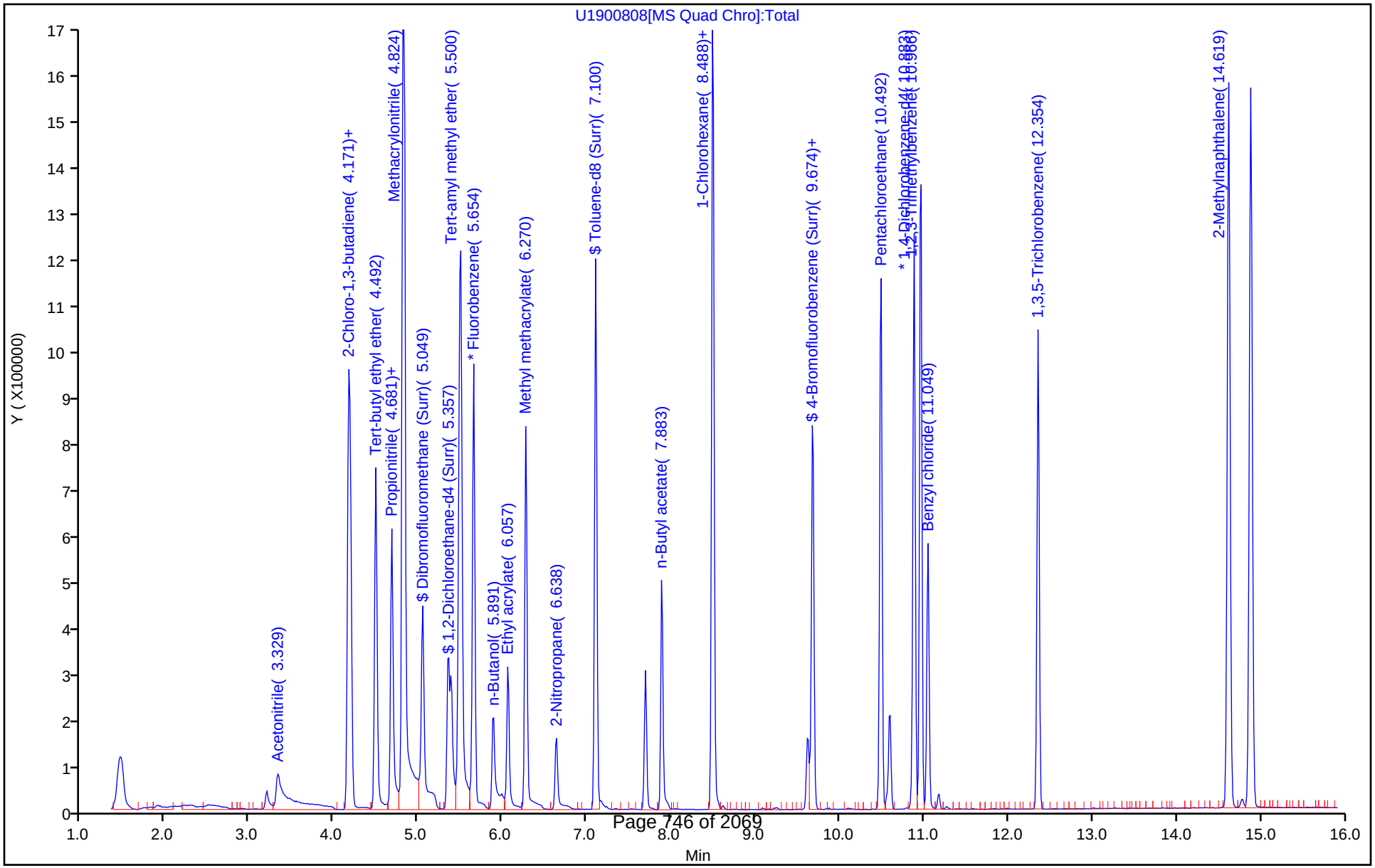
Report Date: 25-Jul-2018 16:30:33 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900808.d

Injection Date:	25-Jul-2018 15:37:29	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	ICV			Worklist Smp#:	14
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-342719/14 Calibration Date: 08/27/2018 19:45

Instrument ID: A3UX19 Calib Start Date: 08/27/2018 17:09

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/27/2018 19:23

Lab File ID: U1901330.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3850	0.2913	0.1000	0.0151	0.0200	-24.3	30.0
Chloromethane	Ave	0.2883	0.2492	0.1000	0.0173	0.0200	-13.6	30.0
Butadiene	Ave	0.2887	0.2477		0.0172	0.0200	-14.2	30.0
Vinyl chloride	Ave	0.2980	0.2874	0.1000	0.0193	0.0200	-3.5	30.0
Bromomethane	Ave	0.2335	0.2187	0.0500	0.0187	0.0200	-6.3	30.0
Chloroethane	Ave	0.1848	0.1799	0.0500	0.0195	0.0200	-2.7	30.0
Dichlorofluoromethane	Ave	0.4581	0.4762		0.0208	0.0200	3.9	30.0
Trichlorofluoromethane	Ave	0.4984	0.5062	0.1000	0.0203	0.0200	1.6	30.0
Ethyl ether	Ave	0.1800	0.1933		0.0215	0.0200	7.4	30.0
Acrolein	Ave	0.0445	0.0361		0.0812	0.100	-18.8	50.0
1,1-Dichloroethene	Ave	0.3589	0.3889	0.1000	0.0217	0.0200	8.3	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2567	0.2852	0.0500	0.0222	0.0200	11.1	30.0
Acetone	Ave	0.0784	0.0730	0.0100	0.0372	0.0400	-6.9	50.0
Iodomethane	Ave	0.4655	0.4827		0.0207	0.0200	3.7	30.0
Carbon disulfide	Ave	0.7515	0.7522	0.1000	0.0200	0.0200	0.0	30.0
3-Chloro-1-propene	Ave	0.3541	0.3611		0.0204	0.0200	2.0	30.0
Methyl acetate	Ave	0.2328	0.2202	0.1000	0.0378	0.0400	-5.4	30.0
Methylene Chloride	Ave	0.2846	0.2847	0.1000	0.0200	0.0200	0.0	50.0
tert-Butyl alcohol (TBA)	Ave	0.0271	0.0283		0.209	0.200	4.3	50.0
Acrylonitrile	Ave	0.1006	0.1020		0.203	0.200	1.4	30.0
Methyl tert-butyl ether	Ave	0.6938	0.7063	0.1000	0.0204	0.0200	1.8	30.0
trans-1,2-Dichloroethene	Ave	0.3387	0.3554	0.1000	0.0210	0.0200	4.9	30.0
Hexane	Ave	0.3524	0.3872		0.0220	0.0200	9.9	30.0
1,1-Dichloroethane	Ave	0.4048	0.4171	0.2000	0.0206	0.0200	3.0	30.0
Vinyl acetate	Ave	0.4639	0.5080		0.0219	0.0200	9.5	50.0
2,2-Dichloropropane	Ave	0.2438	0.2691		0.0221	0.0200	10.4	30.0
2-Butanone (MEK)	Ave	0.0472	0.0464	0.0100	0.0393	0.0400	-1.8	30.0
cis-1,2-Dichloroethene	Ave	0.2891	0.2867	0.1000	0.0198	0.0200	-0.8	30.0
Bromochloromethane	Ave	0.1945	0.1891		0.0194	0.0200	-2.8	30.0
Tetrahydrofuran	Lin1		0.1082		0.0418	0.0400	4.6	30.0
Chloroform	Ave	0.4433	0.4563	0.2000	0.0206	0.0200	2.9	30.0
1,1,1-Trichloroethane	Ave	0.4174	0.4498	0.1000	0.0216	0.0200	7.8	30.0
Cyclohexane	Ave	0.3819	0.4119	0.1000	0.0216	0.0200	7.8	30.0
1,1-Dichloropropene	Ave	0.3519	0.3667		0.0208	0.0200	4.2	30.0
Carbon tetrachloride	Ave	0.4023	0.4240	0.1000	0.0211	0.0200	5.4	30.0
Isobutyl alcohol	Ave	0.0110	0.0112		0.508	0.500	1.6	30.0
1,2-Dichloroethane	Ave	0.3600	0.3604	0.1000	0.0200	0.0200	0.1	30.0
Benzene	Ave	0.9518	0.9713	0.5000	0.0204	0.0200	2.1	30.0
n-Heptane	Lin1		0.2300		0.0213	0.0200	6.3	30.0
Trichloroethene	Ave	0.3160	0.3196	0.1500	0.0202	0.0200	1.1	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-342719/14 Calibration Date: 08/27/2018 19:45

Instrument ID: A3UX19 Calib Start Date: 08/27/2018 17:09

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/27/2018 19:23

Lab File ID: U1901330.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4590	0.4761	0.1000	0.0207	0.0200	3.7	30.0
1,2-Dichloropropane	Ave	0.2208	0.2306	0.1000	0.0209	0.0200	4.5	30.0
Dibromomethane	Ave	0.2271	0.2193		0.0193	0.0200	-3.4	30.0
1,4-Dioxane	Ave	0.0024	0.0028		0.474	0.400	18.4	50.0
Bromodichloromethane	Ave	0.3479	0.3495	0.1500	0.0201	0.0200	0.4	30.0
2-Chloroethyl vinyl ether	Ave	0.1770	0.1822		0.0206	0.0200	2.9	30.0
cis-1,3-Dichloropropene	Ave	0.3865	0.4060	0.1500	0.0210	0.0200	5.1	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3203	0.3230	0.0500	0.0403	0.0400	0.8	30.0
Toluene	Ave	1.352	1.362	0.4000	0.0201	0.0200	0.7	30.0
trans-1,3-Dichloropropene	Ave	0.4818	0.4613	0.1000	0.0191	0.0200	-4.3	30.0
Ethyl methacrylate	Ave	0.4344	0.4432		0.0204	0.0200	2.0	30.0
1,1,2-Trichloroethane	Ave	0.2842	0.2905	0.1000	0.0204	0.0200	2.2	30.0
Tetrachloroethene	Ave	0.4313	0.4447	0.1500	0.0206	0.0200	3.1	30.0
1,3-Dichloropropane	Ave	0.4802	0.4738		0.0197	0.0200	-1.3	30.0
2-Hexanone	Ave	0.3149	0.3202	0.0500	0.0407	0.0400	1.7	30.0
Dibromochloromethane	Ave	0.3583	0.3632		0.0203	0.0200	1.3	30.0
1,2-Dibromoethane	Ave	0.3346	0.3230		0.0193	0.0200	-3.5	30.0
Chlorobenzene	Ave	0.9253	0.9231	0.3000	0.0200	0.0200	-0.2	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3336	0.3465		0.0208	0.0200	3.9	30.0
Ethylbenzene	Ave	0.4836	0.4959		0.0205	0.0200	2.5	30.0
m-Xylene & p-Xylene	Ave	0.5890	0.6110		0.0207	0.0200	3.7	30.0
o-Xylene	Ave	0.5597	0.5768		0.0206	0.0200	3.1	30.0
Styrene	Ave	0.9588	0.9701	0.3000	0.0202	0.0200	1.2	30.0
Bromoform	Ave	0.2933	0.2923	0.1000	0.0199	0.0200	-0.3	30.0
Isopropylbenzene	Ave	1.503	1.583	0.1000	0.0211	0.0200	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7706	0.7768	0.3000	0.0202	0.0200	0.8	30.0
Bromobenzene	Ave	0.7690	0.7545		0.0196	0.0200	-1.9	30.0
1,2,3-Trichloropropane	Ave	0.2921	0.3010		0.0206	0.0200	3.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.2737	0.2785		0.0203	0.0200	1.7	30.0
N-Propylbenzene	Ave	0.7729	0.7998		0.0207	0.0200	3.5	30.0
2-Chlorotoluene	Ave	0.6541	0.6592		0.0202	0.0200	0.8	30.0
1,3,5-Trimethylbenzene	Ave	2.225	2.303		0.0207	0.0200	3.5	30.0
4-Chlorotoluene	Ave	0.7072	0.7078		0.0200	0.0200	0.0	30.0
tert-Butylbenzene	Ave	2.113	2.203		0.0209	0.0200	4.3	30.0
1,2,4-Trimethylbenzene	Ave	2.256	2.278		0.0202	0.0200	1.0	30.0
sec-Butylbenzene	Ave	2.845	3.009		0.0212	0.0200	5.8	30.0
1,3-Dichlorobenzene	Ave	1.412	1.370	0.6000	0.0194	0.0200	-3.0	30.0
p-Isopropyltoluene	Ave	2.492	2.628		0.0211	0.0200	5.5	30.0
1,4-Dichlorobenzene	Ave	1.459	1.395	0.5000	0.0191	0.0200	-4.4	30.0
n-Butylbenzene	Ave	2.050	2.114		0.0206	0.0200	3.1	30.0
1,2-Dichlorobenzene	Ave	1.282	1.257	0.4000	0.0196	0.0200	-2.0	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-342719/14 Calibration Date: 08/27/2018 19:45

Instrument ID: A3UX19 Calib Start Date: 08/27/2018 17:09

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/27/2018 19:23

Lab File ID: U1901330.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.2450	0.2412	0.0500	0.0197	0.0200	-1.6	50.0
1,2,4-Trichlorobenzene	Ave	0.8550	0.8004	0.2000	0.0187	0.0200	-6.4	50.0
Hexachlorobutadiene	Ave	0.4392	0.4373		0.0199	0.0200	-0.4	30.0
Naphthalene	Ave	2.363	2.262		0.0191	0.0200	-4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7677	0.7284		0.0190	0.0200	-5.1	30.0
Dibromofluoromethane (Surr)	Ave	0.2692	0.2770		0.0206	0.0200	2.9	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3092	0.3266		0.0211	0.0200	5.6	30.0
Toluene-d8 (Surr)	Ave	1.199	1.238		0.0206	0.0200	3.2	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4513	0.4759		0.0211	0.0200	5.5	30.0

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901330.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 27-Aug-2018 19:45:31 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info:
Operator ID: 001904 Instrument ID: A3UX19
Sublist:

Method: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 27-Aug-2018 21:12:05 Calib Date: 27-Aug-2018 19:23:28
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	96	955207	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	765531	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	87	424750	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	59	264542	20.0	20.6	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.345	0.012	100	311954	20.0	21.1	
$ 6 Toluene-d8 (Surr)	98	7.100	7.101	0.000	86	947747	20.0	20.6	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.674	0.000	89	364329	20.0	21.1	
9 Dichlorodifluoromethane	85	1.610	1.610	0.000	88	278240	20.0	15.1	
10 Chloromethane	50	1.823	1.812	0.011	78	238040	20.0	17.3	
12 Butadiene	54	1.906	1.906	0.000	87	236605	20.0	17.2	
11 Vinyl chloride	62	1.930	1.918	0.012	82	274549	20.0	19.3	
13 Bromomethane	94	2.227	2.227	0.000	92	208903	20.0	18.7	
14 Chloroethane	64	2.298	2.298	0.000	95	171871	20.0	19.5	
15 Dichlorofluoromethane	67	2.511	2.499	0.012	83	454821	20.0	20.8	
16 Trichlorofluoromethane	101	2.582	2.582	0.000	88	483563	20.0	20.3	
17 Ethyl ether	59	2.808	2.808	0.000	90	184629	20.0	21.5	
18 Acrolein	56	2.926	2.926	0.000	94	172494	100.0	81.2	
21 1,1-Dichloroethene	61	3.045	3.045	0.000	89	371471	20.0	21.7	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.057	0.000	81	272453	20.0	22.2	
22 Acetone	43	3.068	3.069	-0.001	72	139402	40.0	37.2	
23 Iodomethane	142	3.199	3.199	0.000	99	461057	20.0	20.7	
24 Carbon disulfide	76	3.258	3.258	0.000	99	718482	20.0	20.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
26 3-Chloro-1-propene	41	3.365	3.365	0.000	74	344875	20.0	20.4	
27 Methyl acetate	43	3.377	3.377	0.000	96	420737	40.0	37.8	
28 Methylene Chloride	49	3.484	3.495	-0.011	55	271908	20.0	20.0	
29 2-Methyl-2-propanol	59	3.578	3.567	0.011	87	269854	200.0	208.6	
30 Acrylonitrile	53	3.697	3.685	0.012	98	973795	200.0	202.8	
32 trans-1,2-Dichloroethene	61	3.733	3.721	0.012	68	339431	20.0	21.0	
31 Methyl tert-butyl ether	73	3.733	3.733	0.000	89	674668	20.0	20.4	
33 Hexane	57	3.982	3.982	0.000	92	369879	20.0	22.0	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	85	398379	20.0	20.6	
35 Vinyl acetate	43	4.148	4.148	0.000	97	485201	20.0	21.9	
40 cis-1,2-Dichloroethene	96	4.634	4.622	0.012	68	273831	20.0	19.8	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	92	88581	40.0	39.3	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	65	257071	20.0	22.1	
45 Chlorobromomethane	49	4.835	4.836	-0.001	70	180641	20.0	19.4	
46 Tetrahydrofuran	42	4.883	4.883	0.000	83	206721	40.0	41.8	
47 Chloroform	83	4.907	4.907	0.000	71	435869	20.0	20.6	
48 1,1,1-Trichloroethane	97	5.084	5.085	-0.001	90	429620	20.0	21.6	
49 Cyclohexane	84	5.144	5.144	0.000	86	393450	20.0	21.6	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	90	350261	20.0	20.8	
51 Carbon tetrachloride	117	5.239	5.239	0.000	70	405050	20.0	21.1	
52 Isobutyl alcohol	41	5.298	5.298	0.000	83	266481	500.0	508.1	
54 1,2-Dichloroethane	62	5.416	5.417	-0.001	50	344294	20.0	20.0	
53 Benzene	78	5.416	5.417	-0.001	94	927804	20.0	20.4	
56 n-Heptane	57	5.642	5.642	0.000	82	219666	20.0	21.3	
58 Trichloroethene	130	5.986	5.986	0.000	92	305241	20.0	20.2	
60 Methylcyclohexane	83	6.175	6.176	-0.001	87	454812	20.0	20.7	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	80	220275	20.0	20.9	
63 Dibromomethane	174	6.294	6.294	0.000	89	209471	20.0	19.3	
64 1,4-Dioxane	88	6.306	6.306	0.000	35	54068	400.0	473.8	
65 Dichlorobromomethane	83	6.436	6.436	0.000	93	333796	20.0	20.1	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	93	174029	20.0	20.6	
68 cis-1,3-Dichloropropene	75	6.840	6.840	0.000	89	387819	20.0	21.0	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	83	617114	40.0	40.3	
70 Toluene	91	7.172	7.172	0.000	94	1042380	20.0	20.1	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	85	353136	20.0	19.1	
72 Ethyl methacrylate	69	7.432	7.433	-0.001	89	339271	20.0	20.4	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	86	222400	20.0	20.4	
75 Tetrachloroethene	166	7.693	7.693	0.000	92	340390	20.0	20.6	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	90	362713	20.0	19.7	
77 2-Hexanone	43	7.765	7.765	-0.001	79	490171	40.0	40.7	
79 Chlorodibromomethane	129	7.931	7.919	0.012	88	278002	20.0	20.3	
80 Ethylene Dibromide	107	8.049	8.049	0.000	99	247260	20.0	19.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
82 Chlorobenzene	112	8.523	8.524	-0.001	92	706649	20.0	20.0	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.607	-0.001	87	265224	20.0	20.8	
84 Ethylbenzene	106	8.630	8.630	0.000	98	379588	20.0	20.5	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	100	467728	20.0	20.7	
86 o-Xylene	106	9.152	9.152	0.000	88	441586	20.0	20.6	
87 Styrene	104	9.164	9.164	0.000	93	742653	20.0	20.2	
88 Bromoform	173	9.354	9.354	0.000	98	223782	20.0	19.9	
89 Isopropylbenzene	105	9.520	9.520	0.000	96	1211475	20.0	21.1	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	88	329964	20.0	20.2	
92 Bromobenzene	156	9.840	9.840	0.000	89	320488	20.0	19.6	
93 1,2,3-Trichloropropane	110	9.863	9.864	-0.001	69	127830	20.0	20.6	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	61	118291	20.0	20.3	
95 N-Propylbenzene	120	9.946	9.947	-0.001	96	339730	20.0	20.7	
96 2-Chlorotoluene	126	10.041	10.041	0.000	97	279994	20.0	20.2	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	95	978383	20.0	20.7	
98 4-Chlorotoluene	126	10.148	10.148	0.000	98	300639	20.0	20.0	
99 tert-Butylbenzene	119	10.468	10.468	0.000	78	935547	20.0	20.9	
101 1,2,4-Trimethylbenzene	105	10.516	10.516	0.000	71	967584	20.0	20.2	
102 sec-Butylbenzene	105	10.694	10.694	0.000	93	1277861	20.0	21.2	
103 1,3-Dichlorobenzene	146	10.812	10.812	0.000	84	581709	20.0	19.4	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	91	1116328	20.0	21.1	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	92	592339	20.0	19.1	
108 n-Butylbenzene	91	11.287	11.287	0.000	97	897771	20.0	20.6	
109 1,2-Dichlorobenzene	146	11.310	11.298	0.012	98	533790	20.0	19.6	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.129	-0.001	89	102428	20.0	19.7	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	92	339973	20.0	18.7	
113 Hexachlorobutadiene	225	13.208	13.208	0.000	88	185743	20.0	19.9	
114 Naphthalene	128	13.279	13.279	0.000	96	960764	20.0	19.1	
115 1,2,3-Trichlorobenzene	180	13.540	13.540	0.000	93	309386	20.0	19.0	
S 164 Total BTEX	1				0		100.0	102.4	
S 127 Trihalomethanes, Total	1				0		80.0	80.9	
S 126 Xylenes, Total	106				0		40.0	41.4	

Reagents:

vmfasgw_00271	Amount Added:	16.00	Units: uL	
vmfasaw_00246	Amount Added:	16.00	Units: uL	
vmfaspw_00264	Amount Added:	16.00	Units: uL	
vm50ss_stk_00077	Amount Added:	2.00	Units: uL	Run Reagent
vmDist_H2o_00123	Amount Added:	0.00	Units:	Run Reagent
vm50is_stk_A_00001	Amount Added:	2.00	Units: uL	Run Reagent

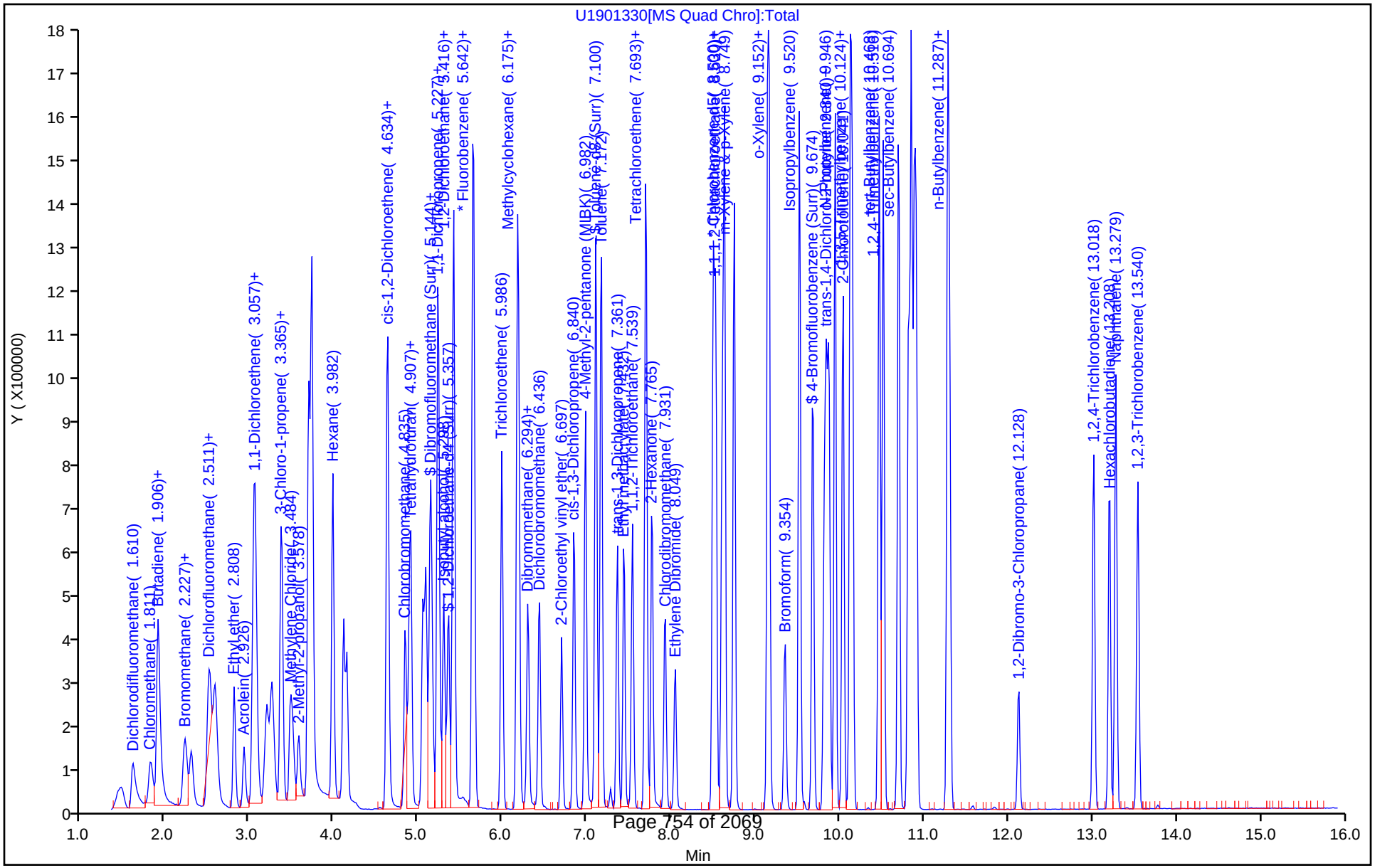
Report Date: 27-Aug-2018 21:12:28 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901330.d

Injection Date:	27-Aug-2018 19:45:31	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	ICV			Worklist Smp#:	14
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355689/2 Calibration Date: 11/15/2018 19:27

Instrument ID: A3UX19 Calib Start Date: 07/25/2018 13:24

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 07/25/2018 15:15

Lab File ID: U1903840.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Lin1		0.0326		0.164	0.200	-18.2	20.0
Diisopropyl ether	Ave	0.2313	0.2023		0.0175	0.0200	-12.5	20.0
2-Chloro-1,3-butadiene	Ave	0.3979	0.3690		0.0185	0.0200	-7.3	20.0
Ethyl t-butyl ether	Ave	0.7258	0.5684		0.0157	0.0200	-21.7*	20.0
Ethyl acetate	Ave	0.3007	0.3130		0.0416	0.0400	4.1	50.0
Propionitrile	Ave	0.0408	0.0488		0.239	0.200	19.7	20.0
Methacrylonitrile	Ave	0.1828	0.1884		0.206	0.200	3.1	20.0
Tert-amyl methyl ether	Ave	0.7700	0.6151		0.0160	0.0200	-20.1*	20.0
n-Butanol	Ave	0.0094	0.0123		0.656	0.500	31.3*	20.0
Ethyl acrylate	Ave	0.3703	0.3986		0.0215	0.0200	7.6	20.0
Methyl methacrylate	Ave	0.2459	0.2403		0.0391	0.0400	-2.3	20.0
2-Nitropropane	Ave	0.0726	0.0904		0.0498	0.0400	24.6*	20.0
n-Butyl acetate	Ave	0.5364	0.5054		0.0188	0.0200	-5.8	20.0
1-Chlorohexane	Ave	0.4610	0.4375		0.0190	0.0200	-5.1	20.0
Cyclohexanone	Ave	0.0137	0.0140		0.205	0.200	2.6	20.0
Pentachloroethane	Ave	0.3462	0.4667		0.0539	0.0400	34.8*	20.0
1,2,3-Trimethylbenzene	Ave	2.276	2.418		0.0213	0.0200	6.3	20.0
Benzyl chloride	Ave	1.286	1.473		0.0229	0.0200	14.5	20.0
1,3,5-Trichlorobenzene	Ave	1.021	1.084		0.0212	0.0200	6.1	20.0
2-Methylnaphthalene	Ave	1.433	1.062		0.0296	0.0400	-25.9*	20.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903840.d
Lims ID: CCV A9
Client ID:
Sample Type: CCV
Inject. Date: 15-Nov-2018 19:27:15 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 002
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub3

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 15-Nov-2018 20:10:11 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: laveyt Date: 15-Nov-2018 20:10:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.654	0.000	99	803748	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.500	0.000	83	651286	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	83	340432	20.0	20.0	
165 1-Chloro-1-fluoroethane TI	47	2.238	2.226	0.012	93	207017	20.0	19.7	
25 Acetonitrile	41	3.329	3.353	-0.024	98	261747	200.0	163.5	
36 Isopropyl ether	87	4.171	4.171	0.000	92	162563	20.0	17.5	
37 2-Chloro-1,3-butadiene	53	4.195	4.195	0.000	88	296539	20.0	18.5	
38 Tert-butyl ethyl ether	59	4.492	4.491	0.001	96	456847	20.0	15.7	
42 Ethyl acetate	43	4.681	4.634	0.047	96	503164	40.0	41.6	
43 Propionitrile	54	4.681	4.681	0.000	2	392002	200.0	239.3	
44 Methacrylonitrile	41	4.824	4.823	0.001	90	1514395	200.0	206.1	
55 Tert-amyl methyl ether	73	5.500	5.499	0.001	85	494402	20.0	16.0	
57 n-Butanol	56	5.891	5.891	0.000	85	246883	500.0	656.4	
59 Ethyl acrylate	55	6.057	6.057	0.000	92	320345	20.0	21.5	
62 Methyl methacrylate	41	6.270	6.270	0.000	86	386302	40.0	39.1	
66 2-Nitropropane	41	6.638	6.638	0.000	98	145339	40.0	49.8	
78 n-Butyl acetate	43	7.883	7.883	0.000	98	329173	20.0	18.8	
81 1-Chlorohexane	91	8.488	8.488	0.000	73	284953	20.0	19.0	
90 Cyclohexanone	55	9.615	9.614	0.001	90	91303	200.0	205.1	
100 Pentachloroethane	167	10.492	10.492	0.000	88	317747	40.0	53.9	
106 1,2,3-Trimethylbenzene	105	10.966	10.966	0.000	85	823320	20.0	21.3	
107 Benzyl chloride	91	11.049	11.049	0.000	97	501427	20.0	22.9	
111 1,3,5-Trichlorobenzene	180	12.354	12.354	0.000	98	369072	20.0	21.2	
116 2-Methylnaphthalene	142	14.619	14.619	0.000	89	722849	40.0	29.6	

Reagents:

vm50is_stk_A_00002 Amount Added: 2.00 Units: uL
vmra9w_00273 Amount Added: 16.00 Units: uL

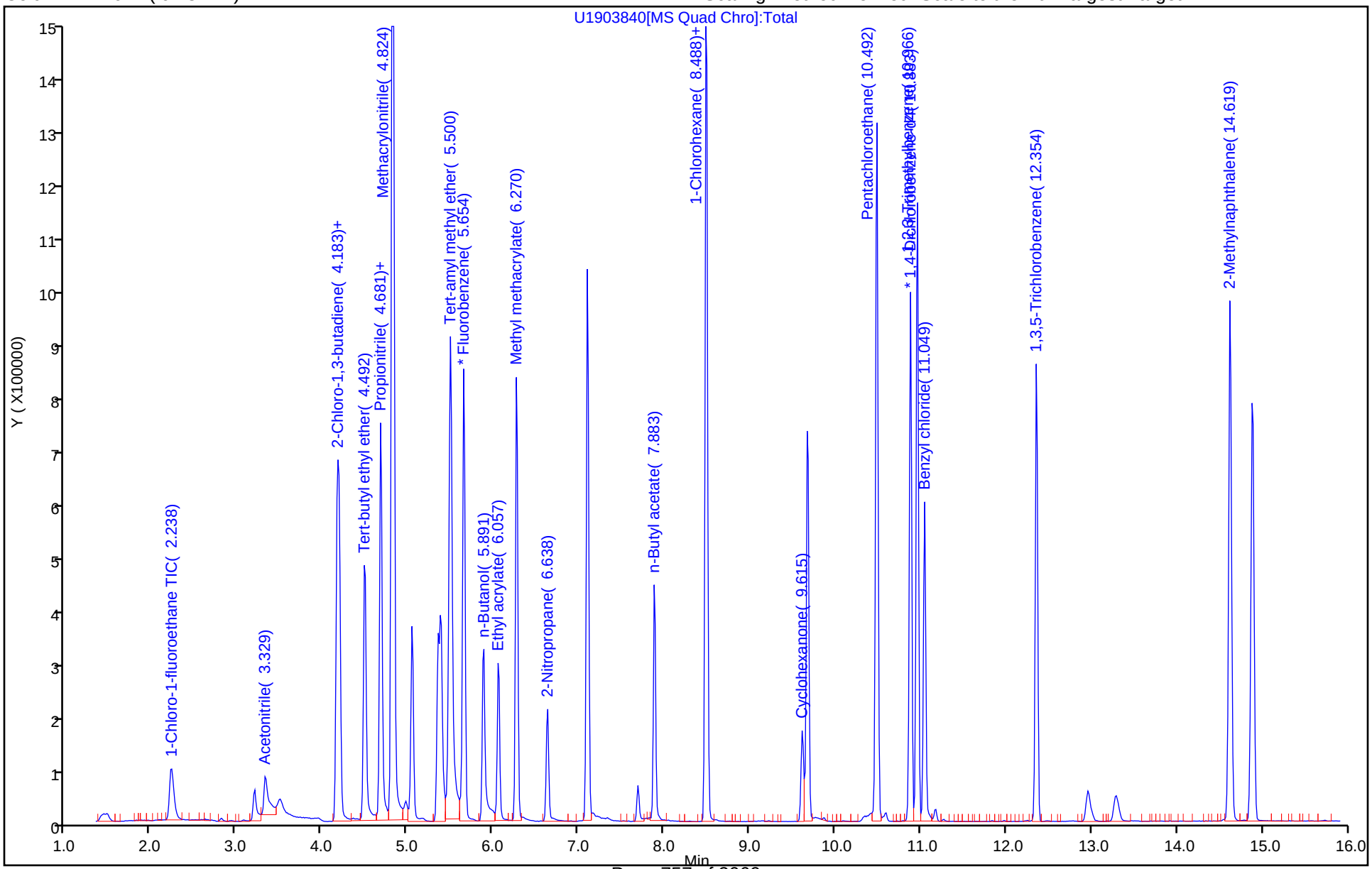
Report Date: 15-Nov-2018 20:10:12 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903840.d

Injection Date:	15-Nov-2018 19:27:15	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	CCV A9			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCVIS 240-355689/3 Calibration Date: 11/15/2018 19:49

Instrument ID: A3UX19 Calib Start Date: 08/27/2018 17:09

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/27/2018 19:23

Lab File ID: U1903841.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3850	0.3133	0.1000	0.0163	0.0200	-18.6	20.0
Chloromethane	Ave	0.2883	0.2502	0.1000	0.0174	0.0200	-13.2	20.0
Butadiene	Ave	0.2887	0.2572		0.0178	0.0200	-10.9	20.0
Vinyl chloride	Ave	0.2980	0.2693	0.1000	0.0181	0.0200	-9.6	20.0
Bromomethane	Ave	0.2335	0.2143	0.0500	0.0184	0.0200	-8.2	20.0
Chloroethane	Ave	0.1848	0.1692	0.0500	0.0183	0.0200	-8.5	20.0
Dichlorofluoromethane	Ave	0.4581	0.4051		0.0177	0.0200	-11.6	20.0
Trichlorofluoromethane	Ave	0.4984	0.4423	0.1000	0.0177	0.0200	-11.3	20.0
Ethyl ether	Ave	0.1800	0.1707		0.0190	0.0200	-5.1	20.0
Acrolein	Ave	0.0445	0.0427		0.0959	0.100	-4.1	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2567	0.2741	0.0500	0.0214	0.0200	6.8	20.0
1,1-Dichloroethene	Ave	0.3589	0.3600	0.1000	0.0201	0.0200	0.3	20.0
Acetone	Ave	0.0784	0.0985	0.0100	0.0502	0.0400	25.6	50.0
Iodomethane	Ave	0.4655	0.4712		0.0202	0.0200	1.2	20.0
Carbon disulfide	Ave	0.7515	0.6802	0.1000	0.0181	0.0200	-9.5	20.0
3-Chloro-1-propene	Ave	0.3541	0.3120		0.0176	0.0200	-11.9	20.0
Methyl acetate	Ave	0.2328	0.2416	0.1000	0.0415	0.0400	3.8	20.0
Methylene Chloride	Ave	0.2846	0.2989	0.1000	0.0210	0.0200	5.0	50.0
tert-Butyl alcohol (TBA)	Ave	0.0271	0.0317		0.234	0.200	16.9	50.0
Acrylonitrile	Ave	0.1006	0.1114		0.222	0.200	10.8	20.0
Methyl tert-butyl ether	Ave	0.6938	0.6042	0.1000	0.0174	0.0200	-12.9	20.0
trans-1,2-Dichloroethene	Ave	0.3387	0.3238	0.1000	0.0191	0.0200	-4.4	20.0
Hexane	Ave	0.3524	0.3575		0.0203	0.0200	1.5	20.0
1,1-Dichloroethane	Ave	0.4048	0.4013	0.2000	0.0198	0.0200	-0.9	20.0
Vinyl acetate	Ave	0.4639	0.4344		0.0187	0.0200	-6.4	50.0
2,2-Dichloropropane	Ave	0.2438	0.1682		0.0138	0.0200	-31.0*	20.0
2-Butanone (MEK)	Ave	0.0472	0.0535	0.0100	0.0453	0.0400	13.3	20.0
cis-1,2-Dichloroethene	Ave	0.2891	0.2859	0.1000	0.0198	0.0200	-1.1	20.0
Bromochloromethane	Ave	0.1945	0.1741		0.0179	0.0200	-10.5	20.0
Tetrahydrofuran	Lin1		0.1070		0.0413	0.0400	3.4	20.0
Chloroform	Ave	0.4433	0.4381	0.2000	0.0198	0.0200	-1.2	20.0
1,1,1-Trichloroethane	Ave	0.4174	0.3972	0.1000	0.0190	0.0200	-4.8	20.0
Cyclohexane	Ave	0.3819	0.3885	0.1000	0.0203	0.0200	1.7	20.0
1,1-Dichloropropene	Ave	0.3519	0.3519		0.0200	0.0200	0.0	20.0
Carbon tetrachloride	Ave	0.4023	0.3931	0.1000	0.0195	0.0200	-2.3	20.0
Isobutyl alcohol	Ave	0.0110	0.0127		0.576	0.500	15.2	20.0
1,2-Dichloroethane	Ave	0.3600	0.3363	0.1000	0.0187	0.0200	-6.6	20.0
Benzene	Ave	0.9518	0.9686	0.5000	0.0204	0.0200	1.8	20.0
n-Heptane	Lin1		0.2084		0.0189	0.0200	-5.3	20.0
Trichloroethene	Ave	0.3160	0.3148	0.1500	0.0199	0.0200	-0.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCVIS 240-355689/3 Calibration Date: 11/15/2018 19:49

Instrument ID: A3UX19 Calib Start Date: 08/27/2018 17:09

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/27/2018 19:23

Lab File ID: U1903841.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4590	0.4686	0.1000	0.0204	0.0200	2.1	20.0
1,2-Dichloropropane	Ave	0.2208	0.2227	0.1000	0.0202	0.0200	0.9	20.0
Dibromomethane	Ave	0.2271	0.2303		0.0203	0.0200	1.4	20.0
1,4-Dioxane	Ave	0.0024	0.0036		0.598	0.400	49.5	50.0
Bromodichloromethane	Ave	0.3479	0.3298	0.1500	0.0190	0.0200	-5.2	20.0
2-Chloroethyl vinyl ether	Ave	0.1770	0.1800		0.0407	0.0400	1.7	20.0
cis-1,3-Dichloropropene	Ave	0.3865	0.3685	0.1500	0.0191	0.0200	-4.7	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3203	0.3340	0.0500	0.0417	0.0400	4.3	20.0
Toluene	Ave	1.352	1.353	0.4000	0.0200	0.0200	0.0	20.0
trans-1,3-Dichloropropene	Ave	0.4818	0.4207	0.1000	0.0175	0.0200	-12.7	20.0
Ethyl methacrylate	Ave	0.4344	0.4269		0.0197	0.0200	-1.7	20.0
1,1,2-Trichloroethane	Ave	0.2842	0.2922	0.1000	0.0206	0.0200	2.8	20.0
Tetrachloroethene	Ave	0.4313	0.4379	0.1500	0.0203	0.0200	1.5	20.0
1,3-Dichloropropane	Ave	0.4802	0.4869		0.0203	0.0200	1.4	20.0
2-Hexanone	Ave	0.3149	0.3197	0.0500	0.0406	0.0400	1.5	20.0
Dibromochloromethane	Ave	0.3583	0.3464		0.0193	0.0200	-3.3	20.0
1,2-Dibromoethane	Ave	0.3346	0.3267		0.0195	0.0200	-2.4	20.0
Chlorobenzene	Ave	0.9253	0.9234	0.3000	0.0200	0.0200	-0.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3336	0.3333		0.0200	0.0200	-0.0	20.0
Ethylbenzene	Ave	0.4836	0.4926		0.0204	0.0200	1.9	20.0
m-Xylene & p-Xylene	Ave	0.5890	0.6065		0.0206	0.0200	3.0	20.0
o-Xylene	Ave	0.5597	0.5727		0.0205	0.0200	2.3	20.0
Styrene	Ave	0.9588	1.006	0.3000	0.0210	0.0200	4.9	20.0
Bromoform	Ave	0.2933	0.2840	0.1000	0.0194	0.0200	-3.2	20.0
Isopropylbenzene	Ave	1.503	1.530	0.1000	0.0204	0.0200	1.8	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7706	0.8075	0.3000	0.0210	0.0200	4.8	20.0
Bromobenzene	Ave	0.7690	0.7936		0.0206	0.0200	3.2	20.0
1,2,3-Trichloropropane	Ave	0.2921	0.3095		0.0212	0.0200	6.0	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2737	0.2247		0.0164	0.0200	-17.9	20.0
N-Propylbenzene	Ave	0.7729	0.8106		0.0210	0.0200	4.9	20.0
2-Chlorotoluene	Ave	0.6541	0.6959		0.0213	0.0200	6.4	20.0
1,3,5-Trimethylbenzene	Ave	2.225	2.307		0.0207	0.0200	3.7	20.0
4-Chlorotoluene	Ave	0.7072	0.7366		0.0208	0.0200	4.1	20.0
tert-Butylbenzene	Ave	2.113	2.150		0.0204	0.0200	1.8	20.0
1,2,4-Trimethylbenzene	Ave	2.256	2.377		0.0211	0.0200	5.3	20.0
sec-Butylbenzene	Ave	2.845	2.981		0.0210	0.0200	4.8	20.0
1,3-Dichlorobenzene	Ave	1.412	1.453	0.6000	0.0206	0.0200	2.9	20.0
p-Isopropyltoluene	Ave	2.492	2.636		0.0212	0.0200	5.8	20.0
1,4-Dichlorobenzene	Ave	1.459	1.472	0.5000	0.0202	0.0200	0.9	20.0
n-Butylbenzene	Ave	2.050	2.164		0.0211	0.0200	5.6	20.0
1,2-Dichlorobenzene	Ave	1.282	1.340	0.4000	0.0209	0.0200	4.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCVIS 240-355689/3 Calibration Date: 11/15/2018 19:49

Instrument ID: A3UX19 Calib Start Date: 08/27/2018 17:09

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/27/2018 19:23

Lab File ID: U1903841.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.2450	0.2451	0.0500	0.0200	0.0200	0.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8550	0.8427	0.2000	0.0197	0.0200	-1.4	50.0
Hexachlorobutadiene	Ave	0.4392	0.4401		0.0200	0.0200	0.2	20.0
Naphthalene	Ave	2.363	2.363		0.0200	0.0200	-0.0	50.0
1,2,3-Trichlorobenzene	Ave	0.7677	0.7838		0.0204	0.0200	2.1	20.0
Dibromofluoromethane (Surr)	Ave	0.2692	0.2651		0.0197	0.0200	-1.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3092	0.3036		0.0196	0.0200	-1.8	20.0
Toluene-d8 (Surr)	Ave	1.199	1.207		0.0201	0.0200	0.6	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4513	0.4644		0.0206	0.0200	2.9	20.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903841.d
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 15-Nov-2018 19:49:41 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 003
Operator ID: 001904 Instrument ID: A3UX19
Sublist: chrom-8260_19*sub1

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 15-Nov-2018 20:13:10 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: laveyt Date: 15-Nov-2018 20:13:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.653	5.653	0.000	97	816685	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.499	8.499	0.000	84	664993	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	86	364439	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	59	216502	20.0	19.7	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	98	247954	20.0	19.6	
$ 6 Toluene-d8 (Surr)	98	7.100	7.100	0.000	84	802566	20.0	20.1	
$ 7 4-Bromofluorobenzene (Surr	95	9.673	9.673	0.000	91	308827	20.0	20.6	
9 Dichlorodifluoromethane	85	1.598	1.598	0.000	77	255897	20.0	16.3	
10 Chloromethane	50	1.811	1.811	0.000	89	204361	20.0	17.4	
12 Butadiene	54	1.906	1.906	0.000	87	210043	20.0	17.8	
11 Vinyl chloride	62	1.906	1.906	0.000	79	219934	20.0	18.1	
13 Bromomethane	94	2.226	2.226	0.000	91	175035	20.0	18.4	
14 Chloroethane	64	2.309	2.309	0.000	86	138166	20.0	18.3	
15 Dichlorofluoromethane	67	2.511	2.511	0.000	98	330832	20.0	17.7	
16 Trichlorofluoromethane	101	2.558	2.558	0.000	98	361205	20.0	17.7	
17 Ethyl ether	59	2.807	2.807	0.000	88	139426	20.0	19.0	
18 Acrolein	56	2.926	2.926	0.000	81	174162	100.0	95.9	
21 1,1-Dichloroethene	61	3.056	3.056	0.000	96	293983	20.0	20.1	
20 1,1,2-Trichloro-1,2,2-trif	101	3.056	3.056	0.000	85	223880	20.0	21.4	
22 Acetone	43	3.068	3.068	0.000	62	160840	40.0	50.2	
23 Iodomethane	142	3.199	3.199	0.000	98	384827	20.0	20.2	
24 Carbon disulfide	76	3.282	3.282	0.000	87	555484	20.0	18.1	M
26 3-Chloro-1-propene	41	3.365	3.365	0.000	51	254790	20.0	17.6	
27 Methyl acetate	43	3.377	3.377	0.000	96	394572	40.0	41.5	
28 Methylene Chloride	49	3.495	3.495	0.000	53	244127	20.0	21.0	
29 2-Methyl-2-propanol	59	3.578	3.578	0.000	54	258654	200.0	233.9	
30 Acrylonitrile	53	3.697	3.697	0.000	98	909689	200.0	221.5	
32 trans-1,2-Dichloroethene	61	3.732	3.732	0.000	67	264465	20.0	19.1	
31 Methyl tert-butyl ether	73	3.732	3.732	0.000	89	493458	20.0	17.4	
33 Hexane	57	3.981	3.981	0.000	89	291985	20.0	20.3	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	97	327717	20.0	19.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	4.147	4.147	0.000	97	354747	20.0	18.7	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	53	137343	20.0	13.8	
40 cis-1,2-Dichloroethene	96	4.634	4.634	0.000	65	233483	20.0	19.8	
41 2-Butanone (MEK)	72	4.634	4.634	0.000	97	87381	40.0	45.3	
45 Chlorobromomethane	49	4.835	4.835	0.000	70	142210	20.0	17.9	
46 Tetrahydrofuran	42	4.883	4.883	0.000	82	174776	40.0	41.3	
47 Chloroform	83	4.906	4.906	0.000	83	357788	20.0	19.8	
48 1,1,1-Trichloroethane	97	5.084	5.084	0.000	94	324407	20.0	19.0	
49 Cyclohexane	84	5.143	5.143	0.000	83	317254	20.0	20.3	
50 1,1-Dichloropropene	75	5.227	5.227	0.000	86	287426	20.0	20.0	
51 Carbon tetrachloride	117	5.238	5.238	0.000	80	321054	20.0	19.5	
52 Isobutyl alcohol	41	5.298	5.298	0.000	87	258257	500.0	575.9	
53 Benzene	78	5.416	5.416	0.000	93	791042	20.0	20.4	
54 1,2-Dichloroethane	62	5.416	5.416	0.000	53	274657	20.0	18.7	
56 n-Heptane	57	5.642	5.642	0.000	81	170175	20.0	18.9	
58 Trichloroethene	130	5.985	5.985	0.000	95	257081	20.0	19.9	
60 Methylcyclohexane	83	6.175	6.175	0.000	88	382658	20.0	20.4	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	82	181901	20.0	20.2	
63 Dibromomethane	174	6.294	6.294	0.000	90	188077	20.0	20.3	
64 1,4-Dioxane	88	6.306	6.306	0.000	39	58353	400.0	598.1	
65 Dichlorobromomethane	83	6.436	6.436	0.000	99	269372	20.0	19.0	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	93	293985	40.0	40.7	
68 cis-1,3-Dichloropropene	75	6.839	6.839	0.000	93	300911	20.0	19.1	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	93	545499	40.0	41.7	
70 Toluene	91	7.171	7.171	0.000	95	899505	20.0	20.0	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	89	279785	20.0	17.5	
72 Ethyl methacrylate	69	7.432	7.432	0.000	86	283856	20.0	19.7	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	85	194302	20.0	20.6	
75 Tetrachloroethene	166	7.693	7.693	0.000	98	291183	20.0	20.3	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	88	323778	20.0	20.3	
77 2-Hexanone	43	7.764	7.764	0.000	79	425173	40.0	40.6	
79 Chlorodibromomethane	129	7.930	7.930	0.000	88	230361	20.0	19.3	
80 Ethylene Dibromide	107	8.049	8.049	0.000	98	217223	20.0	19.5	
82 Chlorobenzene	112	8.523	8.523	0.000	92	614072	20.0	20.0	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.606	0.000	92	221662	20.0	20.0	
84 Ethylbenzene	106	8.630	8.630	0.000	98	327594	20.0	20.4	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	403301	20.0	20.6	
86 o-Xylene	106	9.152	9.152	0.000	87	380811	20.0	20.5	
87 Styrene	104	9.164	9.164	0.000	93	668783	20.0	21.0	
88 Bromoform	173	9.353	9.353	0.000	97	188831	20.0	19.4	
89 Isopropylbenzene	105	9.519	9.519	0.000	95	1017253	20.0	20.4	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	85	294284	20.0	21.0	
92 Bromobenzene	156	9.840	9.840	0.000	86	289222	20.0	20.6	
93 1,2,3-Trichloropropane	110	9.863	9.863	0.000	72	112801	20.0	21.2	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	64	81870	20.0	16.4	
95 N-Propylbenzene	120	9.946	9.946	0.000	96	295412	20.0	21.0	
96 2-Chlorotoluene	126	10.041	10.041	0.000	96	253616	20.0	21.3	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	840781	20.0	20.7	
98 4-Chlorotoluene	126	10.148	10.148	0.000	97	268434	20.0	20.8	
99 tert-Butylbenzene	119	10.468	10.468	0.000	77	783479	20.0	20.4	
101 1,2,4-Trimethylbenzene	105	10.515	10.515	0.000	71	866296	20.0	21.1	
102 sec-Butylbenzene	105	10.693	10.693	0.000	94	1086230	20.0	21.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
103 1,3-Dichlorobenzene	146	10.824	10.824	0.000	84	529404	20.0	20.6	
104 4-Isopropyltoluene	119	10.848	10.848	0.000	91	960567	20.0	21.2	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	93	536416	20.0	20.2	
108 n-Butylbenzene	91	11.286	11.286	0.000	96	788704	20.0	21.1	
109 1,2-Dichlorobenzene	146	11.298	11.298	0.000	98	488280	20.0	20.9	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.128	0.000	90	89315	20.0	20.0	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	91	307106	20.0	19.7	
113 Hexachlorobutadiene	225	13.207	13.207	0.000	89	160378	20.0	20.0	
114 Naphthalene	128	13.279	13.279	0.000	95	861030	20.0	20.0	
115 1,2,3-Trichlorobenzene	180	13.539	13.539	0.000	95	285645	20.0	20.4	
S 164 Total BTEX	1				0		100.0	101.8	
S 127 Trihalomethanes, Total	1				0		80.0	77.4	
S 126 Xylenes, Total	106				0		40.0	41.1	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

vmrgas_00269	Amount Added: 16.00	Units: uL		
vmarolistdw_00272	Amount Added: 16.00	Units: uL		
vmrprimw_00308	Amount Added: 16.00	Units: uL		
vm50ss_stk_00078	Amount Added: 2.00	Units: uL	Run Reagent	
vmDist_H2o_00133	Amount Added: 0.00	Units:	Run Reagent	
vm50is_stk_A_00002	Amount Added: 2.00	Units: uL	Run Reagent	

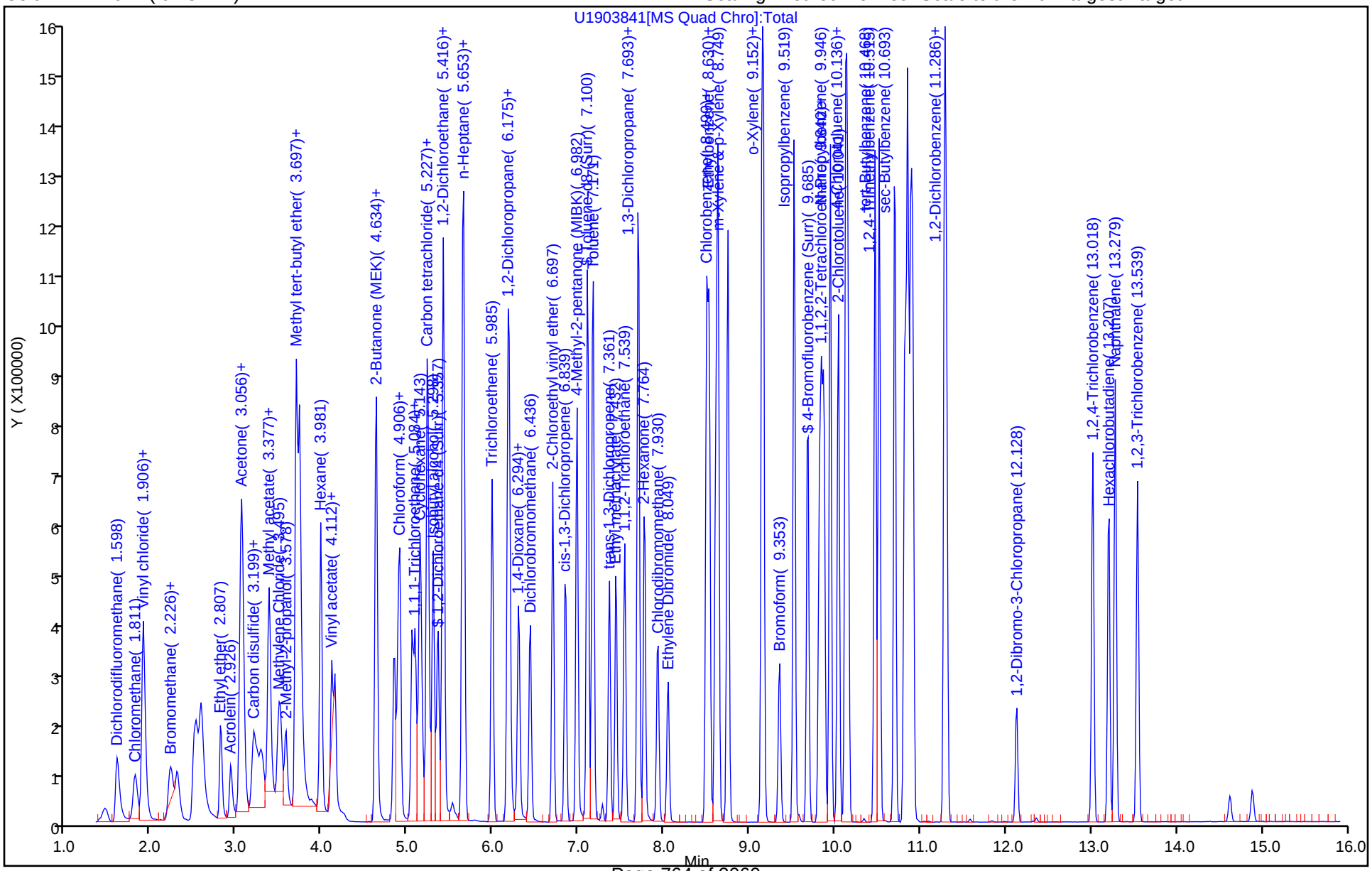
Report Date: 15-Nov-2018 20:13:11 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903841.d

Injection Date:	15-Nov-2018 19:49:41	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	CCVIS			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

TestAmerica Canton

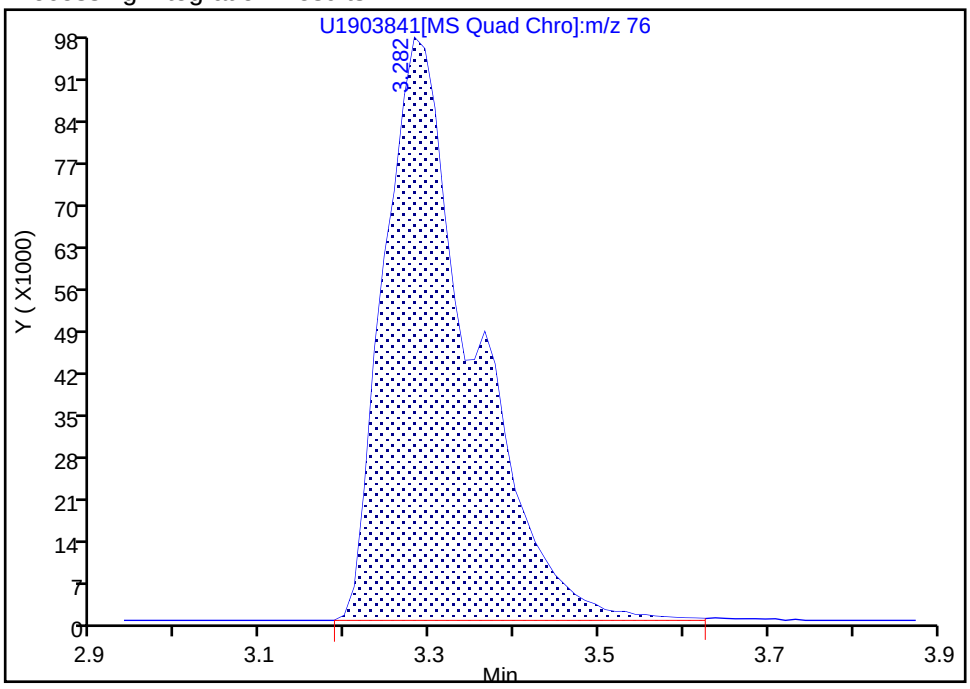
Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903841.d
Injection Date: 15-Nov-2018 19:49:41 Instrument ID: A3UX19
Lims ID: CCVIS
Client ID:
Operator ID: 001904 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_19 Limit Group: MSV 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

24 Carbon disulfide, CAS: 75-15-0

Signal: 1

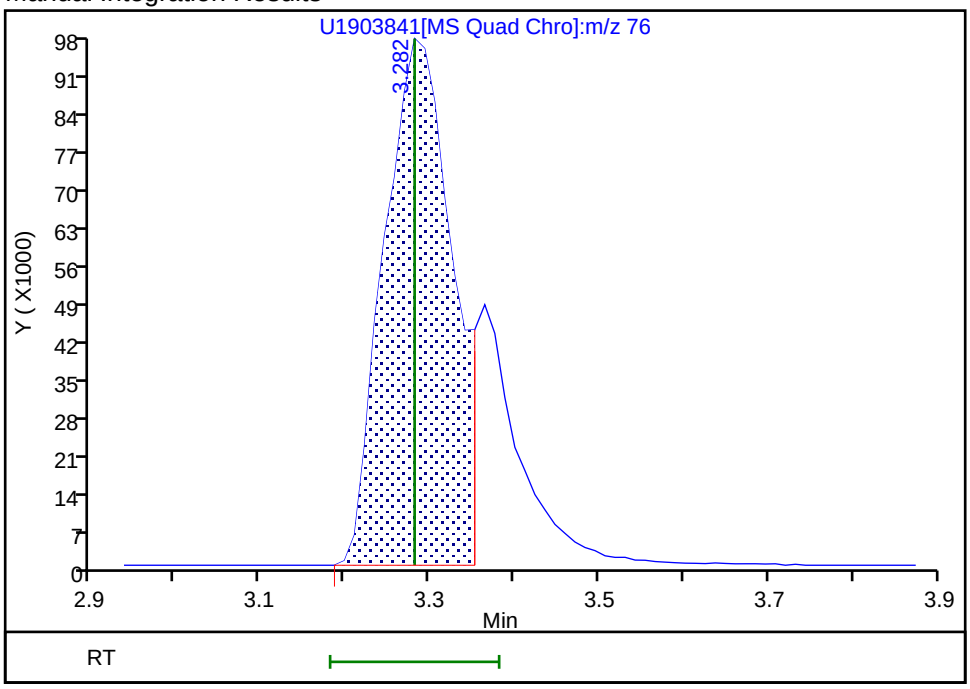
Processing Integration Results

RT: 3.28
Area: 710507
Amount: 23.154495
Amount Units: ug/l



Manual Integration Results

RT: 3.28
Area: 555484
Amount: 18.102498
Amount Units: ug/l



Reviewer: laveyt, 15-Nov-2018 20:11:44
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\BFB14841.D				
Lims ID:	bfb				
Client ID:					
Sample Type:	BFB				
Inject. Date:	16-Nov-2018 16:17:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Sample Info:	bfb				
Misc. Info.:	240-0082038-001				
Operator ID:	002808	Instrument ID:	A3UX14		
Method:	\\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\8260_14.m				
Limit Group:	MSV 8260C ICAL				
Last Update:	19-Nov-2018 10:56:31	Calib Date:	16-Nov-2018 19:51:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\1416828.D				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	CTX0316				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	3.709	3.709	0.000	0	725778	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

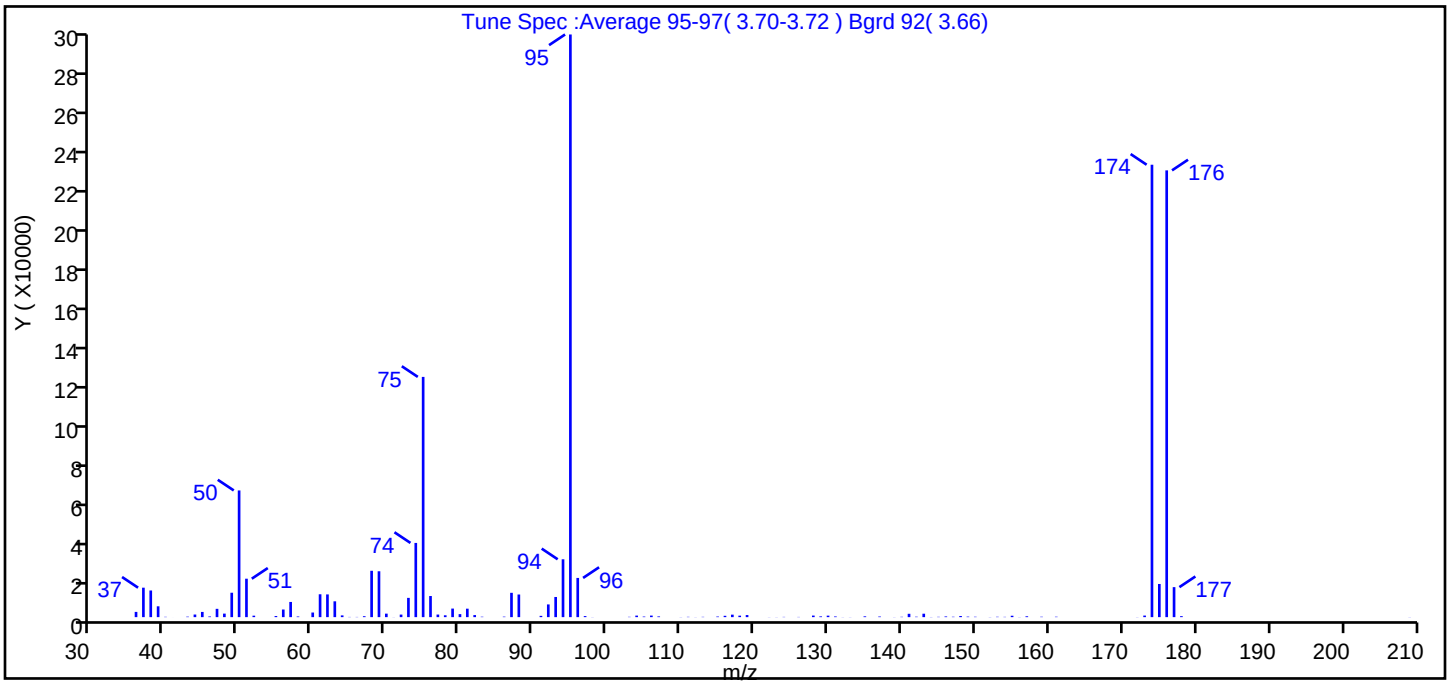
vmbfb_00020 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\BFB14841.D
Injection Date: 16-Nov-2018 16:17:30 Instrument ID: A3UX14
Lims ID: bfb
Client ID:
Operator ID: 002808 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_14 Limit Group: MSV 8260C ICAL
Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.7
75	30 to 60% of m/z 95	41.2
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.3 (0.3)
174	50 to 120% of m/z 95	77.6
175	5 to 9% of m/z 174	5.7 (7.3)
176	Greater than 95% but less than 101% of m/z 174	76.7 (98.8)
177	5 to 9% of m/z 176	5.2 (6.7)

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\BFB14841.D\8260_14.rslt\spectra.d
Injection Date: 16-Nov-2018 16:17:30
Spectrum: Tune Spec :Average 95-97(3.70-3.72) Bgrd 92(3.66)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 109

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2673	68.00	23624	104.00	785	142.00	225
37.00	15013	69.00	23376	105.00	296	143.00	1751
38.00	13583	70.00	1785	106.00	795	144.00	77
39.00	5524	71.00	42	107.00	366	145.00	161
40.00	160	72.00	1305	110.00	60	146.00	357
41.00	9	73.00	9817	111.00	158	147.00	201
43.00	246	74.00	37816	112.00	51	148.00	571
44.00	1335	75.00	122416	113.00	152	149.00	261
45.00	2657	76.00	10765	115.00	308	150.00	200
46.00	339	77.00	1318	116.00	684	152.00	68
47.00	4233	78.00	944	117.00	1269	153.00	190
48.00	1798	79.00	4368	118.00	757	154.00	142
49.00	12440	80.00	1538	119.00	1063	155.00	712
50.00	64560	81.00	4310	122.00	50	156.00	63
51.00	19584	82.00	1051	123.00	52	157.00	436
52.00	748	83.00	217	124.00	129	159.00	207
55.00	565	86.00	251	126.00	109	161.00	215
56.00	3891	87.00	12398	128.00	801	172.00	59
57.00	7743	88.00	11533	129.00	388	173.00	804
58.00	332	91.00	656	130.00	763	174.00	230528
60.00	2357	92.00	6479	131.00	348	175.00	16896
61.00	11656	93.00	10273	132.00	50	176.00	227648
62.00	11583	94.00	29480	133.00	52	177.00	15292
63.00	8063	95.00	296896	135.00	406	178.00	494
64.00	890	96.00	19976	137.00	313	209.00	57
65.00	107	97.00	541	139.00	53		
66.00	105	98.00	52	140.00	167		
67.00	470	103.00	162	141.00	1710		

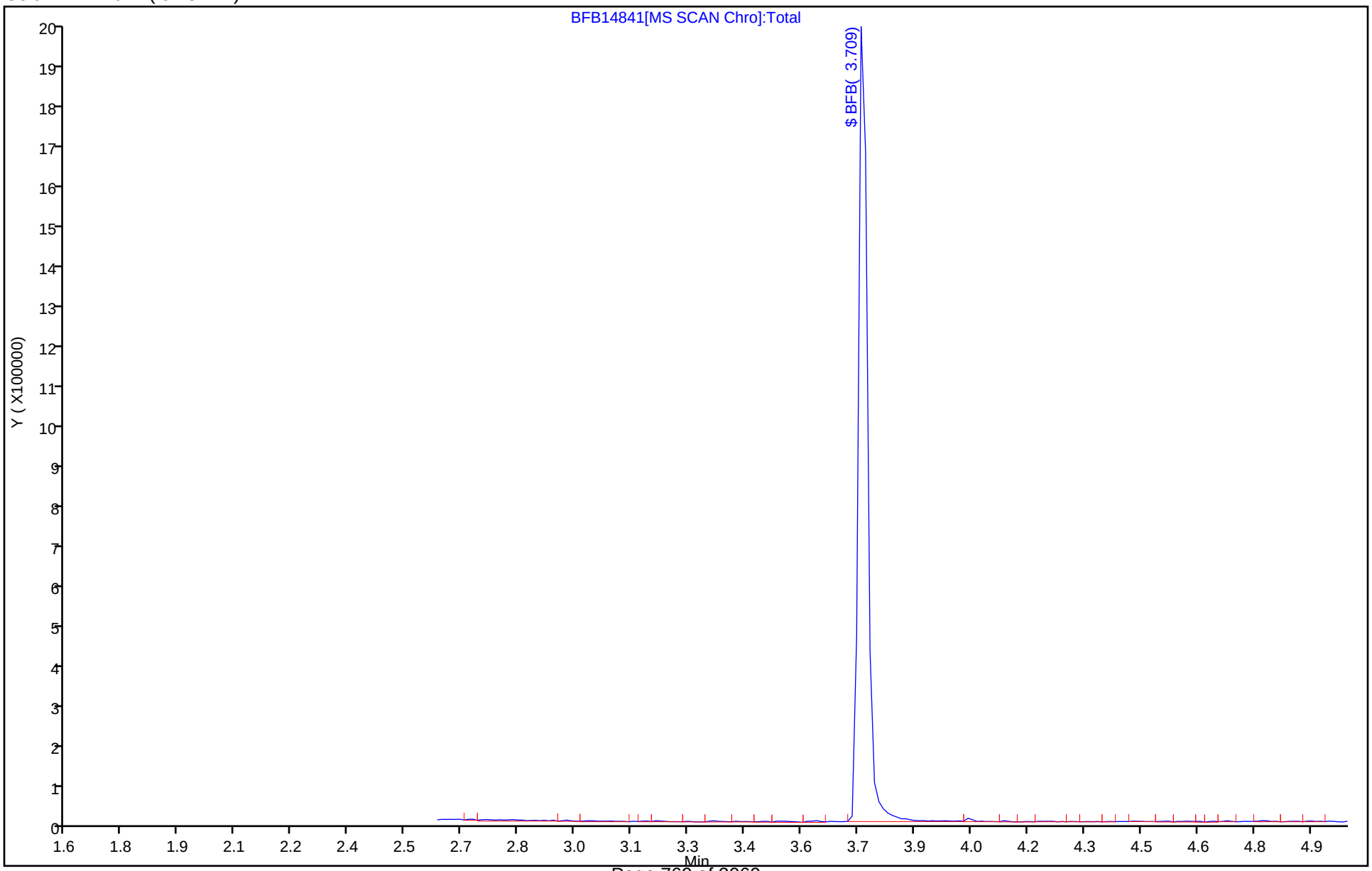
Report Date: 19-Nov-2018 10:56:33 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181116-82038.b\BFB14841.D

Injection Date:	16-Nov-2018 16:17:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	bfb			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\BFB14843.D				
Lims ID:	bfb				
Client ID:					
Sample Type:	BFB				
Inject. Date:	19-Nov-2018 09:07:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Sample Info:	bfb				
Misc. Info.:	240-0082085-001				
Operator ID:	002808	Instrument ID:	A3UX14		
Method:	\\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m				
Limit Group:	MSV 8260C ICAL				
Last Update:	20-Nov-2018 09:43:34	Calib Date:	19-Nov-2018 13:24:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	CTX0315				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	3.709	3.709	0.000	0	525210	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

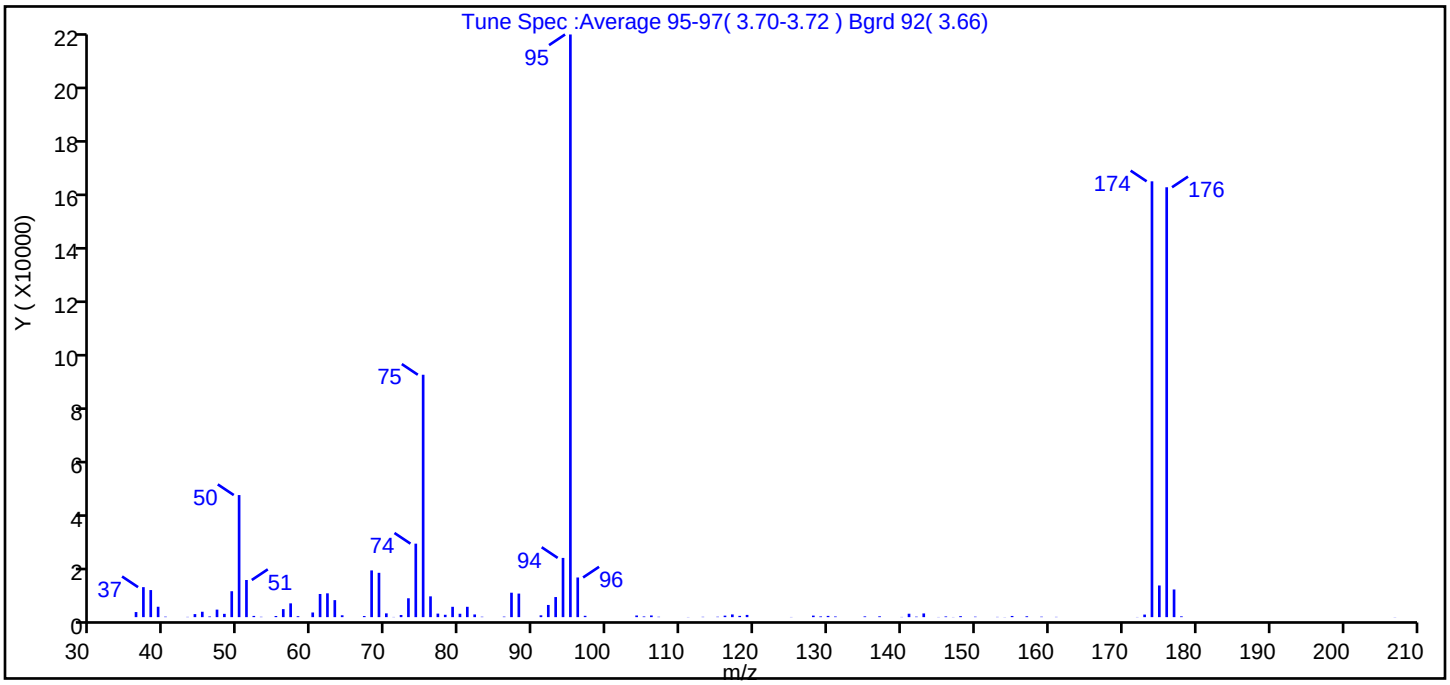
vmbfb_00020 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\BFB14843.D
Injection Date: 19-Nov-2018 09:07:30 Instrument ID: A3UX14
Lims ID: bfb
Client ID:
Operator ID: 002808 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_14 Limit Group: MSV 8260C ICAL
Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.0
75	30 to 60% of m/z 95	41.6
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.4 (0.6)
174	50 to 120% of m/z 95	74.8
175	5 to 9% of m/z 174	5.4 (7.3)
176	Greater than 95% but less than 101% of m/z 174	73.8 (98.6)
177	5 to 9% of m/z 176	4.7 (6.4)

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\BFB14843.D\8260_14.rslt\spectra.d
Injection Date: 19-Nov-2018 09:07:30
Spectrum: Tune Spec :Average 95-97(3.70-3.72) Bgrd 92(3.66)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 93

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1866	64.00	682	94.00	21712	142.00	183
37.00	10994	67.00	404	95.00	213568	143.00	1358
38.00	9925	68.00	17128	96.00	14536	145.00	62
39.00	3812	69.00	16247	97.00	492	146.00	257
40.00	173	70.00	1385	104.00	603	147.00	56
43.00	93	71.00	72	105.00	251	148.00	355
44.00	1117	72.00	787	106.00	615	150.00	173
45.00	1977	73.00	6919	107.00	132	153.00	93
46.00	237	74.00	26936	111.00	57	154.00	50
47.00	2760	75.00	88848	113.00	119	155.00	433
48.00	1212	76.00	7622	115.00	148	157.00	322
49.00	9501	77.00	1302	116.00	550	159.00	163
50.00	44744	78.00	867	117.00	989	161.00	97
51.00	13613	79.00	3788	118.00	468	172.00	59
52.00	451	80.00	1241	119.00	816	173.00	942
53.00	122	81.00	3787	125.00	62	174.00	159744
55.00	422	82.00	986	128.00	560	175.00	11608
56.00	2942	83.00	148	129.00	266	176.00	157568
57.00	5057	86.00	188	130.00	460	177.00	10144
58.00	333	87.00	8957	131.00	243	178.00	284
60.00	1709	88.00	8634	135.00	280	207.00	51
61.00	8490	91.00	670	137.00	304		
62.00	8728	92.00	4465	140.00	73		
63.00	6233	93.00	7366	141.00	1253		

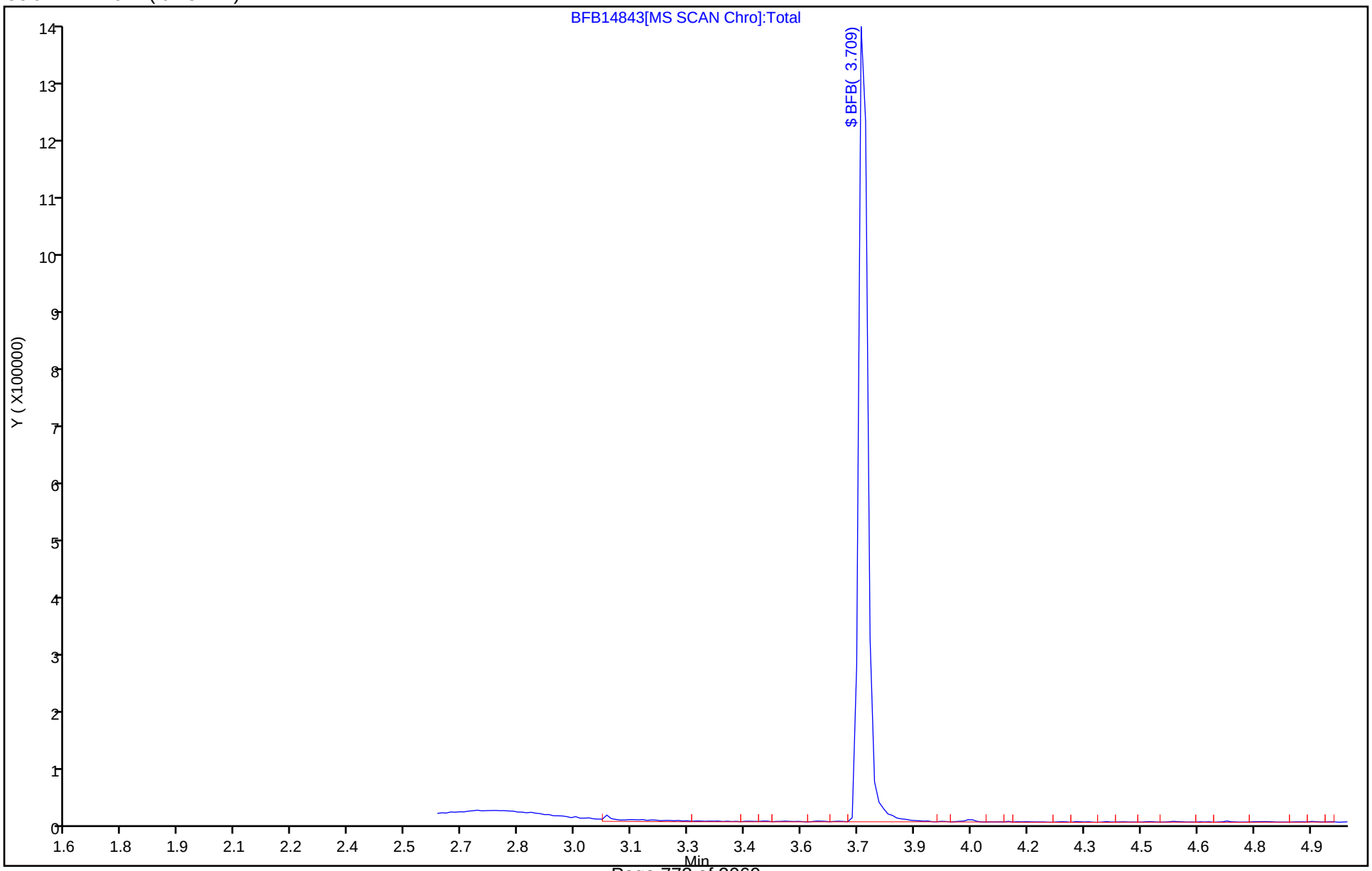
Report Date: 20-Nov-2018 09:43:35 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\BFB14843.D

Injection Date:	19-Nov-2018 09:07:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	bfb			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



Report Date: 24-Jul-2018 18:26:02 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Target Compound Quantitation Report

Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\bfb036.d				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	24-Jul-2018 17:22:19	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Sample Info:	240-0078277-001				
Operator ID:	001904	Instrument ID:	A3UX19		
Method:	\\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\8260_19.m				
Limit Group:	MSV 8260C ICAL				
Last Update:	24-Jul-2018 18:26:01	Calib Date:	01-Jan-0001 00:00:00		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	XAWRK002				
First Level Reviewer: laveyt		Date:	24-Jul-2018 18:26:01		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	4.698	4.698	0.000	0	1090680	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

vmbfb_00020 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\bfb036.d

Injection Date: 24-Jul-2018 17:22:19 Instrument ID: A3UX19

Lims ID: BFB

Client ID:

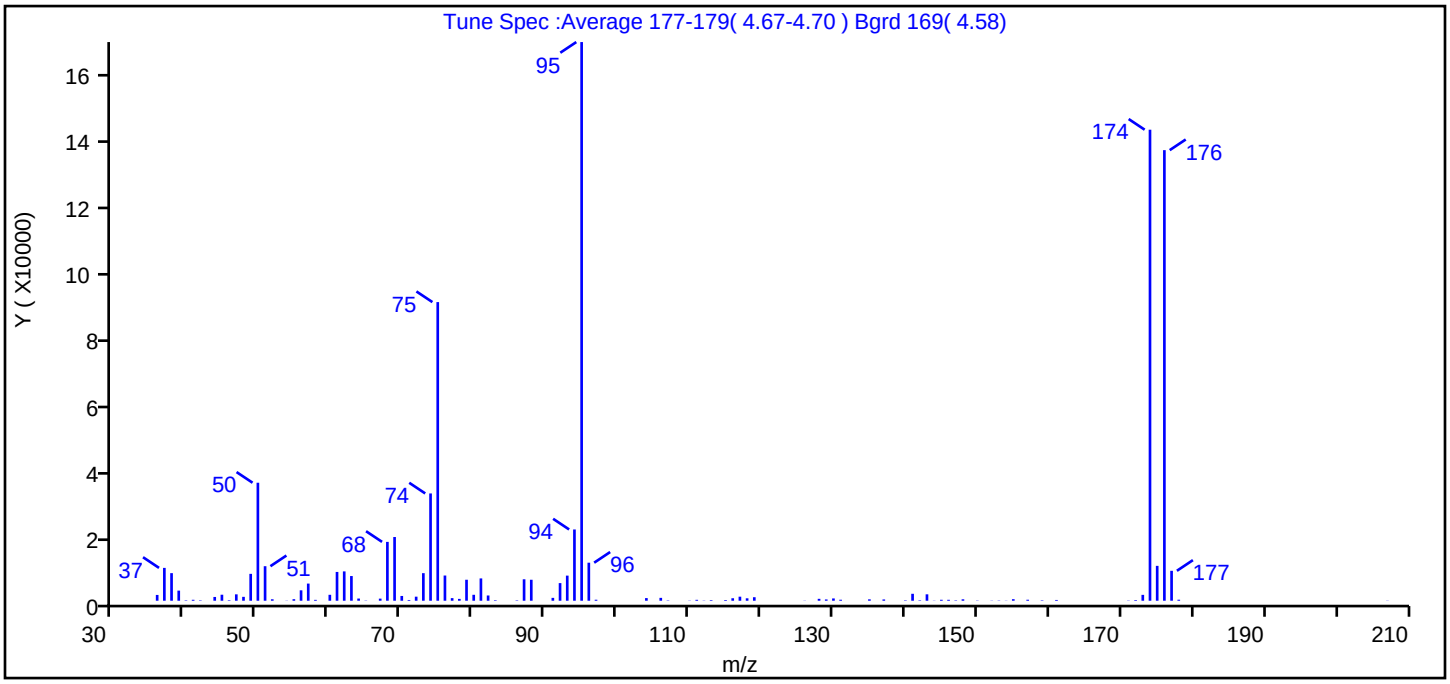
Operator ID: 001904 ALS Bottle#: 0 Worklist Smp#: 1

Injection Vol: 5.0 mL Dil. Factor: 1.0000

Method: 8260_19 Limit Group: MSV 8260C ICAL

Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.1
75	30 to 60% of m/z 95	53.5
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	1.1 (1.2)
174	50 to 120% of m/z 95	84.3
175	5 to 9% of m/z 174	6.2 (7.4)
176	Greater than 95% but less than 101% of m/z 174	80.7 (95.7)
177	5 to 9% of m/z 176	5.4 (6.6)

Report Date: 24-Jul-2018 18:26:02 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\bfb036.d\8260_19.rslt\spectra.d

Injection Date: 24-Jul-2018 17:22:19

Spectrum: Tune Spec :Average 177-179(4.67-4.70) Bgrd 169(4.58)

Base Peak: 95.00

Minimum % Base Peak: 0

Number of Points: 99

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1706	64.00	645	94.00	20976	142.00	135
37.00	9667	65.00	75	95.00	164416	143.00	1887
38.00	8121	67.00	620	96.00	11195	144.00	54
39.00	2976	68.00	17320	97.00	297	145.00	282
40.00	128	69.00	18752	104.00	777	146.00	275
41.00	280	70.00	1405	106.00	846	147.00	123
42.00	120	71.00	220	107.00	102	148.00	420
44.00	1112	72.00	1196	110.00	66	150.00	76
45.00	1770	73.00	8112	111.00	269	152.00	57
46.00	157	74.00	31576	112.00	68	153.00	83
47.00	1883	75.00	87888	113.00	186	154.00	50
48.00	1146	76.00	7419	115.00	214	155.00	454
49.00	7909	77.00	768	116.00	734	157.00	295
50.00	34728	78.00	542	117.00	1191	159.00	132
51.00	10164	79.00	6178	118.00	715	161.00	228
52.00	428	80.00	1749	119.00	1035	171.00	76
54.00	52	81.00	6569	126.00	50	172.00	196
55.00	455	82.00	1544	128.00	562	173.00	1730
56.00	3065	83.00	158	129.00	380	174.00	138624
57.00	5049	86.00	123	130.00	675	175.00	10263
58.00	260	87.00	6315	131.00	295	176.00	132608
60.00	1747	88.00	6174	135.00	411	177.00	8811
61.00	8473	91.00	844	137.00	377	178.00	300
62.00	8634	92.00	5187	140.00	129	207.00	54
63.00	7267	93.00	7390	141.00	2044		

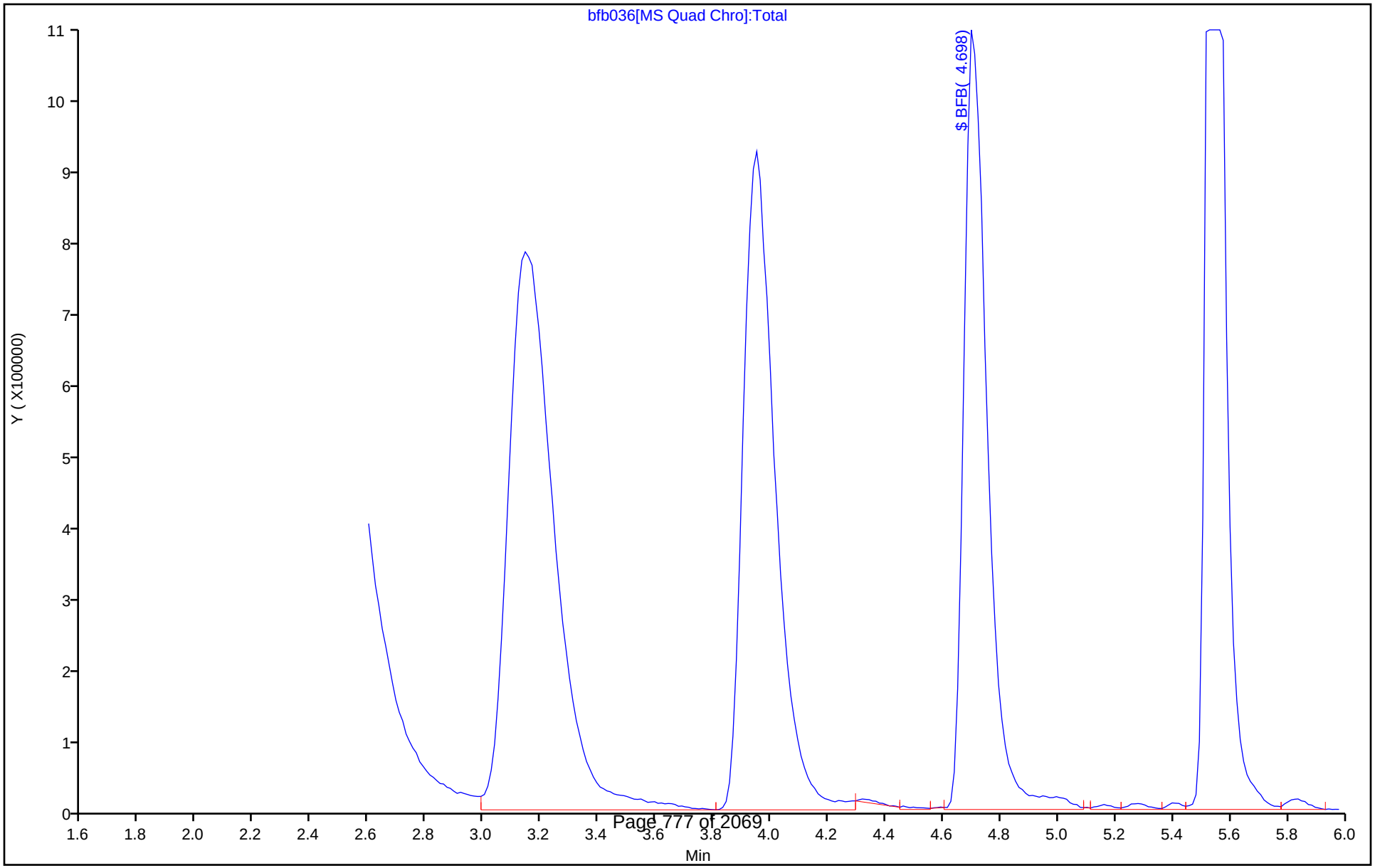
Report Date: 24-Jul-2018 18:26:02 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180724-78277.b\bfb036.d

Injection Date:	24-Jul-2018 17:22:19	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton

Target Compound Quantitation Report

Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\bfb037.d				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	25-Jul-2018 11:28:13	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Sample Info:	240-0078311-001				
Operator ID:	001904	Instrument ID:	A3UX19		
Method:	\\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\8260_19.m				
Limit Group:	MSV 8260C ICAL				
Last Update:	25-Jul-2018 16:32:06	Calib Date:	25-Jul-2018 15:15:13		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\U1900807.d				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	XAWRK026				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	4.686	4.686	0.000	0	1106546	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

vmbfb_00020 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\bfb037.d

Injection Date: 25-Jul-2018 11:28:13 Instrument ID: A3UX19

Lims ID: BFB

Client ID:

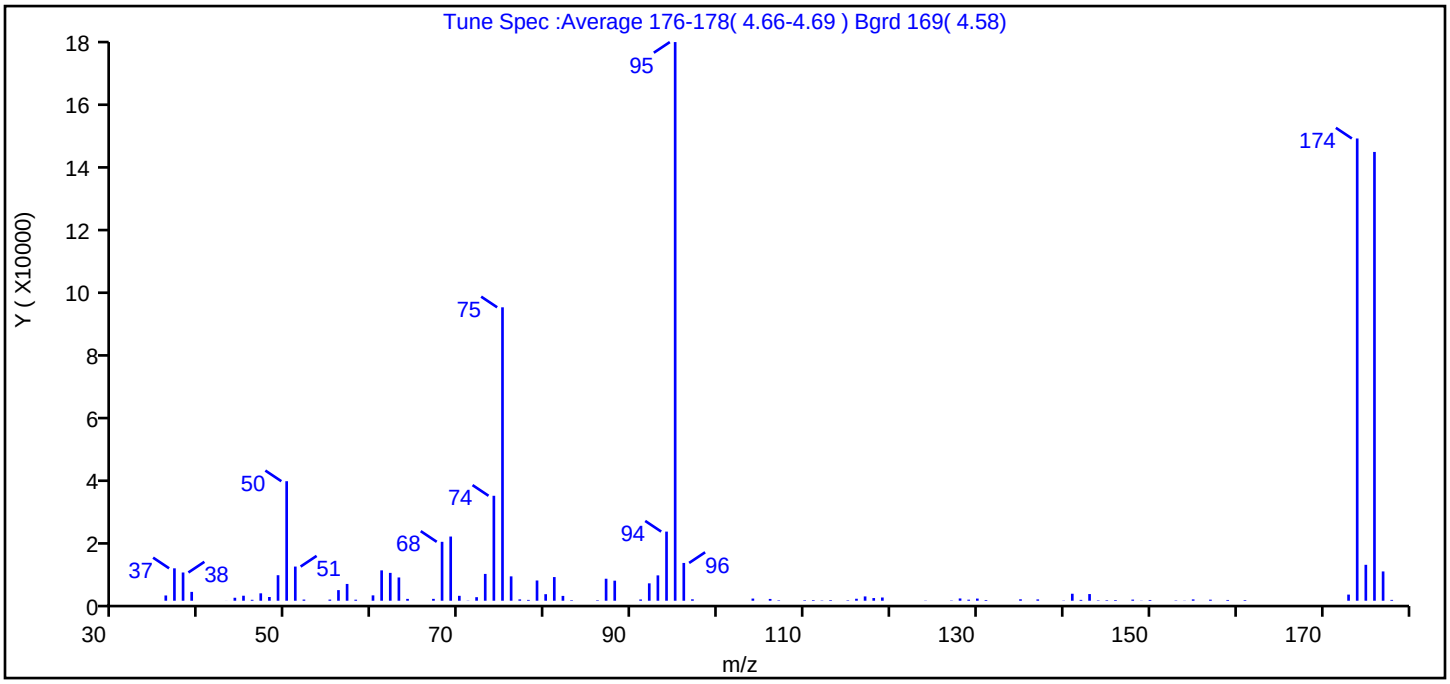
Operator ID: 001904 ALS Bottle#: 0 Worklist Smp#: 1

Injection Vol: 5.0 mL Dil. Factor: 1.0000

Method: 8260_19 Limit Group: MSV 8260C ICAL

Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.4
75	30 to 60% of m/z 95	52.5
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	1.1 (1.3)
174	50 to 120% of m/z 95	82.7
175	5 to 9% of m/z 174	6.4 (7.8)
176	Greater than 95% but less than 101% of m/z 174	80.3 (97.1)
177	5 to 9% of m/z 176	5.2 (6.5)

Report Date: 25-Jul-2018 16:32:07 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\bfb037.d\8260_19.rslt\spectra.d

Injection Date: 25-Jul-2018 11:28:13

Spectrum: Tune Spec :Average 176-178(4.66-4.69) Bgrd 169(4.58)

Base Peak: 95.00

Minimum % Base Peak: 0

Number of Points: 92

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1628	67.00	581	94.00	21384	137.00	409
37.00	10027	68.00	18224	95.00	172800	140.00	80
38.00	8737	69.00	19856	96.00	11689	141.00	2163
39.00	2738	70.00	1521	97.00	441	142.00	263
43.00	20	71.00	65	104.00	670	143.00	2064
44.00	922	72.00	1099	106.00	557	144.00	132
45.00	1551	73.00	8295	107.00	144	145.00	176
46.00	292	74.00	32464	110.00	165	146.00	215
47.00	2293	75.00	90760	111.00	202	148.00	348
48.00	1156	76.00	7539	112.00	94	149.00	57
49.00	7894	77.00	416	113.00	196	150.00	232
50.00	36968	78.00	262	115.00	145	153.00	106
51.00	10570	79.00	6264	116.00	614	154.00	54
52.00	361	80.00	2025	117.00	1332	155.00	412
55.00	352	81.00	7320	118.00	827	157.00	327
56.00	3282	82.00	1495	119.00	1001	159.00	239
57.00	5195	83.00	170	124.00	70	161.00	201
58.00	322	86.00	159	127.00	96	173.00	1900
60.00	1660	87.00	6806	128.00	700	174.00	142976
61.00	9391	88.00	6205	129.00	329	175.00	11113
62.00	8617	91.00	385	130.00	667	176.00	138816
63.00	7197	92.00	5382	131.00	228	177.00	9062
64.00	572	93.00	7843	135.00	442	178.00	262

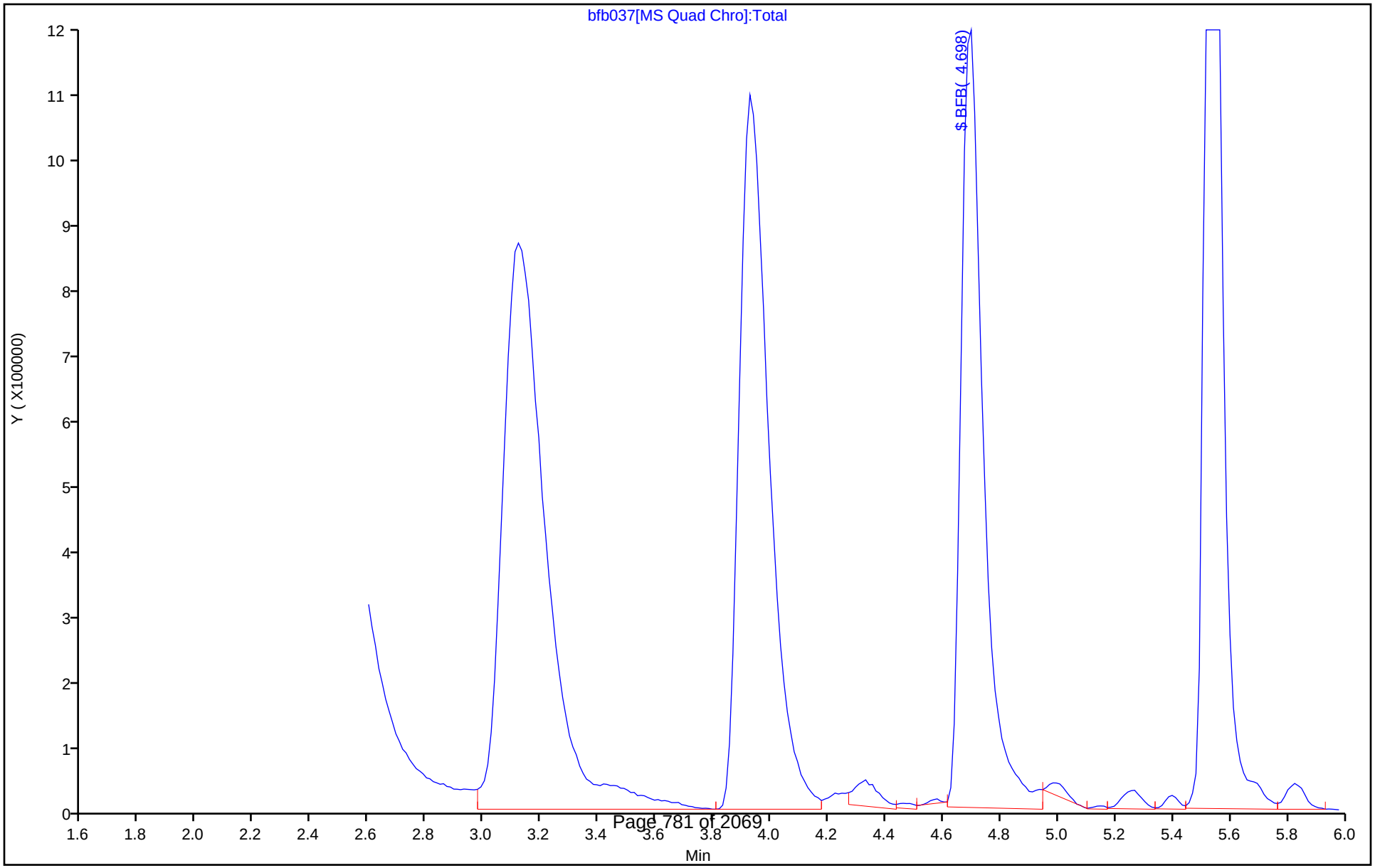
Report Date: 25-Jul-2018 16:32:07 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180725-78311.b\bfb037.d

Injection Date:	25-Jul-2018 11:28:13	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton

Target Compound Quantitation Report

Data File:	\\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\bfb058.d				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	27-Aug-2018 16:23:35	ALS Bottle#:	0	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Sample Info:	240-0079307-001				
Operator ID:	001904	Instrument ID:	A3UX19		
Method:	\\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\8260_19.m				
Limit Group:	MSV 8260C ICAL				
Last Update:	27-Aug-2018 20:00:43	Calib Date:	27-Aug-2018 19:23:28		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\U1901329.d				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	XAWRK010				
First Level Reviewer: laveyt		Date:	27-Aug-2018 19:59:46		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	4.698	4.698	0.000	0	1569511	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

vmbfb_00020 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\bfb058.d

Injection Date: 27-Aug-2018 16:23:35 Instrument ID: A3UX19

Lims ID: BFB

Client ID:

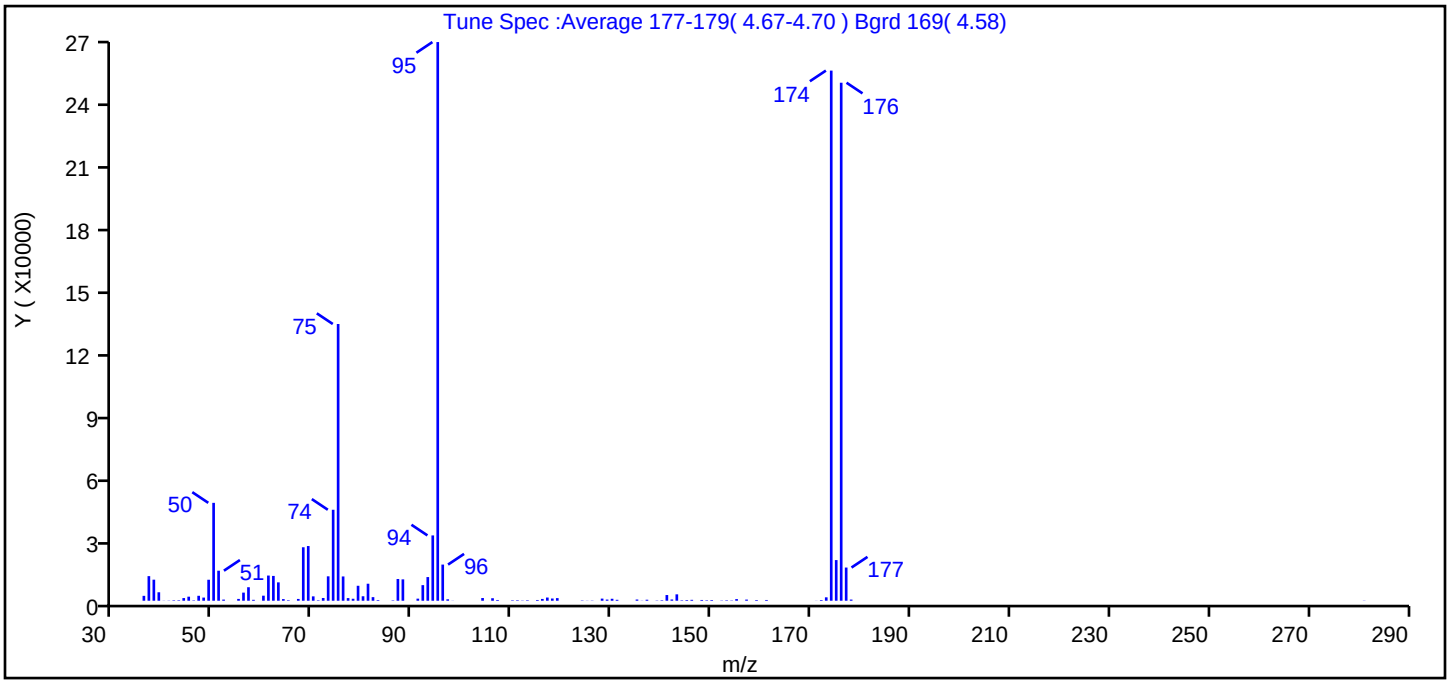
Operator ID: 001904 ALS Bottle#: 0 Worklist Smp#: 1

Injection Vol: 5.0 mL Dil. Factor: 1.0000

Method: 8260_19 Limit Group: MSV 8260C ICAL

Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.5
75	30 to 60% of m/z 95	49.5
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	0.6 (0.6)
174	50 to 120% of m/z 95	94.9
175	5 to 9% of m/z 174	7.3 (7.7)
176	Greater than 95% but less than 101% of m/z 174	92.7 (97.7)
177	5 to 9% of m/z 176	5.9 (6.4)

Report Date: 27-Aug-2018 20:00:44 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\bfb058.d\8260_19.rslt\spectra.d

Injection Date: 27-Aug-2018 16:23:35

Spectrum: Tune Spec :Average 177-179(4.67-4.70) Bgrd 169(4.58)

Base Peak: 95.00

Minimum % Base Peak: 0

Number of Points: 104

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2349	65.00	256	96.00	17360	140.00	251
37.00	11809	67.00	862	97.00	688	141.00	2734
38.00	10107	68.00	25672	98.00	58	142.00	600
39.00	4064	69.00	26264	104.00	1300	143.00	3067
40.00	66	70.00	2099	106.00	1203	144.00	221
41.00	100	71.00	235	107.00	359	145.00	322
42.00	232	72.00	1321	110.00	224	146.00	434
43.00	243	73.00	11723	111.00	256	148.00	370
44.00	1279	74.00	43680	112.00	119	149.00	227
45.00	1945	75.00	132864	113.00	246	150.00	326
46.00	198	76.00	11659	115.00	360	152.00	127
47.00	2373	77.00	1269	116.00	866	153.00	224
48.00	1513	78.00	954	117.00	1530	154.00	142
49.00	10079	79.00	7185	118.00	1063	155.00	786
50.00	47000	80.00	2148	119.00	1259	157.00	556
51.00	14416	81.00	8168	124.00	158	159.00	325
52.00	549	82.00	1723	125.00	69	161.00	362
55.00	872	83.00	325	126.00	112	171.00	51
56.00	3900	86.00	204	128.00	1021	172.00	331
57.00	6486	87.00	10430	129.00	555	173.00	1639
58.00	440	88.00	10260	130.00	946	174.00	254528
60.00	2424	91.00	1000	131.00	447	175.00	19520
61.00	12091	92.00	7487	135.00	583	176.00	248704
62.00	11912	93.00	11359	136.00	73	177.00	15935
63.00	8822	94.00	31360	137.00	488	178.00	556
64.00	782	95.00	268224	139.00	133	281.00	85

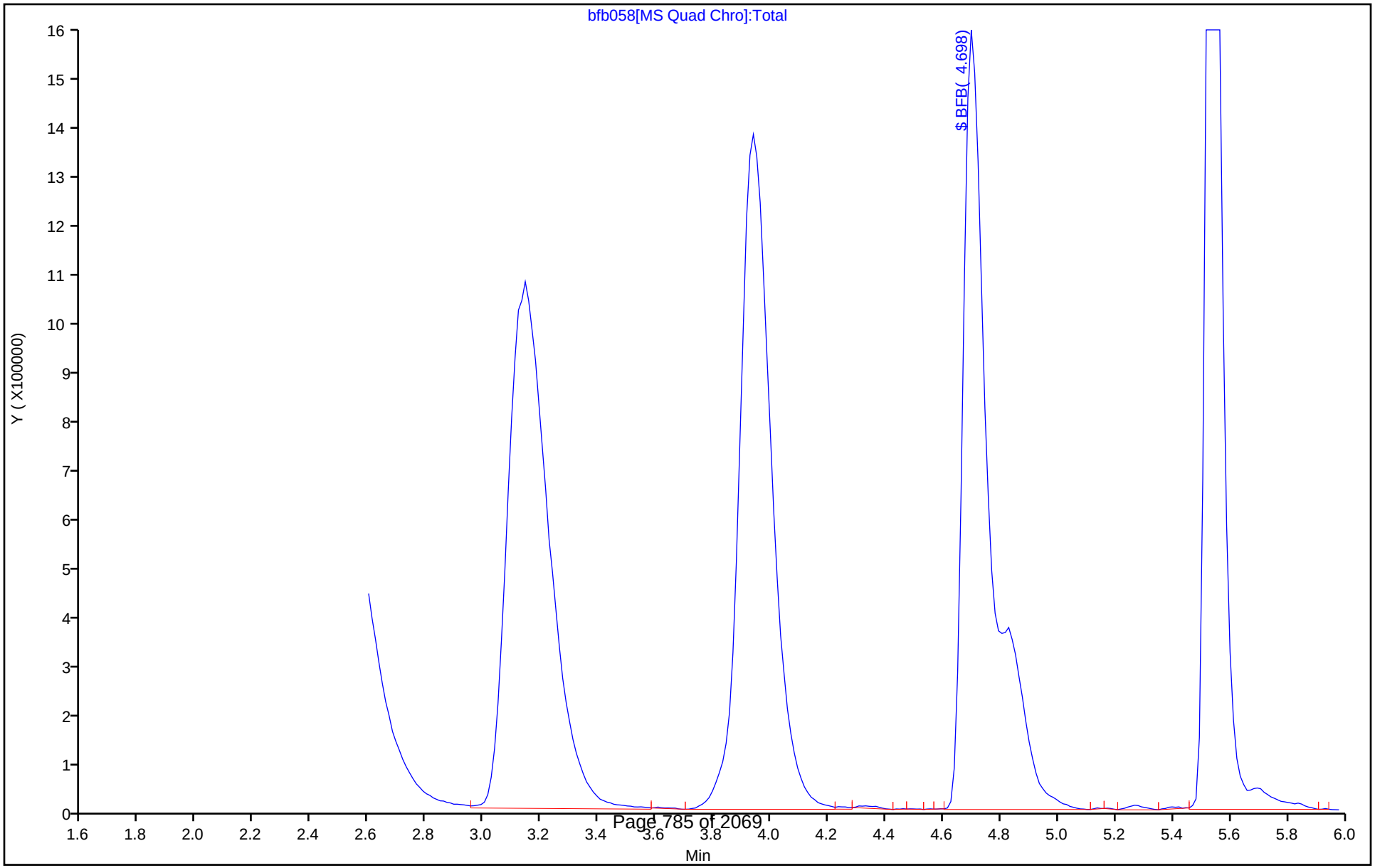
Report Date: 27-Aug-2018 20:00:44 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20180827-79307.b\bfb058.d

Injection Date:	27-Aug-2018 16:23:35	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\bfb133.d
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 15-Nov-2018 19:02:33 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 001
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 15-Nov-2018 19:42:00 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: laveyt Date: 15-Nov-2018 19:42:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	4.691	4.691	0.000	0	1349179	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

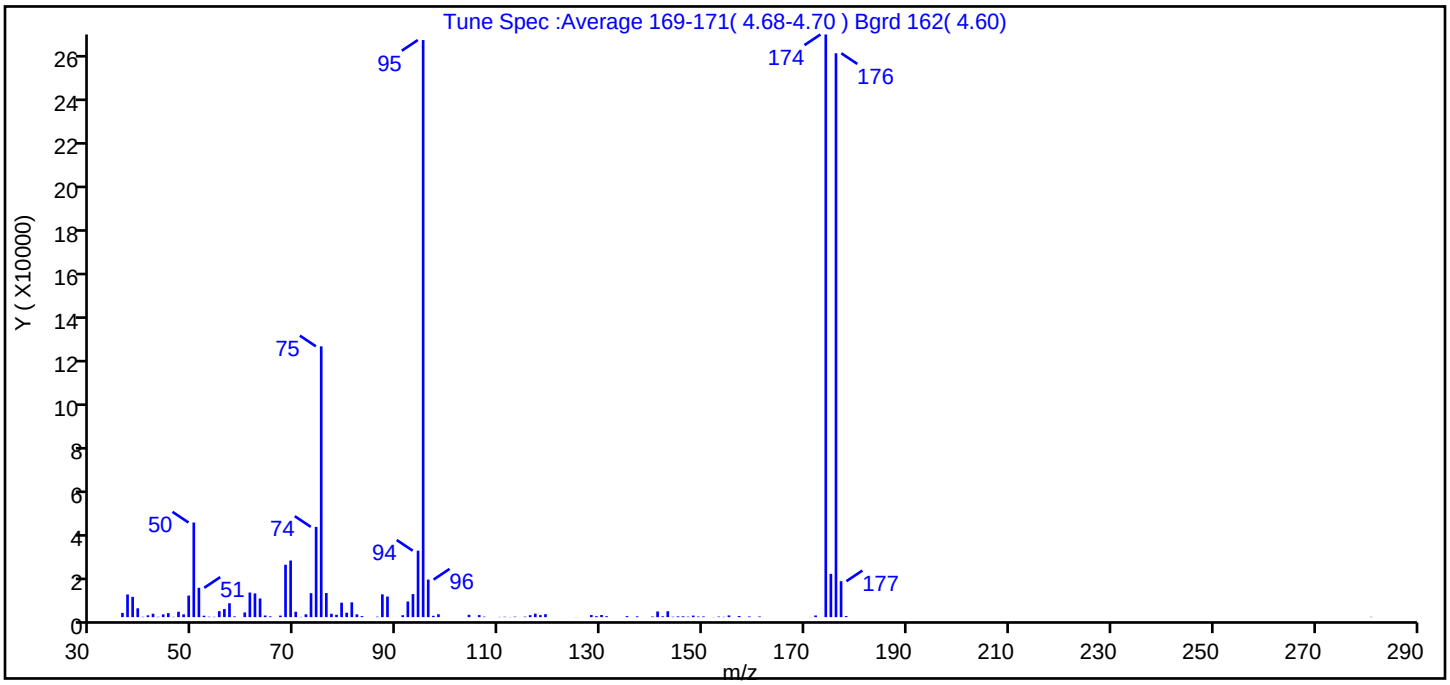
vmbfb_00020 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\bfb133.d
Injection Date: 15-Nov-2018 19:02:33 Instrument ID: A3UX19
Lims ID: BFB
Client ID:
Operator ID: 001904 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_19 Limit Group: MSV 8260C ICAL
Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.4
75	30 to 60% of m/z 95	46.9
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	101.0
175	5 to 9% of m/z 174	7.5 (7.4)
176	Greater than 95% but less than 101% of m/z 174	97.7 (96.8)
177	5 to 9% of m/z 176	6.2 (6.4)

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\bfb133.d\8260_19.rslt\spectra.d
Injection Date: 15-Nov-2018 19:02:33
Spectrum: Tune Spec :Average 169-171(4.68-4.70) Bgrd 162(4.60)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 102

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1947	63.00	8570	94.00	30560	142.00	377
37.00	10425	64.00	757	95.00	265408	143.00	2727
38.00	9354	65.00	358	96.00	17272	144.00	188
39.00	4077	67.00	721	97.00	612	145.00	353
40.00	165	68.00	24088	98.00	1335	146.00	388
41.00	840	69.00	26040	104.00	1078	147.00	225
42.00	1572	70.00	2484	106.00	953	148.00	707
43.00	173	71.00	121	107.00	230	149.00	273
44.00	1278	72.00	1303	110.00	109	150.00	322
45.00	1836	73.00	11019	111.00	181	152.00	55
46.00	128	74.00	41520	112.00	73	153.00	257
47.00	2469	75.00	124544	113.00	217	154.00	142
48.00	1286	76.00	11100	115.00	236	155.00	797
49.00	9928	77.00	1552	116.00	906	157.00	536
50.00	43520	78.00	1091	117.00	1612	159.00	316
51.00	13505	79.00	6646	118.00	937	161.00	298
52.00	665	80.00	2037	119.00	1365	171.00	59
53.00	204	81.00	6805	125.00	56	172.00	769
54.00	157	82.00	1297	128.00	955	174.00	267968
55.00	2752	83.00	476	129.00	448	175.00	19912
56.00	3707	86.00	219	130.00	987	176.00	259328
57.00	6402	87.00	10484	131.00	423	177.00	16528
58.00	340	88.00	9469	135.00	476	178.00	499
60.00	2160	91.00	886	137.00	379	281.00	141
61.00	11323	92.00	7216	140.00	282		
62.00	10926	93.00	10592	141.00	2592		

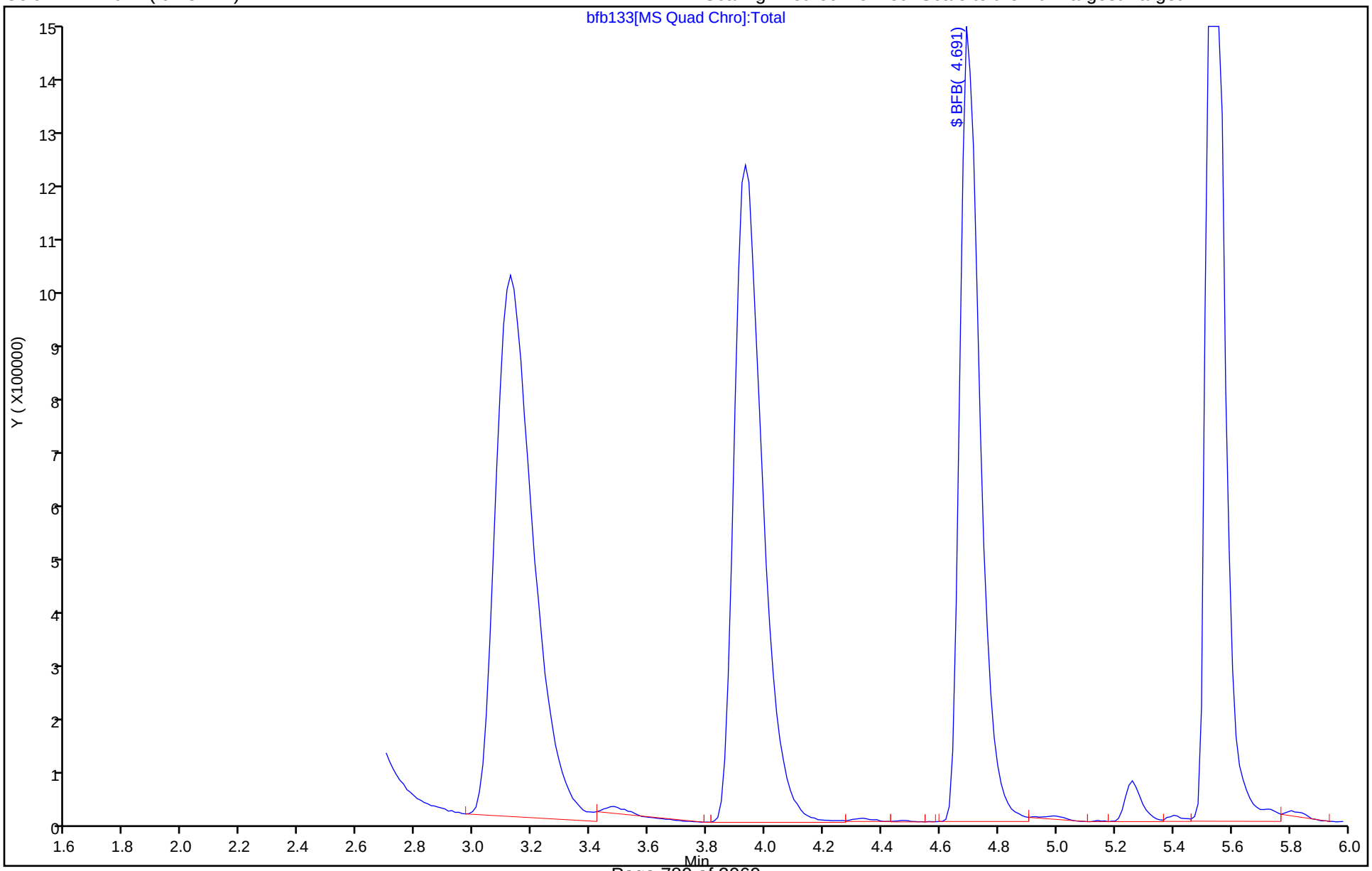
Report Date: 15-Nov-2018 19:42:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\bfb133.d

Injection Date:	15-Nov-2018 19:02:33	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-355689/7

Matrix: Water | Lab File ID: U1903845.d

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 11/15/2018 21:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	p-Isopropyltoluene	0.13	U	1.0	0.13
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
108-86-1	Bromobenzene	0.12	U	1.0	0.12
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-355689/7

Matrix: Water | Lab File ID: U1903845.d

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 11/15/2018 21:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	0.39	U	1.0	0.39
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
74-95-3	Dibromomethane	0.090	U	1.0	0.090
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-65-0	tert-Butyl alcohol (TBA)	1.7	U	50	1.7
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
108-20-3	Diisopropyl ether	0.17	U	10	0.17
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
179601-23-1	m-Xylene & p-Xylene	0.080	U	2.0	0.080
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
95-47-6	o-Xylene	0.090	U	1.0	0.090
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
100-42-5	Styrene	0.10	U	1.0	0.10
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
637-92-3	Ethyl t-butyl ether	0.15	U	5.0	0.15
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-355689/7

Matrix: Water | Lab File ID: U1903845.d

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 11/15/2018 21:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	98		70-123
1868-53-7	Dibromofluoromethane (Surr)	100		75-128
460-00-4	4-Bromofluorobenzene (Surr)	94		59-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		70-121

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903845.d
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 15-Nov-2018 21:19:01 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 007
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 15-Nov-2018 22:04:04 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: laveyt Date: 15-Nov-2018 22:05:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.653	0.001	99	781668	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.499	0.001	80	649582	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	93	345027	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	60	210984	20.0	20.1	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	96	245714	20.0	20.3	
$ 6 Toluene-d8 (Surr)	98	7.100	7.100	0.000	93	764887	20.0	19.6	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.673	0.001	91	274896	20.0	18.8	
9 Dichlorodifluoromethane	85		1.598					ND	
10 Chloromethane	50		1.811					ND	
12 Butadiene	54		1.906					ND	
11 Vinyl chloride	62		1.906					ND	
13 Bromomethane	94		2.226					ND	
165 1-Chloro-1-fluoroethane TI	47		2.226					ND	
14 Chloroethane	64		2.309					ND	
15 Dichlorofluoromethane	67		2.511					ND	
16 Trichlorofluoromethane	101		2.558					ND	
17 Ethyl ether	59	2.807	2.807	0.000	77	3326		0.4728	
18 Acrolein	56		2.926					ND	
20 1,1,2-Trichloro-1,2,2-trif	101		3.056					ND	
21 1,1-Dichloroethene	61		3.056					ND	
22 Acetone	43	3.068	3.068	0.000	70	3318		1.08	
19 Methylal	45		3.092					ND	
23 Iodomethane	142		3.199					ND	
24 Carbon disulfide	76		3.282					ND	
25 Acetonitrile	41	3.329	3.353	-0.024	51	327		3.23	
26 3-Chloro-1-propene	41		3.365					ND	
27 Methyl acetate	43		3.377					ND	
28 Methylene Chloride	49	3.495	3.495	0.000	84	20899		1.88	
29 2-Methyl-2-propanol	59		3.578					ND	
30 Acrylonitrile	53	3.697	3.697	0.000	41	458		0.1165	
32 trans-1,2-Dichloroethene	61		3.732					ND	
31 Methyl tert-butyl ether	73		3.732					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
33 Hexane	57		3.981					ND	
34 1,1-Dichloroethane	63		4.112					ND	
35 Vinyl acetate	43		4.147					ND	
36 Isopropyl ether	87		4.171					ND	
37 2-Chloro-1,3-butadiene	53		4.195					ND	
38 Tert-butyl ethyl ether	59		4.491					ND	
41 2-Butanone (MEK)	72		4.634					ND	
39 2,2-Dichloropropane	77		4.634					ND	
40 cis-1,2-Dichloroethene	96		4.634					ND	
42 Ethyl acetate	43		4.634					ND	
43 Propionitrile	54		4.681					ND	
44 Methacrylonitrile	41		4.823					ND	
45 Chlorobromomethane	49		4.835					ND	
46 Tetrahydrofuran	42		4.883					ND	
47 Chloroform	83		4.906					ND	
48 1,1,1-Trichloroethane	97		5.084					ND	
49 Cyclohexane	84		5.143					ND	
50 1,1-Dichloropropene	75		5.227					ND	
51 Carbon tetrachloride	117		5.238					ND	
52 Isobutyl alcohol	41		5.298					ND	
53 Benzene	78		5.416					ND	
54 1,2-Dichloroethane	62		5.416					ND	
55 Tert-amyl methyl ether	73		5.499					ND	
56 n-Heptane	57		5.642					ND	
57 n-Butanol	56		5.891					ND	
58 Trichloroethene	130		5.985					ND	
59 Ethyl acrylate	55		6.057					ND	
60 Methylcyclohexane	83		6.175					ND	
61 1,2-Dichloropropane	63		6.187					ND	
62 Methyl methacrylate	41		6.270					ND	
63 Dibromomethane	174		6.294					ND	
64 1,4-Dioxane	88		6.306					ND	
65 Dichlorobromomethane	83		6.436					ND	
66 2-Nitropropane	41		6.638					ND	
67 2-Chloroethyl vinyl ether	63		6.697					ND	
68 cis-1,3-Dichloropropene	75		6.839					ND	
69 4-Methyl-2-pentanone (MIBK	43		6.982					ND	
70 Toluene	91		7.171					ND	
71 trans-1,3-Dichloropropene	75		7.361					ND	
72 Ethyl methacrylate	69		7.432					ND	
74 1,1,2-Trichloroethane	97		7.539					ND	
75 Tetrachloroethene	166		7.693					ND	
76 1,3-Dichloropropane	76		7.705					ND	
77 2-Hexanone	43		7.764					ND	
78 n-Butyl acetate	43		7.883					ND	
79 Chlorodibromomethane	129		7.930					ND	
73 Tetrahydrothiophene	60		7.931					ND	
80 Ethylene Dibromide	107		8.049					ND	
81 1-Chlorohexane	91		8.488					ND	
82 Chlorobenzene	112		8.523					ND	
83 1,1,1,2-Tetrachloroethane	131		8.606					ND	
84 Ethylbenzene	106		8.630					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
85 m-Xylene & p-Xylene	106		8.749					ND	
86 o-Xylene	106		9.152					ND	
87 Styrene	104		9.164					ND	
88 Bromoform	173		9.353					ND	
89 Isopropylbenzene	105		9.519					ND	
90 Cyclohexanone	55		9.614					ND	
120 1,4-Dichlorobutane	55		9.615					ND	
91 1,1,2,2-Tetrachloroethane	83		9.816					ND	
117 3-Ethyltoluene	105		9.824					ND	
92 Bromobenzene	156		9.840					ND	
93 1,2,3-Trichloropropane	110		9.863					ND	
94 trans-1,4-Dichloro-2-buten	53		9.875					ND	
95 N-Propylbenzene	120		9.946					ND	
123 2-Ethyltoluene	105		10.013					ND	
96 2-Chlorotoluene	126		10.041					ND	
97 1,3,5-Trimethylbenzene	105		10.124					ND	
98 4-Chlorotoluene	126		10.148					ND	
99 tert-Butylbenzene	119		10.468					ND	
100 Pentachloroethane	167		10.492					ND	
101 1,2,4-Trimethylbenzene	105		10.515					ND	
102 sec-Butylbenzene	105		10.693					ND	
103 1,3-Dichlorobenzene	146		10.824					ND	
104 4-Isopropyltoluene	119		10.848					ND	
105 1,4-Dichlorobenzene	146		10.907					ND	
106 1,2,3-Trimethylbenzene	105		10.966					ND	
107 Benzyl chloride	91		11.049					ND	
108 n-Butylbenzene	91		11.286					ND	
109 1,2-Dichlorobenzene	146		11.298					ND	
110 1,2-Dibromo-3-Chloropropan	157		12.128					ND	
111 1,3,5-Trichlorobenzene	180		12.354					ND	
112 1,2,4-Trichlorobenzene	180		13.018					ND	
113 Hexachlorobutadiene	225		13.207					ND	
114 Naphthalene	128		13.279					ND	
115 1,2,3-Trichlorobenzene	180		13.539					ND	
116 2-Methylnaphthalene	142		14.619					ND	
118 Epichlorohydrin	1		-0.010					ND	
119 Ethylene oxide	1		-0.010					ND	
121 Propene oxide	1		-0.010					ND	
S 127 Trihalomethanes, Total	1		-0.010					ND	
S 164 Total BTEX	1		-0.010					ND	
S 124 1,2-Dichloroethene, Total	96		1.130					ND	
S 125 1,3-Dichloropropene, Total	75		6.750					ND	
S 126 Xylenes, Total	106		16.520					ND	

Reagents:

vm50ss_stk_00078	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00133	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00002	Amount Added: 2.00	Units: uL	Run Reagent

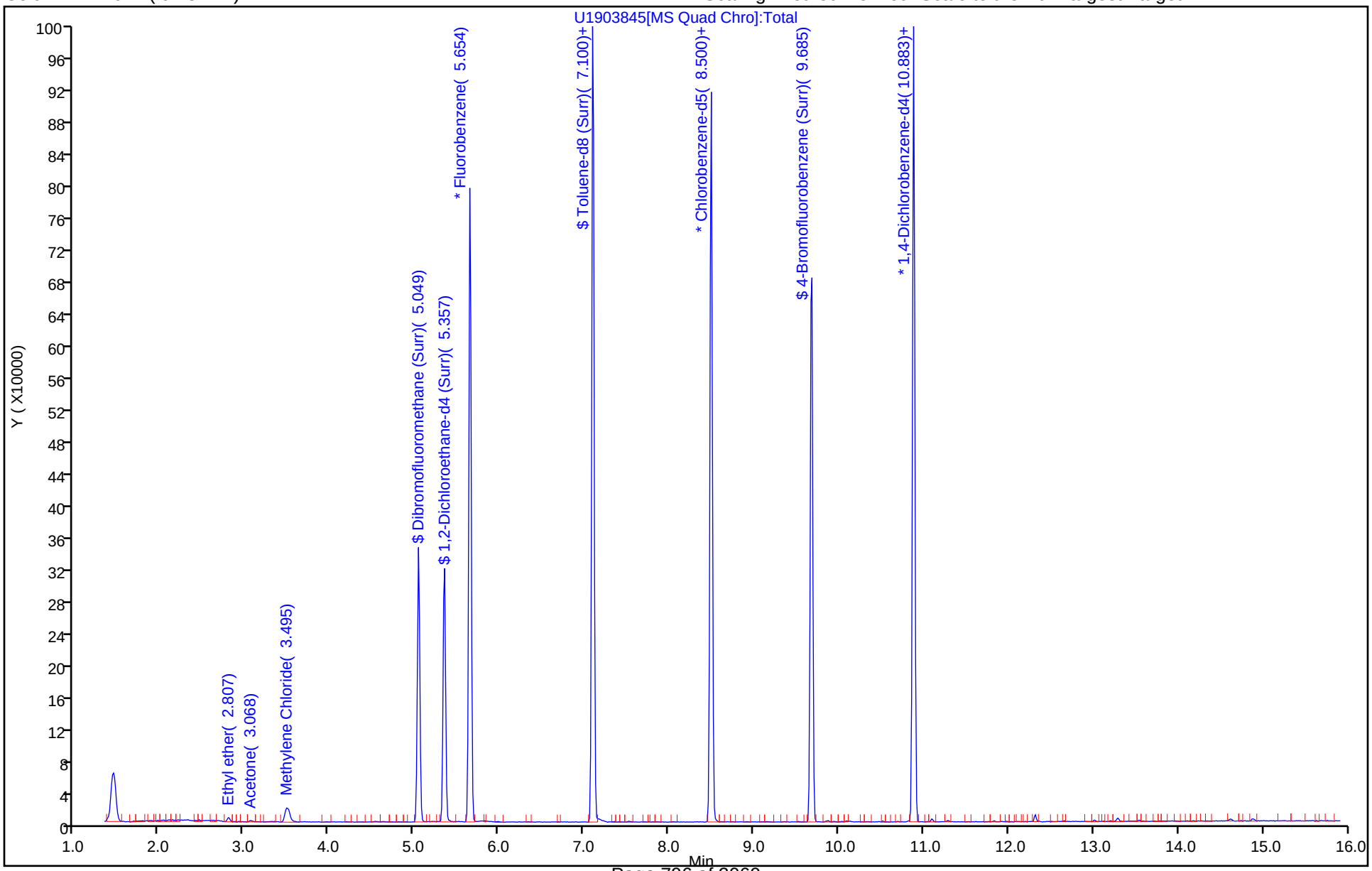
Report Date: 15-Nov-2018 22:05:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903845.d

Injection Date:	15-Nov-2018 21:19:01	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903845.d
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 15-Nov-2018 21:19:01 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 007
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 15-Nov-2018 22:04:04 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: laveyt Date: 15-Nov-2018 22:05:01

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	20.0	20.1	100.27
$ 5 1,2-Dichloroethane-d4 (Surr)	20.0	20.3	101.67
$ 6 Toluene-d8 (Surr)	20.0	19.6	98.18
$ 7 4-Bromofluorobenzene (Surr)	20.0	18.8	93.77

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-356055/16

Matrix: Solid | Lab File ID: 1416880.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 11/19/2018 14:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.0	U	5.0	3.0
71-55-6	1,1,1-Trichloroethane	0.82	U	5.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	1.4	U	5.0	1.4
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.3	U	5.0	1.3
75-34-3	1,1-Dichloroethane	0.69	U	5.0	0.69
75-35-4	1,1-Dichloroethene	0.90	U	5.0	0.90
563-58-6	1,1-Dichloropropene	0.99	U	5.0	0.99
87-61-6	1,2,3-Trichlorobenzene	0.57	U	5.0	0.57
96-18-4	1,2,3-Trichloropropane	1.6	U	5.0	1.6
526-73-8	1,2,3-Trimethylbenzene	1.8	U	5.0	1.8
120-82-1	1,2,4-Trichlorobenzene	0.57	U	5.0	0.57
95-63-6	1,2,4-Trimethylbenzene	1.0	U	5.0	1.0
96-12-8	1,2-Dibromo-3-Chloropropane	3.6	U	10	3.6
95-50-1	1,2-Dichlorobenzene	1.1	U	5.0	1.1
107-06-2	1,2-Dichloroethane	0.77	U	5.0	0.77
78-87-5	1,2-Dichloropropane	0.85	U	5.0	0.85
541-73-1	1,3-Dichlorobenzene	0.82	U	5.0	0.82
142-28-9	1,3-Dichloropropane	0.99	U	5.0	0.99
106-46-7	1,4-Dichlorobenzene	0.88	U	5.0	0.88
594-20-7	2,2-Dichloropropane	1.2	U	5.0	1.2
78-93-3	2-Butanone (MEK)	3.6	U	20	3.6
110-75-8	2-Chloroethyl vinyl ether	8.9	U	50	8.9
95-49-8	2-Chlorotoluene	0.95	U	5.0	0.95
591-78-6	2-Hexanone	4.1	U	20	4.1
106-43-4	4-Chlorotoluene	0.86	U	5.0	0.86
99-87-6	p-Isopropyltoluene	2.9	U	5.0	2.9
108-10-1	4-Methyl-2-pentanone (MIBK)	3.7	U	20	3.7
67-64-1	Acetone	21	U	25	21
71-43-2	Benzene	0.70	U	5.0	0.70
108-86-1	Bromobenzene	1.2	U	5.0	1.2
75-25-2	Bromoform	2.4	U	5.0	2.4
74-83-9	Bromomethane	0.99	U	5.0	0.99
75-15-0	Carbon disulfide	1.2	U	5.0	1.2
56-23-5	Carbon tetrachloride	3.3	U	5.0	3.3
108-90-7	Chlorobenzene	0.92	U	5.0	0.92

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-356055/16

Matrix: Solid | Lab File ID: 1416880.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 11/19/2018 14:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	2.8	U	5.0	2.8
75-00-3	Chloroethane	1.2	U	5.0	1.2
67-66-3	Chloroform	0.79	U	5.0	0.79
74-87-3	Chloromethane	1.0	U	5.0	1.0
156-59-2	cis-1,2-Dichloroethene	0.65	U	5.0	0.65
10061-01-5	cis-1,3-Dichloropropene	1.4	U	5.0	1.4
74-95-3	Dibromomethane	0.67	U	5.0	0.67
74-97-5	Bromochloromethane	0.59	U	5.0	0.59
75-71-8	Dichlorodifluoromethane	0.94	U	5.0	0.94
75-27-4	Bromodichloromethane	0.68	U	5.0	0.68
75-65-0	tert-Butyl alcohol (TBA)	17	U	200	17
100-41-4	Ethylbenzene	1.0	U	5.0	1.0
87-68-3	Hexachlorobutadiene	3.7	U	5.0	3.7
108-20-3	Diisopropyl ether	0.76	U	10	0.76
98-82-8	Isopropylbenzene	0.83	U	5.0	0.83
1634-04-4	Methyl tert-butyl ether	0.82	U	5.0	0.82
75-09-2	Methylene Chloride	12	U	25	12
179601-23-1	m-Xylene & p-Xylene	0.78	U	10	0.78
91-20-3	Naphthalene	2.7	U	5.0	2.7
104-51-8	n-Butylbenzene	3.5	U	5.0	3.5
103-65-1	N-Propylbenzene	0.73	U	5.0	0.73
95-47-6	o-Xylene	0.86	U	5.0	0.86
135-98-8	sec-Butylbenzene	0.86	U	5.0	0.86
100-42-5	Styrene	1.2	U	5.0	1.2
994-05-8	Tert-amyl methyl ether	2.2	U	5.0	2.2
637-92-3	Ethyl t-butyl ether	2.3	U	5.0	2.3
127-18-4	Tetrachloroethene	0.73	U	5.0	0.73
108-88-3	Toluene	0.77	U	5.0	0.77
156-60-5	trans-1,2-Dichloroethene	0.47	U	5.0	0.47
10061-02-6	trans-1,3-Dichloropropene	1.0	U	5.0	1.0
79-01-6	Trichloroethene	0.63	U	5.0	0.63
75-69-4	Trichlorofluoromethane	1.1	U	5.0	1.1
108-05-4	Vinyl acetate	2.1	U	10	2.1
75-01-4	Vinyl chloride	0.84	U	5.0	0.84
1330-20-7	Xylenes, Total	1.6	U	10	1.6
98-06-6	tert-Butylbenzene	0.91	U	5.0	0.91

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-356055/16

Matrix: Solid | Lab File ID: 1416880.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 11/19/2018 14:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
106-93-4	1,2-Dibromoethane	0.77	U	5.0	0.77

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	93		62-135
1868-53-7	Dibromofluoromethane (Surr)	81		49-132
460-00-4	4-Bromofluorobenzene (Surr)	92		49-141
17060-07-0	1,2-Dichloroethane-d4 (Surr)	78		48-123

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416880.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 19-Nov-2018 14:29:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Misc. Info.: 240-0082085-016
Operator ID: 002808 Instrument ID: A3UX14

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 14:57:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1287785	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	893127	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.285	-0.001	98	379462	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.510	5.498	0.012	94	276804	50.0	40.5	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	92	298993	50.0	38.8	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	1198160	50.0	46.3	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	387341	50.0	45.9	
9 Dichlorodifluoromethane	85		1.061					ND	
10 Chloromethane	50		1.191					ND	
11 Vinyl chloride	62		1.286					ND	U
12 Butadiene	54		1.298					ND	U
13 Bromomethane	94		1.522					ND	
156 1-Chloro-1-fluoroethane TI	47		1.546					ND	
15 Chloroethane	64		1.605					ND	
16 Dichlorofluoromethane	67		1.795					ND	
17 Trichlorofluoromethane	101		1.806					ND	
14 Ethylene oxide	44		1.895					ND	
18 Ethyl ether	59	2.078	2.079	-0.001	86	1325		0.2385	
19 Acrolein	56		2.209					ND	
21 1,1-Dichloroethene	96		2.268					ND	
22 1,1,2-Trichloro-1,2,2-trif	151		2.292					ND	
24 Acetone	43	2.386	2.374	0.012	99	12697		5.28	
25 Iodomethane	142		2.422					ND	
26 Carbon disulfide	76		2.457					ND	
27 3-Chloro-1-propene	76		2.670					ND	
28 Acetonitrile	41		2.694					ND	U
29 Methyl acetate	43		2.729					ND	
20 Propene oxide	58		2.819					ND	
30 Methylene Chloride	84		2.824					ND	
23 Methylal	45		2.932					ND	
31 2-Methyl-2-propanol	59		3.061					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
32 trans-1,2-Dichloroethene	96		3.132					ND	
33 Methyl tert-butyl ether	73		3.155					ND	
34 Acrylonitrile	53		3.167					ND	
35 Hexane	86		3.487					ND	
36 1,1-Dichloroethane	63		3.735					ND	
37 2-Chloro-1,3-butadiene	53		3.853					ND	
38 Isopropyl ether	87		3.877					ND	
39 Vinyl acetate	86		3.889					ND	
40 Tert-butyl ethyl ether	59		4.504					ND	
41 2,2-Dichloropropane	97		4.682					ND	
42 cis-1,2-Dichloroethene	96		4.717					ND	
43 2-Butanone (MEK)	43		4.824					ND	U
45 Ethyl acetate	43		4.954					ND	
44 Propionitrile	54	4.978	4.954	0.024	90	1873		1.76	
46 Chlorobromomethane	128		5.108					ND	
47 Methacrylonitrile	41	5.167	5.155	0.012	93	7499		1.52	
48 Tetrahydrofuran	42		5.167					ND	
49 Chloroform	83		5.273					ND	
50 1,1,1-Trichloroethane	97		5.451					ND	
51 Cyclohexane	56		5.475					ND	
52 Carbon tetrachloride	117		5.652					ND	
53 1,1-Dichloropropene	75		5.676					ND	
54 Benzene	78		5.948					ND	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	88	1167		0.1291	
55 Isobutyl alcohol	41		6.066					ND	U
57 Tert-amyl methyl ether	73		6.137					ND	
58 n-Heptane	100		6.315					ND	
59 Trichloroethene	130		6.729					ND	
60 n-Butanol	56		6.824					ND	
62 Methylcyclohexane	83		6.895					ND	
61 Ethyl acrylate	55		6.942					ND	
63 1,2-Dichloropropane	63		6.977					ND	
65 Dibromomethane	93		7.108					ND	
67 1,4-Dioxane	88		7.155					ND	
66 Methyl methacrylate	41	7.178	7.167	0.011	83	1503		0.2417	
64 Tetrahydrothiophene	60		7.255					ND	
68 Dichlorobromomethane	83		7.297					ND	
69 2-Nitropropane	41		7.557					ND	U
70 2-Chloroethyl vinyl ether	63		7.640					ND	
71 cis-1,3-Dichloropropene	75		7.747					ND	
72 Epichlorohydrin	57	7.971	7.919	0.053	40	1306		NC	
73 4-Methyl-2-pentanone (MIBK	43		7.924					ND	
74 Toluene	91		8.031					ND	
75 trans-1,3-Dichloropropene	75		8.291					ND	
76 Ethyl methacrylate	69		8.386					ND	
77 1,1,2-Trichloroethane	97		8.445					ND	
78 Tetrachloroethene	164		8.528					ND	
79 1,3-Dichloropropane	76		8.587					ND	
80 2-Hexanone	43		8.693					ND	U
82 Chlorodibromomethane	129		8.788					ND	
81 n-Butyl acetate	43	8.823	8.811	0.012	63	4367		0.3899	
83 Ethylene Dibromide	107		8.871					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
84 1-Chlorohexane	91		9.308					ND	U
85 Chlorobenzene	112		9.308					ND	
86 1,1,1,2-Tetrachloroethane	131		9.391					ND	
87 Ethylbenzene	106		9.415					ND	
88 m-Xylene & p-Xylene	106		9.510					ND	
89 o-Xylene	106		9.853					ND	
90 Styrene	104		9.876					ND	
91 Bromoform	173		10.030					ND	
92 Isopropylbenzene	105		10.172					ND	
93 Cyclohexanone	55		10.267					ND	U
94 Bromobenzene	156		10.421					ND	
95 1,1,2,2-Tetrachloroethane	83		10.456					ND	
96 1,2,3-Trichloropropane	110		10.492					ND	
97 trans-1,4-Dichloro-2-buten	53		10.504					ND	
98 N-Propylbenzene	120		10.527					ND	
99 2-Chlorotoluene	126		10.586					ND	
100 1,3,5-Trimethylbenzene	105	10.681	10.681	0.000	1	704		0.0368	7a
101 4-Chlorotoluene	126		10.693					ND	
102 3-Ethyltoluene	105	10.989	10.920	0.069	90	2236		NC	
103 tert-Butylbenzene	119		10.953					ND	
104 Pentachloroethane	167		10.965					ND	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	93	2236		0.1119	
107 sec-Butylbenzene	105		11.131					ND	
106 2-Ethyltoluene	105		11.168					ND	
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	42	341		0.0274	7a
109 4-Isopropyltoluene	119	11.261	11.261	0.000	92	2336		0.1136	
110 1,4-Dichlorobenzene	146		11.296					ND	
111 1,2,3-Trimethylbenzene	105		11.344					ND	
112 Benzyl chloride	126		11.427					ND	
113 n-Butylbenzene	91		11.604					ND	
114 1,2-Dichlorobenzene	146		11.616					ND	
115 1,2-Dibromo-3-Chloropropan	157		12.279					ND	
116 1,3,5-Trichlorobenzene	180	12.444	12.444	0.000	89	1737		0.2081	
117 1,2,4-Trichlorobenzene	180		12.953					ND	
118 Hexachlorobutadiene	225		13.095					ND	
119 Naphthalene	128		13.166					ND	
120 1,2,3-Trichlorobenzene	180		13.367					ND	
121 2-Methylnaphthalene	142	14.065	14.065	0.000	94	17964		1.29	
126 1,3-Diethylbenzene TIC	1		0.000					ND	
124 Hexachloroethane TIC	1		0.000					ND	
123 1,4-Dichlorobutane	1		0.000					ND	
122 Chlorodifluoromethane TIC	1		0.000					ND	
125 Isobutylene TIC	1		0.000					ND	
128 Butyl Methacrylate TIC	1		0.000					ND	
S 132 1,2-Dichloroethene, Total	96		1.140					ND	
S 133 1,3-Dichloropropene, Total	75		6.760					ND	
S 134 Xylenes, Total	106		16.530					ND	
S 157 Total BTEX	1		0.000					ND	
S 135 Trihalomethanes, Total	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

VM250SS_00050	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00132	Amount Added:	0.00	Units:	Run Reagent
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00010	Amount Added:	0.00	Units:	Run Reagent

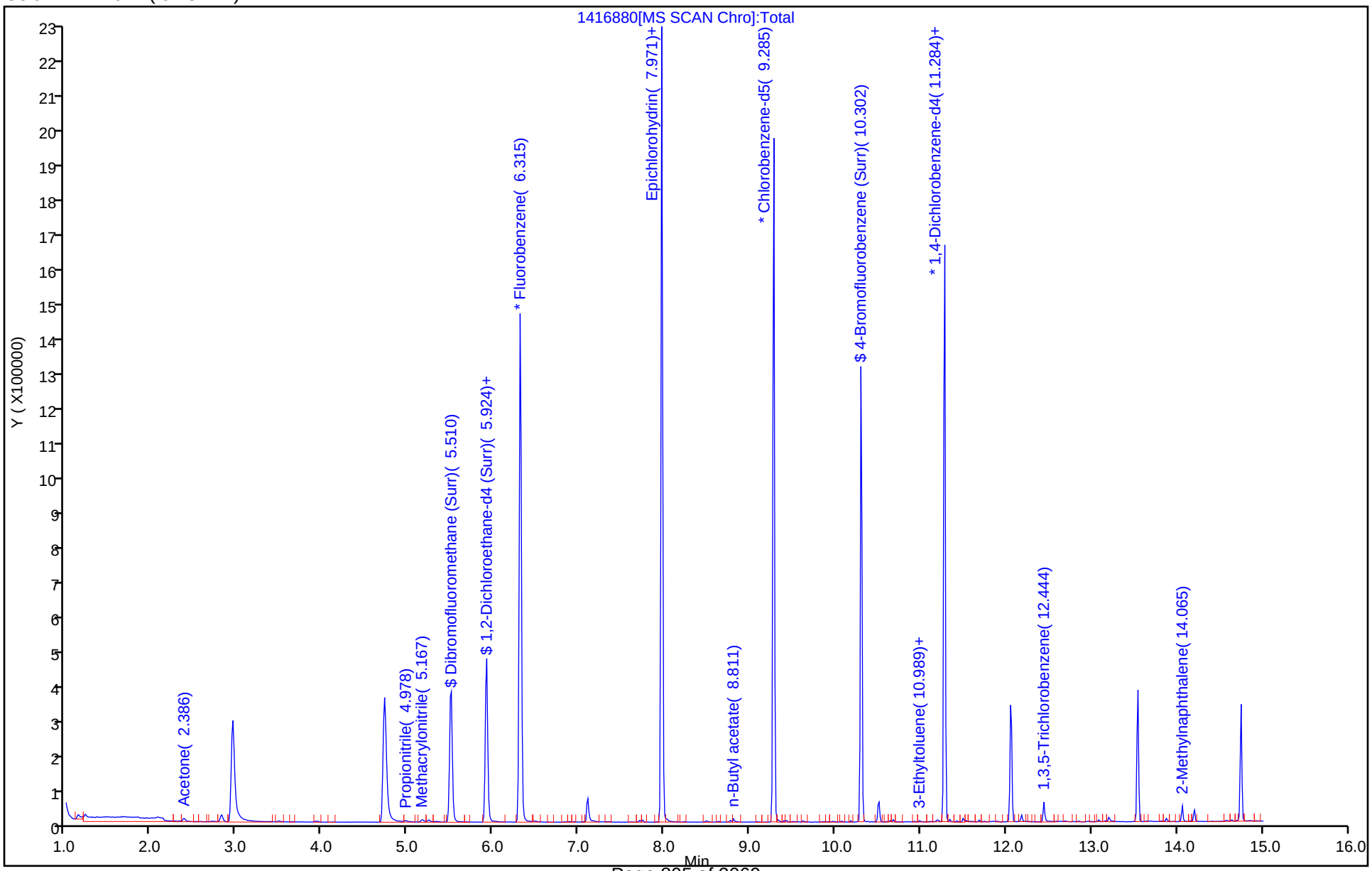
Report Date: 20-Nov-2018 09:44:13 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416880.D

Injection Date:	19-Nov-2018 14:29:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	MB			Worklist Smp#:	16
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416880.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 19-Nov-2018 14:29:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: mb
Misc. Info.: 240-0082085-016
Operator ID: 002808 Instrument ID: A3UX14

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 14:57:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	40.5	81.08
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	38.8	77.61
$ 6 Toluene-d8 (Surr)	50.0	46.3	92.55
$ 7 4-Bromofluorobenzene (Surr)	50.0	45.9	91.81

Manual Integration/User Assign Peak Report

TestAmerica Canton

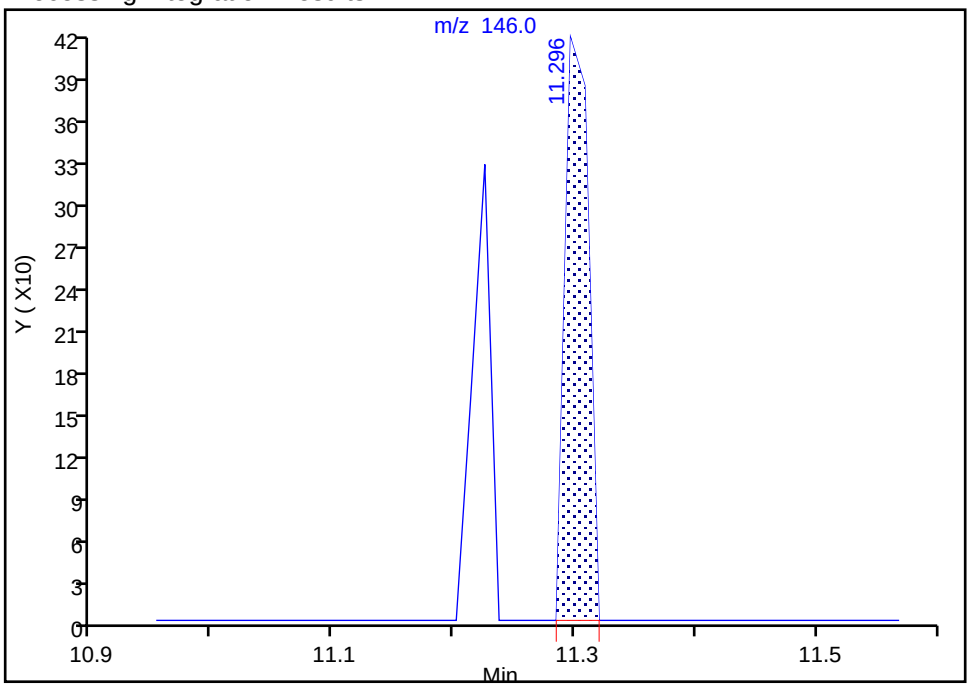
Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416880.D
Injection Date: 19-Nov-2018 14:29:30 Instrument ID: A3UX14
Lims ID: MB
Client ID:
Operator ID: 002808 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_14 Limit Group: MSV 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

108 1,3-Dichlorobenzene, CAS: 541-73-1

Signal: 1

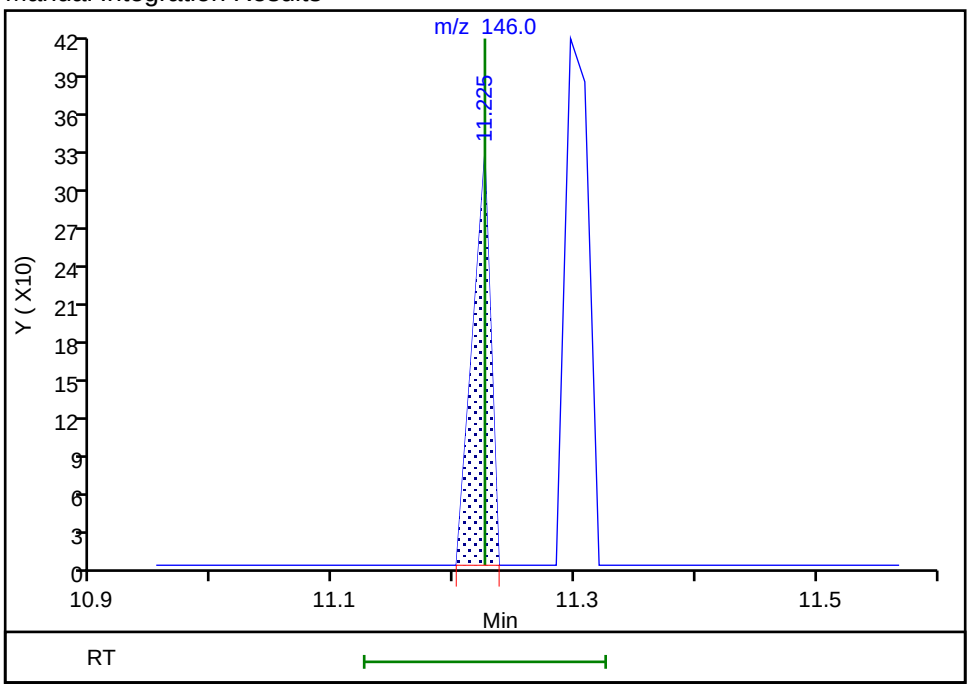
Processing Integration Results

RT: 11.30
Area: 564
Amount: 0.045385
Amount Units: ug/l



Manual Integration Results

RT: 11.23
Area: 341
Amount: 0.027440
Amount Units: ug/l



Reviewer: macenczaks, 19-Nov-2018 14:54:52
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

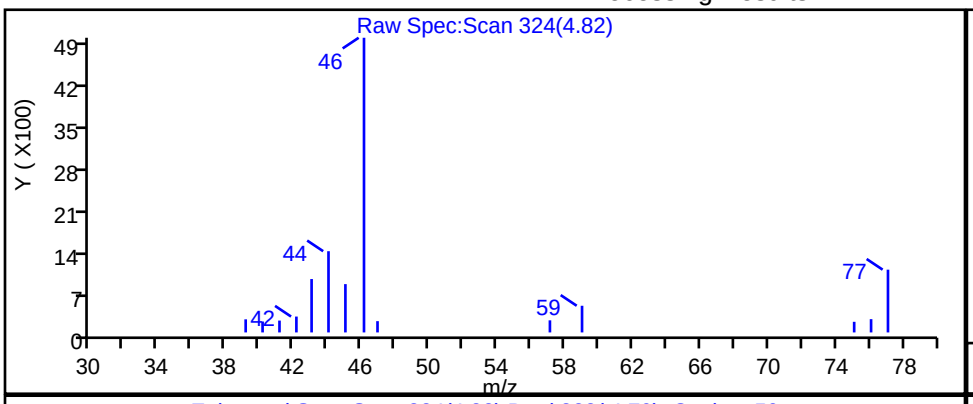
User Disabled Compound Report

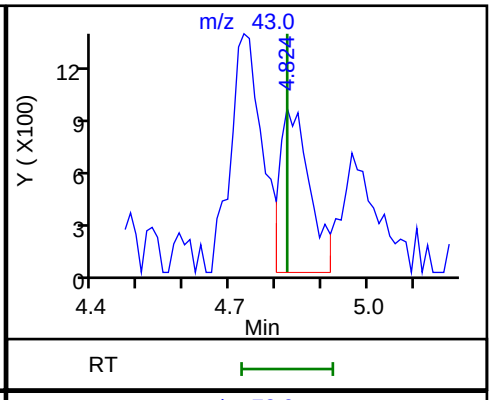
TestAmerica Canton

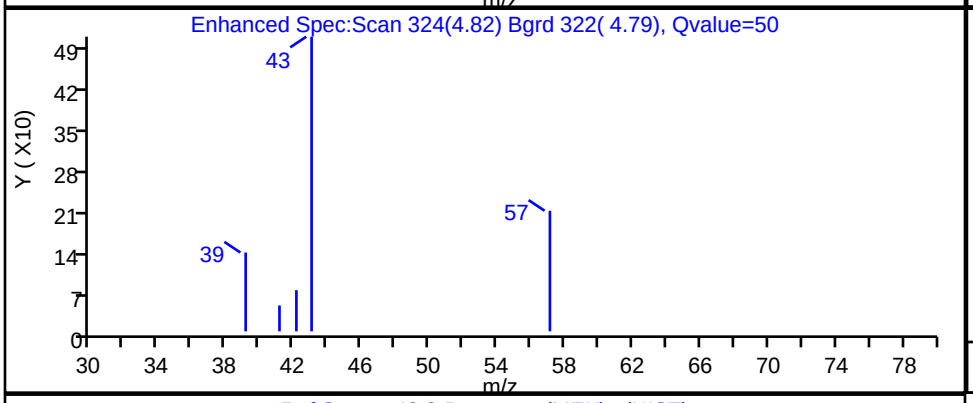
Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416880.D
Injection Date: 19-Nov-2018 14:29:30 Instrument ID: A3UX14
Lims ID: MB
Client ID:
Operator ID: 002808 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_14 Limit Group: MSV 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

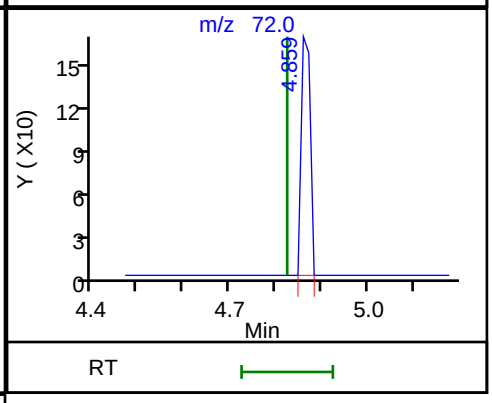
43 2-Butanone (MEK), CAS: 78-93-3

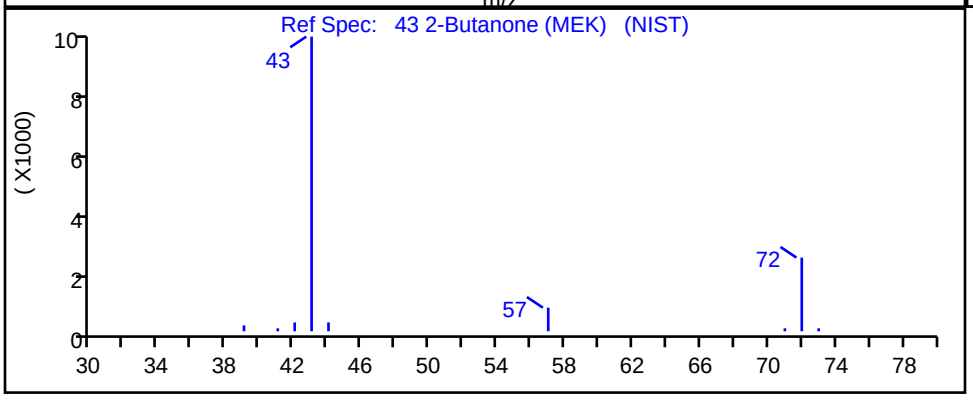
Processing Results











RT	Mass	Response	Amount
4.82	43.00	4180	1.075279
4.86	72.00	221	

Reviewer: macenczaks, 19-Nov-2018 14:55:35
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

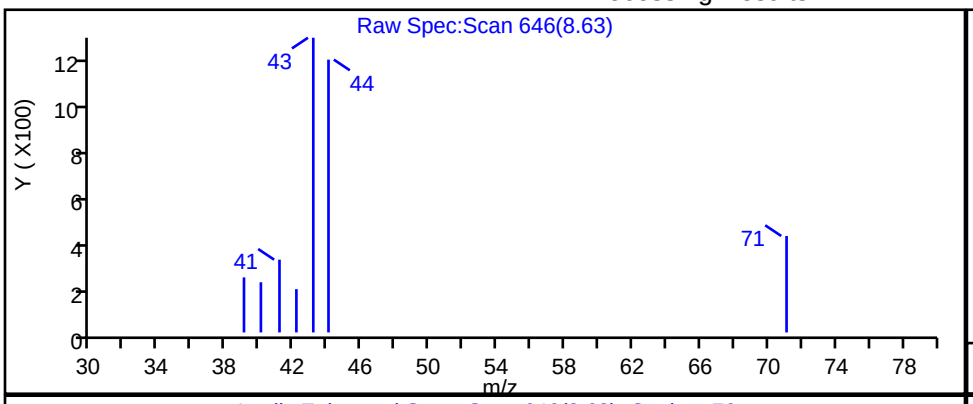
User Disabled Compound Report

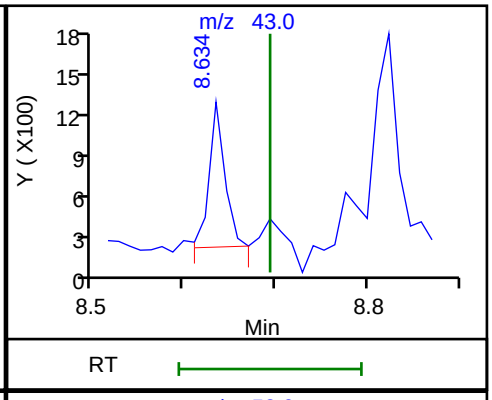
TestAmerica Canton

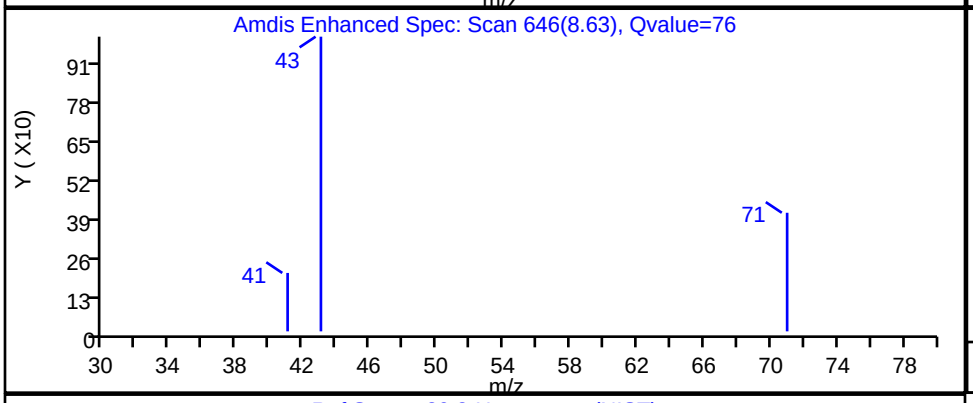
Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416880.D
Injection Date: 19-Nov-2018 14:29:30 Instrument ID: A3UX14
Lims ID: MB
Client ID:
Operator ID: 002808 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_14 Limit Group: MSV 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

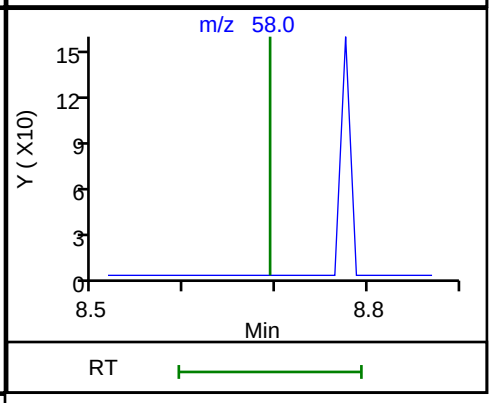
80 2-Hexanone, CAS: 591-78-6

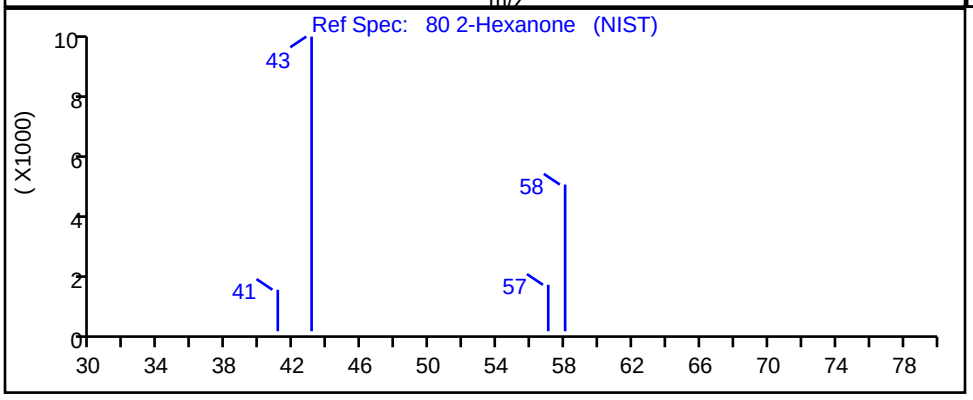
Processing Results











RT	Mass	Response	Amount
8.63	43.00	1305	0.282696
8.69	58.00	0	

Reviewer: macenczaks, 19-Nov-2018 14:54:30
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 20-Nov-2018 09:44:13 Chrom Revision: 2.3 19-Nov-2018 09:14:08

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416880.D

Injection Date: 19-Nov-2018 14:29:30 Instrument ID: A3UX14

Lims ID: MB

Client ID:

Operator ID: 002808 ALS Bottle#: 15 Worklist Smp#: 16

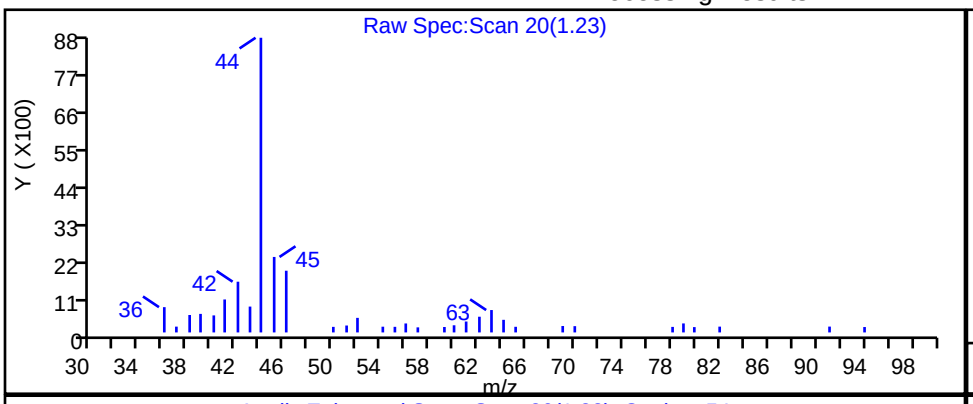
Purge Vol: 5.000 mL Dil. Factor: 1.0000

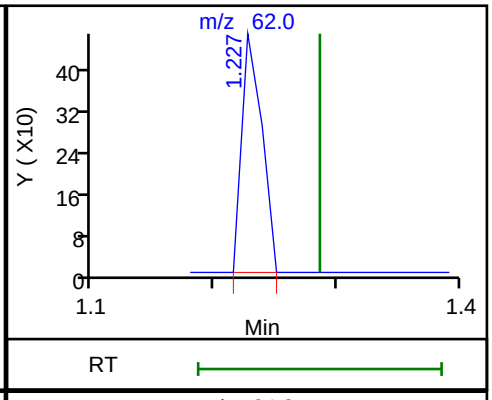
Method: 8260_14 Limit Group: MSV 8260C ICAL

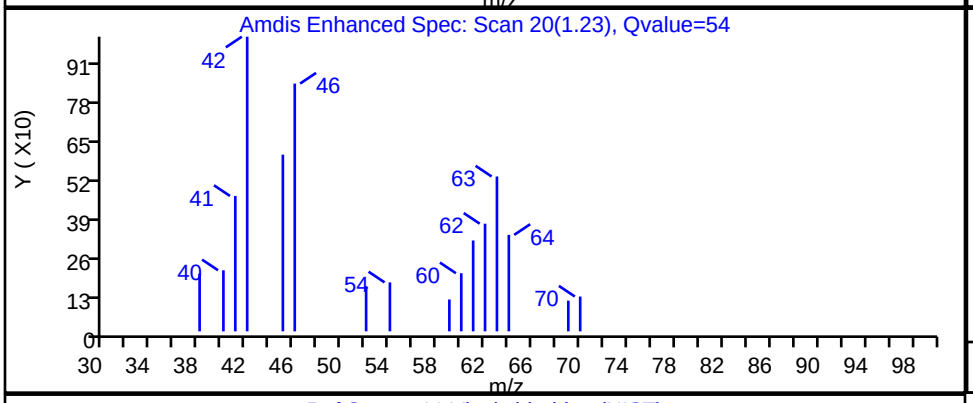
Column: DB-624 (0.18 mm) Detector MS SCAN

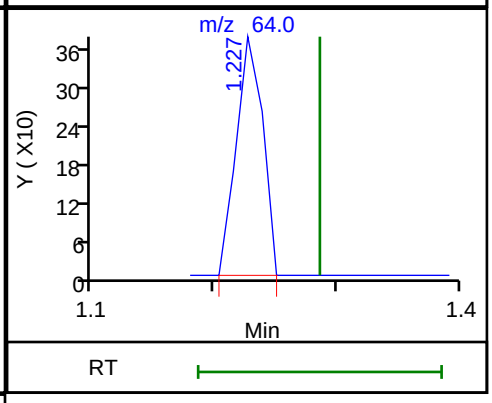
11 Vinyl chloride, CAS: 75-01-4

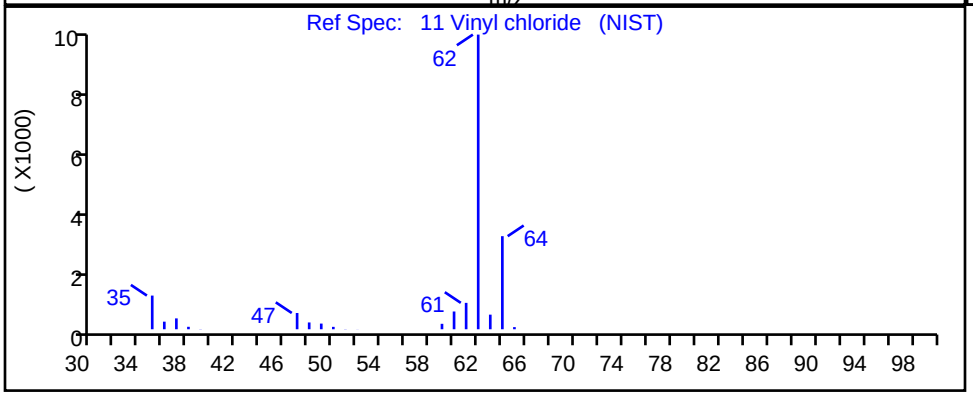
Processing Results











RT	Mass	Response	Amount
1.23	62.00	535	0.095943
1.23	64.00	564	

Reviewer: macenczaks, 19-Nov-2018 14:55:52

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-355689/4

Matrix: Water | Lab File ID: U1903842.d

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 11/15/2018 20:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	19.8		1.0	0.14
71-55-6	1,1,1-Trichloroethane	18.9		1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	20.7		1.0	0.13
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	21.3		1.0	0.41
75-34-3	1,1-Dichloroethane	19.6		1.0	0.17
75-35-4	1,1-Dichloroethene	20.1		1.0	0.19
563-58-6	1,1-Dichloropropene	19.6		1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	21.3		1.0	0.54
96-18-4	1,2,3-Trichloropropane	20.7		1.0	0.24
120-82-1	1,2,4-Trichlorobenzene	20.4		1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	20.3		1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	20.9		2.0	0.91
95-50-1	1,2-Dichlorobenzene	21.1		1.0	0.15
107-06-2	1,2-Dichloroethane	18.4		1.0	0.21
78-87-5	1,2-Dichloropropane	20.0		1.0	0.15
541-73-1	1,3-Dichlorobenzene	20.1		1.0	0.15
142-28-9	1,3-Dichloropropane	19.7		1.0	0.21
106-46-7	1,4-Dichlorobenzene	20.0		1.0	0.16
594-20-7	2,2-Dichloropropane	13.4		1.0	0.31
78-93-3	2-Butanone (MEK)	42.4		10	1.2
110-75-8	2-Chloroethyl vinyl ether	18.8		10	0.26
95-49-8	2-Chlorotoluene	20.7		1.0	0.15
591-78-6	2-Hexanone	38.6		10	0.54
106-43-4	4-Chlorotoluene	20.2		1.0	0.090
99-87-6	p-Isopropyltoluene	20.7		1.0	0.13
108-10-1	4-Methyl-2-pentanone (MIBK)	39.1		10	0.42
67-64-1	Acetone	42.3		10	5.4
71-43-2	Benzene	20.1		1.0	0.13
108-86-1	Bromobenzene	20.4		1.0	0.12
75-25-2	Bromoform	18.5		1.0	0.76
74-83-9	Bromomethane	19.4		1.0	0.42
75-15-0	Carbon disulfide	16.9		1.0	0.28
56-23-5	Carbon tetrachloride	19.3		1.0	0.26
108-90-7	Chlorobenzene	19.4		1.0	0.14
124-48-1	Dibromochloromethane	19.2		1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-355689/4

Matrix: Water | Lab File ID: U1903842.d

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 11/15/2018 20:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	20.0		1.0	0.83
67-66-3	Chloroform	19.7		1.0	0.13
74-87-3	Chloromethane	17.8		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	19.4		1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	19.2		1.0	0.61
74-95-3	Dibromomethane	19.1		1.0	0.090
74-97-5	Bromochloromethane	17.7		1.0	0.14
75-71-8	Dichlorodifluoromethane	15.2		1.0	0.35
75-27-4	Bromodichloromethane	18.9		1.0	0.17
75-65-0	tert-Butyl alcohol (TBA)	233		50	1.7
100-41-4	Ethylbenzene	19.8		1.0	0.11
87-68-3	Hexachlorobutadiene	20.6		1.0	0.83
98-82-8	Isopropylbenzene	19.9		1.0	0.090
1634-04-4	Methyl tert-butyl ether	17.1		1.0	0.070
75-09-2	Methylene Chloride	20.3		5.0	2.6
179601-23-1	m-Xylene & p-Xylene	20.0		2.0	0.080
91-20-3	Naphthalene	20.7		1.0	0.32
104-51-8	n-Butylbenzene	20.5		1.0	0.14
103-65-1	N-Propylbenzene	20.5		1.0	0.15
95-47-6	o-Xylene	20.3		1.0	0.090
135-98-8	sec-Butylbenzene	20.7		1.0	0.13
100-42-5	Styrene	19.9		1.0	0.10
127-18-4	Tetrachloroethene	19.8		1.0	0.15
108-88-3	Toluene	19.5		1.0	0.14
156-60-5	trans-1,2-Dichloroethene	19.3		1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	17.1		1.0	0.67
79-01-6	Trichloroethene	19.7		1.0	0.10
75-69-4	Trichlorofluoromethane	18.9		1.0	0.45
108-05-4	Vinyl acetate	18.3		2.0	0.19
75-01-4	Vinyl chloride	19.2		1.0	0.20
1330-20-7	Xylenes, Total	40.3		2.0	0.15
98-06-6	tert-Butylbenzene	20.2		1.0	0.14
106-93-4	1,2-Dibromoethane	19.1		1.0	0.12

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 240-355689/4

Matrix: Water Lab File ID: U1903842.d

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 11/15/2018 20:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 355689 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	102		70-123
1868-53-7	Dibromofluoromethane (Surr)	100		75-128
460-00-4	4-Bromofluorobenzene (Surr)	100		59-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		70-121

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903842.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 15-Nov-2018 20:11:56 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 004
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 15-Nov-2018 20:44:28 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: laveyt Date: 15-Nov-2018 20:44:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.654	5.653	0.001	96	804007	20.0	20.0	
* 2 Chlorobenzene-d5	117	8.500	8.499	0.001	82	651130	20.0	20.0	
* 3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	86	353362	20.0	20.0	
$ 4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	59	216501	20.0	20.0	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	99	243231	20.0	19.6	
$ 6 Toluene-d8 (Surr)	98	7.100	7.100	0.000	84	795189	20.0	20.4	
$ 7 4-Bromofluorobenzene (Surr	95	9.674	9.673	0.001	91	293524	20.0	20.0	
9 Dichlorodifluoromethane	85	1.610	1.598	0.012	92	234725	20.0	15.2	
10 Chloromethane	50	1.811	1.811	0.000	89	206875	20.0	17.8	
12 Butadiene	54	1.906	1.906	0.000	88	195559	20.0	16.9	
11 Vinyl chloride	62	1.918	1.906	0.012	87	229723	20.0	19.2	
13 Bromomethane	94	2.238	2.226	0.012	90	182186	20.0	19.4	
14 Chloroethane	64	2.309	2.309	0.000	94	148444	20.0	20.0	
15 Dichlorofluoromethane	67	2.511	2.511	0.000	98	369182	20.0	20.0	
16 Trichlorofluoromethane	101	2.582	2.558	0.024	99	378074	20.0	18.9	
17 Ethyl ether	59	2.819	2.807	0.012	88	144686	20.0	20.0	
18 Acrolein	56	2.938	2.926	0.012	94	179172	100.0	100.2	
20 1,1,2-Trichloro-1,2,2-trif	101	3.057	3.056	0.001	83	219927	20.0	21.3	
21 1,1-Dichloroethene	61	3.057	3.056	0.001	98	289902	20.0	20.1	
22 Acetone	43	3.080	3.068	0.012	82	133464	40.0	42.3	
23 Iodomethane	142	3.211	3.199	0.012	98	378401	20.0	20.2	
24 Carbon disulfide	76	3.294	3.282	0.012	88	511930	20.0	16.9	
26 3-Chloro-1-propene	41	3.377	3.365	0.012	60	244902	20.0	17.2	
27 Methyl acetate	43	3.389	3.377	0.012	96	379861	40.0	40.6	
28 Methylene Chloride	49	3.507	3.495	0.012	54	232431	20.0	20.3	
29 2-Methyl-2-propanol	59	3.578	3.578	0.000	74	253544	200.0	232.9	
30 Acrylonitrile	53	3.697	3.697	0.000	98	864289	200.0	213.8	
32 trans-1,2-Dichloroethene	61	3.744	3.732	0.012	64	262278	20.0	19.3	
31 Methyl tert-butyl ether	73	3.744	3.732	0.012	10	477506	20.0	17.1	
33 Hexane	57	3.982	3.981	0.001	90	275068	20.0	19.4	
34 1,1-Dichloroethane	63	4.112	4.112	0.000	97	319210	20.0	19.6	
35 Vinyl acetate	43	4.148	4.147	0.001	97	340669	20.0	18.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 2-Butanone (MEK)	72	4.634	4.634	0.000	96	80508	40.0	42.4	
39 2,2-Dichloropropane	77	4.634	4.634	0.000	52	131723	20.0	13.4	
40 cis-1,2-Dichloroethene	96	4.634	4.634	0.000	79	225509	20.0	19.4	
45 Chlorobromomethane	49	4.847	4.835	0.012	67	138412	20.0	17.7	
46 Tetrahydrofuran	42	4.883	4.883	0.000	83	166433	40.0	39.9	
47 Chloroform	83	4.906	4.906	0.000	83	350325	20.0	19.7	
48 1,1,1-Trichloroethane	97	5.096	5.084	0.012	81	317049	20.0	18.9	
49 Cyclohexane	84	5.144	5.143	0.001	84	299646	20.0	19.5	
50 1,1-Dichloropropene	75	5.227	5.227	0.001	91	277844	20.0	19.6	
51 Carbon tetrachloride	117	5.239	5.238	0.001	76	312551	20.0	19.3	
52 Isobutyl alcohol	41	5.298	5.298	0.000	87	249059	500.0	564.1	
53 Benzene	78	5.416	5.416	0.000	94	768142	20.0	20.1	
54 1,2-Dichloroethane	62	5.428	5.416	0.012	63	266472	20.0	18.4	
56 n-Heptane	57	5.642	5.642	0.000	85	157639	20.0	17.6	
58 Trichloroethene	130	5.986	5.985	0.001	96	249977	20.0	19.7	
60 Methylcyclohexane	83	6.175	6.175	0.000	89	358070	20.0	19.4	
61 1,2-Dichloropropane	63	6.187	6.187	0.000	81	177816	20.0	20.0	
63 Dibromomethane	174	6.306	6.294	0.012	83	174703	20.0	19.1	
64 1,4-Dioxane	88	6.306	6.306	0.000	39	57652	400.0	600.2	
65 Dichlorobromomethane	83	6.436	6.436	0.000	99	263773	20.0	18.9	
67 2-Chloroethyl vinyl ether	63	6.697	6.697	0.000	93	134053	20.0	18.8	
68 cis-1,3-Dichloropropene	75	6.851	6.839	0.012	93	298864	20.0	19.2	
69 4-Methyl-2-pentanone (MIBK	43	6.982	6.982	0.000	93	503934	40.0	39.1	
70 Toluene	91	7.171	7.171	0.000	95	859536	20.0	19.5	
71 trans-1,3-Dichloropropene	75	7.361	7.361	0.000	89	268134	20.0	17.1	
72 Ethyl methacrylate	69	7.432	7.432	0.000	86	263738	20.0	18.6	
74 1,1,2-Trichloroethane	97	7.539	7.539	0.000	90	189642	20.0	20.5	
75 Tetrachloroethene	166	7.693	7.693	0.000	97	278682	20.0	19.8	
76 1,3-Dichloropropane	76	7.705	7.705	0.000	88	307665	20.0	19.7	
77 2-Hexanone	43	7.764	7.764	0.000	79	395713	40.0	38.6	
79 Chlorodibromomethane	129	7.930	7.930	0.000	89	224483	20.0	19.2	
80 Ethylene Dibromide	107	8.049	8.049	0.000	99	208597	20.0	19.1	
82 Chlorobenzene	112	8.523	8.523	0.000	93	585821	20.0	19.4	
83 1,1,1,2-Tetrachloroethane	131	8.606	8.606	0.000	92	215465	20.0	19.8	
84 Ethylbenzene	106	8.630	8.630	0.000	98	311234	20.0	19.8	
85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	383159	20.0	20.0	
86 o-Xylene	106	9.152	9.152	0.000	87	370566	20.0	20.3	
87 Styrene	104	9.164	9.164	0.000	93	619904	20.0	19.9	
88 Bromoform	173	9.353	9.353	0.000	98	176178	20.0	18.5	
89 Isopropylbenzene	105	9.519	9.519	0.000	95	975576	20.0	19.9	
91 1,1,2,2-Tetrachloroethane	83	9.816	9.816	0.000	95	282200	20.0	20.7	
92 Bromobenzene	156	9.840	9.840	0.000	87	277016	20.0	20.4	
93 1,2,3-Trichloropropane	110	9.863	9.863	0.000	72	107049	20.0	20.7	
94 trans-1,4-Dichloro-2-buten	53	9.875	9.875	0.000	57	78110	20.0	16.2	
95 N-Propylbenzene	120	9.946	9.946	0.000	92	279647	20.0	20.5	
96 2-Chlorotoluene	126	10.041	10.041	0.000	97	238671	20.0	20.7	
97 1,3,5-Trimethylbenzene	105	10.124	10.124	0.000	93	801051	20.0	20.4	
98 4-Chlorotoluene	126	10.148	10.148	0.000	97	252324	20.0	20.2	
99 tert-Butylbenzene	119	10.468	10.468	0.000	77	755809	20.0	20.2	
101 1,2,4-Trimethylbenzene	105	10.516	10.515	0.001	70	808640	20.0	20.3	
102 sec-Butylbenzene	105	10.694	10.693	0.001	94	1042390	20.0	20.7	
103 1,3-Dichlorobenzene	146	10.824	10.824	0.000	82	502470	20.0	20.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 4-Isopropyltoluene	119	10.848	10.848	0.000	90	912127	20.0	20.7	
105 1,4-Dichlorobenzene	146	10.907	10.907	0.000	93	514951	20.0	20.0	
108 n-Butylbenzene	91	11.286	11.286	0.000	96	741401	20.0	20.5	
109 1,2-Dichlorobenzene	146	11.310	11.298	0.012	98	477800	20.0	21.1	
110 1,2-Dibromo-3-Chloropropan	157	12.128	12.128	0.000	91	90442	20.0	20.9	
112 1,2,4-Trichlorobenzene	180	13.018	13.018	0.000	91	308896	20.0	20.4	
113 Hexachlorobutadiene	225	13.208	13.207	0.001	89	159679	20.0	20.6	
114 Naphthalene	128	13.279	13.279	0.000	95	863947	20.0	20.7	
115 1,2,3-Trichlorobenzene	180	13.540	13.539	0.001	93	288375	20.0	21.3	
S 127 Trihalomethanes, Total	1				0		80.0	76.2	
S 164 Total BTEX	1				0		100.0	99.7	
S 126 Xylenes, Total	106				0		40.0	40.3	

Reagents:

vmfasgw_00282	Amount Added:	16.00	Units: uL	
vmfasaw_00256	Amount Added:	16.00	Units: uL	
vmfaspw_00275	Amount Added:	16.00	Units: uL	
vm50ss_stk_00078	Amount Added:	2.00	Units: uL	Run Reagent
vmDist_H2o_00133	Amount Added:	0.00	Units:	Run Reagent
vm50is_stk_A_00002	Amount Added:	2.00	Units: uL	Run Reagent

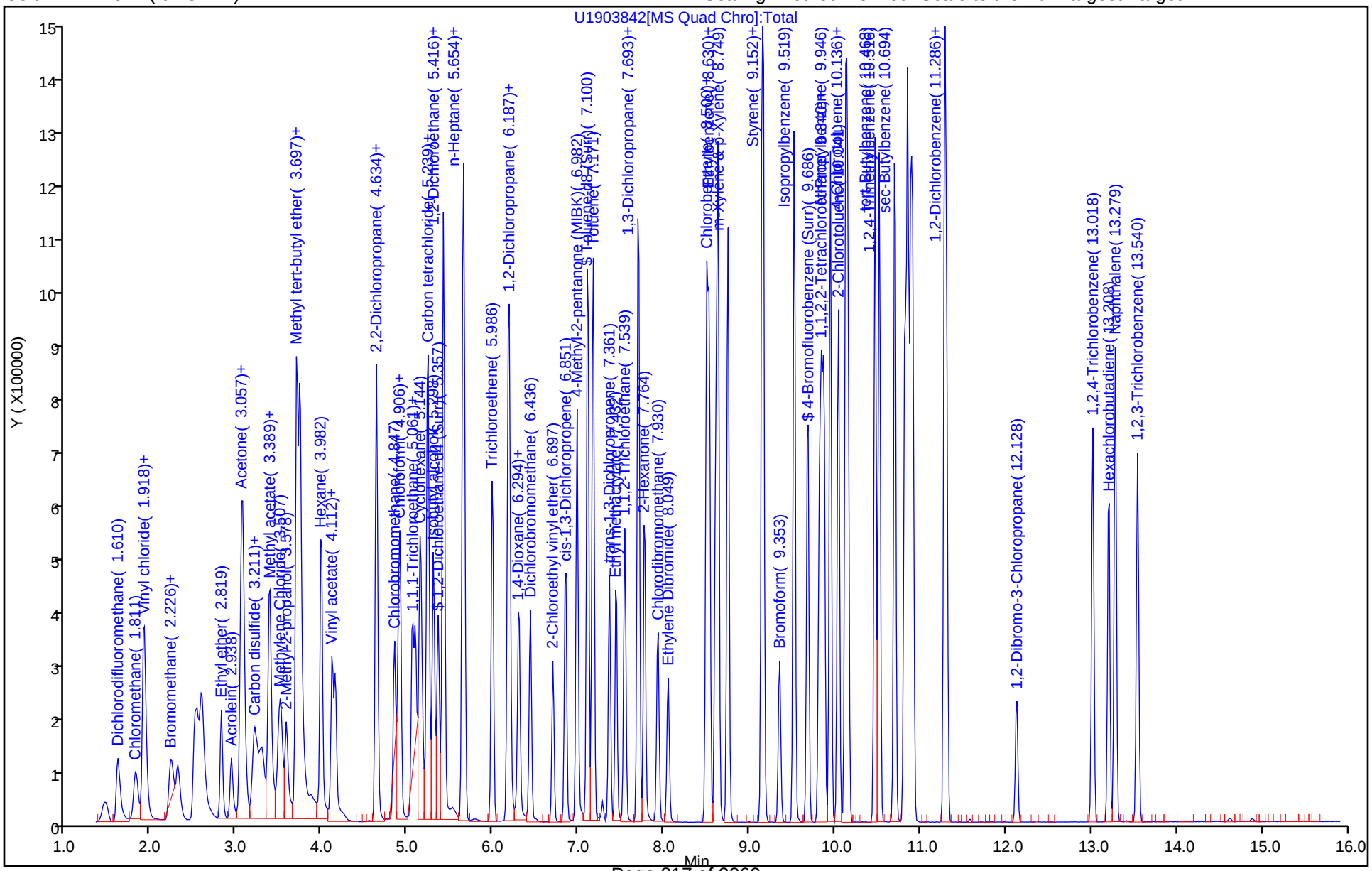
Report Date: 15-Nov-2018 20:44:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903842.d

Injection Date:	15-Nov-2018 20:11:56	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903842.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 15-Nov-2018 20:11:56 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 004
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 15-Nov-2018 20:44:28 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: laveyt Date: 15-Nov-2018 20:44:28

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	20.0	20.0	100.03
$ 5 1,2-Dichloroethane-d4 (Surr)	20.0	19.6	97.84
$ 6 Toluene-d8 (Surr)	20.0	20.4	101.83
$ 7 4-Bromofluorobenzene (Surr)	20.0	20.0	99.89

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-356055/4

Matrix: Solid | Lab File ID: 1416868.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 11/19/2018 10:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	57.3		5.0	3.0
71-55-6	1,1,1-Trichloroethane	53.2		5.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	54.9		5.0	1.4
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	48.9		5.0	1.3
75-34-3	1,1-Dichloroethane	50.5		5.0	0.69
75-35-4	1,1-Dichloroethene	55.8		5.0	0.90
563-58-6	1,1-Dichloropropene	52.4		5.0	0.99
87-61-6	1,2,3-Trichlorobenzene	48.6		5.0	0.57
96-18-4	1,2,3-Trichloropropane	52.7		5.0	1.6
120-82-1	1,2,4-Trichlorobenzene	47.9		5.0	0.57
95-63-6	1,2,4-Trimethylbenzene	54.4		5.0	1.0
96-12-8	1,2-Dibromo-3-Chloropropane	42.7		10	3.6
95-50-1	1,2-Dichlorobenzene	52.9		5.0	1.1
107-06-2	1,2-Dichloroethane	46.6		5.0	0.77
78-87-5	1,2-Dichloropropane	49.7		5.0	0.85
541-73-1	1,3-Dichlorobenzene	50.6		5.0	0.82
142-28-9	1,3-Dichloropropane	50.6		5.0	0.99
106-46-7	1,4-Dichlorobenzene	50.4		5.0	0.88
594-20-7	2,2-Dichloropropane	52.3		5.0	1.2
78-93-3	2-Butanone (MEK)	86.2		20	3.6
110-75-8	2-Chloroethyl vinyl ether	45.3	J	50	8.9
95-49-8	2-Chlorotoluene	53.1		5.0	0.95
591-78-6	2-Hexanone	99.8		20	4.1
106-43-4	4-Chlorotoluene	53.3		5.0	0.86
99-87-6	p-Isopropyltoluene	57.3		5.0	2.9
108-10-1	4-Methyl-2-pentanone (MIBK)	100		20	3.7
67-64-1	Acetone	91.3		25	21
71-43-2	Benzene	49.9		5.0	0.70
108-86-1	Bromobenzene	50.3		5.0	1.2
75-25-2	Bromoform	51.2		5.0	2.4
74-83-9	Bromomethane	9.22		5.0	0.99
75-15-0	Carbon disulfide	50.8		5.0	1.2
56-23-5	Carbon tetrachloride	49.6		5.0	3.3
108-90-7	Chlorobenzene	52.2		5.0	0.92
124-48-1	Dibromochloromethane	53.5		5.0	2.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-356055/4

Matrix: Solid | Lab File ID: 1416868.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 11/19/2018 10:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-00-3	Chloroethane	11.4		5.0	1.2
67-66-3	Chloroform	51.2		5.0	0.79
74-87-3	Chloromethane	11.3		5.0	1.0
156-59-2	cis-1,2-Dichloroethene	50.7		5.0	0.65
10061-01-5	cis-1,3-Dichloropropene	50.9		5.0	1.4
74-95-3	Dibromomethane	48.3		5.0	0.67
74-97-5	Bromochloromethane	47.4		5.0	0.59
75-71-8	Dichlorodifluoromethane	10.5		5.0	0.94
75-27-4	Bromodichloromethane	51.8		5.0	0.68
75-65-0	tert-Butyl alcohol (TBA)	523		200	17
100-41-4	Ethylbenzene	54.5		5.0	1.0
87-68-3	Hexachlorobutadiene	48.1		5.0	3.7
98-82-8	Isopropylbenzene	57.6		5.0	0.83
1634-04-4	Methyl tert-butyl ether	48.8		5.0	0.82
75-09-2	Methylene Chloride	49.7		25	12
179601-23-1	m-Xylene & p-Xylene	54.5		10	0.78
91-20-3	Naphthalene	48.2		5.0	2.7
104-51-8	n-Butylbenzene	56.9		5.0	3.5
103-65-1	N-Propylbenzene	54.8		5.0	0.73
95-47-6	o-Xylene	55.1		5.0	0.86
135-98-8	sec-Butylbenzene	57.9		5.0	0.86
100-42-5	Styrene	54.0		5.0	1.2
127-18-4	Tetrachloroethene	52.3		5.0	0.73
108-88-3	Toluene	53.4		5.0	0.77
156-60-5	trans-1,2-Dichloroethene	52.8		5.0	0.47
10061-02-6	trans-1,3-Dichloropropene	51.6		5.0	1.0
79-01-6	Trichloroethene	50.6		5.0	0.63
75-69-4	Trichlorofluoromethane	13.2		5.0	1.1
108-05-4	Vinyl acetate	52.0		10	2.1
75-01-4	Vinyl chloride	12.2		5.0	0.84
1330-20-7	Xylenes, Total	110		10	1.6
98-06-6	tert-Butylbenzene	56.1		5.0	0.91
106-93-4	1,2-Dibromoethane	52.6		5.0	0.77

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 240-356055/4

Matrix: Solid Lab File ID: 1416868.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(g) Date Analyzed: 11/19/2018 10:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 356055 Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	91		62-135
1868-53-7	Dibromofluoromethane (Surr)	88		49-132
460-00-4	4-Bromofluorobenzene (Surr)	84		49-141
17060-07-0	1,2-Dichloroethane-d4 (Surr)	79		48-123

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416868.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-Nov-2018 10:11:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Misc. Info.: 240-0082085-004
Operator ID: 002808 Instrument ID: A3UX14

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:43:37 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 10:49:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	100	1571040	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	1033262	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.285	-0.001	98	474151	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	94	367410	50.0	44.1	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	95	370648	50.0	39.4	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	1369368	50.0	45.7	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	443771	50.0	42.1	
9 Dichlorodifluoromethane	85	1.061	1.061	0.000	98	55997	10.0	10.5	
10 Chloromethane	50	1.191	1.191	0.000	99	96951	10.0	11.3	
11 Vinyl chloride	62	1.274	1.286	-0.012	98	83309	10.0	12.2	
12 Butadiene	54	1.297	1.298	-0.001	97	79011	10.0	11.2	
13 Bromomethane	94	1.522	1.522	0.000	91	33689	10.0	9.22	
15 Chloroethane	64	1.605	1.605	0.000	99	41052	10.0	11.4	
16 Dichlorofluoromethane	67	1.783	1.795	-0.012	98	103397	10.0	12.5	
17 Trichlorofluoromethane	101	1.806	1.806	0.000	98	92796	10.0	13.2	
18 Ethyl ether	59	2.078	2.079	-0.001	96	419787	50.0	61.9	
19 Acrolein	56	2.209	2.209	0.000	99	338733	250.0	226.5	
21 1,1-Dichloroethene	96	2.268	2.268	0.000	98	395824	50.0	55.8	
22 1,1,2-Trichloro-1,2,2-trif	151	2.291	2.292	-0.001	93	220785	50.0	48.9	
24 Acetone	43	2.374	2.374	0.000	100	267710	100.0	91.3	
25 Iodomethane	142	2.422	2.422	0.000	96	629623	50.0	51.5	
26 Carbon disulfide	76	2.457	2.457	0.000	100	1160043	50.0	50.8	
27 3-Chloro-1-propene	76	2.670	2.670	0.000	91	279455	50.0	53.0	
29 Methyl acetate	43	2.729	2.729	0.000	99	694568	100.0	87.4	
30 Methylene Chloride	84	2.824	2.824	0.000	97	458097	50.0	49.7	
31 2-Methyl-2-propanol	59	3.061	3.061	-0.001	98	435309	500.0	522.9	
32 trans-1,2-Dichloroethene	96	3.132	3.132	0.000	99	484995	50.0	52.8	
33 Methyl tert-butyl ether	73	3.155	3.155	0.000	99	997693	50.0	48.8	
34 Acrylonitrile	53	3.167	3.167	0.000	99	1696123	500.0	479.3	
35 Hexane	86	3.486	3.487	-0.001	94	126943	50.0	47.9	
36 1,1-Dichloroethane	63	3.735	3.735	0.000	96	802065	50.0	50.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Vinyl acetate	86	3.889	3.889	0.000	97	86818	50.0	52.0	
41 2,2-Dichloropropane	97	4.682	4.682	0.000	94	110228	50.0	52.3	
42 cis-1,2-Dichloroethene	96	4.729	4.717	0.012	82	525145	50.0	50.7	
43 2-Butanone (MEK)	43	4.835	4.824	0.011	100	408898	100.0	86.2	
46 Chlorobromomethane	128	5.108	5.108	0.000	97	226119	50.0	47.4	
48 Tetrahydrofuran	42	5.167	5.167	0.000	92	284682	100.0	92.8	
49 Chloroform	83	5.273	5.273	0.000	96	678608	50.0	51.2	
50 1,1,1-Trichloroethane	97	5.451	5.451	0.000	99	516733	50.0	53.2	
51 Cyclohexane	56	5.474	5.475	-0.001	93	778901	50.0	47.8	
52 Carbon tetrachloride	117	5.652	5.652	0.000	96	450464	50.0	49.6	
53 1,1-Dichloropropene	75	5.676	5.676	0.000	92	567332	50.0	52.4	
54 Benzene	78	5.948	5.948	0.000	97	1749352	50.0	49.9	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	95	513477	50.0	46.6	
55 Isobutyl alcohol	41	6.066	6.066	0.000	95	383803	1250.0	1234.2	
58 n-Heptane	100	6.326	6.315	0.011	93	137440	50.0	48.9	
59 Trichloroethene	130	6.729	6.729	0.000	97	460248	50.0	50.6	
62 Methylcyclohexane	83	6.894	6.895	-0.001	93	755181	50.0	49.4	
63 1,2-Dichloropropane	63	6.977	6.977	0.000	95	450014	50.0	49.7	
65 Dibromomethane	93	7.107	7.108	-0.001	96	240089	50.0	48.3	
67 1,4-Dioxane	88	7.155	7.155	0.000	95	85081	1000.0	1015.3	
68 Dichlorobromomethane	83	7.297	7.297	0.000	98	467657	50.0	51.8	
70 2-Chloroethyl vinyl ether	63	7.640	7.640	0.000	92	243382	50.0	45.3	
71 cis-1,3-Dichloropropene	75	7.746	7.747	-0.001	93	629830	50.0	50.9	
73 4-Methyl-2-pentanone (MIBK	43	7.924	7.924	0.000	97	833895	100.0	100.0	
74 Toluene	91	8.030	8.031	-0.001	98	1752567	50.0	53.4	
75 trans-1,3-Dichloropropene	75	8.291	8.291	0.000	96	499312	50.0	51.6	
76 Ethyl methacrylate	69	8.385	8.386	-0.001	92	454755	50.0	50.8	
77 1,1,2-Trichloroethane	97	8.444	8.445	-0.001	89	347131	50.0	52.9	
78 Tetrachloroethene	164	8.527	8.528	-0.001	98	332483	50.0	52.3	
79 1,3-Dichloropropane	76	8.586	8.587	-0.001	97	559009	50.0	50.6	
80 2-Hexanone	43	8.693	8.693	0.000	97	533101	100.0	99.8	
82 Chlorodibromomethane	129	8.788	8.788	0.000	90	339425	50.0	53.5	
83 Ethylene Dibromide	107	8.870	8.871	-0.001	98	333815	50.0	52.6	
85 Chlorobenzene	112	9.308	9.308	0.000	97	1109340	50.0	52.2	
86 1,1,1,2-Tetrachloroethane	131	9.391	9.391	0.000	97	369612	50.0	57.3	
87 Ethylbenzene	106	9.415	9.415	0.000	98	607248	50.0	54.5	
88 m-Xylene & p-Xylene	106	9.509	9.510	-0.001	99	728238	50.0	54.5	
89 o-Xylene	106	9.853	9.853	0.000	97	714893	50.0	55.1	
90 Styrene	104	9.876	9.876	0.000	96	1151413	50.0	54.0	
91 Bromoform	173	10.042	10.030	0.012	99	188174	50.0	51.2	
92 Isopropylbenzene	105	10.172	10.172	0.000	95	1730009	50.0	57.6	
94 Bromobenzene	156	10.421	10.421	0.000	96	437139	50.0	50.3	
95 1,1,2,2-Tetrachloroethane	83	10.456	10.456	0.000	94	402804	50.0	54.9	
96 1,2,3-Trichloropropane	110	10.492	10.492	0.000	87	124685	50.0	52.7	
97 trans-1,4-Dichloro-2-buten	53	10.503	10.504	-0.001	86	137826	50.0	50.7	
98 N-Propylbenzene	120	10.527	10.527	0.000	99	511111	50.0	54.8	
99 2-Chlorotoluene	126	10.598	10.586	0.012	99	416196	50.0	53.1	
100 1,3,5-Trimethylbenzene	105	10.681	10.681	0.000	96	1351128	50.0	56.5	
101 4-Chlorotoluene	126	10.693	10.693	0.000	98	429692	50.0	53.3	
103 tert-Butylbenzene	119	10.953	10.953	0.000	92	1201708	50.0	56.1	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	96	1357463	50.0	54.4	
107 sec-Butylbenzene	105	11.131	11.131	0.000	94	1771612	50.0	57.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	98	786023	50.0	50.6	
109 4-Isopropyltoluene	119	11.261	11.261	0.000	97	1473995	50.0	57.3	
110 1,4-Dichlorobenzene	146	11.296	11.296	0.000	95	798330	50.0	50.4	
113 n-Butylbenzene	91	11.604	11.604	0.000	97	1311684	50.0	56.9	
114 1,2-Dichlorobenzene	146	11.616	11.616	0.000	99	742799	50.0	52.9	
115 1,2-Dibromo-3-Chloropropan	157	12.278	12.279	-0.001	82	65283	50.0	42.7	
117 1,2,4-Trichlorobenzene	180	12.965	12.953	0.012	95	469763	50.0	47.9	
118 Hexachlorobutadiene	225	13.095	13.095	0.000	97	219228	50.0	48.1	
119 Naphthalene	128	13.166	13.166	0.000	96	1182833	50.0	48.2	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	96	450404	50.0	48.6	
S 134 Xylenes, Total	106				0		100.0	109.6	
S 135 Trihalomethanes, Total	1				0		200.0	207.7	
S 157 Total BTEX	1				0		250.0	267.4	

Reagents:

VMFASAW_00256	Amount Added:	5.00	Units: uL	
VMFASGW_00283	Amount Added:	1.00	Units: uL	
VMFASPW_00276	Amount Added:	5.00	Units: uL	
VM250SS_00050	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00132	Amount Added:	0.00	Units:	Run Reagent
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00010	Amount Added:	0.00	Units:	Run Reagent

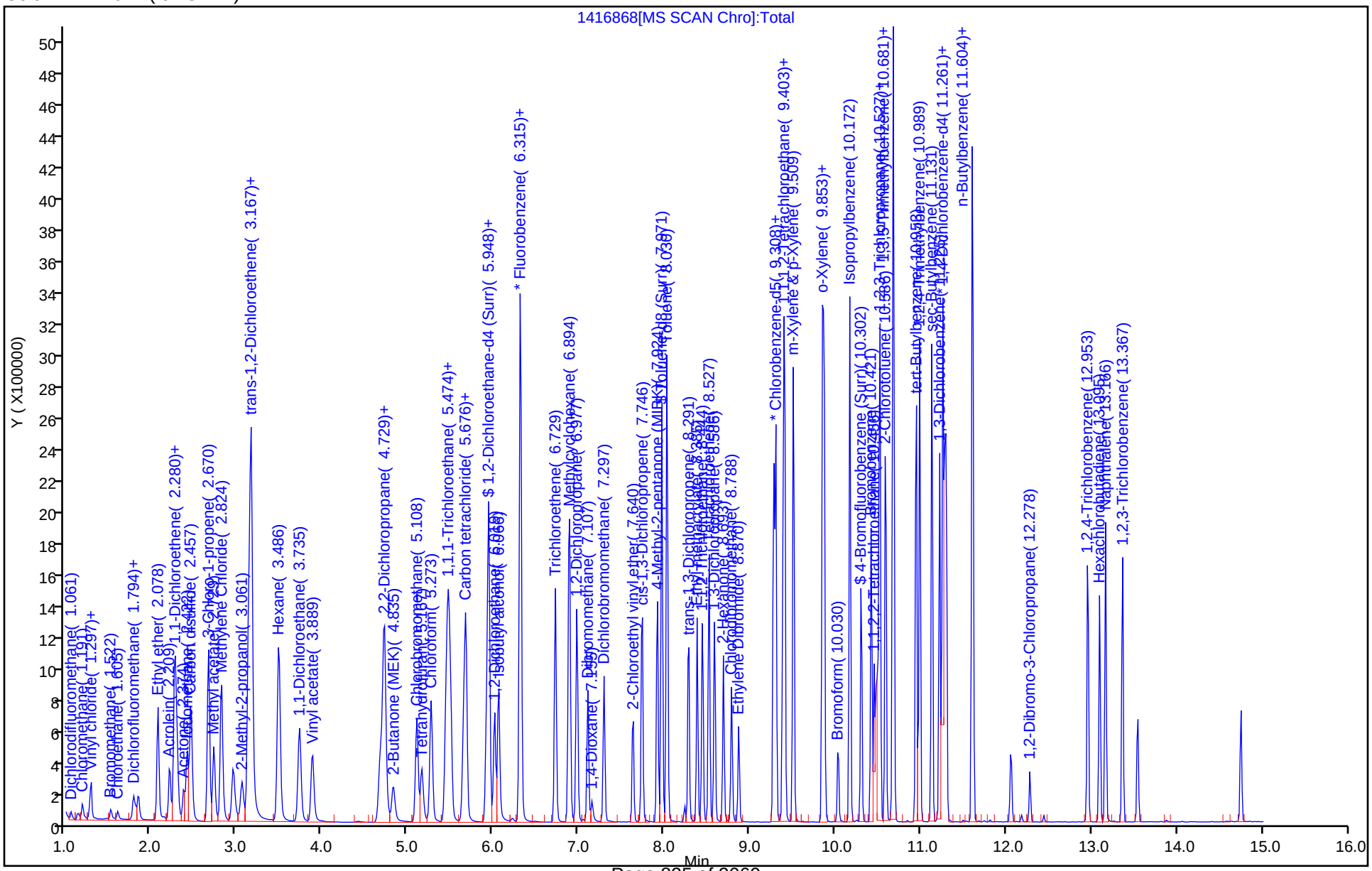
Report Date: 20-Nov-2018 09:43:43 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416868.D

Injection Date:	19-Nov-2018 10:11:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416868.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-Nov-2018 10:11:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Misc. Info.: 240-0082085-004
Operator ID: 002808 Instrument ID: A3UX14

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:43:37 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 10:49:46

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	44.1	88.22
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	39.4	78.86
$ 6 Toluene-d8 (Surr)	50.0	45.7	91.43
$ 7 4-Bromofluorobenzene (Surr)	50.0	42.1	84.18

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-356055/15

Matrix: Solid | Lab File ID: 1416879.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 11/19/2018 14:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	54.0		5.0	1.8
108-20-3	Diisopropyl ether	52.3		10	0.76
994-05-8	Tert-amyl methyl ether	50.3		5.0	2.2
637-92-3	Ethyl t-butyl ether	50.7		5.0	2.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	91		62-135
1868-53-7	Dibromofluoromethane (Surr)	80		49-132
460-00-4	4-Bromofluorobenzene (Surr)	89		49-141
17060-07-0	1,2-Dichloroethane-d4 (Surr)	76		48-123

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416879.D
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 19-Nov-2018 14:08:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Misc. Info.: 240-0082085-015
Operator ID: 002808 Instrument ID: A3UX14

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 14:52:39

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	6.315	6.315	0.000	100	1370025	50.0	50.0	
*	2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	931793	50.0	50.0	
*	3 1,4-Dichlorobenzene-d4	152	11.284	11.285	-0.001	98	405595	50.0	50.0	
$	4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	94	290900	50.0	40.0	
$	5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	93	312051	50.0	38.1	
$	6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	1233665	50.0	45.7	
$	7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	403196	50.0	44.7	
	28 Acetonitrile	41	2.694	2.694	0.000	99	459384	500.0	463.9	
	37 2-Chloro-1,3-butadiene	53	3.853	3.853	0.000	92	640155	50.0	54.0	
	38 Isopropyl ether	87	3.877	3.877	0.000	97	350663	50.0	52.3	
	40 Tert-butyl ethyl ether	59	4.504	4.504	0.000	99	1165847	50.0	50.7	
	45 Ethyl acetate	43	4.966	4.954	0.012	99	747812	100.0	97.9	
	44 Propionitrile	54	4.954	4.954	0.000	99	556019	500.0	490.6	
	47 Methacrylonitrile	41	5.167	5.155	0.012	95	2534677	500.0	483.2	
	57 Tert-amyl methyl ether	73	6.137	6.137	0.000	92	1145265	50.0	50.3	
	60 n-Butanol	56	6.823	6.824	-0.001	89	274933	1250.0	1231.9	
	61 Ethyl acrylate	55	6.942	6.942	0.000	100	458263	50.0	52.8	
	66 Methyl methacrylate	41	7.167	7.167	0.000	95	692254	100.0	104.6	
	69 2-Nitropropane	41	7.557	7.557	0.000	98	156636	100.0	85.3	
	81 n-Butyl acetate	43	8.811	8.811	0.000	98	594168	50.0	50.8	
	84 1-Chlorohexane	91	9.308	9.308	0.000	82	495579	50.0	53.5	
	93 Cyclohexanone	55	10.267	10.267	0.000	94	115701	500.0	467.7	
	104 Pentachloroethane	167	10.977	10.965	0.012	96	257013	100.0	72.1	
	111 1,2,3-Trimethylbenzene	105	11.344	11.344	0.000	98	1243523	50.0	54.0	
	112 Benzyl chloride	126	11.426	11.427	-0.001	100	116050	50.0	40.9	
	116 1,3,5-Trichlorobenzene	180	12.444	12.444	0.000	98	441208	50.0	49.4	
	121 2-Methylnaphthalene	142	14.065	14.065	0.000	94	1352636	100.0	90.6	

Reagents:

VMFASA9W_00209	Amount Added:	5.00	Units: uL	
VM250SS_00050	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00132	Amount Added:	0.00	Units:	Run Reagent
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00010	Amount Added:	0.00	Units:	Run Reagent

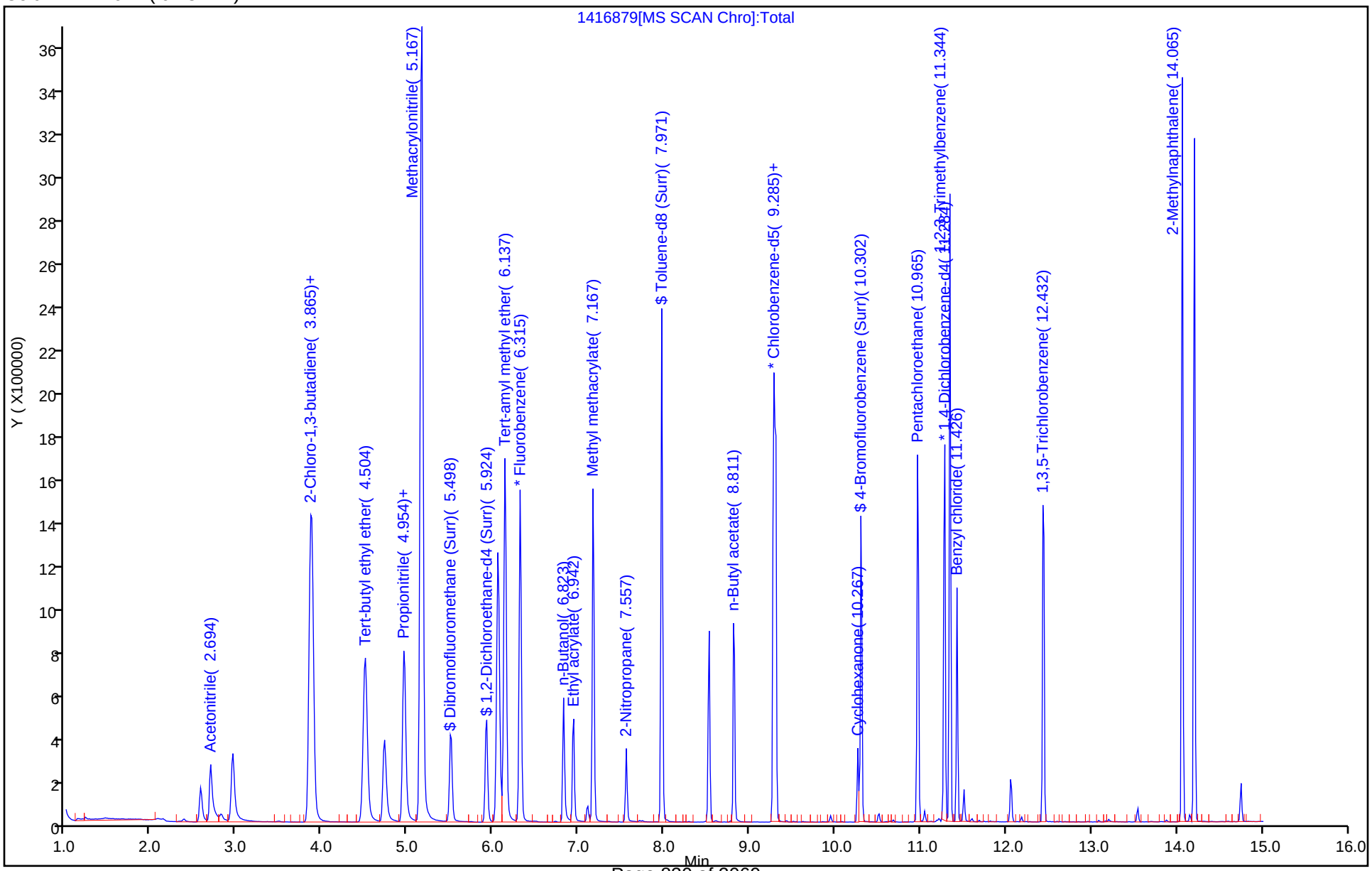
Report Date: 20-Nov-2018 09:44:09 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416879.D

Injection Date:	19-Nov-2018 14:08:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	lcs			Worklist Smp#:	15
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416879.D
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 19-Nov-2018 14:08:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: lcs
Misc. Info.: 240-0082085-015
Operator ID: 002808 Instrument ID: A3UX14

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 19-Nov-2018 14:52:39

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	40.0	80.09
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	38.1	76.13
$ 6 Toluene-d8 (Surr)	50.0	45.7	91.34
$ 7 4-Bromofluorobenzene (Surr)	50.0	44.7	89.41

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-SOIL MS | Lab Sample ID: 240-104089-4 MS

Matrix: Solid | Lab File ID: 1416892.D

Analysis Method: 8260C | Date Collected: 11/07/2018 10:15

Sample wt/vol: 5.0463(g) | Date Analyzed: 11/19/2018 18:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.6 | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	52.9		5.9	3.5
71-55-6	1,1,1-Trichloroethane	50.3		5.9	0.97
79-34-5	1,1,2,2-Tetrachloroethane	65.9		5.9	1.7
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	42.8		5.9	1.5
75-34-3	1,1-Dichloroethane	52.4		5.9	0.82
75-35-4	1,1-Dichloroethene	50.9		5.9	1.1
563-58-6	1,1-Dichloropropene	50.7		5.9	1.2
87-61-6	1,2,3-Trichlorobenzene	32.9		5.9	0.68
96-18-4	1,2,3-Trichloropropane	59.1		5.9	1.9
526-73-8	1,2,3-Trimethylbenzene	45.5		5.9	2.2
120-82-1	1,2,4-Trichlorobenzene	34.2		5.9	0.68
95-63-6	1,2,4-Trimethylbenzene	44.7		5.9	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	43.3		12	4.3
95-50-1	1,2-Dichlorobenzene	42.9		5.9	1.3
107-06-2	1,2-Dichloroethane	51.4		5.9	0.92
78-87-5	1,2-Dichloropropane	55.8		5.9	1.0
541-73-1	1,3-Dichlorobenzene	37.6		5.9	0.97
142-28-9	1,3-Dichloropropane	56.9		5.9	1.2
106-46-7	1,4-Dichlorobenzene	37.5		5.9	1.0
594-20-7	2,2-Dichloropropane	47.0		5.9	1.4
78-93-3	2-Butanone (MEK)	87.9		24	4.2
110-75-8	2-Chloroethyl vinyl ether	47.5	J	59	11
95-49-8	2-Chlorotoluene	43.4		5.9	1.1
591-78-6	2-Hexanone	109		24	4.9
106-43-4	4-Chlorotoluene	41.6		5.9	1.0
99-87-6	p-Isopropyltoluene	41.0		5.9	3.5
108-10-1	4-Methyl-2-pentanone (MIBK)	120		24	4.4
67-64-1	Acetone	173		30	25
71-43-2	Benzene	52.5		5.9	0.83
108-86-1	Bromobenzene	43.6		5.9	1.4
75-25-2	Bromoform	43.0		5.9	2.9
74-83-9	Bromomethane	10.4		5.9	1.2
75-15-0	Carbon disulfide	40.1		5.9	1.4
56-23-5	Carbon tetrachloride	44.6		5.9	3.9
108-90-7	Chlorobenzene	47.0		5.9	1.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-SOIL MS | Lab Sample ID: 240-104089-4 MS

Matrix: Solid | Lab File ID: 1416892.D

Analysis Method: 8260C | Date Collected: 11/07/2018 10:15

Sample wt/vol: 5.0463(g) | Date Analyzed: 11/19/2018 18:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.6 | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	50.8		5.9	3.3
75-00-3	Chloroethane	12.3		5.9	1.4
67-66-3	Chloroform	52.6		5.9	0.94
74-87-3	Chloromethane	12.0		5.9	1.2
156-59-2	cis-1,2-Dichloroethene	49.9		5.9	0.77
10061-01-5	cis-1,3-Dichloropropene	53.5		5.9	1.7
74-95-3	Dibromomethane	51.4		5.9	0.79
74-97-5	Bromochloromethane	46.4		5.9	0.71
75-71-8	Dichlorodifluoromethane	10.3		5.9	1.1
75-27-4	Bromodichloromethane	53.4		5.9	0.81
75-65-0	tert-Butyl alcohol (TBA)	579		240	20
100-41-4	Ethylbenzene	45.5		5.9	1.2
87-68-3	Hexachlorobutadiene	22.3		5.9	4.4
108-20-3	Diisopropyl ether	54.9		12	0.90
98-82-8	Isopropylbenzene	45.3		5.9	0.99
1634-04-4	Methyl tert-butyl ether	55.1		5.9	0.97
75-09-2	Methylene Chloride	47.8		30	14
179601-23-1	m-Xylene & p-Xylene	44.1		12	0.93
91-20-3	Naphthalene	45.2		5.9	3.2
104-51-8	n-Butylbenzene	39.2		5.9	4.1
103-65-1	N-Propylbenzene	41.5		5.9	0.87
95-47-6	o-Xylene	47.8		5.9	1.0
135-98-8	sec-Butylbenzene	43.3		5.9	1.0
100-42-5	Styrene	43.6		5.9	1.4
994-05-8	Tert-amyl methyl ether	56.8		5.9	2.7
637-92-3	Ethyl t-butyl ether	55.4		5.9	2.7
127-18-4	Tetrachloroethene	44.9		5.9	0.87
108-88-3	Toluene	51.8		5.9	0.92
156-60-5	trans-1,2-Dichloroethene	49.5		5.9	0.55
10061-02-6	trans-1,3-Dichloropropene	53.0		5.9	1.2
79-01-6	Trichloroethene	44.2		5.9	0.75
75-69-4	Trichlorofluoromethane	14.2		5.9	1.3
108-05-4	Vinyl acetate	23.9		12	2.5
75-01-4	Vinyl chloride	13.7		5.9	0.99
1330-20-7	Xylenes, Total	91.9		12	1.9
98-06-6	tert-Butylbenzene	69.0		5.9	1.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-SOIL MS | Lab Sample ID: 240-104089-4 MS

Matrix: Solid | Lab File ID: 1416892.D

Analysis Method: 8260C | Date Collected: 11/07/2018 10:15

Sample wt/vol: 5.0463(g) | Date Analyzed: 11/19/2018 18:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.6 | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
106-93-4	1,2-Dibromoethane	53.9		5.9	0.91

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	96		62-135
1868-53-7	Dibromofluoromethane (Surr)	83		49-132
460-00-4	4-Bromofluorobenzene (Surr)	94		49-141
17060-07-0	1,2-Dichloroethane-d4 (Surr)	79		48-123

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416892.D
Lims ID: 240-104089-B-4-B MS
Client ID:
Sample Type: MS
Inject. Date: 19-Nov-2018 18:47:30 ALS Bottle#: 27 Worklist Smp#: 28
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-104089-b-4-b ms
Misc. Info.: 240-0082085-028
Operator ID: 002808 Instrument ID: A3UX14

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 20-Nov-2018 09:23:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	97	1182999	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	96	755541	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.285	-0.001	99	315965	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	93	261712	50.0	41.7	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	96	280250	50.0	39.6	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	1055394	50.0	48.2	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	330305	50.0	47.0	
9 Dichlorodifluoromethane	85	1.061	1.061	0.000	99	34887	10.0	8.65	
10 Chloromethane	50	1.191	1.191	0.000	99	65060	10.0	10.1	
11 Vinyl chloride	62	1.286	1.286	0.000	98	59030	10.0	11.5	
13 Bromomethane	94	1.522	1.522	0.000	90	23987	10.0	8.72	
15 Chloroethane	64	1.605	1.605	0.000	100	28192	10.0	10.4	
17 Trichlorofluoromethane	101	1.818	1.806	0.012	98	63339	10.0	12.0	
21 1,1-Dichloroethene	96	2.268	2.268	0.000	97	228700	50.0	42.8	
22 1,1,2-Trichloro-1,2,2-trif	151	2.291	2.292	-0.001	97	122543	50.0	36.1	
24 Acetone	43	2.374	2.374	0.000	100	320672	100.0	145.3	
26 Carbon disulfide	76	2.469	2.457	0.012	100	580869	50.0	33.7	
30 Methylene Chloride	84	2.824	2.824	0.000	99	285159	50.0	40.2	
31 2-Methyl-2-propanol	59	3.061	3.061	0.000	98	305546	500.0	487.4	
32 trans-1,2-Dichloroethene	96	3.132	3.132	0.000	97	288263	50.0	41.6	
33 Methyl tert-butyl ether	73	3.155	3.155	0.000	99	713273	50.0	46.3	
36 1,1-Dichloroethane	63	3.735	3.735	0.000	96	527745	50.0	44.1	
38 Isopropyl ether	87	3.877	3.877	0.000	88	267724	50.0	46.2	
39 Vinyl acetate	86	3.877	3.889	-0.012	73	25248	50.0	20.1	
40 Tert-butyl ethyl ether	59	4.504	4.504	0.000	99	924386	50.0	46.6	
41 2,2-Dichloropropane	97	4.682	4.682	0.000	91	62753	50.0	39.5	
42 cis-1,2-Dichloroethene	96	4.717	4.717	0.000	83	327451	50.0	42.0	
43 2-Butanone (MEK)	43	4.836	4.824	0.012	99	264141	100.0	74.0	
46 Chlorobromomethane	128	5.108	5.108	0.000	91	140052	50.0	39.0	
49 Chloroform	83	5.273	5.273	0.000	96	442400	50.0	44.3	
50 1,1,1-Trichloroethane	97	5.451	5.451	0.000	99	309341	50.0	42.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
52 Carbon tetrachloride	117	5.652	5.652	0.000	96	257071	50.0	37.6	
53 1,1-Dichloropropene	75	5.676	5.676	0.000	93	347684	50.0	42.6	
54 Benzene	78	5.948	5.948	0.000	98	1166477	50.0	44.2	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	95	359074	50.0	43.3	
57 Tert-amyl methyl ether	73	6.137	6.137	0.000	91	939837	50.0	47.8	
59 Trichloroethene	130	6.729	6.729	0.000	98	254926	50.0	37.2	
63 1,2-Dichloropropane	63	6.977	6.977	0.000	95	319714	50.0	46.9	
65 Dibromomethane	93	7.107	7.108	-0.001	96	161920	50.0	43.2	
68 Dichlorobromomethane	83	7.297	7.297	0.000	97	305697	50.0	44.9	
70 2-Chloroethyl vinyl ether	63	7.640	7.640	0.000	92	161732	50.0	40.0	
71 cis-1,3-Dichloropropene	75	7.746	7.747	-0.001	94	419261	50.0	45.0	
73 4-Methyl-2-pentanone (MIBK	43	7.924	7.924	0.000	98	616746	100.0	101.2	
74 Toluene	91	8.030	8.031	-0.001	98	1045553	50.0	43.6	
75 trans-1,3-Dichloropropene	75	8.291	8.291	0.000	97	315528	50.0	44.6	
78 Tetrachloroethene	164	8.527	8.528	-0.001	97	175708	50.0	37.8	
79 1,3-Dichloropropane	76	8.587	8.587	0.000	97	387162	50.0	47.9	
80 2-Hexanone	43	8.693	8.693	0.000	97	358165	100.0	91.7	
82 Chlorodibromomethane	129	8.788	8.788	0.000	91	198226	50.0	42.7	
83 Ethylene Dibromide	107	8.871	8.871	0.000	98	210622	50.0	45.4	
85 Chlorobenzene	112	9.308	9.308	0.000	95	614867	50.0	39.6	
86 1,1,1,2-Tetrachloroethane	131	9.391	9.391	0.000	97	210016	50.0	44.5	
87 Ethylbenzene	106	9.415	9.415	0.000	98	311480	50.0	38.3	
88 m-Xylene & p-Xylene	106	9.510	9.510	0.000	99	363308	50.0	37.2	
89 o-Xylene	106	9.853	9.853	0.000	98	381352	50.0	40.2	
90 Styrene	104	9.876	9.876	0.000	96	571587	50.0	36.7	
91 Bromoform	173	10.030	10.030	0.000	95	97064	50.0	36.2	
92 Isopropylbenzene	105	10.172	10.172	0.000	95	838122	50.0	38.1	
94 Bromobenzene	156	10.421	10.421	0.000	97	212882	50.0	36.7	
95 1,1,2,2-Tetrachloroethane	83	10.456	10.456	0.000	94	270981	50.0	55.4	
96 1,2,3-Trichloropropane	110	10.492	10.492	0.000	87	78323	50.0	49.7	
98 N-Propylbenzene	120	10.527	10.527	0.000	99	217220	50.0	35.0	
99 2-Chlorotoluene	126	10.586	10.586	0.000	96	190925	50.0	36.5	
101 4-Chlorotoluene	126	10.693	10.693	0.000	98	187811	50.0	35.0	
103 tert-Butylbenzene	119	10.953	10.953	0.000	92	828806	50.0	58.1	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	97	625968	50.0	37.6	
107 sec-Butylbenzene	105	11.131	11.131	0.000	94	741802	50.0	36.4	
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	98	327444	50.0	31.6	
109 4-Isopropyltoluene	119	11.261	11.261	0.000	97	591116	50.0	34.5	
110 1,4-Dichlorobenzene	146	11.296	11.296	0.000	94	332900	50.0	31.6	
111 1,2,3-Trimethylbenzene	105	11.344	11.344	0.000	98	687475	50.0	38.3	
113 n-Butylbenzene	91	11.604	11.604	0.000	98	506930	50.0	33.0	
114 1,2-Dichlorobenzene	146	11.616	11.616	0.000	98	337599	50.0	36.1	
115 1,2-Dibromo-3-Chloropropan	157	12.278	12.279	-0.001	78	36635	50.0	36.5	
117 1,2,4-Trichlorobenzene	180	12.965	12.953	0.012	95	187752	50.0	28.8	
118 Hexachlorobutadiene	225	13.095	13.095	0.000	97	57141	50.0	18.8	
119 Naphthalene	128	13.166	13.166	0.000	97	621441	50.0	38.0	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	97	170964	50.0	27.7	
S 134 Xylenes, Total	106				0		100.0	77.4	

Reagents:

VMFASA9W_00209	Amount Added:	5.00	Units: uL	
VMFASAW_00256	Amount Added:	5.00	Units: uL	
VMFASPW_00276	Amount Added:	5.00	Units: uL	
VMFASGW_00283	Amount Added:	1.00	Units: uL	
VM250SS_00050	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00132	Amount Added:	0.00	Units:	Run Reagent
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00010	Amount Added:	0.00	Units:	Run Reagent

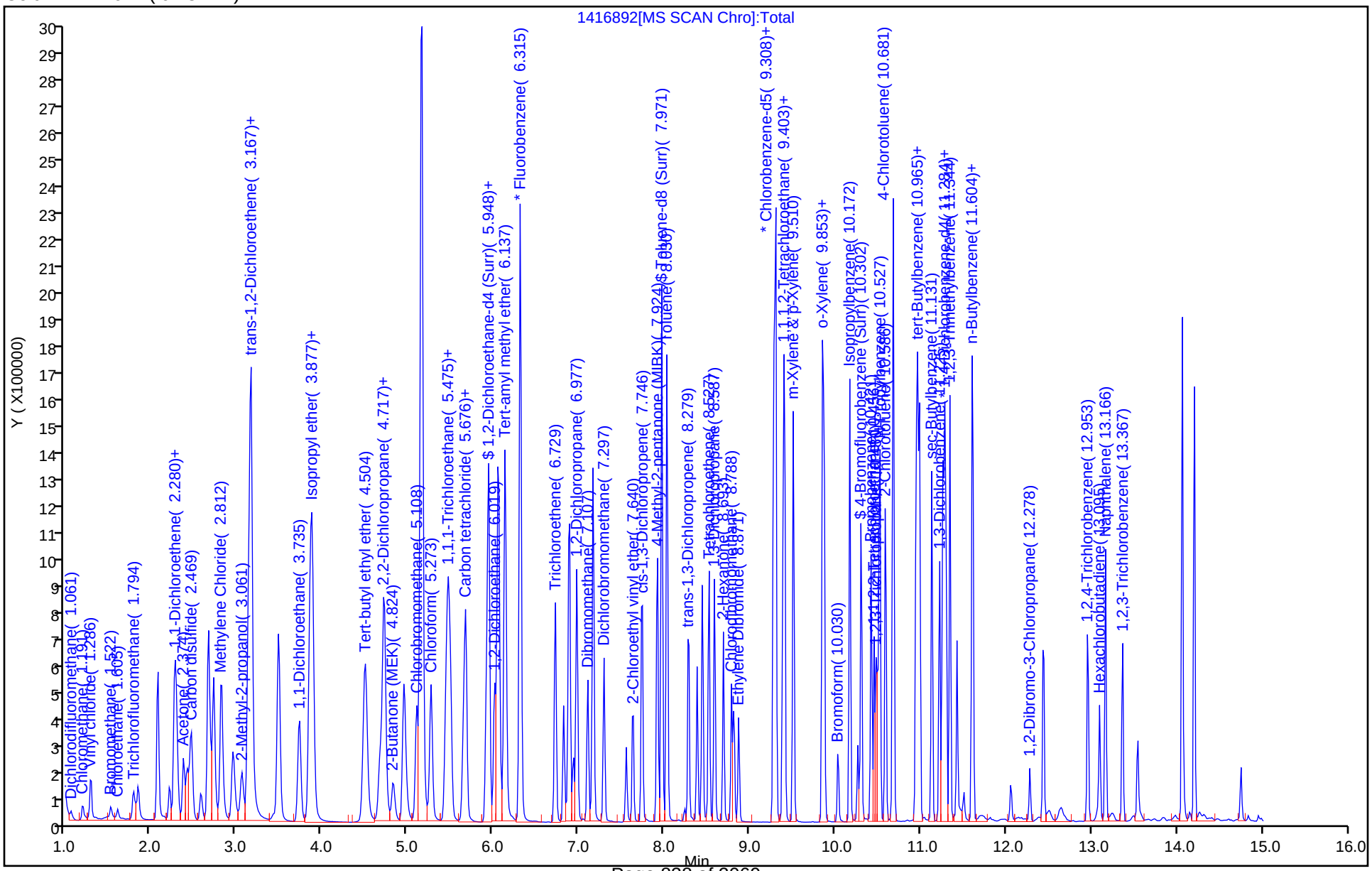
Report Date: 20-Nov-2018 09:44:44 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416892.D

Injection Date:	19-Nov-2018 18:47:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	240-104089-B-4-B MS			Worklist Smp#:	28
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416892.D
Lims ID: 240-104089-B-4-B MS
Client ID:
Sample Type: MS
Inject. Date: 19-Nov-2018 18:47:30 ALS Bottle#: 27 Worklist Smp#: 28
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-104089-b-4-b ms
Misc. Info.: 240-0082085-028
Operator ID: 002808 Instrument ID: A3UX14

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 20-Nov-2018 09:23:52

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	41.7	83.45
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	39.6	79.19
$ 6 Toluene-d8 (Surr)	50.0	48.2	96.37
$ 7 4-Bromofluorobenzene (Surr)	50.0	47.0	94.03

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: 240-104014-E-1 MS

Matrix: Water | Lab File ID: U1903847.d

Analysis Method: 8260C | Date Collected: 11/06/2018 11:40

Sample wt/vol: 5(mL) | Date Analyzed: 11/15/2018 22:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-06-2	1,2-Dichloroethane	18.1		1.0	0.21
78-93-3	2-Butanone (MEK)	41.4		10	1.2
71-43-2	Benzene	19.6		1.0	0.13
75-15-0	Carbon disulfide	21.7		1.0	0.28
108-90-7	Chlorobenzene	19.4		1.0	0.14
67-66-3	Chloroform	19.1		1.0	0.13
100-41-4	Ethylbenzene	19.5		1.0	0.11
179601-23-1	m-Xylene & p-Xylene	19.8		2.0	0.080
95-47-6	o-Xylene	19.9		1.0	0.090
100-42-5	Styrene	19.6		1.0	0.10
108-88-3	Toluene	19.6		1.0	0.14
1330-20-7	Xylenes, Total	39.7		2.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	103		70-123
1868-53-7	Dibromofluoromethane (Surr)	100		75-128
460-00-4	4-Bromofluorobenzene (Surr)	102		59-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-121

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903847.d
Lims ID: 240-104014-E-1 MS
Client ID: M-15
Sample Type: MS
Inject. Date: 15-Nov-2018 22:03:54 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 009
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 16-Nov-2018 13:59:42 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0324

First Level Reviewer: laveyt Date: 16-Nov-2018 14:00:23

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.666	5.653	0.013	99	807865	20.0	20.0	
*	2 Chlorobenzene-d5	117	8.500	8.499	0.001	83	645434	20.0	20.0	
*	3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	86	355659	20.0	20.0	
$	4 Dibromofluoromethane (Surr	111	5.049	5.049	0.000	59	217982	20.0	20.0	
$	5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	99	246560	20.0	19.7	
$	6 Toluene-d8 (Surr)	98	7.112	7.100	0.012	80	798308	20.0	20.6	
$	7 4-Bromofluorobenzene (Surr	95	9.674	9.673	0.001	91	296229	20.0	20.3	
	24 Carbon disulfide	76	3.294	3.282	0.012	98	657791	20.0	21.7	
	41 2-Butanone (MEK)	72	4.634	4.634	0.000	97	79038	40.0	41.4	
	47 Chloroform	83	4.907	4.906	0.001	83	341272	20.0	19.1	
	53 Benzene	78	5.416	5.416	0.000	94	755293	20.0	19.6	
	54 1,2-Dichloroethane	62	5.428	5.416	0.012	62	262881	20.0	18.1	
	70 Toluene	91	7.172	7.171	0.001	95	853003	20.0	19.6	
	82 Chlorobenzene	112	8.523	8.523	0.000	93	578206	20.0	19.4	
	84 Ethylbenzene	106	8.630	8.630	0.000	98	304198	20.0	19.5	
	85 m-Xylene & p-Xylene	106	8.749	8.749	0.000	99	377036	20.0	19.8	
	86 o-Xylene	106	9.152	9.152	0.000	87	359958	20.0	19.9	
	87 Styrene	104	9.164	9.164	0.000	93	605624	20.0	19.6	
S	126 Xylenes, Total	106				0		40.0	39.8	

Reagents:

vmfasgw_00282	Amount Added: 16.00	Units: uL	
vmfasaw_00256	Amount Added: 16.00	Units: uL	
vmfaspw_00275	Amount Added: 16.00	Units: uL	
vm50ss_stk_00078	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00133	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00002	Amount Added: 2.00	Units: uL	Run Reagent

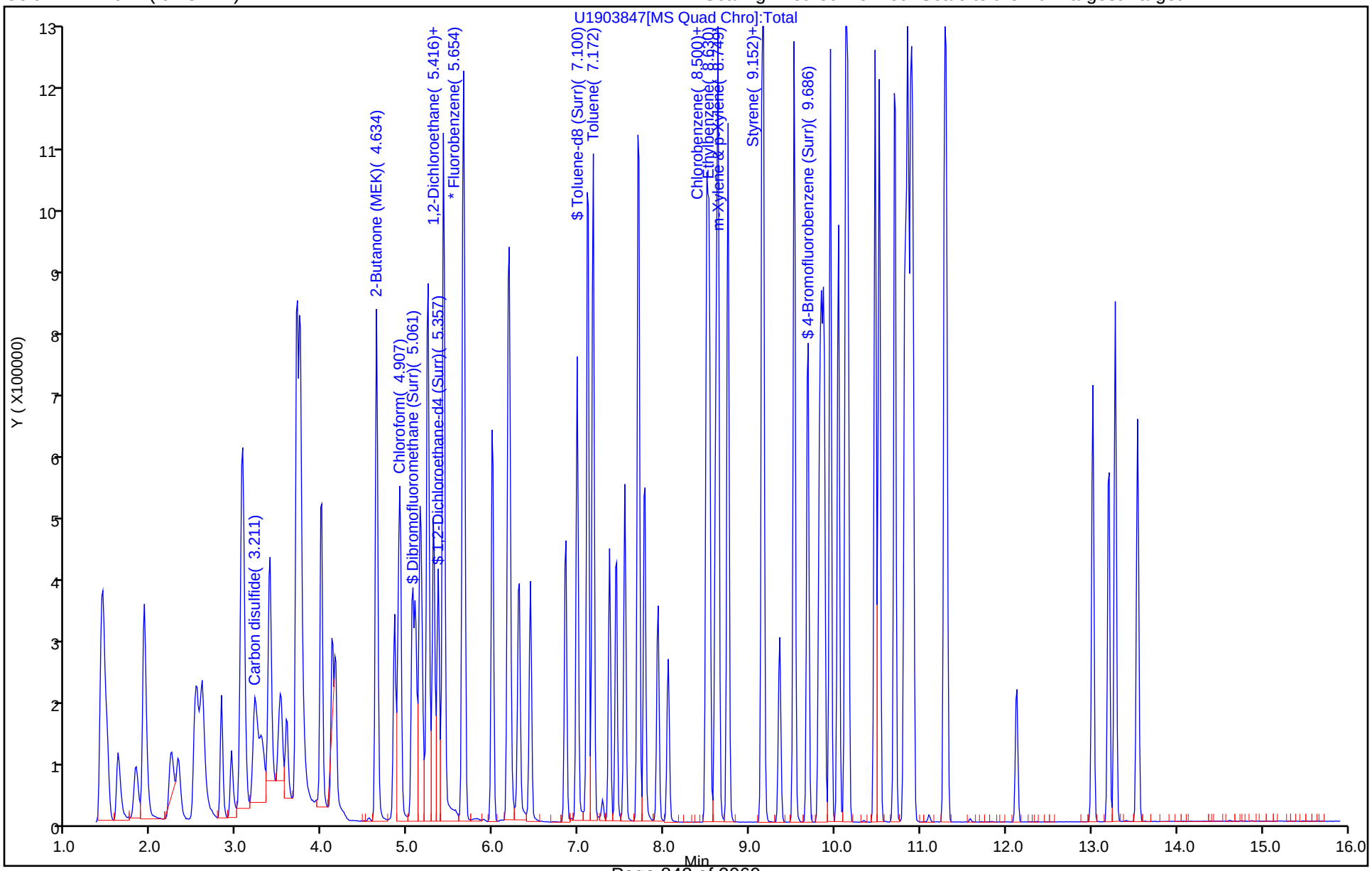
Report Date: 16-Nov-2018 14:00:25 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903847.d

Injection Date:	15-Nov-2018 22:03:54	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	240-104014-E-1 MS			Worklist Smp#:	9
Client ID:	M-15				
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903847.d
Lims ID: 240-104014-E-1 MS
Client ID: M-15
Sample Type: MS
Inject. Date: 15-Nov-2018 22:03:54 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 009
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 16-Nov-2018 13:59:42 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0324

First Level Reviewer: laveyt Date: 16-Nov-2018 14:00:23

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	20.0	20.0	100.23
$ 5 1,2-Dichloroethane-d4 (Surr)	20.0	19.7	98.71
$ 6 Toluene-d8 (Surr)	20.0	20.6	103.13
$ 7 4-Bromofluorobenzene (Surr)	20.0	20.3	101.70

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-SOIL MSD | Lab Sample ID: 240-104089-4 MSD

Matrix: Solid | Lab File ID: 1416893.D

Analysis Method: 8260C | Date Collected: 11/07/2018 10:15

Sample wt/vol: 5.0322(g) | Date Analyzed: 11/19/2018 19:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.6 | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	46.1		6.0	3.5
71-55-6	1,1,1-Trichloroethane	44.7		6.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	63.1		6.0	1.7
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	38.8		6.0	1.5
75-34-3	1,1-Dichloroethane	46.0		6.0	0.83
75-35-4	1,1-Dichloroethene	44.2		6.0	1.1
563-58-6	1,1-Dichloropropene	43.3		6.0	1.2
87-61-6	1,2,3-Trichlorobenzene	28.7		6.0	0.68
96-18-4	1,2,3-Trichloropropane	57.3		6.0	1.9
526-73-8	1,2,3-Trimethylbenzene	38.0		6.0	2.2
120-82-1	1,2,4-Trichlorobenzene	30.6		6.0	0.68
95-63-6	1,2,4-Trimethylbenzene	36.6		6.0	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	41.6		12	4.3
95-50-1	1,2-Dichlorobenzene	37.1		6.0	1.3
107-06-2	1,2-Dichloroethane	45.7		6.0	0.92
78-87-5	1,2-Dichloropropane	48.8		6.0	1.0
541-73-1	1,3-Dichlorobenzene	32.8		6.0	0.97
142-28-9	1,3-Dichloropropane	53.2		6.0	1.2
106-46-7	1,4-Dichlorobenzene	32.6		6.0	1.1
594-20-7	2,2-Dichloropropane	42.6		6.0	1.4
78-93-3	2-Butanone (MEK)	87.7		24	4.2
110-75-8	2-Chloroethyl vinyl ether	46.1	J	60	11
95-49-8	2-Chlorotoluene	35.4		6.0	1.1
591-78-6	2-Hexanone	120		24	4.9
106-43-4	4-Chlorotoluene	35.7		6.0	1.0
99-87-6	p-Isopropyltoluene	33.2		6.0	3.5
108-10-1	4-Methyl-2-pentanone (MIBK)	120		24	4.4
67-64-1	Acetone	164		30	25
71-43-2	Benzene	45.0		6.0	0.83
108-86-1	Bromobenzene	37.9		6.0	1.4
75-25-2	Bromoform	40.8		6.0	2.9
74-83-9	Bromomethane	9.39		6.0	1.2
75-15-0	Carbon disulfide	34.9		6.0	1.4
56-23-5	Carbon tetrachloride	38.7		6.0	3.9
108-90-7	Chlorobenzene	40.8		6.0	1.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-SOIL MSD | Lab Sample ID: 240-104089-4 MSD

Matrix: Solid | Lab File ID: 1416893.D

Analysis Method: 8260C | Date Collected: 11/07/2018 10:15

Sample wt/vol: 5.0322(g) | Date Analyzed: 11/19/2018 19:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.6 | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	46.9		6.0	3.3
75-00-3	Chloroethane	10.4		6.0	1.5
67-66-3	Chloroform	47.1		6.0	0.94
74-87-3	Chloromethane	10.1		6.0	1.2
156-59-2	cis-1,2-Dichloroethene	45.1		6.0	0.78
10061-01-5	cis-1,3-Dichloropropene	47.4		6.0	1.7
74-95-3	Dibromomethane	47.8		6.0	0.80
74-97-5	Bromochloromethane	43.8		6.0	0.71
75-71-8	Dichlorodifluoromethane	7.66		6.0	1.1
75-27-4	Bromodichloromethane	46.4		6.0	0.81
75-65-0	tert-Butyl alcohol (TBA)	578		240	20
100-41-4	Ethylbenzene	38.7		6.0	1.2
87-68-3	Hexachlorobutadiene	17.4		6.0	4.5
108-20-3	Diisopropyl ether	50.9		12	0.90
98-82-8	Isopropylbenzene	38.0		6.0	0.99
1634-04-4	Methyl tert-butyl ether	50.6		6.0	0.98
75-09-2	Methylene Chloride	44.6		30	14
179601-23-1	m-Xylene & p-Xylene	37.1		12	0.93
91-20-3	Naphthalene	38.5		6.0	3.2
104-51-8	n-Butylbenzene	31.5		6.0	4.1
103-65-1	N-Propylbenzene	34.3		6.0	0.87
95-47-6	o-Xylene	40.1		6.0	1.0
135-98-8	sec-Butylbenzene	34.7		6.0	1.0
100-42-5	Styrene	39.0		6.0	1.4
994-05-8	Tert-amyl methyl ether	52.4		6.0	2.7
637-92-3	Ethyl t-butyl ether	51.3		6.0	2.7
127-18-4	Tetrachloroethene	39.4		6.0	0.87
108-88-3	Toluene	44.9		6.0	0.92
156-60-5	trans-1,2-Dichloroethene	43.3		6.0	0.55
10061-02-6	trans-1,3-Dichloropropene	48.3		6.0	1.2
79-01-6	Trichloroethene	37.5		6.0	0.75
75-69-4	Trichlorofluoromethane	12.2		6.0	1.3
108-05-4	Vinyl acetate	27.3		12	2.5
75-01-4	Vinyl chloride	11.3		6.0	1.0
1330-20-7	Xylenes, Total	77.2		12	1.9
98-06-6	tert-Butylbenzene	56.8		6.0	1.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-SOIL MSD | Lab Sample ID: 240-104089-4 MSD

Matrix: Solid | Lab File ID: 1416893.D

Analysis Method: 8260C | Date Collected: 11/07/2018 10:15

Sample wt/vol: 5.0322(g) | Date Analyzed: 11/19/2018 19:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.6 | Level: (low/med) Low

Analysis Batch No.: 356055 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
106-93-4	1,2-Dibromoethane	52.4		6.0	0.92

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	96		62-135
1868-53-7	Dibromofluoromethane (Surr)	82		49-132
460-00-4	4-Bromofluorobenzene (Surr)	94		49-141
17060-07-0	1,2-Dichloroethane-d4 (Surr)	77		48-123

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416893.D
Lims ID: 240-104089-B-4-C MSD
Client ID:
Sample Type: MSD
Inject. Date: 19-Nov-2018 19:09:30 ALS Bottle#: 28 Worklist Smp#: 29
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-104089-b-4-c msd
Misc. Info.: 240-0082085-029
Operator ID: 002808 Instrument ID: A3UX14

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 20-Nov-2018 09:24:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	6.315	6.315	0.000	97	1118739	50.0	50.0	
* 2 Chlorobenzene-d5	117	9.285	9.285	0.000	95	721201	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	11.284	11.285	-0.001	99	304240	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	5.498	5.498	0.000	93	243160	50.0	41.0	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.924	5.924	0.000	96	258889	50.0	38.7	
$ 6 Toluene-d8 (Surr)	98	7.971	7.971	0.000	93	1003165	50.0	48.0	
$ 7 4-Bromofluorobenzene (Surr	95	10.302	10.302	0.000	0	317031	50.0	46.9	
9 Dichlorodifluoromethane	85	1.061	1.061	0.000	99	24524	10.0	6.43	
10 Chloromethane	50	1.203	1.191	0.012	99	51434	10.0	8.46	
11 Vinyl chloride	62	1.286	1.286	0.000	97	45801	10.0	9.45	
13 Bromomethane	94	1.522	1.522	0.000	91	20495	10.0	7.88	
15 Chloroethane	64	1.605	1.605	0.000	99	22517	10.0	8.76	
17 Trichlorofluoromethane	101	1.818	1.806	0.012	98	51468	10.0	10.3	
21 1,1-Dichloroethene	96	2.268	2.268	0.000	97	187412	50.0	37.1	
22 1,1,2-Trichloro-1,2,2-trif	151	2.291	2.292	-0.001	96	104747	50.0	32.6	
24 Acetone	43	2.374	2.374	0.000	100	286478	100.0	137.2	
26 Carbon disulfide	76	2.469	2.457	0.012	100	477430	50.0	29.3	
30 Methylene Chloride	84	2.824	2.824	0.000	98	252878	50.0	37.4	
31 2-Methyl-2-propanol	59	3.061	3.061	0.000	98	287458	500.0	484.9	
32 trans-1,2-Dichloroethene	96	3.132	3.132	0.000	98	237863	50.0	36.3	
33 Methyl tert-butyl ether	73	3.155	3.155	0.000	99	618153	50.0	42.5	
36 1,1-Dichloroethane	63	3.735	3.735	0.000	96	436316	50.0	38.6	
38 Isopropyl ether	87	3.877	3.877	0.000	86	234041	50.0	42.7	
39 Vinyl acetate	86	3.889	3.889	0.000	79	27219	50.0	22.9	
40 Tert-butyl ethyl ether	59	4.504	4.504	0.000	99	807393	50.0	43.0	
41 2,2-Dichloropropane	97	4.682	4.682	0.000	91	53633	50.0	35.7	
42 cis-1,2-Dichloroethene	96	4.717	4.717	0.000	81	279398	50.0	37.9	
43 2-Butanone (MEK)	43	4.836	4.824	0.012	100	248703	100.0	73.6	
46 Chlorobromomethane	128	5.108	5.108	0.000	90	124869	50.0	36.8	
49 Chloroform	83	5.273	5.273	0.000	96	373069	50.0	39.5	
50 1,1,1-Trichloroethane	97	5.451	5.451	0.000	99	259224	50.0	37.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
52 Carbon tetrachloride	117	5.652	5.652	0.000	96	210379	50.0	32.5	
53 1,1-Dichloropropene	75	5.676	5.676	0.000	94	279893	50.0	36.3	
54 Benzene	78	5.948	5.948	0.000	97	941272	50.0	37.7	
56 1,2-Dichloroethane	62	6.019	6.019	0.000	95	301290	50.0	38.4	
57 Tert-amyl methyl ether	73	6.137	6.137	0.000	91	817356	50.0	44.0	
59 Trichloroethene	130	6.729	6.729	0.000	98	203806	50.0	31.4	
63 1,2-Dichloropropane	63	6.977	6.977	0.000	95	263937	50.0	41.0	
65 Dibromomethane	93	7.107	7.108	-0.001	97	142223	50.0	40.1	
68 Dichlorobromomethane	83	7.297	7.297	0.000	98	250630	50.0	39.0	
70 2-Chloroethyl vinyl ether	63	7.640	7.640	0.000	92	147959	50.0	38.7	
71 cis-1,3-Dichloropropene	75	7.746	7.747	-0.001	93	350566	50.0	39.8	
73 4-Methyl-2-pentanone (MIBK	43	7.924	7.924	0.000	98	586226	100.0	100.8	
74 Toluene	91	8.030	8.031	-0.001	98	863390	50.0	37.7	
75 trans-1,3-Dichloropropene	75	8.291	8.291	0.000	97	273650	50.0	40.5	
78 Tetrachloroethene	164	8.527	8.528	-0.001	97	146872	50.0	33.1	
79 1,3-Dichloropropane	76	8.587	8.587	0.000	97	344618	50.0	44.7	
80 2-Hexanone	43	8.693	8.693	0.000	97	375897	100.0	100.8	
82 Chlorodibromomethane	129	8.788	8.788	0.000	91	174468	50.0	39.4	
83 Ethylene Dibromide	107	8.871	8.871	0.000	98	194872	50.0	44.0	
85 Chlorobenzene	112	9.308	9.308	0.000	96	507881	50.0	34.3	
86 1,1,1,2-Tetrachloroethane	131	9.391	9.391	0.000	97	174225	50.0	38.7	
87 Ethylbenzene	106	9.415	9.415	0.000	98	252343	50.0	32.5	
88 m-Xylene & p-Xylene	106	9.510	9.510	0.000	100	290968	50.0	31.2	
89 o-Xylene	106	9.853	9.853	0.000	97	305108	50.0	33.7	
90 Styrene	104	9.876	9.876	0.000	96	486518	50.0	32.7	
91 Bromoform	173	10.042	10.030	0.012	99	87672	50.0	34.2	
92 Isopropylbenzene	105	10.172	10.172	0.000	95	668305	50.0	31.9	
94 Bromobenzene	156	10.421	10.421	0.000	97	177598	50.0	31.8	
95 1,1,2,2-Tetrachloroethane	83	10.456	10.456	0.000	93	249210	50.0	52.9	
96 1,2,3-Trichloropropane	110	10.492	10.492	0.000	83	72942	50.0	48.1	
98 N-Propylbenzene	120	10.527	10.527	0.000	99	172154	50.0	28.8	
99 2-Chlorotoluene	126	10.586	10.586	0.000	96	149350	50.0	29.7	
101 4-Chlorotoluene	126	10.693	10.693	0.000	98	154906	50.0	30.0	
103 tert-Butylbenzene	119	10.953	10.953	0.000	93	655499	50.0	47.7	
105 1,2,4-Trimethylbenzene	105	10.989	10.989	0.000	96	492748	50.0	30.8	
107 sec-Butylbenzene	105	11.131	11.131	0.000	94	571749	50.0	29.1	
108 1,3-Dichlorobenzene	146	11.225	11.225	0.000	98	274396	50.0	27.5	
109 4-Isopropyltoluene	119	11.261	11.261	0.000	97	459842	50.0	27.9	
110 1,4-Dichlorobenzene	146	11.296	11.296	0.000	94	278267	50.0	27.4	
111 1,2,3-Trimethylbenzene	105	11.344	11.344	0.000	98	550840	50.0	31.9	
113 n-Butylbenzene	91	11.604	11.604	0.000	98	390749	50.0	26.4	
114 1,2-Dichlorobenzene	146	11.616	11.616	0.000	98	280162	50.0	31.1	
115 1,2-Dibromo-3-Chloropropan	157	12.278	12.279	-0.001	77	33669	50.0	34.9	
117 1,2,4-Trichlorobenzene	180	12.965	12.953	0.012	95	161636	50.0	25.7	
118 Hexachlorobutadiene	225	13.095	13.095	0.000	97	42606	50.0	14.6	
119 Naphthalene	128	13.166	13.166	0.000	97	508445	50.0	32.3	
120 1,2,3-Trichlorobenzene	180	13.367	13.367	0.000	96	142924	50.0	24.1	
S 134 Xylenes, Total	106				0		100.0	64.9	

Reagents:

VMFASAW_00256	Amount Added:	5.00	Units: uL	
VMFASPW_00276	Amount Added:	5.00	Units: uL	
VMFASA9W_00209	Amount Added:	5.00	Units: uL	
VMFASGW_00283	Amount Added:	1.00	Units: uL	
VM250SS_00050	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00132	Amount Added:	0.00	Units:	Run Reagent
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00010	Amount Added:	0.00	Units:	Run Reagent

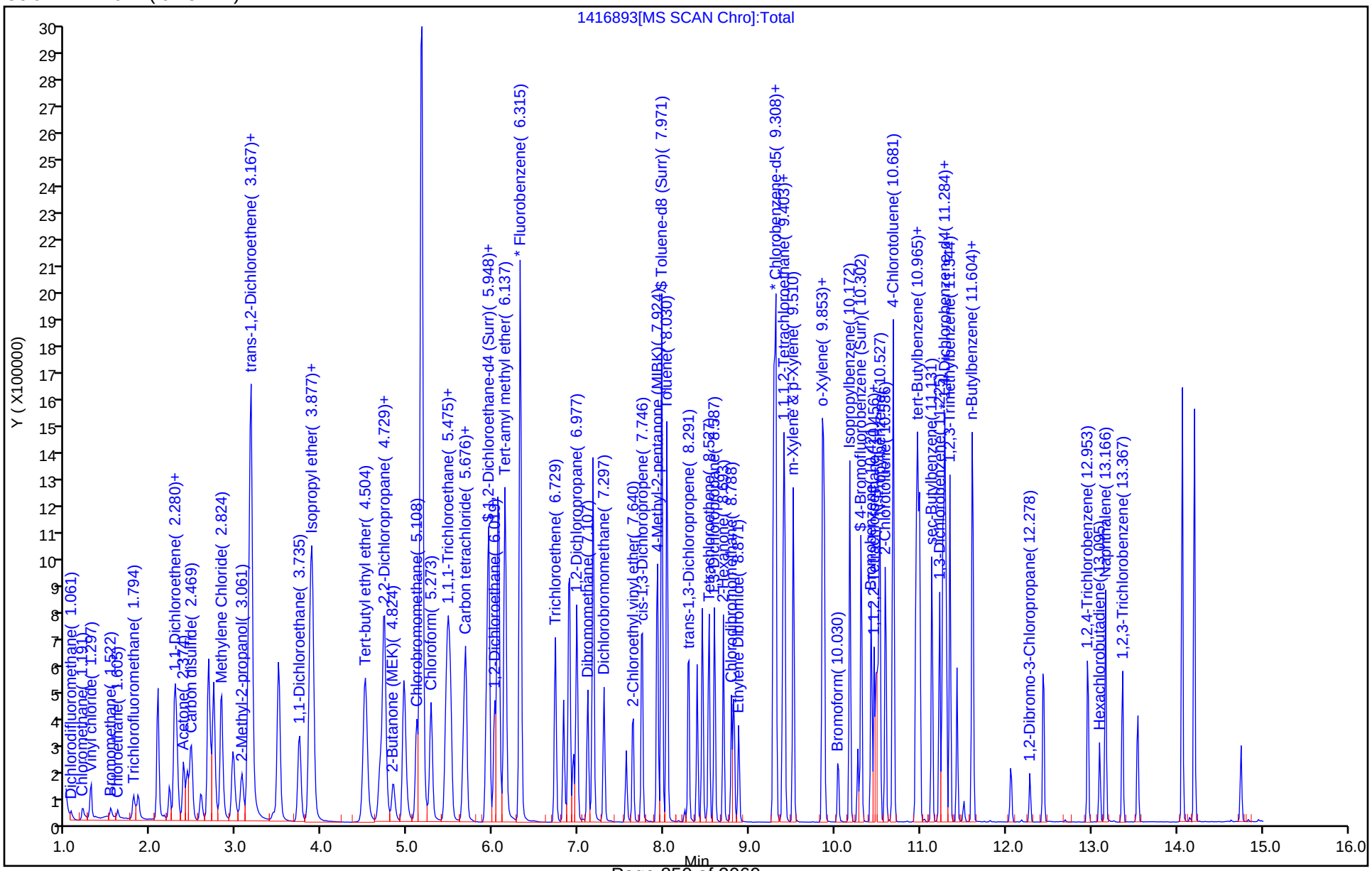
Report Date: 20-Nov-2018 09:44:46 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416893.D

Injection Date:	19-Nov-2018 19:09:30	Instrument ID:	A3UX14	Operator ID:	002808
Lims ID:	240-104089-B-4-C MSD			Worklist Smp#:	29
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8260_14	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416893.D
Lims ID: 240-104089-B-4-C MSD
Client ID:
Sample Type: MSD
Inject. Date: 19-Nov-2018 19:09:30 ALS Bottle#: 28 Worklist Smp#: 29
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-104089-b-4-c msd
Misc. Info.: 240-0082085-029
Operator ID: 002808 Instrument ID: A3UX14

Method: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\8260_14.m
Limit Group: MSV 8260C ICAL
Last Update: 20-Nov-2018 09:44:04 Calib Date: 19-Nov-2018 13:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX14\20181119-82085.b\1416877.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0315

First Level Reviewer: macenczaks Date: 20-Nov-2018 09:24:41

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	41.0	81.99
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	38.7	77.35
$ 6 Toluene-d8 (Surr)	50.0	48.0	95.96
$ 7 4-Bromofluorobenzene (Surr)	50.0	46.9	93.73

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: 240-104014-H-1 MSD

Matrix: Water | Lab File ID: U1903848.d

Analysis Method: 8260C | Date Collected: 11/06/2018 11:40

Sample wt/vol: 5(mL) | Date Analyzed: 11/15/2018 22:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 355689 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-06-2	1,2-Dichloroethane	18.2		1.0	0.21
78-93-3	2-Butanone (MEK)	43.2		10	1.2
71-43-2	Benzene	20.2		1.0	0.13
75-15-0	Carbon disulfide	17.6		1.0	0.28
108-90-7	Chlorobenzene	19.6		1.0	0.14
67-66-3	Chloroform	19.6		1.0	0.13
100-41-4	Ethylbenzene	19.9		1.0	0.11
179601-23-1	m-Xylene & p-Xylene	20.2		2.0	0.080
95-47-6	o-Xylene	20.5		1.0	0.090
100-42-5	Styrene	20.2		1.0	0.10
108-88-3	Toluene	19.7		1.0	0.14
1330-20-7	Xylenes, Total	40.7		2.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	100		70-123
1868-53-7	Dibromofluoromethane (Surr)	100		75-128
460-00-4	4-Bromofluorobenzene (Surr)	101		59-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-121

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903848.d
Lims ID: 240-104014-H-1 MSD
Client ID: M-15
Sample Type: MSD
Inject. Date: 15-Nov-2018 22:26:20 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 010
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 16-Nov-2018 13:59:42 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0324

First Level Reviewer: laveyt Date: 16-Nov-2018 14:00:32

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.653	5.653	0.000	97	799470	20.0	20.0	
*	2 Chlorobenzene-d5	117	8.499	8.499	0.000	82	659619	20.0	20.0	
*	3 1,4-Dichlorobenzene-d4	152	10.883	10.883	0.000	81	361097	20.0	20.0	
$	4 Dibromofluoromethane (Surr	111	5.049	5.049	-0.001	59	215776	20.0	20.1	
$	5 1,2-Dichloroethane-d4 (Sur	65	5.357	5.357	0.000	99	244674	20.0	19.8	
$	6 Toluene-d8 (Surr)	98	7.100	7.100	0.000	81	794971	20.0	20.1	
$	7 4-Bromofluorobenzene (Surr	95	9.673	9.673	0.000	90	301582	20.0	20.3	
	24 Carbon disulfide	76	3.282	3.282	0.000	88	529005	20.0	17.6	
	41 2-Butanone (MEK)	72	4.633	4.634	-0.001	97	81546	40.0	43.2	
	47 Chloroform	83	4.906	4.906	0.000	83	346678	20.0	19.6	
	53 Benzene	78	5.416	5.416	0.000	93	768286	20.0	20.2	
	54 1,2-Dichloroethane	62	5.416	5.416	0.000	53	262437	20.0	18.2	
	70 Toluene	91	7.171	7.171	0.000	95	877865	20.0	19.7	
	82 Chlorobenzene	112	8.523	8.523	0.000	94	598657	20.0	19.6	
	84 Ethylbenzene	106	8.630	8.630	0.000	98	316869	20.0	19.9	
	85 m-Xylene & p-Xylene	106	8.748	8.749	-0.001	99	393233	20.0	20.2	
	86 o-Xylene	106	9.152	9.152	0.000	87	377761	20.0	20.5	
	87 Styrene	104	9.163	9.164	-0.001	94	637768	20.0	20.2	
S	126 Xylenes, Total	106				0		40.0	40.7	

Reagents:

vmfasgw_00282	Amount Added: 16.00	Units: uL	
vmfasaw_00256	Amount Added: 16.00	Units: uL	
vmfaspw_00275	Amount Added: 16.00	Units: uL	
vm50ss_stk_00078	Amount Added: 2.00	Units: uL	Run Reagent
vmDist_H2o_00133	Amount Added: 0.00	Units:	Run Reagent
vm50is_stk_A_00002	Amount Added: 2.00	Units: uL	Run Reagent

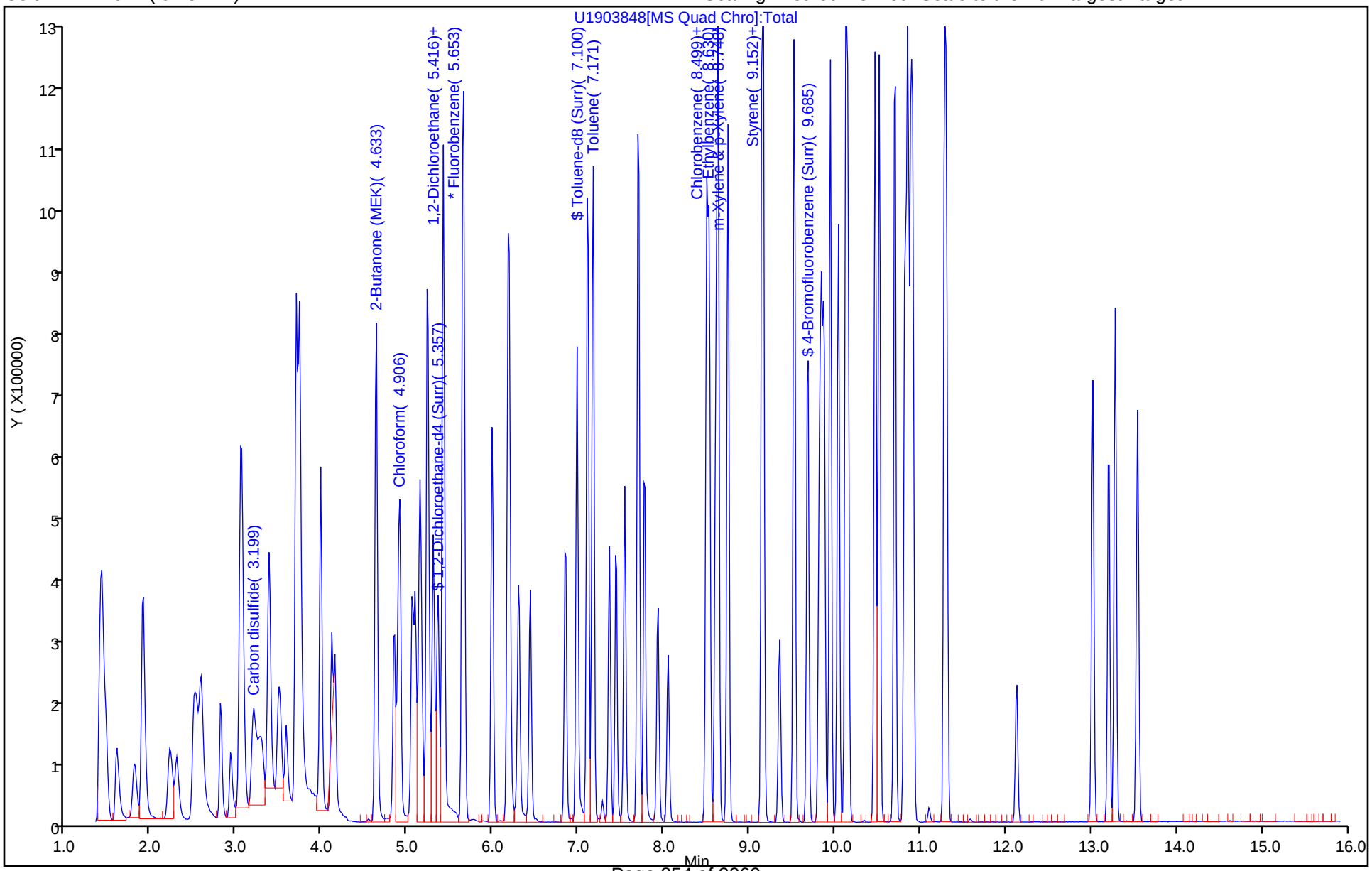
Report Date: 16-Nov-2018 14:00:33 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903848.d

Injection Date:	15-Nov-2018 22:26:20	Instrument ID:	A3UX19	Operator ID:	001904
Lims ID:	240-104014-H-1 MSD			Worklist Smp#:	10
Client ID:	M-15				
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	8260_19	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\U1903848.d
Lims ID: 240-104014-H-1 MSD
Client ID: M-15
Sample Type: MSD
Inject. Date: 15-Nov-2018 22:26:20 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 010
Operator ID: 001904 Instrument ID: A3UX19

Method: \\ChromNA\Canton\ChromData\A3UX19\20181115-81993.b\8260_19.m
Limit Group: MSV 8260C ICAL
Last Update: 16-Nov-2018 13:59:42 Calib Date: 10-Oct-2018 20:18:55
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX19\20181010-80724.b\U1902694.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0324

First Level Reviewer: laveyt Date: 16-Nov-2018 14:00:32

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	20.0	20.1	100.26
$ 5 1,2-Dichloroethane-d4 (Surr)	20.0	19.8	98.98
$ 6 Toluene-d8 (Surr)	20.0	20.1	100.49
$ 7 4-Bromofluorobenzene (Surr)	20.0	20.3	101.31

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A3UX19 Start Date: 07/24/2018 17:22

Analysis Batch Number: 337766 End Date: 07/24/2018 21:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-337766/1		07/24/2018 17:22	1	bfb036.d	DB-624 0.18(mm)
STD8260 240-337766/2 IC		07/24/2018 17:50	1	U1900783.d	DB-624 0.18(mm)
STD8260 240-337766/3 IC		07/24/2018 18:13	1	U1900784.d	DB-624 0.18(mm)
STD8260 240-337766/9 IC		07/24/2018 18:35	1	U1900790.d	DB-624 0.18(mm)
ICIS 240-337766/10		07/24/2018 18:57	1	U1900791.d	DB-624 0.18(mm)
STD8260 240-337766/11 IC		07/24/2018 19:20	1	U1900792.d	DB-624 0.18(mm)
STD8260 240-337766/12 IC		07/24/2018 19:42	1	U1900793.d	DB-624 0.18(mm)
STD8260 240-337766/13 IC		07/24/2018 20:04	1	U1900794.d	DB-624 0.18(mm)
ICV 240-337766/14		07/24/2018 20:26	1		DB-624 0.18(mm)
MRL 240-337766/15 MDLV		07/24/2018 20:48	1		DB-624 0.18(mm)
MDLV 240-337766/16		07/24/2018 21:10	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A3UX19 Start Date: 07/25/2018 11:28

Analysis Batch Number: 337917 End Date: 07/25/2018 19:42

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-337917/1		07/25/2018 11:28	1	bfb037.d	DB-624 0.18(mm)
CCVIS 240-337917/3		07/25/2018 12:17	1		DB-624 0.18(mm)
ZZZZZ		07/25/2018 12:39	1		DB-624 0.18(mm)
STDA9 240-337917/8 IC		07/25/2018 13:24	1	U1900802.d	DB-624 0.18(mm)
STDA9 240-337917/9 IC		07/25/2018 13:46	1	U1900803.d	DB-624 0.18(mm)
STDA9 240-337917/10 IC		07/25/2018 14:08	1	U1900804.d	DB-624 0.18(mm)
STDA9 240-337917/11 IC		07/25/2018 14:30	1	U1900805.d	DB-624 0.18(mm)
STDA9 240-337917/12 IC		07/25/2018 14:52	1	U1900806.d	DB-624 0.18(mm)
STDA9 240-337917/13 IC		07/25/2018 15:15	1	U1900807.d	DB-624 0.18(mm)
ICV 240-337917/14		07/25/2018 15:37	1	U1900808.d	DB-624 0.18(mm)
MRL 240-337917/15 MDLV		07/25/2018 15:59	1		DB-624 0.18(mm)
ZZZZZ		07/25/2018 16:21	1		DB-624 0.18(mm)
ZZZZZ		07/25/2018 16:44	1		DB-624 0.18(mm)
ZZZZZ		07/25/2018 17:06	1		DB-624 0.18(mm)
ZZZZZ		07/25/2018 17:29	1		DB-624 0.18(mm)
ZZZZZ		07/25/2018 17:51	1		DB-624 0.18(mm)
ZZZZZ		07/25/2018 18:13	1		DB-624 0.18(mm)
ZZZZZ		07/25/2018 18:35	1		DB-624 0.18(mm)
ZZZZZ		07/25/2018 18:57	1		DB-624 0.18(mm)
ZZZZZ		07/25/2018 19:20	1		DB-624 0.18(mm)
ZZZZZ		07/25/2018 19:42	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A3UX19 Start Date: 08/27/2018 16:23

Analysis Batch Number: 342719 End Date: 08/27/2018 20:52

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-342719/1		08/27/2018 16:23	1	bfb058.d	DB-624 0.18(mm)
CCV 240-342719/2		08/27/2018 16:46	1		DB-624 0.18(mm)
STD8260 240-342719/7 IC		08/27/2018 17:09	1	U1901323.d	DB-624 0.18(mm)
STD8260 240-342719/8 IC		08/27/2018 17:31	1	U1901324.d	DB-624 0.18(mm)
STD8260 240-342719/9 IC		08/27/2018 17:53	1	U1901325.d	DB-624 0.18(mm)
ICIS 240-342719/10		08/27/2018 18:16	1	U1901326.d	DB-624 0.18(mm)
STD8260 240-342719/11 IC		08/27/2018 18:38	1	U1901327.d	DB-624 0.18(mm)
STD8260 240-342719/12 IC		08/27/2018 19:01	1	U1901328.d	DB-624 0.18(mm)
STD8260 240-342719/13 IC		08/27/2018 19:23	1	U1901329.d	DB-624 0.18(mm)
ICV 240-342719/14		08/27/2018 19:45	1	U1901330.d	DB-624 0.18(mm)
MRL 240-342719/15 MDLV		08/27/2018 20:07	1		DB-624 0.18(mm)
MDLV 240-342719/16		08/27/2018 20:30	1		DB-624 0.18(mm)
ZZZZZ		08/27/2018 20:52	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A3UX19 Start Date: 11/15/2018 19:02

Analysis Batch Number: 355689 End Date: 11/16/2018 05:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-355689/1		11/15/2018 19:02	1	bfb133.d	DB-624 0.18(mm)
CCV 240-355689/2		11/15/2018 19:27	1	U1903840.d	DB-624 0.18(mm)
CCVIS 240-355689/3		11/15/2018 19:49	1	U1903841.d	DB-624 0.18(mm)
LCS 240-355689/4		11/15/2018 20:11	1	U1903842.d	DB-624 0.18(mm)
MRL 240-355689/5 MDLV		11/15/2018 20:34	1		DB-624 0.18(mm)
MRL 240-355689/6 MDLV		11/15/2018 20:56	1		DB-624 0.18(mm)
MB 240-355689/7		11/15/2018 21:19	1	U1903845.d	DB-624 0.18(mm)
ZZZZZ		11/15/2018 21:41	1		DB-624 0.18(mm)
240-104014-E-1 MS		11/15/2018 22:03	1	U1903847.d	DB-624 0.18(mm)
240-104014-H-1 MSD		11/15/2018 22:26	1	U1903848.d	DB-624 0.18(mm)
ZZZZZ		11/15/2018 23:11	1		DB-624 0.18(mm)
ZZZZZ		11/15/2018 23:33	1		DB-624 0.18(mm)
ZZZZZ		11/15/2018 23:55	1		DB-624 0.18(mm)
ZZZZZ		11/16/2018 00:18	1		DB-624 0.18(mm)
ZZZZZ		11/16/2018 00:40	1		DB-624 0.18(mm)
ZZZZZ		11/16/2018 01:02	1		DB-624 0.18(mm)
ZZZZZ		11/16/2018 01:24	1		DB-624 0.18(mm)
ZZZZZ		11/16/2018 01:46	1		DB-624 0.18(mm)
ZZZZZ		11/16/2018 02:09	1		DB-624 0.18(mm)
ZZZZZ		11/16/2018 02:31	1		DB-624 0.18(mm)
ZZZZZ		11/16/2018 02:53	1		DB-624 0.18(mm)
ZZZZZ		11/16/2018 03:15	1		DB-624 0.18(mm)
ZZZZZ		11/16/2018 03:37	1		DB-624 0.18(mm)
ZZZZZ		11/16/2018 03:59	1		DB-624 0.18(mm)
240-104089-1		11/16/2018 04:22	1	U1903864.d	DB-624 0.18(mm)
240-104089-3		11/16/2018 04:44	2	U1903865.d	DB-624 0.18(mm)
240-104089-5		11/16/2018 05:06	1	U1903866.d	DB-624 0.18(mm)
ZZZZZ		11/16/2018 05:29	1		DB-624 0.18(mm)
ZZZZZ		11/16/2018 05:51	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A3UX14 Start Date: 11/16/2018 16:17

Analysis Batch Number: 355881 End Date: 11/16/2018 21:18

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-355881/1		11/16/2018 16:17	1	BFB14841.D	DB-624 0.18(mm)
IC 240-355881/3		11/16/2018 16:59	1	1416820.D	DB-624 0.18(mm)
IC 240-355881/4		11/16/2018 17:20	1	1416821.D	DB-624 0.18(mm)
IC 240-355881/5		11/16/2018 17:42	1	1416822.D	DB-624 0.18(mm)
ICIS 240-355881/6		11/16/2018 18:03	1	1416823.D	DB-624 0.18(mm)
IC 240-355881/7		11/16/2018 18:25	1	1416824.D	DB-624 0.18(mm)
IC 240-355881/8		11/16/2018 18:46	1	1416825.D	DB-624 0.18(mm)
IC 240-355881/9		11/16/2018 19:08	1	1416826.D	DB-624 0.18(mm)
IC 240-355881/10		11/16/2018 19:29	1	1416827.D	DB-624 0.18(mm)
IC 240-355881/11		11/16/2018 19:51	1	1416828.D	DB-624 0.18(mm)
ICV 240-355881/12		11/16/2018 20:13	1	1416829.D	DB-624 0.18(mm)
ZZZZZ		11/16/2018 20:35	1		DB-624 0.18(mm)
ZZZZZ		11/16/2018 20:56	1		DB-624 0.18(mm)
ZZZZZ		11/16/2018 21:18	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A3UX14 Start Date: 11/19/2018 09:07

Analysis Batch Number: 356055 End Date: 11/19/2018 19:09

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-356055/1		11/19/2018 09:07	1	BFB14843.D	DB-624 0.18(mm)
CCVIS 240-356055/3		11/19/2018 09:49	1	1416867.D	DB-624 0.18(mm)
LCS 240-356055/4		11/19/2018 10:11	1	1416868.D	DB-624 0.18(mm)
IC 240-356055/5		11/19/2018 10:32	1	1416869.D	DB-624 0.18(mm)
IC 240-356055/6		11/19/2018 10:54	1	1416870.D	DB-624 0.18(mm)
IC 240-356055/7		11/19/2018 11:15	1	1416871.D	DB-624 0.18(mm)
IC 240-356055/8		11/19/2018 11:37	1	1416872.D	DB-624 0.18(mm)
IC 240-356055/9		11/19/2018 11:58	1	1416873.D	DB-624 0.18(mm)
IC 240-356055/10		11/19/2018 12:20	1	1416874.D	DB-624 0.18(mm)
IC 240-356055/11		11/19/2018 12:41	1	1416875.D	DB-624 0.18(mm)
IC 240-356055/12		11/19/2018 13:03	1	1416876.D	DB-624 0.18(mm)
IC 240-356055/13		11/19/2018 13:24	1	1416877.D	DB-624 0.18(mm)
ICV 240-356055/14		11/19/2018 13:46	1	1416878.D	DB-624 0.18(mm)
LCS 240-356055/15		11/19/2018 14:08	1	1416879.D	DB-624 0.18(mm)
MB 240-356055/16		11/19/2018 14:29	1	1416880.D	DB-624 0.18(mm)
ZZZZZ		11/19/2018 14:51	1		DB-624 0.18(mm)
ZZZZZ		11/19/2018 15:12	1		DB-624 0.18(mm)
ZZZZZ		11/19/2018 17:21	1		DB-624 0.18(mm)
240-104089-2		11/19/2018 17:43	1	1416889.D	DB-624 0.18(mm)
240-104089-4		11/19/2018 18:04	1	1416890.D	DB-624 0.18(mm)
240-104089-4 MS		11/19/2018 18:47	1	1416892.D	DB-624 0.18(mm)
240-104089-4 MSD		11/19/2018 19:09	1	1416893.D	DB-624 0.18(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 337917 Batch Start Date: 07/25/18 11:28 Batch Analyst: Lavey, Tim

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	vm50is_stk_A 00001	vm50ss_stk 00077	vmbfb 00020	VMFASA9W 00194
BFB 240-337917/1		8260C		5 mL	5 mL			1 uL	
STDA9 240-337917/8 IC		8260C		5 mL	5 mL	2 uL			
STDA9 240-337917/9 IC		8260C		5 mL	5 mL	2 uL			
STDA9 240-337917/10 IC		8260C		5 mL	5 mL	2 uL			
STDA9 240-337917/11 IC		8260C		5 mL	5 mL	2 uL			
STDA9 240-337917/12 IC		8260C		5 mL	5 mL	2 uL			
STDA9 240-337917/13 IC		8260C		5 mL	5 mL	2 uL			
ICV 240-337917/14		8260C		5 mL	5 mL	2 uL	2 uL		16 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmra9w 00259					
BFB 240-337917/1		8260C							
STDA9 240-337917/8 IC		8260C		64 uL					
STDA9 240-337917/9 IC		8260C		32 uL					
STDA9 240-337917/10 IC		8260C		16 uL					
STDA9 240-337917/11 IC		8260C		8 uL					
STDA9 240-337917/12 IC		8260C		0.8 uL					
STDA9 240-337917/13 IC		8260C		0.4 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 337917 Batch Start Date: 07/25/18 11:28 Batch Analyst: Lavey, Tim

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmra9w 00259					
ICV 240-337917/14		8260C							

Batch Notes	
pH Indicator ID	HC746949

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 342719 Batch Start Date: 08/27/18 16:23 Batch Analyst: Lavey, Tim

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	vm50is_stk_A 00001	vm50ss 00333	vm50ss_stk 00077	vmarolistdw 00260
BFB 240-342719/1		8260C		5 mL	5 mL				
STD8260 240-342719/7 IC		8260C		5 mL	5 mL	2 uL	64 uL		64 uL
STD8260 240-342719/8 IC		8260C		5 mL	5 mL	2 uL	48 uL		48 uL
STD8260 240-342719/9 IC		8260C		5 mL	5 mL	2 uL	32 uL		32 uL
ICIS 240-342719/10		8260C		5 mL	5 mL	2 uL	16 uL		16 uL
STD8260 240-342719/11 IC		8260C		5 mL	5 mL	2 uL	8 uL		8 uL
STD8260 240-342719/12 IC		8260C		5 mL	5 mL	2 uL	0.8 uL		0.8 uL
STD8260 240-342719/13 IC		8260C		5 mL	5 mL	2 uL	0.4 uL		0.4 uL
ICV 240-342719/14		8260C		5 mL	5 mL	2 uL		2 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00020	vmfasaw 00246	vmfasgw 00271	vmfaspw 00264	vmrgas 00259	vmrprimw 00297
BFB 240-342719/1		8260C		1 uL					
STD8260 240-342719/7 IC		8260C						64 uL	64 uL
STD8260 240-342719/8 IC		8260C						48 uL	48 uL
STD8260 240-342719/9 IC		8260C						32 uL	32 uL
ICIS 240-342719/10		8260C						16 uL	16 uL
STD8260 240-342719/11 IC		8260C						8 uL	8 uL
STD8260 240-342719/12 IC		8260C						0.8 uL	0.8 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 342719 Batch Start Date: 08/27/18 16:23 Batch Analyst: Lavey, Tim

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00020	vmfasaw 00246	vmfasgw 00271	vmfaspw 00264	vmrgas 00259	vmrprimw 00297
STD8260 240-342719/13 IC		8260C						0.4 uL	0.4 uL
ICV 240-342719/14		8260C			16 uL	16 uL	16 uL		

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 355689 Batch Start Date: 11/15/18 19:02 Batch Analyst: Lavey, Tim

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	vm50is_stk_A 00002	vm50ss_stk 00078	vmarolistdw 00272
BFB 240-355689/1		8260C		5 mL	5 mL				
CCV 240-355689/2		8260C		5 mL	5 mL		2 uL		
CCVIS 240-355689/3		8260C		5 mL	5 mL		2 uL	2 uL	16 uL
LCS 240-355689/4		8260C		5 mL	5 mL		2 uL	2 uL	
MB 240-355689/7		8260C		5 mL	5 mL		2 uL	2 uL	
240-104014-E-1 MS	M-15	8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	
240-104014-H-1 MSD	M-15	8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	
240-104089-B-1	TB-110718	8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	
240-104089-B-3	WC-FTCB-DEVW	8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	
240-104089-B-5	WC-FTCB-DECON	8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00020	vmfasaw 00256	vmfasgw 00282	vmfaspw 00275	vmra9w 00273	vmrgas 00269
BFB 240-355689/1		8260C		1 uL					
CCV 240-355689/2		8260C						16 uL	
CCVIS 240-355689/3		8260C							16 uL
LCS 240-355689/4		8260C			16 uL	16 uL	16 uL		
MB 240-355689/7		8260C							
240-104014-E-1 MS	M-15	8260C	T		16 uL	16 uL	16 uL		
240-104014-H-1 MSD	M-15	8260C	T		16 uL	16 uL	16 uL		
240-104089-B-1	TB-110718	8260C	T						
240-104089-B-3	WC-FTCB-DEVW	8260C	T						
240-104089-B-5	WC-FTCB-DECON	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmrprimw 00308					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 355689 Batch Start Date: 11/15/18 19:02 Batch Analyst: Lavey, Tim

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmrprimw 00308					
BFB 240-355689/1		8260C							
CCV 240-355689/2		8260C							
CCVIS 240-355689/3		8260C		16 uL					
LCS 240-355689/4		8260C							
MB 240-355689/7		8260C							
240-104014-E-1 MS	M-15	8260C	T						
240-104014-H-1 MSD	M-15	8260C	T						
240-104089-B-1	TB-110718	8260C	T						
240-104089-B-3	WC-FTCB-DEVW	8260C	T						
240-104089-B-5	WC-FTCB-DECON	8260C	T						

Batch Notes	
pH Indicator ID	HC746949

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 356055 Batch Start Date: 11/19/18 09:07 Batch Analyst: Macenczak, Steven

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM250SS 00050	VM568718 00013	VMAROLISTDW 00273	vmbfb 00020
BFB 240-356055/1		8260C		5 mL	5 mL				1 uL
CCVIS 240-356055/3		8260C		5 mL	5 mL	1 uL	1 uL	5 uL	
LCS 240-356055/4		8260C		5 g	5 mL	1 uL	1 uL		
IC 240-356055/5		8260C		5 mL	5 mL		1 uL		
IC 240-356055/6		8260C		5 mL	5 mL		1 uL		
IC 240-356055/7		8260C		5 mL	5 mL		1 uL		
IC 240-356055/8		8260C		5 mL	5 mL		1 uL		
IC 240-356055/9		8260C		5 mL	5 mL		1 uL		
IC 240-356055/10		8260C		5 mL	5 mL		1 uL		
IC 240-356055/11		8260C		5 mL	5 mL		1 uL		
IC 240-356055/12		8260C		5 mL	5 mL		1 uL		
IC 240-356055/13		8260C		5 mL	5 mL		1 uL		
ICV 240-356055/14		8260C		5 mL	5 mL	1 uL	1 uL		
LCS 240-356055/15		8260C		5 g	5 mL	1 uL	1 uL		
MB 240-356055/16		8260C		5 g	5 mL	1 uL	1 uL		
240-104089-B-2-A	WC-SEMW10D-SOIL	8260C	T	5 g	5 mL	1 uL	1 uL		
240-104089-B-4-A	WC-FTCB-SOIL	8260C	T	5 g	5 mL	1 uL	1 uL		
240-104089-B-4-B MS	WC-FTCB-SOIL	8260C	T	5 g	5 mL	1 uL	1 uL		
240-104089-B-4-C MSD	WC-FTCB-SOIL	8260C	T	5 g	5 mL	1 uL	1 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00209	VMFASAW 00256	VMFASGW 00283	VMFASPW 00276	VMRA9W 00273	VMRGAS 00270
BFB 240-356055/1		8260C							
CCVIS 240-356055/3		8260C							1 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 356055 Batch Start Date: 11/19/18 09:07 Batch Analyst: Macenczak, Steven

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00209	VMFASAW 00256	VMFASGW 00283	VMFASPW 00276	VMRA9W 00273	VMRGAS 00270
LCS 240-356055/4		8260C			5 uL	1 uL	5 uL		
IC 240-356055/5		8260C						25 uL	
IC 240-356055/6		8260C						20 uL	
IC 240-356055/7		8260C						10 uL	
IC 240-356055/8		8260C						5 uL	
IC 240-356055/9		8260C						2 uL	
IC 240-356055/10		8260C						1 uL	
IC 240-356055/11		8260C						0.5 uL	
IC 240-356055/12		8260C						0.2 uL	
IC 240-356055/13		8260C						0.1 uL	
ICV 240-356055/14		8260C		5 uL					
LCS 240-356055/15		8260C		5 uL					
MB 240-356055/16		8260C							
240-104089-B-2-A	WC-SEMW10D-SOIL	8260C	T						
240-104089-B-4-A	WC-FTCB-SOIL	8260C	T						
240-104089-B-4-B MS	WC-FTCB-SOIL	8260C	T	5 uL	5 uL	1 uL	5 uL		
240-104089-B-4-C MSD	WC-FTCB-SOIL	8260C	T	5 uL	5 uL	1 uL	5 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00309					
BFB 240-356055/1		8260C							
CCVIS 240-356055/3		8260C		5 uL					
LCS 240-356055/4		8260C							
IC 240-356055/5		8260C							
IC 240-356055/6		8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 356055 Batch Start Date: 11/19/18 09:07 Batch Analyst: Macenczak, Steven

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00309					
IC 240-356055/7		8260C							
IC 240-356055/8		8260C							
IC 240-356055/9		8260C							
IC 240-356055/10		8260C							
IC 240-356055/11		8260C							
IC 240-356055/12		8260C							
IC 240-356055/13		8260C							
ICV 240-356055/14		8260C							
LCS 240-356055/15		8260C							
MB 240-356055/16		8260C							
240-104089-B-2-A	WC-SEMW10D-SOIL	8260C	T						
240-104089-B-4-A	WC-FTCB-SOIL	8260C	T						
240-104089-B-4-B MS	WC-FTCB-SOIL	8260C	T						
240-104089-B-4-C MSD	WC-FTCB-SOIL	8260C	T						

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 356153 Batch Start Date: 11/19/18 13:10 Batch Analyst: Macenczak, Steven

Batch Method: 5030C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount				
240-104089-B-2	WC-SEMW10D-SOIL	5030C, 8260C	T	5.0850 g	5 mL				
240-104089-B-4	WC-FTCB-SOIL	5030C, 8260C	T	5.3471 g	5 mL				
240-104089-B-4 MS	WC-FTCB-SOIL	5030C, 8260C	T	5.0463 g	5 mL				
240-104089-B-4 MSD	WC-FTCB-SOIL	5030C, 8260C	T	5.0322 g	5 mL				

Batch Notes	
Balance ID	b051
Blank Matrix ID	178797
Vial Lot Number	3879547

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 8082A

Polychlorinated Biphenyls (PCBs) (GC) by Method 8082A

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): CLP-2 (0.53 ID: 0.53(mm)

Client Sample ID	Lab Sample ID	TCX1 #	DCBP1 #
WC-SEMW10D-SOIL	240-104089-2	81	81
WC-FTCB-SOIL	240-104089-4	81	85
	MB 240-354879/23-A	82	90
	LCS 240-354879/24-A	73	78
	240-104227-B-2-B MS	79	78
	240-104227-B-2-C MSD	67	75

	QC LIMITS
TCX = Tetrachloro-m-xylene	14-128
DCBP = DCB Decachlorobiphenyl	10-132

Column to be used to flag recovery values

FORM II 8082A

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Water Level: Low

GC Column (2): CLP-1 (0.53 ID: 0.53(mm)

Client Sample ID	Lab Sample ID	TCX2 #	DCBP2 #
WC-FTCB-DEVW	240-104089-3	71	46
WC-FTCB-DECON	240-104089-5	62	46
	MB 240-354524/16-A	105	82
	LCS 240-354524/17-A	58	45

	QC LIMITS
TCX = Tetrachloro-m-xylene	22-120
DCBP = DCB Decachlorobiphenyl	10-120

Column to be used to flag recovery values

FORM II 8082A

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P4111310.D

Lab ID: LCS 240-354524/17-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Aroclor-1016	2.50	1.89	75	28-120	
Aroclor-1260	2.50	2.04	81	30-120	

Column to be used to flag recovery and RPD values

FORM III 8082A

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: P12111352.D

Lab ID: LCS 240-354879/24-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Aroclor-1016	1000	678	68	47-120	
Aroclor-1260	1000	758	76	46-120	

Column to be used to flag recovery and RPD values

FORM III 8082A

FORM III
PCBS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: P12111349.D

Lab ID: 240-104227-B-2-B MS Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
Aroclor-1016	1110	25 U	805	72	31-120	
Aroclor-1260	1110	25 U	852	76	21-122	

Column to be used to flag recovery and RPD values

FORM III 8082A

FORM III
PCBS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: P12111350.D

Lab ID: 240-104227-B-2-C MSD Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Aroclor-1016	1140	742	65	8	30	31-120	
Aroclor-1260	1140	829	73	3	30	21-122	

Column to be used to flag recovery and RPD values

FORM III 8082A

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: MB 240-354524/16-A

Matrix: Water Date Extracted: 11/09/2018 08:13

Lab File ID:(1) P4111309.D Lab File ID:(2) P4111309.D

Date Analyzed:(1) 11/13/2018 07:53 Date Analyzed:(2) 11/13/2018 07:53

Instrument ID:(1) A2HP4 Instrument ID:(2) A2HP4

GC Column:(1) CLP-2 (0.53m ID: 0.53(mm) GC Column:(2) CLP-1 (0.53m ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-354524/17-A	11/13/2018 08:14	11/13/2018 08:14
WC-FTCB-DEVW	240-104089-3	11/13/2018 12:56	11/13/2018 12:56
WC-FTCB-DECON	240-104089-5	11/13/2018 13:19	11/13/2018 13:19

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: MB 240-354879/23-A

Matrix: Solid Date Extracted: 11/12/2018 08:27

Lab File ID:(1) P12111351.D Lab File ID:(2) P12111351.D

Date Analyzed:(1) 11/13/2018 22:13 Date Analyzed:(2) 11/13/2018 22:13

Instrument ID:(1) A2HP12 Instrument ID:(2) A2HP12

GC Column:(1) CLP-2 (0.53m ID: 0.53(mm) GC Column:(2) CLP-1 (0.53m ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	240-104227-B-2-B MS	11/13/2018 21:32	11/13/2018 21:32
	240-104227-B-2-C MSD	11/13/2018 21:53	11/13/2018 21:53
	LCS 240-354879/24-A	11/13/2018 22:34	11/13/2018 22:34
WC-SEMW10D-SOIL	240-104089-2	11/14/2018 01:39	11/14/2018 01:39
WC-FTCB-SOIL	240-104089-4	11/14/2018 01:59	11/14/2018 01:59

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Sample No.: STD05 240-350710/31 Date Analyzed: 10/19/2018 00:30

Instrument ID: A2HP12 GC Column: CLP-1 (0.53mm) ID: 0.53(mm)

Lab File ID (Standard): P12101831.D Heated Purge: (Y/N) N

Calibration ID: 47549

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		130862926	2.93				
UPPER LIMIT		261725852	3.43				
LOWER LIMIT		65431463	2.43				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-350710/35		114611351	2.93				
ICV 240-350710/36		122376078	2.93				
ICV 240-350710/37		122652464	2.93				
ICV 240-350710/40		120853713	2.93				
ICV 240-350710/41		117652604	2.93				
ICV 240-350710/42		118523757	2.94				
ICV 240-350710/43		118527198	2.94				
ICV 240-350710/44		120178694	2.94				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Sample No.: STD05 240-350710/31 Date Analyzed: 10/19/2018 00:30

Instrument ID: A2HP12 GC Column: CLP-2 (0.53mm) ID: 0.53(mm)

Lab File ID (Standard): P12101831.D Heated Purge: (Y/N) N

Calibration ID: 47550

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		101179890	3.58				
UPPER LIMIT		202359780	4.08				
LOWER LIMIT		50589945	3.08				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-350710/35		89575361	3.58				
ICV 240-350710/36		94886566	3.58				
ICV 240-350710/37		95330215	3.58				
ICV 240-350710/40		94426578	3.58				
ICV 240-350710/41		92156976	3.58				
ICV 240-350710/42		97447882	3.57				
ICV 240-350710/43		93101097	3.57				
ICV 240-350710/44		95510711	3.57				
CCV 240-355209/3 CCVIS		113414801	3.31				
CCV 240-355209/16		103094723	3.31				
CCVIS 240-355209/17		107418355	3.30				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Sample No.: CCV 240-355209/3 Date Analyzed: 11/13/2018 18:27

Instrument ID: A2HP12 GC Column: CLP-2 (0.53mm) ID: 0.53(mm)

Lab File ID (Standard): P12111340.D Heated Purge: (Y/N) N

Calibration ID: 47550

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		113414801	3.31				
UPPER LIMIT		226829602	3.81				
LOWER LIMIT		56707401	2.81				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-355209/4		113726490	3.31				
CCV 240-355209/5		111022023	3.31				
CCV 240-355209/6		114162902	3.32				
CCV 240-355209/7		112204161	3.31				
240-104227-B-2-B MS		95895637	3.31				
240-104227-B-2-C MSD		111379634	3.31				
MB 240-354879/23-A		108673852	3.31				
LCS 240-354879/24-A		106469718	3.32				
CCV 240-355209/16		103094723	3.31				
240-104089-2	WC-SEMW10D-SOIL	104556087	3.31				
240-104089-4	WC-FTCB-SOIL	111074535	3.31				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Sample No.: CCVIS 240-355209/17 Date Analyzed: 11/13/2018 23:15

Instrument ID: A2HP12 GC Column: CLP-2 (0.53mm) ID: 0.53(mm)

Lab File ID (Standard): P12111354.D Heated Purge: (Y/N) N

Calibration ID: 47550

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		107418355	3.30				
UPPER LIMIT		214836710	3.80				
LOWER LIMIT		53709178	2.80				
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-104089-2	WC-SEMW10D-SOIL	104556087	3.31				
240-104089-4	WC-FTCB-SOIL	111074535	3.31				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Sample No.: STD05 240-353863/31 Date Analyzed: 11/06/2018 23:14

Instrument ID: A2HP4 GC Column: CLP-1 (0.53mm) ID: 0.53(mm)

Lab File ID (Standard): P4110631.D Heated Purge: (Y/N) N

Calibration ID: 47805

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		48702694	2.06				
UPPER LIMIT		97405388	2.56				
LOWER LIMIT		24351347	1.56				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-353863/34		46352211	2.06				
ICV 240-353863/35		50695253	2.06				
ICV 240-353863/36		51758497	2.06				
ICV 240-353863/37		50451600	2.06				
ICV 240-353863/39		52921770	2.06				
ICV 240-353863/40		51010772	2.06				
ICV 240-353863/41		50272755	2.06				
ICV 240-353863/43		43441328	2.07				
CCV 240-355036/3 CCVIS		55378823	2.05				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Sample No.: STD05 240-353863/31 Date Analyzed: 11/06/2018 23:14

Instrument ID: A2HP4 GC Column: CLP-2 (0.53mm) ID: 0.53(mm)

Lab File ID (Standard): P4110631.D Heated Purge: (Y/N) N

Calibration ID: 47806

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		40377428	2.56				
UPPER LIMIT		80754856	3.06				
LOWER LIMIT		20188714	2.06				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-353863/34		38420696	2.56				
ICV 240-353863/35		42222927	2.55				
ICV 240-353863/36		43111540	2.55				
ICV 240-353863/37		41888916	2.55				
ICV 240-353863/39		43534523	2.55				
ICV 240-353863/40		42164009	2.55				
ICV 240-353863/41		41409507	2.55				
ICV 240-353863/43		35164896	2.56				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Sample No.: CCV 240-355036/3 Date Analyzed: 11/13/2018 05:48

Instrument ID: A2HP4 GC Column: CLP-1 (0.53mm) ID: 0.53(mm)

Lab File ID (Standard): P4111303.D Heated Purge: (Y/N) N

Calibration ID: 47805

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		55378823	2.05				
UPPER LIMIT		110757646	2.55				
LOWER LIMIT		27689412	1.55				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-355036/4		55900470	2.05				
CCV 240-355036/5		55304075	2.05				
CCV 240-355036/6		58089833	2.05				
CCV 240-355036/7		56213584	2.05				
MB 240-354524/16-A		54023776	2.05				
LCS 240-354524/17-A		64339466	2.05				
240-104089-3	WC-FTCB-DEVW	57654232	2.06				
240-104089-5	WC-FTCB-DECON	56809691	2.05				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-SOIL Lab Sample ID: 240-104089-4

Instrument ID (1): A2HP12 Instrument ID (2): A2HP12

Date Analyzed (1): 11/14/2018 01:59 Date Analyzed (2): 11/14/2018 01:59

GC Column (1): CLP-2 (0.53mm ID: 0.53(mm) GC Column (2): CLP-1 (0.53mm ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Aroclor-1260	1	1	8.96	8.94	8.98	78.9	95	2.2
		2	9.22	9.20	9.24	110		
		3	9.74	9.72	9.76	86.2		
		4	10.37	10.35	10.39	99.2		
		5	10.75	10.73	10.77	102		
	2	1	7.99	7.97	8.01	86.6	97	
		2	8.33	8.31	8.34	104		
		3	8.79	8.77	8.81	89.2		
		4	9.43	9.41	9.45	93.8		
		5	9.75	9.73	9.77	114		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 240-354524/17-A

Instrument ID (1): A2HP4 Instrument ID (2): A2HP4

Date Analyzed (1): 11/13/2018 08:14 Date Analyzed (2): 11/13/2018 08:14

GC Column (1): CLP-2 (0.53mm ID: 0.53(mm) GC Column (2): CLP-1 (0.53mm ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Aroclor-1016	1	1	5.44	5.42	5.46	1.94	1.95	3.3
		2	6.19	6.18	6.22	1.85		
		4	7.16	7.15	7.19	2.22		
		5	7.54	7.53	7.56	1.79		
	2	1	4.09	4.08	4.12	1.62	1.89	
		2	4.81	4.80	4.84	1.40		
		3	5.68	5.64	5.68	2.36		
		4	5.88	5.87	5.91	1.85		
		5	6.30	6.28	6.32	2.20		
Aroclor-1260	1	1	9.23	9.21	9.25	2.13	2.19	7.3
		2	9.43	9.41	9.45	2.18		
		3	9.75	9.73	9.77	2.11		
		4	10.30	10.28	10.32	2.34		
		5	10.60	10.58	10.62	2.19		
	2	1	8.23	8.21	8.25	1.93	2.04	
		2	8.53	8.52	8.55	1.99		
		3	8.81	8.79	8.83	2.07		
		4	9.45	9.43	9.47	2.09		
		5	9.70	9.68	9.72	2.10		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Client Sample ID: Lab Sample ID: 240-104227-B-2-B MS

Instrument ID (1): A2HP12 Instrument ID (2): A2HP12

Date Analyzed (1): 11/13/2018 21:32 Date Analyzed (2): 11/13/2018 21:32

GC Column (1): CLP-2 (0.53mm ID: 0.53(mm) GC Column (2): CLP-1 (0.53mm ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Aroclor-1016	1	1	5.47	5.45	5.49	781	805	4.8
		2	6.05	6.03	6.06	805		
		3	6.65	6.63	6.67	847		
		4	6.82	6.80	6.84	831		
		5	7.15	7.13	7.17	760		
	2	1	4.67	4.65	4.69	806	845	
		2	5.17	5.15	5.19	860		
		3	5.79	5.77	5.81	882		
		4	5.96	5.94	5.98	865		
		5	6.29	6.27	6.31	810		
Aroclor-1260	1	1	8.96	8.94	8.98	770	852	5.6
		2	9.22	9.20	9.24	850		
		3	9.74	9.72	9.76	868		
		4	10.37	10.35	10.39	891		
		5	10.75	10.73	10.77	882		
	2	1	7.99	7.97	8.01	880	902	
		2	8.32	8.31	8.34	906		
		3	8.79	8.77	8.81	891		
		4	9.43	9.41	9.45	928		
		5	9.75	9.73	9.77	903		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Client Sample ID: Lab Sample ID: 240-104227-B-2-C MSD

Instrument ID (1): A2HP12 Instrument ID (2): A2HP12

Date Analyzed (1): 11/13/2018 21:53 Date Analyzed (2): 11/13/2018 21:53

GC Column (1): CLP-2 (0.53mm ID: 0.53(mm) GC Column (2): CLP-1 (0.53mm ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Aroclor-1016	1	1	5.47	5.45	5.49	694	742	3.7
		2	6.05	6.03	6.06	733		
		3	6.65	6.63	6.67	789		
		4	6.82	6.80	6.84	773		
		5	7.15	7.13	7.17	721		
	2	1	4.68	4.65	4.69	774	769	
		2	5.17	5.15	5.19	755		
		3	5.79	5.77	5.81	809		
		4	5.96	5.94	5.98	772		
		5	6.29	6.27	6.31	737		
Aroclor-1260	1	1	8.96	8.94	8.98	750	829	2.4
		2	9.22	9.20	9.24	824		
		3	9.74	9.72	9.76	843		
		4	10.37	10.35	10.39	868		
		5	10.75	10.73	10.77	861		
	2	1	7.99	7.97	8.01	827	849	
		2	8.32	8.31	8.34	856		
		3	8.79	8.77	8.81	837		
		4	9.43	9.41	9.45	876		
		5	9.75	9.73	9.77	849		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 240-354879/24-A

Instrument ID (1): A2HP12 Instrument ID (2): A2HP12

Date Analyzed (1): 11/13/2018 22:34 Date Analyzed (2): 11/13/2018 22:34

GC Column (1): CLP-2 (0.53mm ID: 0.53(mm) GC Column (2): CLP-1 (0.53mm ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Aroclor-1016	1	1	5.47	5.45	5.49	653	678	3.4
		2	6.05	6.03	6.06	663		
		3	6.65	6.63	6.67	714		
		4	6.83	6.80	6.84	707		
		5	7.15	7.13	7.17	651		
	2	1	4.68	4.65	4.69	680	701	
		2	5.18	5.15	5.19	715		
		3	5.80	5.77	5.81	650		
		4	5.97	5.94	5.98	760		
		5	6.29	6.27	6.31	700		
Aroclor-1260	1	1	8.96	8.94	8.98	679	758	6.9
		2	9.22	9.20	9.24	752		
		3	9.74	9.72	9.76	771		
		4	10.37	10.35	10.39	797		
		5	10.75	10.73	10.77	791		
	2	1	7.99	7.97	8.01	797	812	
		2	8.32	8.31	8.34	818		
		3	8.79	8.77	8.81	810		
		4	9.43	9.41	9.45	847		
		5	9.75	9.73	9.77	788		

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-SEMW10D-SOIL | Lab Sample ID: 240-104089-2

Matrix: Solid | Lab File ID: P12111361.D

Analysis Method: 8082A | Date Collected: 11/07/2018 09:30

Extraction Method: 3540C | Date Extracted: 11/12/2018 08:27

Sample wt/vol: 10.32(g) | Date Analyzed: 11/14/2018 01:39

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-2 (0.53mm) ID: 0.53(mm)

% Moisture: 18.2 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 355209 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor-1016	26	U	59	26
11104-28-2	Aroclor-1221	28	U	59	28
11141-16-5	Aroclor-1232	27	U	59	27
53469-21-9	Aroclor-1242	22	U	59	22
12672-29-6	Aroclor-1248	28	U	59	28
11097-69-1	Aroclor-1254	27	U	59	27
11096-82-5	Aroclor-1260	26	U	59	26

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	81		14-128
2051-24-3	DCB Decachlorobiphenyl	81		10-132

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111361.D
Lims ID: 240-104089-C-2-A
Client ID: WC-SEMW10D-SOIL
Sample Type: Client
Inject. Date: 14-Nov-2018 01:39:18 ALS Bottle#: 61 Worklist Smp#: 24
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-024
Operator ID: Instrument ID: A2HP12

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:25:35 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene						
1	2.803	2.785	0.018	134168346	0.0500	
2	3.309	3.303	0.007	104556087	0.0500	
$ 2 Tetrachloro-m-xylene						
1	4.123	4.118	0.005	38409927	0.0159	
2	4.721	4.718	0.003	31326181	0.0161	
					RPD = 1.80	
3 PCB-1221						
1		4.415			ND	
1		4.621				
1		4.676				
2		5.188				
2		5.391				
2		5.474				
6 PCB-1016						
1		4.673			ND	
1		5.171				
1		5.792				
1		5.963				
1		6.288				
2		5.472				
2		6.045				
2		6.651				
2		6.823				
2		7.148				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
5 PCB-1242						
1		4.676			ND	
1		5.173				
1		5.793				
1		5.963				
1		6.494				
2		5.473				
2		6.047				
2		6.653				
2		6.824				
2		7.150				
4 PCB-1232						
1		4.676			ND	
1		5.174				
1		5.795				
1		5.965				
1		6.290				
2		5.474				
2		6.048				
2		6.654				
2		6.825				
2		7.150				
7 PCB-1248						
1		5.176			ND	
1		6.497				
1		7.054				
1		7.293				
1		7.768				
2		6.047				
2		6.653				
2		7.424				
2		7.951				
2		8.726				
8 PCB-1254						
1		7.299			ND	
1		7.767				
1		8.099				
1		8.323				
1		8.647				
2		7.944				
2		8.191				
2		8.725				
2		9.004				
2		9.626				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
10 PCB-1260						
1		7.992			ND	
1		8.324				
1		8.787				
1		9.430				
1		9.748				
2		8.959				
2		9.219				
2		9.738				
2		10.370				
2		10.748				
$ 12 DCB Decachlorobiphenyl						
1	10.948	10.947	0.001	47849301	0.0160	
2	11.860	11.859	0.001	31496776	0.0163	
					RPD = 1.54	

Reagents:

SGPCBISTD_00015 Amount Added: 5.00 Units: uL Run Reagent

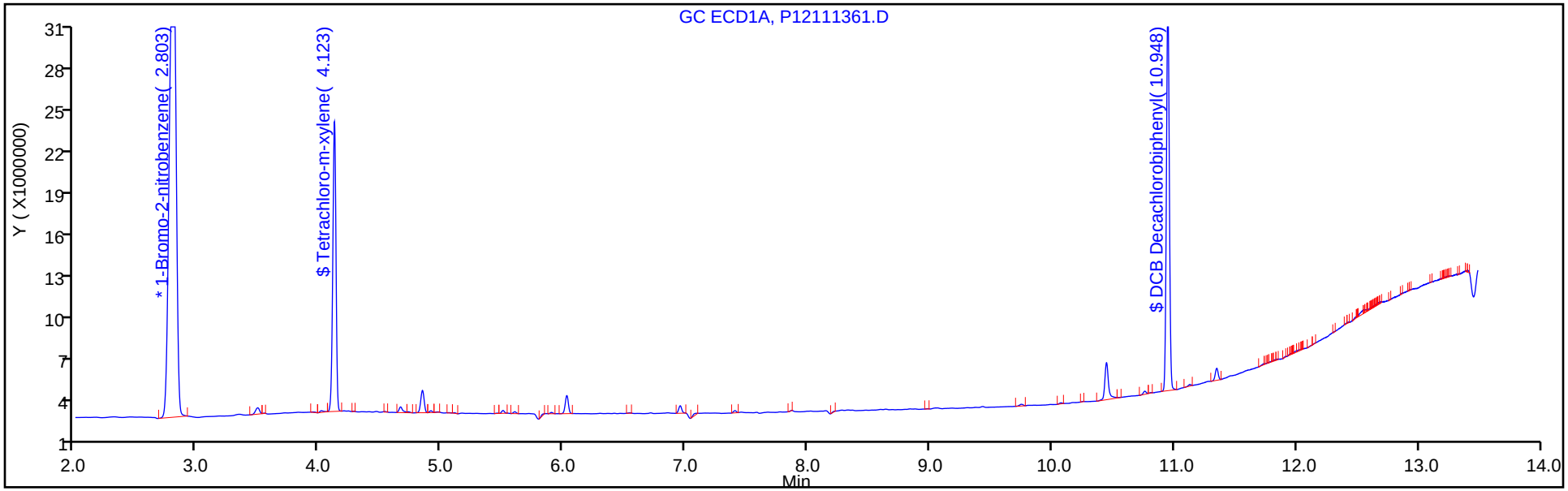
Report Date: 14-Nov-2018 11:25:54 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

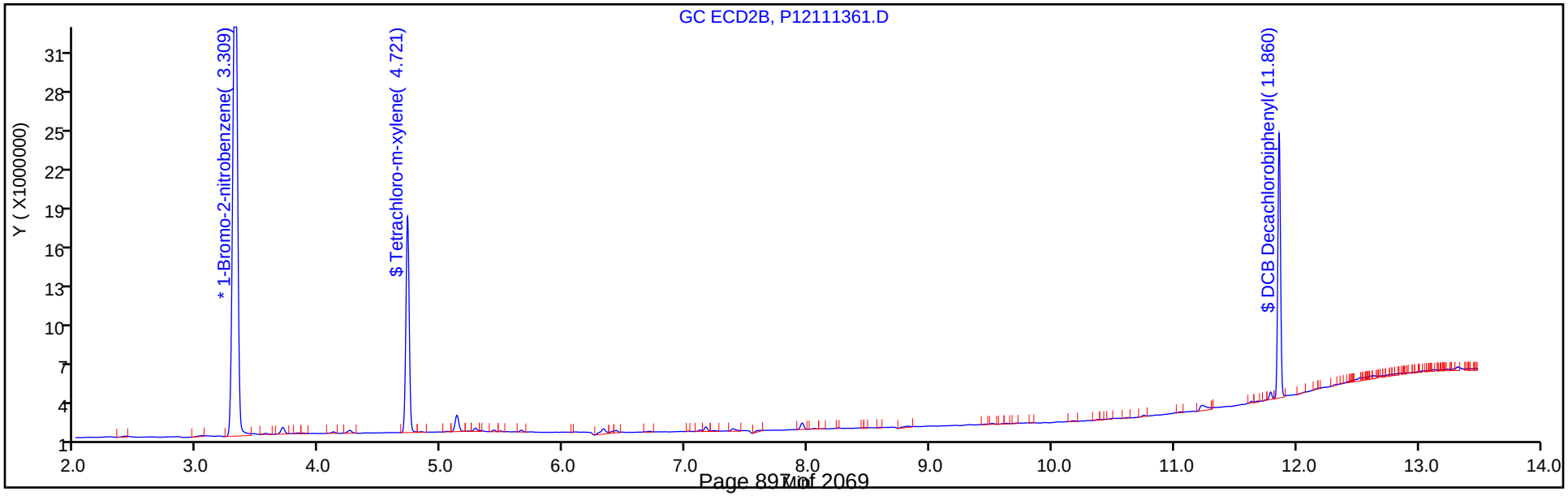
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111361.D

Injection Date:	14-Nov-2018 01:39:18	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	240-104089-C-2-A	Lab Sample ID:	240-104089-2	Worklist Smp#:	24
Client ID:	WC-SEMW10D-SOIL				
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	61
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Recovery Report

Data File:	\\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111361.D				
Lims ID:	240-104089-C-2-A				
Client ID:	WC-SEMW10D-SOIL				
Sample Type:	Client				
Inject. Date:	14-Nov-2018 01:39:18	ALS Bottle#:	61	Worklist Smp#:	24
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	240-0081903-024				
Operator ID:		Instrument ID:	A2HP12		
Method:	\\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m				
Limit Group:	GC 8082A IS				
Last Update:	14-Nov-2018 11:25:35	Calib Date:	19-Oct-2018 01:11:38		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D				
Column 1 :			Det: GC ECD1A		
Column 2 :			Det: GC ecd2b		
Process Host:	CTX0325				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0159	79.30
$ 12 DCB Decachlorobiphenyl	0.0200	0.0160	80.12

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0161	80.75
$ 12 DCB Decachlorobiphenyl	0.0200	0.0163	81.36

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-DEVW | Lab Sample ID: 240-104089-3

Matrix: Water | Lab File ID: P4111323.D

Analysis Method: 8082A | Date Collected: 11/07/2018 10:00

Extraction Method: 3520C | Date Extracted: 11/09/2018 08:13

Sample wt/vol: 990(mL) | Date Analyzed: 11/13/2018 12:56

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-1 (0.53mm) ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 355036 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor-1016	0.057	U	0.10	0.057
11104-28-2	Aroclor-1221	0.058	U	0.10	0.058
11141-16-5	Aroclor-1232	0.075	U	0.10	0.075
53469-21-9	Aroclor-1242	0.077	U	0.10	0.077
12672-29-6	Aroclor-1248	0.051	U	0.10	0.051
11097-69-1	Aroclor-1254	0.040	U	0.10	0.040
11096-82-5	Aroclor-1260	0.046	U	0.10	0.046

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	71		22-120
2051-24-3	DCB Decachlorobiphenyl	46		10-120

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111323.D
Lims ID: 240-104089-E-3-A
Client ID: WC-FTCB-DEVW
Sample Type: Client
Inject. Date: 13-Nov-2018 12:56:22 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081870-023
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 06:27:30 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0306

First Level Reviewer: coastc Date: 14-Nov-2018 06:21:07

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene						
1	2.055	2.051	0.003	57654232	0.0500	
2	2.543	2.540	0.002	41037117	0.0500	
$ 2 Tetrachloro-m-xylene						
1	3.338	3.337	0.001	100508088	0.0707	
2	4.351	4.354	-0.003	74512009	0.0884	
					RPD = 22.28	
3 PCB-1221						
1		3.729			ND	
1		4.015				
1		4.090				
2		5.041				
2		5.325				
2		5.437				
4 PCB-1232						
1		4.093			ND	
1		4.815				
1		5.659				
1		5.882				
1		6.298				
2		5.439				
2		6.197				
2		6.953				
2		7.168				
2		7.541				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
5 PCB-1242						
1		4.095			ND	
1		4.816				
1		5.662				
1		5.884				
1		6.300				
2		5.442				
2		6.198				
2		6.954				
2		7.169				
2		7.542				
6 PCB-1016						
1		4.097			ND	
1		4.819				
1		5.663				
1		5.886				
1		6.301				
2		5.442				
2		6.198				
2		6.957				
2		7.172				
2		7.544				
7 PCB-1248						
1		4.816			ND	
1		6.559				
1		7.212				
1		7.516				
1		8.012				
2		6.197				
2		6.954				
2		7.840				
2		8.355				
2		9.037				
8 PCB-1254						
1		7.143			ND	
1		8.007				
1		8.325				
1		8.529				
1		8.810				
2		8.345				
2		8.567				
2		9.033				
2		9.257				
2		9.747				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
10 PCB-1260						
1		8.228			ND	
1		8.534				
1		8.813				
1		9.452				
1		9.697				
2		9.229				
2		9.430				
2		9.748				
2		10.299				
2		10.601				
$ 12 DCB Decachlorobiphenyl						
1	10.615	10.617	-0.002	58727824	0.0459	
2	11.532	11.534	-0.002	44495670	0.0513	
					RPD = 11.05	

Reagents:

SGPCBISTD_00015 Amount Added: 5.00 Units: uL Run Reagent

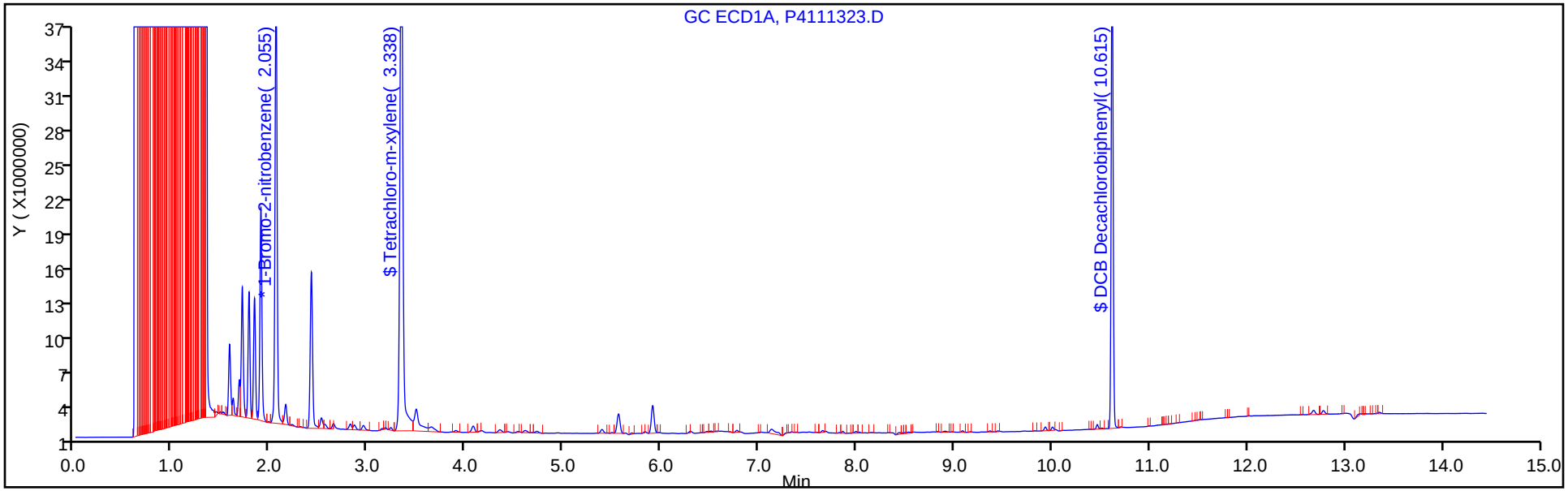
Report Date: 14-Nov-2018 06:27:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

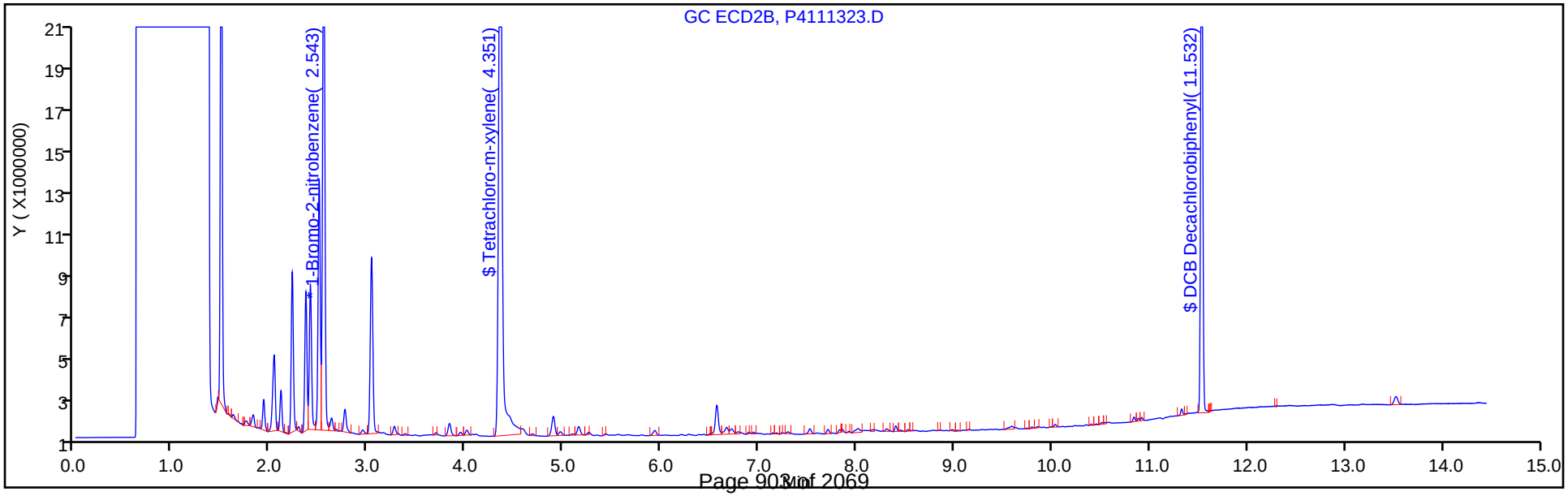
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111323.D

Injection Date:	13-Nov-2018 12:56:22	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	240-104089-E-3-A	Lab Sample ID:	240-104089-3	Worklist Smp#:	23
Client ID:	WC-FTCB-DEVW				
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111323.D
Lims ID: 240-104089-E-3-A
Client ID: WC-FTCB-DEVW
Sample Type: Client
Inject. Date: 13-Nov-2018 12:56:22 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081870-023
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 06:27:30 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0306

First Level Reviewer: coastc Date: 14-Nov-2018 06:21:07

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.1000	0.0707	70.68
$ 12 DCB Decachlorobiphenyl	0.1000	0.0459	45.92

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.1000	0.0884	88.40
$ 12 DCB Decachlorobiphenyl	0.1000	0.0513	51.30

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-SOIL | Lab Sample ID: 240-104089-4

Matrix: Solid | Lab File ID: P12111362.D

Analysis Method: 8082A | Date Collected: 11/07/2018 10:15

Extraction Method: 3540C | Date Extracted: 11/12/2018 08:27

Sample wt/vol: 10.39(g) | Date Analyzed: 11/14/2018 01:59

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-2 (0.53mm) ID: 0.53(mm)

% Moisture: 16.6 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 355209 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor-1016	25	U	58	25
11104-28-2	Aroclor-1221	28	U	58	28
11141-16-5	Aroclor-1232	27	U	58	27
53469-21-9	Aroclor-1242	22	U	58	22
12672-29-6	Aroclor-1248	28	U	58	28
11097-69-1	Aroclor-1254	27	U	58	27
11096-82-5	Aroclor-1260	95		58	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	81		14-128
2051-24-3	DCB Decachlorobiphenyl	85		10-132

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111362.D
Lims ID: 240-104089-C-4-A
Client ID: WC-FTCB-SOIL
Sample Type: Client
Inject. Date: 14-Nov-2018 01:59:48 ALS Bottle#: 62 Worklist Smp#: 25
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-025
Operator ID: Instrument ID: A2HP12

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:25:35 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 11:10:07

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene						
1	2.805	2.785	0.020	147031387	0.0500	
2	3.313	3.303	0.010	111074535	0.0500	
$ 2 Tetrachloro-m-xylene						
1	4.124	4.118	0.006	42091821	0.0159	
2	4.721	4.718	0.003	33377720	0.0162	
					RPD = 2.10	
3 PCB-1221						
1		4.415			ND	
1		4.621				
1		4.676				
2		5.188				
2		5.391				
2		5.474				
6 PCB-1016						
1		4.673			ND	
1		5.171				
1		5.792				
1		5.963				
1		6.288				
2		5.472				
2		6.045				
2		6.651				
2		6.823				
2		7.148				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
5	PCB-1242					
1		4.676			ND	
1		5.173				
1		5.793				
1		5.963				
1		6.494				
2		5.473				
2		6.047				
2		6.653				
2		6.824				
2		7.150				
4	PCB-1232					
1		4.676			ND	
1		5.174				
1		5.795				
1		5.965				
1		6.290				
2		5.474				
2		6.048				
2		6.654				
2		6.825				
2		7.150				
7	PCB-1248					U
1		5.176			ND	
1		6.497				
1		7.054				
1		7.293				
1		7.768				
2		6.047				
2		6.653				
2		7.424				
2		7.951				
2		8.726				
8	PCB-1254					U
1		7.299			ND	
1		7.767				
1		8.099				
1		8.323				
1		8.647				
2		7.944				
2		8.191				
2		8.725				
2		9.004				
2		9.626				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
10 PCB-1260						
1	7.993	7.992	0.001	7964302	0.0750	
1	8.325	8.324	0.001	15667962	0.0901	
1	8.789	8.787	0.002	8773963	0.0773	
1	9.430	9.430	0.000	24428593	0.0812	
1	9.748	9.748	0.000	14542139	0.0985	
		Average of Peak Amounts =			0.0844	
2	8.960	8.959	0.001	5670356	0.0684	
2	9.219	9.219	0.000	9461995	0.0952	
2	9.739	9.738	0.001	6282889	0.0747	
2	10.371	10.370	0.001	18699563	0.0860	
2	10.751	10.748	0.003	13263008	0.0888	
		Average of Peak Amounts =			0.0826	
					RPD = 2.20	
$ 12 DCB Decachlorobiphenyl						
1	10.948	10.947	0.001	54261832	0.0166	
2	11.860	11.859	0.001	34989666	0.0170	
					RPD = 2.58	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

SGPCBISTD_00015 Amount Added: 5.00 Units: uL Run Reagent

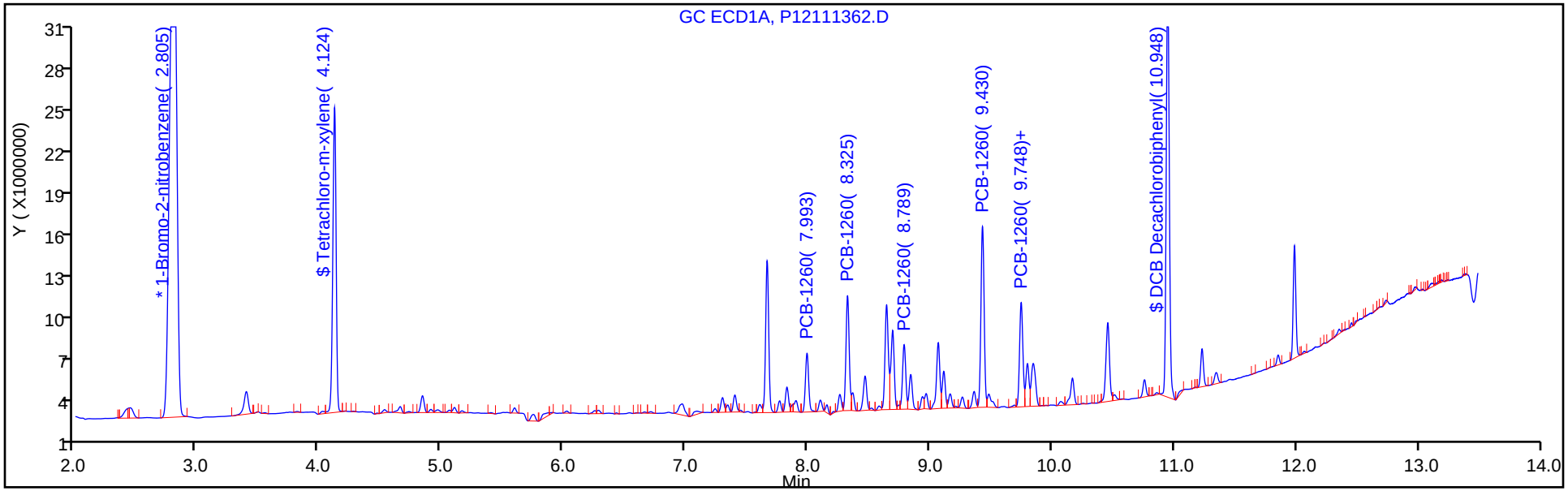
Report Date: 14-Nov-2018 11:25:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

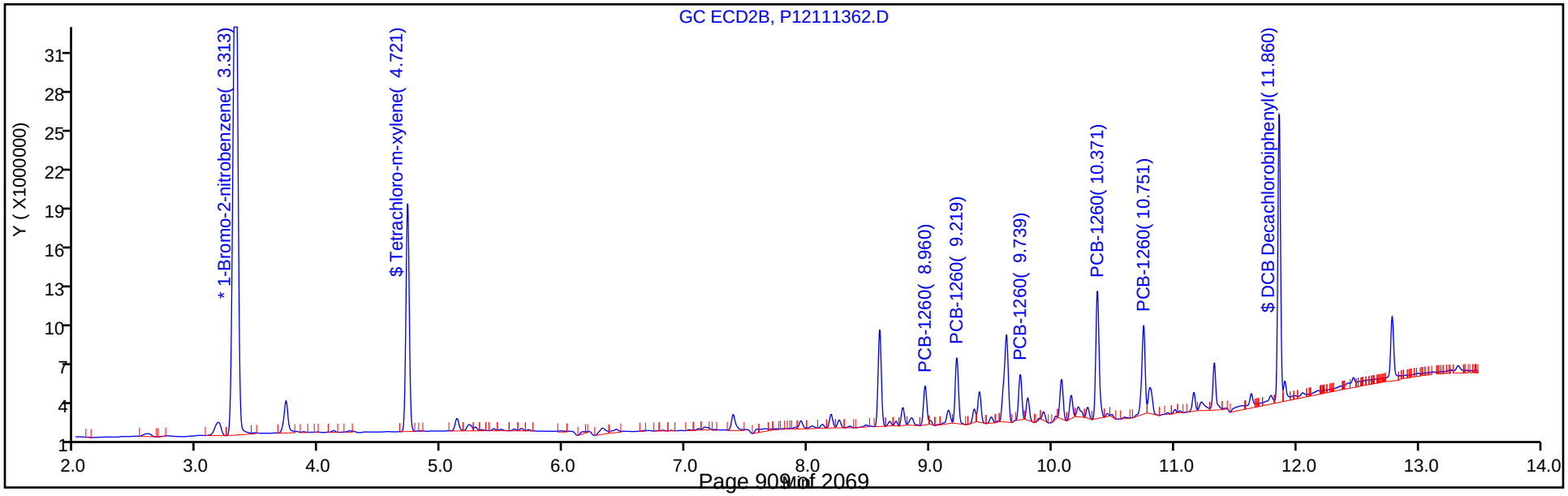
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111362.D

Injection Date:	14-Nov-2018 01:59:48	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	240-104089-C-4-A	Lab Sample ID:	240-104089-4	Worklist Smp#:	25
Client ID:	WC-FTCB-SOIL				
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	62
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111362.D
Lims ID: 240-104089-C-4-A
Client ID: WC-FTCB-SOIL
Sample Type: Client
Inject. Date: 14-Nov-2018 01:59:48 ALS Bottle#: 62 Worklist Smp#: 25
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-025
Operator ID: Instrument ID: A2HP12

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:25:35 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 11:10:07

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0159	79.30
$ 12 DCB Decachlorobiphenyl	0.0200	0.0166	82.91

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0162	80.98
$ 12 DCB Decachlorobiphenyl	0.0200	0.0170	85.08

Report Date: 14-Nov-2018 11:25:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

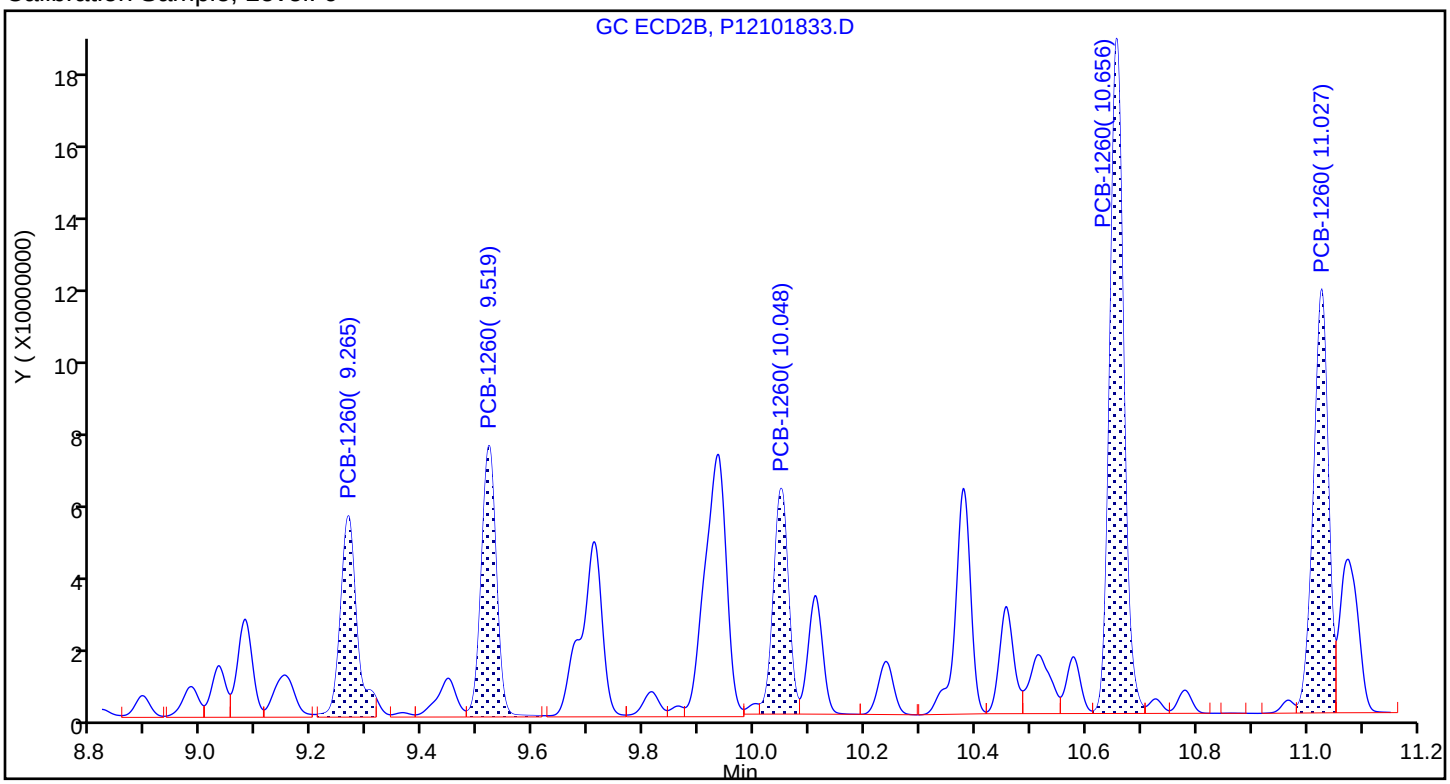
TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111362.D

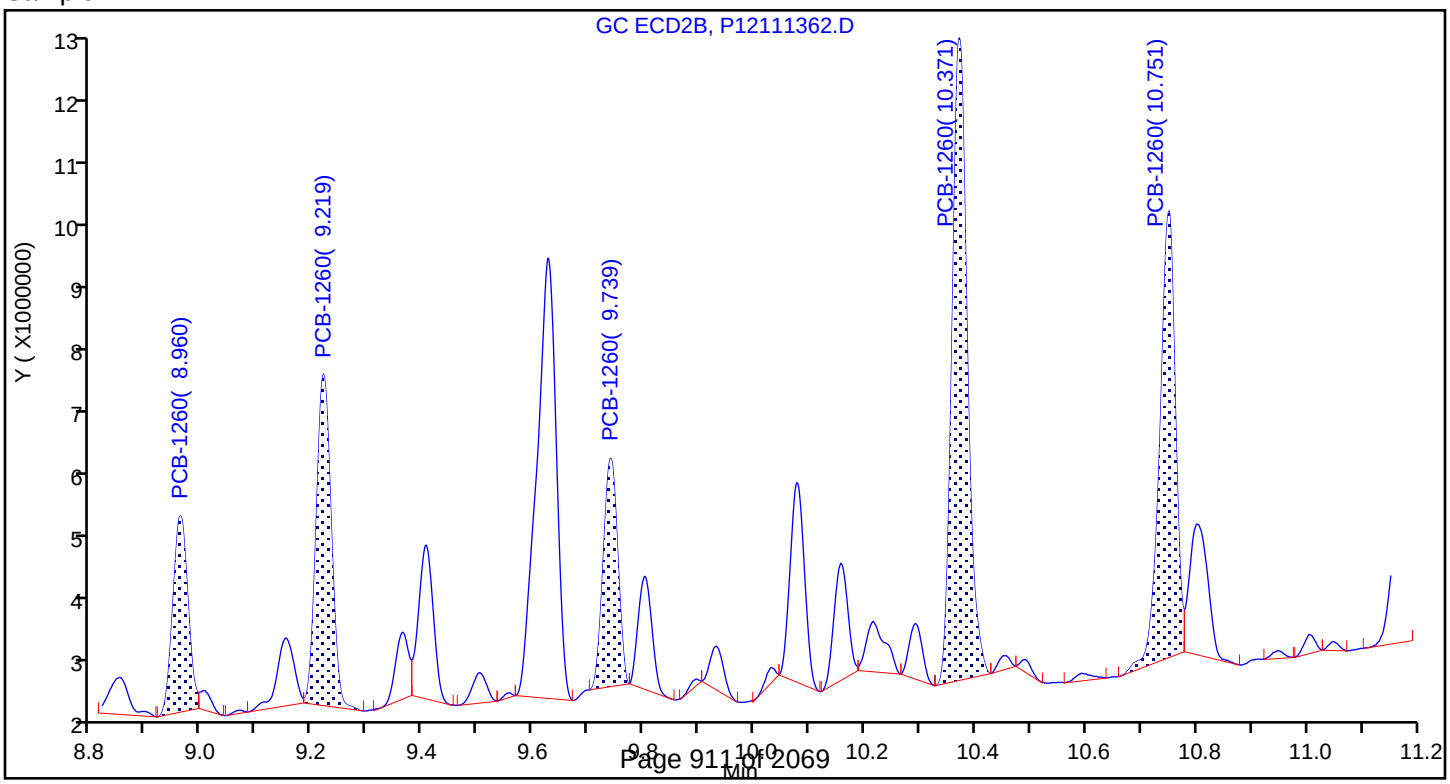
Injection Date:	14-Nov-2018 01:59:48	Instrument ID:	A2HP12		
Lims ID:	240-104089-C-4-A	Lab Sample ID:	240-104089-4		
Client ID:	WC-FTCB-SOIL				
Operator ID:		ALS Bottle#:	62	Worklist Smp#:	25
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	PCB12IS	Limit Group:	GC 8082A IS		
Column:		Detector	GC ecd2b		

10 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 6



Sample



FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: WC-FTCB-DECON | Lab Sample ID: 240-104089-5

Matrix: Water | Lab File ID: P4111324.D

Analysis Method: 8082A | Date Collected: 11/07/2018 10:30

Extraction Method: 3520C | Date Extracted: 11/09/2018 08:13

Sample wt/vol: 970(mL) | Date Analyzed: 11/13/2018 13:19

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-1 (0.53mm) ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 355036 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor-1016	0.058	U	0.10	0.058
11104-28-2	Aroclor-1221	0.059	U	0.10	0.059
11141-16-5	Aroclor-1232	0.076	U	0.10	0.076
53469-21-9	Aroclor-1242	0.078	U	0.10	0.078
12672-29-6	Aroclor-1248	0.052	U	0.10	0.052
11097-69-1	Aroclor-1254	0.041	U	0.10	0.041
11096-82-5	Aroclor-1260	0.047	U	0.10	0.047

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	62		22-120
2051-24-3	DCB Decachlorobiphenyl	46		10-120

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111324.D
Lims ID: 240-104089-E-5-A
Client ID: WC-FTCB-DECON
Sample Type: Client
Inject. Date: 13-Nov-2018 13:19:18 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081870-024
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 06:27:30 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0306

First Level Reviewer: coastc Date: 14-Nov-2018 06:19:28

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene						
1	2.054	2.051	0.003	56809691	0.0500	
2	2.542	2.540	0.002	43294045	0.0500	
$ 2 Tetrachloro-m-xylene						
1	3.338	3.337	0.001	87121693	0.0622	
2	4.351	4.354	-0.003	62299541	0.0701	
					RPD = 11.92	
3 PCB-1221						
1		3.729			ND	
1		4.015				
1		4.090				
2		5.041				
2		5.325				
2		5.437				
4 PCB-1232						
1		4.093			ND	
1		4.815				
1		5.659				
1		5.882				
1		6.298				
2		5.439				
2		6.197				
2		6.953				
2		7.168				
2		7.541				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
5 PCB-1242						
1		4.095			ND	
1		4.816				
1		5.662				
1		5.884				
1		6.300				
2		5.442				
2		6.198				
2		6.954				
2		7.169				
2		7.542				
6 PCB-1016						
1		4.097			ND	
1		4.819				
1		5.663				
1		5.886				
1		6.301				
2		5.442				
2		6.198				
2		6.957				
2		7.172				
2		7.544				
7 PCB-1248						
1		4.816			ND	
1		6.559				
1		7.212				
1		7.516				
1		8.012				
2		6.197				
2		6.954				
2		7.840				
2		8.355				
2		9.037				
8 PCB-1254						
1		7.143			ND	
1		8.007				
1		8.325				
1		8.529				
1		8.810				
2		8.345				
2		8.567				
2		9.033				
2		9.257				
2		9.747				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
10 PCB-1260						
1		8.228			ND	
1		8.534				
1		8.813				
1		9.452				
1		9.697				
2		9.229				
2		9.430				
2		9.748				
2		10.299				
2		10.601				
$ 12 DCB Decachlorobiphenyl						
1	10.615	10.617	-0.002	58422130	0.0464	
2	11.532	11.534	-0.002	43593162	0.0476	
					RPD = 2.71	

Reagents:

SGPCBISTD_00015 Amount Added: 5.00 Units: uL Run Reagent

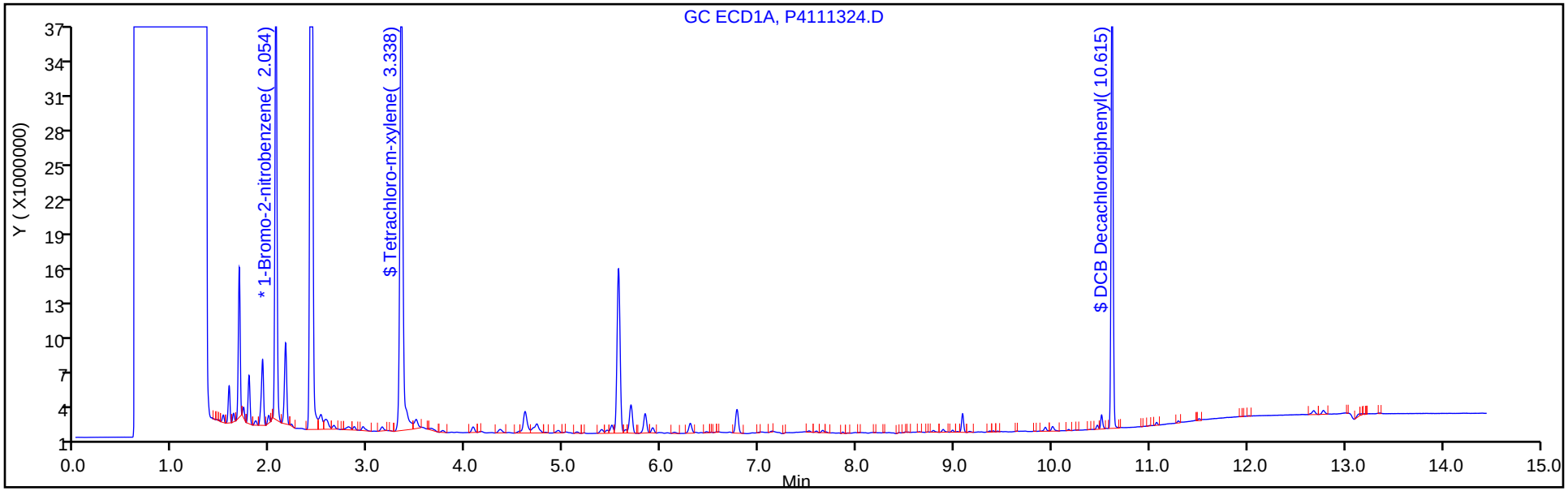
Report Date: 14-Nov-2018 06:27:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

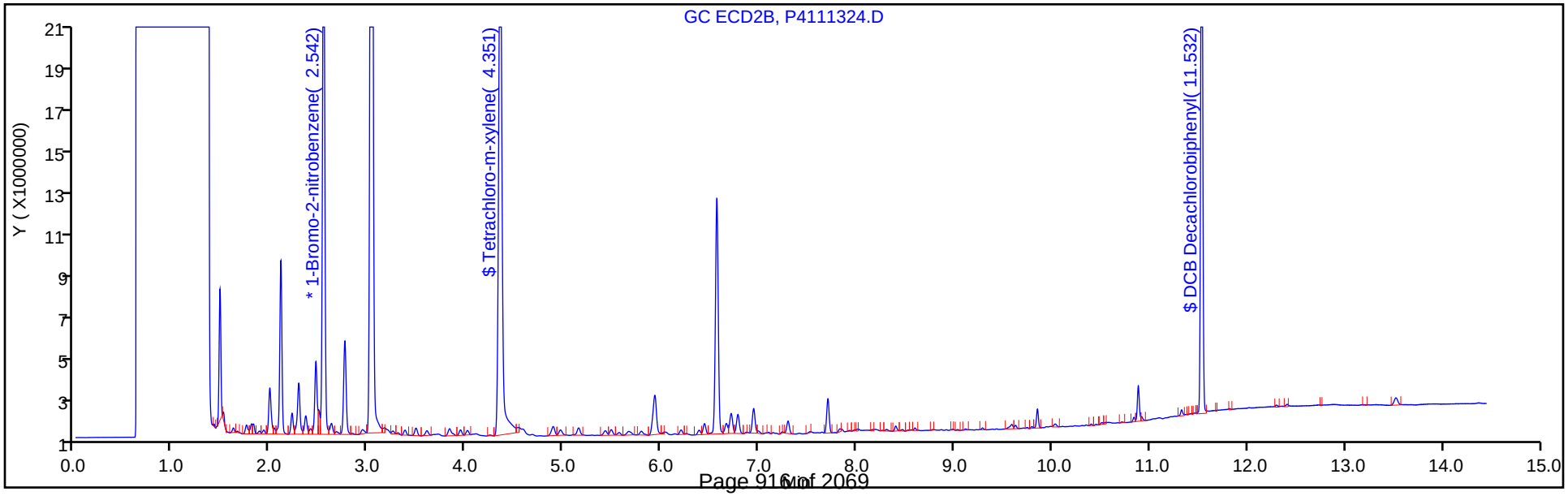
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111324.D

Injection Date:	13-Nov-2018 13:19:18	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	240-104089-E-5-A	Lab Sample ID:	240-104089-5	Worklist Smp#:	24
Client ID:	WC-FTCB-DECON				
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111324.D
Lims ID: 240-104089-E-5-A
Client ID: WC-FTCB-DECON
Sample Type: Client
Inject. Date: 13-Nov-2018 13:19:18 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081870-024
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 06:27:30 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0306

First Level Reviewer: coastc Date: 14-Nov-2018 06:19:28

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.1000	0.0622	62.18
$ 12 DCB Decachlorobiphenyl	0.1000	0.0464	46.36

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.1000	0.0701	70.06
$ 12 DCB Decachlorobiphenyl	0.1000	0.0476	47.64

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 15:16 Calibration End Date: 10/18/2018 16:58 Calibration ID: 47581

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/4	P12101804.D
Level 2	STD01 240-350710/5	P12101805.D
Level 3	STD02 240-350710/6	P12101806.D
Level 4	STD05 240-350710/7	P12101807.D
Level 5	STD1 240-350710/8	P12101808.D
Level 6	STD15 240-350710/9	P12101809.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1232 Peak 1	0.0195 0.0163	0.0193	0.0193	0.0176	0.0177	Ave		0.0183				7.2		20.0			
PCB-1232 Peak 2	0.0131 0.0112	0.0134	0.0135	0.0122	0.0124	Ave		0.0126				7.1		20.0			
PCB-1232 Peak 3	0.0299 0.0282	0.0309	0.0312	0.0292	0.0302	Ave		0.0299				3.7		20.0			
PCB-1232 Peak 4	0.0128 0.0119	0.0136	0.0140	0.0127	0.0129	Ave		0.0130				5.7		20.0			
PCB-1232 Peak 5	0.0048 0.0041	0.0050	0.0049	0.0046	0.0044	Ave		0.0046				7.6		20.0			
PCB-1262 Peak 1	0.0343 0.0283	0.0328	0.0307	0.0288	0.0298	Ave		0.0308				7.6		20.0			
PCB-1262 Peak 2	0.0487 0.0412	0.0469	0.0466	0.0426	0.0444	Ave		0.0451				6.4		20.0			
PCB-1262 Peak 3	0.0606 0.0492	0.0561	0.0558	0.0510	0.0522	Ave		0.0541				7.6		20.0			
PCB-1262 Peak 4	0.1271 0.1219	0.1238	0.1258	0.1204	0.1272	Ave		0.1244				2.3		20.0			
PCB-1262 Peak 5	0.0565 0.0480	0.0545	0.0544	0.0498	0.0511	Ave		0.0524				6.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 15:16 Calibration End Date: 10/18/2018 16:58 Calibration ID: 47581

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/4	P12101804.D
Level 2	STD01 240-350710/5	P12101805.D
Level 3	STD02 240-350710/6	P12101806.D
Level 4	STD05 240-350710/7	P12101807.D
Level 5	STD1 240-350710/8	P12101808.D
Level 6	STD15 240-350710/9	P12101809.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1232 Peak 1	BNB	Ave	2305732 62848029	4801547	9212663	22158426	41104782	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 2	BNB	Ave	1548280 43192378	3330246	6457298	15330791	28733645	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 3	BNB	Ave	3521374 108858245	7664414	14905195	36797131	70331283	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 4	BNB	Ave	1508695 46010556	3389262	6685780	16030638	30016519	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 5	BNB	Ave	560288 15822501	1254215	2359617	5741272	10296114	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 1	BNB	Ave	4047809 109382273	8146593	14683861	36374183	69215083	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 2	BNB	Ave	5743941 159040322	11650282	22310024	53734547	103176558	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 3	BNB	Ave	7144909 190224270	13939837	26672988	64360061	121411381	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 4	BNB	Ave	14995480 470868483	30760287	60157522	151931504	295849456	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 5	BNB	Ave	6663650 185607642	13536389	26029312	62893036	118835445	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101804.D
Lims ID: std005 1232 1262
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Oct-2018 15:16:26 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-004
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:28 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:19:29

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.942	2.930	0.013	117951796	0.0500	0.0500	
2	3.581	3.577	0.004	93741065	0.0500	0.0500	
4 PCB-1232							M
1	4.784	4.784	0.000	2305732	0.0500	0.0535	
1	5.287	5.287	0.000	1548280	0.0500	0.0520	
1	5.912	5.912	0.000	3521374	0.0500	0.0499	
1	6.085	6.085	0.000	1508695	0.0500	0.0492	M
1	6.408	6.408	0.000	560288	0.0500	0.0513	M
		Average of Peak Amounts =				0.0512	
2	5.756	5.756	0.000	2194447	0.0500	0.0570	
2	6.335	6.335	0.000	1756995	0.0500	0.0575	
2	6.947	6.947	0.000	3378133	0.0500	0.0563	
2	7.121	7.121	0.000	1222998	0.0500	0.0493	
2	7.438	7.438	0.000	1108494	0.0500	0.0377	
		Average of Peak Amounts =				0.0516	
					RPD =	0.77	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.122	8.122	0.000	4047809	0.0500	0.0557	
1	8.455	8.455	0.000	5743941	0.0500	0.0540	
1	9.199	9.199	0.000	7144909	0.0500	0.0559	
1	9.562	9.562	0.000	14995480	0.0500	0.0511	
1	9.933	9.933	0.000	6663650	0.0500	0.0539	
		Average of Peak Amounts =				0.0541	
2	9.522	9.522	0.000	3878560	0.0500	0.0556	
2	10.052	10.052	0.000	5532558	0.0500	0.0511	
2	10.382	10.382	0.000	4519467	0.0500	0.0498	
2	10.658	10.658	0.000	10937206	0.0500	0.0499	
2	11.027	11.027	0.000	7930237	0.0500	0.0507	
		Average of Peak Amounts =				0.0514	
						RPD = 5.16	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@.05PPM_00013 Amount Added: 1.00 Units: mL

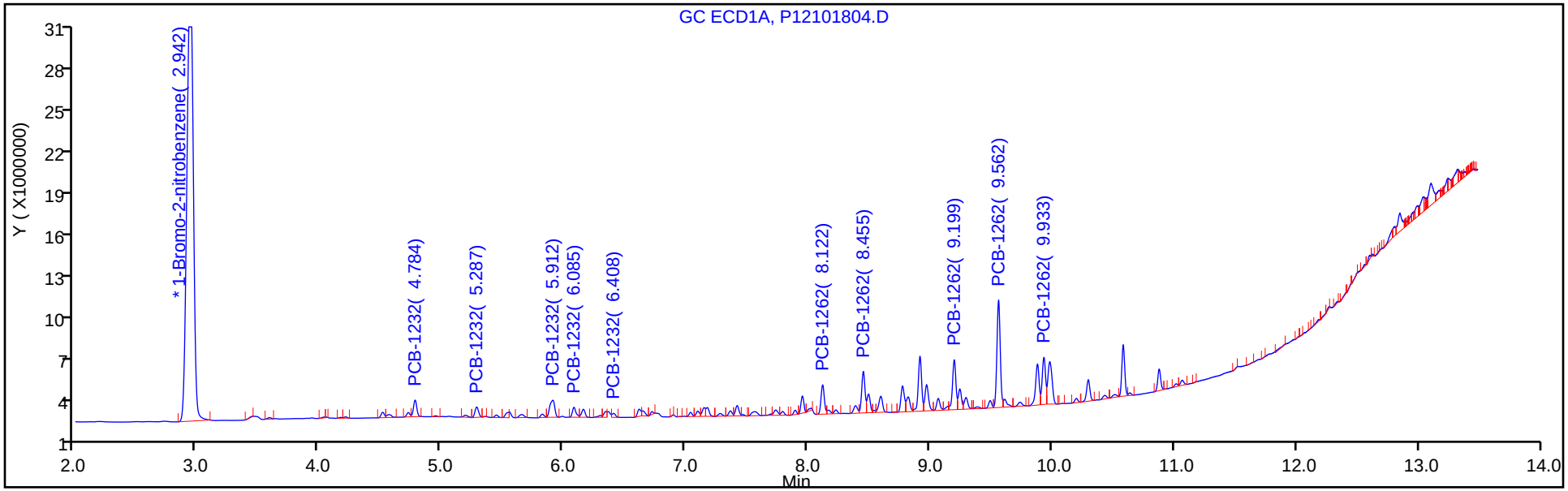
Report Date: 19-Oct-2018 13:36:31 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

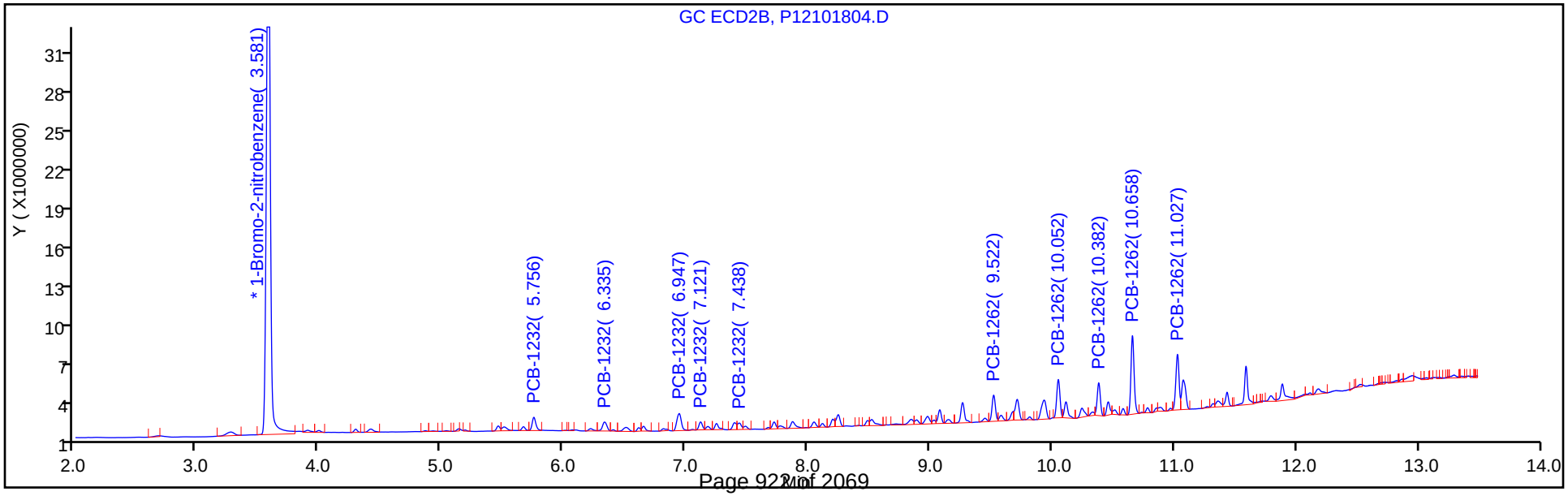
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101804.D

Injection Date:	18-Oct-2018 15:16:26	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std005 1232 1262			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 19-Oct-2018 13:36:31 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101804.D

Injection Date: 18-Oct-2018 15:16:26 Instrument ID: A2HP12

Lims ID: std005 1232 1262

Client ID:

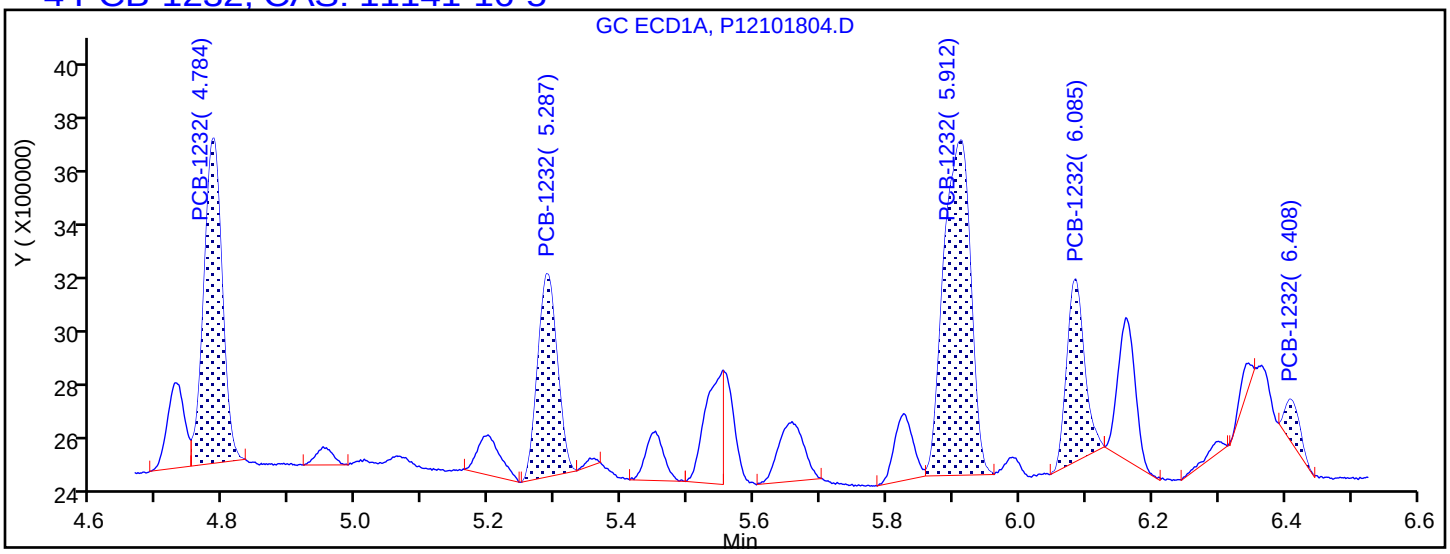
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

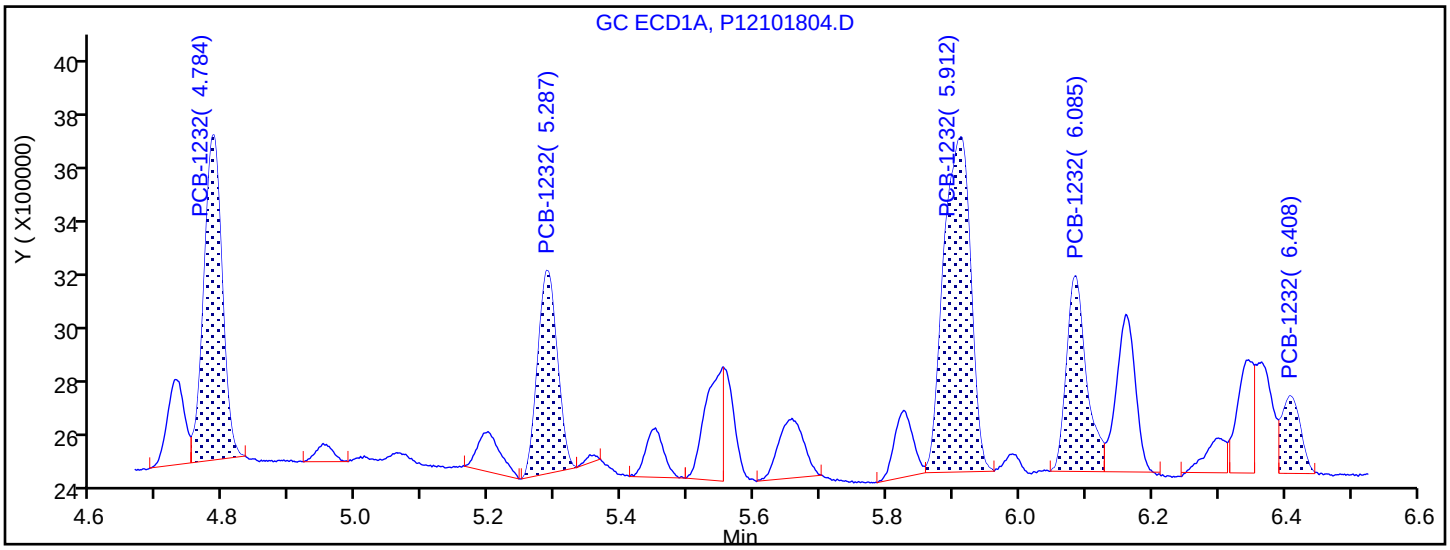
Column: Detector GC ECD1A

4 PCB-1232, CAS: 11141-16-5



Processing Integration Results

4.784	Response = 2305732
5.287	Response = 1548280
5.912	Response = 3521374
6.085	Response = 1253241
6.408	Response = 243743



Manual Integration Results

4.784	Response = 2305732	
5.287	Response = 1548280	
5.912	Response = 3521374	
6.085	Response = 1508695	M
6.408	Response = 560288	M

Reviewer: hassl, 19-Oct-2018 07:21:53

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101805.D
Lims ID: std01 1232 1262
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Oct-2018 15:36:55 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-005
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:18 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:21:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.943	2.930	0.013	124214806	0.0500	0.0500	
2	3.581	3.577	0.005	97905789	0.0500	0.0500	
4 PCB-1232							M
1	4.782	4.784	-0.002	4801547	0.1000	0.1058	
1	5.286	5.287	-0.001	3330246	0.1000	0.1062	
1	5.910	5.912	-0.002	7664414	0.1000	0.1032	
1	6.083	6.085	-0.002	3389262	0.1000	0.1050	
1	6.410	6.408	0.002	1254215	0.1000	0.1089	M
		Average of Peak Amounts =				0.1058	
2	5.755	5.756	-0.001	4487957	0.1000	0.1117	
2	6.335	6.335	0.000	3514262	0.1000	0.1101	
2	6.945	6.947	-0.002	6728008	0.1000	0.1074	
2	7.120	7.121	-0.001	2570004	0.1000	0.0993	
2	7.440	7.438	0.002	1901946	0.1000	0.1034	
		Average of Peak Amounts =				0.1064	
					RPD =	0.52	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.121	8.122	-0.001	8146593	0.1000	0.1065	
1	8.453	8.455	-0.002	11650282	0.1000	0.1041	
1	9.199	9.199	0.000	13939837	0.1000	0.1036	
1	9.562	9.562	0.000	30760287	0.1000	0.0996	
1	9.933	9.933	0.000	13536389	0.1000	0.1040	
		Average of Peak Amounts =				0.1036	
2	9.522	9.522	0.000	7415759	0.1000	0.1018	
2	10.051	10.052	-0.001	11578536	0.1000	0.1023	
2	10.382	10.382	0.000	9421652	0.1000	0.0994	
2	10.659	10.658	0.001	22606426	0.1000	0.0988	
2	11.027	11.027	0.000	16416952	0.1000	0.1006	
		Average of Peak Amounts =				0.1006	
						RPD = 2.92	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@0.1PPM_00014 Amount Added: 1.00 Units: mL

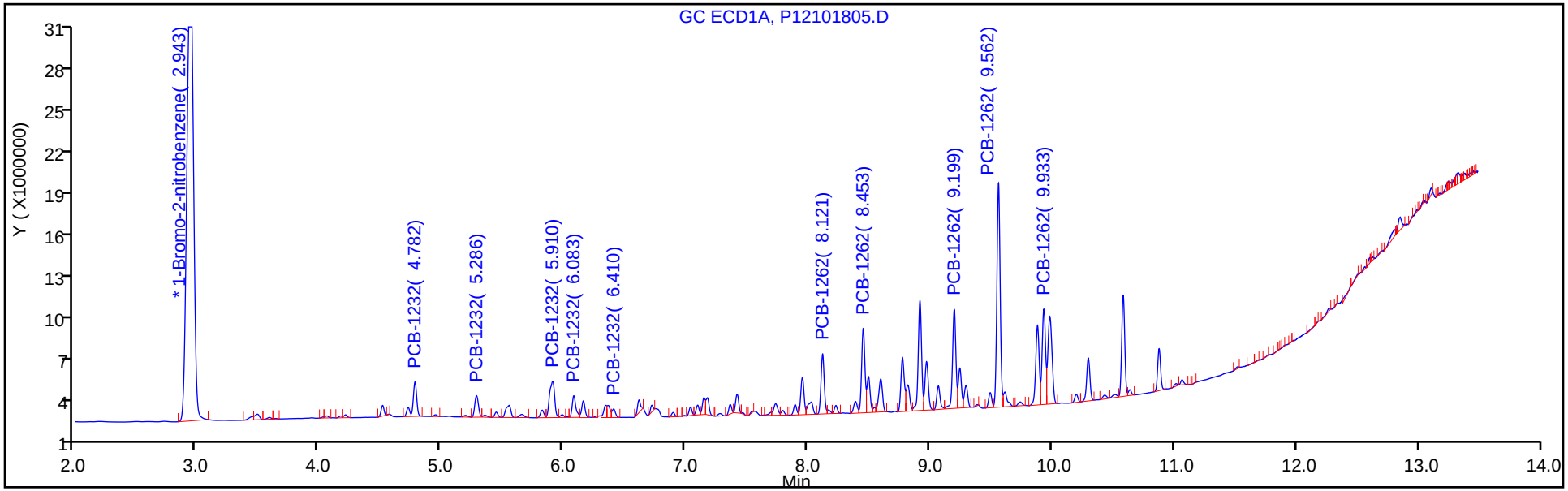
Report Date: 19-Oct-2018 13:36:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

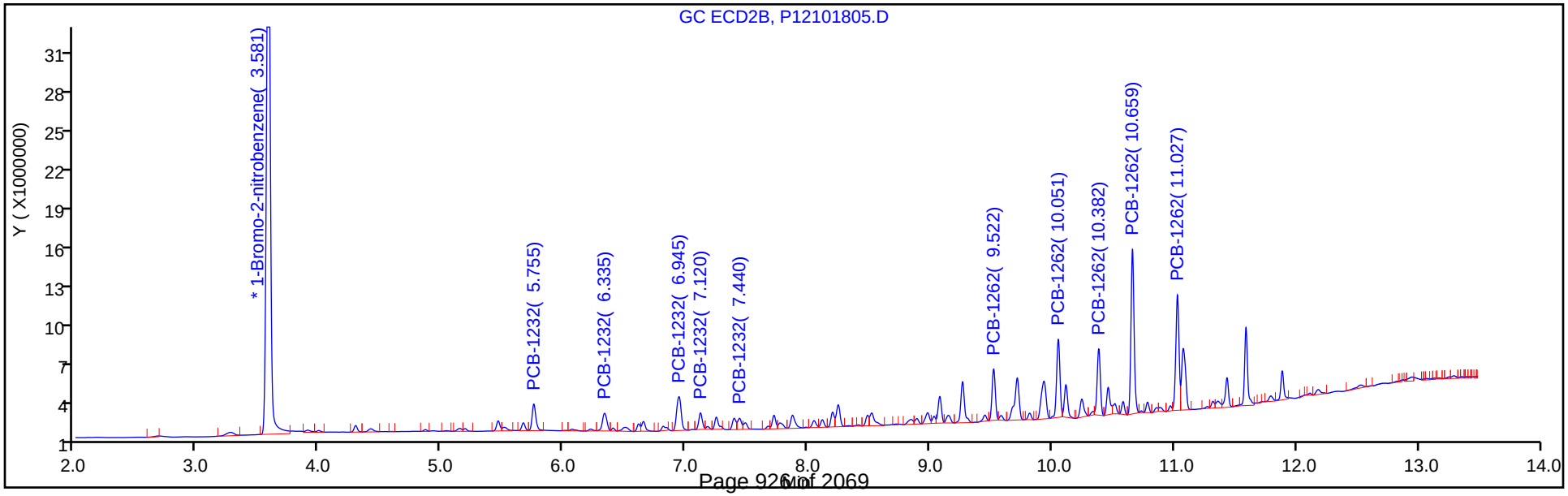
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101805.D

Injection Date:	18-Oct-2018 15:36:55	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std01 1232 1262			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 19-Oct-2018 13:36:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101805.D

Injection Date: 18-Oct-2018 15:36:55 Instrument ID: A2HP12

Lims ID: std01 1232 1262

Client ID:

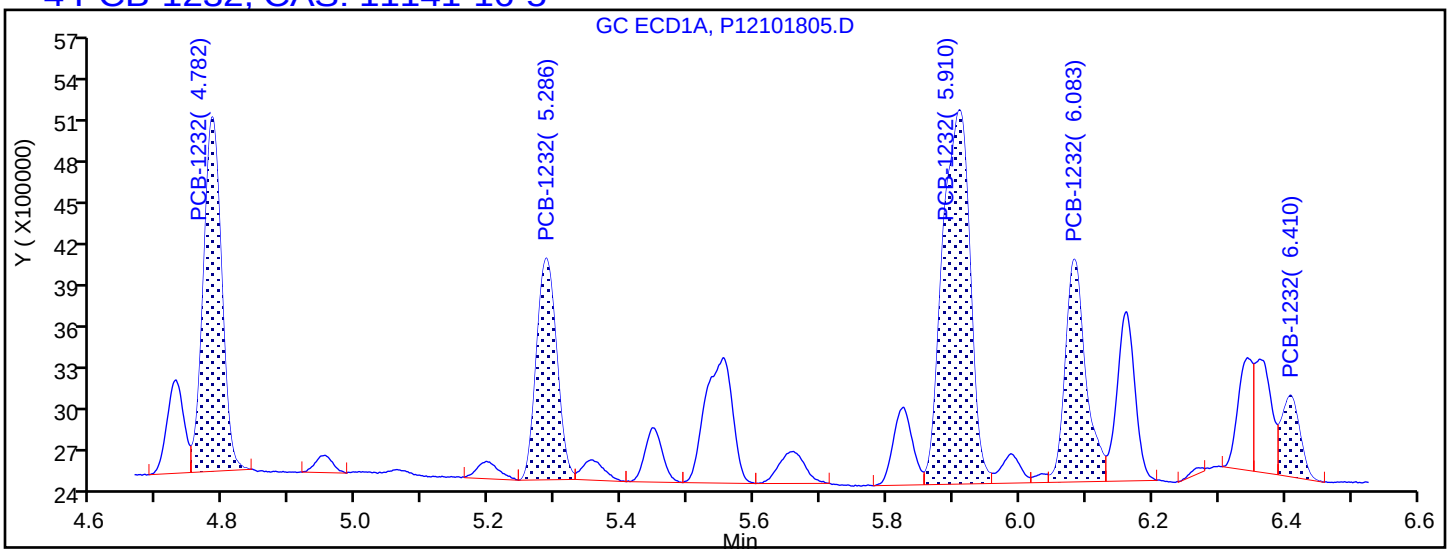
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

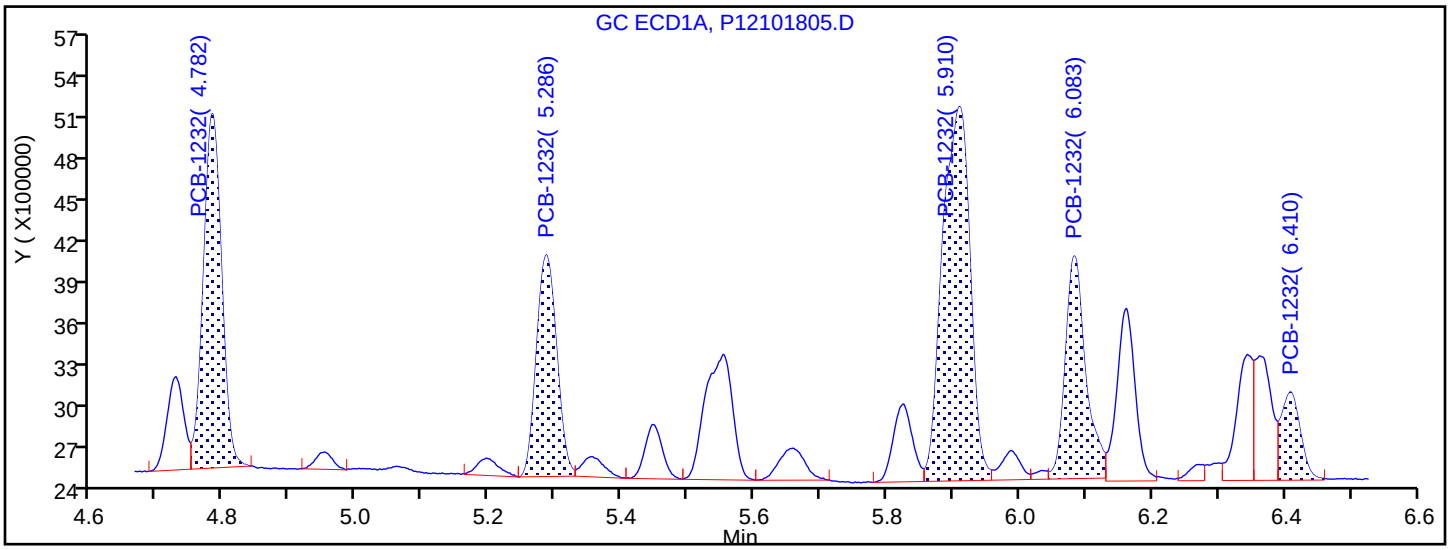
Column: Detector GC ECD1A

4 PCB-1232, CAS: 11141-16-5



Processing Integration Results

4.782	Response = 4801547
5.286	Response = 3330246
5.910	Response = 7664414
6.083	Response = 3389262
6.410	Response = 1109434



Manual Integration Results

4.782	Response = 4801547	
5.286	Response = 3330246	
5.910	Response = 7664414	
6.083	Response = 3389262	
6.410	Response = 1254215	M

Reviewer: hassl, 19-Oct-2018 07:21:28

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101806.D
Lims ID: std02 1232 1262
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-Oct-2018 15:57:22 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-006
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:10 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:17:15

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.939	2.930	0.009	119568060	0.0500	0.0500	
2	3.580	3.577	0.003	94110910	0.0500	0.0500	
4 PCB-1232							
1	4.782	4.784	-0.002	9212663	0.2000	0.2108	
1	5.285	5.287	-0.002	6457298	0.2000	0.2140	
1	5.910	5.912	-0.002	14905195	0.2000	0.2084	
1	6.084	6.085	-0.001	6685780	0.2000	0.2153	
1	6.409	6.408	0.001	2359617	0.2000	0.2129	
		Average of Peak Amounts =				0.2123	
2	5.755	5.756	-0.001	8252191	0.2000	0.2136	
2	6.335	6.335	0.000	6672967	0.2000	0.2176	
2	6.945	6.947	-0.002	12671027	0.2000	0.2105	
2	7.121	7.121	0.000	5412292	0.2000	0.2175	
2	7.442	7.438	0.004	3253023	0.2000	0.2343	
		Average of Peak Amounts =				0.2187	
						RPD = 2.97	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.120	8.122	-0.002	14683861	0.2000	0.1995	
1	8.454	8.455	-0.001	22310024	0.2000	0.2071	
1	9.199	9.199	0.000	26672988	0.2000	0.2060	
1	9.561	9.562	-0.001	60157522	0.2000	0.2023	
1	9.932	9.933	-0.001	26029312	0.2000	0.2077	
		Average of Peak Amounts =				0.2045	
2	9.521	9.522	-0.001	14249938	0.2000	0.2035	
2	10.051	10.052	-0.001	22138572	0.2000	0.2036	
2	10.383	10.382	0.001	19243460	0.2000	0.2112	
2	10.659	10.658	0.001	44594224	0.2000	0.2027	
2	11.027	11.027	0.000	32017229	0.2000	0.2041	
		Average of Peak Amounts =				0.2050	
						RPD = 0.24	

Reagents:

SG3262@.2PPM_00016 Amount Added: 1.00 Units: mL

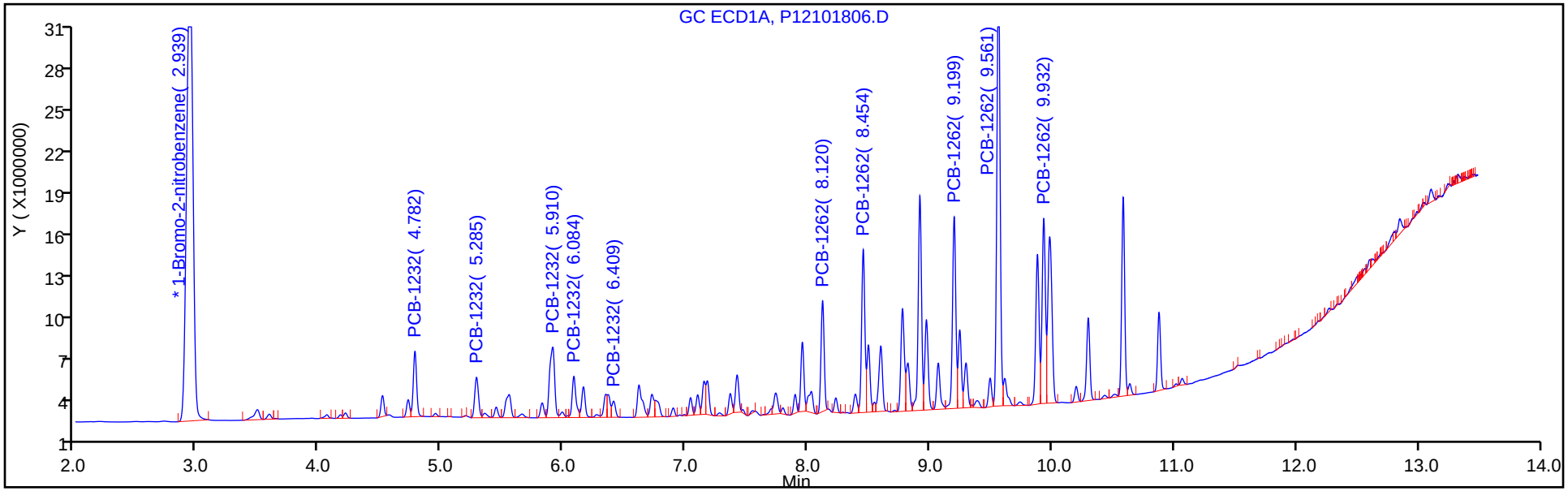
Report Date: 19-Oct-2018 13:36:12 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

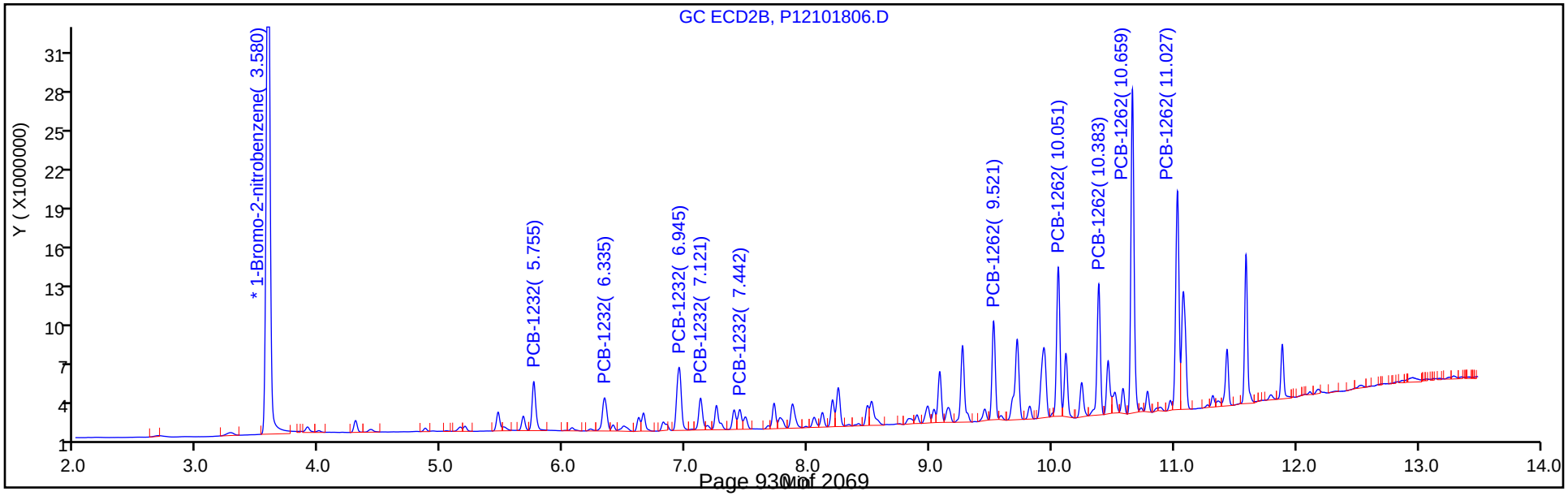
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101806.D

Injection Date:	18-Oct-2018 15:57:22	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std02 1232 1262			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101807.D
Lims ID: std05 1232 1262
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-Oct-2018 16:17:58 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-007
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:35:58 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 06:56:22

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.944	2.930	0.014	126174720	0.0500	0.0500	
2	3.583	3.577	0.007	99385349	0.0500	0.0500	
4 PCB-1232							M
1	4.782	4.784	-0.002	22158426	0.5000	0.4806	
1	5.286	5.287	-0.001	15330791	0.5000	0.4814	
1	5.910	5.912	-0.002	36797131	0.5000	0.4876	
1	6.083	6.085	-0.002	16030638	0.5000	0.4891	
1	6.410	6.408	0.002	5741272	0.5000	0.4910	
		Average of Peak Amounts =				0.4859	
2	5.756	5.756	0.000	18835372	0.5000	0.4617	
2	6.334	6.335	-0.001	15083739	0.5000	0.4657	M
2	6.946	6.947	-0.001	29761820	0.5000	0.4681	M
2	7.121	7.121	0.000	13840267	0.5000	0.5266	M
2	7.442	7.438	0.004	6790069	0.5000	0.5263	
		Average of Peak Amounts =				0.4897	
						RPD = 0.77	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.121	8.122	-0.001	36374183	0.5000	0.4682	
1	8.453	8.455	-0.002	53734547	0.5000	0.4726	
1	9.199	9.199	0.000	64360061	0.5000	0.4710	
1	9.561	9.562	-0.001	151931504	0.5000	0.4841	
1	9.932	9.933	-0.001	62893036	0.5000	0.4757	
		Average of Peak Amounts =				0.4743	
2	9.522	9.522	0.000	34936443	0.5000	0.4724	
2	10.051	10.052	-0.001	56504049	0.5000	0.4920	
2	10.382	10.382	0.000	46949775	0.5000	0.4879	
2	10.659	10.658	0.001	113442590	0.5000	0.4882	
2	11.028	11.027	0.001	80237968	0.5000	0.4843	
		Average of Peak Amounts =				0.4850	
						RPD = 2.22	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@0.5PPM_00030 Amount Added: 1.00 Units: mL

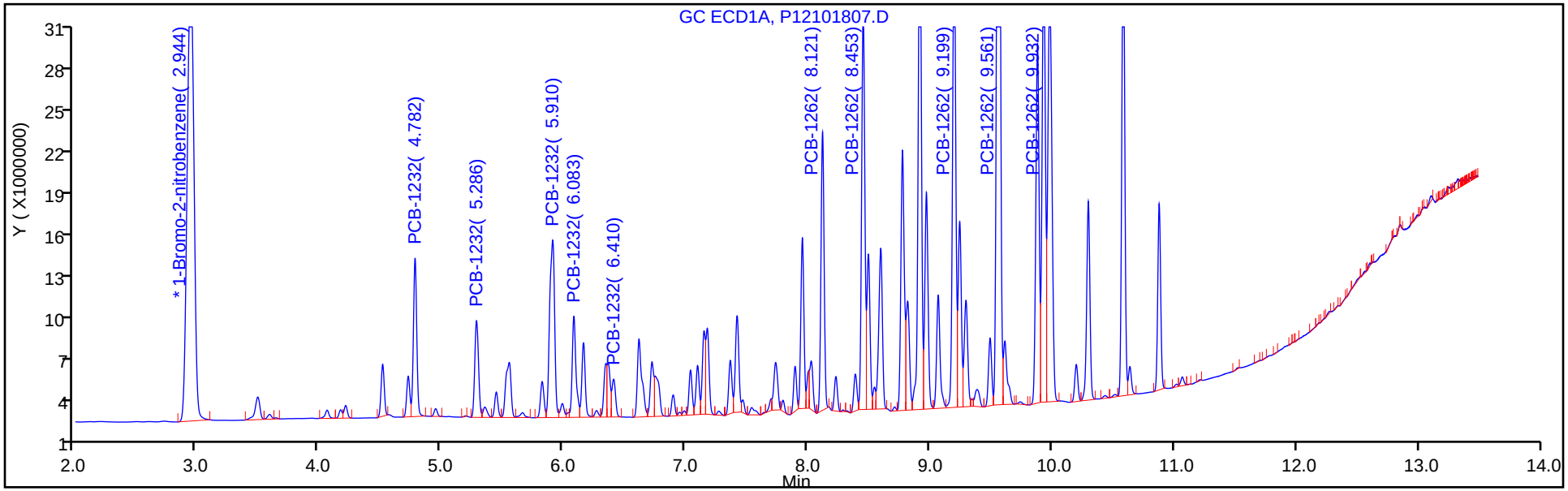
Report Date: 19-Oct-2018 13:36:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

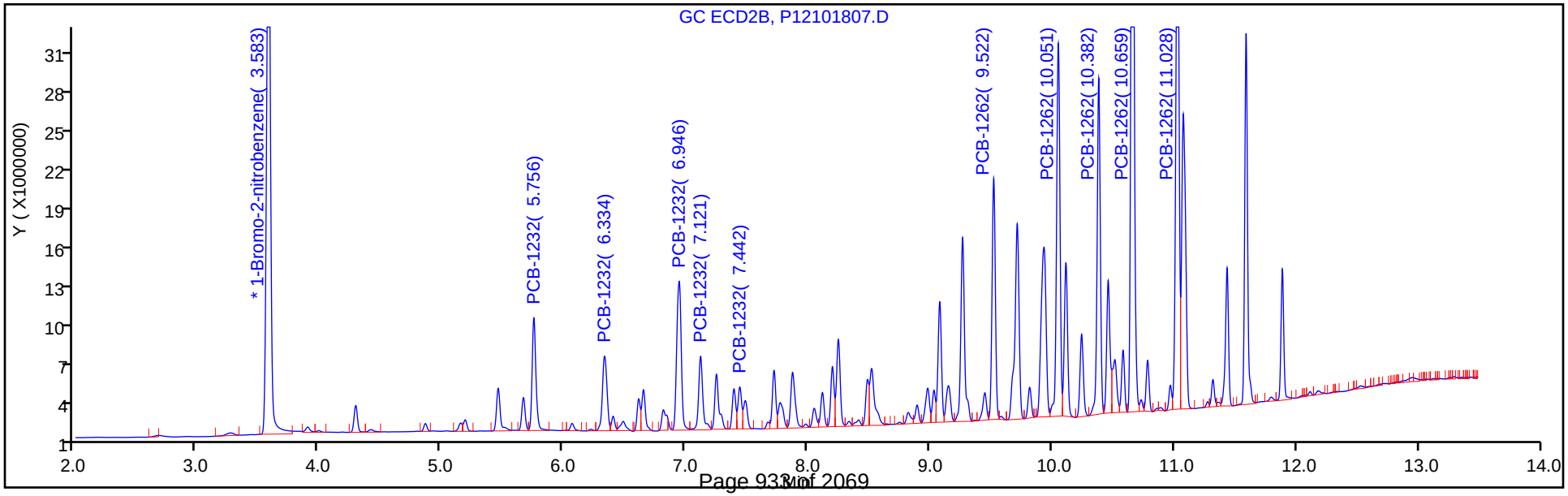
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101807.D

Injection Date:	18-Oct-2018 16:17:58	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std05 1232 1262			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101808.D
Lims ID: std1 1232 1262
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-Oct-2018 16:38:29 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-008
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:35:50 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 06:56:04

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.935	2.930	0.005	116305768	0.0500	0.0500	
2	3.580	3.577	0.003	91326727	0.0500	0.0500	
4 PCB-1232							M
1	4.781	4.784	-0.003	41104782	1.00	0.9671	
1	5.286	5.287	-0.001	28733645	1.00	0.9789	
1	5.910	5.912	-0.002	70331283	1.00	1.01	
1	6.083	6.085	-0.002	30016519	1.00	0.99	
1	6.408	6.408	0.000	10296114	1.00	0.9552	
		Average of Peak Amounts =				0.9811	
2	5.755	5.756	-0.001	34412249	1.00	0.9179	
2	6.335	6.335	0.000	27190001	1.00	0.9136	M
2	6.946	6.947	-0.001	55462149	1.00	0.9494	M
2	7.121	7.121	0.000	24251687	1.00	1.00	M
2	7.443	7.438	0.005	11959706	1.00	1.07	M
		Average of Peak Amounts =				0.9706	
						RPD = 1.08	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.120	8.122	-0.002	69215083	1.00	0.9666	
1	8.453	8.455	-0.002	103176558	1.00	0.9844	
1	9.197	9.199	-0.002	121411381	1.00	0.9639	
1	9.561	9.562	-0.001	295849456	1.00	1.02	
1	9.932	9.933	-0.001	118835445	1.00	0.9750	
		Average of Peak Amounts =				0.9825	
2	9.521	9.522	-0.001	67095450	1.00	0.9873	
2	10.051	10.052	-0.001	106643874	1.00	1.01	
2	10.382	10.382	0.000	90385405	1.00	1.02	
2	10.658	10.658	0.000	221946272	1.00	1.04	
2	11.028	11.027	0.001	156253154	1.00	1.03	
		Average of Peak Amounts =				1.02	
						RPD = 3.46	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@1.0PPM_00019 Amount Added: 1.00 Units: mL

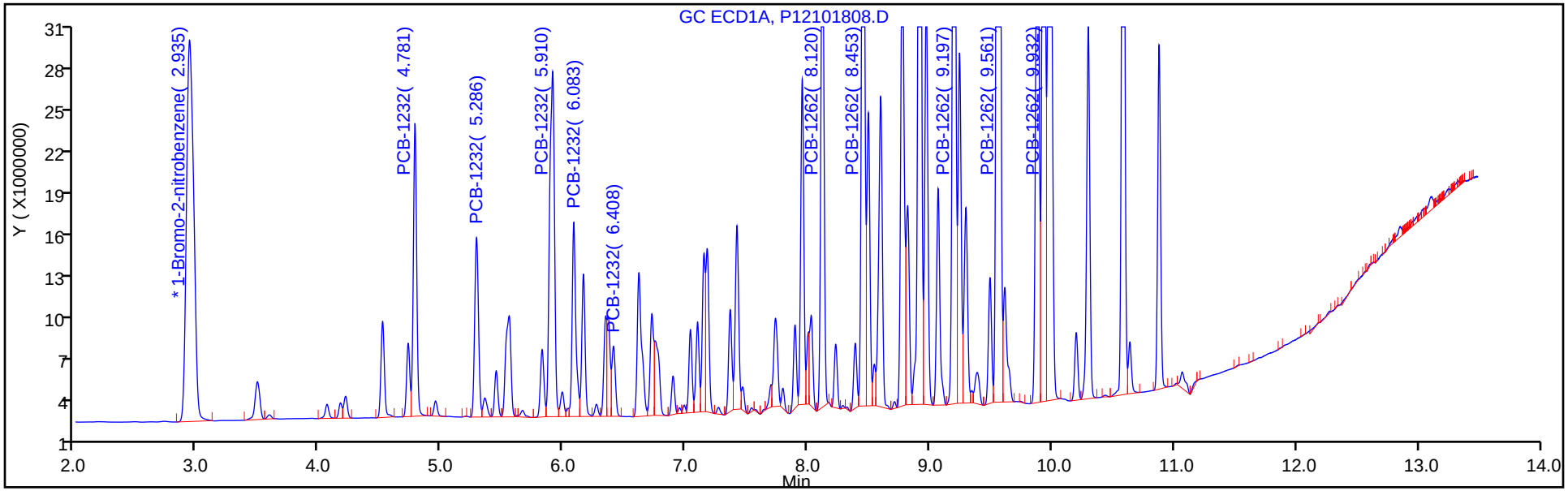
Report Date: 19-Oct-2018 13:35:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

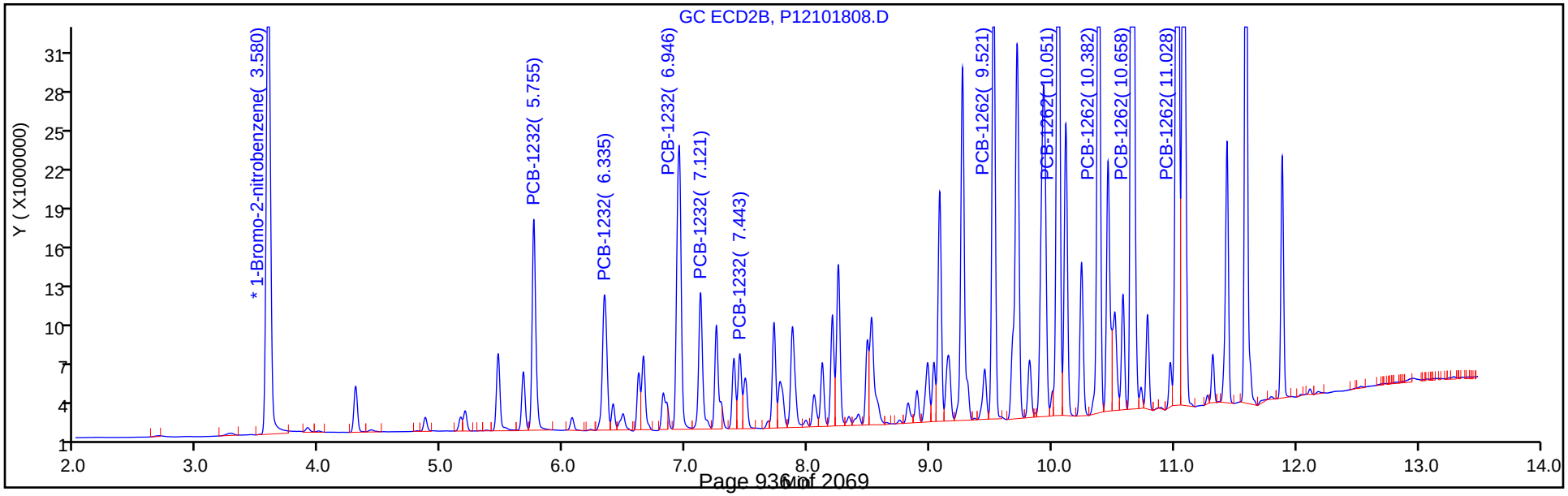
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101808.D

Injection Date:	18-Oct-2018 16:38:29	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std1 1232 1262			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101809.D
Lims ID: std15 1232 1262
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-Oct-2018 16:58:57 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-009
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:35:43 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:20:06

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.937	2.930	0.007	128809624	0.0500	0.0500	
2	3.580	3.577	0.004	100730242	0.0500	0.0500	
4 PCB-1232							
1	4.783	4.784	-0.001	62848029	1.50	1.34	
1	5.286	5.287	-0.001	43192378	1.50	1.33	
1	5.910	5.912	-0.002	108858245	1.50	1.41	
1	6.083	6.085	-0.002	46010556	1.50	1.38	
1	6.408	6.408	0.000	15822501	1.50	1.33	
		Average of Peak Amounts =				1.36	
2	5.756	5.756	0.000	51704608	1.50	1.25	
2	6.334	6.335	-0.001	40140099	1.50	1.22	
2	6.946	6.947	-0.001	83204509	1.50	1.29	
2	7.121	7.121	0.000	35005370	1.50	1.31	
2	7.443	7.438	0.005	16831009	1.50	1.38	
		Average of Peak Amounts =				1.29	
						RPD = 4.81	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.118	8.122	-0.004	109382273	1.50	1.38	
1	8.453	8.455	-0.002	159040322	1.50	1.37	
1	9.198	9.199	-0.001	190224270	1.50	1.36	
1	9.561	9.562	-0.001	470868483	1.50	1.47	
1	9.933	9.933	0.000	185607642	1.50	1.38	
		Average of Peak Amounts =				1.39	
2	9.522	9.522	0.000	103476819	1.50	1.38	
2	10.051	10.052	-0.001	164517187	1.50	1.41	
2	10.383	10.382	0.001	139836437	1.50	1.43	
2	10.659	10.658	0.001	348145006	1.50	1.48	
2	11.028	11.027	0.001	242785597	1.50	1.45	
		Average of Peak Amounts =				1.43	
						RPD = 2.75	

Reagents:

SG3262@1.5PPM_00004 Amount Added: 1.00 Units: mL

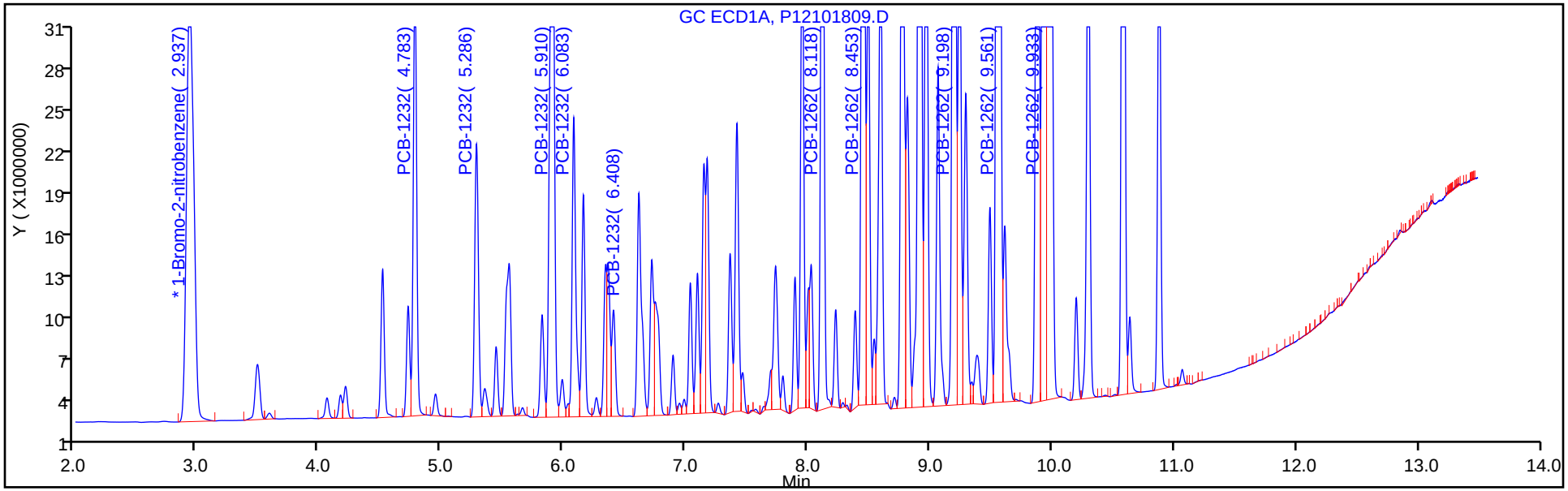
Report Date: 19-Oct-2018 13:35:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

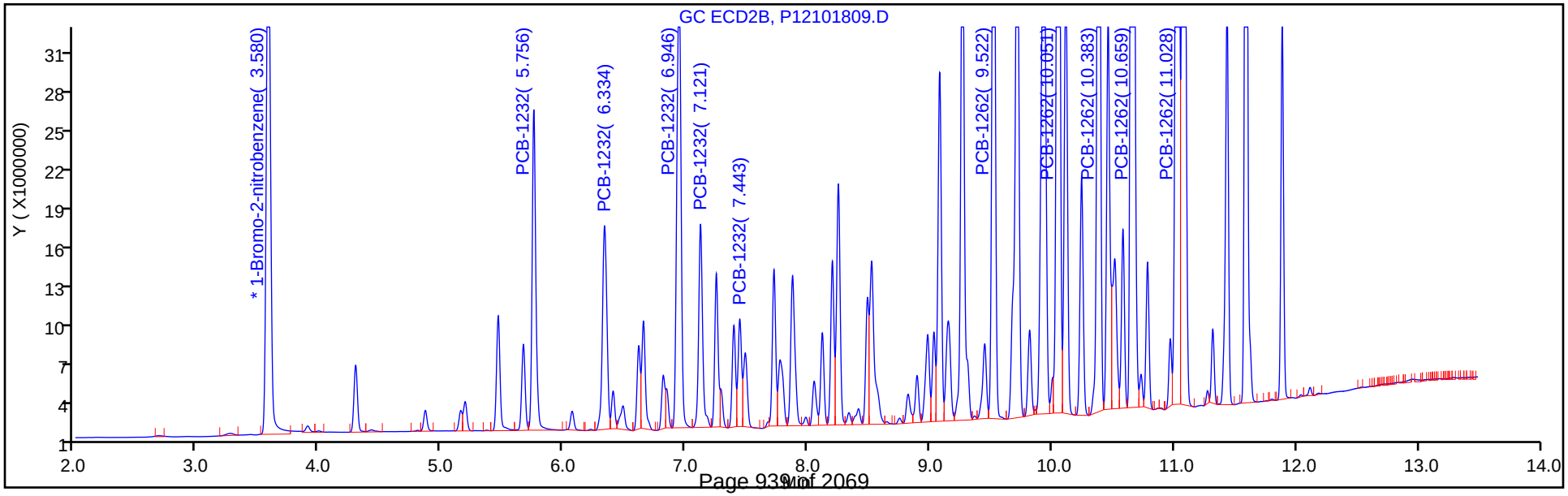
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101809.D

Injection Date:	18-Oct-2018 16:58:57	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std15 1232 1262			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-104089-1 | Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 | GC Column: CLP-2 (0.53 ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 15:16 | Calibration End Date: 10/18/2018 16:58 | Calibration ID: 47582

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/4	P12101804.D
Level 2	STD01 240-350710/5	P12101805.D
Level 3	STD02 240-350710/6	P12101806.D
Level 4	STD05 240-350710/7	P12101807.D
Level 5	STD1 240-350710/8	P12101808.D
Level 6	STD15 240-350710/9	P12101809.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1232 Peak 1	0.0234 0.0171	0.0229	0.0219	0.0190	0.0188	Ave		0.0205				12.5		20.0			
PCB-1232 Peak 2	0.0187 0.0133	0.0179	0.0177	0.0152	0.0149	Ave		0.0163				13.2		20.0			
PCB-1232 Peak 3	0.0360 0.0275	0.0344	0.0337	0.0299	0.0304	Ave		0.0320				10.0		20.0			
PCB-1232 Peak 4	0.0130 0.0116	0.0131	0.0144	0.0139	0.0133	Ave		0.0132				7.2		20.0			
PCB-1232 Peak 5	0.0118 0.0056	0.0097	0.0086	0.0068	0.0065	Lin1	0.0004	0.0058							0.9900		0.9900
PCB-1262 Peak 1	0.0414 0.0342	0.0379	0.0379	0.0352	0.0367	Ave		0.0372				6.7		20.0			
PCB-1262 Peak 2	0.0590 0.0544	0.0591	0.0588	0.0569	0.0584	Ave		0.0578				3.2		20.0			
PCB-1262 Peak 3	0.0482 0.0463	0.0481	0.0511	0.0472	0.0495	Ave		0.0484				3.5		20.0			
PCB-1262 Peak 4	0.1167 0.1152	0.1154	0.1185	0.1141	0.1215	Ave		0.1169				2.3		20.0			
PCB-1262 Peak 5	0.0846 0.0803	0.0838	0.0851	0.0807	0.0855	Ave		0.0834				2.7		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 15:16 Calibration End Date: 10/18/2018 16:58 Calibration ID: 47582

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/4	P12101804.D
Level 2	STD01 240-350710/5	P12101805.D
Level 3	STD02 240-350710/6	P12101806.D
Level 4	STD05 240-350710/7	P12101807.D
Level 5	STD1 240-350710/8	P12101808.D
Level 6	STD15 240-350710/9	P12101809.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1232 Peak 1	BNB	Ave	2194447 51704608	4487957	8252191	18835372	34412249	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 2	BNB	Ave	1756995 40140099	3514262	6672967	15083739	27190001	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 3	BNB	Ave	3378133 83204509	6728008	12671027	29761820	55462149	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 4	BNB	Ave	1222998 35005370	2570004	5412292	13840267	24251687	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 5	BNB	Lin1	1108494 16831009	1901946	3253023	6790069	11959706	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 1	BNB	Ave	3878560 103476819	7415759	14249938	34936443	67095450	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 2	BNB	Ave	5532558 164517187	11578536	22138572	56504049	106643874	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 3	BNB	Ave	4519467 139836437	9421652	19243460	46949775	90385405	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 4	BNB	Ave	10937206 348145006	22606426	44594224	113442590	221946272	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 5	BNB	Ave	7930237 242785597	16416952	32017229	80237968	156253154	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101804.D
Lims ID: std005 1232 1262
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Oct-2018 15:16:26 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-004
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:28 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:19:29

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.942	2.930	0.013	117951796	0.0500	0.0500	
2	3.581	3.577	0.004	93741065	0.0500	0.0500	
4 PCB-1232							M
1	4.784	4.784	0.000	2305732	0.0500	0.0535	
1	5.287	5.287	0.000	1548280	0.0500	0.0520	
1	5.912	5.912	0.000	3521374	0.0500	0.0499	
1	6.085	6.085	0.000	1508695	0.0500	0.0492	M
1	6.408	6.408	0.000	560288	0.0500	0.0513	M
		Average of Peak Amounts =				0.0512	
2	5.756	5.756	0.000	2194447	0.0500	0.0570	
2	6.335	6.335	0.000	1756995	0.0500	0.0575	
2	6.947	6.947	0.000	3378133	0.0500	0.0563	
2	7.121	7.121	0.000	1222998	0.0500	0.0493	
2	7.438	7.438	0.000	1108494	0.0500	0.0377	
		Average of Peak Amounts =				0.0516	
					RPD =	0.77	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.122	8.122	0.000	4047809	0.0500	0.0557	
1	8.455	8.455	0.000	5743941	0.0500	0.0540	
1	9.199	9.199	0.000	7144909	0.0500	0.0559	
1	9.562	9.562	0.000	14995480	0.0500	0.0511	
1	9.933	9.933	0.000	6663650	0.0500	0.0539	
		Average of Peak Amounts =				0.0541	
2	9.522	9.522	0.000	3878560	0.0500	0.0556	
2	10.052	10.052	0.000	5532558	0.0500	0.0511	
2	10.382	10.382	0.000	4519467	0.0500	0.0498	
2	10.658	10.658	0.000	10937206	0.0500	0.0499	
2	11.027	11.027	0.000	7930237	0.0500	0.0507	
		Average of Peak Amounts =				0.0514	
						RPD = 5.16	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@.05PPM_00013 Amount Added: 1.00 Units: mL

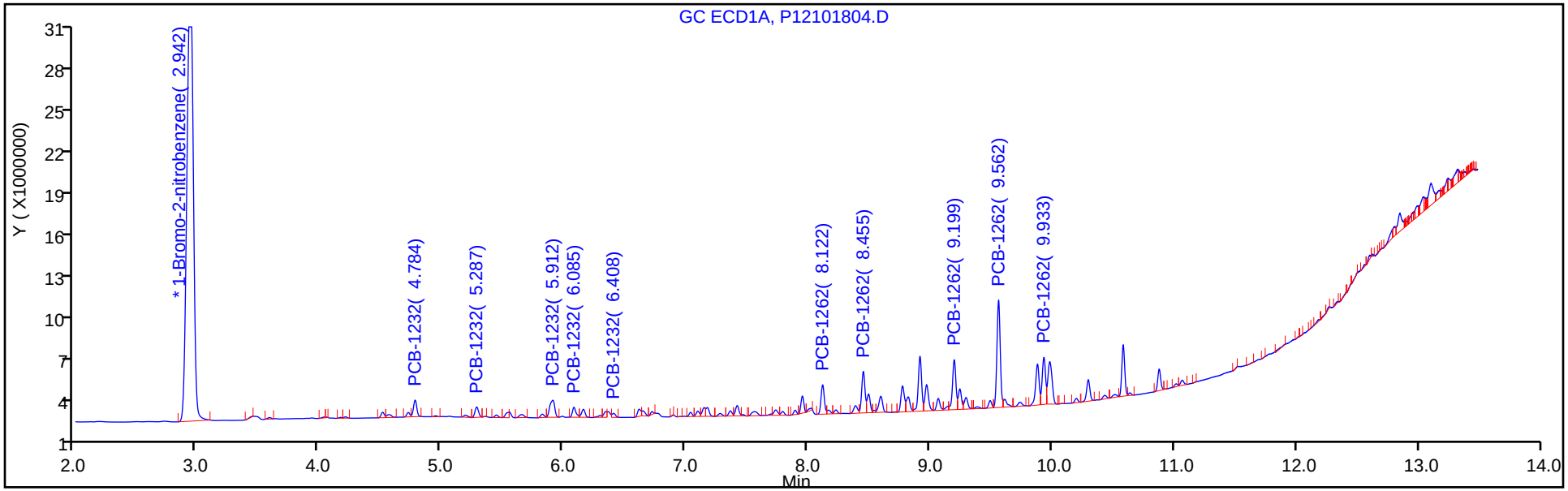
Report Date: 19-Oct-2018 13:36:31 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

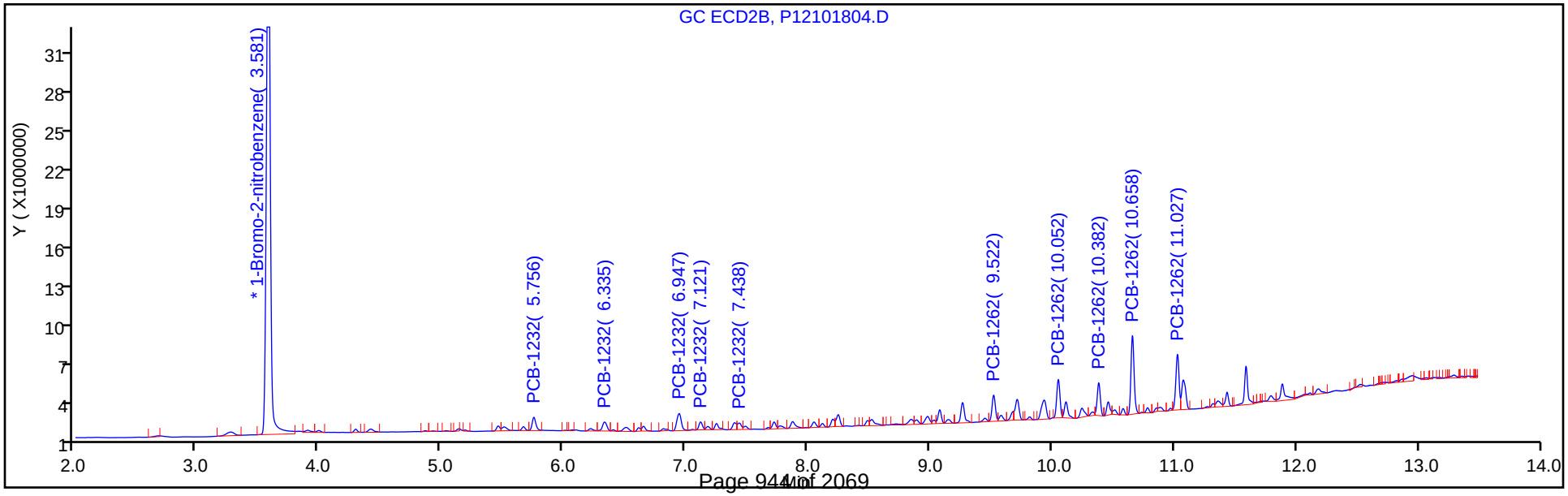
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101804.D

Injection Date:	18-Oct-2018 15:16:26	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std005 1232 1262			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101805.D
Lims ID: std01 1232 1262
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Oct-2018 15:36:55 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-005
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:18 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:21:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.943	2.930	0.013	124214806	0.0500	0.0500	
2	3.581	3.577	0.005	97905789	0.0500	0.0500	
4 PCB-1232							M
1	4.782	4.784	-0.002	4801547	0.1000	0.1058	
1	5.286	5.287	-0.001	3330246	0.1000	0.1062	
1	5.910	5.912	-0.002	7664414	0.1000	0.1032	
1	6.083	6.085	-0.002	3389262	0.1000	0.1050	
1	6.410	6.408	0.002	1254215	0.1000	0.1089	M
		Average of Peak Amounts =				0.1058	
2	5.755	5.756	-0.001	4487957	0.1000	0.1117	
2	6.335	6.335	0.000	3514262	0.1000	0.1101	
2	6.945	6.947	-0.002	6728008	0.1000	0.1074	
2	7.120	7.121	-0.001	2570004	0.1000	0.0993	
2	7.440	7.438	0.002	1901946	0.1000	0.1034	
		Average of Peak Amounts =				0.1064	
					RPD =	0.52	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.121	8.122	-0.001	8146593	0.1000	0.1065	
1	8.453	8.455	-0.002	11650282	0.1000	0.1041	
1	9.199	9.199	0.000	13939837	0.1000	0.1036	
1	9.562	9.562	0.000	30760287	0.1000	0.0996	
1	9.933	9.933	0.000	13536389	0.1000	0.1040	
		Average of Peak Amounts =				0.1036	
2	9.522	9.522	0.000	7415759	0.1000	0.1018	
2	10.051	10.052	-0.001	11578536	0.1000	0.1023	
2	10.382	10.382	0.000	9421652	0.1000	0.0994	
2	10.659	10.658	0.001	22606426	0.1000	0.0988	
2	11.027	11.027	0.000	16416952	0.1000	0.1006	
		Average of Peak Amounts =				0.1006	
						RPD = 2.92	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@0.1PPM_00014 Amount Added: 1.00 Units: mL

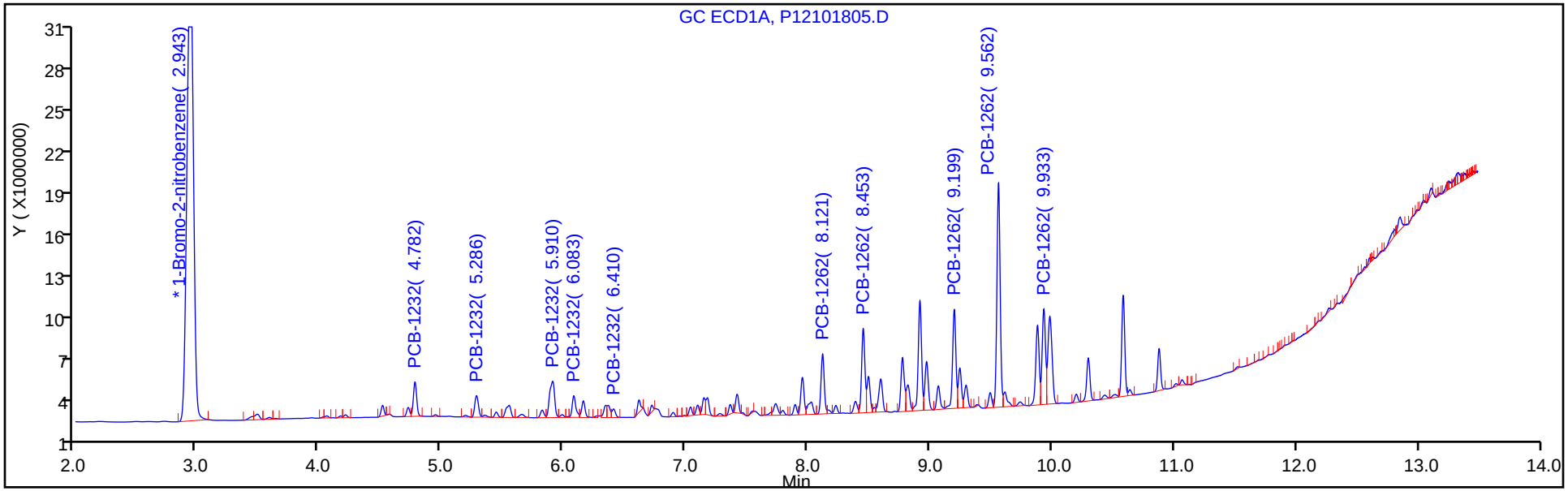
Report Date: 19-Oct-2018 13:36:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

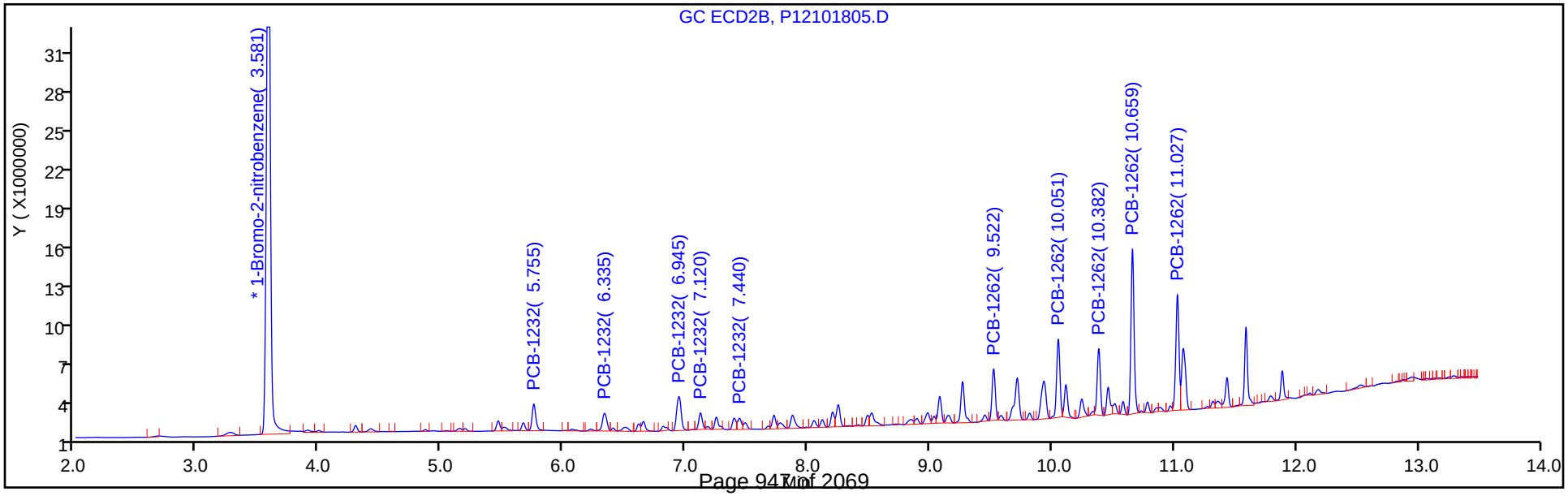
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101805.D

Injection Date:	18-Oct-2018 15:36:55	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std01 1232 1262			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101806.D
Lims ID: std02 1232 1262
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-Oct-2018 15:57:22 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-006
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:10 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:17:15

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.939	2.930	0.009	119568060	0.0500	0.0500	
2	3.580	3.577	0.003	94110910	0.0500	0.0500	
4 PCB-1232							
1	4.782	4.784	-0.002	9212663	0.2000	0.2108	
1	5.285	5.287	-0.002	6457298	0.2000	0.2140	
1	5.910	5.912	-0.002	14905195	0.2000	0.2084	
1	6.084	6.085	-0.001	6685780	0.2000	0.2153	
1	6.409	6.408	0.001	2359617	0.2000	0.2129	
		Average of Peak Amounts =				0.2123	
2	5.755	5.756	-0.001	8252191	0.2000	0.2136	
2	6.335	6.335	0.000	6672967	0.2000	0.2176	
2	6.945	6.947	-0.002	12671027	0.2000	0.2105	
2	7.121	7.121	0.000	5412292	0.2000	0.2175	
2	7.442	7.438	0.004	3253023	0.2000	0.2343	
		Average of Peak Amounts =				0.2187	
						RPD = 2.97	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.120	8.122	-0.002	14683861	0.2000	0.1995	
1	8.454	8.455	-0.001	22310024	0.2000	0.2071	
1	9.199	9.199	0.000	26672988	0.2000	0.2060	
1	9.561	9.562	-0.001	60157522	0.2000	0.2023	
1	9.932	9.933	-0.001	26029312	0.2000	0.2077	
		Average of Peak Amounts =				0.2045	
2	9.521	9.522	-0.001	14249938	0.2000	0.2035	
2	10.051	10.052	-0.001	22138572	0.2000	0.2036	
2	10.383	10.382	0.001	19243460	0.2000	0.2112	
2	10.659	10.658	0.001	44594224	0.2000	0.2027	
2	11.027	11.027	0.000	32017229	0.2000	0.2041	
		Average of Peak Amounts =				0.2050	
						RPD = 0.24	

Reagents:

SG3262@.2PPM_00016 Amount Added: 1.00 Units: mL

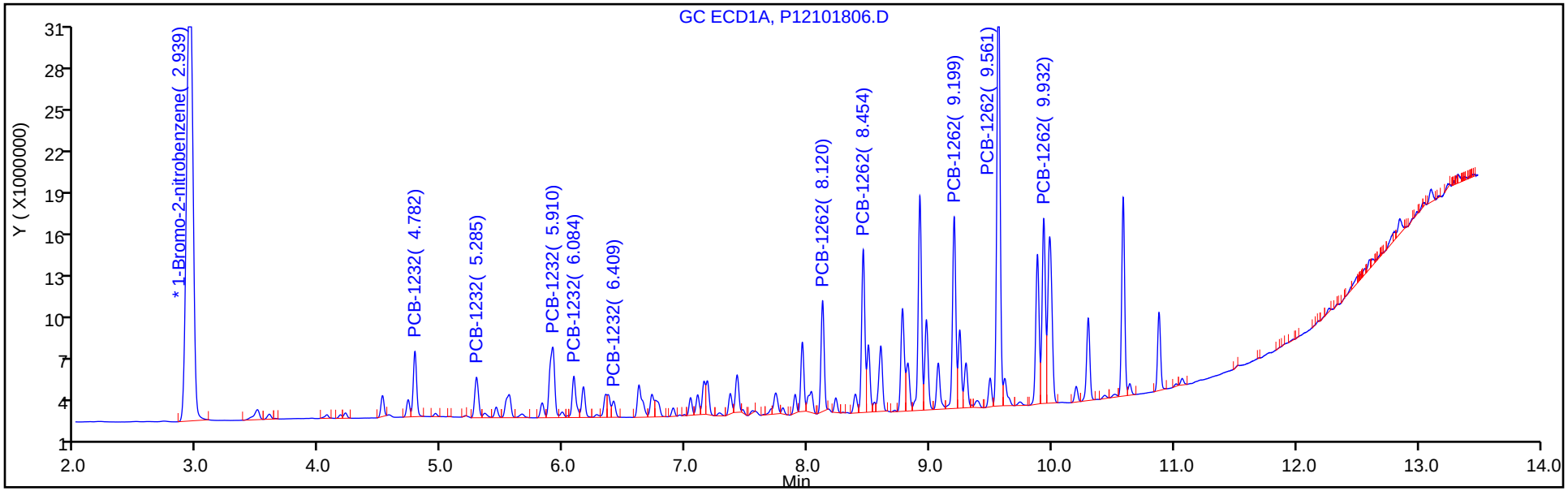
Report Date: 19-Oct-2018 13:36:12 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

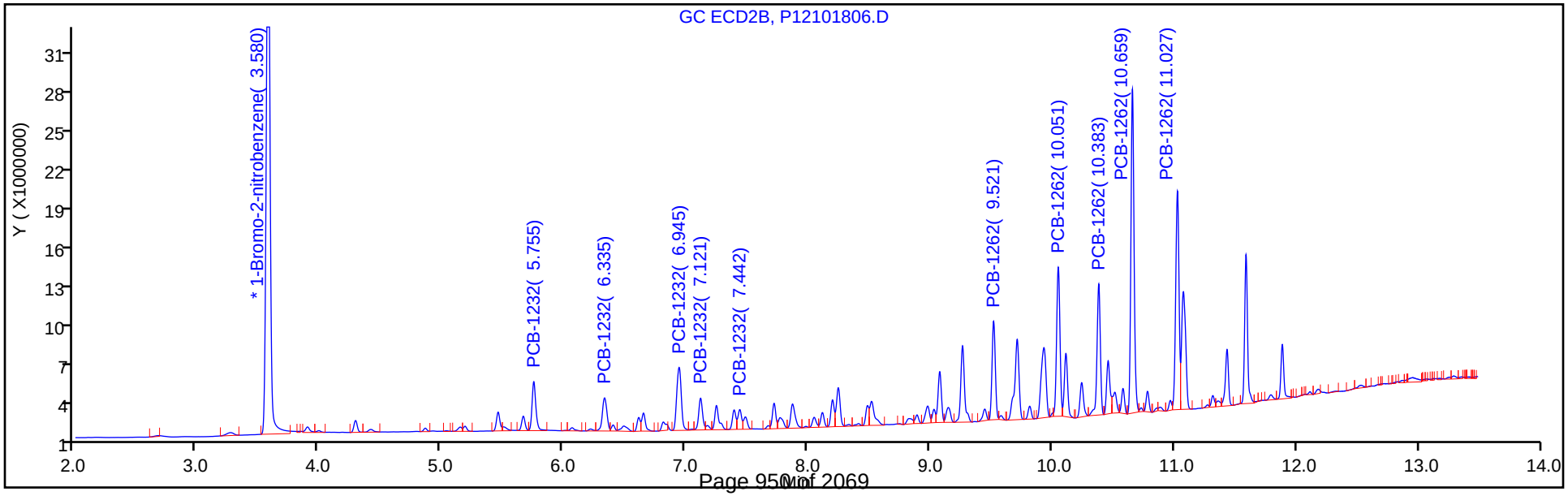
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101806.D

Injection Date:	18-Oct-2018 15:57:22	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std02 1232 1262			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101807.D
Lims ID: std05 1232 1262
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-Oct-2018 16:17:58 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-007
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:35:58 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 06:56:22

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.944	2.930	0.014	126174720	0.0500	0.0500	
2	3.583	3.577	0.007	99385349	0.0500	0.0500	
4 PCB-1232							M
1	4.782	4.784	-0.002	22158426	0.5000	0.4806	
1	5.286	5.287	-0.001	15330791	0.5000	0.4814	
1	5.910	5.912	-0.002	36797131	0.5000	0.4876	
1	6.083	6.085	-0.002	16030638	0.5000	0.4891	
1	6.410	6.408	0.002	5741272	0.5000	0.4910	
		Average of Peak Amounts =				0.4859	
2	5.756	5.756	0.000	18835372	0.5000	0.4617	
2	6.334	6.335	-0.001	15083739	0.5000	0.4657	M
2	6.946	6.947	-0.001	29761820	0.5000	0.4681	M
2	7.121	7.121	0.000	13840267	0.5000	0.5266	M
2	7.442	7.438	0.004	6790069	0.5000	0.5263	
		Average of Peak Amounts =				0.4897	
						RPD = 0.77	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.121	8.122	-0.001	36374183	0.5000	0.4682	
1	8.453	8.455	-0.002	53734547	0.5000	0.4726	
1	9.199	9.199	0.000	64360061	0.5000	0.4710	
1	9.561	9.562	-0.001	151931504	0.5000	0.4841	
1	9.932	9.933	-0.001	62893036	0.5000	0.4757	
		Average of Peak Amounts =				0.4743	
2	9.522	9.522	0.000	34936443	0.5000	0.4724	
2	10.051	10.052	-0.001	56504049	0.5000	0.4920	
2	10.382	10.382	0.000	46949775	0.5000	0.4879	
2	10.659	10.658	0.001	113442590	0.5000	0.4882	
2	11.028	11.027	0.001	80237968	0.5000	0.4843	
		Average of Peak Amounts =				0.4850	
						RPD = 2.22	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@0.5PPM_00030 Amount Added: 1.00 Units: mL

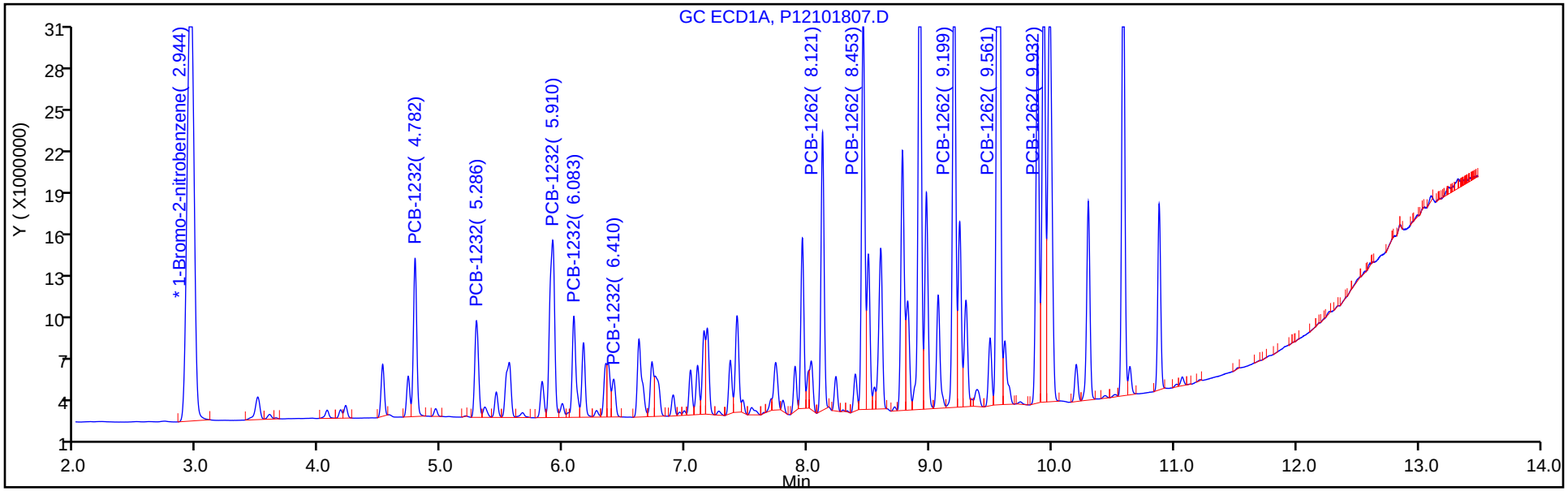
Report Date: 19-Oct-2018 13:36:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

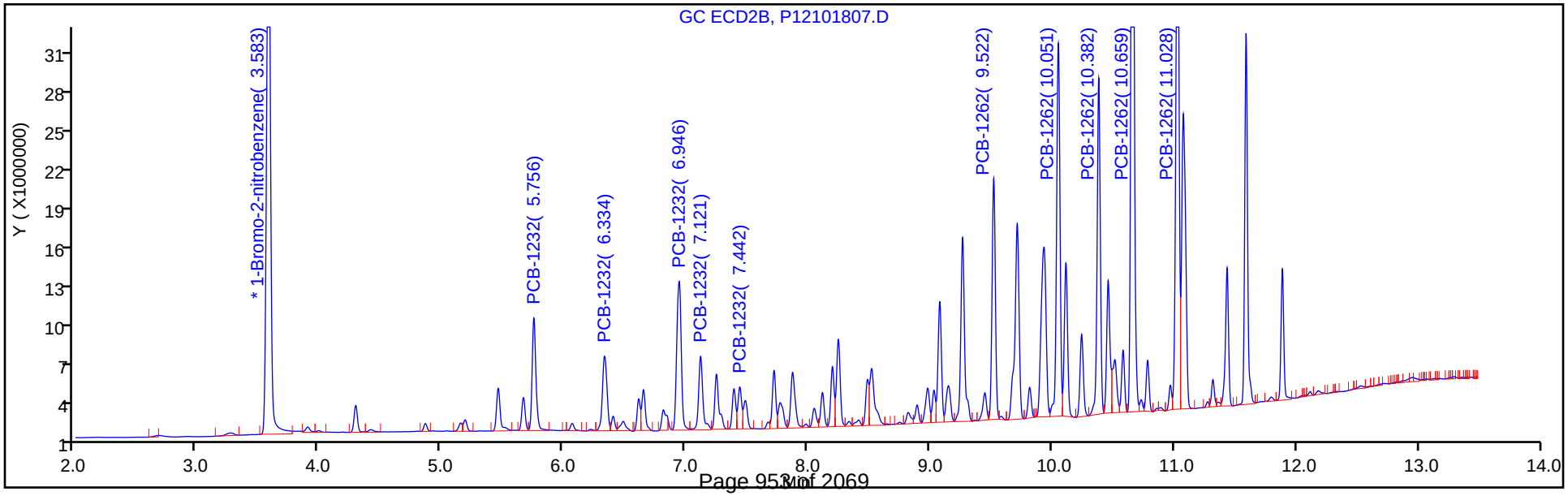
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101807.D

Injection Date:	18-Oct-2018 16:17:58	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std05 1232 1262			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 19-Oct-2018 13:36:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101807.D

Injection Date: 18-Oct-2018 16:17:58 Instrument ID: A2HP12

Lims ID: std05 1232 1262

Client ID:

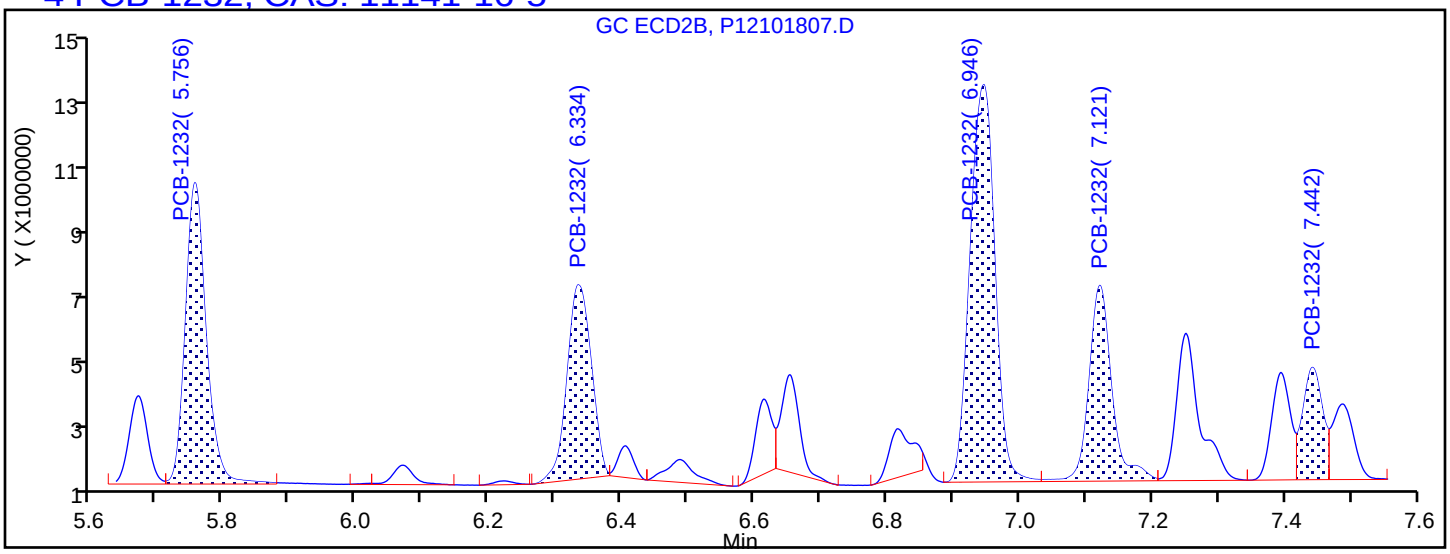
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

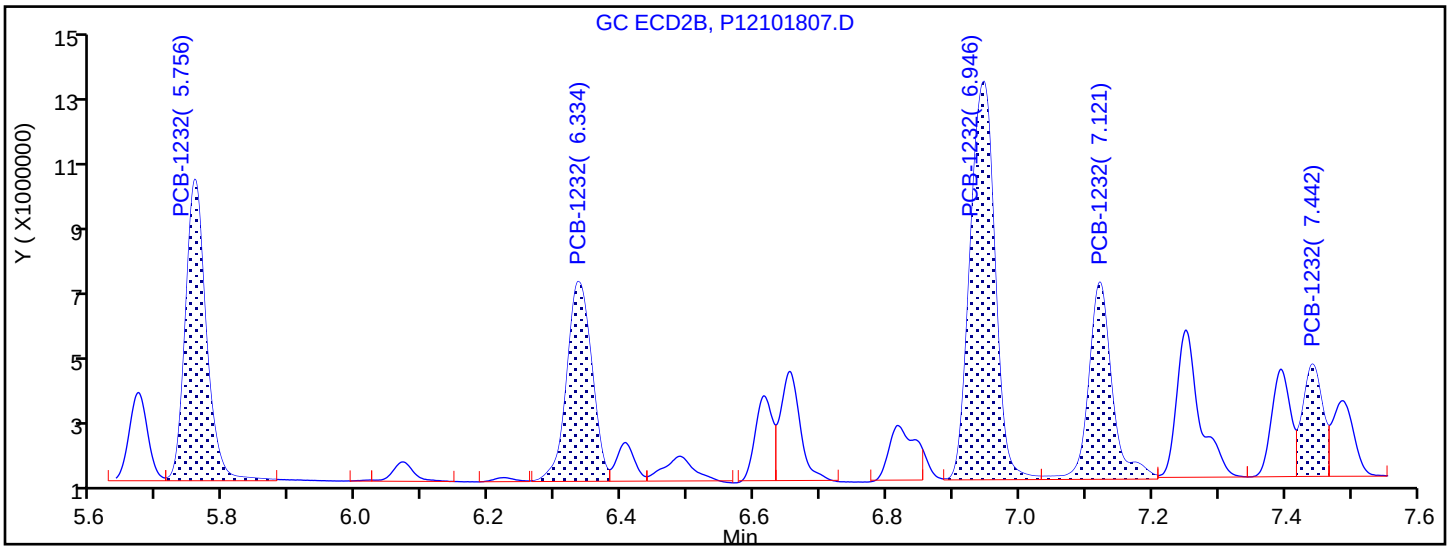
Column: Detector GC ecd2b

4 PCB-1232, CAS: 11141-16-5



Processing Integration Results

5.756	Response = 18835372	
6.334	Response = 14127216	
6.946	Response = 29478102	
7.121	Response = 13397294	
7.442	Response = 6790069	



Manual Integration Results

5.756	Response = 18835372	
6.334	Response = 15083739	M
6.946	Response = 29761820	M
7.121	Response = 13840267	M
7.442	Response = 6790069	

Reviewer: hassl, 19-Oct-2018 07:20:47

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101808.D
Lims ID: std1 1232 1262
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-Oct-2018 16:38:29 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-008
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:35:50 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 06:56:04

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.935	2.930	0.005	116305768	0.0500	0.0500	
2	3.580	3.577	0.003	91326727	0.0500	0.0500	
4 PCB-1232							M
1	4.781	4.784	-0.003	41104782	1.00	0.9671	
1	5.286	5.287	-0.001	28733645	1.00	0.9789	
1	5.910	5.912	-0.002	70331283	1.00	1.01	
1	6.083	6.085	-0.002	30016519	1.00	0.99	
1	6.408	6.408	0.000	10296114	1.00	0.9552	
		Average of Peak Amounts =				0.9811	
2	5.755	5.756	-0.001	34412249	1.00	0.9179	
2	6.335	6.335	0.000	27190001	1.00	0.9136	M
2	6.946	6.947	-0.001	55462149	1.00	0.9494	M
2	7.121	7.121	0.000	24251687	1.00	1.00	M
2	7.443	7.438	0.005	11959706	1.00	1.07	M
		Average of Peak Amounts =				0.9706	
						RPD = 1.08	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.120	8.122	-0.002	69215083	1.00	0.9666	
1	8.453	8.455	-0.002	103176558	1.00	0.9844	
1	9.197	9.199	-0.002	121411381	1.00	0.9639	
1	9.561	9.562	-0.001	295849456	1.00	1.02	
1	9.932	9.933	-0.001	118835445	1.00	0.9750	
		Average of Peak Amounts =				0.9825	
2	9.521	9.522	-0.001	67095450	1.00	0.9873	
2	10.051	10.052	-0.001	106643874	1.00	1.01	
2	10.382	10.382	0.000	90385405	1.00	1.02	
2	10.658	10.658	0.000	221946272	1.00	1.04	
2	11.028	11.027	0.001	156253154	1.00	1.03	
		Average of Peak Amounts =				1.02	
						RPD = 3.46	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@1.0PPM_00019 Amount Added: 1.00 Units: mL

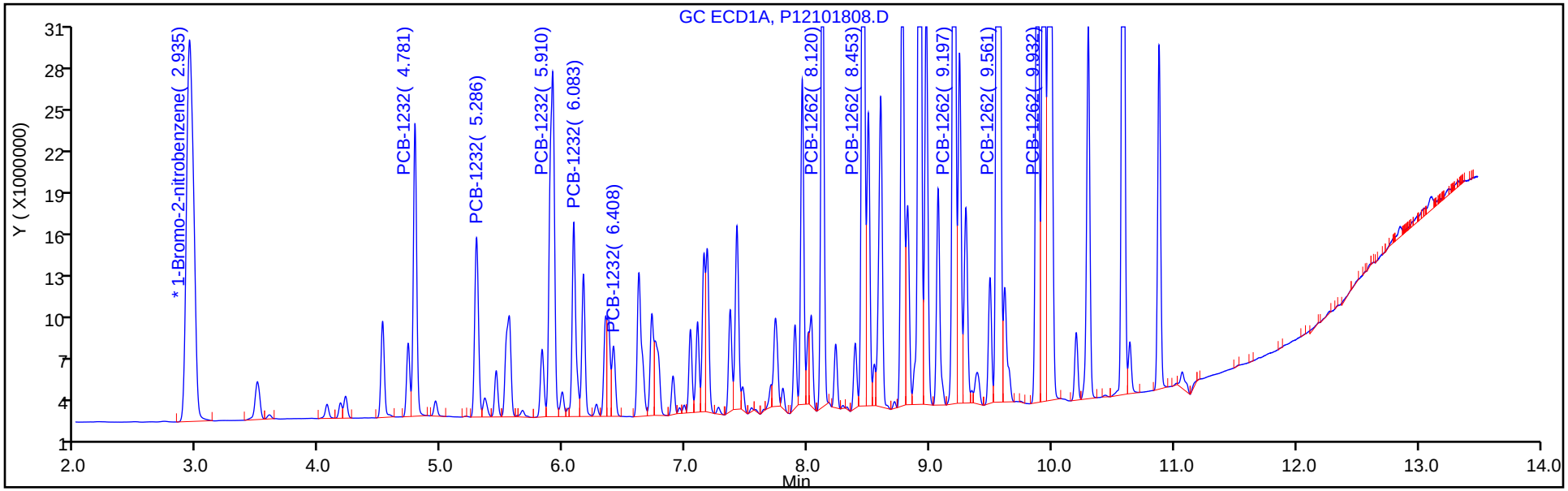
Report Date: 19-Oct-2018 13:35:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

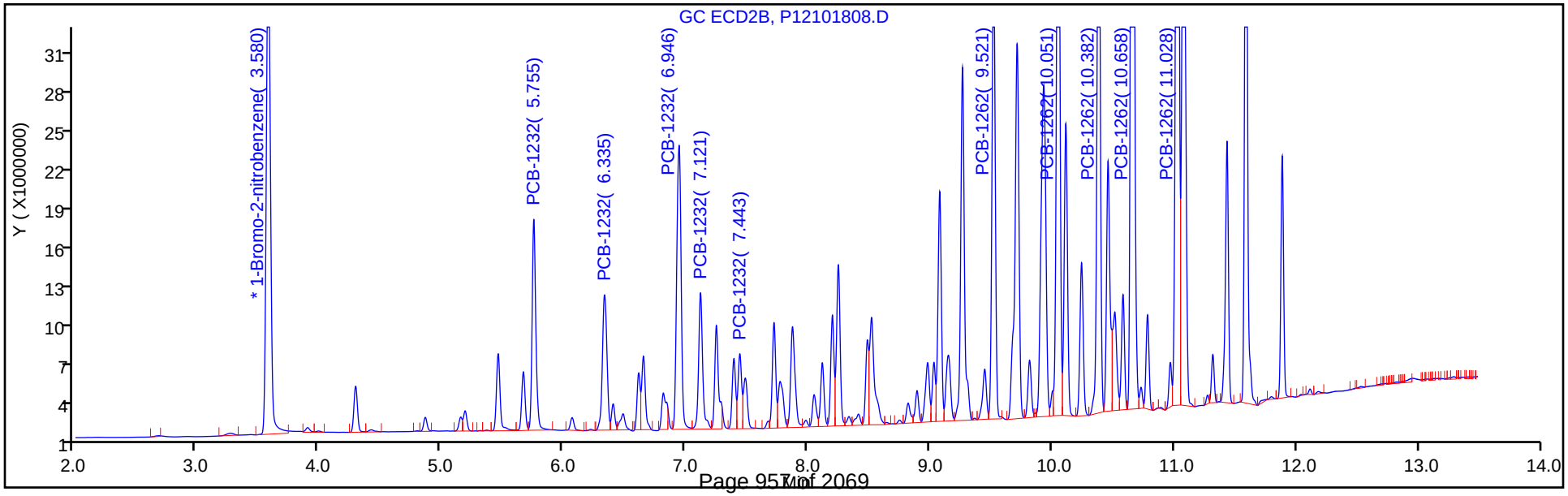
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101808.D

Injection Date:	18-Oct-2018 16:38:29	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std1 1232 1262			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 19-Oct-2018 13:35:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101808.D

Injection Date: 18-Oct-2018 16:38:29 Instrument ID: A2HP12

Lims ID: std1 1232 1262

Client ID:

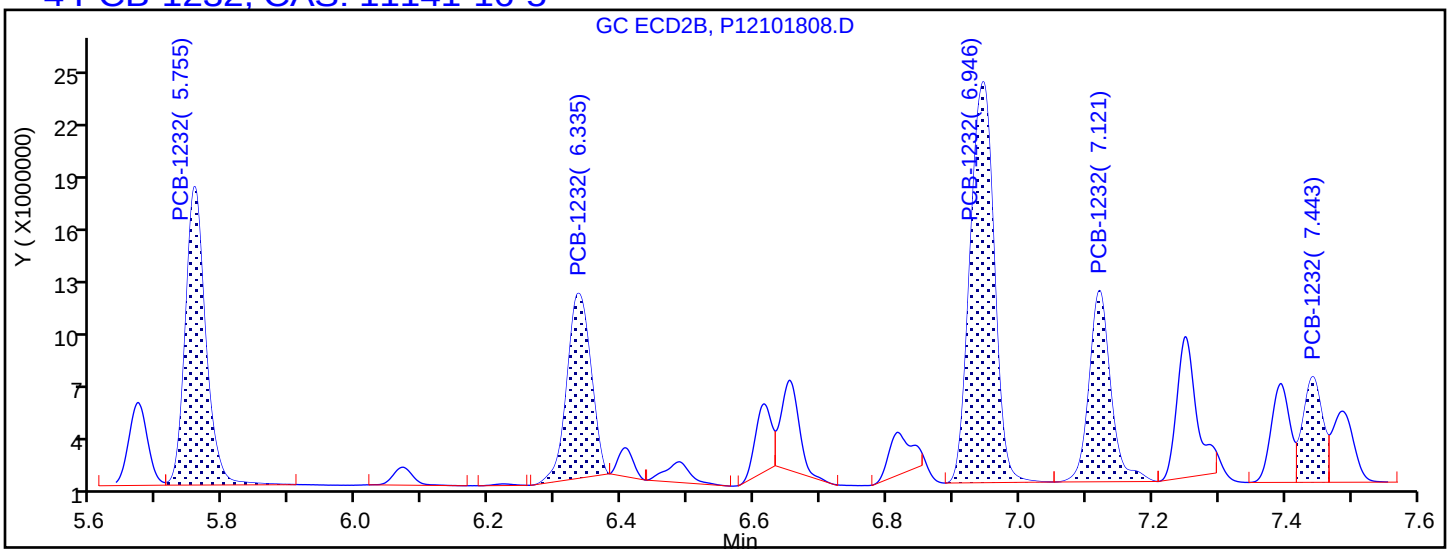
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

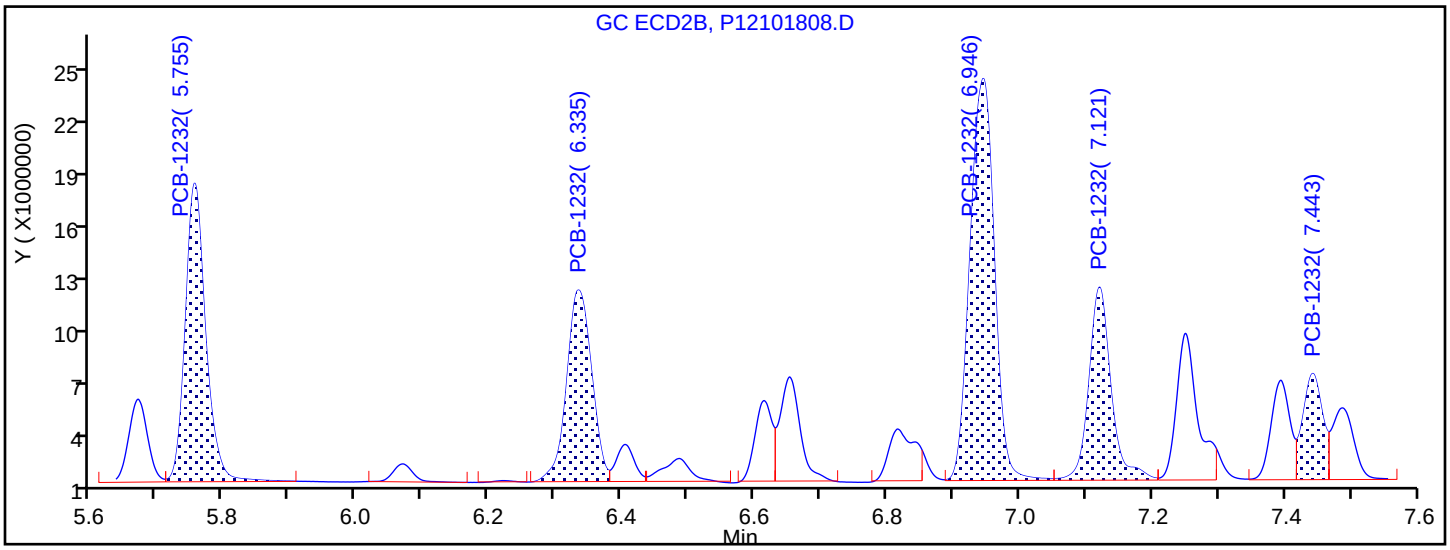
Column: Detector GC ecd2b

4 PCB-1232, CAS: 11141-16-5



Processing Integration Results

5.755	Response = 34412249
6.335	Response = 25107803
6.946	Response = 54803228
7.121	Response = 23366160
7.443	Response = 11864319



Manual Integration Results

5.755	Response = 34412249	
6.335	Response = 27190001	M
6.946	Response = 55462149	M
7.121	Response = 24251687	M
7.443	Response = 11959706	M

Reviewer: hassl, 19-Oct-2018 07:20:31

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101809.D
Lims ID: std15 1232 1262
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-Oct-2018 16:58:57 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-009
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:35:43 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:20:06

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.937	2.930	0.007	128809624	0.0500	0.0500	
2	3.580	3.577	0.004	100730242	0.0500	0.0500	
4 PCB-1232							
1	4.783	4.784	-0.001	62848029	1.50	1.34	
1	5.286	5.287	-0.001	43192378	1.50	1.33	
1	5.910	5.912	-0.002	108858245	1.50	1.41	
1	6.083	6.085	-0.002	46010556	1.50	1.38	
1	6.408	6.408	0.000	15822501	1.50	1.33	
		Average of Peak Amounts =				1.36	
2	5.756	5.756	0.000	51704608	1.50	1.25	
2	6.334	6.335	-0.001	40140099	1.50	1.22	
2	6.946	6.947	-0.001	83204509	1.50	1.29	
2	7.121	7.121	0.000	35005370	1.50	1.31	
2	7.443	7.438	0.005	16831009	1.50	1.38	
		Average of Peak Amounts =				1.29	
						RPD = 4.81	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.118	8.122	-0.004	109382273	1.50	1.38	
1	8.453	8.455	-0.002	159040322	1.50	1.37	
1	9.198	9.199	-0.001	190224270	1.50	1.36	
1	9.561	9.562	-0.001	470868483	1.50	1.47	
1	9.933	9.933	0.000	185607642	1.50	1.38	
		Average of Peak Amounts =				1.39	
2	9.522	9.522	0.000	103476819	1.50	1.38	
2	10.051	10.052	-0.001	164517187	1.50	1.41	
2	10.383	10.382	0.001	139836437	1.50	1.43	
2	10.659	10.658	0.001	348145006	1.50	1.48	
2	11.028	11.027	0.001	242785597	1.50	1.45	
		Average of Peak Amounts =				1.43	
						RPD = 2.75	

Reagents:

SG3262@1.5PPM_00004 Amount Added: 1.00 Units: mL

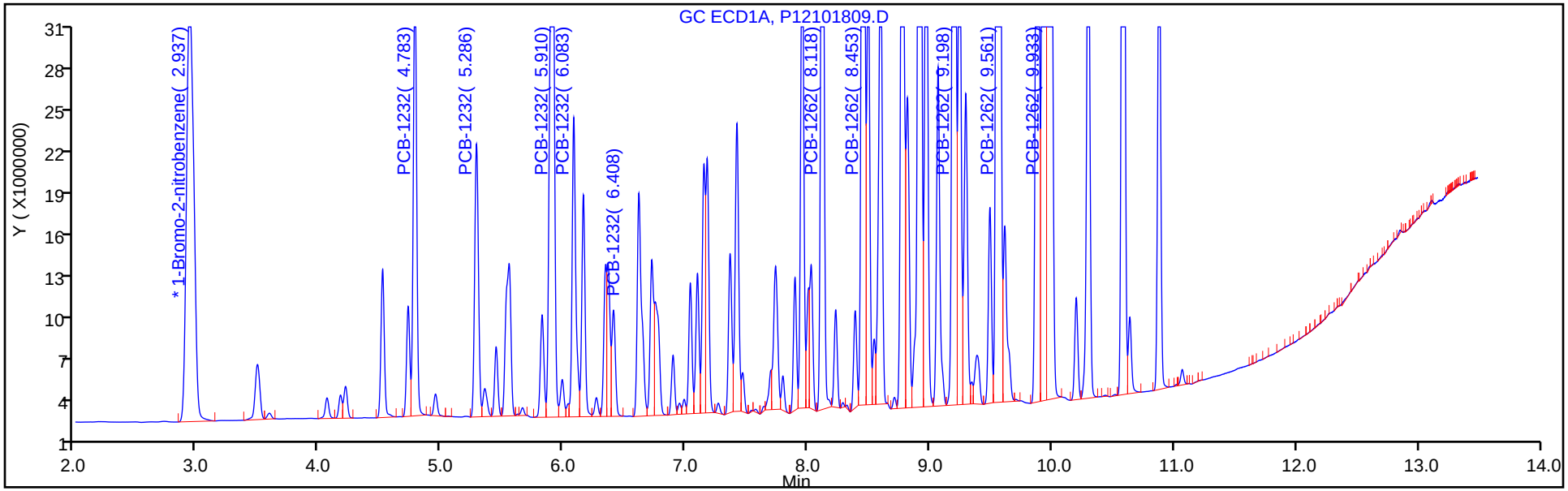
Report Date: 19-Oct-2018 13:35:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

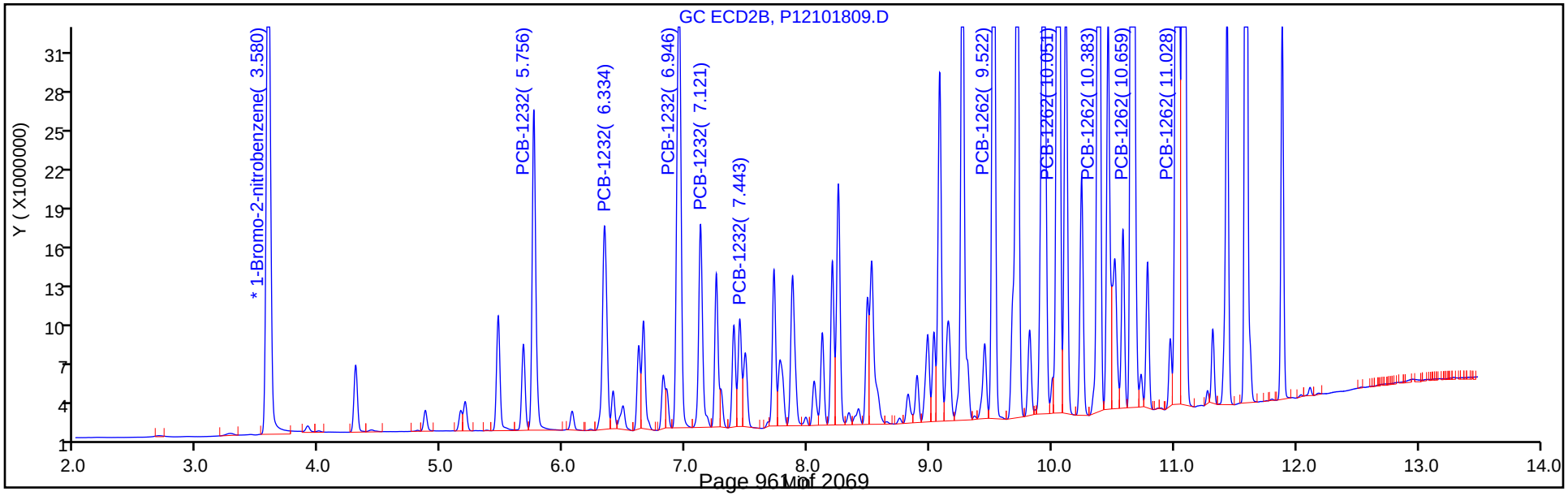
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101809.D

Injection Date:	18-Oct-2018 16:58:57	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std15 1232 1262			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 17:19 Calibration End Date: 10/18/2018 19:02 Calibration ID: 47565

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/10	P12101810.D
Level 2	STD01 240-350710/11	P12101811.D
Level 3	STD02 240-350710/12	P12101812.D
Level 4	STD05 240-350710/13	P12101813.D
Level 5	STD1 240-350710/14	P12101814.D
Level 6	STD15 240-350710/15	P12101815.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1242 Peak 1	0.0143 0.0100	0.0134	0.0129	0.0121	0.0121	Ave		0.0125				12.0		20.0			
PCB-1242 Peak 2	0.0233 0.0201	0.0237	0.0226	0.0212	0.0211	Ave		0.0220				6.4		20.0			
PCB-1242 Peak 3	0.0551 0.0498	0.0542	0.0522	0.0515	0.0524	Ave		0.0525				3.6		20.0			
PCB-1242 Peak 4	0.0241 0.0208	0.0240	0.0229	0.0221	0.0221	Ave		0.0227				5.6		20.0			
PCB-1242 Peak 5	0.0247 0.0206	0.0236	0.0236	0.0223	0.0220	Ave		0.0228				6.4		20.0			
PCB-1268 Peak 1	0.1533 0.1454	0.1494	0.1451	0.1449	0.1492	Ave		0.1479				2.3		20.0			
PCB-1268 Peak 2	0.1538 0.1415	0.1493	0.1436	0.1440	0.1478	Ave		0.1467				3.1		20.0			
PCB-1268 Peak 3	0.1364 0.1242	0.1323	0.1275	0.1266	0.1288	Ave		0.1293				3.4		20.0			
PCB-1268 Peak 4	0.0571 0.0501	0.0552	0.0527	0.0525	0.0525	Ave		0.0534				4.5		20.0			
PCB-1268 Peak 5	0.4140 0.4238	0.4089	0.4009	0.4127	0.4317	Ave		0.4154				2.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 17:19 Calibration End Date: 10/18/2018 19:02 Calibration ID: 47565

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/10	P12101810.D
Level 2	STD01 240-350710/11	P12101811.D
Level 3	STD02 240-350710/12	P12101812.D
Level 4	STD05 240-350710/13	P12101813.D
Level 5	STD1 240-350710/14	P12101814.D
Level 6	STD15 240-350710/15	P12101815.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1242 Peak 1	BNB	Ave	1766399 38358277	3405698	6549938	15324127	29163202	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 2	BNB	Ave	2865068 77142619	6000413	11426924	26777753	50909737	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 3	BNB	Ave	6780163 191346655	13728055	26433475	65092253	126512368	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 4	BNB	Ave	2969300 79871710	6078461	11590528	27936142	53363683	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 5	BNB	Ave	3041117 79258532	5985538	11958231	28135535	53052849	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 1	BNB	Ave	18885640 558413434	37832931	73407805	183086065	360450681	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 2	BNB	Ave	18936193 543541952	37795435	72657048	182005529	357076494	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 3	BNB	Ave	16794116 476994210	33510466	64529908	159984264	311212048	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 4	BNB	Ave	7029161 192557670	13976436	26681399	66373864	126910547	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 5	BNB	Ave	50989973 1628262502	103538026	202894445	521619108	1042833622	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101810.D
Lims ID: std005 1242 1268
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Oct-2018 17:19:32 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-010
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:35:34 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 06:58:22

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.942	2.930	0.013	123161656	0.0500	0.0500	
2	3.582	3.577	0.006	96891906	0.0500	0.0500	
5 PCB-1242							
1	4.783	4.783	0.000	1766399	0.0500	0.0574	
1	5.287	5.287	0.000	2865068	0.0500	0.0529	
1	5.911	5.911	0.000	6780163	0.0500	0.0524	
1	6.082	6.082	0.000	2969300	0.0500	0.0532	
1	6.617	6.617	0.000	3041117	0.0500	0.0541	
		Average of Peak Amounts =				0.0540	
2	5.756	5.756	0.000	1607055	0.0500	0.0583	
2	6.335	6.335	0.000	2873478	0.0500	0.0576	
2	6.946	6.946	0.000	5943114	0.0500	0.0563	
2	7.120	7.120	0.000	2229254	0.0500	0.0508	
2	7.441	7.441	0.000	1708746	0.0500	0.0647	
		Average of Peak Amounts =				0.0575	
						RPD = 6.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.934	9.934	0.000	18885640	0.0500	0.0518	
1	9.978	9.978	0.000	18936193	0.0500	0.0524	
1	10.200	10.200	0.000	16794116	0.0500	0.0527	
1	10.585	10.585	0.000	7029161	0.0500	0.0535	
1	10.877	10.877	0.000	50989973	0.0500	0.0498	
		Average of Peak Amounts =				0.0521	
2	11.026	11.026	0.000	13908282	0.0500	0.0511	
2	11.072	11.072	0.000	13601786	0.0500	0.0521	
2	11.318	11.318	0.000	11902302	0.0500	0.0515	
2	11.590	11.590	0.000	5083076	0.0500	0.0524	
2	11.886	11.886	0.000	35327489	0.0500	0.0488	
		Average of Peak Amounts =				0.0512	
						RPD = 1.75	

Reagents:

SG4268@.05PPM_00014 Amount Added: 1.00 Units: mL

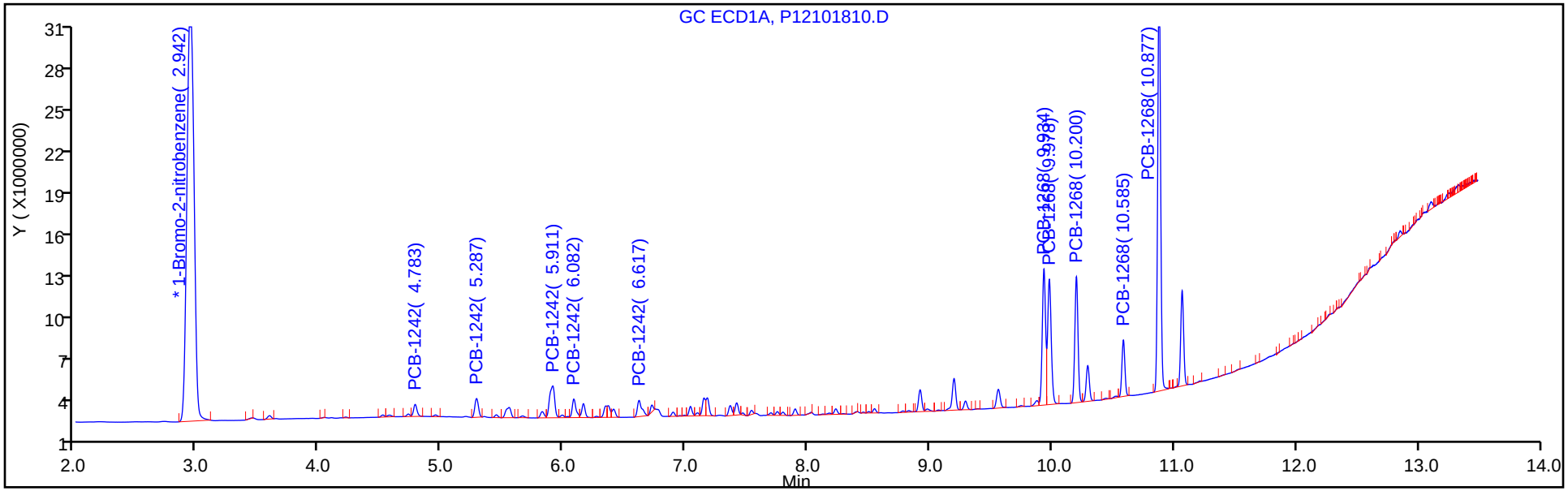
Report Date: 19-Oct-2018 13:35:36 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

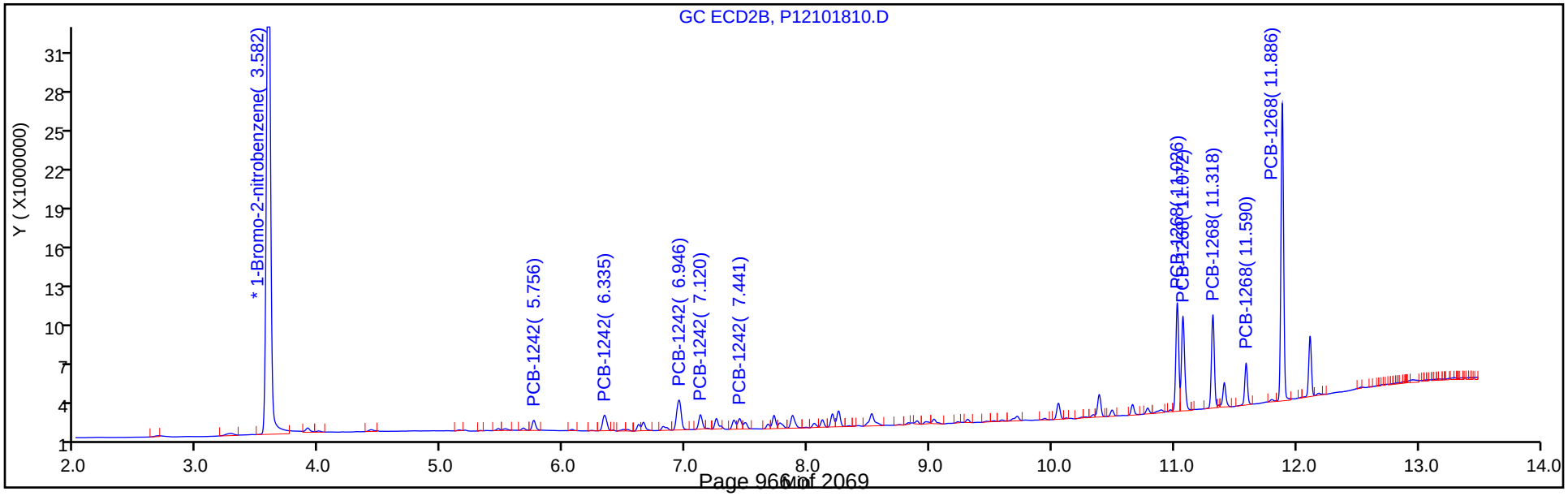
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101810.D

Injection Date:	18-Oct-2018 17:19:32	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std005 1242 1268			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101811.D
Lims ID: std01 1242 1268
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Oct-2018 17:40:02 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-011
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:35:24 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:19:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.944	2.930	0.014	126609852	0.0500	0.0500	
2	3.581	3.577	0.005	99465908	0.0500	0.0500	
5 PCB-1242							
1	4.783	4.783	0.000	3405698	0.1000	0.1077	
1	5.286	5.287	-0.001	6000413	0.1000	0.1078	
1	5.911	5.911	0.000	13728055	0.1000	0.1032	
1	6.084	6.082	0.002	6078461	0.1000	0.1059	
1	6.616	6.617	-0.001	5985538	0.1000	0.1037	
		Average of Peak Amounts =				0.1057	
2	5.755	5.756	-0.001	3232420	0.1000	0.1142	
2	6.334	6.335	-0.001	5686674	0.1000	0.1110	
2	6.946	6.946	0.000	11526708	0.1000	0.1064	
2	7.120	7.120	0.000	4895381	0.1000	0.1088	
2	7.441	7.441	0.000	3098778	0.1000	0.1144	
		Average of Peak Amounts =				0.1109	
						RPD = 4.87	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.933	9.934	-0.001	37832931	0.1000	0.1010	
1	9.978	9.978	0.000	37795435	0.1000	0.1018	
1	10.199	10.200	-0.001	33510466	0.1000	0.1023	
1	10.584	10.585	-0.001	13976436	0.1000	0.1034	
1	10.877	10.877	0.000	103538026	0.1000	0.0984	
		Average of Peak Amounts =				0.1014	
2	11.026	11.026	0.000	28143483	0.1000	0.1007	
2	11.072	11.072	0.000	27190142	0.1000	0.1014	
2	11.318	11.318	0.000	24098747	0.1000	0.1015	
2	11.589	11.590	-0.001	10478573	0.1000	0.1052	
2	11.886	11.886	0.000	72874988	0.1000	0.0980	
		Average of Peak Amounts =				0.1014	
						RPD = 0.04	

Reagents:

SG4268@.1PPM_00014 Amount Added: 1.00 Units: mL

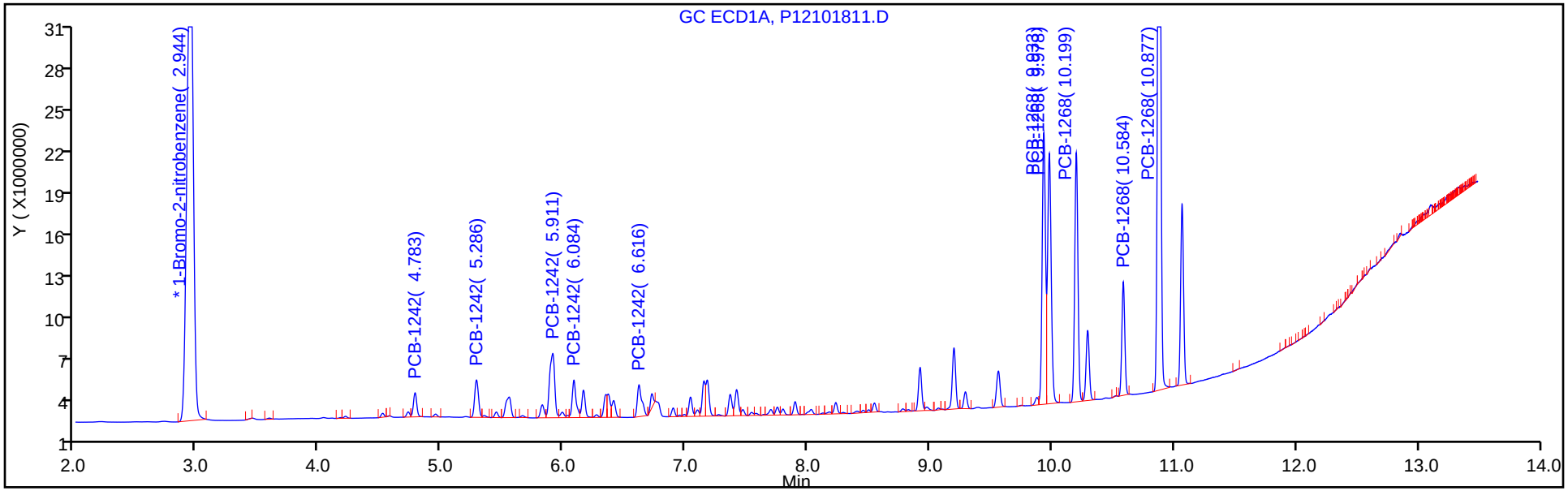
Report Date: 19-Oct-2018 13:35:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

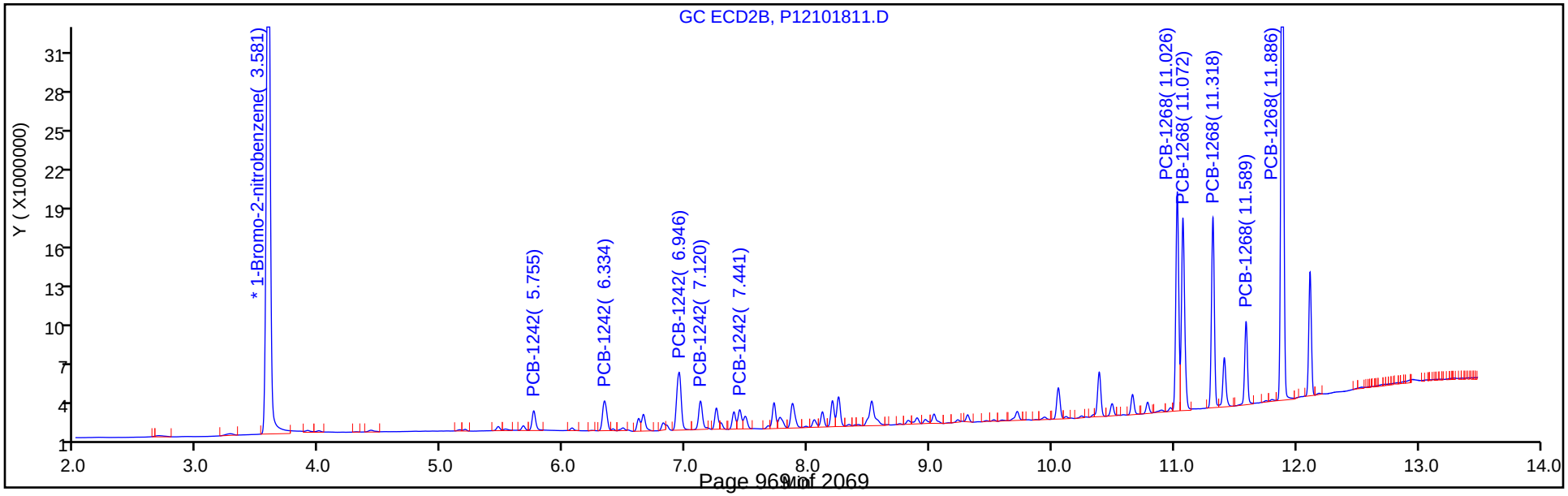
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101811.D

Injection Date:	18-Oct-2018 17:40:02	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std01 1242 1268			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101812.D
Lims ID: std02 1242 1268
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-Oct-2018 18:00:31 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-012
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:35:14 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 06:59:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.941	2.930	0.011	126509872	0.0500	0.0500	
2	3.580	3.577	0.004	98674316	0.0500	0.0500	
5 PCB-1242							M
1	4.782	4.783	-0.001	6549938	0.2000	0.2073	
1	5.285	5.287	-0.002	11426924	0.2000	0.2055	
1	5.909	5.911	-0.002	26433475	0.2000	0.1989	
1	6.083	6.082	0.001	11590528	0.2000	0.2021	
1	6.616	6.617	-0.001	11958231	0.2000	0.2073	
		Average of Peak Amounts =				0.2042	
2	5.754	5.756	-0.002	5822740	0.2000	0.2073	
2	6.334	6.335	-0.001	10605742	0.2000	0.2086	M
2	6.944	6.946	-0.002	21952594	0.2000	0.2042	M
2	7.120	7.120	0.000	9568316	0.2000	0.2143	M
2	7.443	7.441	0.002	5504164	0.2000	0.2048	
		Average of Peak Amounts =				0.2078	
						RPD = 1.77	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.932	9.934	-0.002	73407805	0.2000	0.1962	
1	9.977	9.978	-0.001	72657048	0.2000	0.1958	
1	10.199	10.200	-0.001	64529908	0.2000	0.1972	
1	10.583	10.585	-0.002	26681399	0.2000	0.1976	
1	10.876	10.877	-0.001	202894445	0.2000	0.1931	
		Average of Peak Amounts =				0.1960	
2	11.025	11.026	-0.001	54322264	0.2000	0.1959	
2	11.072	11.072	0.000	52042368	0.2000	0.1956	
2	11.317	11.318	-0.001	46294871	0.2000	0.1965	
2	11.589	11.590	-0.001	19465836	0.2000	0.1971	
2	11.886	11.886	0.000	142623771	0.2000	0.1934	
		Average of Peak Amounts =				0.1957	
						RPD = 0.14	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@.2PPM_00014 Amount Added: 1.00 Units: mL

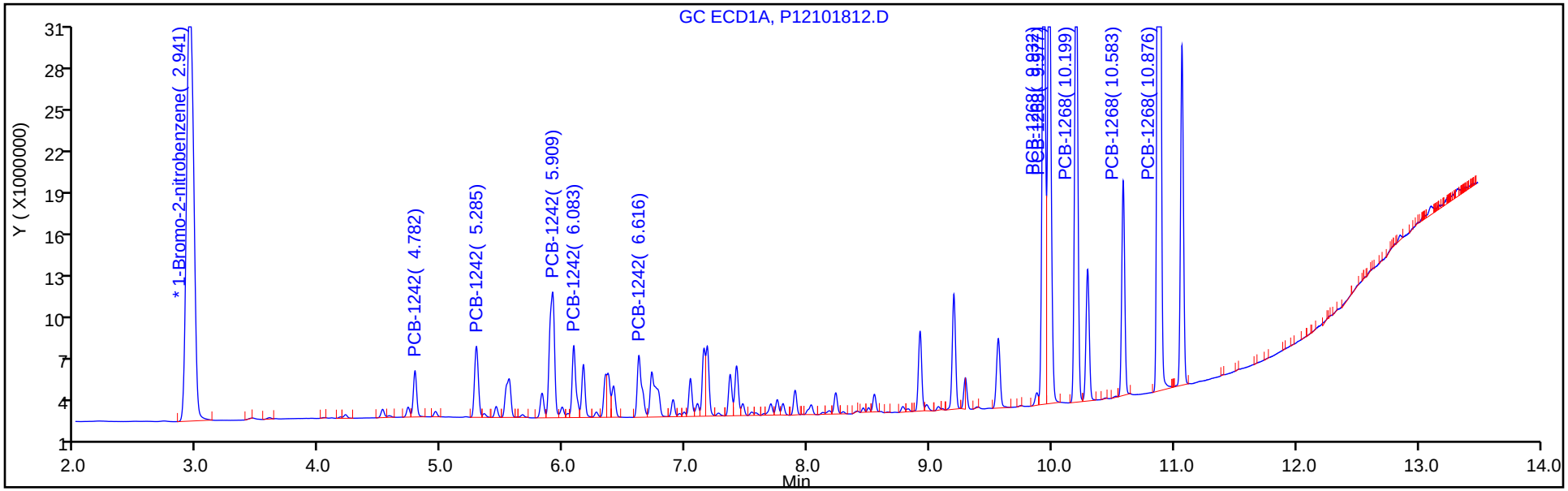
Report Date: 19-Oct-2018 13:35:16 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

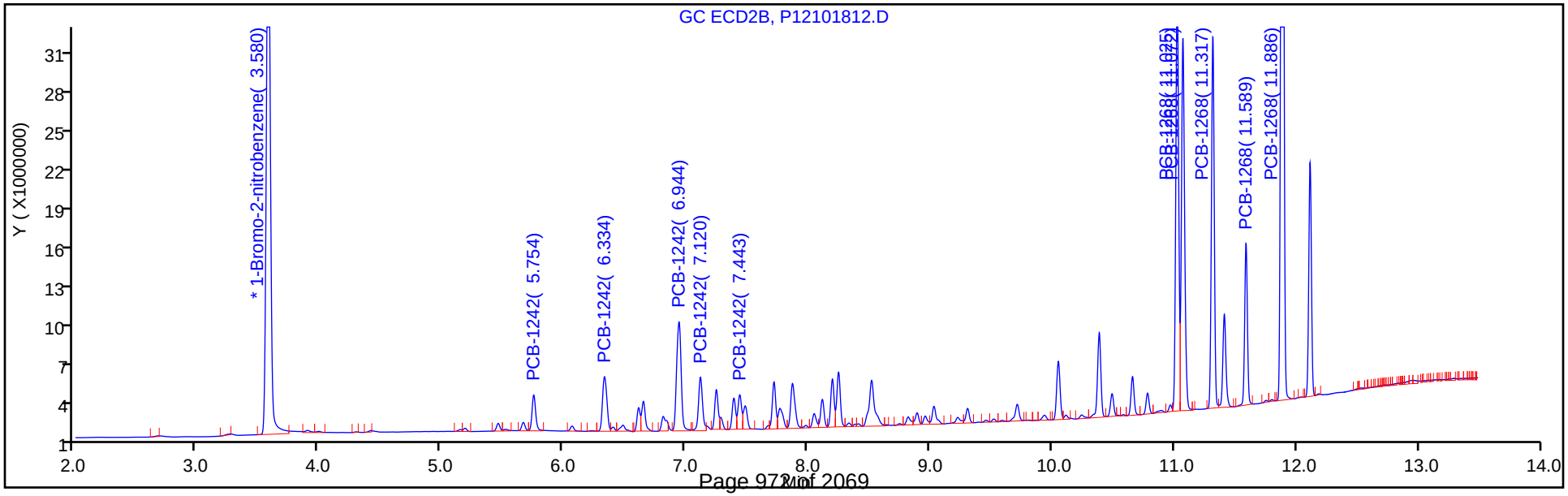
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101812.D

Injection Date:	18-Oct-2018 18:00:31	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std02 1242 1268			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101813.D
Lims ID: std05 1242 1268
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-Oct-2018 18:21:07 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-013
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:35:04 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 06:58:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.936	2.930	0.006	126378494	0.0500	0.0500	
2	3.578	3.577	0.002	98312694	0.0500	0.0500	
5 PCB-1242							M
1	4.781	4.783	-0.002	15324127	0.5000	0.4855	
1	5.284	5.287	-0.003	26777753	0.5000	0.4820	
1	5.910	5.911	-0.001	65092253	0.5000	0.4902	
1	6.082	6.082	0.000	27936142	0.5000	0.4876	
1	6.616	6.617	-0.001	28135535	0.5000	0.4882	
		Average of Peak Amounts =				0.4867	
2	5.754	5.756	-0.002	13244253	0.5000	0.4732	
2	6.333	6.335	-0.002	23871598	0.5000	0.4713	M
2	6.944	6.946	-0.002	50987696	0.5000	0.4760	M
2	7.120	7.120	0.000	22021328	0.5000	0.4950	M
2	7.443	7.441	0.002	12278193	0.5000	0.4585	
		Average of Peak Amounts =				0.4748	
						RPD = 2.47	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.932	9.934	-0.002	183086065	0.5000	0.4898	
1	9.976	9.978	-0.002	182005529	0.5000	0.4910	
1	10.198	10.200	-0.002	159984264	0.5000	0.4895	
1	10.583	10.585	-0.002	66373864	0.5000	0.4921	
1	10.876	10.877	-0.001	521619108	0.5000	0.4969	
		Average of Peak Amounts =				0.4919	
2	11.025	11.026	-0.001	136601330	0.5000	0.4945	
2	11.072	11.072	0.000	130890571	0.5000	0.4937	
2	11.317	11.318	-0.001	116220495	0.5000	0.4952	
2	11.589	11.590	-0.001	48207443	0.5000	0.4898	
2	11.886	11.886	0.000	369706894	0.5000	0.5032	
		Average of Peak Amounts =				0.4953	
						RPD = 0.69	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@0.5PPM_00030 Amount Added: 1.00 Units: mL

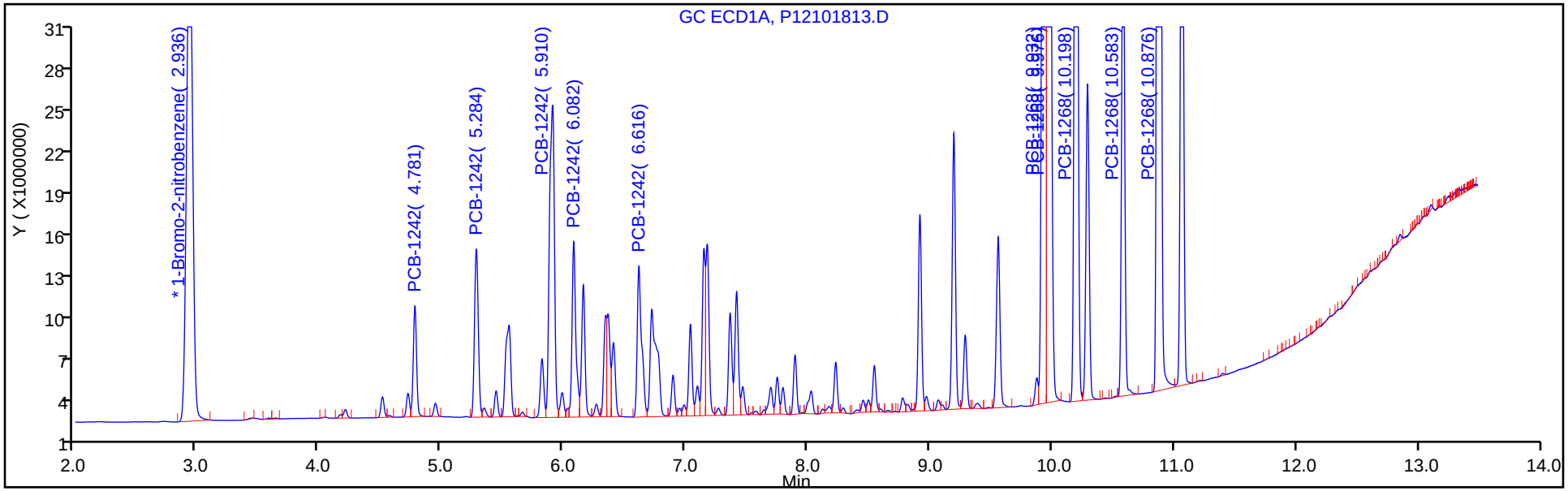
Report Date: 19-Oct-2018 13:35:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

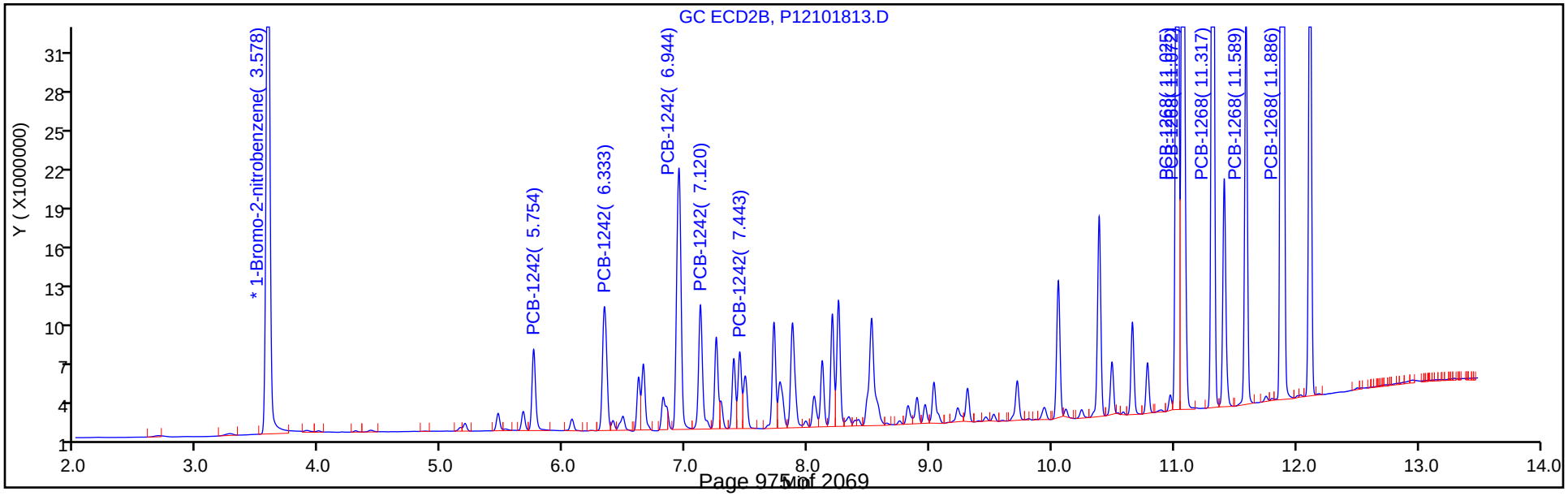
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101813.D

Injection Date:	18-Oct-2018 18:21:07	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std05 1242 1268			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101814.D
Lims ID: std1 1242 1268
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-Oct-2018 18:41:35 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-014
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:55 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 11:58:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.940	2.930	0.010	120771449	0.0500	0.0500	
2	3.580	3.577	0.004	94806114	0.0500	0.0500	
5 PCB-1242							
1	4.782	4.783	-0.001	29163202	1.00	0.9669	
1	5.284	5.287	-0.003	50909737	1.00	0.9589	
1	5.910	5.911	-0.001	126512368	1.00	1.00	
1	6.083	6.082	0.001	53363683	1.00	0.9746	
1	6.617	6.617	0.000	53052849	1.00	0.9632	
		Average of Peak Amounts =				0.9721	
2	5.754	5.756	-0.002	23983777	1.00	0.8887	
2	6.333	6.335	-0.002	44318658	1.00	0.9074	
2	6.944	6.946	-0.002	97777532	1.00	0.9466	
2	7.120	7.120	0.000	41121668	1.00	0.9586	
2	7.443	7.441	0.002	21922493	1.00	0.8489	
		Average of Peak Amounts =				0.9101	
						RPD = 6.60	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.931	9.934	-0.003	360450681	1.00	1.01	
1	9.976	9.978	-0.002	357076494	1.00	1.01	
1	10.197	10.200	-0.003	311212048	1.00	1.00	
1	10.583	10.585	-0.002	126910547	1.00	0.9846	
1	10.876	10.877	-0.001	1042833622	1.00	1.04	
		Average of Peak Amounts =				1.01	
2	11.025	11.026	-0.001	269953927	1.00	1.01	
2	11.072	11.072	0.000	257347825	1.00	1.01	
2	11.317	11.318	-0.001	227578329	1.00	1.01	
2	11.588	11.590	-0.002	93558719	1.00	0.9858	
2	11.887	11.886	0.001	739572591	1.00	1.04	
		Average of Peak Amounts =				1.01	
						RPD = 0.35	

Reagents:

SG42/68@1.0PP_00023 Amount Added: 1.00 Units: mL

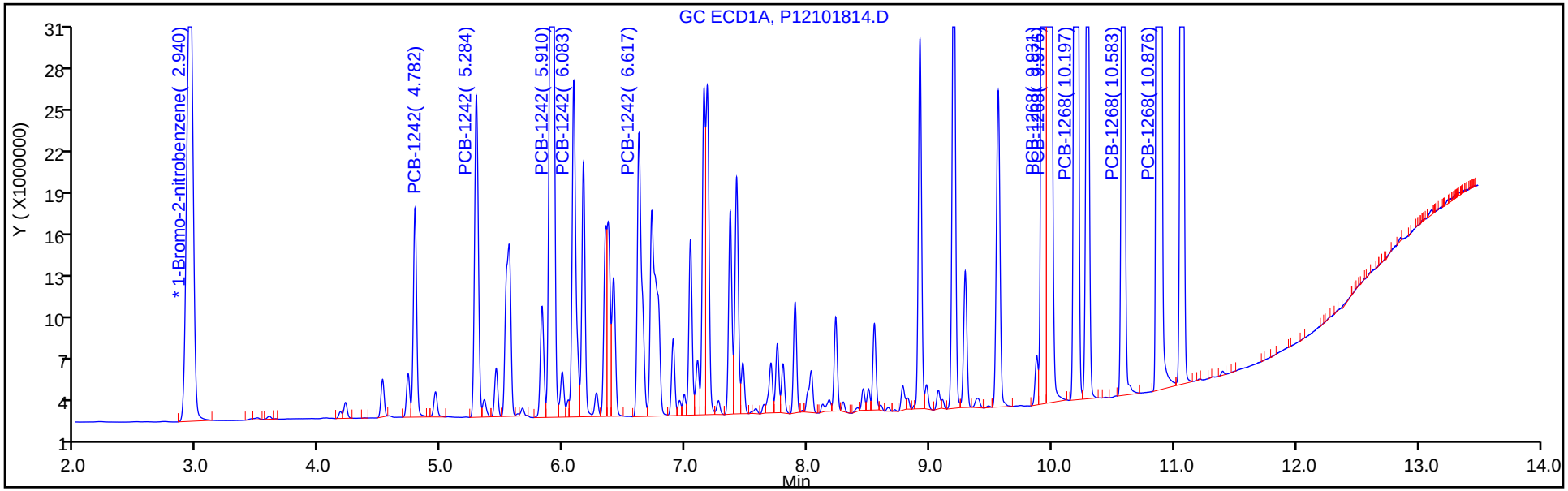
Report Date: 19-Oct-2018 13:34:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

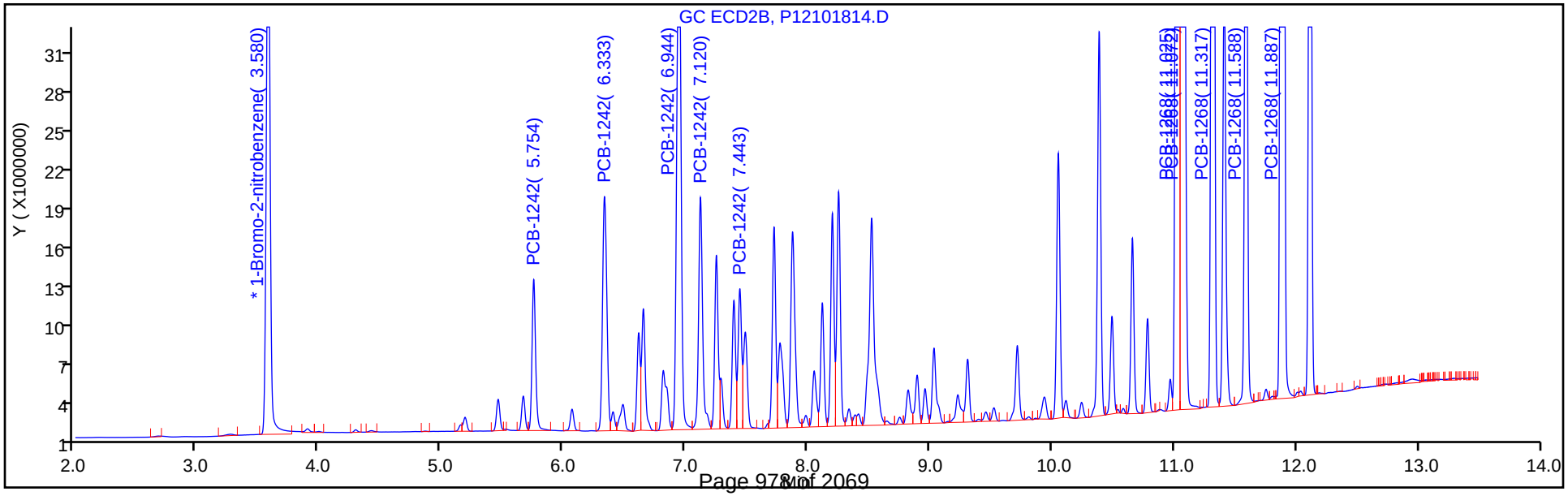
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101814.D

Injection Date:	18-Oct-2018 18:41:35	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std1 1242 1268			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101815.D
Lims ID: std15 1242 1268
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-Oct-2018 19:02:06 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-015
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:47 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 06:58:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.939	2.930	0.009	128057875	0.0500	0.0500	
2	3.579	3.577	0.002	99569450	0.0500	0.0500	
5 PCB-1242							M
1	4.781	4.783	-0.002	38358277	1.50	1.20	
1	5.284	5.287	-0.003	77142619	1.50	1.37	
1	5.910	5.911	-0.001	191346655	1.50	1.42	
1	6.082	6.082	0.000	79871710	1.50	1.38	
1	6.616	6.617	-0.001	79258532	1.50	1.36	
		Average of Peak Amounts =				1.34	
2	5.755	5.756	-0.001	34924105	1.50	1.23	
2	6.334	6.335	-0.001	65046557	1.50	1.27	M
2	6.944	6.946	-0.002	144917893	1.50	1.34	M
2	7.120	7.120	0.000	59134727	1.50	1.31	M
2	7.442	7.441	0.001	31382448	1.50	1.16	
		Average of Peak Amounts =				1.26	
						RPD = 6.43	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.931	9.934	-0.003	558413434	1.50	1.47	
1	9.976	9.978	-0.002	543541952	1.50	1.45	
1	10.197	10.200	-0.003	476994210	1.50	1.44	
1	10.582	10.585	-0.003	192557670	1.50	1.41	
1	10.877	10.877	0.000	1628262502	1.50	1.53	
		Average of Peak Amounts =				1.46	
2	11.026	11.026	0.000	415013055	1.50	1.48	
2	11.071	11.072	-0.001	392106023	1.50	1.46	
2	11.316	11.318	-0.002	348343357	1.50	1.47	
2	11.589	11.590	-0.001	141834139	1.50	1.42	
2	11.886	11.886	0.000	1146393296	1.50	1.54	
		Average of Peak Amounts =				1.47	
						RPD = 0.97	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@1.5PPM_00005 Amount Added: 1.00 Units: mL

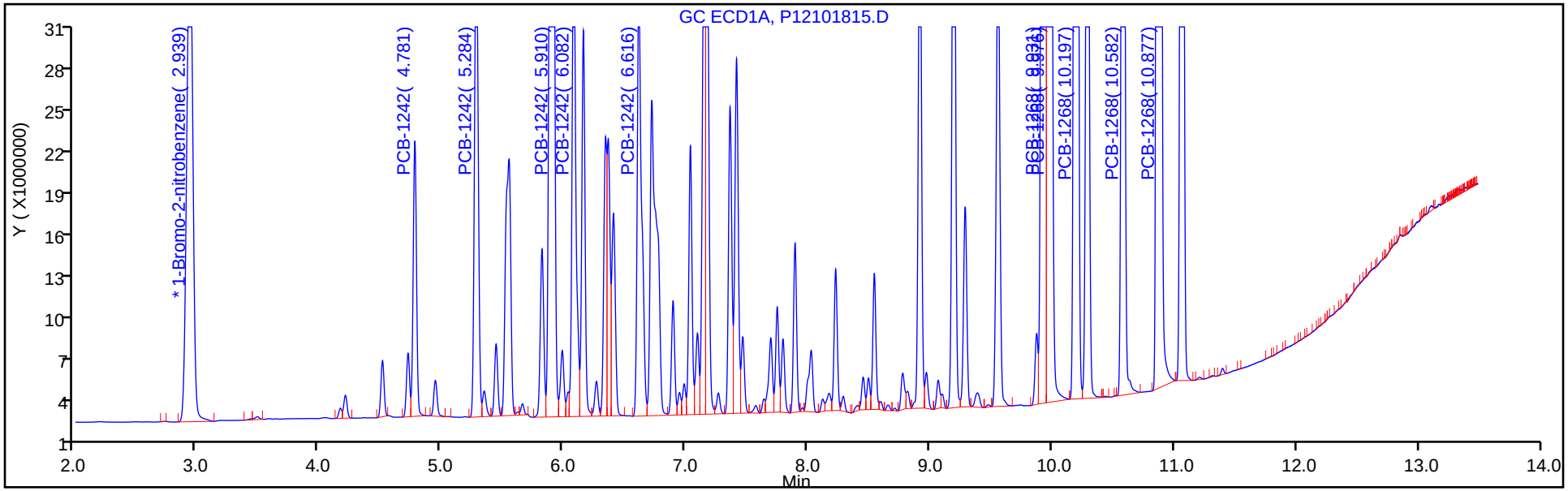
Report Date: 19-Oct-2018 13:34:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

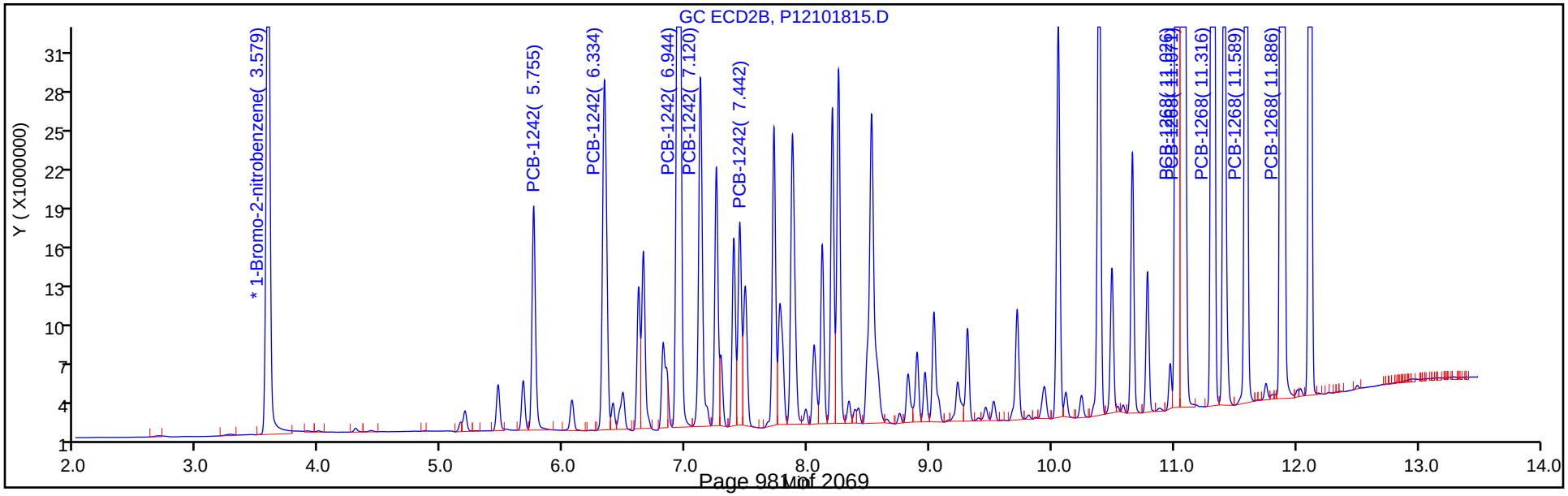
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101815.D

Injection Date:	18-Oct-2018 19:02:06	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std15 1242 1268			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-104089-1 | Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 | GC Column: CLP-2 (0.53 ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 17:19 | Calibration End Date: 10/18/2018 19:02 | Calibration ID: 47566

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/10	P12101810.D
Level 2	STD01 240-350710/11	P12101811.D
Level 3	STD02 240-350710/12	P12101812.D
Level 4	STD05 240-350710/13	P12101813.D
Level 5	STD1 240-350710/14	P12101814.D
Level 6	STD15 240-350710/15	P12101815.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1242 Peak 1	0.0166 0.0117	0.0162	0.0148	0.0135	0.0126	Ave		0.0142				13.8		20.0			
PCB-1242 Peak 2	0.0297 0.0218	0.0286	0.0269	0.0243	0.0234	Ave		0.0258				12.0		20.0			
PCB-1242 Peak 3	0.0613 0.0485	0.0579	0.0556	0.0519	0.0516	Ave		0.0545				8.7		20.0			
PCB-1242 Peak 4	0.0230 0.0198	0.0246	0.0242	0.0224	0.0217	Ave		0.0226				7.8		20.0			
PCB-1242 Peak 5	0.0176 0.0105	0.0156	0.0139	0.0125	0.0116	Ave		0.0136				19.5		20.0			
PCB-1268 Peak 1	0.1435 0.1389	0.1415	0.1376	0.1389	0.1424	Ave		0.1405				1.6		20.0			
PCB-1268 Peak 2	0.1404 0.1313	0.1367	0.1319	0.1331	0.1357	Ave		0.1348				2.6		20.0			
PCB-1268 Peak 3	0.1228 0.1166	0.1211	0.1173	0.1182	0.1200	Ave		0.1194				2.0		20.0			
PCB-1268 Peak 4	0.0525 0.0475	0.0527	0.0493	0.0490	0.0493	Ave		0.0501				4.1		20.0			
PCB-1268 Peak 5	0.3646 0.3838	0.3663	0.3613	0.3761	0.3900	Ave		0.3737				3.1		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 17:19 Calibration End Date: 10/18/2018 19:02 Calibration ID: 47566

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/10	P12101810.D
Level 2	STD01 240-350710/11	P12101811.D
Level 3	STD02 240-350710/12	P12101812.D
Level 4	STD05 240-350710/13	P12101813.D
Level 5	STD1 240-350710/14	P12101814.D
Level 6	STD15 240-350710/15	P12101815.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1242 Peak 1	BNB	Ave	1607055 34924105	3232420	5822740	13244253	23983777	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 2	BNB	Ave	2873478 65046557	5686674	10605742	23871598	44318658	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 3	BNB	Ave	5943114 144917893	11526708	21952594	50987696	97777532	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 4	BNB	Ave	2229254 59134727	4895381	9568316	22021328	41121668	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 5	BNB	Ave	1708746 31382448	3098778	5504164	12278193	21922493	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 1	BNB	Ave	13908282 415013055	28143483	54322264	136601330	269953927	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 2	BNB	Ave	13601786 392106023	27190142	52042368	130890571	257347825	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 3	BNB	Ave	11902302 348343357	24098747	46294871	116220495	227578329	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 4	BNB	Ave	5083076 141834139	10478573	19465836	48207443	93558719	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 5	BNB	Ave	35327489 1146393296	72874988	142623771	369706894	739572591	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101810.D
Lims ID: std005 1242 1268
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Oct-2018 17:19:32 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-010
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:35:34 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 06:58:22

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.942	2.930	0.013	123161656	0.0500	0.0500	
2	3.582	3.577	0.006	96891906	0.0500	0.0500	
5 PCB-1242							
1	4.783	4.783	0.000	1766399	0.0500	0.0574	
1	5.287	5.287	0.000	2865068	0.0500	0.0529	
1	5.911	5.911	0.000	6780163	0.0500	0.0524	
1	6.082	6.082	0.000	2969300	0.0500	0.0532	
1	6.617	6.617	0.000	3041117	0.0500	0.0541	
		Average of Peak Amounts =				0.0540	
2	5.756	5.756	0.000	1607055	0.0500	0.0583	
2	6.335	6.335	0.000	2873478	0.0500	0.0576	
2	6.946	6.946	0.000	5943114	0.0500	0.0563	
2	7.120	7.120	0.000	2229254	0.0500	0.0508	
2	7.441	7.441	0.000	1708746	0.0500	0.0647	
		Average of Peak Amounts =				0.0575	
						RPD = 6.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.934	9.934	0.000	18885640	0.0500	0.0518	
1	9.978	9.978	0.000	18936193	0.0500	0.0524	
1	10.200	10.200	0.000	16794116	0.0500	0.0527	
1	10.585	10.585	0.000	7029161	0.0500	0.0535	
1	10.877	10.877	0.000	50989973	0.0500	0.0498	
		Average of Peak Amounts =				0.0521	
2	11.026	11.026	0.000	13908282	0.0500	0.0511	
2	11.072	11.072	0.000	13601786	0.0500	0.0521	
2	11.318	11.318	0.000	11902302	0.0500	0.0515	
2	11.590	11.590	0.000	5083076	0.0500	0.0524	
2	11.886	11.886	0.000	35327489	0.0500	0.0488	
		Average of Peak Amounts =				0.0512	
						RPD = 1.75	

Reagents:

SG4268@.05PPM_00014 Amount Added: 1.00 Units: mL

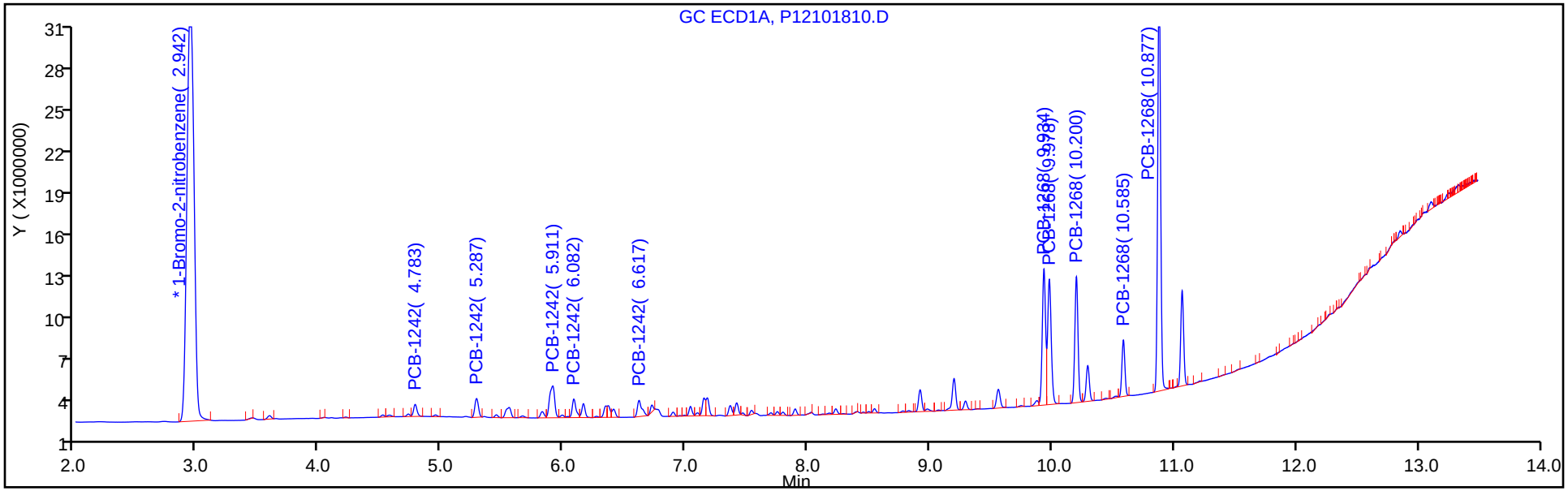
Report Date: 19-Oct-2018 13:35:37 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

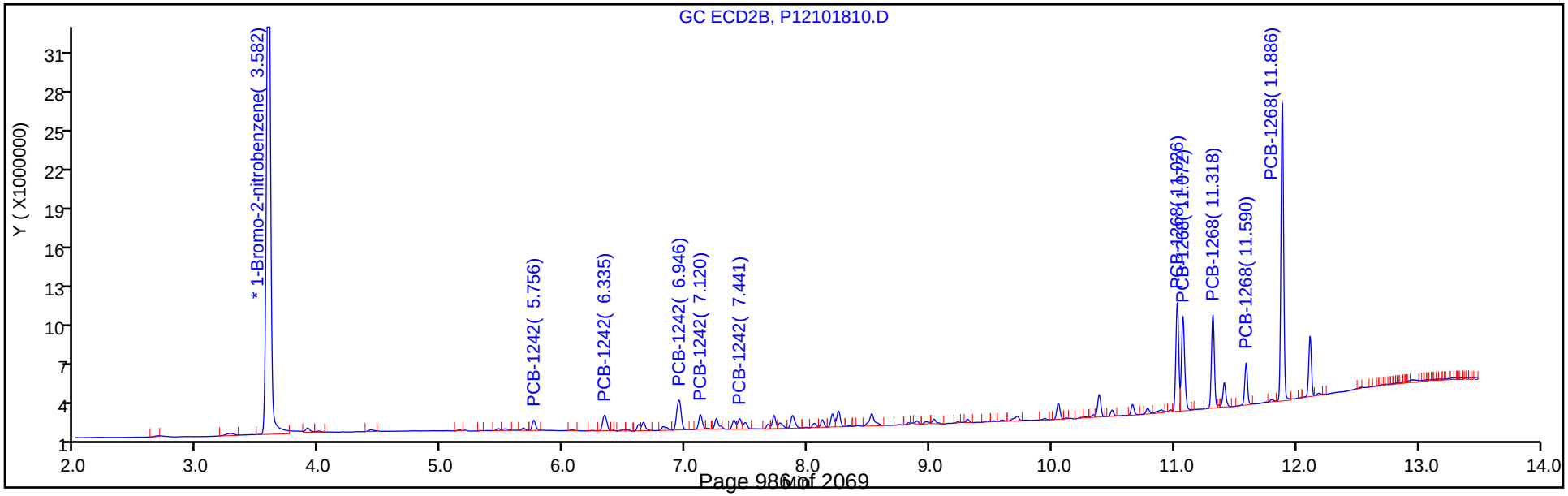
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101810.D

Injection Date:	18-Oct-2018 17:19:32	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std005 1242 1268			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101811.D
Lims ID: std01 1242 1268
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Oct-2018 17:40:02 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-011
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:35:24 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:19:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.944	2.930	0.014	126609852	0.0500	0.0500	
2	3.581	3.577	0.005	99465908	0.0500	0.0500	
5 PCB-1242							
1	4.783	4.783	0.000	3405698	0.1000	0.1077	
1	5.286	5.287	-0.001	6000413	0.1000	0.1078	
1	5.911	5.911	0.000	13728055	0.1000	0.1032	
1	6.084	6.082	0.002	6078461	0.1000	0.1059	
1	6.616	6.617	-0.001	5985538	0.1000	0.1037	
		Average of Peak Amounts =				0.1057	
2	5.755	5.756	-0.001	3232420	0.1000	0.1142	
2	6.334	6.335	-0.001	5686674	0.1000	0.1110	
2	6.946	6.946	0.000	11526708	0.1000	0.1064	
2	7.120	7.120	0.000	4895381	0.1000	0.1088	
2	7.441	7.441	0.000	3098778	0.1000	0.1144	
		Average of Peak Amounts =				0.1109	
						RPD = 4.87	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.933	9.934	-0.001	37832931	0.1000	0.1010	
1	9.978	9.978	0.000	37795435	0.1000	0.1018	
1	10.199	10.200	-0.001	33510466	0.1000	0.1023	
1	10.584	10.585	-0.001	13976436	0.1000	0.1034	
1	10.877	10.877	0.000	103538026	0.1000	0.0984	
		Average of Peak Amounts =				0.1014	
2	11.026	11.026	0.000	28143483	0.1000	0.1007	
2	11.072	11.072	0.000	27190142	0.1000	0.1014	
2	11.318	11.318	0.000	24098747	0.1000	0.1015	
2	11.589	11.590	-0.001	10478573	0.1000	0.1052	
2	11.886	11.886	0.000	72874988	0.1000	0.0980	
		Average of Peak Amounts =				0.1014	
						RPD = 0.04	

Reagents:

SG4268@.1PPM_00014 Amount Added: 1.00 Units: mL

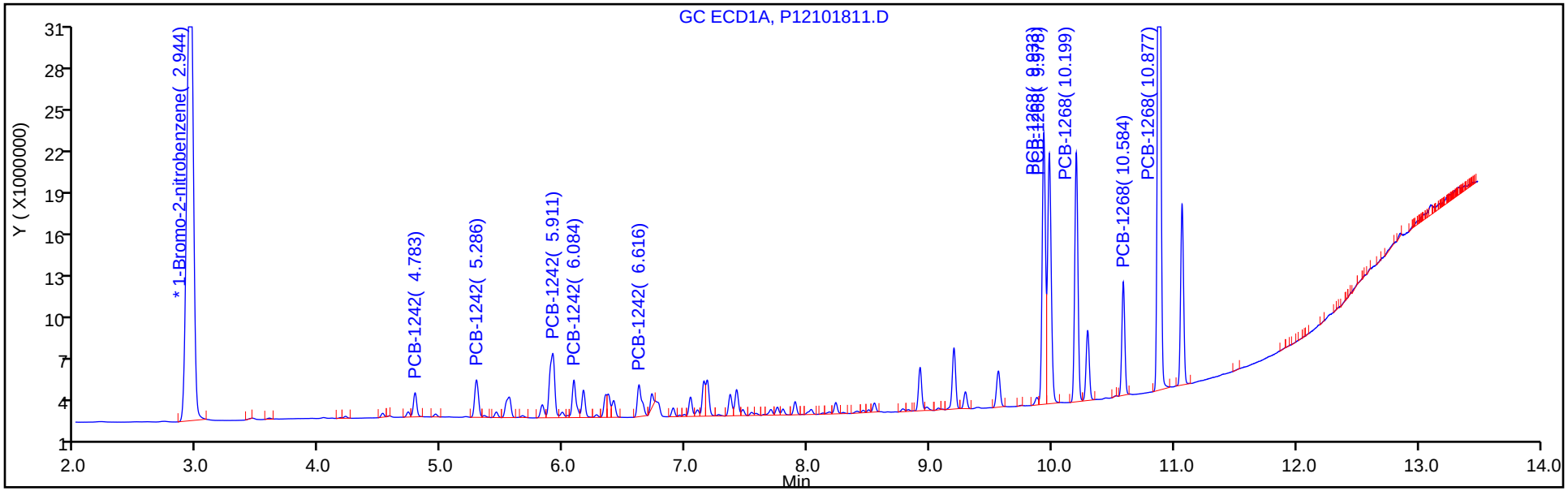
Report Date: 19-Oct-2018 13:35:27 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

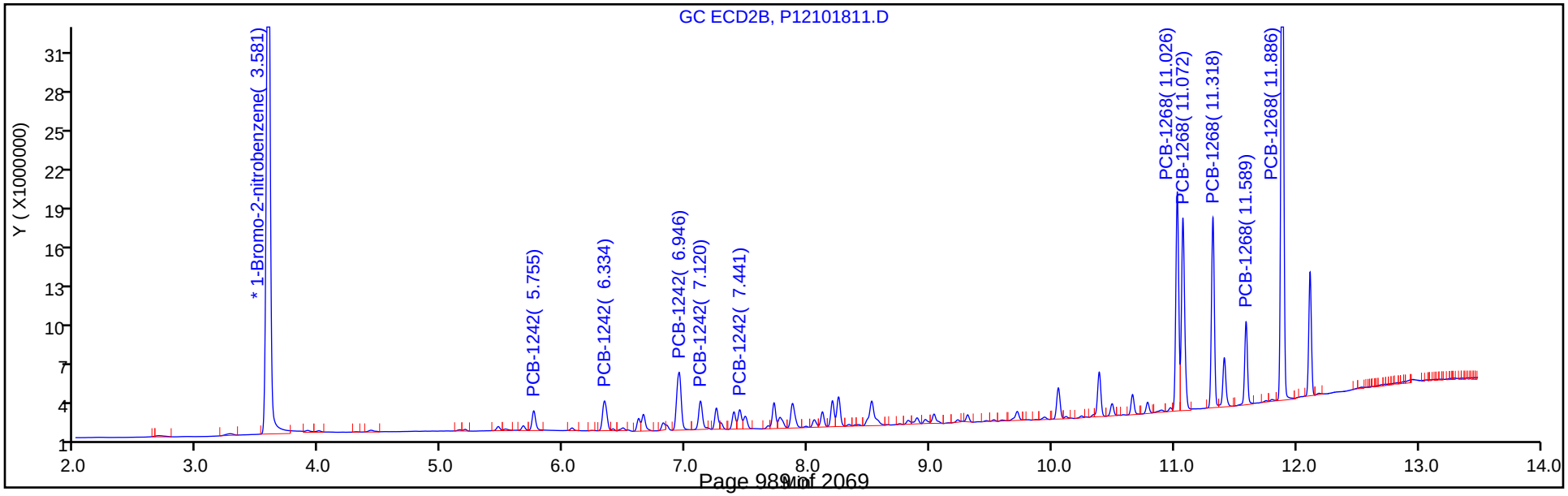
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101811.D

Injection Date:	18-Oct-2018 17:40:02	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std01 1242 1268			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101812.D
Lims ID: std02 1242 1268
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-Oct-2018 18:00:31 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-012
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:35:14 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 06:59:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.941	2.930	0.011	126509872	0.0500	0.0500	
2	3.580	3.577	0.004	98674316	0.0500	0.0500	
5 PCB-1242							M
1	4.782	4.783	-0.001	6549938	0.2000	0.2073	
1	5.285	5.287	-0.002	11426924	0.2000	0.2055	
1	5.909	5.911	-0.002	26433475	0.2000	0.1989	
1	6.083	6.082	0.001	11590528	0.2000	0.2021	
1	6.616	6.617	-0.001	11958231	0.2000	0.2073	
		Average of Peak Amounts =				0.2042	
2	5.754	5.756	-0.002	5822740	0.2000	0.2073	
2	6.334	6.335	-0.001	10605742	0.2000	0.2086	M
2	6.944	6.946	-0.002	21952594	0.2000	0.2042	M
2	7.120	7.120	0.000	9568316	0.2000	0.2143	M
2	7.443	7.441	0.002	5504164	0.2000	0.2048	
		Average of Peak Amounts =				0.2078	
						RPD = 1.77	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.932	9.934	-0.002	73407805	0.2000	0.1962	
1	9.977	9.978	-0.001	72657048	0.2000	0.1958	
1	10.199	10.200	-0.001	64529908	0.2000	0.1972	
1	10.583	10.585	-0.002	26681399	0.2000	0.1976	
1	10.876	10.877	-0.001	202894445	0.2000	0.1931	
		Average of Peak Amounts =				0.1960	
2	11.025	11.026	-0.001	54322264	0.2000	0.1959	
2	11.072	11.072	0.000	52042368	0.2000	0.1956	
2	11.317	11.318	-0.001	46294871	0.2000	0.1965	
2	11.589	11.590	-0.001	19465836	0.2000	0.1971	
2	11.886	11.886	0.000	142623771	0.2000	0.1934	
		Average of Peak Amounts =				0.1957	
						RPD = 0.14	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@.2PPM_00014 Amount Added: 1.00 Units: mL

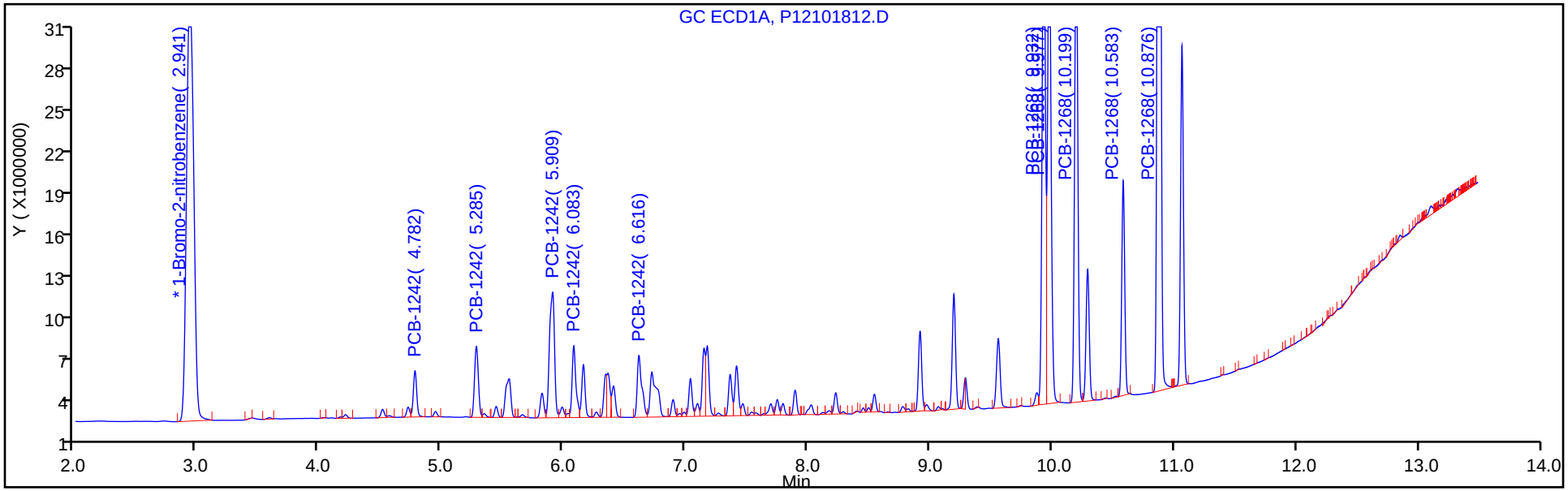
Report Date: 19-Oct-2018 13:35:17 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

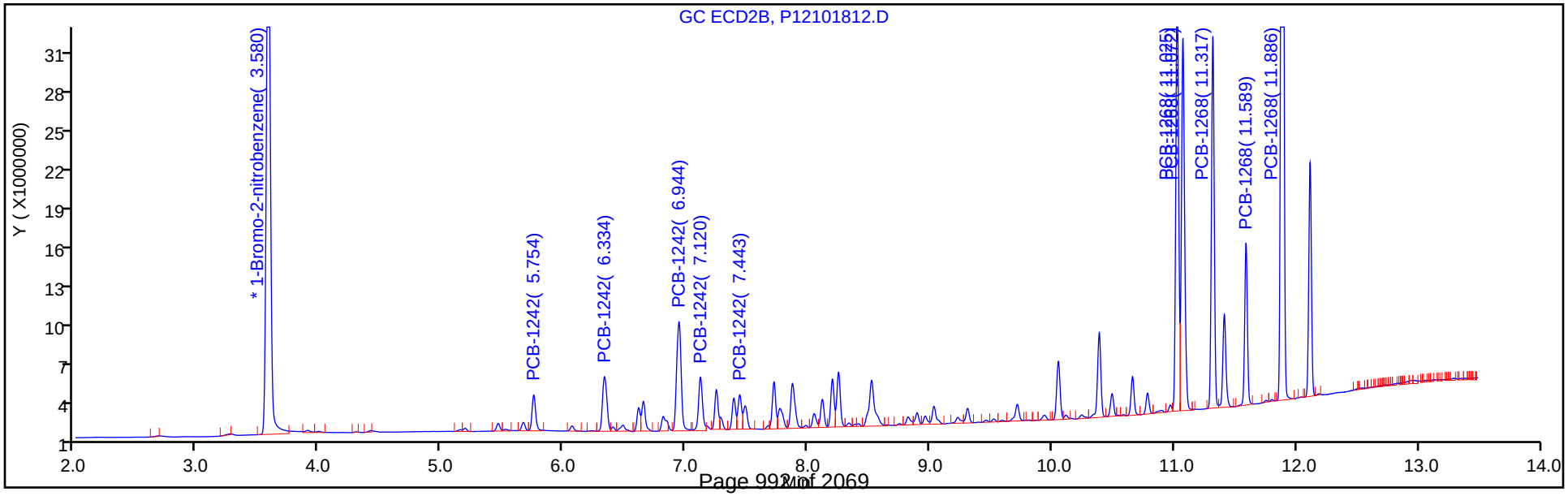
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101812.D

Injection Date:	18-Oct-2018 18:00:31	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std02 1242 1268			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 19-Oct-2018 13:35:17 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101812.D

Injection Date: 18-Oct-2018 18:00:31 Instrument ID: A2HP12

Lims ID: std02 1242 1268

Client ID:

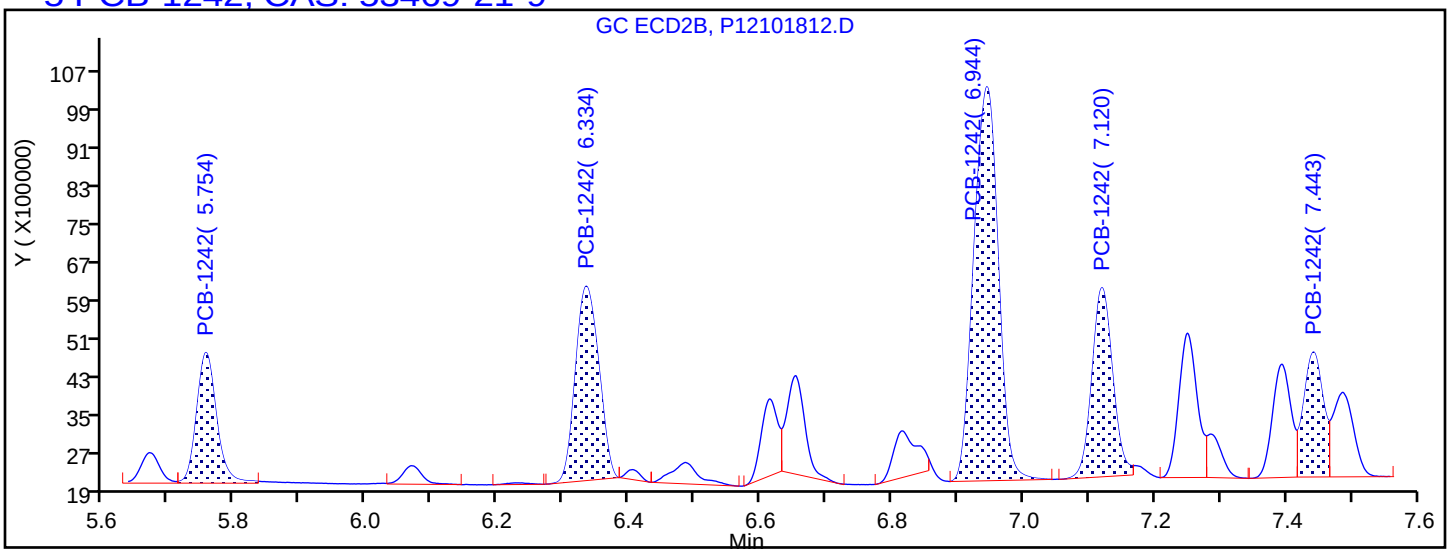
Operator ID: ALS Bottle#: 12 Worklist Smp#: 12

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

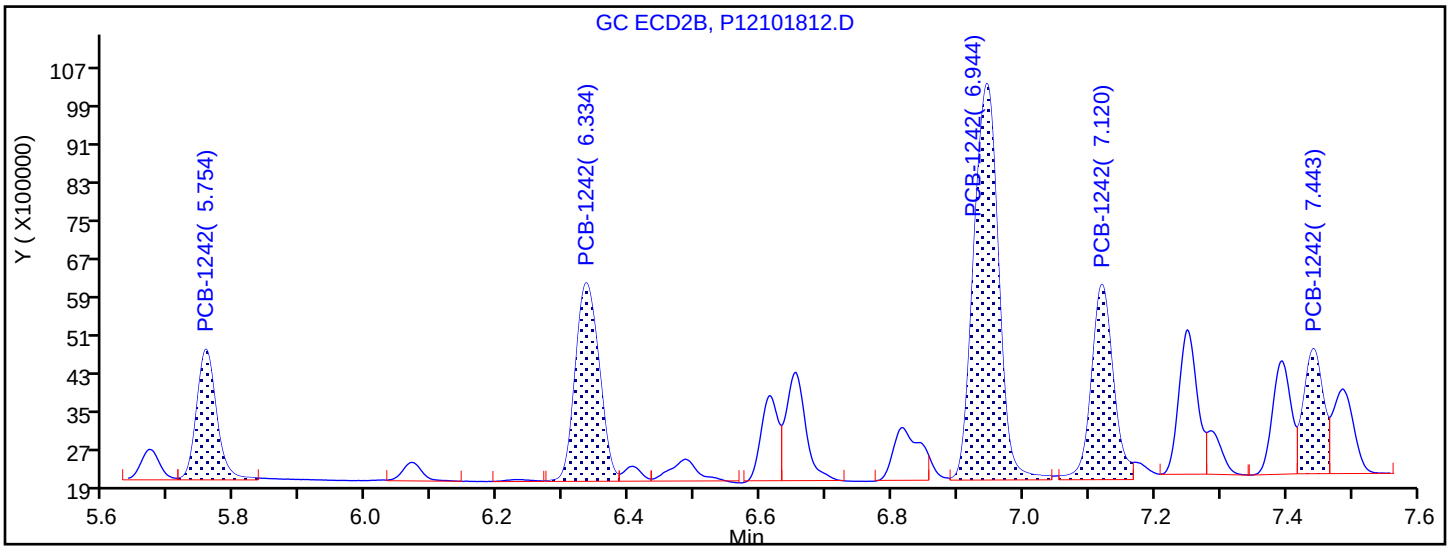
Column: Detector GC ecd2b

5 PCB-1242, CAS: 53469-21-9



Processing Integration Results

5.754	Response = 5822740
6.334	Response = 10082860
6.944	Response = 21403145
7.120	Response = 8736598
7.443	Response = 5504164



Manual Integration Results

5.754	Response = 5822740	
6.334	Response = 10605742	M
6.944	Response = 21952594	M
7.120	Response = 9568316	M
7.443	Response = 5504164	

Reviewer: hassl, 19-Oct-2018 06:59:18

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101813.D
Lims ID: std05 1242 1268
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-Oct-2018 18:21:07 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-013
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:35:04 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 06:58:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.936	2.930	0.006	126378494	0.0500	0.0500	
2	3.578	3.577	0.002	98312694	0.0500	0.0500	
5 PCB-1242							M
1	4.781	4.783	-0.002	15324127	0.5000	0.4855	
1	5.284	5.287	-0.003	26777753	0.5000	0.4820	
1	5.910	5.911	-0.001	65092253	0.5000	0.4902	
1	6.082	6.082	0.000	27936142	0.5000	0.4876	
1	6.616	6.617	-0.001	28135535	0.5000	0.4882	
		Average of Peak Amounts =				0.4867	
2	5.754	5.756	-0.002	13244253	0.5000	0.4732	
2	6.333	6.335	-0.002	23871598	0.5000	0.4713	M
2	6.944	6.946	-0.002	50987696	0.5000	0.4760	M
2	7.120	7.120	0.000	22021328	0.5000	0.4950	M
2	7.443	7.441	0.002	12278193	0.5000	0.4585	
		Average of Peak Amounts =				0.4748	
						RPD = 2.47	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.932	9.934	-0.002	183086065	0.5000	0.4898	
1	9.976	9.978	-0.002	182005529	0.5000	0.4910	
1	10.198	10.200	-0.002	159984264	0.5000	0.4895	
1	10.583	10.585	-0.002	66373864	0.5000	0.4921	
1	10.876	10.877	-0.001	521619108	0.5000	0.4969	
		Average of Peak Amounts =				0.4919	
2	11.025	11.026	-0.001	136601330	0.5000	0.4945	
2	11.072	11.072	0.000	130890571	0.5000	0.4937	
2	11.317	11.318	-0.001	116220495	0.5000	0.4952	
2	11.589	11.590	-0.001	48207443	0.5000	0.4898	
2	11.886	11.886	0.000	369706894	0.5000	0.5032	
		Average of Peak Amounts =				0.4953	
						RPD = 0.69	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@0.5PPM_00030 Amount Added: 1.00 Units: mL

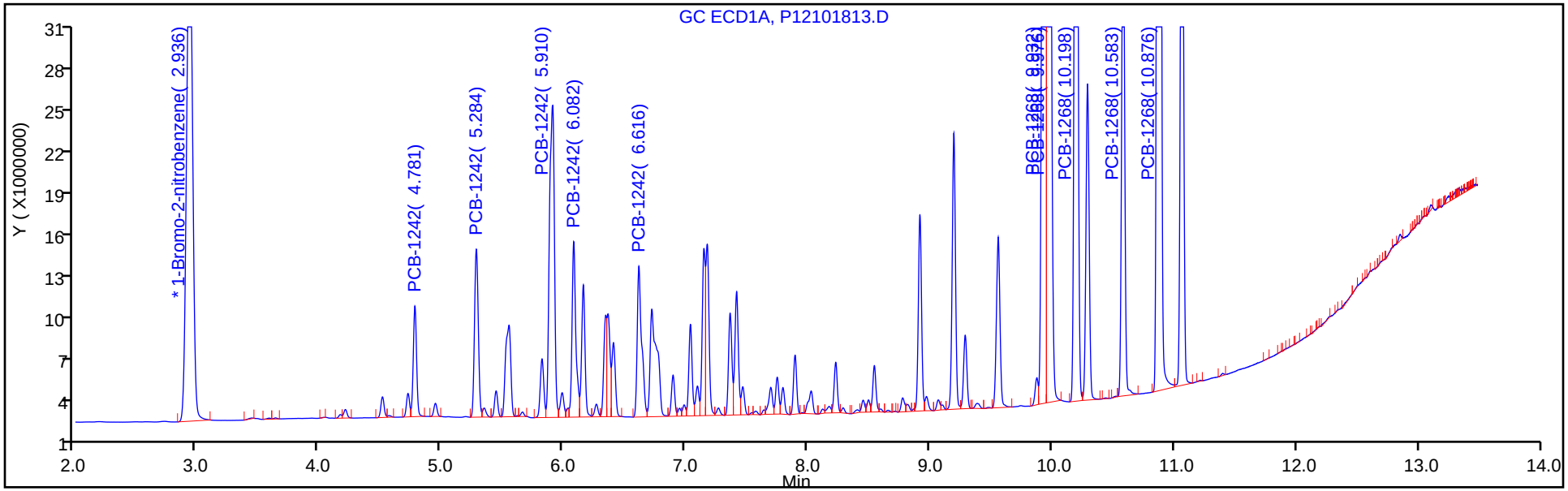
Report Date: 19-Oct-2018 13:35:07 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

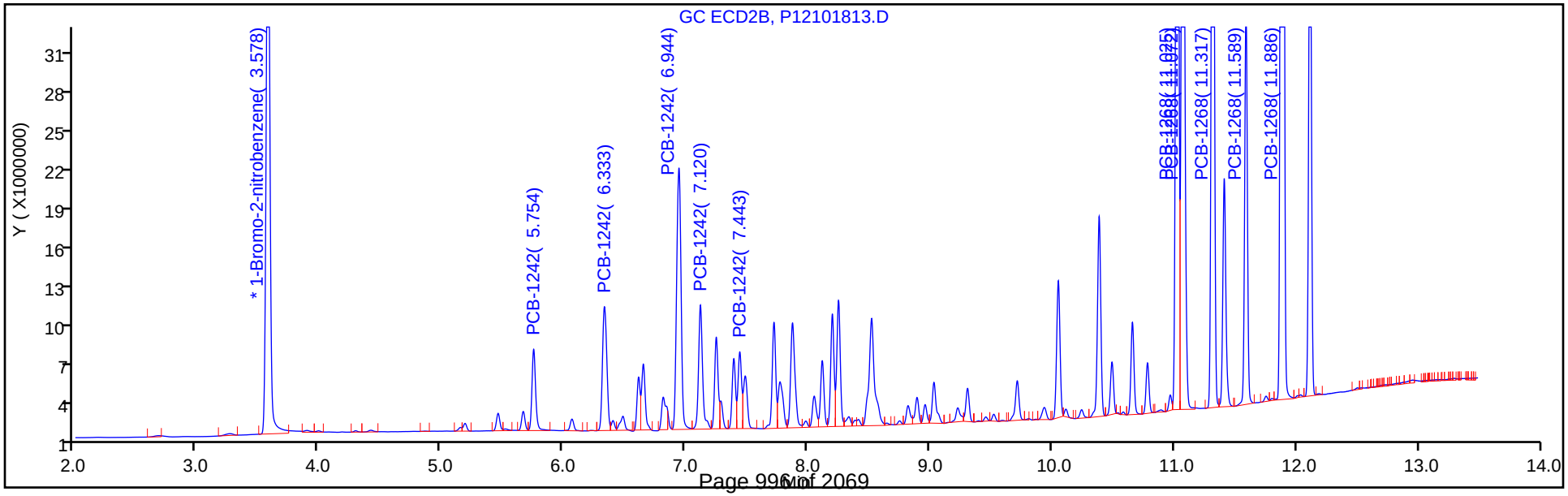
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101813.D

Injection Date:	18-Oct-2018 18:21:07	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std05 1242 1268			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 19-Oct-2018 13:35:07 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101813.D

Injection Date: 18-Oct-2018 18:21:07 Instrument ID: A2HP12

Lims ID: std05 1242 1268

Client ID:

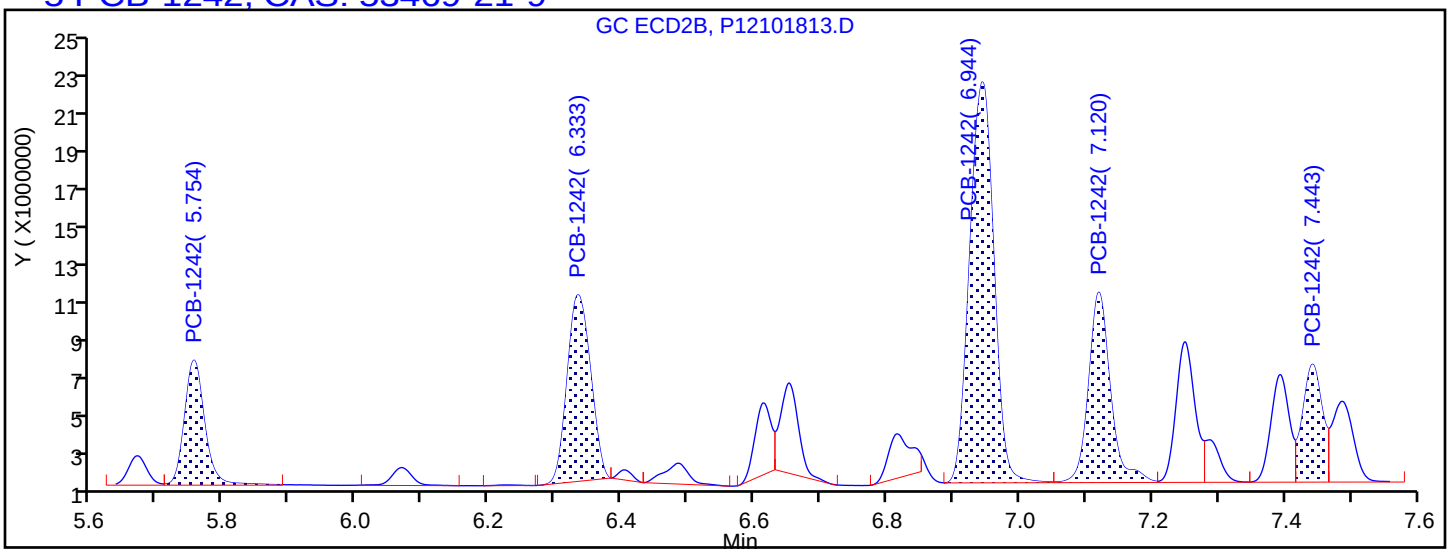
Operator ID: ALS Bottle#: 13 Worklist Smp#: 13

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

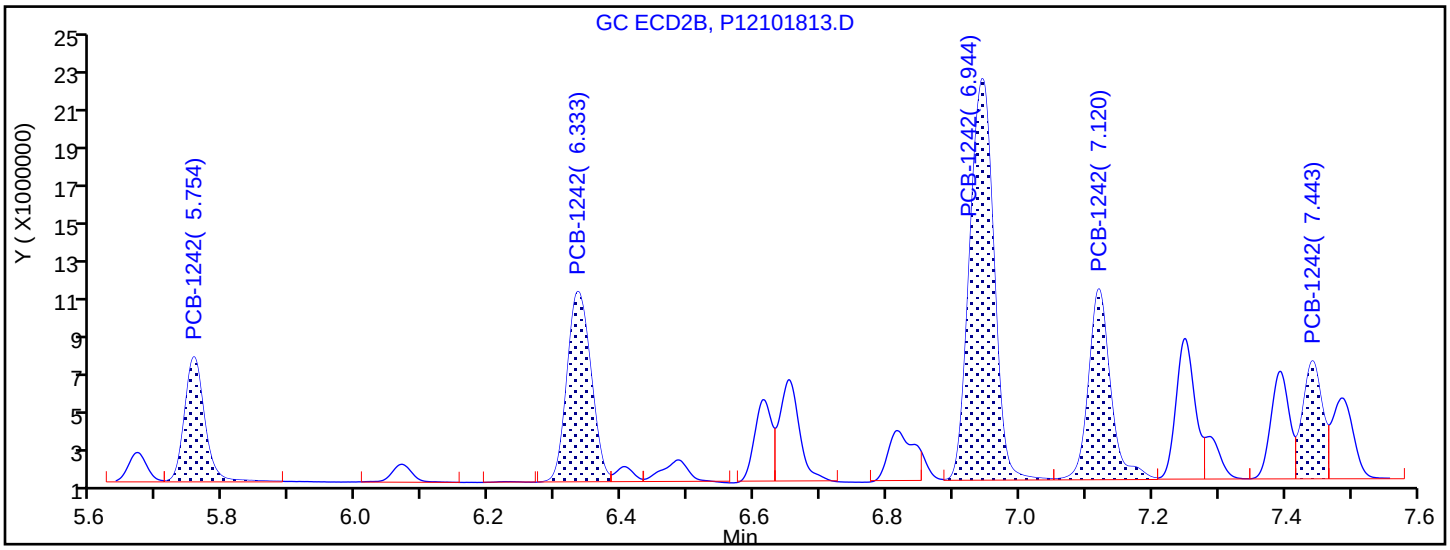
Column: Detector GC ecd2b

5 PCB-1242, CAS: 53469-21-9



Processing Integration Results

5.754	Response = 13244253	
6.333	Response = 22759931	
6.944	Response = 50685236	
7.120	Response = 21821855	
7.443	Response = 12278193	



Manual Integration Results

5.754	Response = 13244253	
6.333	Response = 23871598	M
6.944	Response = 50987696	M
7.120	Response = 22021328	M
7.443	Response = 12278193	

Reviewer: hassl, 19-Oct-2018 06:58:55

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101814.D
Lims ID: std1 1242 1268
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-Oct-2018 18:41:35 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-014
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:55 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 11:58:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.940	2.930	0.010	120771449	0.0500	0.0500	
2	3.580	3.577	0.004	94806114	0.0500	0.0500	
5 PCB-1242							
1	4.782	4.783	-0.001	29163202	1.00	0.9669	
1	5.284	5.287	-0.003	50909737	1.00	0.9589	
1	5.910	5.911	-0.001	126512368	1.00	1.00	
1	6.083	6.082	0.001	53363683	1.00	0.9746	
1	6.617	6.617	0.000	53052849	1.00	0.9632	
		Average of Peak Amounts =				0.9721	
2	5.754	5.756	-0.002	23983777	1.00	0.8887	
2	6.333	6.335	-0.002	44318658	1.00	0.9074	
2	6.944	6.946	-0.002	97777532	1.00	0.9466	
2	7.120	7.120	0.000	41121668	1.00	0.9586	
2	7.443	7.441	0.002	21922493	1.00	0.8489	
		Average of Peak Amounts =				0.9101	
						RPD = 6.60	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.931	9.934	-0.003	360450681	1.00	1.01	
1	9.976	9.978	-0.002	357076494	1.00	1.01	
1	10.197	10.200	-0.003	311212048	1.00	1.00	
1	10.583	10.585	-0.002	126910547	1.00	0.9846	
1	10.876	10.877	-0.001	1042833622	1.00	1.04	
		Average of Peak Amounts =				1.01	
2	11.025	11.026	-0.001	269953927	1.00	1.01	
2	11.072	11.072	0.000	257347825	1.00	1.01	
2	11.317	11.318	-0.001	227578329	1.00	1.01	
2	11.588	11.590	-0.002	93558719	1.00	0.9858	
2	11.887	11.886	0.001	739572591	1.00	1.04	
		Average of Peak Amounts =				1.01	
						RPD = 0.35	

Reagents:

SG42/68@1.0PP_00023 Amount Added: 1.00 Units: mL

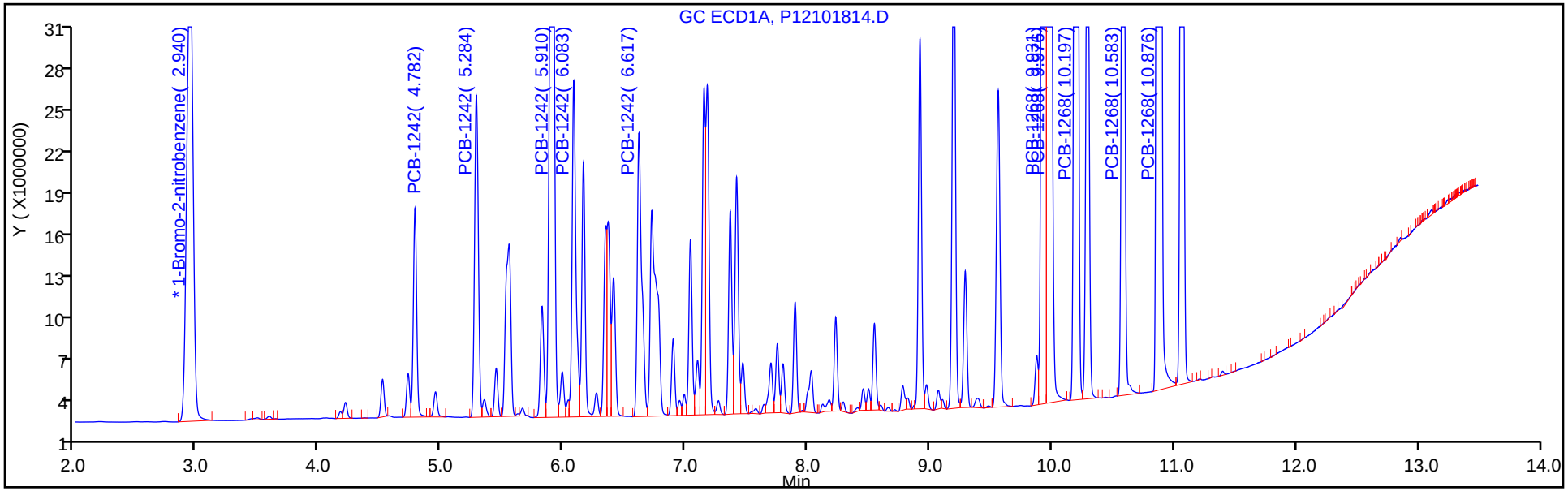
Report Date: 19-Oct-2018 13:34:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

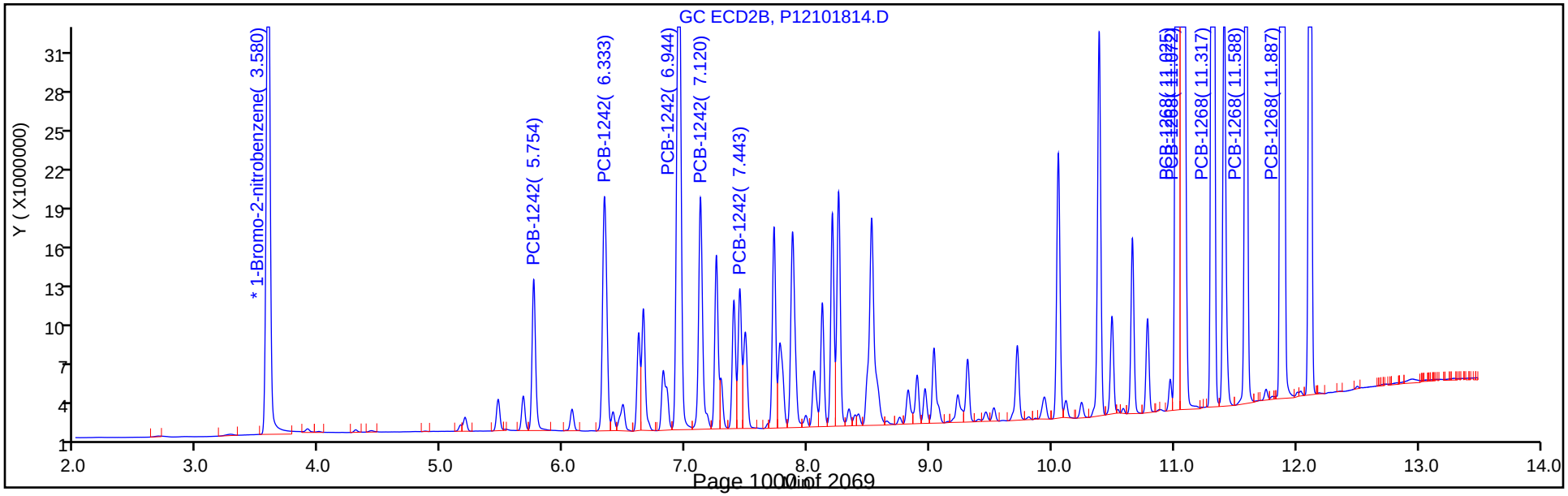
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101814.D

Injection Date:	18-Oct-2018 18:41:35	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std1 1242 1268			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101815.D
Lims ID: std15 1242 1268
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-Oct-2018 19:02:06 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-015
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:47 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 06:58:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.939	2.930	0.009	128057875	0.0500	0.0500	
2	3.579	3.577	0.002	99569450	0.0500	0.0500	
5 PCB-1242							M
1	4.781	4.783	-0.002	38358277	1.50	1.20	
1	5.284	5.287	-0.003	77142619	1.50	1.37	
1	5.910	5.911	-0.001	191346655	1.50	1.42	
1	6.082	6.082	0.000	79871710	1.50	1.38	
1	6.616	6.617	-0.001	79258532	1.50	1.36	
		Average of Peak Amounts =				1.34	
2	5.755	5.756	-0.001	34924105	1.50	1.23	
2	6.334	6.335	-0.001	65046557	1.50	1.27	M
2	6.944	6.946	-0.002	144917893	1.50	1.34	M
2	7.120	7.120	0.000	59134727	1.50	1.31	M
2	7.442	7.441	0.001	31382448	1.50	1.16	
		Average of Peak Amounts =				1.26	
						RPD = 6.43	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.931	9.934	-0.003	558413434	1.50	1.47	
1	9.976	9.978	-0.002	543541952	1.50	1.45	
1	10.197	10.200	-0.003	476994210	1.50	1.44	
1	10.582	10.585	-0.003	192557670	1.50	1.41	
1	10.877	10.877	0.000	1628262502	1.50	1.53	
		Average of Peak Amounts =				1.46	
2	11.026	11.026	0.000	415013055	1.50	1.48	
2	11.071	11.072	-0.001	392106023	1.50	1.46	
2	11.316	11.318	-0.002	348343357	1.50	1.47	
2	11.589	11.590	-0.001	141834139	1.50	1.42	
2	11.886	11.886	0.000	1146393296	1.50	1.54	
		Average of Peak Amounts =				1.47	
						RPD = 0.97	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@1.5PPM_00005 Amount Added: 1.00 Units: mL

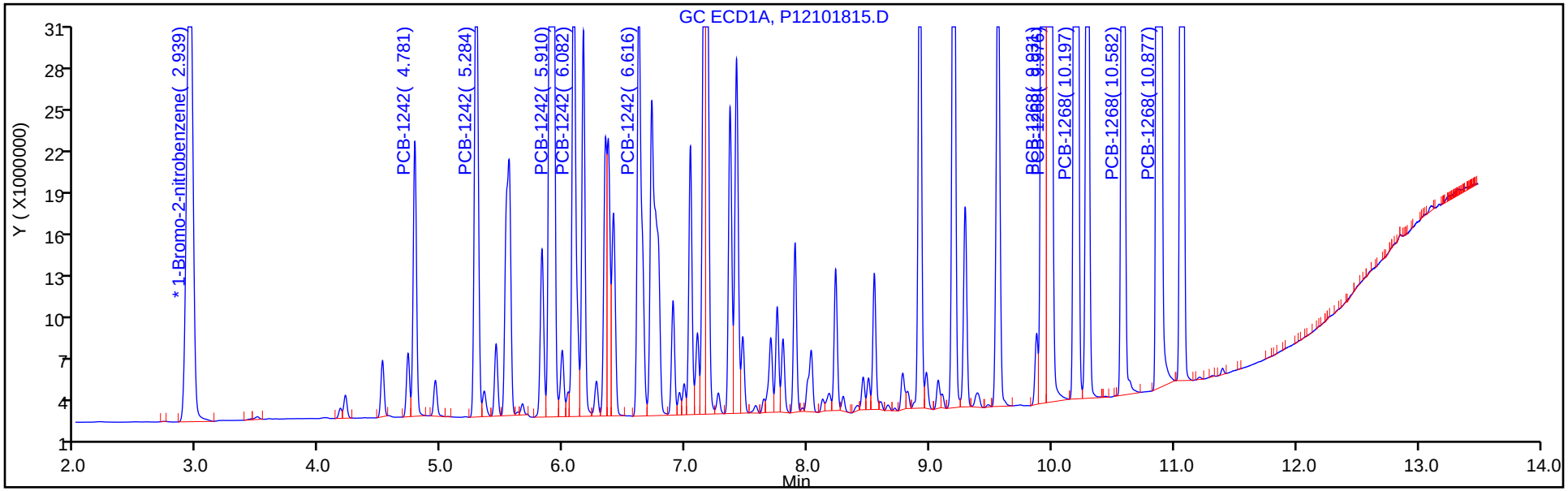
Report Date: 19-Oct-2018 13:34:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

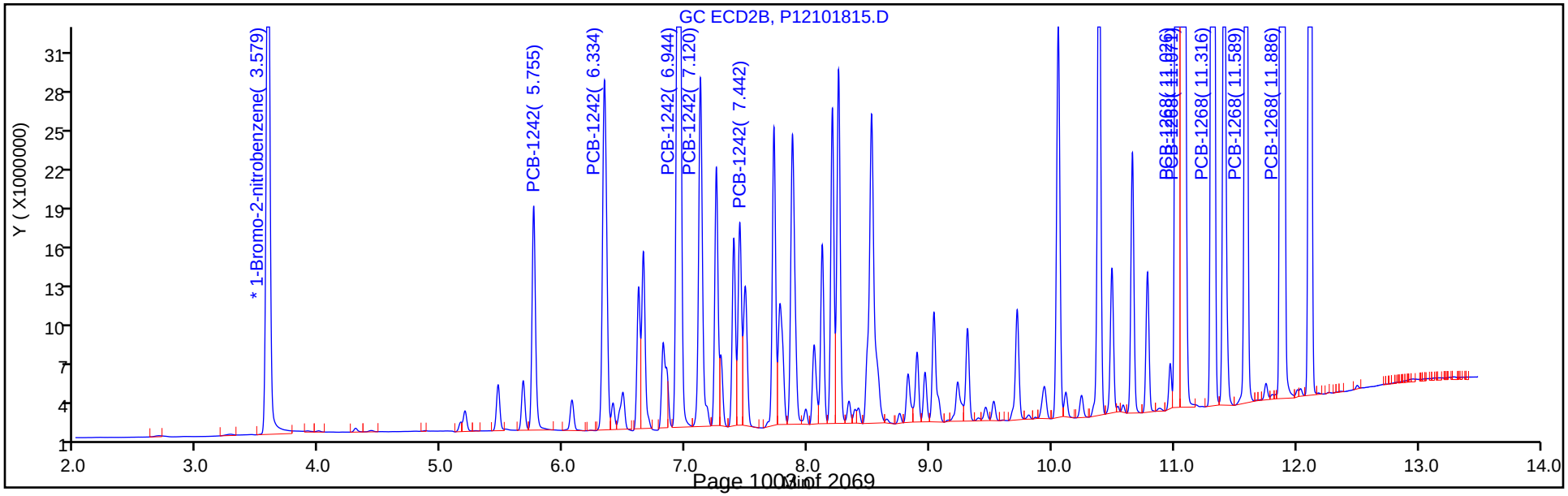
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101815.D

Injection Date:	18-Oct-2018 19:02:06	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std15 1242 1268			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 19-Oct-2018 13:34:50 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101815.D

Injection Date: 18-Oct-2018 19:02:06 Instrument ID: A2HP12

Lims ID: std15 1242 1268

Client ID:

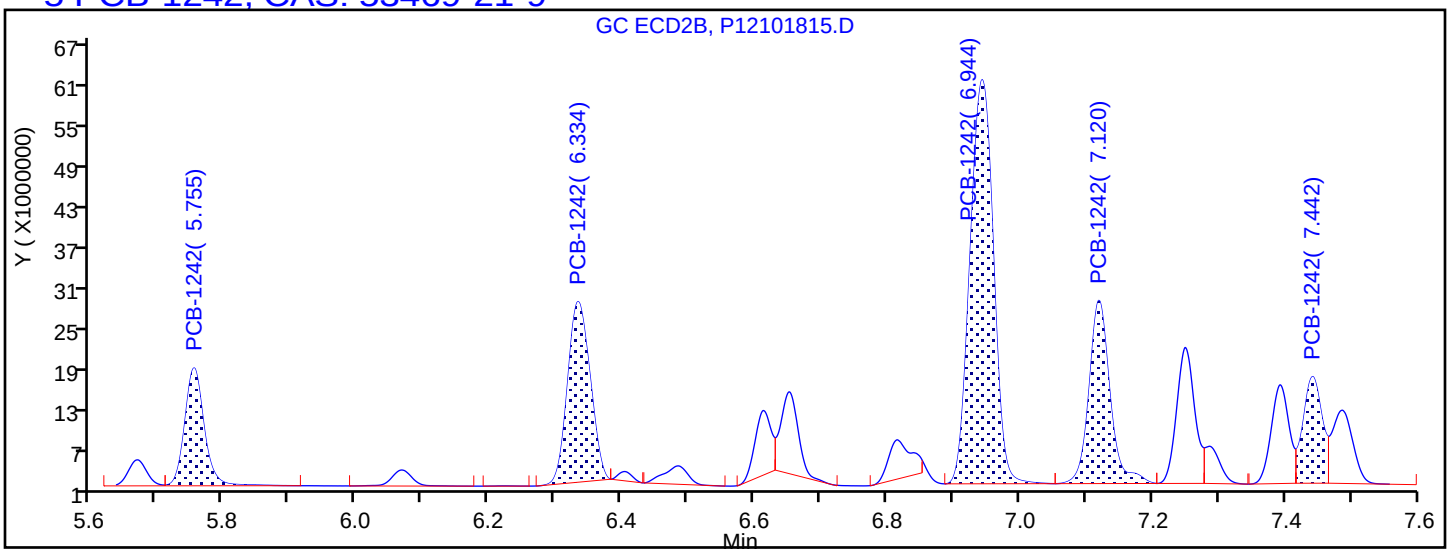
Operator ID: ALS Bottle#: 15 Worklist Smp#: 15

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

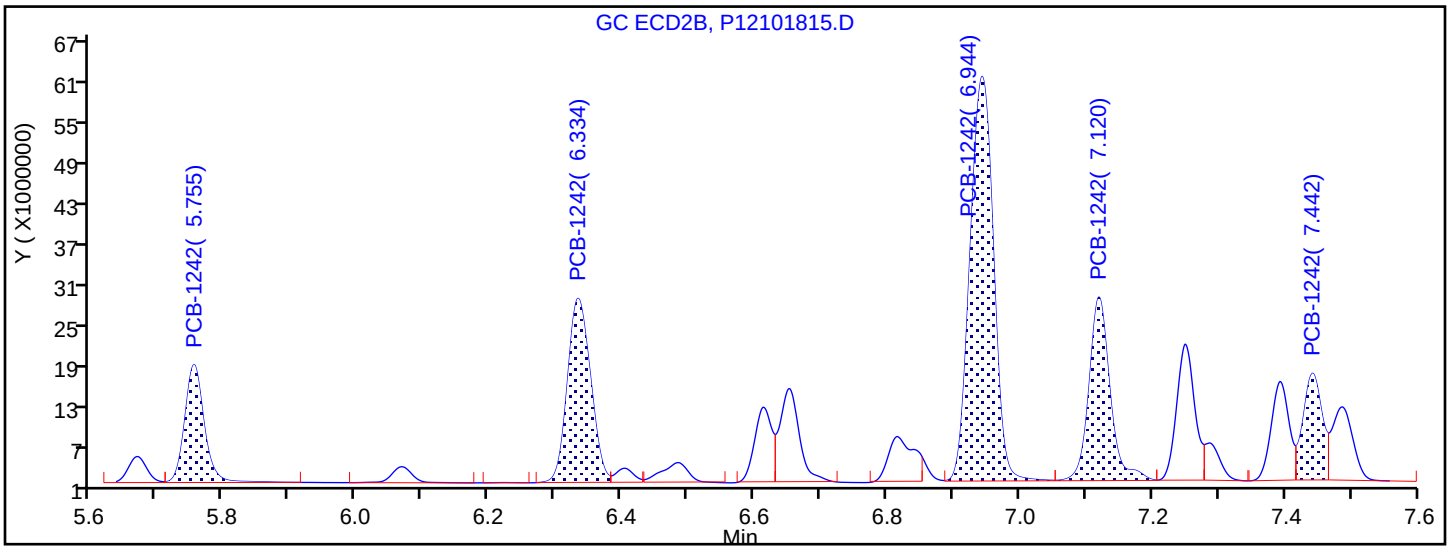
Column: Detector GC ecd2b

5 PCB-1242, CAS: 53469-21-9



Processing Integration Results

5.755	Response = 34924105
6.334	Response = 62027984
6.944	Response = 144205823
7.120	Response = 58714301
7.442	Response = 31382448



Manual Integration Results

5.755	Response = 34924105	
6.334	Response = 65046557	M
6.944	Response = 144917893	M
7.120	Response = 59134727	M
7.442	Response = 31382448	

Reviewer: hassl, 19-Oct-2018 06:58:37

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-104089-1 | Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 | GC Column: CLP-1 (0.53 ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 19:22 | Calibration End Date: 10/18/2018 21:05 | Calibration ID: 47573

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/16	P12101816.D
Level 2	STD01 240-350710/17	P12101817.D
Level 3	STD02 240-350710/18	P12101818.D
Level 4	STD05 240-350710/19	P12101819.D
Level 5	STD1 240-350710/20	P12101820.D
Level 6	STD15 240-350710/21	P12101821.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1248 Peak 1	0.0127 0.0108	0.0124	0.0116	0.0110	0.0104	Ave		0.0115				7.7		20.0			
PCB-1248 Peak 2	0.0393 0.0334	0.0373	0.0347	0.0333	0.0323	Ave		0.0351				7.7		20.0			
PCB-1248 Peak 3	0.0336 0.0313	0.0321	0.0308	0.0298	0.0308	Ave		0.0314				4.2		20.0			
PCB-1248 Peak 4	0.0286 0.0258	0.0277	0.0256	0.0252	0.0250	Ave		0.0263				5.5		20.0			
PCB-1248 Peak 5	0.0182 0.0166	0.0177	0.0168	0.0163	0.0162	Ave		0.0170				4.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton | Job No.: 240-104089-1 | Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 | GC Column: CLP-1 (0.53 ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 19:22 | Calibration End Date: 10/18/2018 21:05 | Calibration ID: 47573

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/16	P12101816.D
Level 2	STD01 240-350710/17	P12101817.D
Level 3	STD02 240-350710/18	P12101818.D
Level 4	STD05 240-350710/19	P12101819.D
Level 5	STD1 240-350710/20	P12101820.D
Level 6	STD15 240-350710/21	P12101821.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1248 Peak 1	BNB	Ave	1572454 40003791	3111608	5962880	13908050	27101178	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 2	BNB	Ave	4887074 123081767	9396313	17874386	42229838	83895539	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 3	BNB	Ave	4181449 115453261	8079719	15824735	37826184	79844251	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 4	BNB	Ave	3550611 95181841	6963413	13186194	31971249	64992121	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 5	BNB	Ave	2263606 61121534	4461148	8624668	20673256	41910879	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101816.D
Lims ID: std005 1248
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Oct-2018 19:22:44 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-016
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub4

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:39 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 06:59:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.932	2.930	0.003	124263744	0.0500	0.0500	
2	3.578	3.577	0.002	96462381	0.0500	0.0500	
7 PCB-1248							
1	5.284	5.284	0.000	1572454	0.0500	0.0551	
1	6.615	6.615	0.000	4887074	0.0500	0.0561	
1	7.148	7.148	0.000	4181449	0.0500	0.0536	
1	7.417	7.417	0.000	3550611	0.0500	0.0543	
1	7.895	7.895	0.000	2263606	0.0500	0.0537	
		Average of Peak Amounts =				0.0546	
2	6.332	6.332	0.000	1683117	0.0500	0.0613	
2	6.942	6.942	0.000	4126620	0.0500	0.0590	
2	7.722	7.722	0.000	3131570	0.0500	0.0588	
2	8.251	8.251	0.000	4010261	0.0500	0.0597	
2	9.032	9.032	0.000	2147420	0.0500	0.0598	
		Average of Peak Amounts =				0.0597	
						RPD = 9.02	

Reagents:

SG1248@.05ppm_00025 Amount Added: 1.00 Units: mL

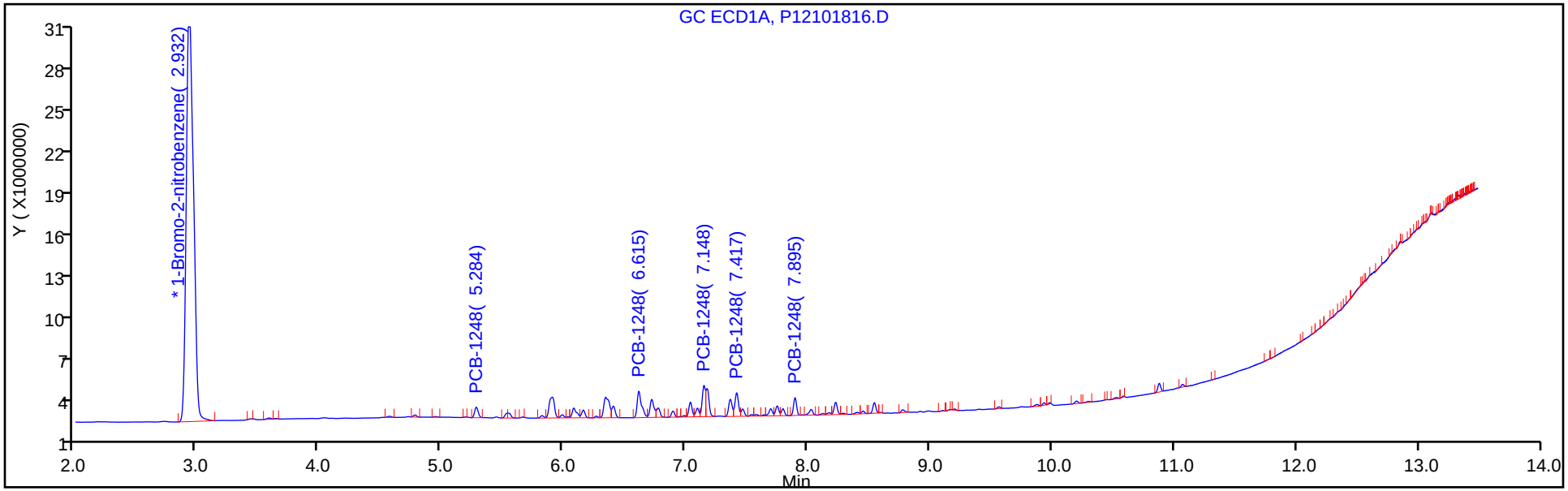
Report Date: 19-Oct-2018 13:34:41 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

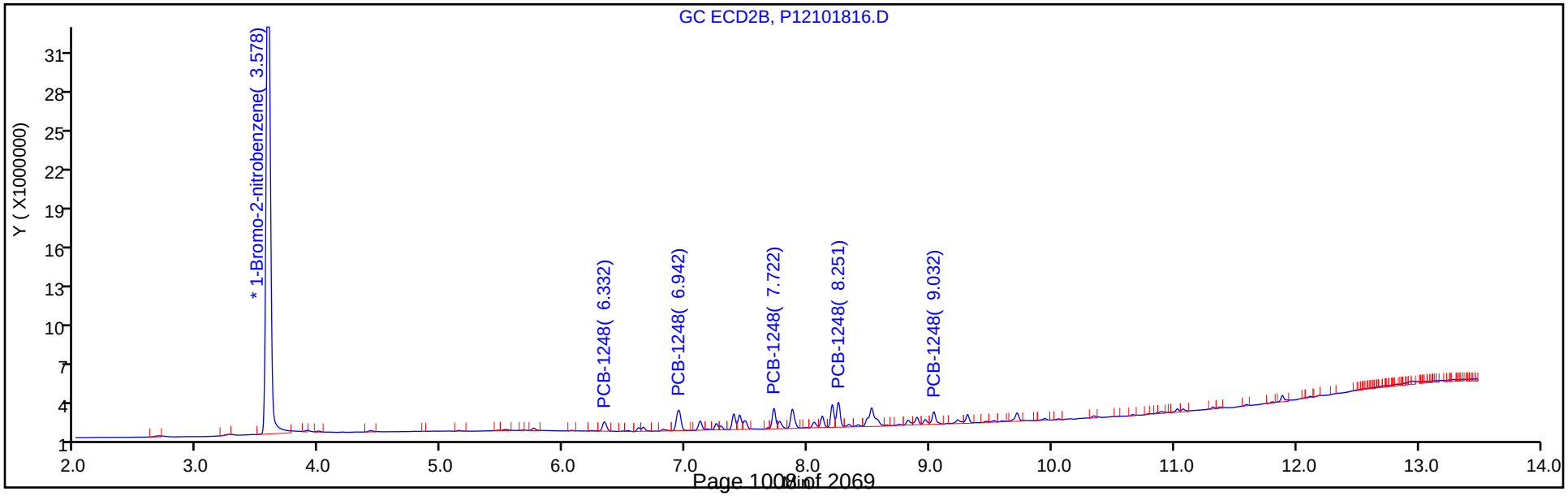
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101816.D

Injection Date:	18-Oct-2018 19:22:44	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std005 1248			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101817.D
Lims ID: std01 1248
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Oct-2018 19:43:31 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-017
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub4

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:30 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 12:49:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.936	2.930	0.006	125884624	0.0500	0.0500	
2	3.578	3.577	0.001	97934772	0.0500	0.0500	
7 PCB-1248							
1	5.283	5.284	-0.001	3111608	0.1000	0.1077	
1	6.616	6.615	0.001	9396313	0.1000	0.1064	
1	7.150	7.148	0.002	8079719	0.1000	0.1022	
1	7.418	7.417	0.001	6963413	0.1000	0.1051	
1	7.896	7.895	0.001	4461148	0.1000	0.1045	
		Average of Peak Amounts =				0.1052	
2	6.332	6.332	0.000	3134848	0.1000	0.1124	
2	6.941	6.942	-0.001	7750982	0.1000	0.1091	
2	7.722	7.722	0.000	5948806	0.1000	0.1100	
2	8.251	8.251	0.000	7464863	0.1000	0.1094	
2	9.033	9.032	0.001	3999903	0.1000	0.1098	
		Average of Peak Amounts =				0.1101	
						RPD = 4.60	

Reagents:

SG1248@0.1PPM_00027 Amount Added: 1.00 Units: mL

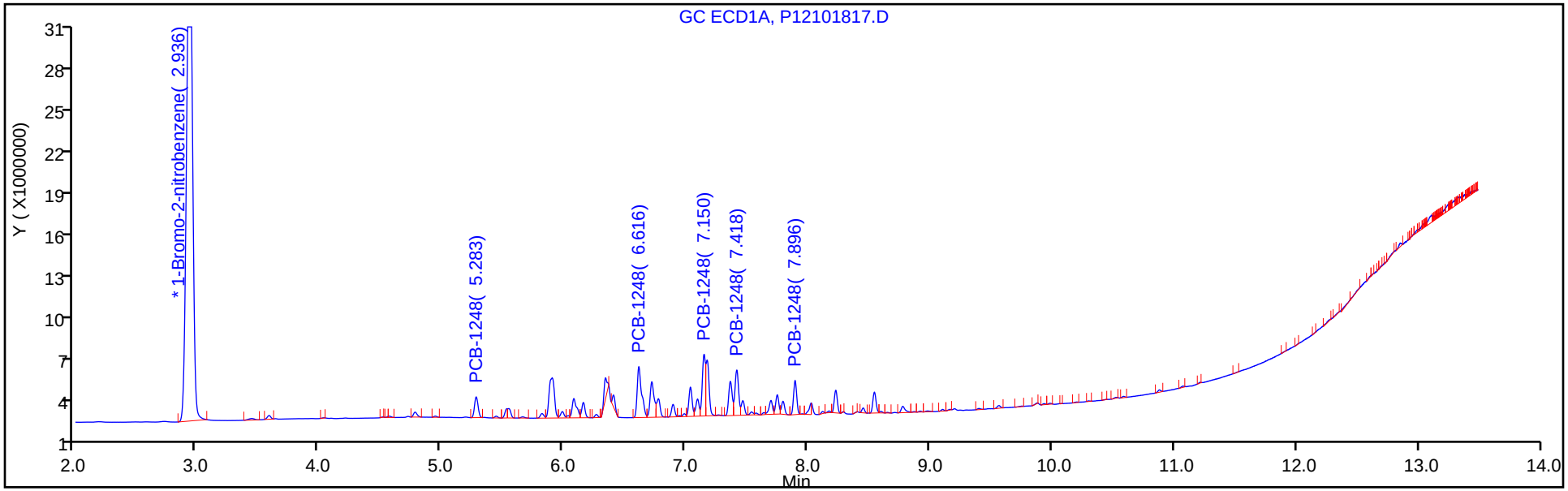
Report Date: 19-Oct-2018 13:34:32 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

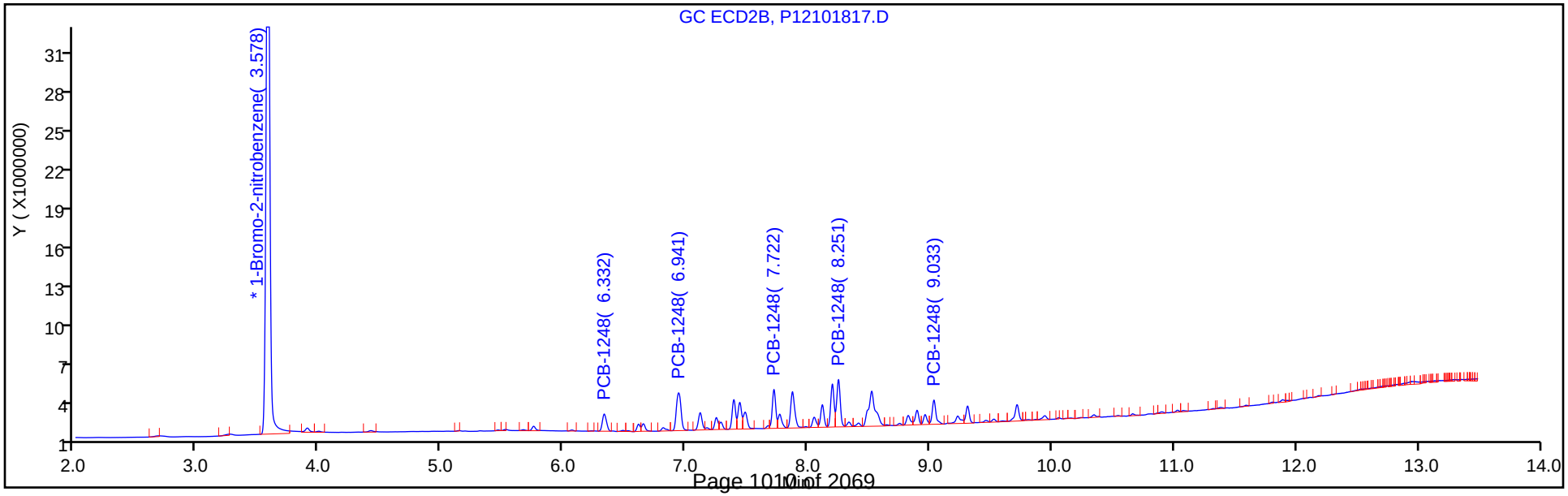
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101817.D

Injection Date:	18-Oct-2018 19:43:31	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std01 1248			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101818.D
Lims ID: std02 1248
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-Oct-2018 20:03:57 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-018
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub4

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:22 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 12:50:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.935	2.930	0.005	128623370	0.0500	0.0500	
2	3.579	3.577	0.002	99835009	0.0500	0.0500	
7 PCB-1248							
1	5.284	5.284	0.000	5962880	0.2000	0.2020	
1	6.616	6.615	0.001	17874386	0.2000	0.1981	
1	7.149	7.148	0.001	15824735	0.2000	0.1959	
1	7.416	7.417	-0.001	13186194	0.2000	0.1947	
1	7.895	7.895	0.000	8624668	0.2000	0.1977	
		Average of Peak Amounts =				0.1977	
2	6.333	6.332	0.001	5824256	0.2000	0.2049	
2	6.942	6.942	0.000	14647651	0.2000	0.2022	
2	7.723	7.722	0.001	11195722	0.2000	0.2030	
2	8.250	8.251	-0.001	13918942	0.2000	0.2001	
2	9.033	9.032	0.001	7437110	0.2000	0.2003	
		Average of Peak Amounts =				0.2021	
						RPD = 2.20	

Reagents:

SG1248@0.2ppm_00024 Amount Added: 1.00 Units: mL

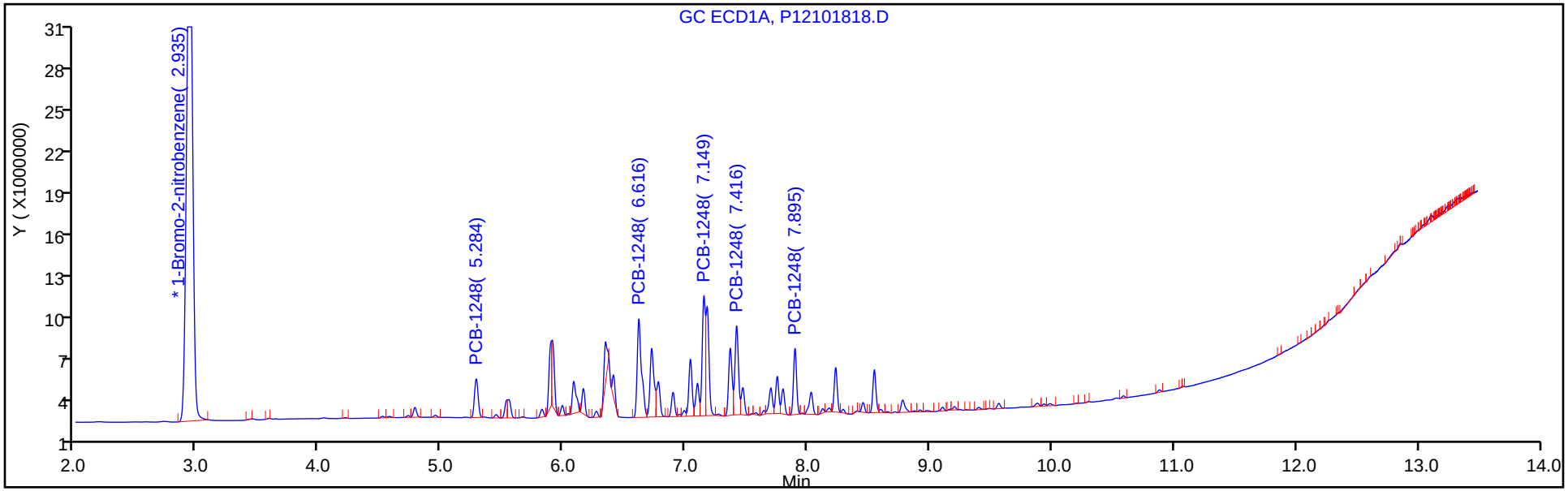
Report Date: 19-Oct-2018 13:34:24 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

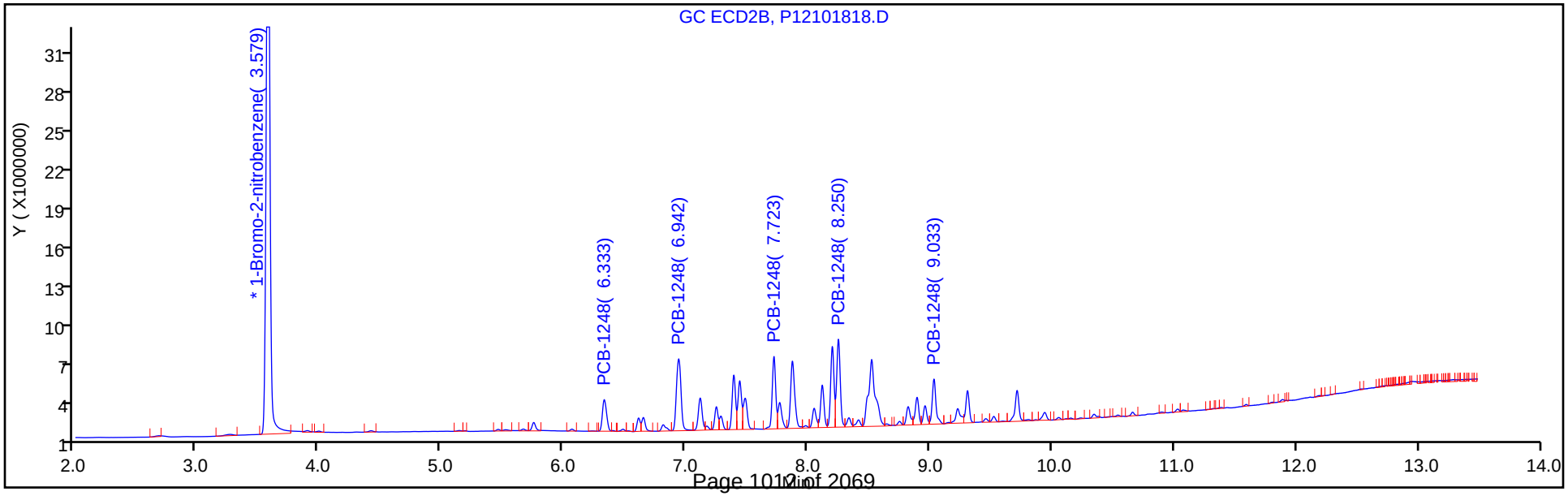
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101818.D

Injection Date:	18-Oct-2018 20:03:57	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std02 1248			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101819.D
Lims ID: std05 1248
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-Oct-2018 20:24:33 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-019
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub4

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:15 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 12:52:28

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.934	2.930	0.004	126730017	0.0500	0.0500	
2	3.578	3.577	0.001	97934993	0.0500	0.0500	
7 PCB-1248							
1	5.284	5.284	0.000	13908050	0.5000	0.4781	
1	6.615	6.615	0.000	42229838	0.5000	0.4751	
1	7.149	7.148	0.001	37826184	0.5000	0.4753	
1	7.417	7.417	0.000	31971249	0.5000	0.4792	
1	7.894	7.895	-0.001	20673256	0.5000	0.4811	
		Average of Peak Amounts =				0.4777	
2	6.332	6.332	0.000	12916361	0.5000	0.4633	
2	6.942	6.942	0.000	32871390	0.5000	0.4626	
2	7.721	7.722	-0.001	25230949	0.5000	0.4664	
2	8.250	8.251	-0.001	31510850	0.5000	0.4617	
2	9.033	9.032	0.001	17067604	0.5000	0.4685	
		Average of Peak Amounts =				0.4645	
						RPD = 2.81	

Reagents:

SG1248@0.5ppm_00036 Amount Added: 1.00 Units: mL

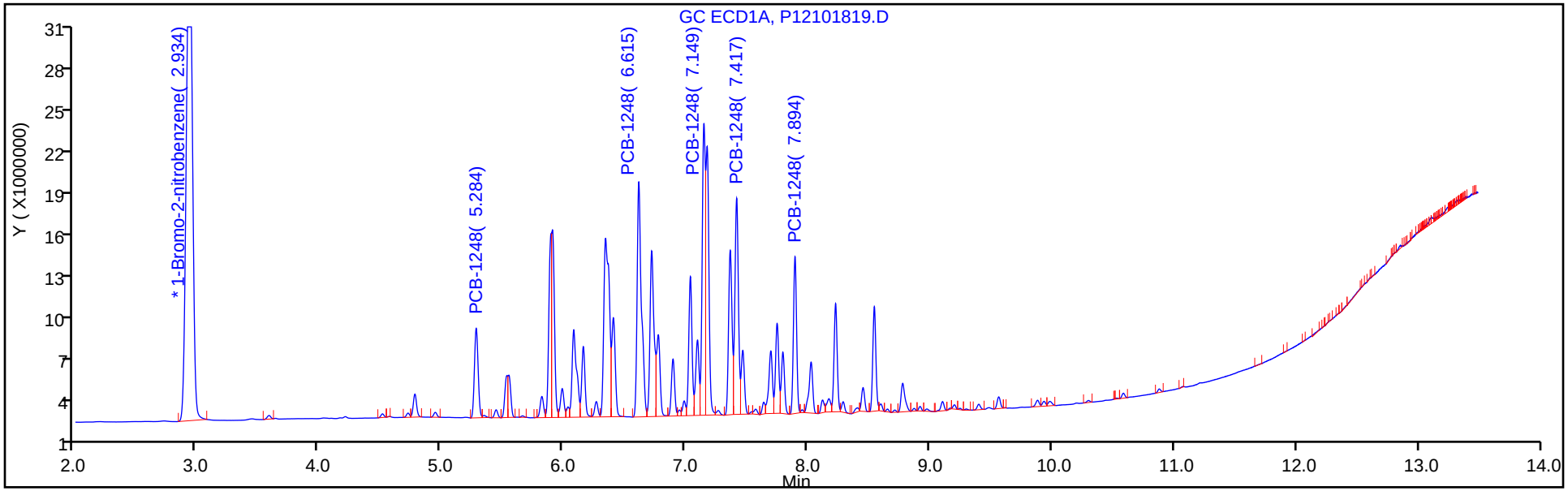
Report Date: 19-Oct-2018 13:34:16 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

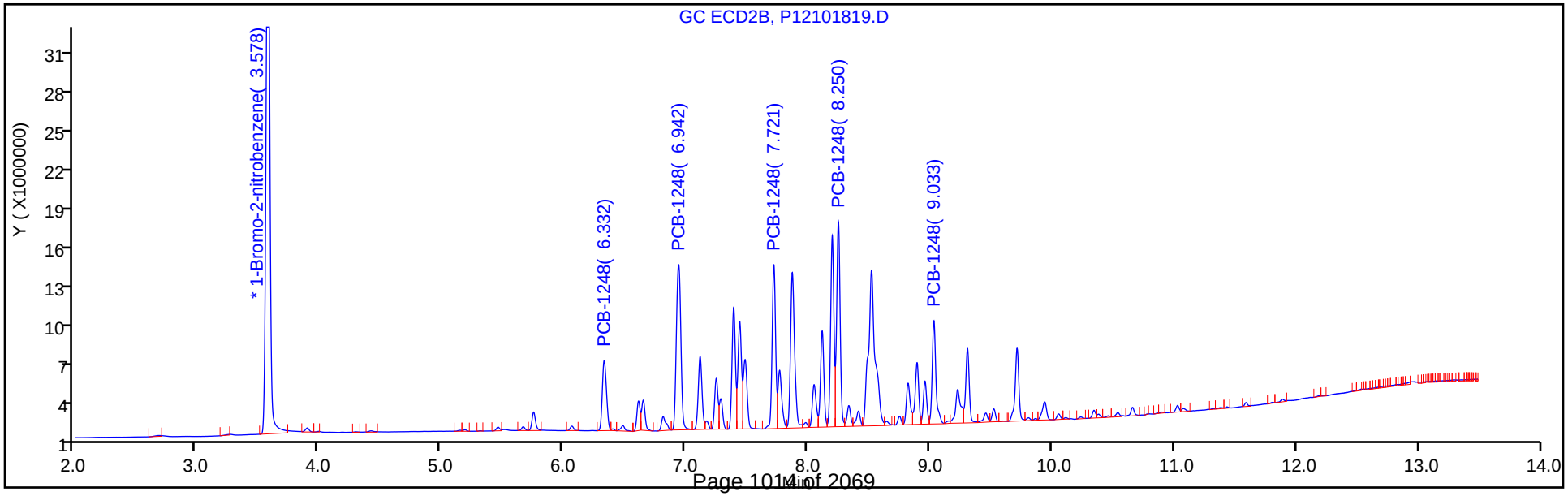
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101819.D

Injection Date:	18-Oct-2018 20:24:33	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std05 1248			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101820.D
Lims ID: std1 1248
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-Oct-2018 20:45:03 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-020
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub4

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:08 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 12:52:41

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.931	2.930	0.001	129726379	0.0500	0.0500	
2	3.577	3.577	0.001	101615097	0.0500	0.0500	
7 PCB-1248							
1	5.284	5.284	0.000	27101178	1.00	0.9101	
1	6.615	6.615	0.000	83895539	1.00	0.9221	
1	7.148	7.148	0.000	79844251	1.00	0.9800	
1	7.416	7.417	-0.001	64992121	1.00	0.9516	
1	7.894	7.895	-0.001	41910879	1.00	0.9527	
		Average of Peak Amounts =				0.9433	
2	6.332	6.332	0.000	24410261	1.00	0.8438	
2	6.941	6.942	-0.001	64926658	1.00	0.8807	
2	7.721	7.722	-0.001	49202909	1.00	0.8766	
2	8.250	8.251	-0.001	62314359	1.00	0.8800	
2	9.031	9.032	-0.001	32982696	1.00	0.8726	
		Average of Peak Amounts =				0.8707	
						RPD = 8.00	

Reagents:

SG1248@1.0ppm_00027 Amount Added: 1.00 Units: mL

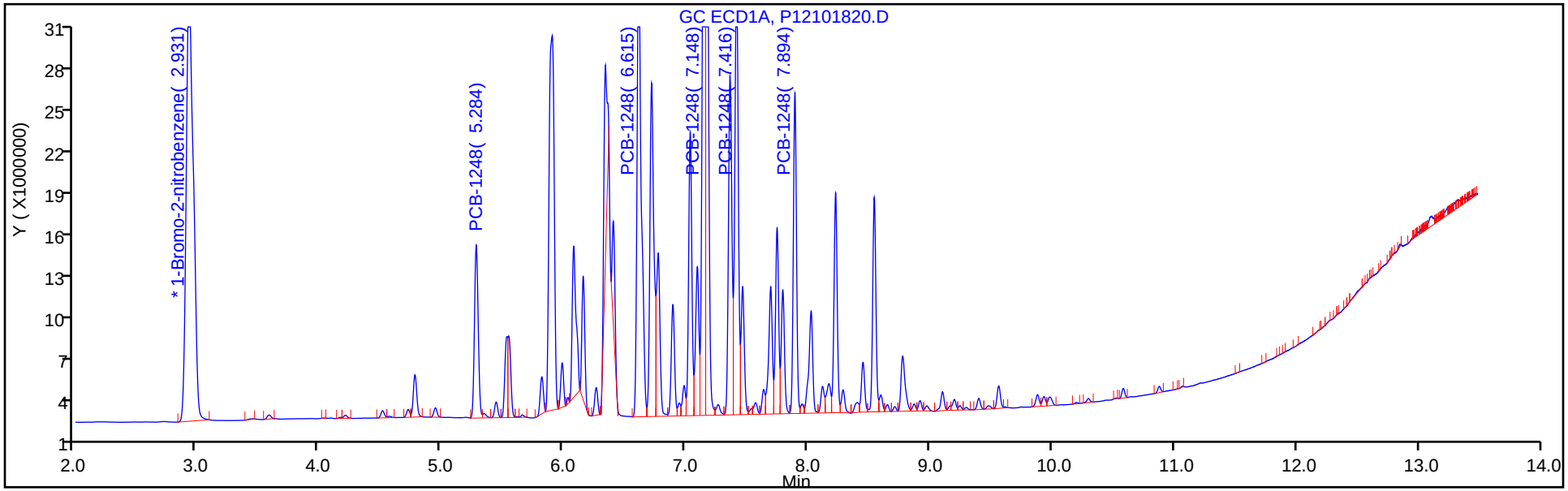
Report Date: 19-Oct-2018 13:34:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

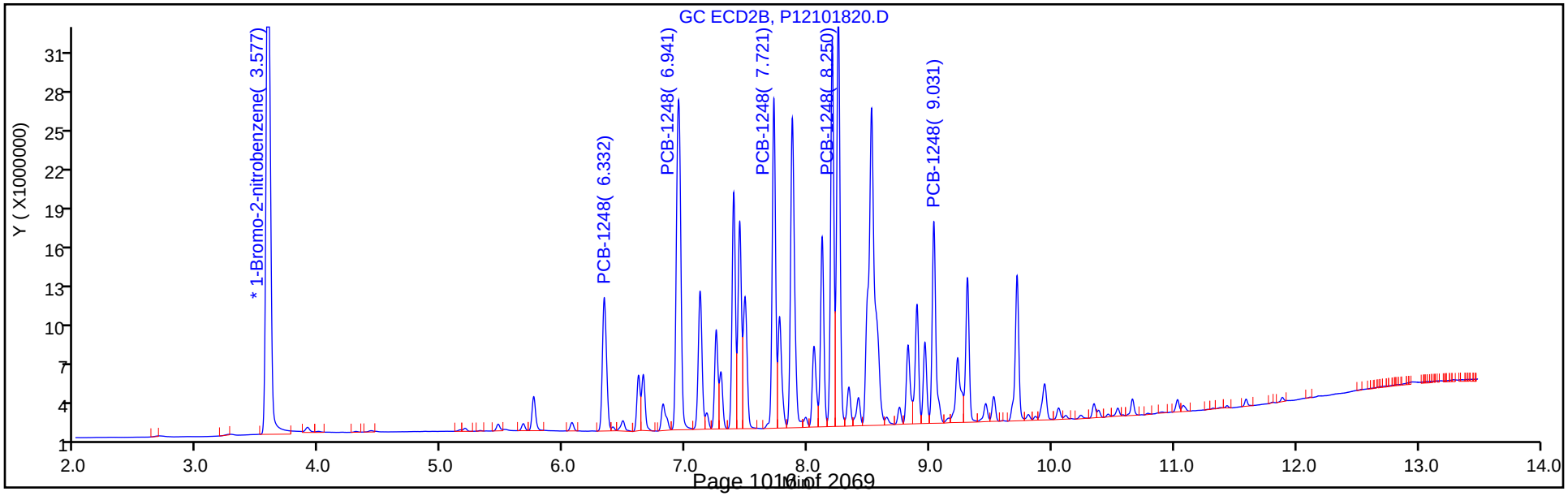
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101820.D

Injection Date:	18-Oct-2018 20:45:03	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std1 1248			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101821.D
Lims ID: std15 1248
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-Oct-2018 21:05:32 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-021
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub4

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:00 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 12:52:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.931	2.930	0.002	122989223	0.0500	0.0500	
2	3.576	3.577	0.000	95403852	0.0500	0.0500	
7 PCB-1248							
1	5.282	5.284	-0.002	40003791	1.50	1.42	
1	6.614	6.615	-0.001	123081767	1.50	1.43	
1	7.146	7.148	-0.002	115453261	1.50	1.49	
1	7.416	7.417	-0.001	95181841	1.50	1.47	
1	7.893	7.895	-0.002	61121534	1.50	1.47	
		Average of Peak Amounts =				1.45	
2	6.331	6.332	-0.001	34822692	1.50	1.28	
2	6.941	6.942	-0.001	94788574	1.50	1.37	
2	7.722	7.722	0.000	71168185	1.50	1.35	
2	8.250	8.251	-0.001	90709653	1.50	1.36	
2	9.032	9.032	0.000	47590444	1.50	1.34	
		Average of Peak Amounts =				1.34	
						RPD = 8.11	

Reagents:

SG1248@1.5ppm_00004 Amount Added: 1.00 Units: mL

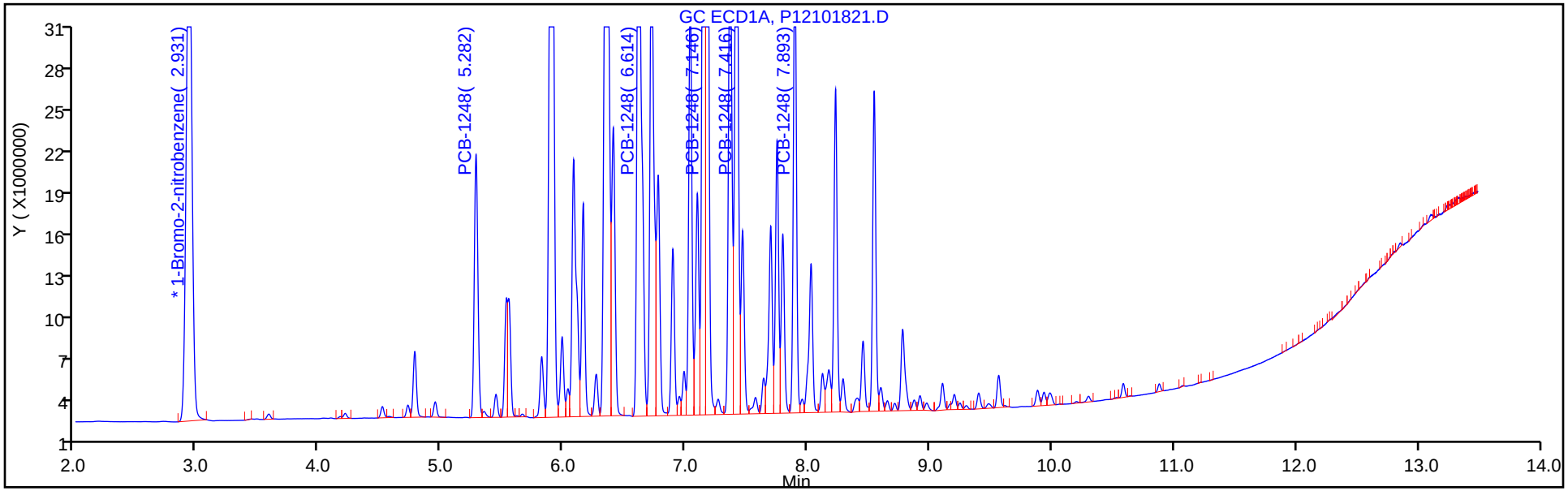
Report Date: 19-Oct-2018 13:34:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

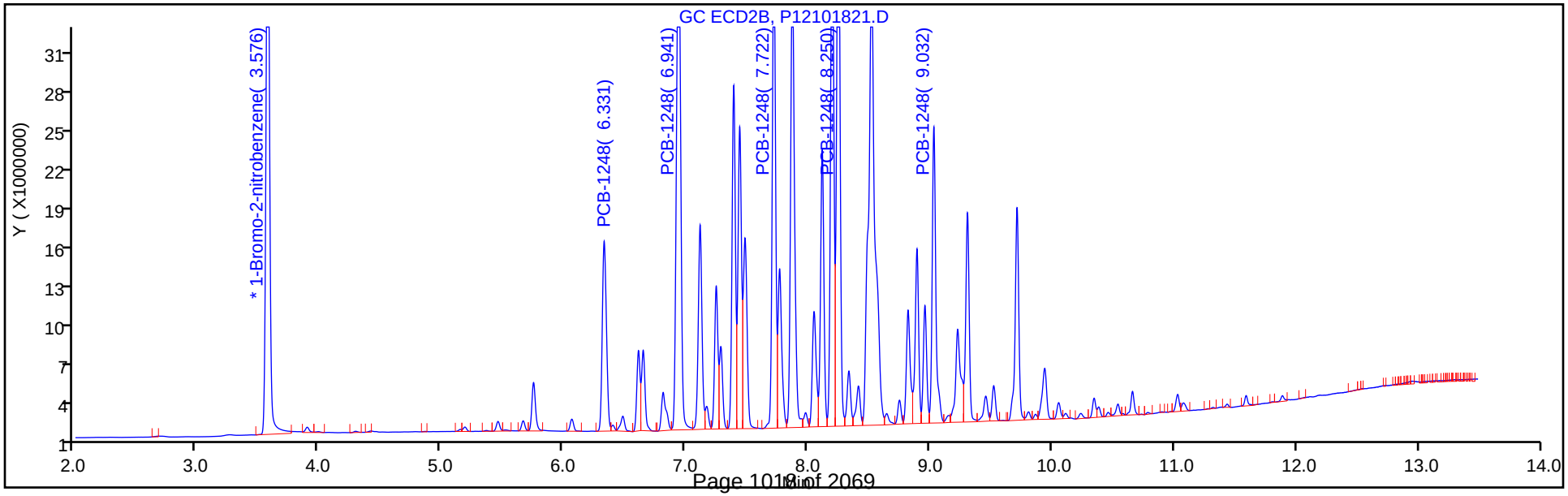
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101821.D

Injection Date:	18-Oct-2018 21:05:32	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std15 1248			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 19:22 Calibration End Date: 10/18/2018 21:05 Calibration ID: 47574

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/16	P12101816.D
Level 2	STD01 240-350710/17	P12101817.D
Level 3	STD02 240-350710/18	P12101818.D
Level 4	STD05 240-350710/19	P12101819.D
Level 5	STD1 240-350710/20	P12101820.D
Level 6	STD15 240-350710/21	P12101821.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1248 Peak 1	0.0174 0.0122	0.0160	0.0146	0.0132	0.0120	Ave		0.0142				15.4		20.0			
PCB-1248 Peak 2	0.0428 0.0331	0.0396	0.0367	0.0336	0.0319	Ave		0.0363				11.7		20.0			
PCB-1248 Peak 3	0.0325 0.0249	0.0304	0.0280	0.0258	0.0242	Ave		0.0276				11.9		20.0			
PCB-1248 Peak 4	0.0416 0.0317	0.0381	0.0349	0.0322	0.0307	Ave		0.0348				12.2		20.0			
PCB-1248 Peak 5	0.0223 0.0166	0.0204	0.0186	0.0174	0.0162	Ave		0.0186				12.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton | Job No.: 240-104089-1 | Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 | GC Column: CLP-2 (0.53 ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 19:22 | Calibration End Date: 10/18/2018 21:05 | Calibration ID: 47574

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/16	P12101816.D
Level 2	STD01 240-350710/17	P12101817.D
Level 3	STD02 240-350710/18	P12101818.D
Level 4	STD05 240-350710/19	P12101819.D
Level 5	STD1 240-350710/20	P12101820.D
Level 6	STD15 240-350710/21	P12101821.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1248 Peak 1	BNB	Ave	1683117 34822692	3134848	5824256	12916361	24410261	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 2	BNB	Ave	4126620 94788574	7750982	14647651	32871390	64926658	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 3	BNB	Ave	3131570 71168185	5948806	11195722	25230949	49202909	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 4	BNB	Ave	4010261 90709653	7464863	13918942	31510850	62314359	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 5	BNB	Ave	2147420 47590444	3999903	7437110	17067604	32982696	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101816.D
Lims ID: std005 1248
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Oct-2018 19:22:44 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-016
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub4

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:39 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 06:59:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.932	2.930	0.003	124263744	0.0500	0.0500	
2	3.578	3.577	0.002	96462381	0.0500	0.0500	
7 PCB-1248							
1	5.284	5.284	0.000	1572454	0.0500	0.0551	
1	6.615	6.615	0.000	4887074	0.0500	0.0561	
1	7.148	7.148	0.000	4181449	0.0500	0.0536	
1	7.417	7.417	0.000	3550611	0.0500	0.0543	
1	7.895	7.895	0.000	2263606	0.0500	0.0537	
		Average of Peak Amounts =				0.0546	
2	6.332	6.332	0.000	1683117	0.0500	0.0613	
2	6.942	6.942	0.000	4126620	0.0500	0.0590	
2	7.722	7.722	0.000	3131570	0.0500	0.0588	
2	8.251	8.251	0.000	4010261	0.0500	0.0597	
2	9.032	9.032	0.000	2147420	0.0500	0.0598	
		Average of Peak Amounts =				0.0597	
						RPD = 9.02	

Reagents:

SG1248@.05ppm_00025 Amount Added: 1.00 Units: mL

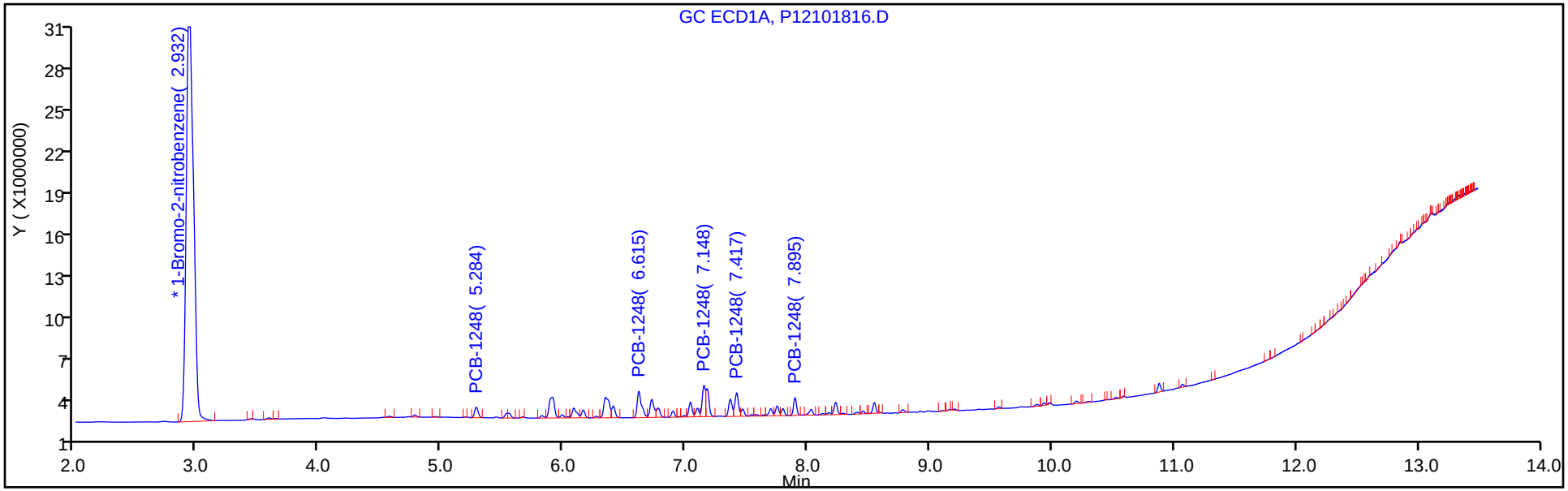
Report Date: 19-Oct-2018 13:34:42 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

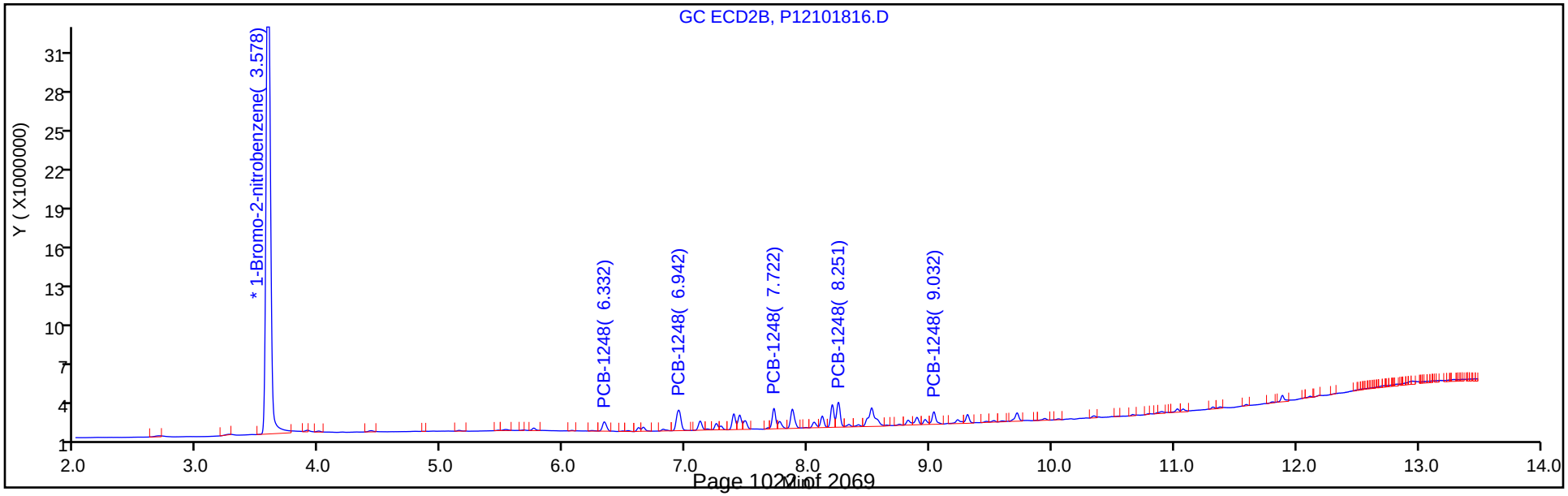
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101816.D

Injection Date:	18-Oct-2018 19:22:44	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std005 1248			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101817.D
Lims ID: std01 1248
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Oct-2018 19:43:31 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-017
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub4

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:30 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 12:49:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.936	2.930	0.006	125884624	0.0500	0.0500	
2	3.578	3.577	0.001	97934772	0.0500	0.0500	
7 PCB-1248							
1	5.283	5.284	-0.001	3111608	0.1000	0.1077	
1	6.616	6.615	0.001	9396313	0.1000	0.1064	
1	7.150	7.148	0.002	8079719	0.1000	0.1022	
1	7.418	7.417	0.001	6963413	0.1000	0.1051	
1	7.896	7.895	0.001	4461148	0.1000	0.1045	
		Average of Peak Amounts =				0.1052	
2	6.332	6.332	0.000	3134848	0.1000	0.1124	
2	6.941	6.942	-0.001	7750982	0.1000	0.1091	
2	7.722	7.722	0.000	5948806	0.1000	0.1100	
2	8.251	8.251	0.000	7464863	0.1000	0.1094	
2	9.033	9.032	0.001	3999903	0.1000	0.1098	
		Average of Peak Amounts =				0.1101	
						RPD = 4.60	

Reagents:

SG1248@0.1PPM_00027 Amount Added: 1.00 Units: mL

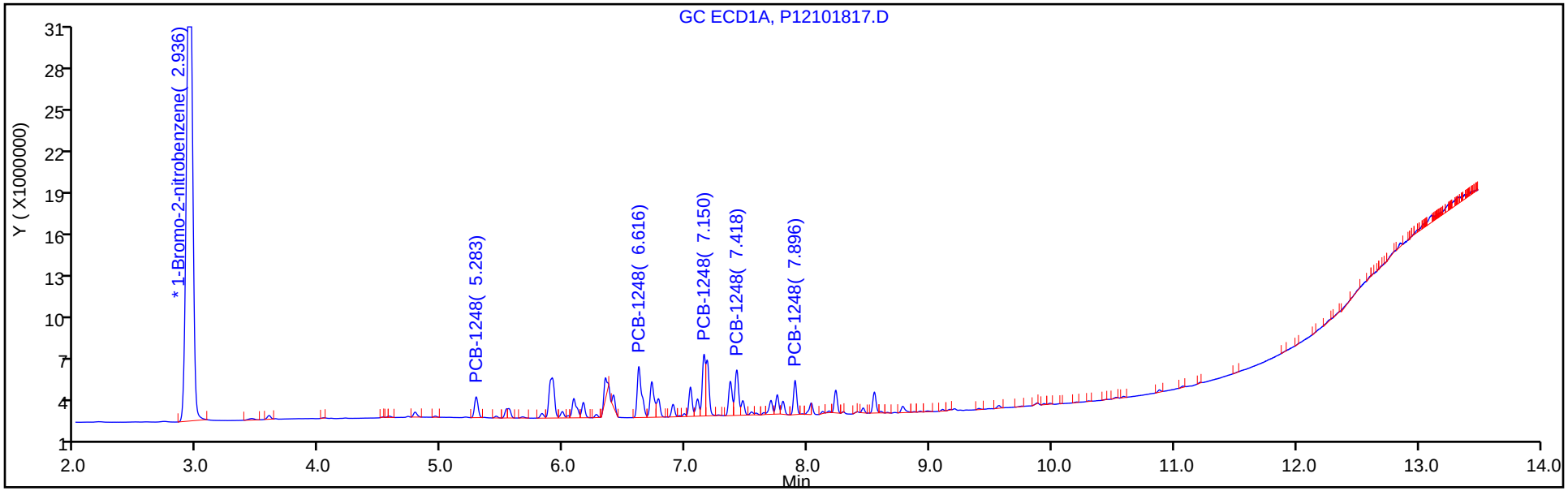
Report Date: 19-Oct-2018 13:34:33 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

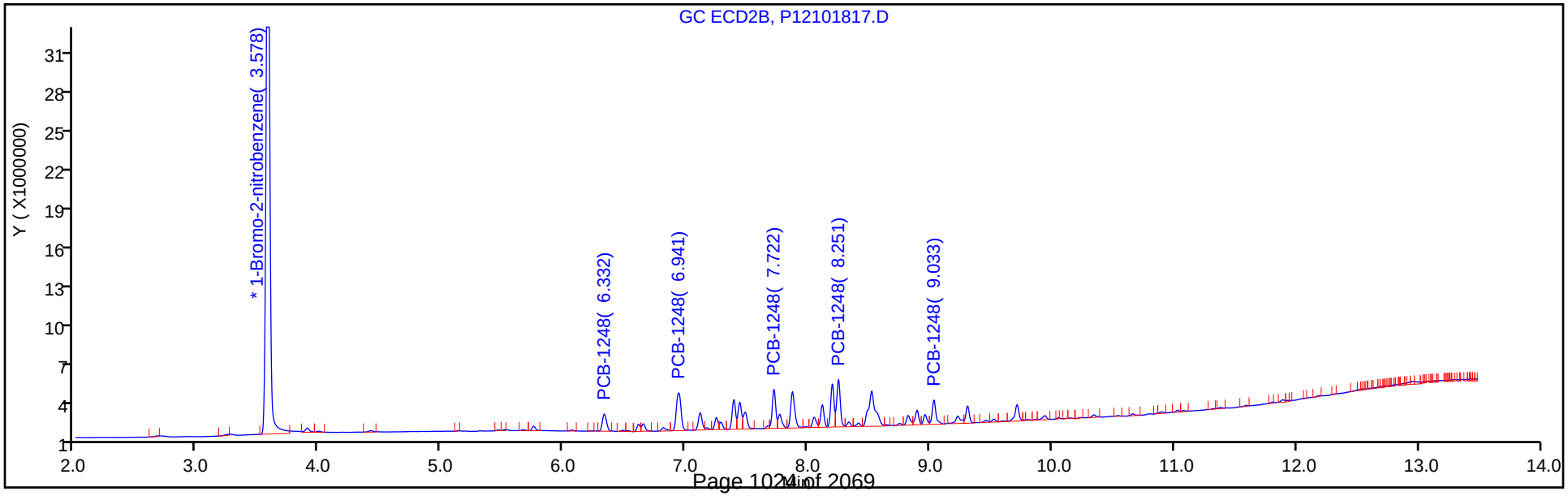
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101817.D

Injection Date:	18-Oct-2018 19:43:31	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std01 1248			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101818.D
Lims ID: std02 1248
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-Oct-2018 20:03:57 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-018
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub4

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:22 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 12:50:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.935	2.930	0.005	128623370	0.0500	0.0500	
2	3.579	3.577	0.002	99835009	0.0500	0.0500	
7 PCB-1248							
1	5.284	5.284	0.000	5962880	0.2000	0.2020	
1	6.616	6.615	0.001	17874386	0.2000	0.1981	
1	7.149	7.148	0.001	15824735	0.2000	0.1959	
1	7.416	7.417	-0.001	13186194	0.2000	0.1947	
1	7.895	7.895	0.000	8624668	0.2000	0.1977	
		Average of Peak Amounts =				0.1977	
2	6.333	6.332	0.001	5824256	0.2000	0.2049	
2	6.942	6.942	0.000	14647651	0.2000	0.2022	
2	7.723	7.722	0.001	11195722	0.2000	0.2030	
2	8.250	8.251	-0.001	13918942	0.2000	0.2001	
2	9.033	9.032	0.001	7437110	0.2000	0.2003	
		Average of Peak Amounts =				0.2021	
						RPD = 2.20	

Reagents:

SG1248@0.2ppm_00024 Amount Added: 1.00 Units: mL

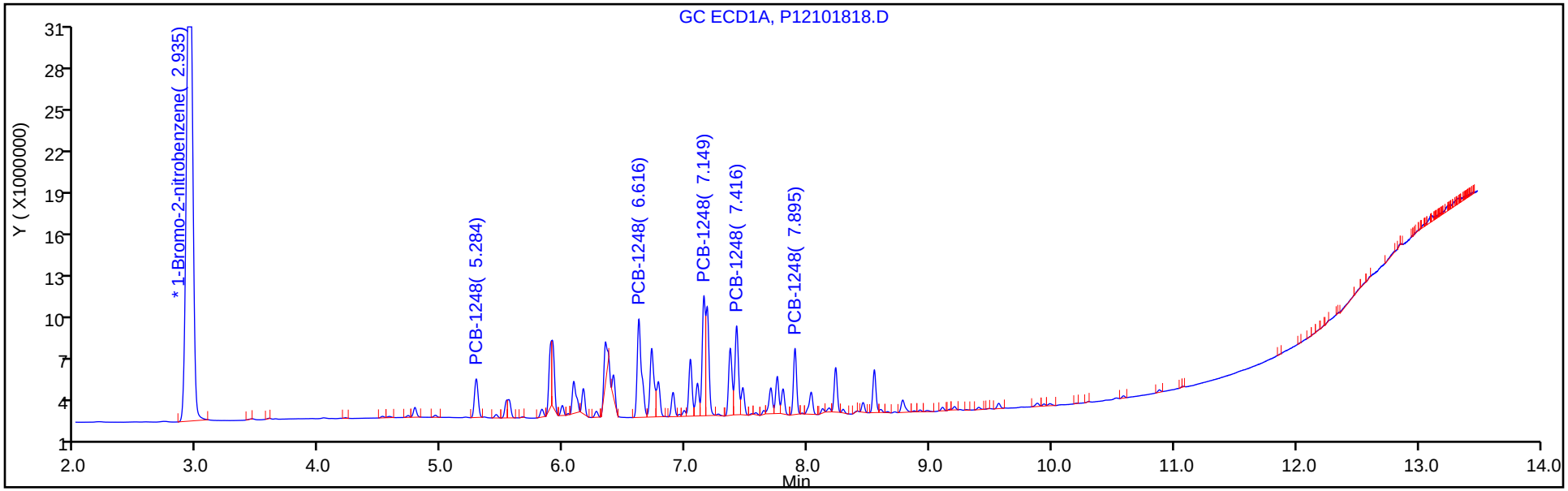
Report Date: 19-Oct-2018 13:34:25 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

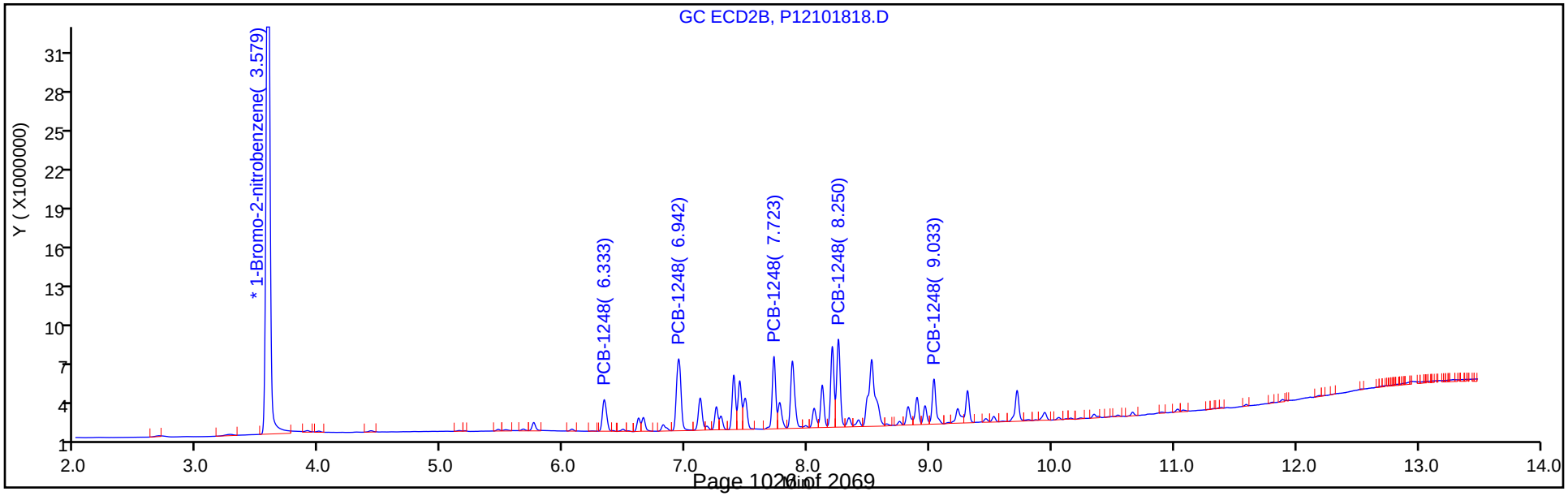
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101818.D

Injection Date:	18-Oct-2018 20:03:57	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std02 1248			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101819.D
Lims ID: std05 1248
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-Oct-2018 20:24:33 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-019
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub4

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:15 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 12:52:28

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.934	2.930	0.004	126730017	0.0500	0.0500	
2	3.578	3.577	0.001	97934993	0.0500	0.0500	
7 PCB-1248							
1	5.284	5.284	0.000	13908050	0.5000	0.4781	
1	6.615	6.615	0.000	42229838	0.5000	0.4751	
1	7.149	7.148	0.001	37826184	0.5000	0.4753	
1	7.417	7.417	0.000	31971249	0.5000	0.4792	
1	7.894	7.895	-0.001	20673256	0.5000	0.4811	
		Average of Peak Amounts =				0.4777	
2	6.332	6.332	0.000	12916361	0.5000	0.4633	
2	6.942	6.942	0.000	32871390	0.5000	0.4626	
2	7.721	7.722	-0.001	25230949	0.5000	0.4664	
2	8.250	8.251	-0.001	31510850	0.5000	0.4617	
2	9.033	9.032	0.001	17067604	0.5000	0.4685	
		Average of Peak Amounts =				0.4645	
						RPD = 2.81	

Reagents:

SG1248@0.5ppm_00036 Amount Added: 1.00 Units: mL

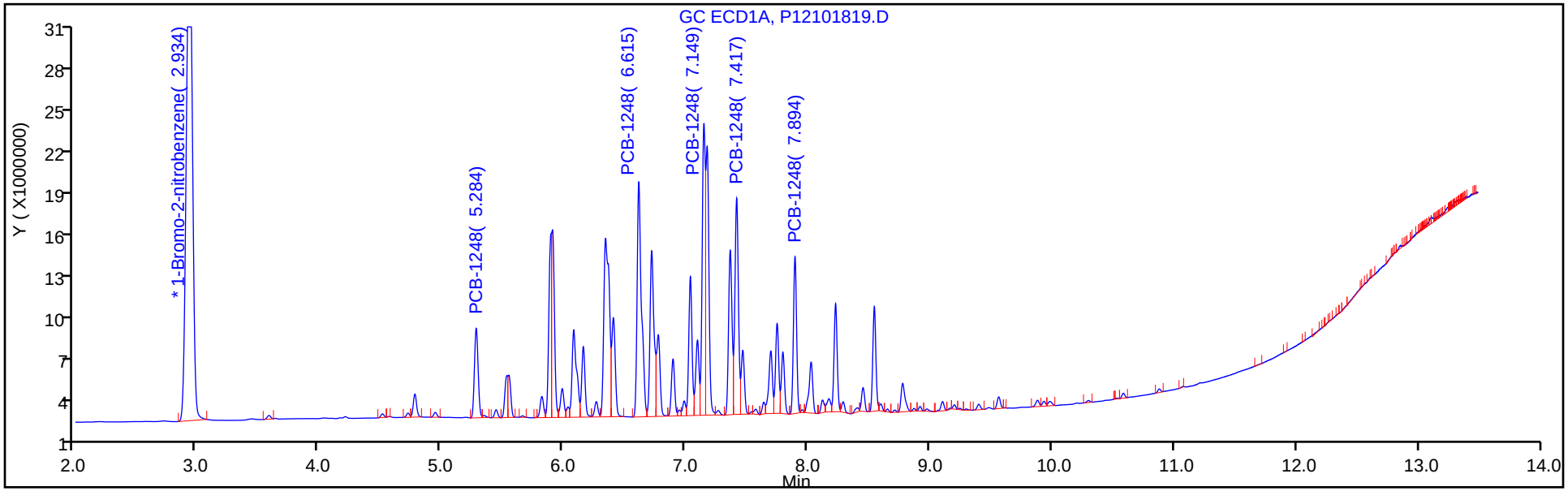
Report Date: 19-Oct-2018 13:34:17 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

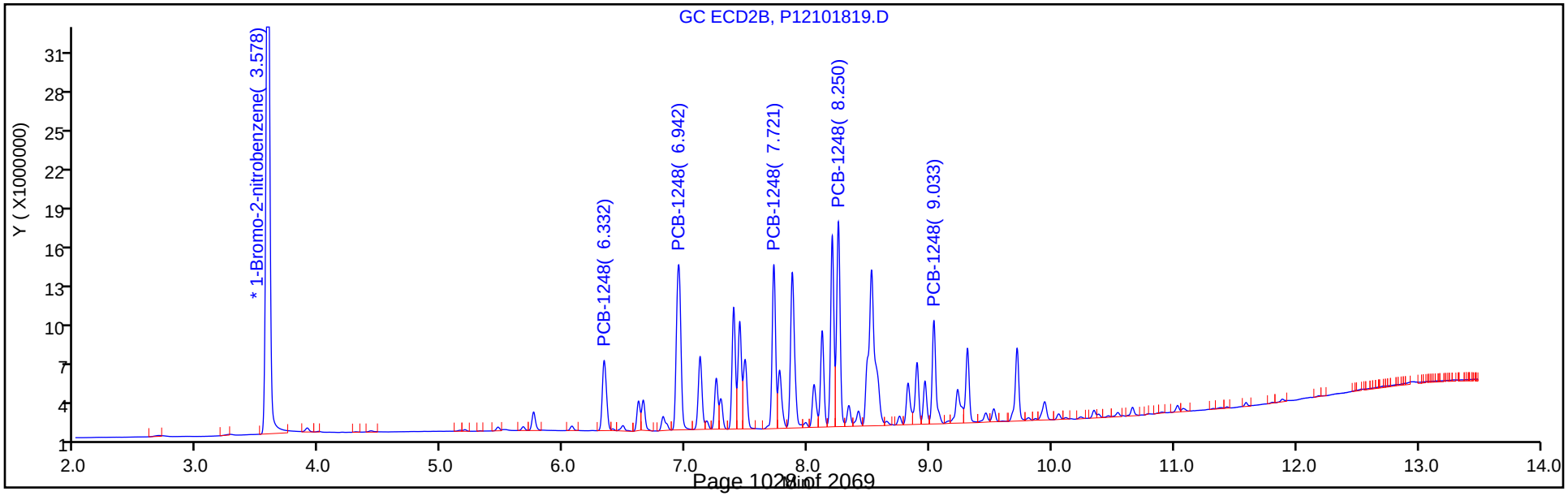
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101819.D

Injection Date:	18-Oct-2018 20:24:33	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std05 1248			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101820.D
Lims ID: std1 1248
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-Oct-2018 20:45:03 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-020
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub4

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:08 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 12:52:41

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.931	2.930	0.001	129726379	0.0500	0.0500	
2	3.577	3.577	0.001	101615097	0.0500	0.0500	
7 PCB-1248							
1	5.284	5.284	0.000	27101178	1.00	0.9101	
1	6.615	6.615	0.000	83895539	1.00	0.9221	
1	7.148	7.148	0.000	79844251	1.00	0.9800	
1	7.416	7.417	-0.001	64992121	1.00	0.9516	
1	7.894	7.895	-0.001	41910879	1.00	0.9527	
		Average of Peak Amounts =				0.9433	
2	6.332	6.332	0.000	24410261	1.00	0.8438	
2	6.941	6.942	-0.001	64926658	1.00	0.8807	
2	7.721	7.722	-0.001	49202909	1.00	0.8766	
2	8.250	8.251	-0.001	62314359	1.00	0.8800	
2	9.031	9.032	-0.001	32982696	1.00	0.8726	
		Average of Peak Amounts =				0.8707	
						RPD = 8.00	

Reagents:

SG1248@1.0ppm_00027 Amount Added: 1.00 Units: mL

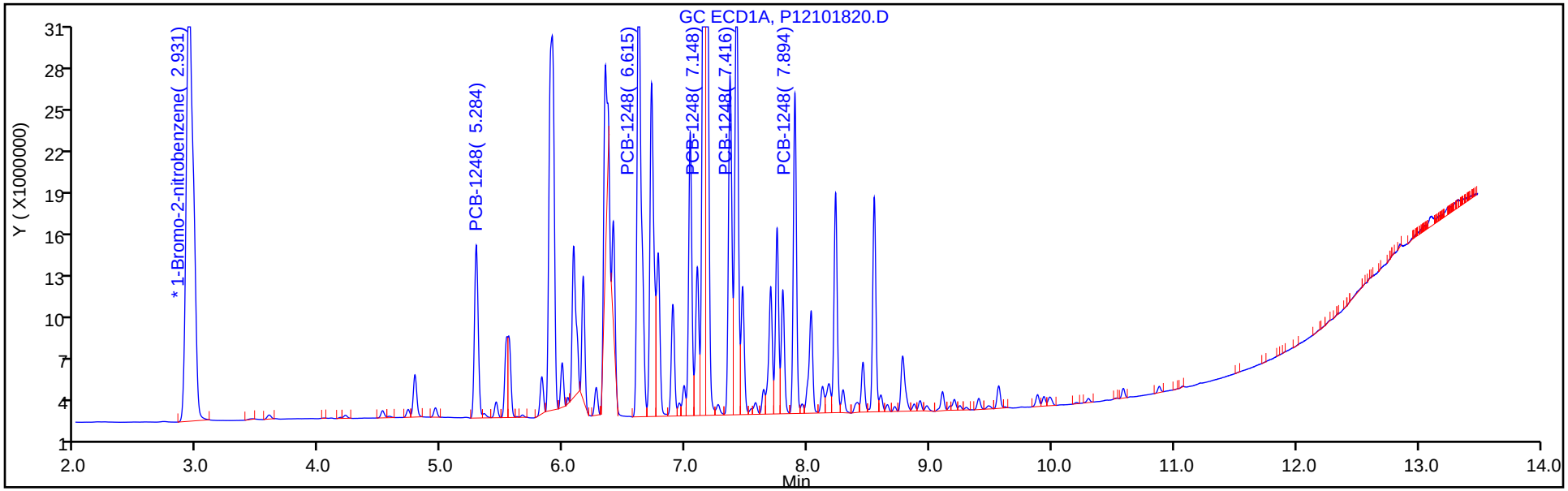
Report Date: 19-Oct-2018 13:34:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

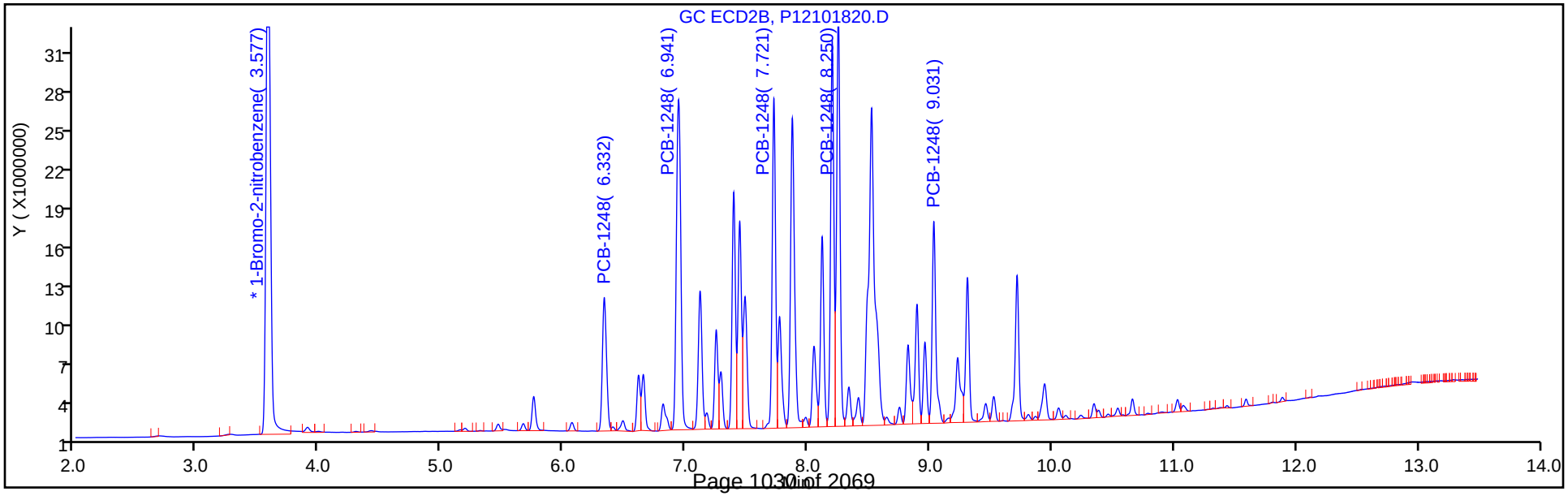
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101820.D

Injection Date:	18-Oct-2018 20:45:03	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std1 1248			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101821.D
Lims ID: std15 1248
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-Oct-2018 21:05:32 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-021
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub4

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:34:00 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 12:52:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.931	2.930	0.002	122989223	0.0500	0.0500	
2	3.576	3.577	0.000	95403852	0.0500	0.0500	
7 PCB-1248							
1	5.282	5.284	-0.002	40003791	1.50	1.42	
1	6.614	6.615	-0.001	123081767	1.50	1.43	
1	7.146	7.148	-0.002	115453261	1.50	1.49	
1	7.416	7.417	-0.001	95181841	1.50	1.47	
1	7.893	7.895	-0.002	61121534	1.50	1.47	
		Average of Peak Amounts =				1.45	
2	6.331	6.332	-0.001	34822692	1.50	1.28	
2	6.941	6.942	-0.001	94788574	1.50	1.37	
2	7.722	7.722	0.000	71168185	1.50	1.35	
2	8.250	8.251	-0.001	90709653	1.50	1.36	
2	9.032	9.032	0.000	47590444	1.50	1.34	
		Average of Peak Amounts =				1.34	
						RPD = 8.11	

Reagents:

SG1248@1.5ppm_00004 Amount Added: 1.00 Units: mL

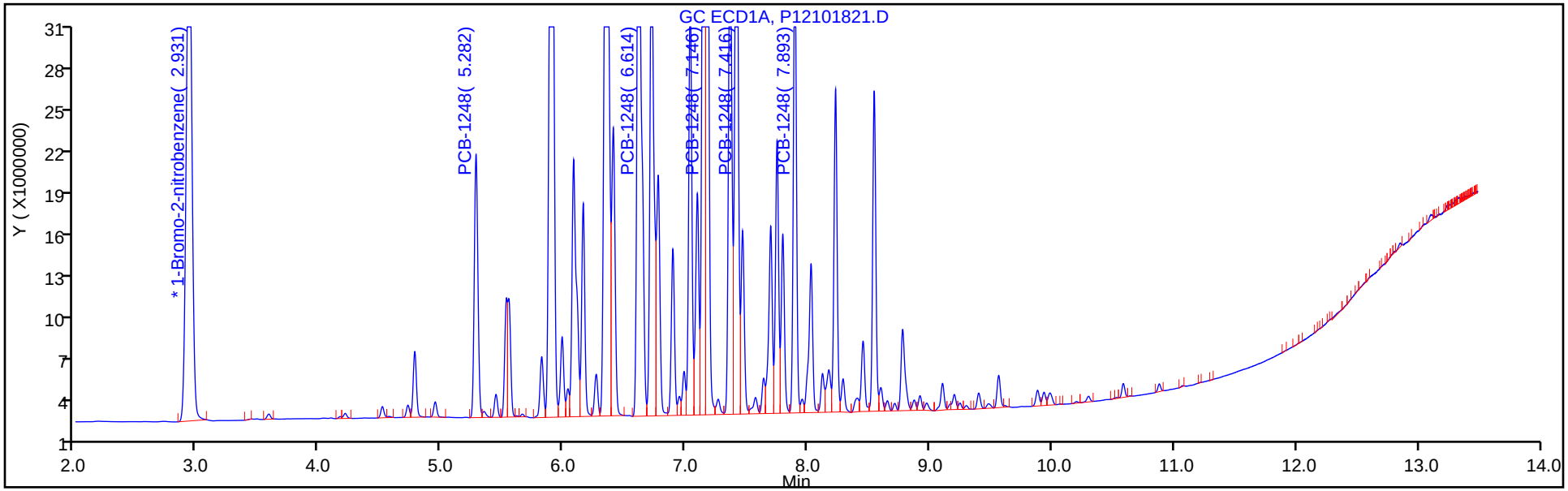
Report Date: 19-Oct-2018 13:34:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

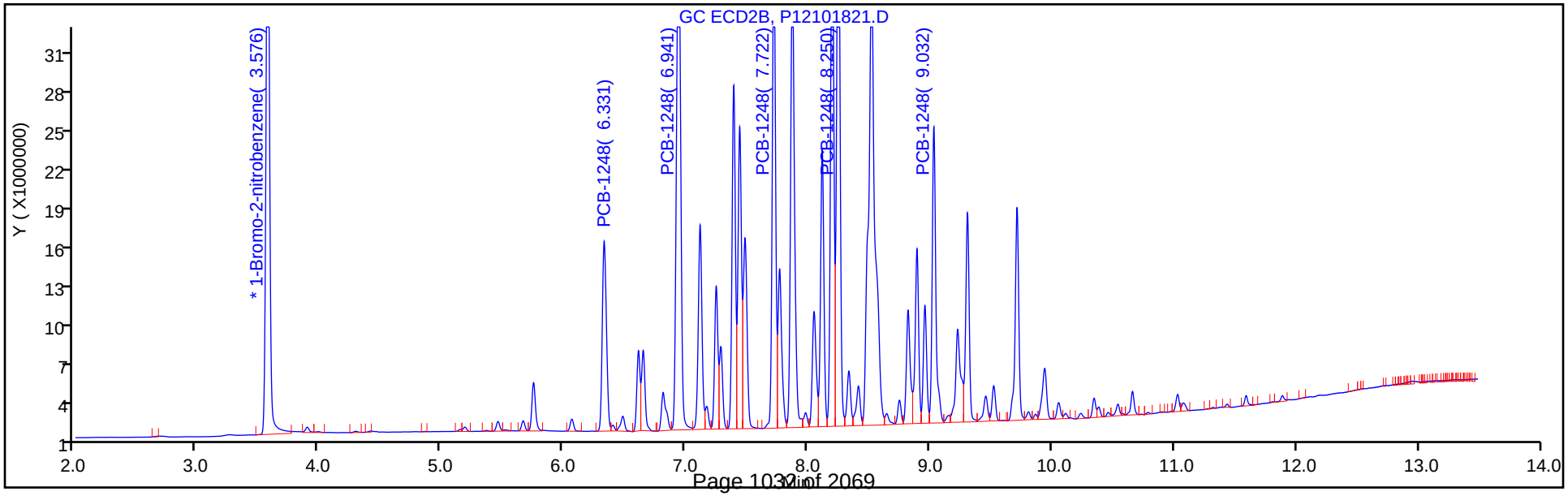
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101821.D

Injection Date:	18-Oct-2018 21:05:32	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std15 1248			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 21:26 Calibration End Date: 10/18/2018 23:08 Calibration ID: 47557

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/22	P12101822.D
Level 2	STD01 240-350710/23	P12101823.D
Level 3	STD02 240-350710/24	P12101824.D
Level 4	STD05 240-350710/25	P12101825.D
Level 5	STD1 240-350710/26	P12101826.D
Level 6	STD15 240-350710/27	P12101827.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1221 Peak 1	0.0090 0.0081	0.0090	0.0089	0.0085	0.0085	Ave		0.0087				4.1		20.0			
PCB-1221 Peak 2	0.0067 0.0051	0.0065	0.0062	0.0058	0.0054	Ave		0.0060				10.5		20.0			
PCB-1221 Peak 3	0.0252 0.0198	0.0239	0.0227	0.0215	0.0207	Ave		0.0223				9.1		20.0			
PCB-1254 Peak 1	0.0407 0.0337	0.0385	0.0375	0.0352	0.0350	Ave		0.0368				7.1		20.0			
PCB-1254 Peak 2	0.0560 0.0514	0.0551	0.0543	0.0527	0.0527	Ave		0.0537				3.2		20.0			
PCB-1254 Peak 3	0.0412 0.0387	0.0420	0.0409	0.0399	0.0398	Ave		0.0404				2.9		20.0			
PCB-1254 Peak 4	0.0364 0.0330	0.0369	0.0355	0.0344	0.0341	Ave		0.0350				4.2		20.0			
PCB-1254 Peak 5	0.0567 0.0523	0.0560	0.0546	0.0535	0.0536	Ave		0.0545				3.1		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 21:26 Calibration End Date: 10/18/2018 23:08 Calibration ID: 47557

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/22	P12101822.D
Level 2	STD01 240-350710/23	P12101823.D
Level 3	STD02 240-350710/24	P12101824.D
Level 4	STD05 240-350710/25	P12101825.D
Level 5	STD1 240-350710/26	P12101826.D
Level 6	STD15 240-350710/27	P12101827.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1221 Peak 1	BNB	Ave	1189562 32627460	2333442	4645388	11320180	22491588	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1221 Peak 2	BNB	Ave	892441 20711451	1687158	3240565	7689300	14358418	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1221 Peak 3	BNB	Ave	3339222 79914480	6190946	11880978	28648938	54638831	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 1	BNB	Ave	5382269 135745494	9994418	19589565	46981071	92288959	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 2	BNB	Ave	7409830 206964911	14293204	28375887	70361230	139148444	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 3	BNB	Ave	5458113 156035114	10898418	21386043	53245161	105114737	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 4	BNB	Ave	4819473 132893437	9562805	18549033	45966735	90015997	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 5	BNB	Ave	7503527 210568772	14524930	28550502	71465271	141429606	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101822.D
Lims ID: std005 ar2154
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Oct-2018 21:26:07 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-022
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:33:53 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:01:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.932	2.930	0.002	132357244	0.0500	0.0500	
2	3.578	3.577	0.001	101934983	0.0500	0.0500	
3 PCB-1221							
1	4.517	4.517	0.000	1189562	0.0500	0.0519	
1	4.726	4.726	0.000	892441	0.0500	0.0565	
1	4.781	4.781	0.000	3339222	0.0500	0.0566	
		Average of Peak Amounts =				0.0550	
2	5.463	5.463	0.000	1262882	0.0500	0.0586	
2	5.669	5.669	0.000	845951	0.0500	0.0589	
2	5.754	5.754	0.000	3006913	0.0500	0.0596	
		Average of Peak Amounts =				0.0591	
						RPD = 7.14	
8 PCB-1254							
1	7.423	7.423	0.000	5382269	0.0500	0.0553	
1	7.894	7.894	0.000	7409830	0.0500	0.0521	
1	8.228	8.228	0.000	5458113	0.0500	0.0510	
1	8.452	8.452	0.000	4819473	0.0500	0.0519	
1	8.777	8.777	0.000	7503527	0.0500	0.0521	
		Average of Peak Amounts =				0.0525	
2	8.244	8.244	0.000	3672415	0.0500	0.0587	
2	8.486	8.486	0.000	3899398	0.0500	0.0556	
2	9.033	9.033	0.000	5643611	0.0500	0.0552	
2	9.307	9.307	0.000	4284331	0.0500	0.0550	
2	9.940	9.940	0.000	5725258	0.0500	0.0560	
		Average of Peak Amounts =				0.0561	
						RPD = 6.66	

Reagents:

SG2154@0.05PP_00020 Amount Added: 1.00 Units: mL

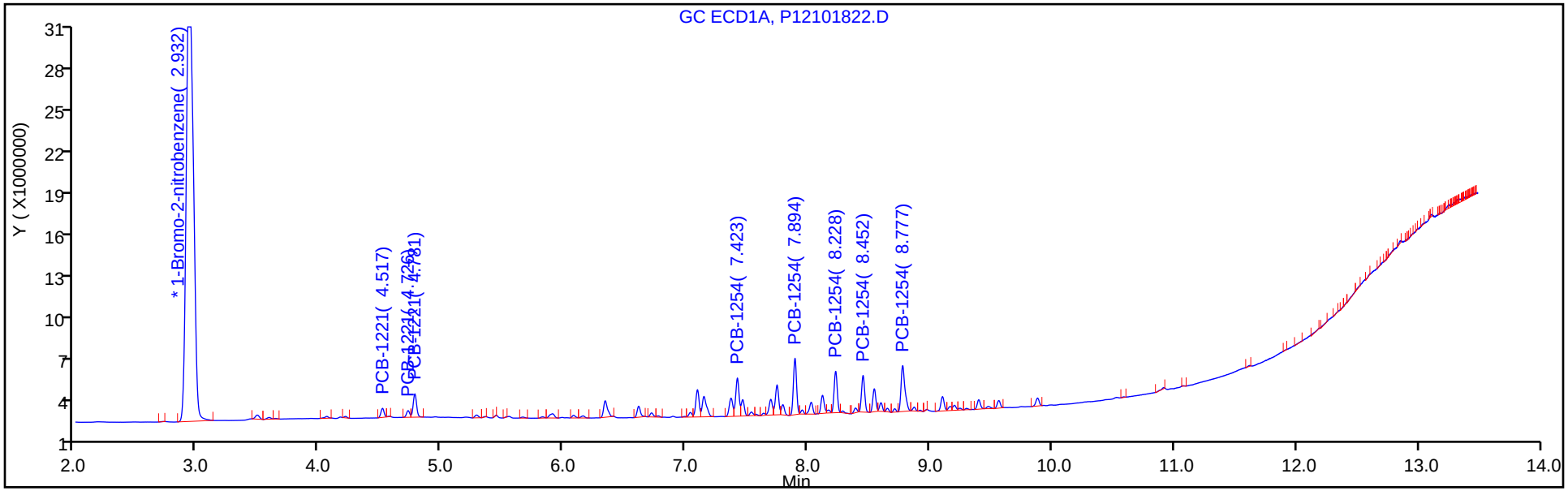
Report Date: 19-Oct-2018 13:33:55 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

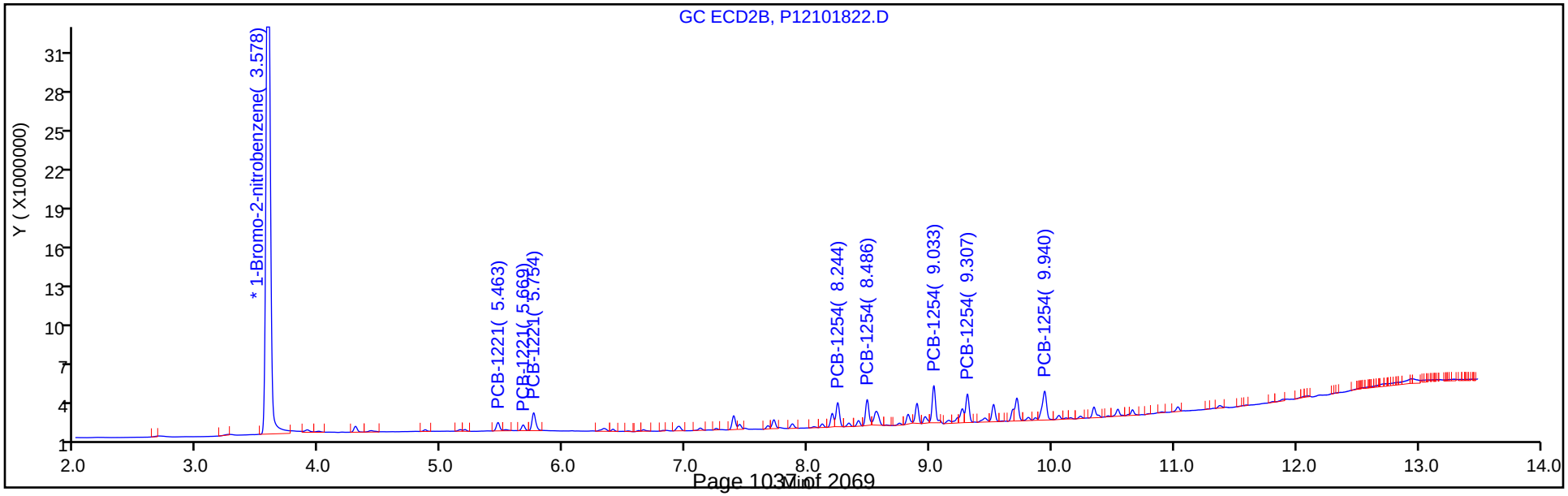
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101822.D

Injection Date:	18-Oct-2018 21:26:07	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std005 ar2154			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101823.D
Lims ID: std01 ar2154
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Oct-2018 21:46:35 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-023
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:33:44 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:23:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.941	2.930	0.011	129692932	0.0500	0.0500	
2	3.581	3.577	0.004	100198443	0.0500	0.0500	
3 PCB-1221							
1	4.517	4.517	0.000	2333442	0.1000	0.1039	
1	4.726	4.726	0.000	1687158	0.1000	0.1090	
1	4.782	4.781	0.001	6190946	0.1000	0.1070	
		Average of Peak Amounts =				0.1066	
2	5.463	5.463	0.000	2326538	0.1000	0.1099	
2	5.669	5.669	0.000	1610156	0.1000	0.1141	
2	5.754	5.754	0.000	5561744	0.1000	0.1121	
		Average of Peak Amounts =				0.1120	
						RPD = 4.95	
8 PCB-1254							
1	7.423	7.423	0.000	9994418	0.1000	0.1048	
1	7.895	7.894	0.001	14293204	0.1000	0.1026	
1	8.227	8.228	-0.001	10898418	0.1000	0.1039	
1	8.453	8.452	0.001	9562805	0.1000	0.1052	
1	8.776	8.777	-0.001	14524930	0.1000	0.1028	
		Average of Peak Amounts =				0.1039	
2	8.245	8.244	0.001	6798014	0.1000	0.1105	
2	8.487	8.486	0.001	7505913	0.1000	0.1088	
2	9.033	9.033	0.000	10634179	0.1000	0.1058	
2	9.308	9.307	0.001	8200914	0.1000	0.1071	
2	9.940	9.940	0.000	10181622	0.1000	0.1014	
		Average of Peak Amounts =				0.1067	
						RPD = 2.72	

Reagents:

SG2154@O.1PPM_00021 Amount Added: 1.00 Units: mL

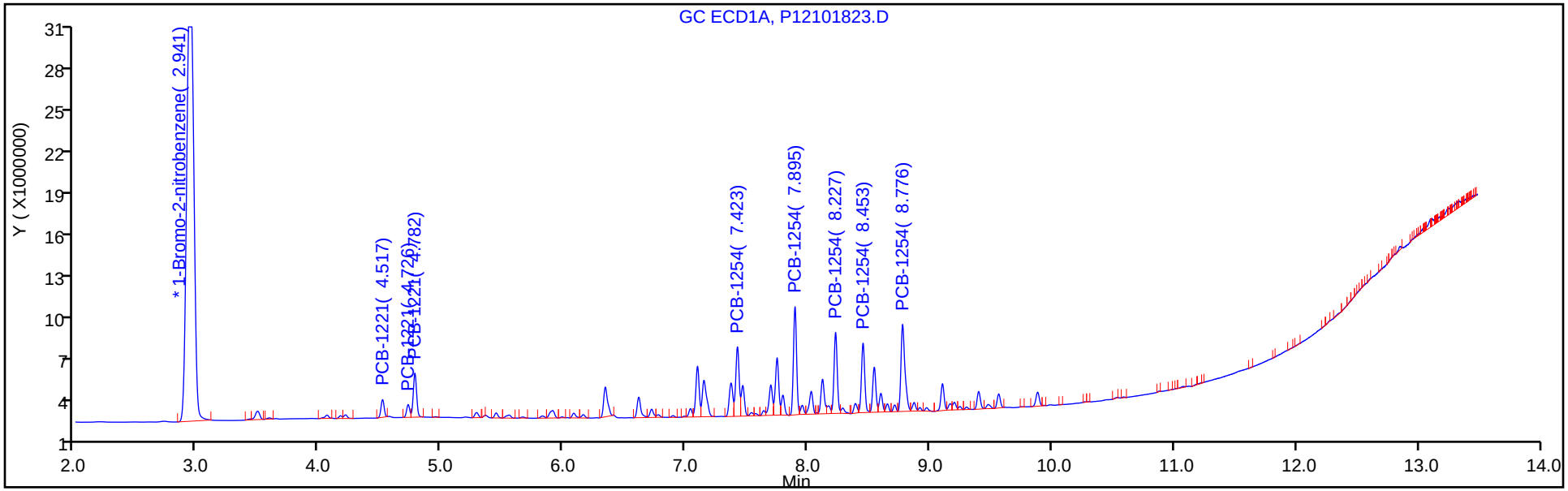
Report Date: 19-Oct-2018 13:33:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

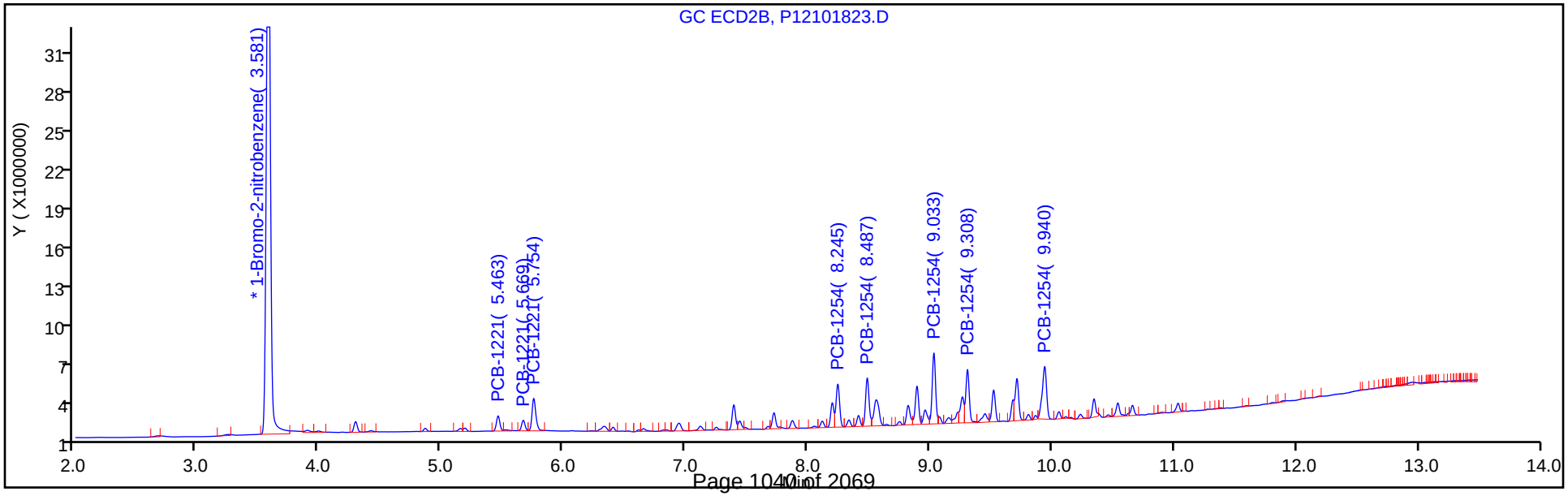
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101823.D

Injection Date:	18-Oct-2018 21:46:35	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std01 ar2154			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101824.D
Lims ID: std02 ar2154
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-Oct-2018 22:07:05 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-024
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:33:33 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:24:07

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.938	2.930	0.009	130611790	0.0500	0.0500	
2	3.580	3.577	0.004	100878591	0.0500	0.0500	
3 PCB-1221							
1	4.516	4.517	-0.001	4645388	0.2000	0.2053	
1	4.726	4.726	0.000	3240565	0.2000	0.2080	
1	4.782	4.781	0.001	11880978	0.2000	0.2039	
		Average of Peak Amounts =				0.2057	
2	5.463	5.463	0.000	4448083	0.2000	0.2086	
2	5.669	5.669	0.000	3014239	0.2000	0.2122	
2	5.755	5.754	0.001	10334222	0.2000	0.2070	
		Average of Peak Amounts =				0.2093	
						RPD = 1.71	
8 PCB-1254							
1	7.423	7.423	0.000	19589565	0.2000	0.2040	
1	7.895	7.894	0.001	28375887	0.2000	0.2023	
1	8.228	8.228	0.000	21386043	0.2000	0.2025	
1	8.452	8.452	0.000	18549033	0.2000	0.2026	
1	8.775	8.777	-0.002	28550502	0.2000	0.2007	
		Average of Peak Amounts =				0.2024	
2	8.245	8.244	0.001	12820732	0.2000	0.2071	
2	8.486	8.486	0.000	14486161	0.2000	0.2086	
2	9.032	9.033	-0.001	20633441	0.2000	0.2039	
2	9.308	9.307	0.001	16001404	0.2000	0.2076	
2	9.939	9.940	-0.001	20919620	0.2000	0.2069	
		Average of Peak Amounts =				0.2068	
						RPD = 2.15	

Reagents:

SG2154@0.2PPM_00020 Amount Added: 1.00 Units: mL

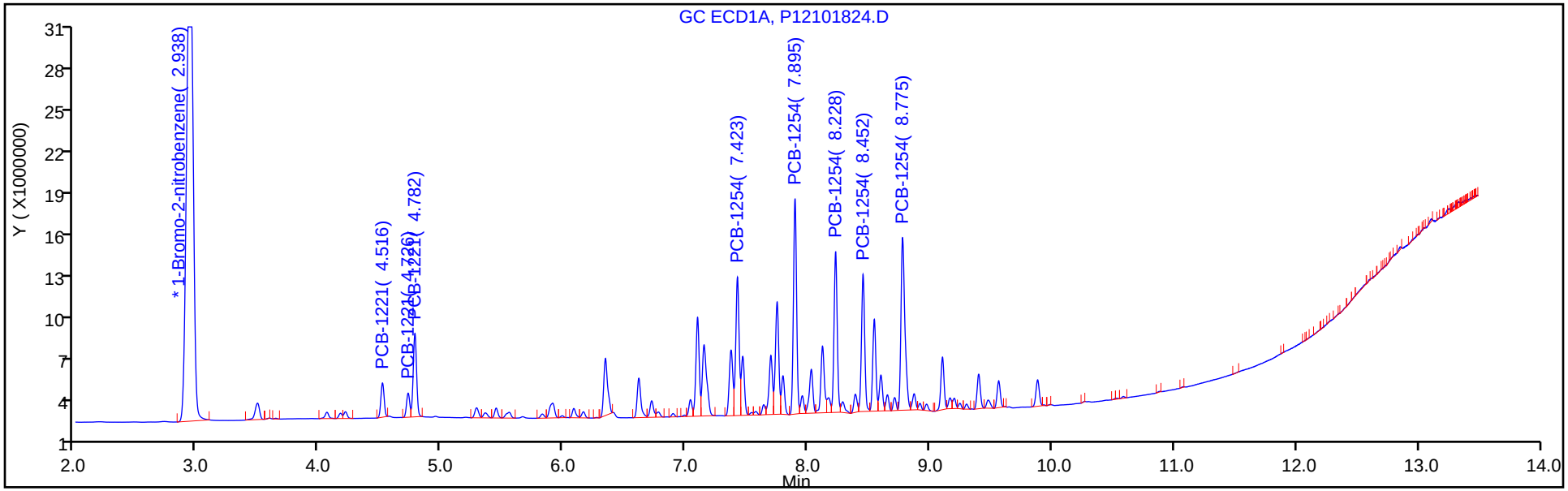
Report Date: 19-Oct-2018 13:33:37 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

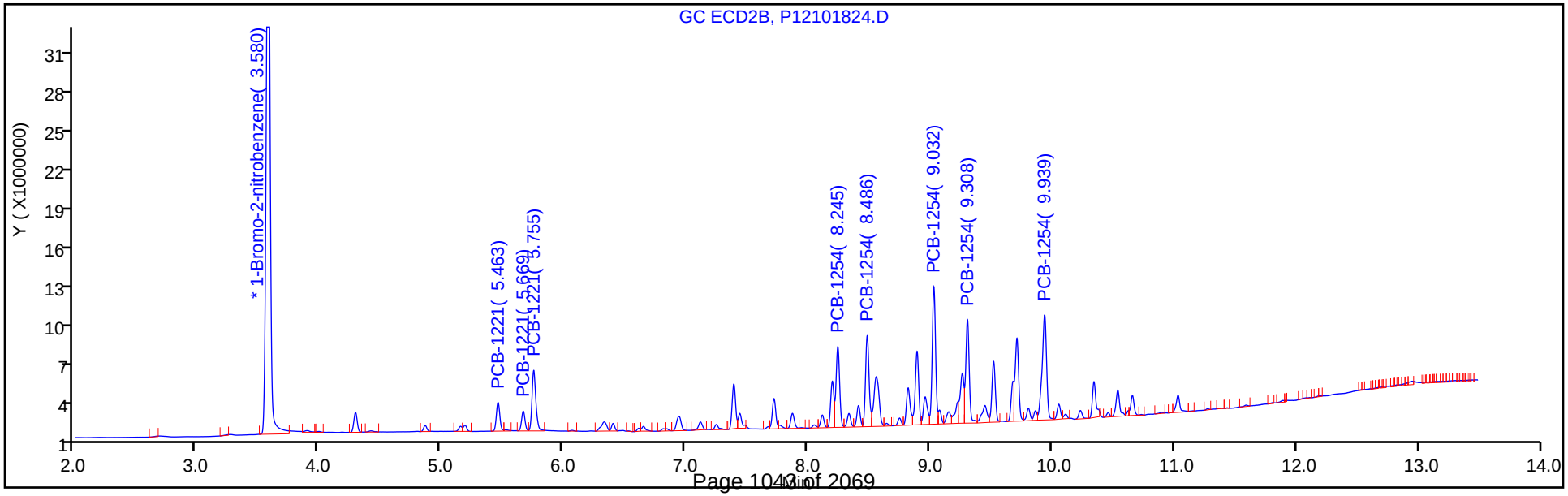
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101824.D

Injection Date:	18-Oct-2018 22:07:05	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std02 ar2154			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101825.D
Lims ID: std05 ar2154
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-Oct-2018 22:27:41 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-025
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:33:26 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:24:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.932	2.930	0.002	133461606	0.0500	0.0500	
2	3.577	3.577	0.001	102705090	0.0500	0.0500	
3 PCB-1221							
1	4.515	4.517	-0.002	11320180	0.5000	0.4896	
1	4.725	4.726	-0.001	7689300	0.5000	0.4829	
1	4.780	4.781	-0.001	28648938	0.5000	0.4812	
		Average of Peak Amounts =				0.4846	
2	5.461	5.463	-0.002	10616586	0.5000	0.4891	
2	5.668	5.669	-0.001	6945093	0.5000	0.4803	
2	5.754	5.754	0.000	23958516	0.5000	0.4713	
		Average of Peak Amounts =				0.4802	
						RPD = 0.90	
8 PCB-1254							
1	7.421	7.423	-0.002	46981071	0.5000	0.4789	
1	7.894	7.894	0.000	70361230	0.5000	0.4909	
1	8.226	8.228	-0.002	53245161	0.5000	0.4933	
1	8.450	8.452	-0.002	45966735	0.5000	0.4913	
1	8.775	8.777	-0.002	71465271	0.5000	0.4917	
		Average of Peak Amounts =				0.4892	
2	8.245	8.244	0.001	29362110	0.5000	0.4658	
2	8.486	8.486	0.000	33704274	0.5000	0.4768	
2	9.032	9.033	-0.001	49320149	0.5000	0.4786	
2	9.307	9.307	0.000	37778689	0.5000	0.4814	
2	9.940	9.940	0.000	47901647	0.5000	0.4654	
		Average of Peak Amounts =				0.4736	
						RPD = 3.24	

Reagents:

SG2154@0.5PPM_00040 Amount Added: 1.00 Units: mL

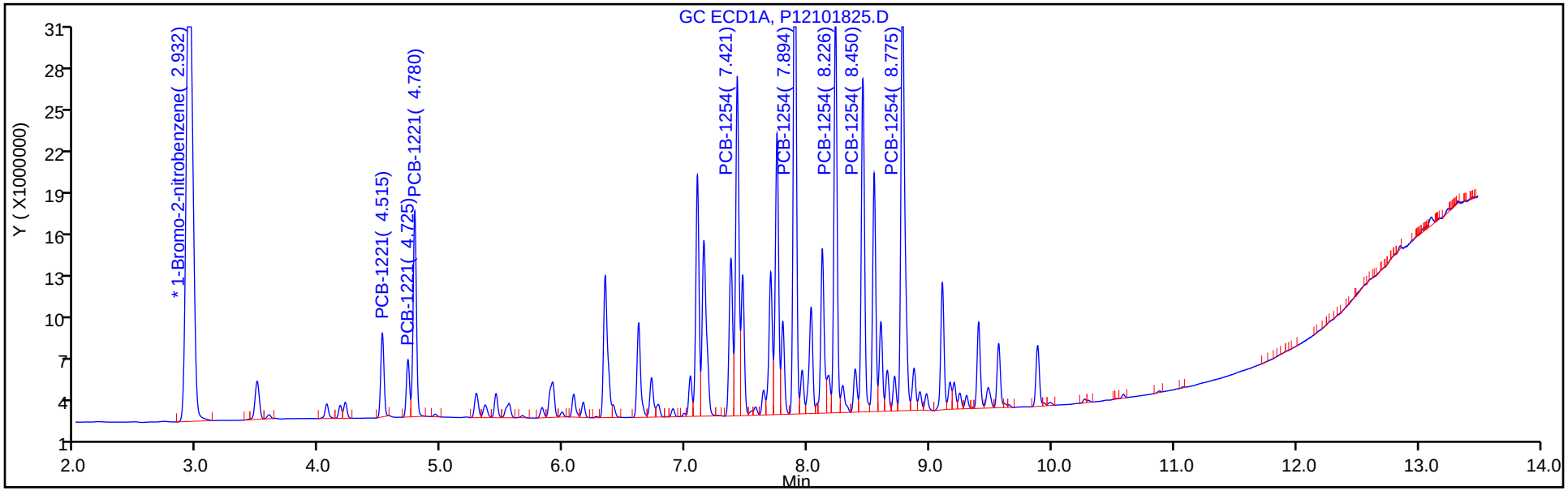
Report Date: 19-Oct-2018 13:33:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

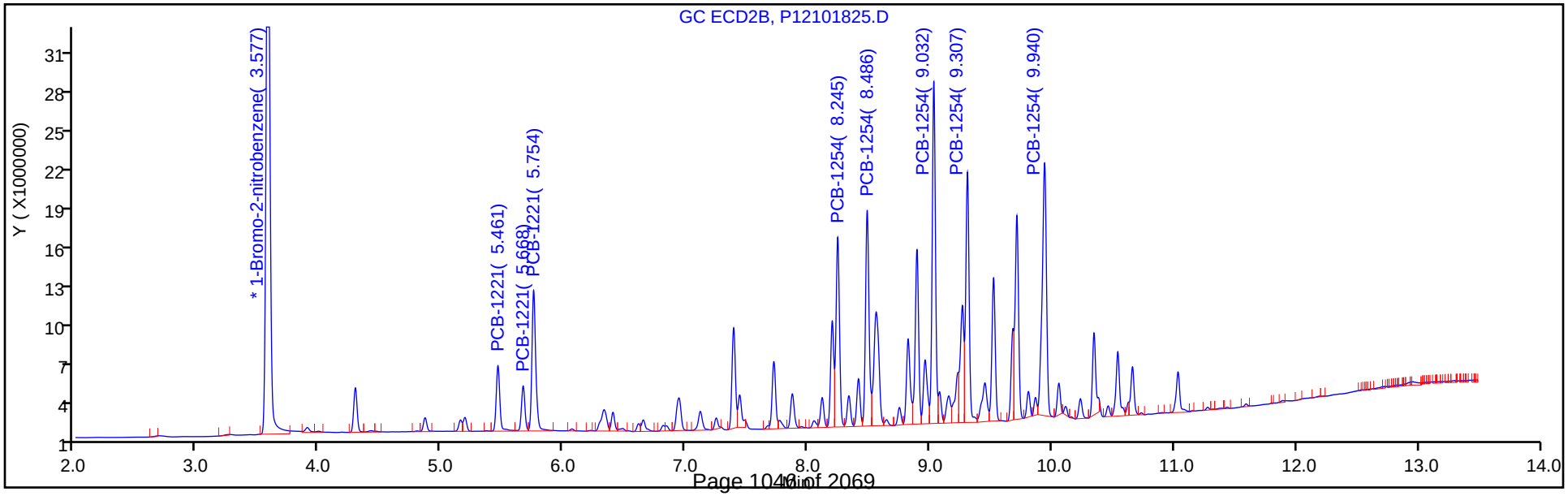
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101825.D

Injection Date:	18-Oct-2018 22:27:41	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std05 ar2154			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101826.D
Lims ID: std1 ar2154
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-Oct-2018 22:48:07 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-026
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:33:17 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:24:25

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.935	2.930	0.005	132023888	0.0500	0.0500	
2	3.579	3.577	0.003	102090403	0.0500	0.0500	
3 PCB-1221							
1	4.516	4.517	-0.001	22491588	1.00	0.9834	
1	4.725	4.726	-0.001	14358418	1.00	0.9116	
1	4.781	4.781	0.000	54638831	1.00	0.9277	
		Average of Peak Amounts =				0.9409	
2	5.463	5.463	0.000	19042643	1.00	0.8825	
2	5.668	5.669	-0.001	12307560	1.00	0.8563	
2	5.754	5.754	0.000	44323553	1.00	0.8771	
		Average of Peak Amounts =				0.8720	
						RPD = 7.60	
8 PCB-1254							
1	7.422	7.423	-0.001	92288959	1.00	0.9509	
1	7.893	7.894	-0.001	139148444	1.00	0.9814	
1	8.226	8.228	-0.002	105114737	1.00	0.9845	
1	8.450	8.452	-0.002	90015997	1.00	0.9726	
1	8.775	8.777	-0.002	141429606	1.00	0.9837	
		Average of Peak Amounts =				0.9746	
2	8.245	8.244	0.001	56078317	1.00	0.8950	
2	8.486	8.486	0.000	64429255	1.00	0.9169	
2	9.032	9.033	-0.001	96642828	1.00	0.9435	
2	9.307	9.307	0.000	72443502	1.00	0.9287	
2	9.939	9.940	-0.001	98644768	1.00	0.9643	
		Average of Peak Amounts =				0.9297	
						RPD = 4.72	

Reagents:

SG2154@1.0PPM_00028 Amount Added: 1.00 Units: mL

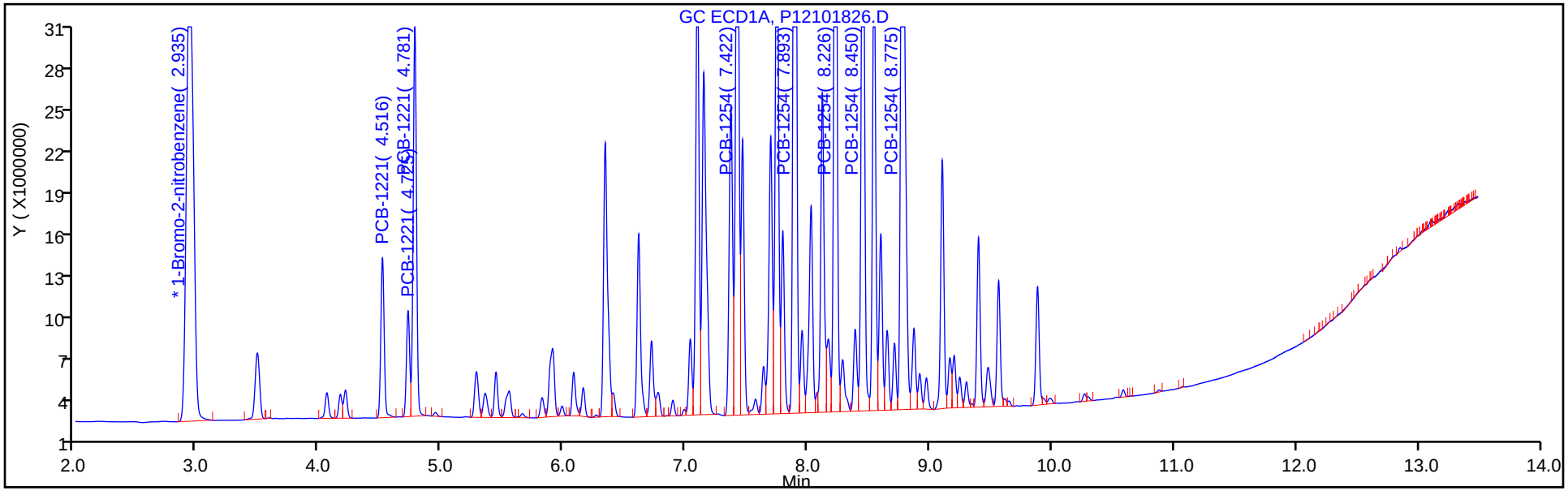
Report Date: 19-Oct-2018 13:33:20 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

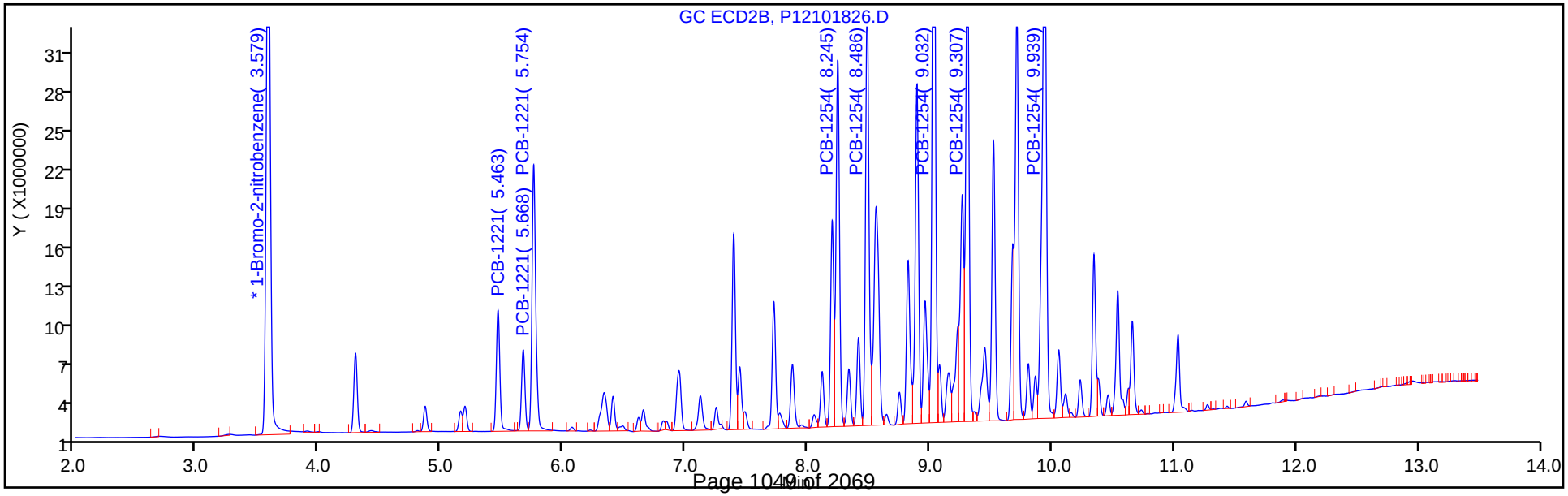
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101826.D

Injection Date:	18-Oct-2018 22:48:07	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std1 ar2154			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101827.D
Lims ID: std15 ar2154
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-Oct-2018 23:08:37 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-027
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:33:08 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:24:34

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.933	2.930	0.003	134305585	0.0500	0.0500	
2	3.576	3.577	-0.001	104185980	0.0500	0.0500	
3 PCB-1221							
1	4.513	4.517	-0.004	32627460	1.50	1.40	
1	4.723	4.726	-0.003	20711451	1.50	1.29	
1	4.778	4.781	-0.003	79914480	1.50	1.33	
		Average of Peak Amounts =				1.34	
2	5.460	5.463	-0.003	27256980	1.50	1.24	
2	5.667	5.669	-0.002	17633064	1.50	1.20	
2	5.753	5.754	-0.001	64380249	1.50	1.25	
		Average of Peak Amounts =				1.23	
						RPD = 8.82	
8 PCB-1254							
1	7.421	7.423	-0.002	135745494	1.50	1.37	
1	7.893	7.894	-0.001	206964911	1.50	1.43	
1	8.224	8.228	-0.004	156035114	1.50	1.44	
1	8.448	8.452	-0.004	132893437	1.50	1.41	
1	8.773	8.777	-0.004	210568772	1.50	1.44	
		Average of Peak Amounts =				1.42	
2	8.244	8.244	0.000	82323561	1.50	1.29	
2	8.485	8.486	-0.001	95364975	1.50	1.33	
2	9.031	9.033	-0.002	144038414	1.50	1.38	
2	9.306	9.307	-0.001	107367946	1.50	1.35	
2	9.938	9.940	-0.002	146436434	1.50	1.40	
		Average of Peak Amounts =				1.35	
						RPD = 5.07	

Reagents:

SG2154@1.5PPM_00004 Amount Added: 1.00 Units: mL

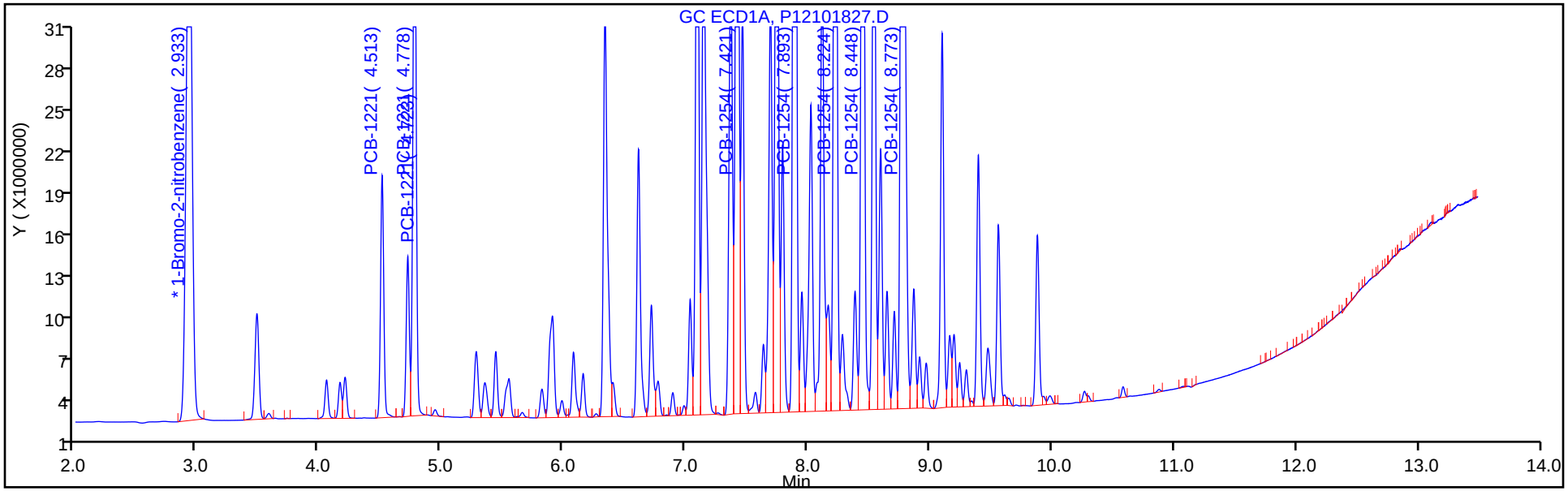
Report Date: 19-Oct-2018 13:33:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

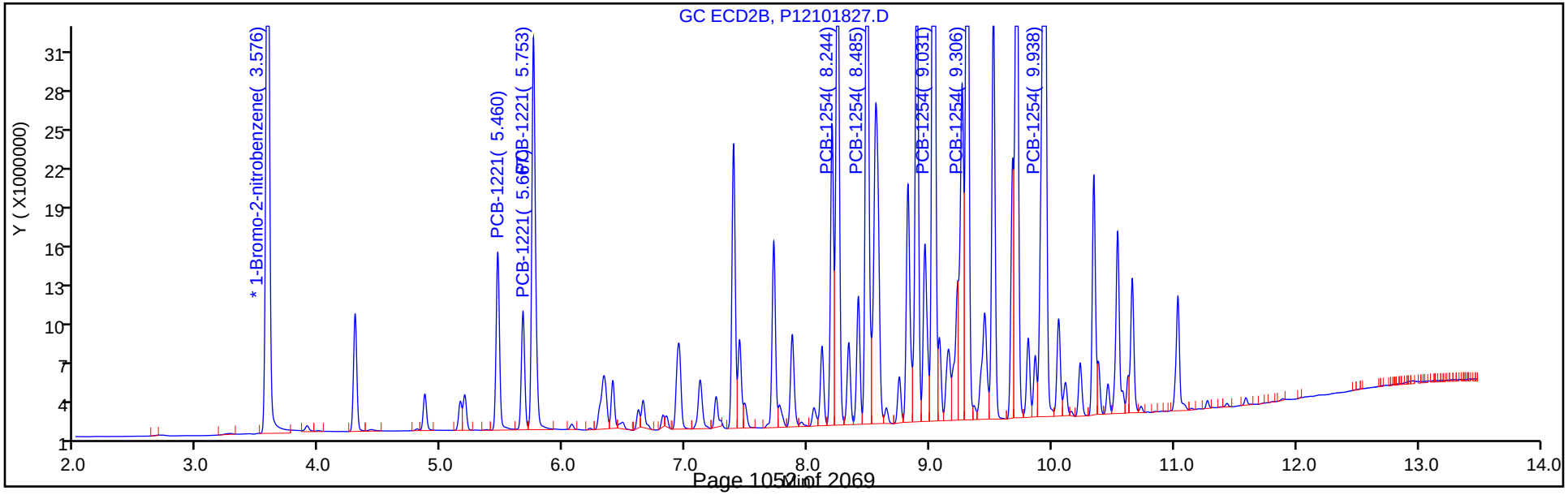
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101827.D

Injection Date:	18-Oct-2018 23:08:37	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std15 ar2154			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 21:26 Calibration End Date: 10/18/2018 23:08 Calibration ID: 47558

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/22	P12101822.D
Level 2	STD01 240-350710/23	P12101823.D
Level 3	STD02 240-350710/24	P12101824.D
Level 4	STD05 240-350710/25	P12101825.D
Level 5	STD1 240-350710/26	P12101826.D
Level 6	STD15 240-350710/27	P12101827.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1221 Peak 1	0.0124 0.0087	0.0116	0.0110	0.0103	0.0093	Ave		0.0106				13.1		20.0			
PCB-1221 Peak 2	0.0083 0.0056	0.0080	0.0075	0.0068	0.0060	Ave		0.0070				15.3		20.0			
PCB-1221 Peak 3	0.0295 0.0206	0.0278	0.0256	0.0233	0.0217	Ave		0.0247				14.1		20.0			
PCB-1254 Peak 1	0.0360 0.0263	0.0339	0.0318	0.0286	0.0275	Ave		0.0307				12.5		20.0			
PCB-1254 Peak 2	0.0383 0.0305	0.0375	0.0359	0.0328	0.0316	Ave		0.0344				9.4		20.0			
PCB-1254 Peak 3	0.0554 0.0461	0.0531	0.0511	0.0480	0.0473	Ave		0.0502				7.2		20.0			
PCB-1254 Peak 4	0.0420 0.0344	0.0409	0.0397	0.0368	0.0355	Ave		0.0382				8.1		20.0			
PCB-1254 Peak 5	0.0562 0.0469	0.0508	0.0518	0.0466	0.0483	Ave		0.0501				7.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 21:26 Calibration End Date: 10/18/2018 23:08 Calibration ID: 47558

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/22	P12101822.D
Level 2	STD01 240-350710/23	P12101823.D
Level 3	STD02 240-350710/24	P12101824.D
Level 4	STD05 240-350710/25	P12101825.D
Level 5	STD1 240-350710/26	P12101826.D
Level 6	STD15 240-350710/27	P12101827.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1221 Peak 1	BNB	Ave	1262882 27256980	2326538	4448083	10616586	19042643	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1221 Peak 2	BNB	Ave	845951 17633064	1610156	3014239	6945093	12307560	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1221 Peak 3	BNB	Ave	3006913 64380249	5561744	10334222	23958516	44323553	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 1	BNB	Ave	3672415 82323561	6798014	12820732	29362110	56078317	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 2	BNB	Ave	3899398 95364975	7505913	14486161	33704274	64429255	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 3	BNB	Ave	5643611 144038414	10634179	20633441	49320149	96642828	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 4	BNB	Ave	4284331 107367946	8200914	16001404	37778689	72443502	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 5	BNB	Ave	5725258 146436434	10181622	20919620	47901647	98644768	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101822.D
Lims ID: std005 ar2154
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Oct-2018 21:26:07 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-022
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:33:53 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:01:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.932	2.930	0.002	132357244	0.0500	0.0500	
2	3.578	3.577	0.001	101934983	0.0500	0.0500	
3 PCB-1221							
1	4.517	4.517	0.000	1189562	0.0500	0.0519	
1	4.726	4.726	0.000	892441	0.0500	0.0565	
1	4.781	4.781	0.000	3339222	0.0500	0.0566	
		Average of Peak Amounts =				0.0550	
2	5.463	5.463	0.000	1262882	0.0500	0.0586	
2	5.669	5.669	0.000	845951	0.0500	0.0589	
2	5.754	5.754	0.000	3006913	0.0500	0.0596	
		Average of Peak Amounts =				0.0591	
						RPD = 7.14	
8 PCB-1254							
1	7.423	7.423	0.000	5382269	0.0500	0.0553	
1	7.894	7.894	0.000	7409830	0.0500	0.0521	
1	8.228	8.228	0.000	5458113	0.0500	0.0510	
1	8.452	8.452	0.000	4819473	0.0500	0.0519	
1	8.777	8.777	0.000	7503527	0.0500	0.0521	
		Average of Peak Amounts =				0.0525	
2	8.244	8.244	0.000	3672415	0.0500	0.0587	
2	8.486	8.486	0.000	3899398	0.0500	0.0556	
2	9.033	9.033	0.000	5643611	0.0500	0.0552	
2	9.307	9.307	0.000	4284331	0.0500	0.0550	
2	9.940	9.940	0.000	5725258	0.0500	0.0560	
		Average of Peak Amounts =				0.0561	
						RPD = 6.66	

Reagents:

SG2154@0.05PP_00020 Amount Added: 1.00 Units: mL

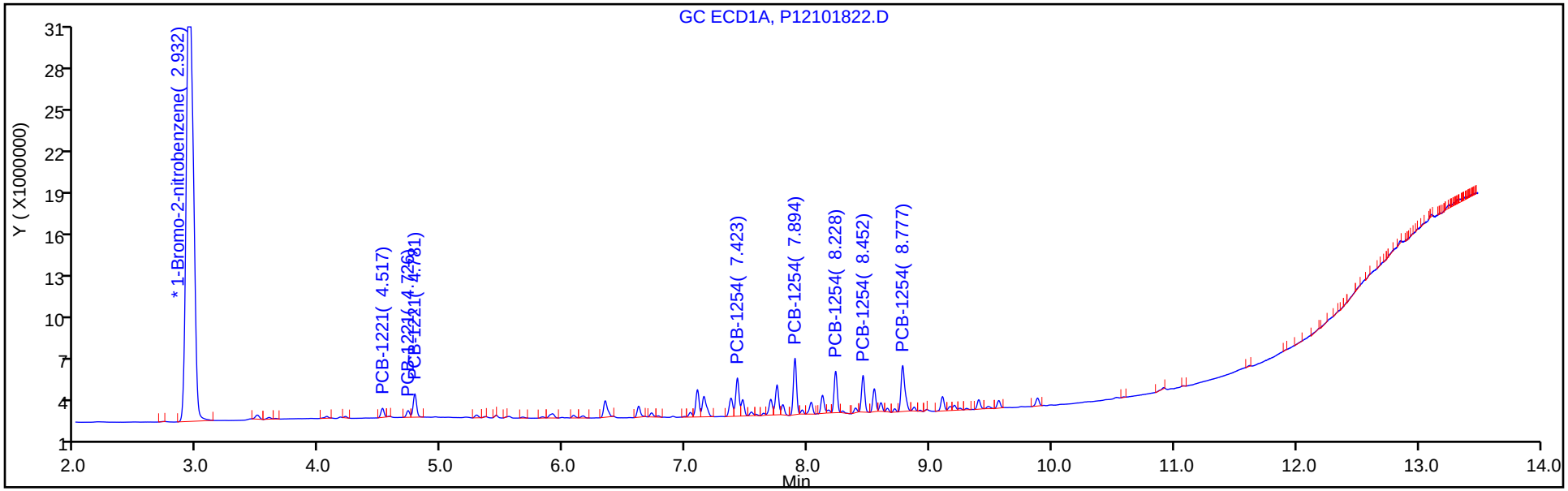
Report Date: 19-Oct-2018 13:33:55 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

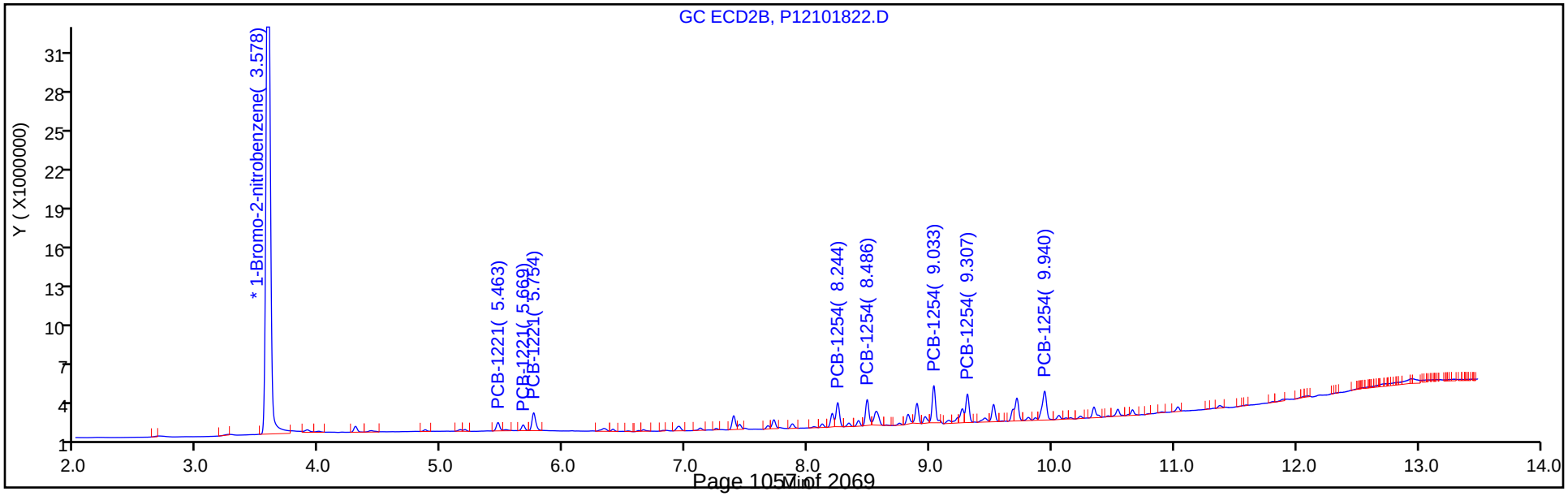
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101822.D

Injection Date:	18-Oct-2018 21:26:07	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std005 ar2154			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101823.D
Lims ID: std01 ar2154
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Oct-2018 21:46:35 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-023
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:33:44 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:23:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.941	2.930	0.011	129692932	0.0500	0.0500	
2	3.581	3.577	0.004	100198443	0.0500	0.0500	
3 PCB-1221							
1	4.517	4.517	0.000	2333442	0.1000	0.1039	
1	4.726	4.726	0.000	1687158	0.1000	0.1090	
1	4.782	4.781	0.001	6190946	0.1000	0.1070	
		Average of Peak Amounts =				0.1066	
2	5.463	5.463	0.000	2326538	0.1000	0.1099	
2	5.669	5.669	0.000	1610156	0.1000	0.1141	
2	5.754	5.754	0.000	5561744	0.1000	0.1121	
		Average of Peak Amounts =				0.1120	
						RPD = 4.95	
8 PCB-1254							
1	7.423	7.423	0.000	9994418	0.1000	0.1048	
1	7.895	7.894	0.001	14293204	0.1000	0.1026	
1	8.227	8.228	-0.001	10898418	0.1000	0.1039	
1	8.453	8.452	0.001	9562805	0.1000	0.1052	
1	8.776	8.777	-0.001	14524930	0.1000	0.1028	
		Average of Peak Amounts =				0.1039	
2	8.245	8.244	0.001	6798014	0.1000	0.1105	
2	8.487	8.486	0.001	7505913	0.1000	0.1088	
2	9.033	9.033	0.000	10634179	0.1000	0.1058	
2	9.308	9.307	0.001	8200914	0.1000	0.1071	
2	9.940	9.940	0.000	10181622	0.1000	0.1014	
		Average of Peak Amounts =				0.1067	
						RPD = 2.72	

Reagents:

SG2154@O.1PPM_00021 Amount Added: 1.00 Units: mL

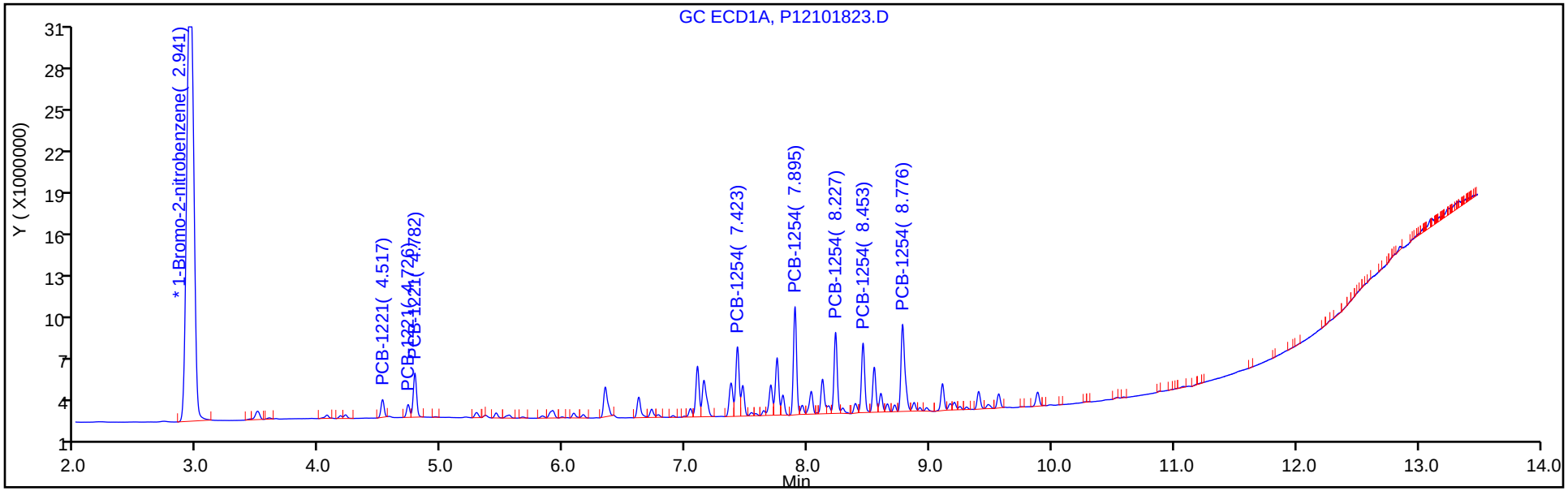
Report Date: 19-Oct-2018 13:33:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

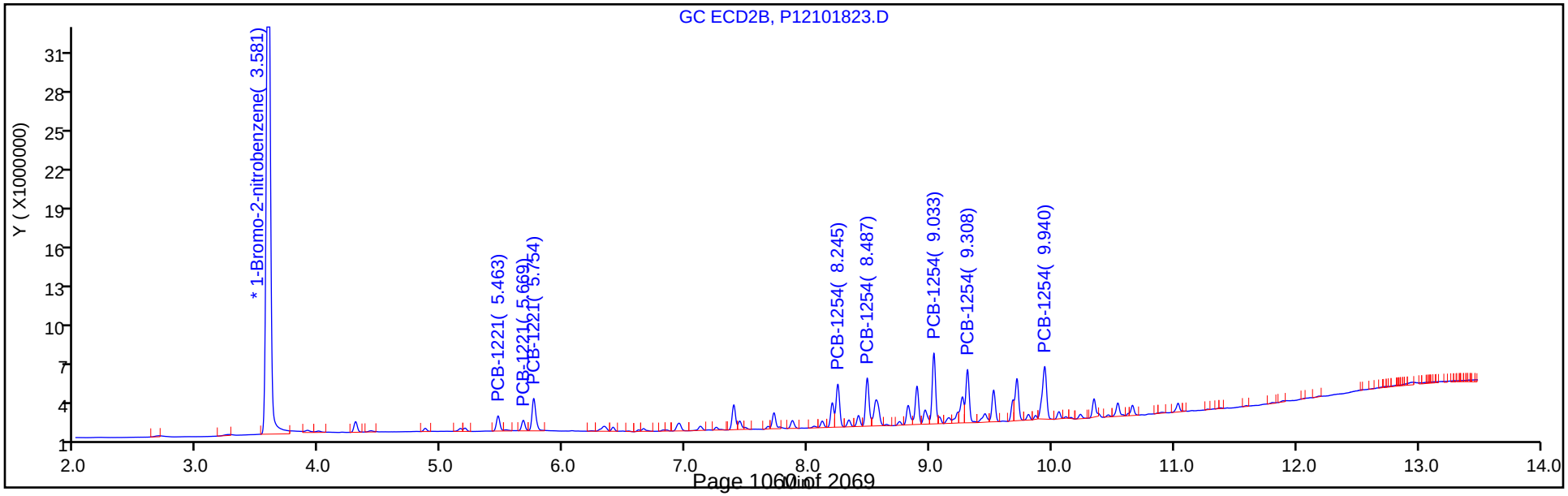
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101823.D

Injection Date:	18-Oct-2018 21:46:35	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std01 ar2154			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101824.D
Lims ID: std02 ar2154
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-Oct-2018 22:07:05 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-024
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:33:33 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:24:07

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.938	2.930	0.009	130611790	0.0500	0.0500	
2	3.580	3.577	0.004	100878591	0.0500	0.0500	
3 PCB-1221							
1	4.516	4.517	-0.001	4645388	0.2000	0.2053	
1	4.726	4.726	0.000	3240565	0.2000	0.2080	
1	4.782	4.781	0.001	11880978	0.2000	0.2039	
		Average of Peak Amounts =				0.2057	
2	5.463	5.463	0.000	4448083	0.2000	0.2086	
2	5.669	5.669	0.000	3014239	0.2000	0.2122	
2	5.755	5.754	0.001	10334222	0.2000	0.2070	
		Average of Peak Amounts =				0.2093	
						RPD = 1.71	
8 PCB-1254							
1	7.423	7.423	0.000	19589565	0.2000	0.2040	
1	7.895	7.894	0.001	28375887	0.2000	0.2023	
1	8.228	8.228	0.000	21386043	0.2000	0.2025	
1	8.452	8.452	0.000	18549033	0.2000	0.2026	
1	8.775	8.777	-0.002	28550502	0.2000	0.2007	
		Average of Peak Amounts =				0.2024	
2	8.245	8.244	0.001	12820732	0.2000	0.2071	
2	8.486	8.486	0.000	14486161	0.2000	0.2086	
2	9.032	9.033	-0.001	20633441	0.2000	0.2039	
2	9.308	9.307	0.001	16001404	0.2000	0.2076	
2	9.939	9.940	-0.001	20919620	0.2000	0.2069	
		Average of Peak Amounts =				0.2068	
						RPD = 2.15	

Reagents:

SG2154@0.2PPM_00020 Amount Added: 1.00 Units: mL

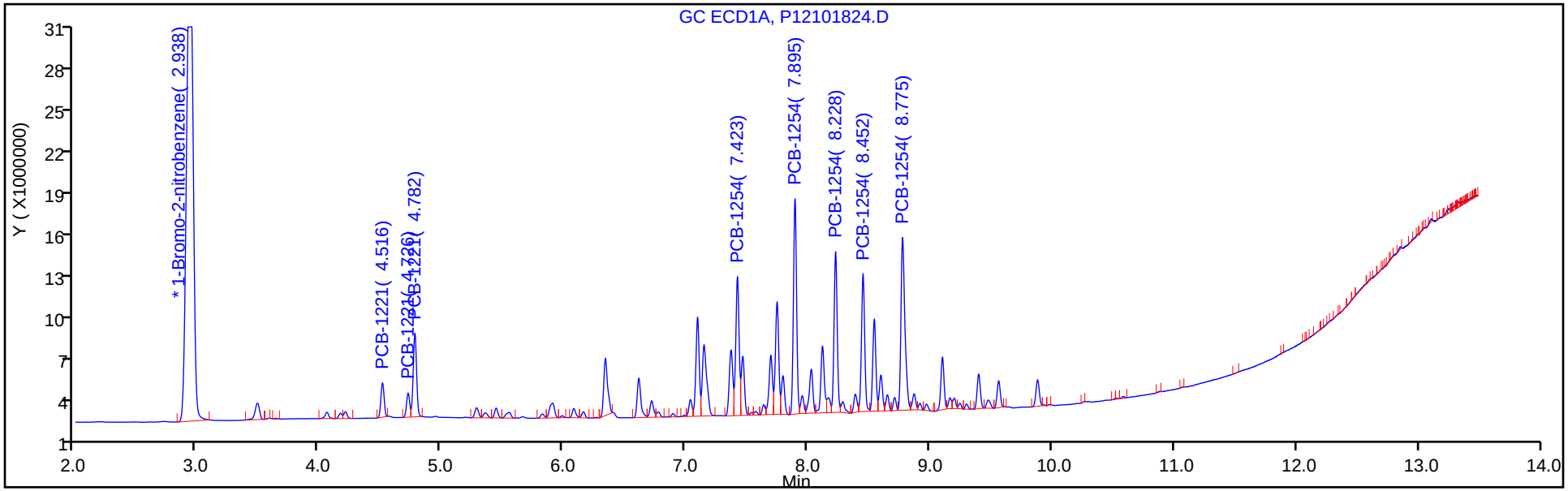
Report Date: 19-Oct-2018 13:33:37 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

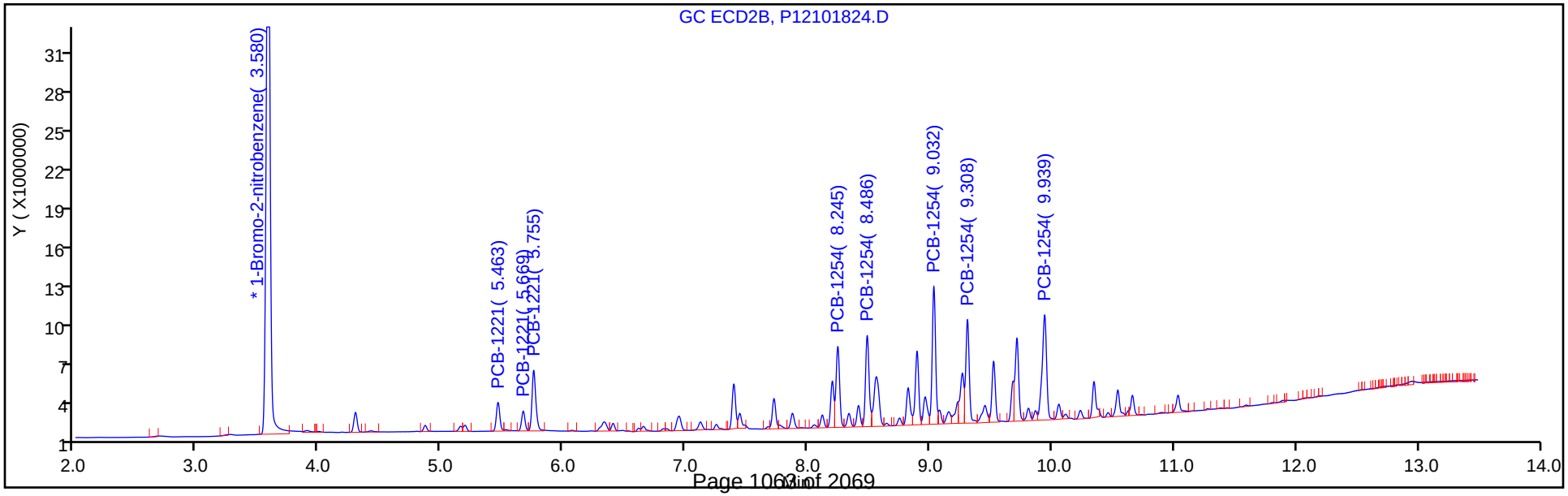
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101824.D

Injection Date:	18-Oct-2018 22:07:05	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std02 ar2154			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101825.D
Lims ID: std05 ar2154
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-Oct-2018 22:27:41 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-025
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:33:26 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:24:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.932	2.930	0.002	133461606	0.0500	0.0500	
2	3.577	3.577	0.001	102705090	0.0500	0.0500	
3 PCB-1221							
1	4.515	4.517	-0.002	11320180	0.5000	0.4896	
1	4.725	4.726	-0.001	7689300	0.5000	0.4829	
1	4.780	4.781	-0.001	28648938	0.5000	0.4812	
		Average of Peak Amounts =				0.4846	
2	5.461	5.463	-0.002	10616586	0.5000	0.4891	
2	5.668	5.669	-0.001	6945093	0.5000	0.4803	
2	5.754	5.754	0.000	23958516	0.5000	0.4713	
		Average of Peak Amounts =				0.4802	
						RPD = 0.90	
8 PCB-1254							
1	7.421	7.423	-0.002	46981071	0.5000	0.4789	
1	7.894	7.894	0.000	70361230	0.5000	0.4909	
1	8.226	8.228	-0.002	53245161	0.5000	0.4933	
1	8.450	8.452	-0.002	45966735	0.5000	0.4913	
1	8.775	8.777	-0.002	71465271	0.5000	0.4917	
		Average of Peak Amounts =				0.4892	
2	8.245	8.244	0.001	29362110	0.5000	0.4658	
2	8.486	8.486	0.000	33704274	0.5000	0.4768	
2	9.032	9.033	-0.001	49320149	0.5000	0.4786	
2	9.307	9.307	0.000	37778689	0.5000	0.4814	
2	9.940	9.940	0.000	47901647	0.5000	0.4654	
		Average of Peak Amounts =				0.4736	
						RPD = 3.24	

Reagents:

SG2154@0.5PPM_00040 Amount Added: 1.00 Units: mL

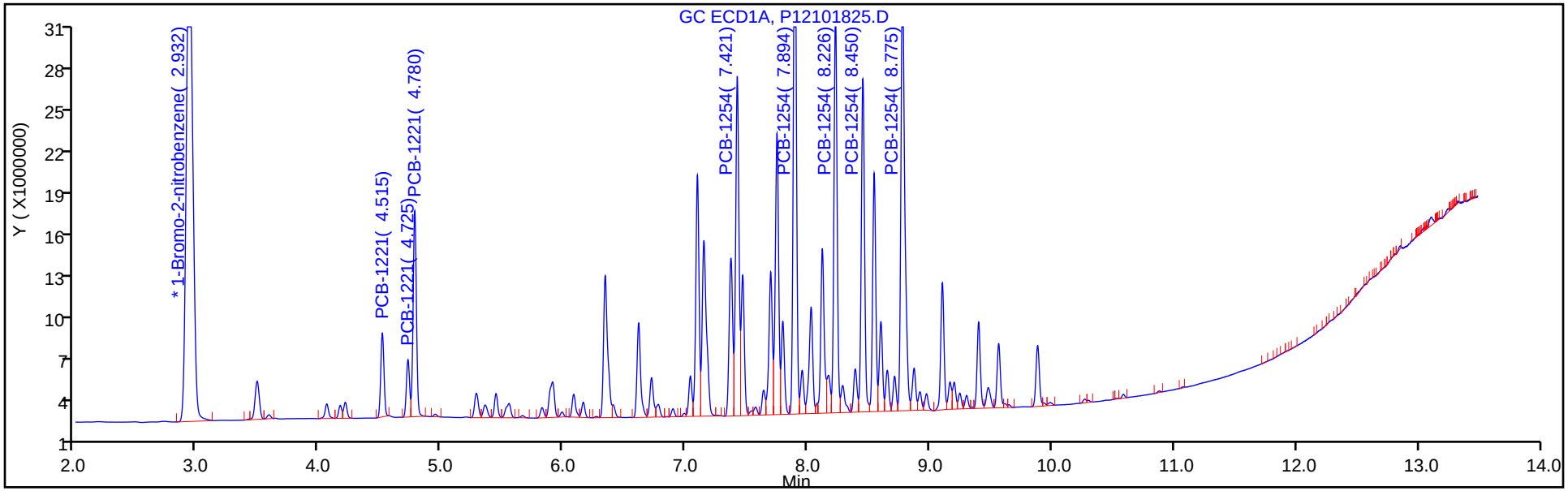
Report Date: 19-Oct-2018 13:33:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

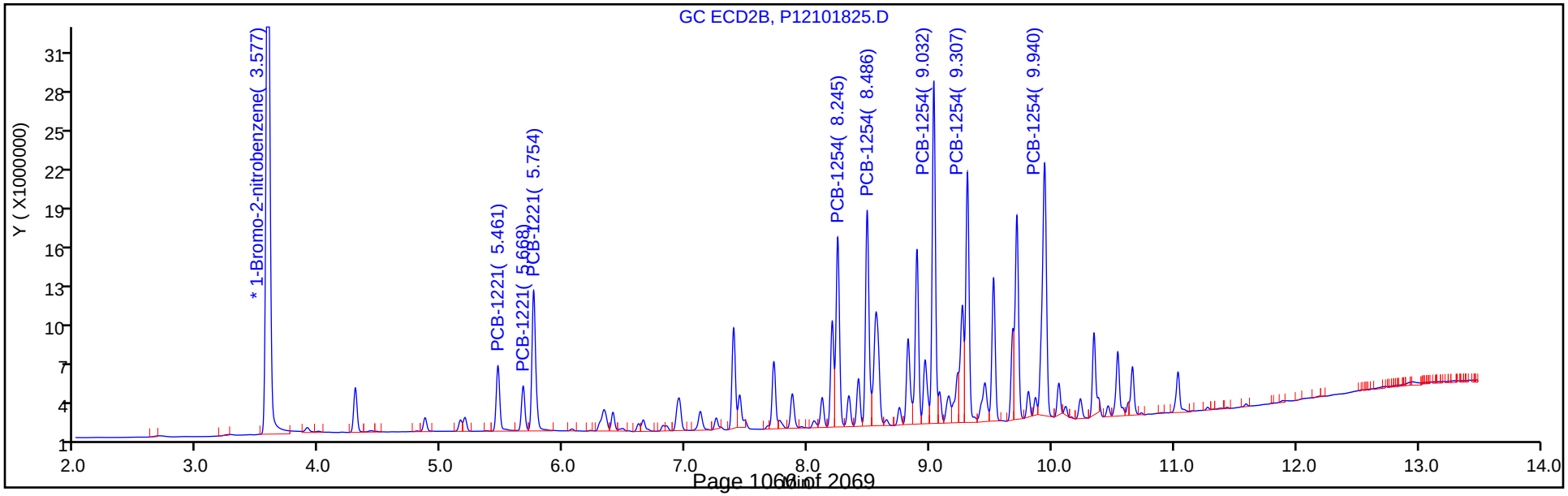
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101825.D

Injection Date:	18-Oct-2018 22:27:41	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std05 ar2154			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101826.D
Lims ID: std1 ar2154
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-Oct-2018 22:48:07 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-026
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:33:17 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:24:25

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.935	2.930	0.005	132023888	0.0500	0.0500	
2	3.579	3.577	0.003	102090403	0.0500	0.0500	
3 PCB-1221							
1	4.516	4.517	-0.001	22491588	1.00	0.9834	
1	4.725	4.726	-0.001	14358418	1.00	0.9116	
1	4.781	4.781	0.000	54638831	1.00	0.9277	
		Average of Peak Amounts =				0.9409	
2	5.463	5.463	0.000	19042643	1.00	0.8825	
2	5.668	5.669	-0.001	12307560	1.00	0.8563	
2	5.754	5.754	0.000	44323553	1.00	0.8771	
		Average of Peak Amounts =				0.8720	
						RPD = 7.60	
8 PCB-1254							
1	7.422	7.423	-0.001	92288959	1.00	0.9509	
1	7.893	7.894	-0.001	139148444	1.00	0.9814	
1	8.226	8.228	-0.002	105114737	1.00	0.9845	
1	8.450	8.452	-0.002	90015997	1.00	0.9726	
1	8.775	8.777	-0.002	141429606	1.00	0.9837	
		Average of Peak Amounts =				0.9746	
2	8.245	8.244	0.001	56078317	1.00	0.8950	
2	8.486	8.486	0.000	64429255	1.00	0.9169	
2	9.032	9.033	-0.001	96642828	1.00	0.9435	
2	9.307	9.307	0.000	72443502	1.00	0.9287	
2	9.939	9.940	-0.001	98644768	1.00	0.9643	
		Average of Peak Amounts =				0.9297	
						RPD = 4.72	

Reagents:

SG2154@1.0PPM_00028 Amount Added: 1.00 Units: mL

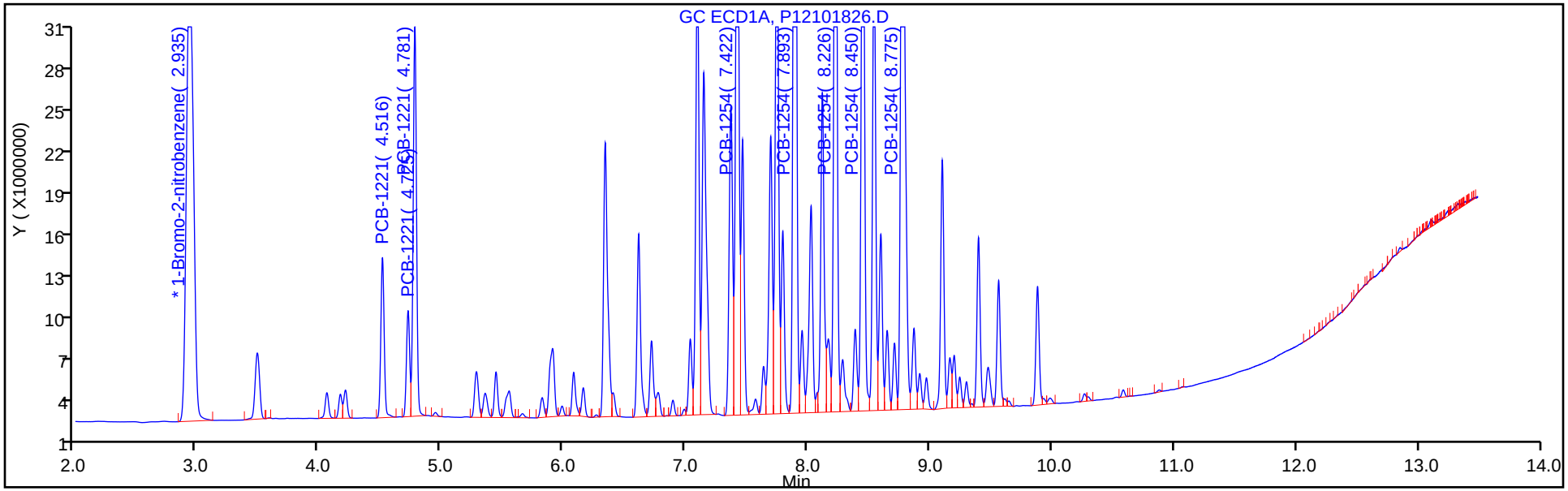
Report Date: 19-Oct-2018 13:33:20 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

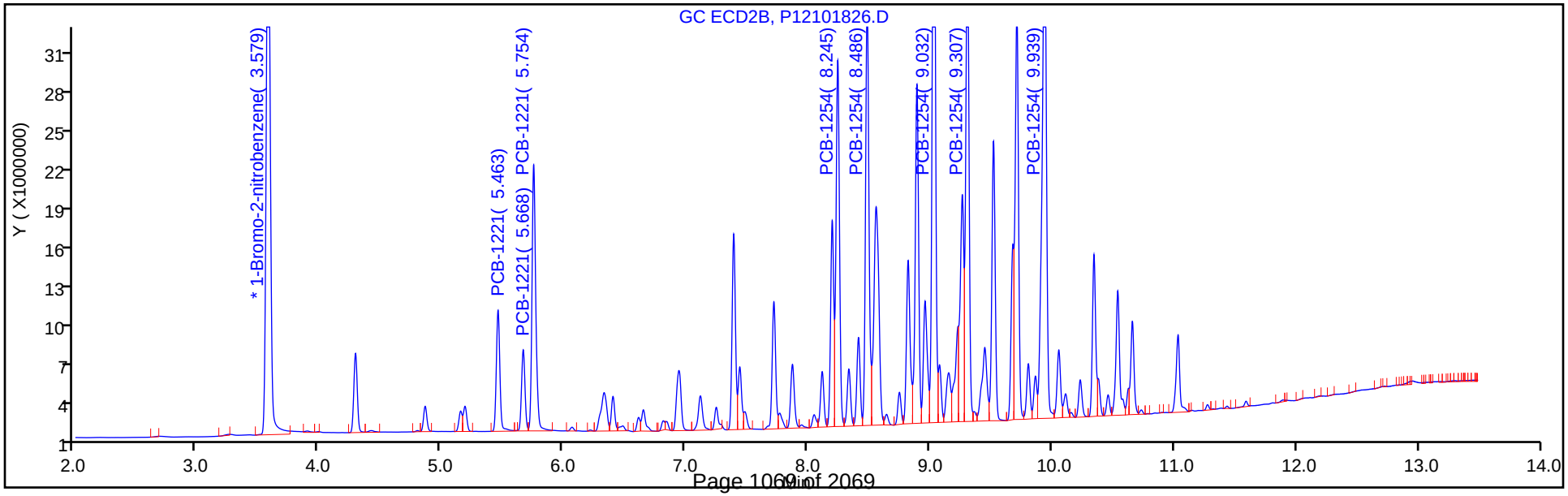
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101826.D

Injection Date:	18-Oct-2018 22:48:07	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std1 ar2154			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101827.D
Lims ID: std15 ar2154
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-Oct-2018 23:08:37 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-027
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:33:08 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:24:34

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.933	2.930	0.003	134305585	0.0500	0.0500	
2	3.576	3.577	-0.001	104185980	0.0500	0.0500	
3 PCB-1221							
1	4.513	4.517	-0.004	32627460	1.50	1.40	
1	4.723	4.726	-0.003	20711451	1.50	1.29	
1	4.778	4.781	-0.003	79914480	1.50	1.33	
		Average of Peak Amounts =				1.34	
2	5.460	5.463	-0.003	27256980	1.50	1.24	
2	5.667	5.669	-0.002	17633064	1.50	1.20	
2	5.753	5.754	-0.001	64380249	1.50	1.25	
		Average of Peak Amounts =				1.23	
						RPD = 8.82	
8 PCB-1254							
1	7.421	7.423	-0.002	135745494	1.50	1.37	
1	7.893	7.894	-0.001	206964911	1.50	1.43	
1	8.224	8.228	-0.004	156035114	1.50	1.44	
1	8.448	8.452	-0.004	132893437	1.50	1.41	
1	8.773	8.777	-0.004	210568772	1.50	1.44	
		Average of Peak Amounts =				1.42	
2	8.244	8.244	0.000	82323561	1.50	1.29	
2	8.485	8.486	-0.001	95364975	1.50	1.33	
2	9.031	9.033	-0.002	144038414	1.50	1.38	
2	9.306	9.307	-0.001	107367946	1.50	1.35	
2	9.938	9.940	-0.002	146436434	1.50	1.40	
		Average of Peak Amounts =				1.35	
						RPD = 5.07	

Reagents:

SG2154@1.5PPM_00004 Amount Added: 1.00 Units: mL

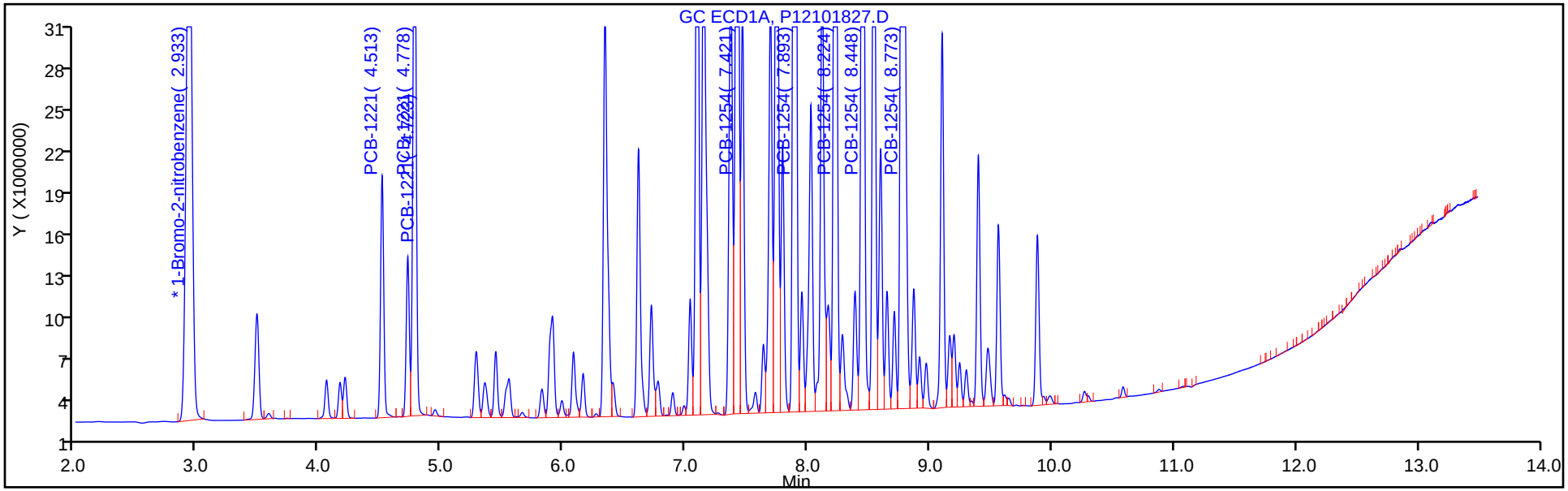
Report Date: 19-Oct-2018 13:33:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

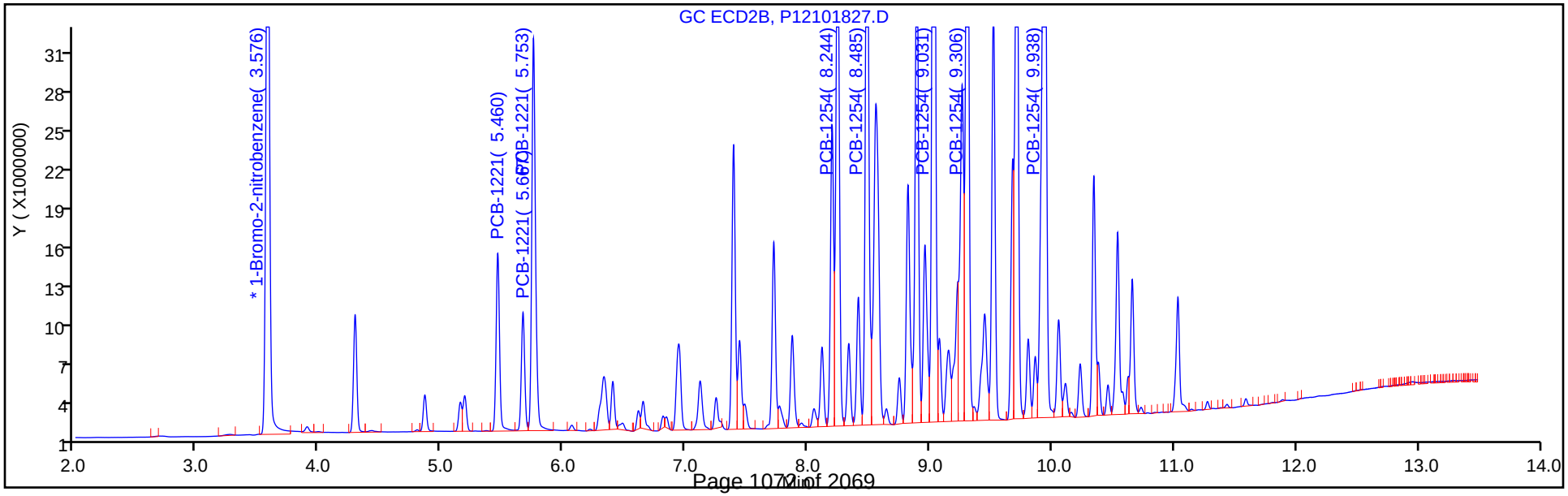
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101827.D

Injection Date:	18-Oct-2018 23:08:37	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std15 ar2154			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 23:29 Calibration End Date: 10/19/2018 01:11 Calibration ID: 47549

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/28	P12101828.D
Level 2	STD01 240-350710/29	P12101829.D
Level 3	STD02 240-350710/30	P12101830.D
Level 4	STD05 240-350710/31	P12101831.D
Level 5	STD1 240-350710/32	P12101832.D
Level 6	STD15 240-350710/33	P12101833.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1016 Peak 1	0.0154 0.0144	0.0151	0.0157	0.0147	0.0138	Ave		0.0149				4.6		20.0			
PCB-1016 Peak 2	0.0292 0.0257	0.0292	0.0281	0.0269	0.0253	Ave		0.0274				6.2		20.0			
PCB-1016 Peak 3	0.0655 0.0661	0.0665	0.0654	0.0654	0.0638	Ave		0.0655				1.4		20.0			
PCB-1016 Peak 4	0.0254 0.0273	0.0295	0.0284	0.0277	0.0265	Ave		0.0275				5.2		20.0			
PCB-1016 Peak 5	0.0134 0.0105	0.0121	0.0115	0.0110	0.0101	Ave		0.0114				10.4		20.0			
PCB-1260 Peak 1	0.0390 0.0351	0.0366	0.0361	0.0355	0.0342	Ave		0.0361				4.6		20.0			
PCB-1260 Peak 2	0.0646 0.0584	0.0593	0.0585	0.0581	0.0562	Ave		0.0592				4.8		20.0			
PCB-1260 Peak 3	0.0414 0.0372	0.0399	0.0389	0.0378	0.0364	Ave		0.0386				4.8		20.0			
PCB-1260 Peak 4	0.1029 0.1056	0.1015	0.1012	0.1018	0.1005	Ave		0.1023				1.8		20.0			
PCB-1260 Peak 5	0.0552 0.0488	0.0512	0.0499	0.0490	0.0470	Ave		0.0502				5.6		20.0			
Tetrachloro-m-xylene	0.9521 0.8655	0.9116	0.9111	0.8965	0.8779	Ave		0.9025				3.4		20.0			
DCB Decachlorobiphenyl	1.3081 0.9727	1.2377	1.1189	1.0461	0.9934	Ave		1.1128				12.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 23:29 Calibration End Date: 10/19/2018 01:11 Calibration ID: 47549

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/28	P12101828.D
Level 2	STD01 240-350710/29	P12101829.D
Level 3	STD02 240-350710/30	P12101830.D
Level 4	STD05 240-350710/31	P12101831.D
Level 5	STD1 240-350710/32	P12101832.D
Level 6	STD15 240-350710/33	P12101833.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 1	BNB	Ave	1976259 58013797	3943981	8107164	19186786	36487493	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 2	BNB	Ave	3744129 103231737	7594017	14523765	35227337	66717413	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 3	BNB	Ave	8390313 265652083	17326704	33825903	85573522	168123860	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 4	BNB	Ave	3252920 109686257	7680049	14690421	36213049	69814083	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 5	BNB	Ave	1718819 42375655	3159214	5922931	14355660	26704813	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 1	BNB	Ave	4994339 141158095	9528635	18672267	46502426	90118636	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 2	BNB	Ave	8270702 234685013	15449523	30241067	76002197	148006908	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 3	BNB	Ave	5302446 149726401	10402771	20118058	49412342	95813812	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 4	BNB	Ave	13171369 424721830	26430306	52326036	133271412	264902671	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 5	BNB	Ave	7063545 196105245	13343876	25827051	64136455	123860843	0.0500 1.50	0.100	0.200	0.500	1.00
Tetrachloro-m-xylene	BNB	Ave	6096681 231982384	11871120	23564174	58662576	115665685	0.00250 0.100	0.00500	0.0100	0.0250	0.0500
DCB Decachlorobiphenyl	BNB	Ave	8376006 260717099	16117399	28936726	68450172	130882950	0.00250 0.100	0.00500	0.0100	0.0250	0.0500

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101828.D
Lims ID: std005 1660
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Oct-2018 23:29:12 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-028
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub6

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:32:54 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:04:35

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.935	2.930	0.005	128061595	0.0500	0.0500	
2	3.577	3.577	0.000	98072146	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.214	4.215	-0.001	6096681	0.002500	0.002638	
2	4.978	4.979	-0.001	5241196	0.002500	0.002881	
						RPD = 8.81	
6 PCB-1016							M
1	4.778	4.780	-0.002	1976259	0.0500	0.0519	
1	5.283	5.283	0.000	3744129	0.0500	0.0534	
1	5.908	5.907	0.001	8390313	0.0500	0.0501	
1	6.081	6.080	0.001	3252920	0.0500	0.0463	
1	6.406	6.406	0.000	1718819	0.0500	0.0587	M
		Average of Peak Amounts =				0.0520	
2	5.752	5.753	-0.001	1955719	0.0500	0.0603	
2	6.332	6.332	0.000	3751996	0.0500	0.0604	
2	6.943	6.942	0.001	7637124	0.0500	0.0571	
2	7.119	7.117	0.002	3067584	0.0500	0.0547	
2	7.441	7.440	0.001	1983679	0.0500	0.0617	
		Average of Peak Amounts =				0.0588	
						RPD = 12.24	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.120	8.117	0.003	4994339	0.0500	0.0540	
1	8.452	8.451	0.001	8270702	0.0500	0.0546	
1	8.917	8.916	0.001	5302446	0.0500	0.0536	
1	9.562	9.560	0.002	13171369	0.0500	0.0503	
1	9.881	9.879	0.002	7063545	0.0500	0.0550	
		Average of Peak Amounts =				0.0535	
2	9.265	9.265	0.000	3711346	0.0500	0.0507	
2	9.520	9.519	0.001	4887986	0.0500	0.0557	
2	10.050	10.049	0.001	4044611	0.0500	0.0545	
2	10.657	10.657	0.000	9975436	0.0500	0.0519	
2	11.027	11.027	0.000	6973743	0.0500	0.0529	
		Average of Peak Amounts =				0.0531	
						RPD = 0.69	
$ 12 DCB Decachlorobiphenyl							
1	11.064	11.062	0.002	8376006	0.002500	0.002939	
2	12.112	12.112	0.000	4978651	0.002500	0.002742	
						RPD = 6.92	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@.05PPM_00024 Amount Added: 1.00 Units: mL

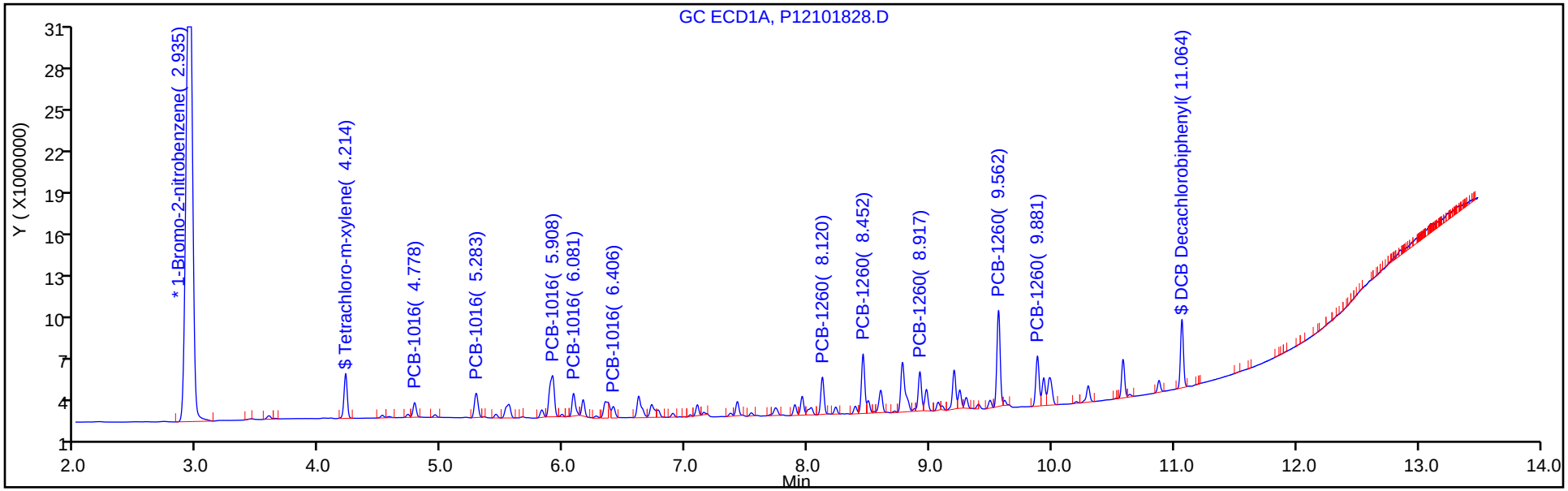
Report Date: 19-Oct-2018 13:32:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

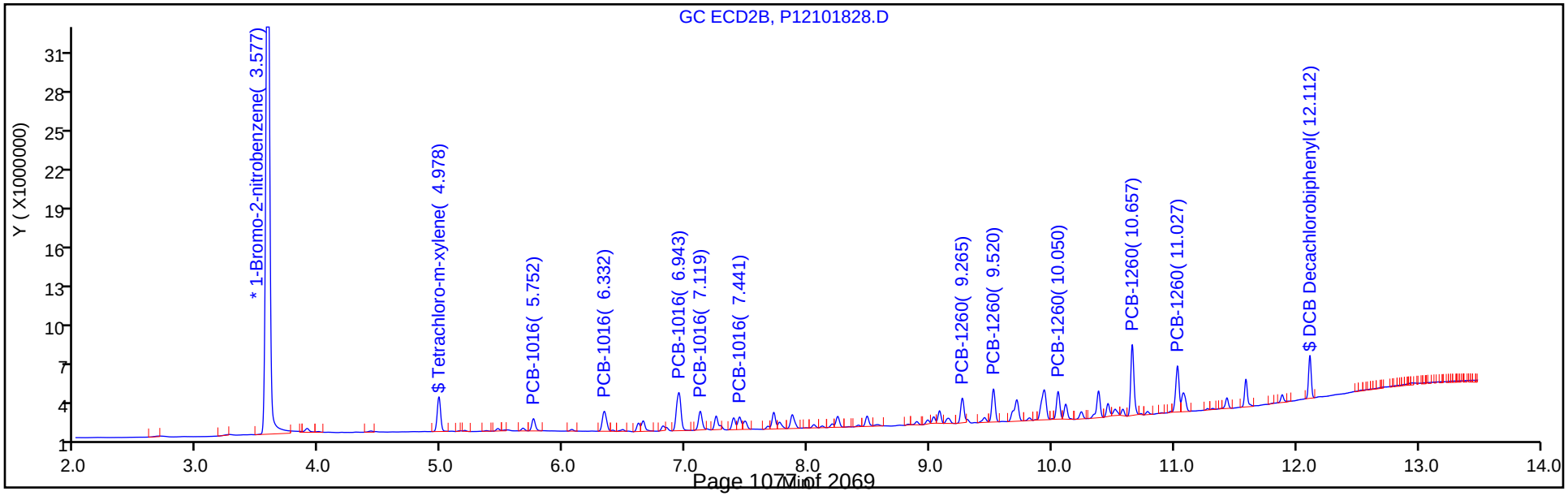
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101828.D

Injection Date:	18-Oct-2018 23:29:12	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std005 1660			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 19-Oct-2018 13:32:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101828.D

Injection Date: 18-Oct-2018 23:29:12 Instrument ID: A2HP12

Lims ID: std005 1660

Client ID:

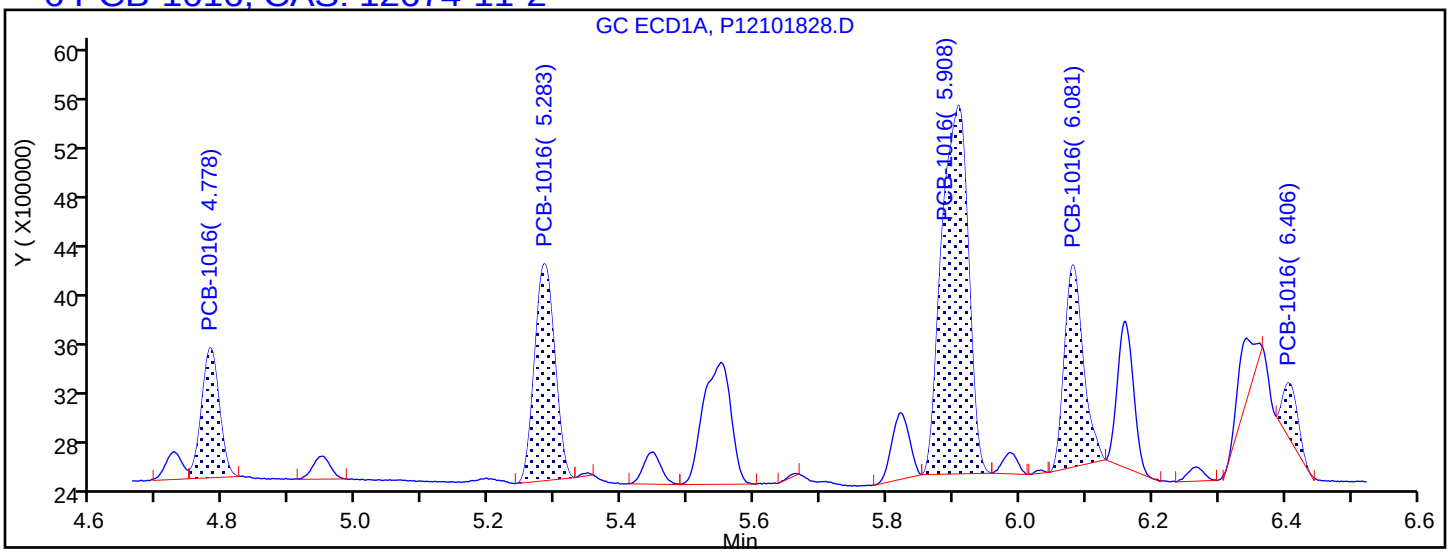
Operator ID: ALS Bottle#: 28 Worklist Smp#: 28

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

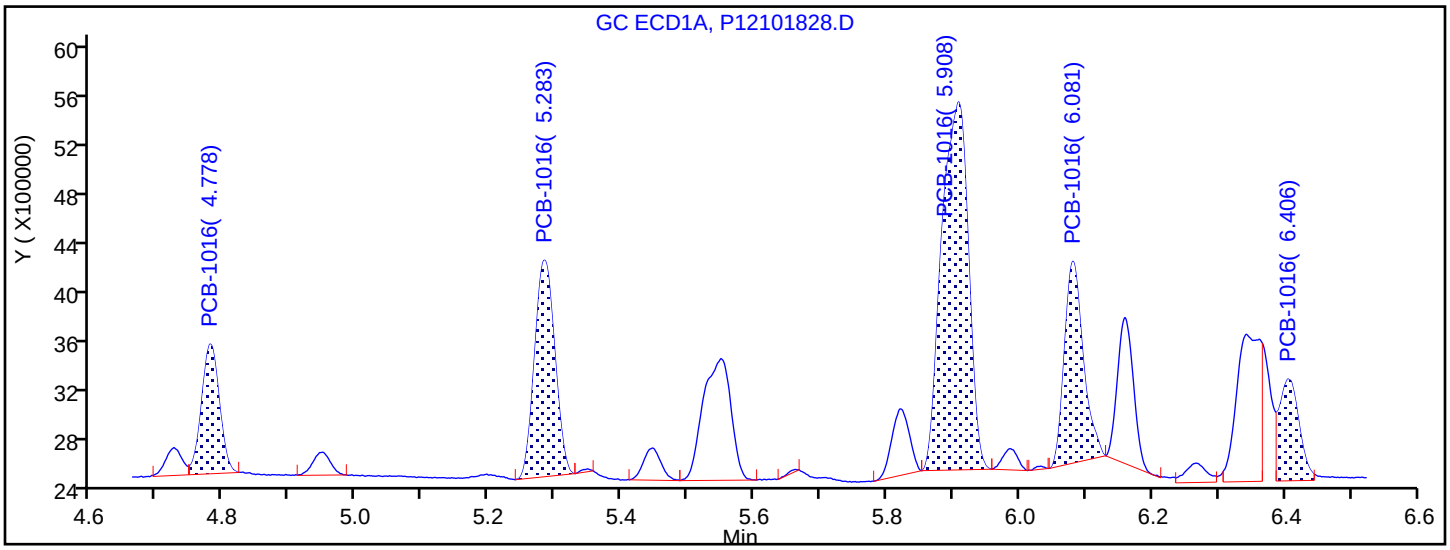
Column: Detector GC ECD1A

6 PCB-1016, CAS: 12674-11-2



Processing Integration Results

4.778	Response = 1976259
5.283	Response = 3744129
5.908	Response = 8390313
6.081	Response = 3252920
6.406	Response = 698300



Manual Integration Results

4.778	Response = 1976259	
5.283	Response = 3744129	
5.908	Response = 8390313	
6.081	Response = 3252920	
6.406	Response = 1718819	M

Reviewer: hassl, 19-Oct-2018 07:04:49

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101829.D
Lims ID: std01 1660
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Oct-2018 23:49:39 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-029
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub6

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:32:42 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:05:06

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.928	2.930	-0.002	130217104	0.0500	0.0500	
2	3.575	3.577	-0.001	100484017	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.214	4.215	-0.001	11871120	0.005000	0.005051	
2	4.978	4.979	-0.001	9844544	0.005000	0.005281	
						RPD = 4.45	
6 PCB-1016							
1	4.780	4.780	0.000	3943981	0.1000	0.1019	
1	5.283	5.283	0.000	7594017	0.1000	0.1064	
1	5.906	5.907	-0.001	17326704	0.1000	0.1016	
1	6.080	6.080	0.000	7680049	0.1000	0.1074	
1	6.405	6.406	-0.001	3159214	0.1000	0.1060	
		Average of Peak Amounts =				0.1047	
2	5.753	5.753	0.000	3641712	0.1000	0.1096	
2	6.333	6.332	0.001	6987816	0.1000	0.1098	
2	6.942	6.942	0.000	14232228	0.1000	0.1038	
2	7.118	7.117	0.001	6177786	0.1000	0.1075	
2	7.440	7.440	0.000	3648686	0.1000	0.1108	
		Average of Peak Amounts =				0.1083	
						RPD = 3.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.118	8.117	0.001	9528635	0.1000	0.1014	
1	8.450	8.451	-0.001	15449523	0.1000	0.1003	
1	8.915	8.916	-0.001	10402771	0.1000	0.1035	
1	9.560	9.560	0.000	26430306	0.1000	0.0993	
1	9.880	9.879	0.001	13343876	0.1000	0.1021	
		Average of Peak Amounts =				0.1013	
2	9.265	9.265	0.000	8280974	0.1000	0.1104	
2	9.520	9.519	0.001	9413856	0.1000	0.1047	
2	10.050	10.049	0.001	7710648	0.1000	0.1014	
2	10.657	10.657	0.000	19265507	0.1000	0.0979	
2	11.028	11.027	0.001	13479066	0.1000	0.0997	
		Average of Peak Amounts =				0.1028	
						RPD = 1.48	
$ 12 DCB Decachlorobiphenyl							
1	11.064	11.062	0.002	16117399	0.005000	0.005561	
2	12.112	12.112	0.000	9677720	0.005000	0.005202	
						RPD = 6.67	

Reagents:

SG1660STD@0.1_00024 Amount Added: 1.00 Units: mL

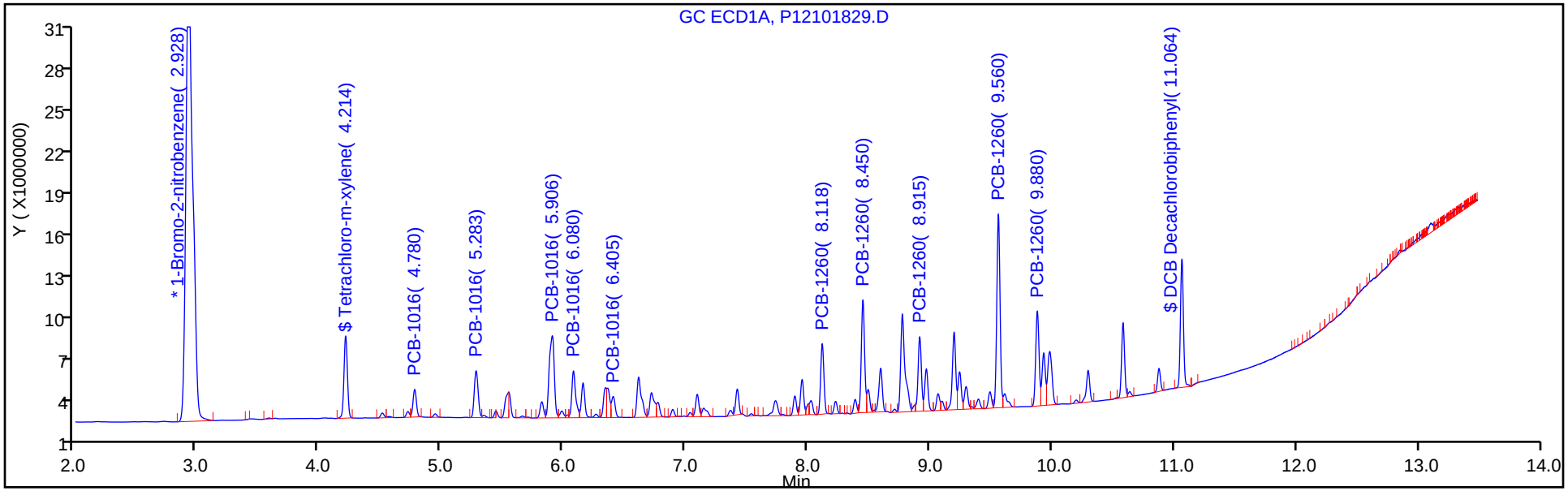
Report Date: 19-Oct-2018 13:32:44 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

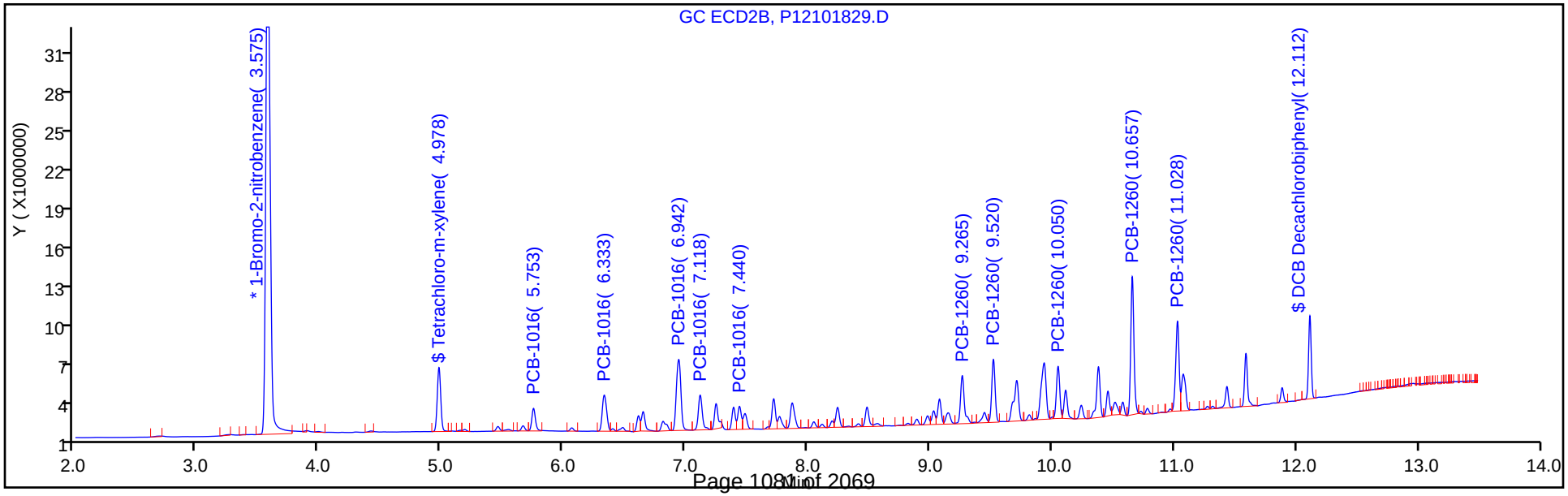
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101829.D

Injection Date:	18-Oct-2018 23:49:39	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std01 1660			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101830.D
Lims ID: std02 1660
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 19-Oct-2018 00:10:06 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-030
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub6

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:32:27 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 13:10:42

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.932	2.930	0.002	129312698	0.0500	0.0500	
2	3.576	3.577	0.000	99953258	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.214	4.215	-0.001	23564174	0.0100	0.0101	
2	4.978	4.979	-0.001	18600521	0.0100	0.0100	
						RPD = 0.65	
6 PCB-1016							
1	4.780	4.780	0.000	8107164	0.2000	0.2109	
1	5.283	5.283	0.000	14523765	0.2000	0.2050	
1	5.907	5.907	0.000	33825903	0.2000	0.1998	
1	6.080	6.080	0.000	14690421	0.2000	0.2069	
1	6.405	6.406	-0.001	5922931	0.2000	0.2002	
		Average of Peak Amounts =				0.2045	
2	5.752	5.753	-0.001	6805149	0.2000	0.2058	
2	6.332	6.332	0.000	12511012	0.2000	0.1975	
2	6.943	6.942	0.001	26930238	0.2000	0.1975	
2	7.118	7.117	0.001	11682445	0.2000	0.2043	
2	7.440	7.440	0.000	6757927	0.2000	0.2064	
		Average of Peak Amounts =				0.2023	
						RPD = 1.10	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.119	8.117	0.002	18672267	0.2000	0.2001	
1	8.451	8.451	0.000	30241067	0.2000	0.1976	
1	8.915	8.916	-0.001	20118058	0.2000	0.2015	
1	9.560	9.560	0.000	52326036	0.2000	0.1979	
1	9.879	9.879	0.000	25827051	0.2000	0.1990	
		Average of Peak Amounts =				0.1992	
2	9.265	9.265	0.000	15378115	0.2000	0.2061	
2	9.520	9.519	0.001	17632351	0.2000	0.1971	
2	10.050	10.049	0.001	15240053	0.2000	0.2014	
2	10.657	10.657	0.000	38372277	0.2000	0.1960	
2	11.029	11.027	0.002	26603486	0.2000	0.1978	
		Average of Peak Amounts =				0.1997	
						RPD = 0.24	
$ 12 DCB Decachlorobiphenyl							
1	11.062	11.062	0.000	28936726	0.0100	0.0101	
2	12.112	12.112	0.000	18598178	0.0100	0.0101	
						RPD = 0.03	

Reagents:

SG1660@0.2ppm_00027 Amount Added: 1.00 Units: mL

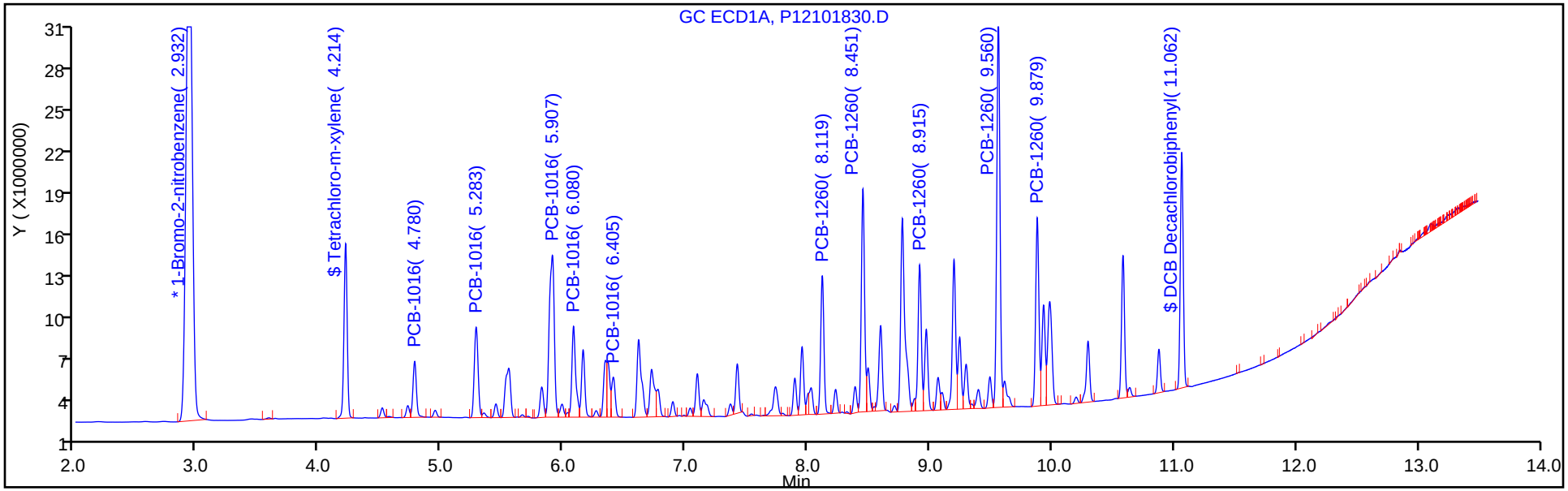
Report Date: 19-Oct-2018 13:32:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

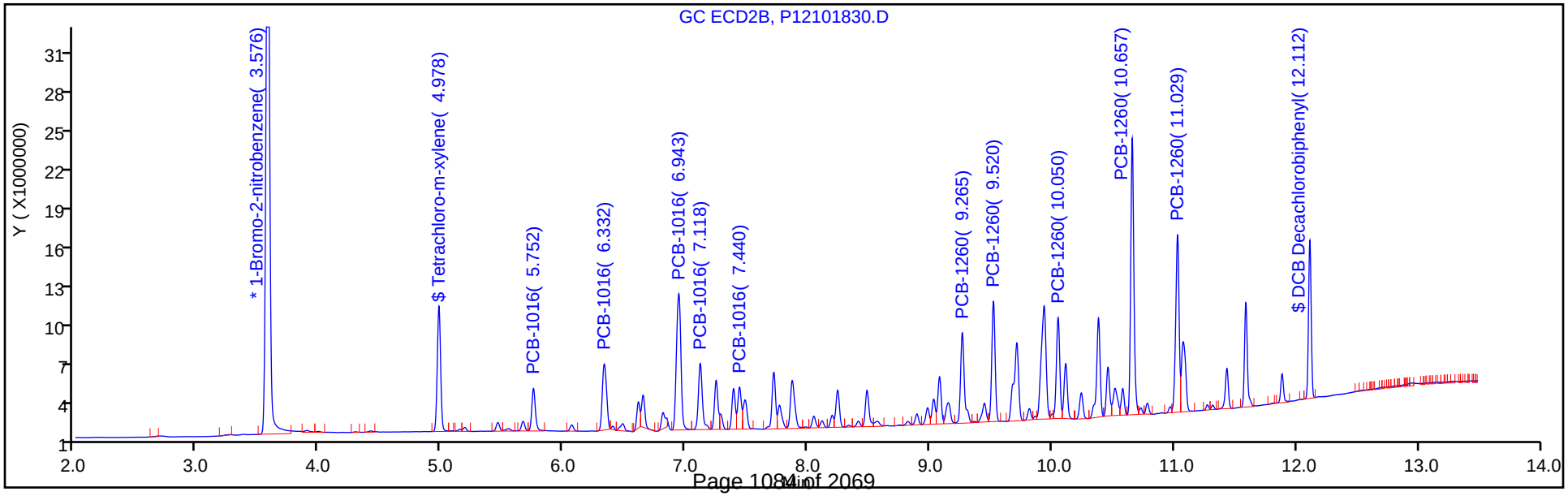
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101830.D

Injection Date:	19-Oct-2018 00:10:06	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std02 1660			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101831.D
Lims ID: std05 1660
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 19-Oct-2018 00:30:42 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-031
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub6

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:32:11 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:05:25

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.930	2.930	0.000	130862926	0.0500	0.0500	
2	3.577	3.577	0.000	101179890	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.215	4.215	0.000	58662576	0.0250	0.0248	
2	4.979	4.979	0.000	44455957	0.0250	0.0237	
						RPD = 4.75	
6 PCB-1016							
1	4.780	4.780	0.000	19186786	0.5000	0.4932	
1	5.283	5.283	0.000	35227337	0.5000	0.4913	
1	5.907	5.907	0.000	85573522	0.5000	0.4995	
1	6.080	6.080	0.000	36213049	0.5000	0.5039	
1	6.406	6.406	0.000	14355660	0.5000	0.4794	
		Average of Peak Amounts =				0.4935	
2	5.753	5.753	0.000	15761580	0.5000	0.4709	
2	6.332	6.332	0.000	30143247	0.5000	0.4702	
2	6.942	6.942	0.000	65826059	0.5000	0.4768	
2	7.117	7.117	0.000	27914551	0.5000	0.4823	
2	7.440	7.440	0.000	15159129	0.5000	0.4573	
		Average of Peak Amounts =				0.4715	
						RPD = 4.55	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							M
1	8.117	8.117	0.000	46502426	0.5000	0.4923	M
1	8.451	8.451	0.000	76002197	0.5000	0.4908	M
1	8.916	8.916	0.000	49412342	0.5000	0.4891	M
1	9.560	9.560	0.000	133271412	0.5000	0.4980	M
1	9.879	9.879	0.000	64136455	0.5000	0.4883	M
		Average of Peak Amounts =				0.4917	
2	9.265	9.265	0.000	35931000	0.5000	0.4757	M
2	9.519	9.519	0.000	42741180	0.5000	0.4720	
2	10.049	10.049	0.000	37173867	0.5000	0.4853	
2	10.657	10.657	0.000	97656609	0.5000	0.4929	
2	11.027	11.027	0.000	66675190	0.5000	0.4898	
		Average of Peak Amounts =				0.4831	
						RPD = 1.76	
$ 12 DCB Decachlorobiphenyl							
1	11.062	11.062	0.000	68450172	0.0250	0.0235	
2	12.112	12.112	0.000	45298788	0.0250	0.0242	
						RPD = 2.86	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@0.5PPM_00083 Amount Added: 1.00 Units: mL

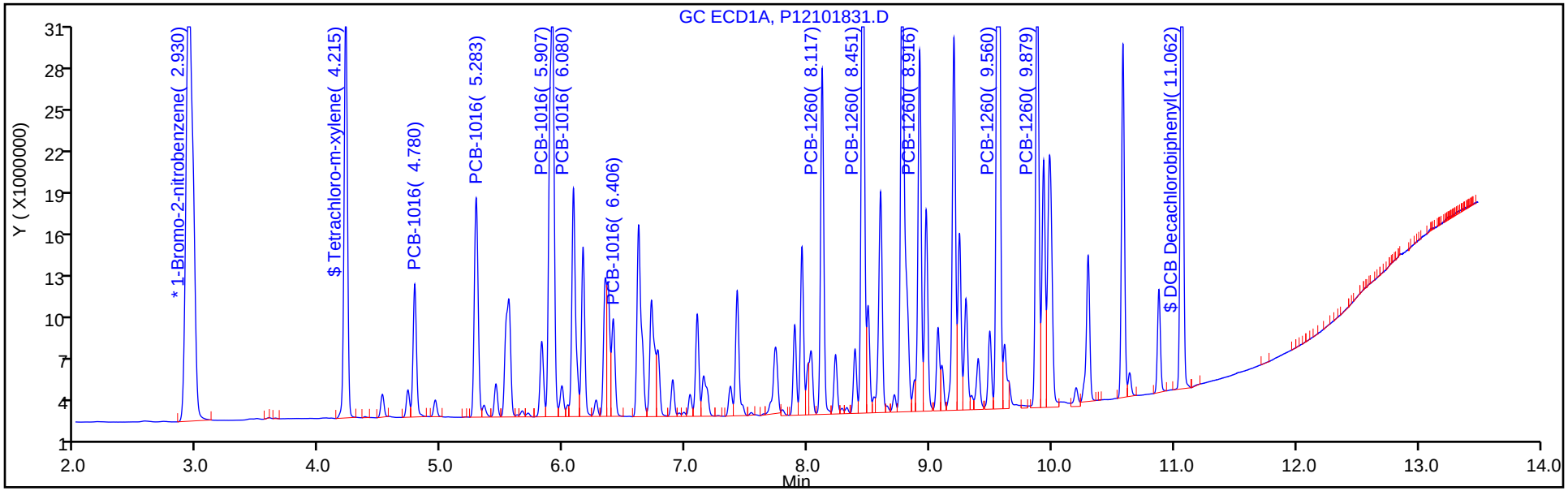
Report Date: 19-Oct-2018 13:32:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

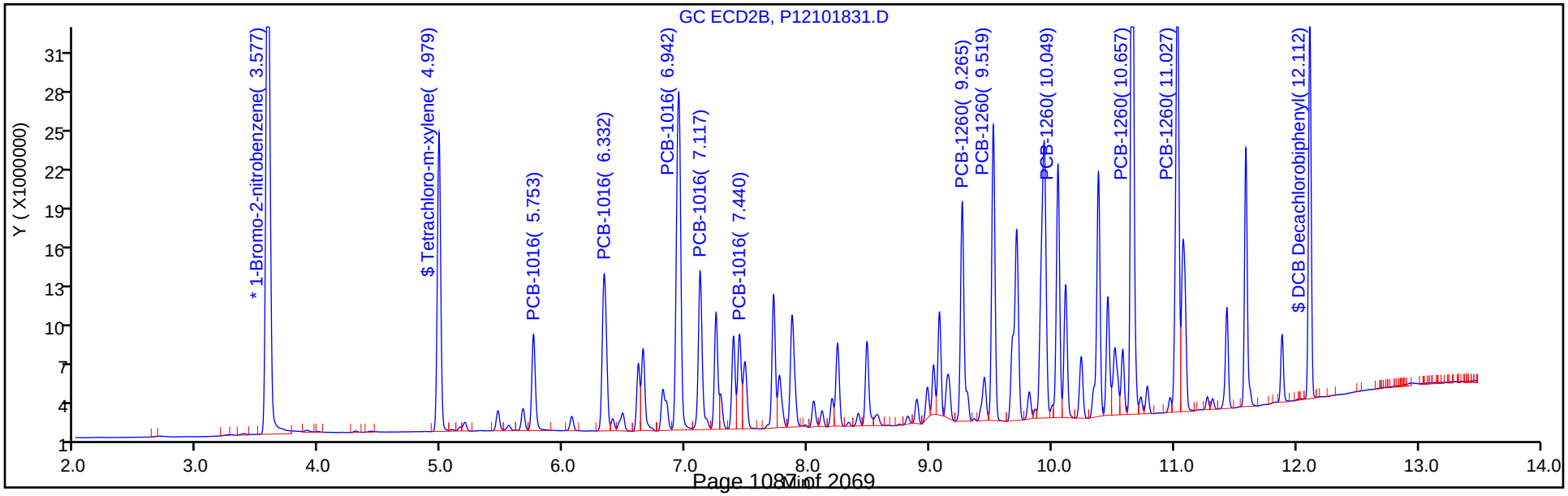
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101831.D

Injection Date:	19-Oct-2018 00:30:42	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std05 1660			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 19-Oct-2018 13:32:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101831.D

Injection Date: 19-Oct-2018 00:30:42 Instrument ID: A2HP12

Lims ID: std05 1660

Client ID:

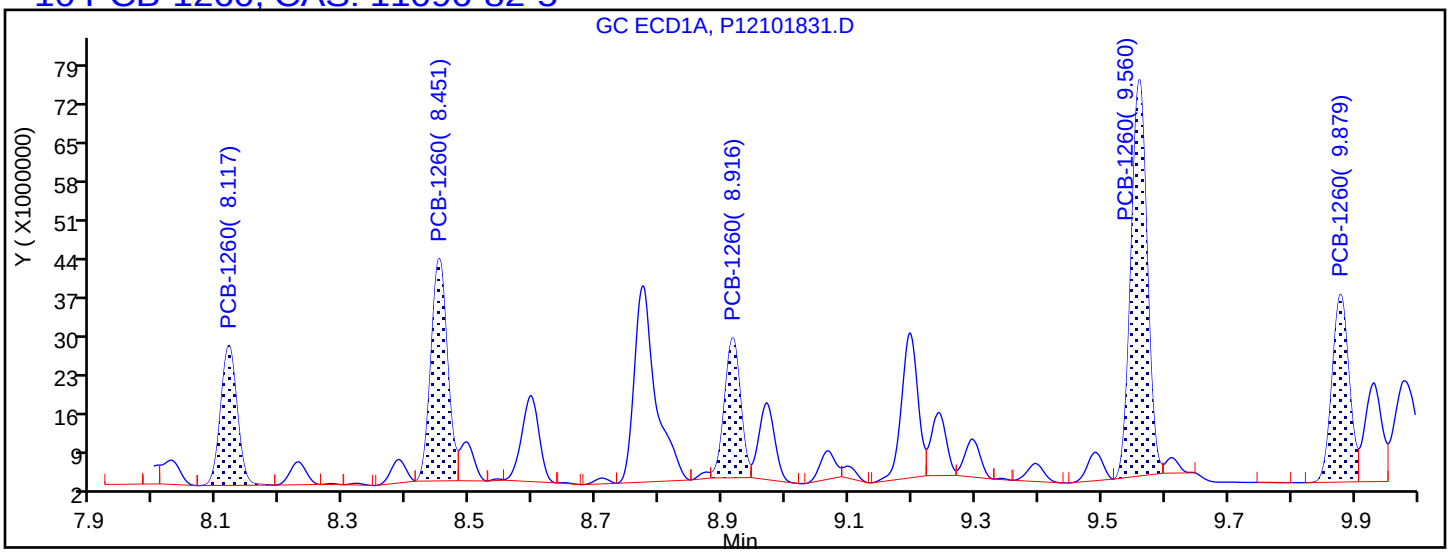
Operator ID: ALS Bottle#: 31 Worklist Smp#: 31

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

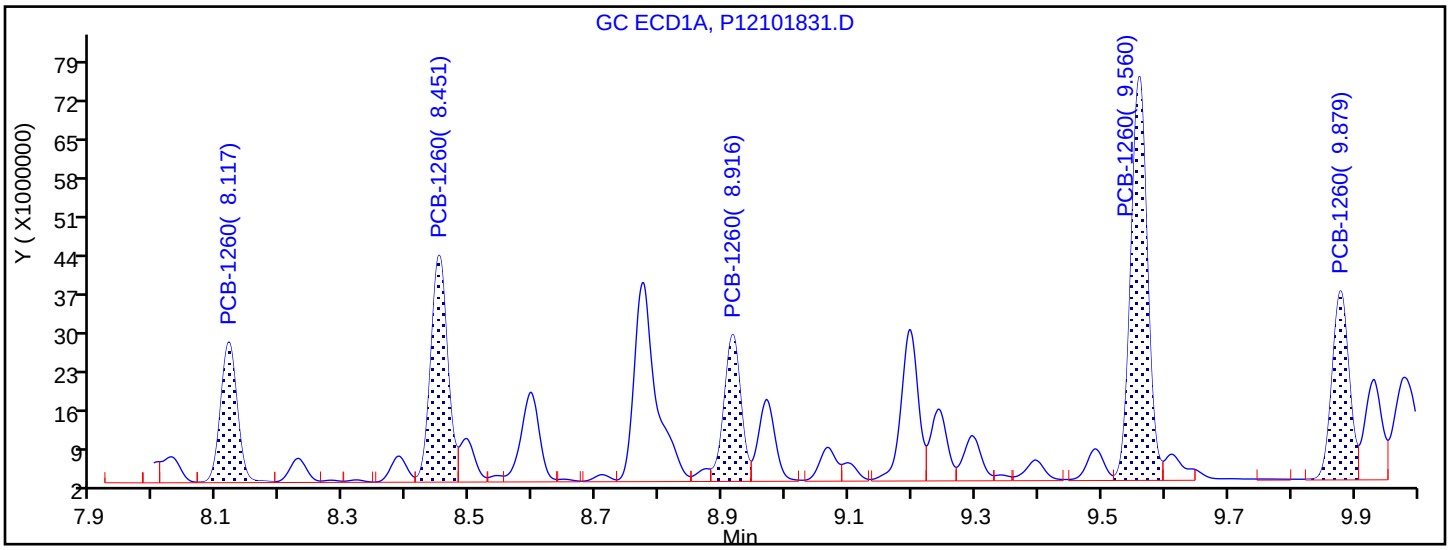
Column: Detector GC ECD1A

10 PCB-1260, CAS: 11096-82-5



Processing Integration Results

8.117	Response = 45566099
8.451	Response = 72578127
8.916	Response = 44526457
9.560	Response = 126761609
9.879	Response = 63073923



Manual Integration Results

8.117	Response = 46502426	M
8.451	Response = 76002197	M
8.916	Response = 49412342	M
9.560	Response = 133271412	M
9.879	Response = 64136455	M

Reviewer: hassl, 19-Oct-2018 07:05:21

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101832.D
Lims ID: std1 1660
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 19-Oct-2018 00:51:10 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-032
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub6

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:32:00 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:05:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.930	2.930	0.000	131748163	0.0500	0.0500	
2	3.576	3.577	0.000	103444534	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.215	4.215	0.000	115665685	0.0500	0.0486	
2	4.979	4.979	0.000	87291893	0.0500	0.0455	
						RPD = 6.71	
6 PCB-1016							
1	4.780	4.780	0.000	36487493	1.00	0.9316	
1	5.283	5.283	0.000	66717413	1.00	0.9241	
1	5.907	5.907	0.000	168123860	1.00	0.9748	
1	6.081	6.080	0.001	69814083	1.00	0.9650	
1	6.406	6.406	0.000	26704813	1.00	0.8858	
		Average of Peak Amounts =				0.9363	
2	5.752	5.753	-0.001	28892144	1.00	0.8443	
2	6.332	6.332	0.000	56650774	1.00	0.8643	
2	6.942	6.942	0.000	128081645	1.00	0.9074	
2	7.117	7.117	0.000	53017714	1.00	0.8959	
2	7.440	7.440	0.000	28301070	1.00	0.8351	
		Average of Peak Amounts =				0.8694	
						RPD = 7.41	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							M
1	8.116	8.117	-0.001	90118636	1.00	0.9477	M
1	8.449	8.451	-0.002	148006908	1.00	0.9494	M
1	8.915	8.916	-0.001	95813812	1.00	0.9420	M
1	9.560	9.560	0.000	264902671	1.00	0.9832	M
1	9.878	9.879	-0.001	123860843	1.00	0.9366	M
		Average of Peak Amounts =				0.9518	
2	9.264	9.265	-0.001	71492056	1.00	0.9258	
2	9.519	9.519	0.000	84363420	1.00	0.9112	
2	10.049	10.049	0.000	72724503	1.00	0.9286	
2	10.656	10.657	-0.001	195157564	1.00	0.9634	
2	11.027	11.027	0.000	131487420	1.00	0.9448	
		Average of Peak Amounts =				0.9347	
						RPD = 1.81	
$ 12 DCB Decachlorobiphenyl							
1	11.062	11.062	0.000	130882950	0.0500	0.0446	
2	12.111	12.112	-0.001	88950136	0.0500	0.0464	
						RPD = 3.98	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@1.0PPM_00029 Amount Added: 1.00 Units: mL

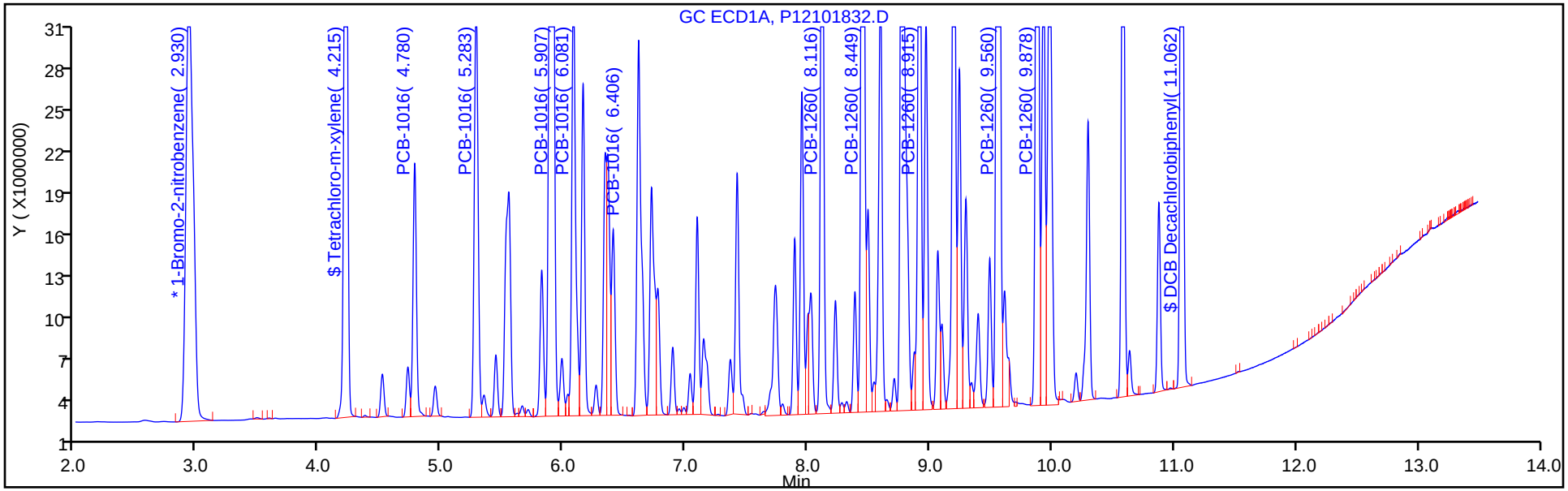
Report Date: 19-Oct-2018 13:32:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

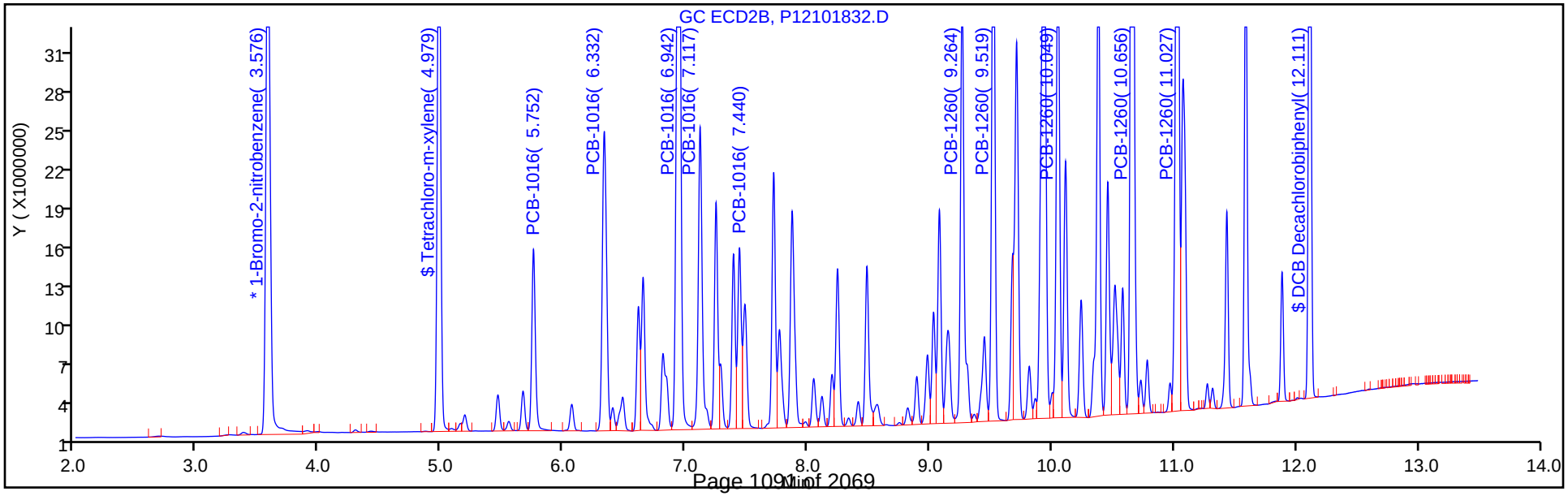
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101832.D

Injection Date:	19-Oct-2018 00:51:10	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std1 1660			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 19-Oct-2018 13:32:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101832.D

Injection Date: 19-Oct-2018 00:51:10 Instrument ID: A2HP12

Lims ID: std1 1660

Client ID:

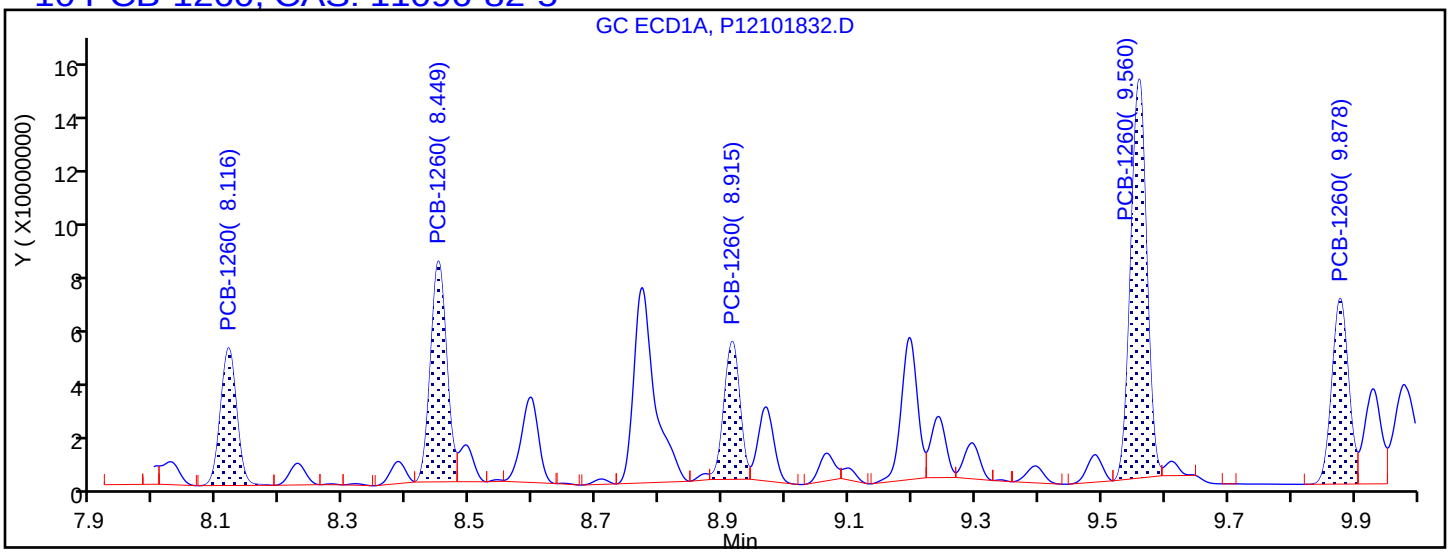
Operator ID: ALS Bottle#: 32 Worklist Smp#: 32

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

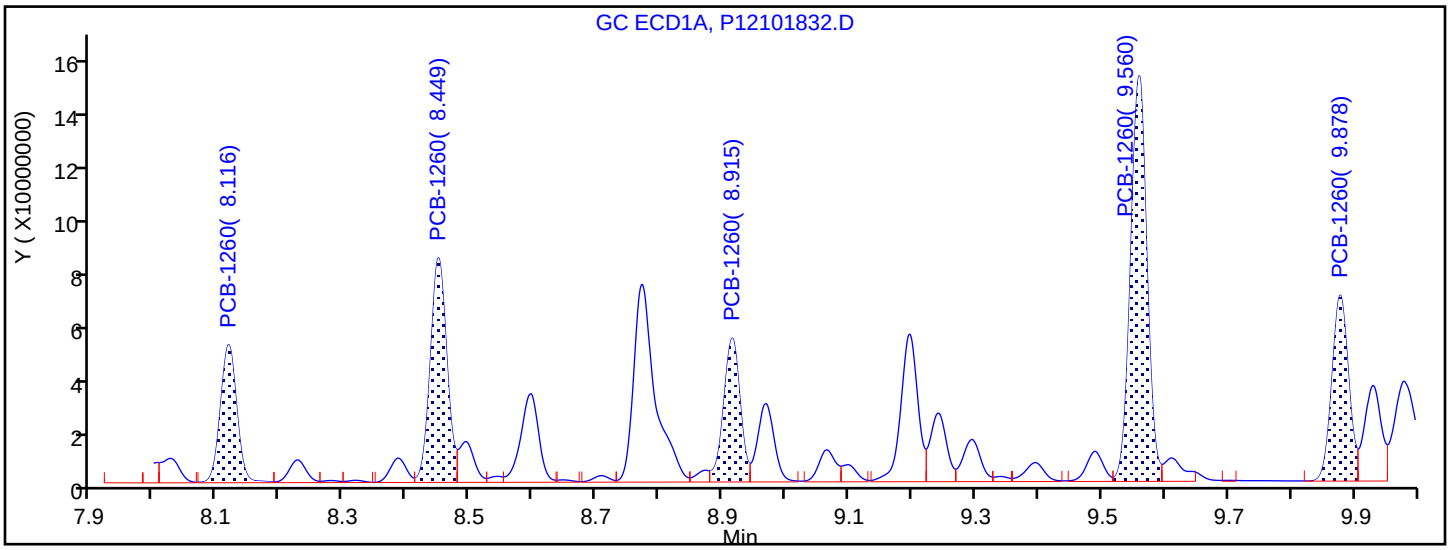
Column: Detector GC ECD1A

10 PCB-1260, CAS: 11096-82-5



Processing Integration Results

8.116	Response = 88470574
8.449	Response = 142253948
8.915	Response = 87478271
9.560	Response = 253953132
9.878	Response = 123258122



Manual Integration Results

8.116	Response = 90118636	M
8.449	Response = 148006908	M
8.915	Response = 95813812	M
9.560	Response = 264902671	M
9.878	Response = 123860843	M

Reviewer: hassl, 19-Oct-2018 07:05:43

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D
Lims ID: std15 1660
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 19-Oct-2018 01:11:38 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-033
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub6

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:31:43 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:06:12

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.933	2.930	0.003	134021842	0.0500	0.0500	
2	3.578	3.577	0.002	101258100	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.217	4.215	0.002	231982384	0.1000	0.0959	
2	4.979	4.979	0.000	175023733	0.1000	0.0932	
						RPD = 2.89	
6 PCB-1016							M
1	4.780	4.780	0.000	58013797	1.50	1.46	
1	5.283	5.283	0.000	103231737	1.50	1.41	
1	5.907	5.907	0.000	265652083	1.50	1.51	
1	6.081	6.080	0.001	109686257	1.50	1.49	
1	6.405	6.406	-0.001	42375655	1.50	1.38	
		Average of Peak Amounts =				1.45	
2	5.752	5.753	-0.001	44409402	1.50	1.33	
2	6.332	6.332	0.000	86846976	1.50	1.35	
2	6.942	6.942	0.000	201513339	1.50	1.46	M
2	7.117	7.117	0.000	82511275	1.50	1.42	M
2	7.440	7.440	0.000	43551365	1.50	1.31	M
		Average of Peak Amounts =				1.38	
						RPD = 5.28	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							M
1	8.117	8.117	0.000	141158095	1.50	1.46	
1	8.449	8.451	-0.002	234685013	1.50	1.48	
1	8.914	8.916	-0.002	149726401	1.50	1.45	
1	9.558	9.560	-0.002	424721830	1.50	1.55	
1	9.877	9.879	-0.002	196105245	1.50	1.46	
		Average of Peak Amounts =				1.48	
2	9.265	9.265	0.000	110495325	1.50	1.46	M
2	9.519	9.519	0.000	135828539	1.50	1.50	M
2	10.048	10.049	-0.001	113909606	1.50	1.49	
2	10.656	10.657	-0.001	313198274	1.50	1.58	
2	11.027	11.027	0.000	210934331	1.50	1.55	
		Average of Peak Amounts =				1.51	
						RPD = 2.41	
$ 12 DCB Decachlorobiphenyl							
1	11.062	11.062	0.000	260717099	0.1000	0.0874	
2	12.112	12.112	0.000	180199446	0.1000	0.0961	
						RPD = 9.51	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@1.5PPM_00005 Amount Added: 1.00 Units: mL

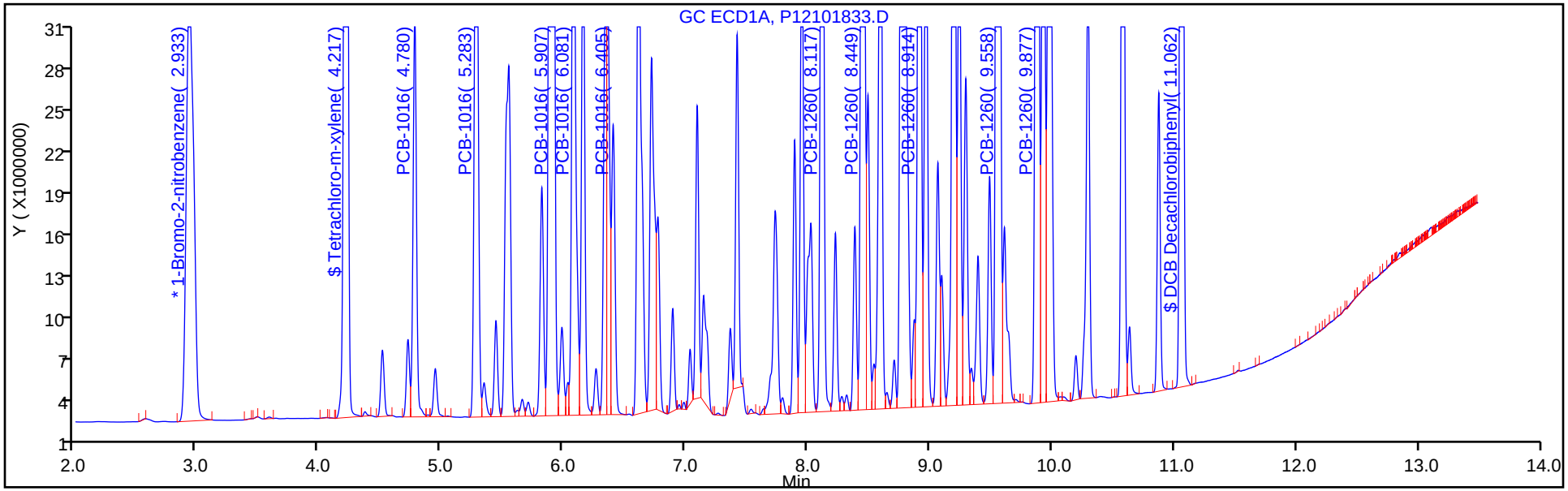
Report Date: 19-Oct-2018 13:31:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

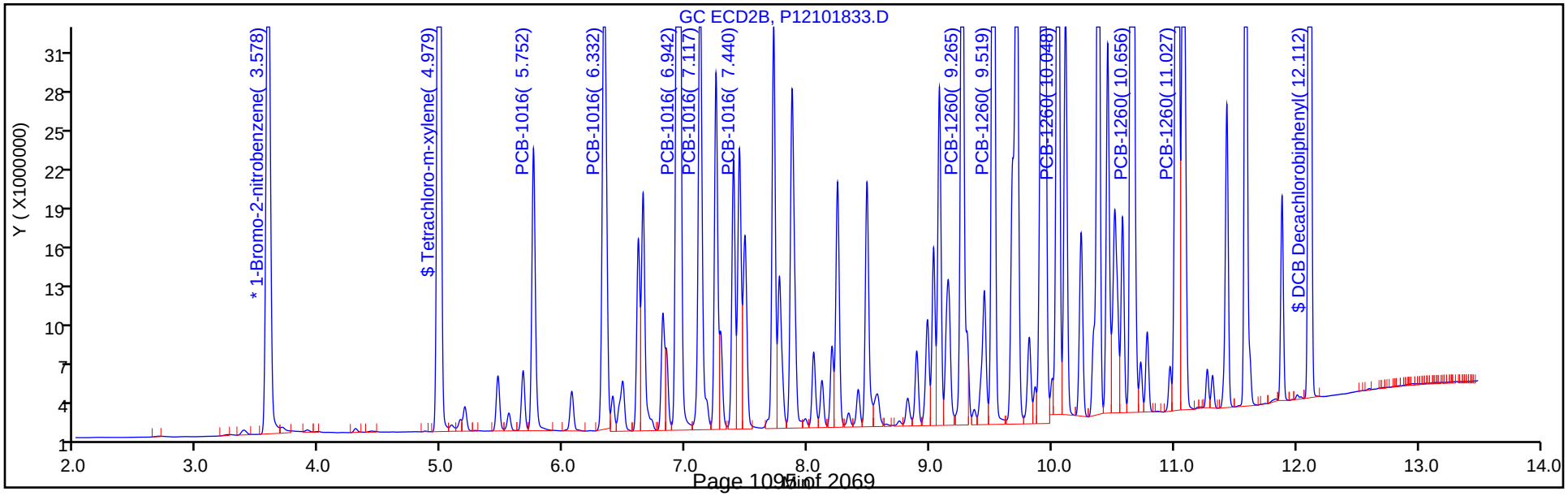
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Injection Date:	19-Oct-2018 01:11:38	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std15 1660			Worklist Smp#:	33
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 23:29 Calibration End Date: 10/19/2018 01:11 Calibration ID: 47550

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/28	P12101828.D
Level 2	STD01 240-350710/29	P12101829.D
Level 3	STD02 240-350710/30	P12101830.D
Level 4	STD05 240-350710/31	P12101831.D
Level 5	STD1 240-350710/32	P12101832.D
Level 6	STD15 240-350710/33	P12101833.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1016 Peak 1	0.0199 0.0146	0.0181	0.0170	0.0156	0.0140	Ave		0.0165				13.7		20.0			
PCB-1016 Peak 2	0.0383 0.0286	0.0348	0.0313	0.0298	0.0274	Ave		0.0317				13.0		20.0			
PCB-1016 Peak 3	0.0779 0.0663	0.0708	0.0674	0.0651	0.0619	Ave		0.0682				8.1		20.0			
PCB-1016 Peak 4	0.0313 0.0272	0.0307	0.0292	0.0276	0.0256	Ave		0.0286				7.7		20.0			
PCB-1016 Peak 5	0.0202 0.0143	0.0182	0.0169	0.0150	0.0137	Ave		0.0164				15.4		20.0			
PCB-1260 Peak 1	0.0378 0.0364	0.0412	0.0385	0.0355	0.0346	Ave		0.0373				6.4		20.0			
PCB-1260 Peak 2	0.0498 0.0447	0.0468	0.0441	0.0422	0.0408	Ave		0.0448				7.3		20.0			
PCB-1260 Peak 3	0.0412 0.0375	0.0384	0.0381	0.0367	0.0352	Ave		0.0379				5.3		20.0			
PCB-1260 Peak 4	0.1017 0.1031	0.0959	0.0960	0.0965	0.0943	Ave		0.0979				3.7		20.0			
PCB-1260 Peak 5	0.0711 0.0694	0.0671	0.0665	0.0659	0.0636	Ave		0.0673				4.0		20.0			
Tetrachloro-m-xylene	1.0688 0.8642	0.9797	0.9305	0.8788	0.8439	Ave		0.9276				9.2		20.0			
DCB Decachlorobiphenyl	1.0153 0.8898	0.9631	0.9303	0.8954	0.8599	Ave		0.9256				6.1		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 350710

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/18/2018 23:29 Calibration End Date: 10/19/2018 01:11 Calibration ID: 47550

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-350710/28	P12101828.D
Level 2	STD01 240-350710/29	P12101829.D
Level 3	STD02 240-350710/30	P12101830.D
Level 4	STD05 240-350710/31	P12101831.D
Level 5	STD1 240-350710/32	P12101832.D
Level 6	STD15 240-350710/33	P12101833.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 1	BNB	Ave	1955719 44409402	3641712	6805149	15761580	28892144	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 2	BNB	Ave	3751996 86846976	6987816	12511012	30143247	56650774	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 3	BNB	Ave	7637124 201513339	14232228	26930238	65826059	128081645	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 4	BNB	Ave	3067584 82511275	6177786	11682445	27914551	53017714	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 5	BNB	Ave	1983679 43551365	3648686	6757927	15159129	28301070	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 1	BNB	Ave	3711346 110495325	8280974	15378115	35931000	71492056	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 2	BNB	Ave	4887986 135828539	9413856	17632351	42741180	84363420	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 3	BNB	Ave	4044611 113909606	7710648	15240053	37173867	72724503	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 4	BNB	Ave	9975436 313198274	19265507	38372277	97656609	195157564	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 5	BNB	Ave	6973743 210934331	13479066	26603486	66675190	131487420	0.0500 1.50	0.100	0.200	0.500	1.00
Tetrachloro-m-xylene	BNB	Ave	5241196 175023733	9844544	18600521	44455957	87291893	0.00250 0.100	0.00500	0.0100	0.0250	0.0500
DCB Decachlorobiphenyl	BNB	Ave	4978651 180199446	9677720	18598178	45298788	88950136	0.00250 0.100	0.00500	0.0100	0.0250	0.0500

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101828.D
Lims ID: std005 1660
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-Oct-2018 23:29:12 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-028
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub6

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:32:54 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:04:35

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.935	2.930	0.005	128061595	0.0500	0.0500	
2	3.577	3.577	0.000	98072146	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.214	4.215	-0.001	6096681	0.002500	0.002638	
2	4.978	4.979	-0.001	5241196	0.002500	0.002881	
						RPD = 8.81	
6 PCB-1016							M
1	4.778	4.780	-0.002	1976259	0.0500	0.0519	
1	5.283	5.283	0.000	3744129	0.0500	0.0534	
1	5.908	5.907	0.001	8390313	0.0500	0.0501	
1	6.081	6.080	0.001	3252920	0.0500	0.0463	
1	6.406	6.406	0.000	1718819	0.0500	0.0587	M
		Average of Peak Amounts =				0.0520	
2	5.752	5.753	-0.001	1955719	0.0500	0.0603	
2	6.332	6.332	0.000	3751996	0.0500	0.0604	
2	6.943	6.942	0.001	7637124	0.0500	0.0571	
2	7.119	7.117	0.002	3067584	0.0500	0.0547	
2	7.441	7.440	0.001	1983679	0.0500	0.0617	
		Average of Peak Amounts =				0.0588	
						RPD = 12.24	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.120	8.117	0.003	4994339	0.0500	0.0540	
1	8.452	8.451	0.001	8270702	0.0500	0.0546	
1	8.917	8.916	0.001	5302446	0.0500	0.0536	
1	9.562	9.560	0.002	13171369	0.0500	0.0503	
1	9.881	9.879	0.002	7063545	0.0500	0.0550	
		Average of Peak Amounts =				0.0535	
2	9.265	9.265	0.000	3711346	0.0500	0.0507	
2	9.520	9.519	0.001	4887986	0.0500	0.0557	
2	10.050	10.049	0.001	4044611	0.0500	0.0545	
2	10.657	10.657	0.000	9975436	0.0500	0.0519	
2	11.027	11.027	0.000	6973743	0.0500	0.0529	
		Average of Peak Amounts =				0.0531	
						RPD = 0.69	
$ 12 DCB Decachlorobiphenyl							
1	11.064	11.062	0.002	8376006	0.002500	0.002939	
2	12.112	12.112	0.000	4978651	0.002500	0.002742	
						RPD = 6.92	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@.05PPM_00024 Amount Added: 1.00 Units: mL

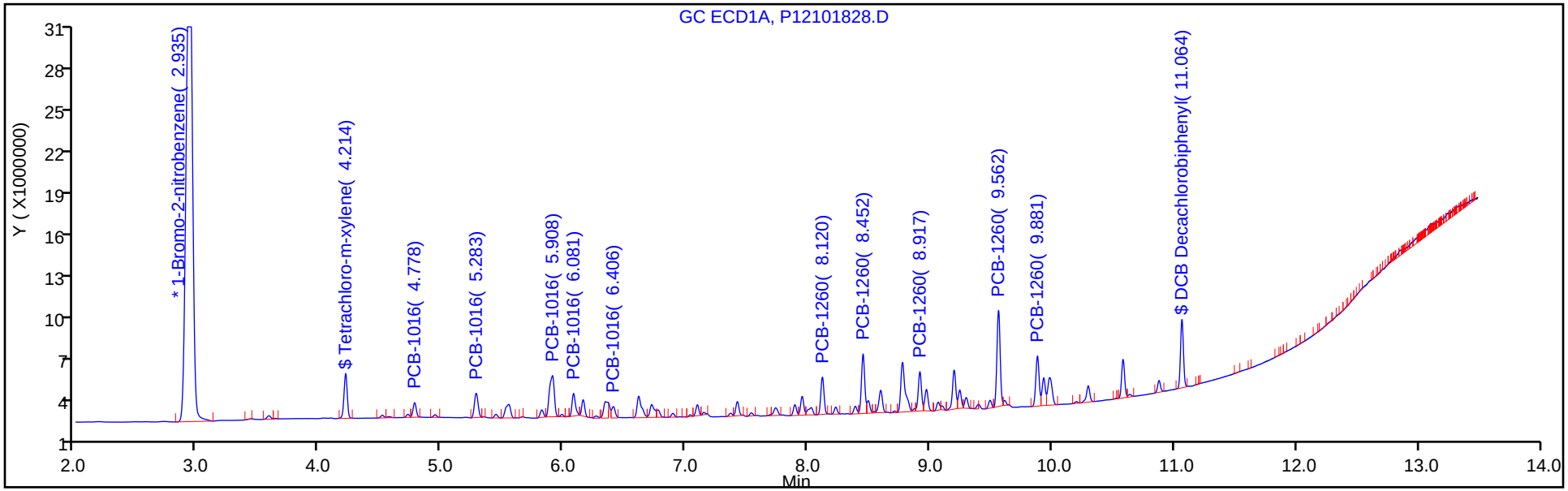
Report Date: 19-Oct-2018 13:32:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

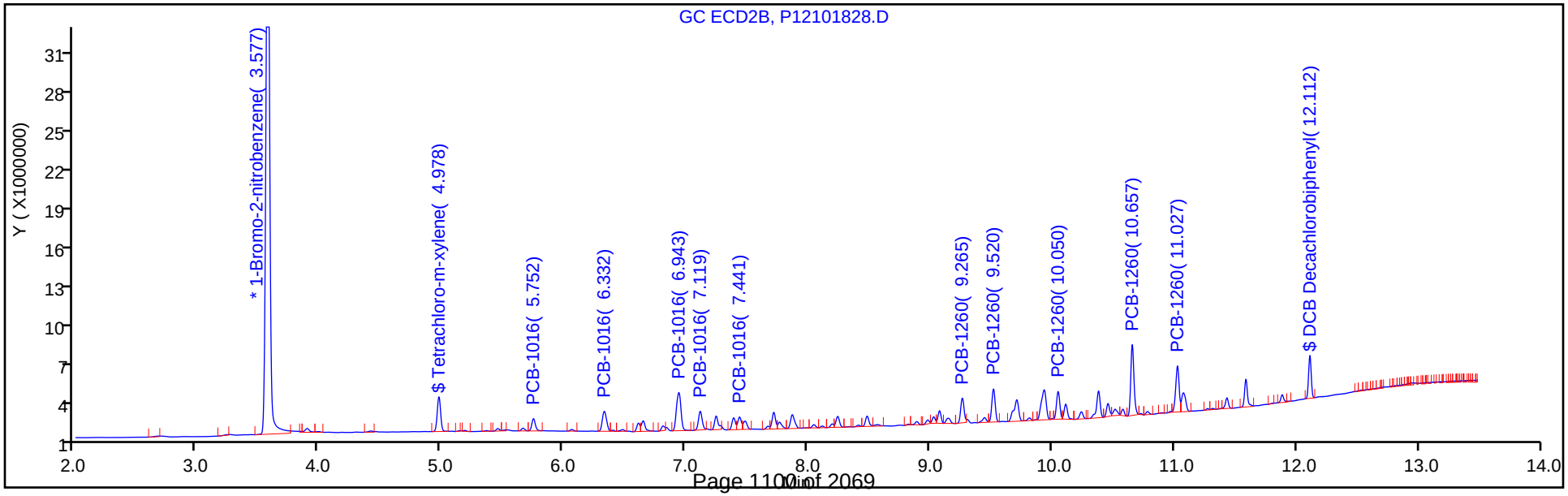
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101828.D

Injection Date:	18-Oct-2018 23:29:12	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std005 1660			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101829.D
Lims ID: std01 1660
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-Oct-2018 23:49:39 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-029
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub6

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:32:42 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:05:06

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.928	2.930	-0.002	130217104	0.0500	0.0500	
2	3.575	3.577	-0.001	100484017	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.214	4.215	-0.001	11871120	0.005000	0.005051	
2	4.978	4.979	-0.001	9844544	0.005000	0.005281	
						RPD = 4.45	
6 PCB-1016							
1	4.780	4.780	0.000	3943981	0.1000	0.1019	
1	5.283	5.283	0.000	7594017	0.1000	0.1064	
1	5.906	5.907	-0.001	17326704	0.1000	0.1016	
1	6.080	6.080	0.000	7680049	0.1000	0.1074	
1	6.405	6.406	-0.001	3159214	0.1000	0.1060	
		Average of Peak Amounts =				0.1047	
2	5.753	5.753	0.000	3641712	0.1000	0.1096	
2	6.333	6.332	0.001	6987816	0.1000	0.1098	
2	6.942	6.942	0.000	14232228	0.1000	0.1038	
2	7.118	7.117	0.001	6177786	0.1000	0.1075	
2	7.440	7.440	0.000	3648686	0.1000	0.1108	
		Average of Peak Amounts =				0.1083	
						RPD = 3.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.118	8.117	0.001	9528635	0.1000	0.1014	
1	8.450	8.451	-0.001	15449523	0.1000	0.1003	
1	8.915	8.916	-0.001	10402771	0.1000	0.1035	
1	9.560	9.560	0.000	26430306	0.1000	0.0993	
1	9.880	9.879	0.001	13343876	0.1000	0.1021	
		Average of Peak Amounts =				0.1013	
2	9.265	9.265	0.000	8280974	0.1000	0.1104	
2	9.520	9.519	0.001	9413856	0.1000	0.1047	
2	10.050	10.049	0.001	7710648	0.1000	0.1014	
2	10.657	10.657	0.000	19265507	0.1000	0.0979	
2	11.028	11.027	0.001	13479066	0.1000	0.0997	
		Average of Peak Amounts =				0.1028	
						RPD = 1.48	
$ 12 DCB Decachlorobiphenyl							
1	11.064	11.062	0.002	16117399	0.005000	0.005561	
2	12.112	12.112	0.000	9677720	0.005000	0.005202	
						RPD = 6.67	

Reagents:

SG1660STD@0.1_00024 Amount Added: 1.00 Units: mL

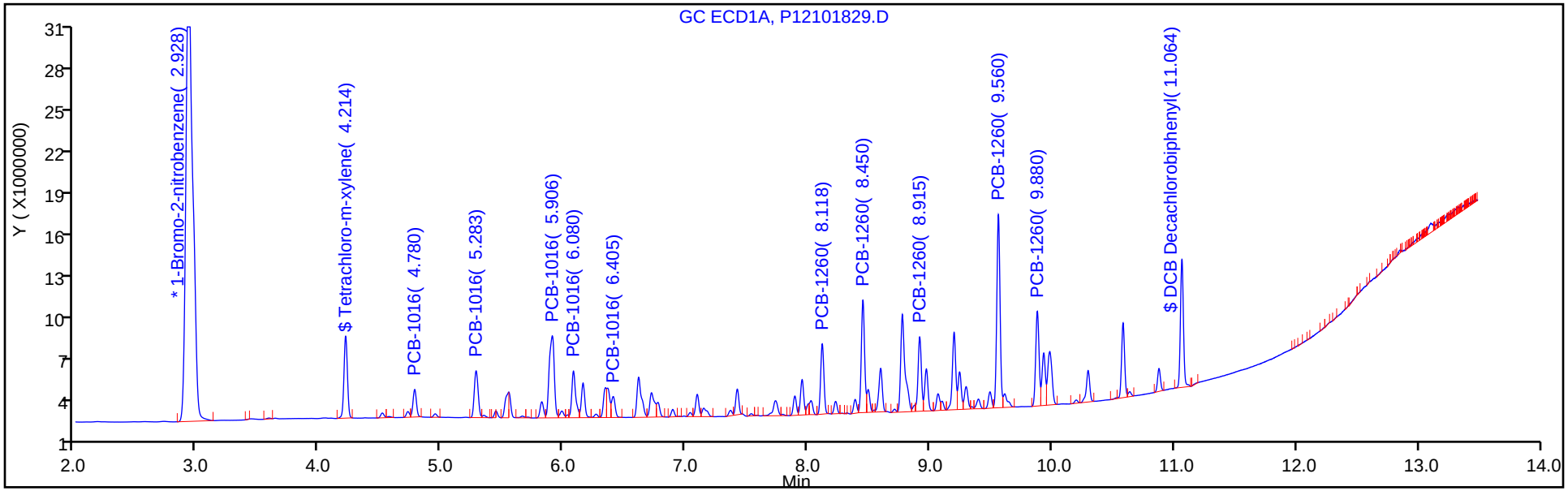
Report Date: 19-Oct-2018 13:32:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

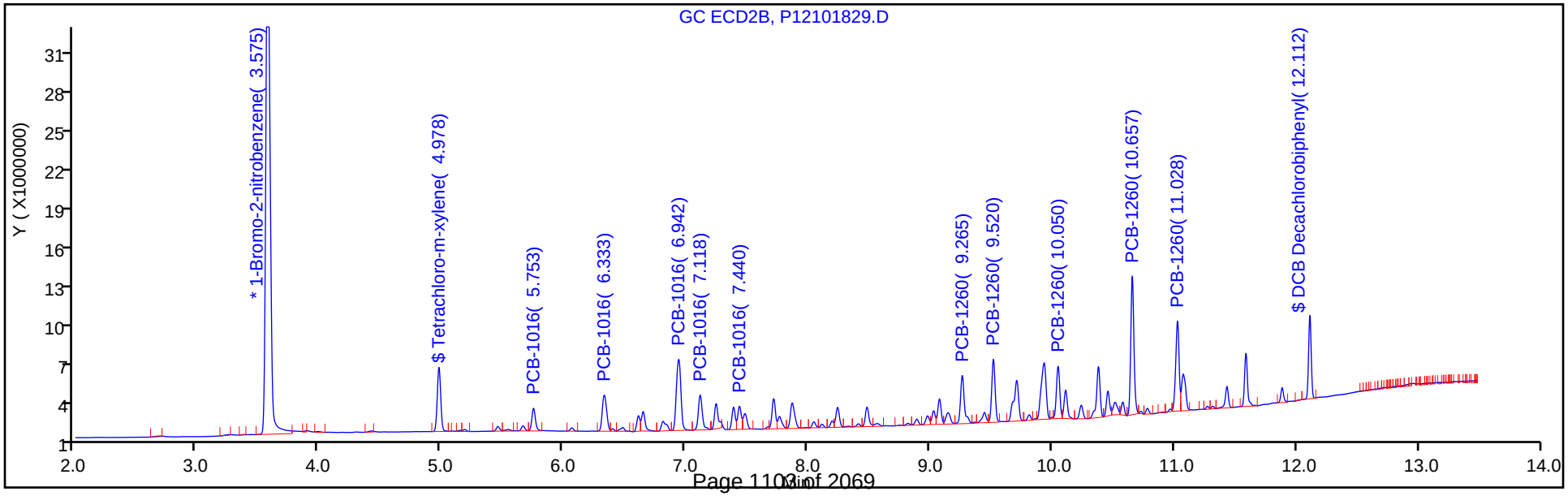
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101829.D

Injection Date:	18-Oct-2018 23:49:39	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std01 1660			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101830.D
Lims ID: std02 1660
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 19-Oct-2018 00:10:06 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-030
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub6

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:32:27 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 13:10:42

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.932	2.930	0.002	129312698	0.0500	0.0500	
2	3.576	3.577	0.000	99953258	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.214	4.215	-0.001	23564174	0.0100	0.0101	
2	4.978	4.979	-0.001	18600521	0.0100	0.0100	
						RPD = 0.65	
6 PCB-1016							
1	4.780	4.780	0.000	8107164	0.2000	0.2109	
1	5.283	5.283	0.000	14523765	0.2000	0.2050	
1	5.907	5.907	0.000	33825903	0.2000	0.1998	
1	6.080	6.080	0.000	14690421	0.2000	0.2069	
1	6.405	6.406	-0.001	5922931	0.2000	0.2002	
		Average of Peak Amounts =				0.2045	
2	5.752	5.753	-0.001	6805149	0.2000	0.2058	
2	6.332	6.332	0.000	12511012	0.2000	0.1975	
2	6.943	6.942	0.001	26930238	0.2000	0.1975	
2	7.118	7.117	0.001	11682445	0.2000	0.2043	
2	7.440	7.440	0.000	6757927	0.2000	0.2064	
		Average of Peak Amounts =				0.2023	
						RPD = 1.10	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.119	8.117	0.002	18672267	0.2000	0.2001	
1	8.451	8.451	0.000	30241067	0.2000	0.1976	
1	8.915	8.916	-0.001	20118058	0.2000	0.2015	
1	9.560	9.560	0.000	52326036	0.2000	0.1979	
1	9.879	9.879	0.000	25827051	0.2000	0.1990	
		Average of Peak Amounts =				0.1992	
2	9.265	9.265	0.000	15378115	0.2000	0.2061	
2	9.520	9.519	0.001	17632351	0.2000	0.1971	
2	10.050	10.049	0.001	15240053	0.2000	0.2014	
2	10.657	10.657	0.000	38372277	0.2000	0.1960	
2	11.029	11.027	0.002	26603486	0.2000	0.1978	
		Average of Peak Amounts =				0.1997	
						RPD = 0.24	
$ 12 DCB Decachlorobiphenyl							
1	11.062	11.062	0.000	28936726	0.0100	0.0101	
2	12.112	12.112	0.000	18598178	0.0100	0.0101	
						RPD = 0.03	

Reagents:

SG1660@0.2ppm_00027 Amount Added: 1.00 Units: mL

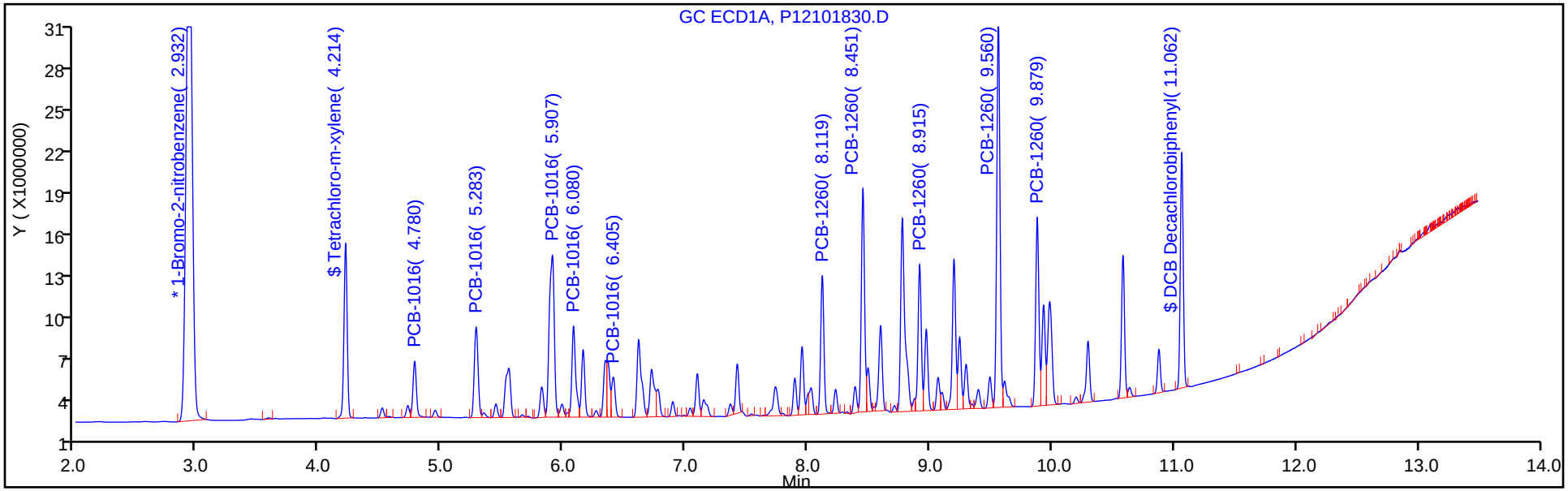
Report Date: 19-Oct-2018 13:32:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

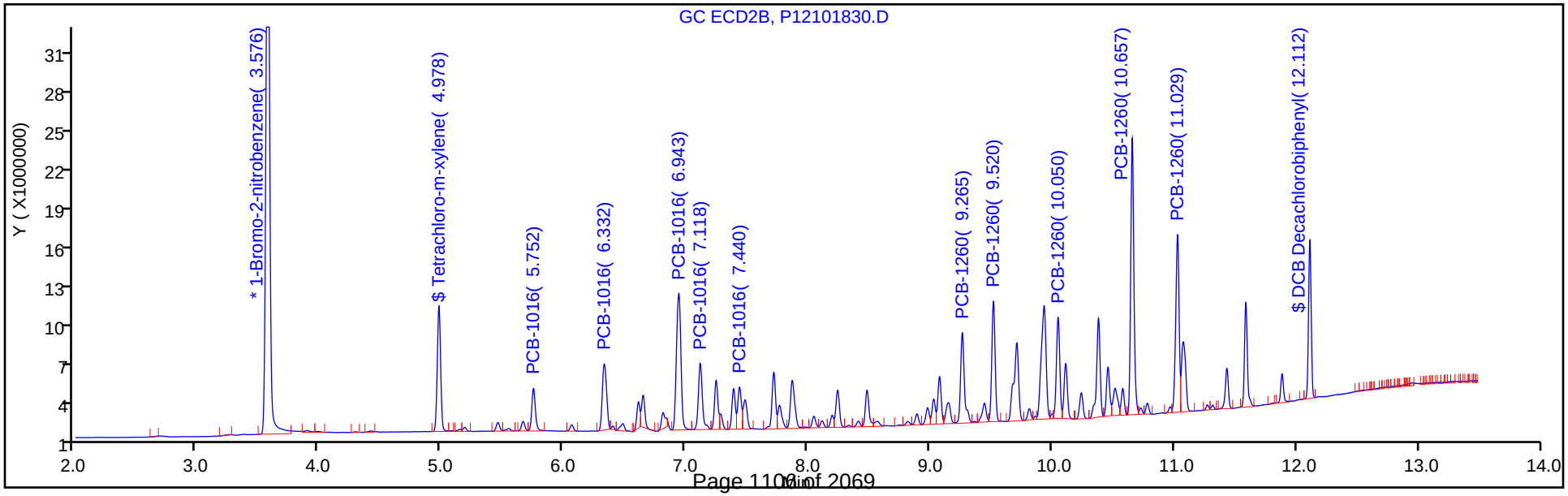
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101830.D

Injection Date:	19-Oct-2018 00:10:06	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std02 1660			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101831.D
Lims ID: std05 1660
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 19-Oct-2018 00:30:42 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-031
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub6

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:32:11 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:05:25

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.930	2.930	0.000	130862926	0.0500	0.0500	
2	3.577	3.577	0.000	101179890	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.215	4.215	0.000	58662576	0.0250	0.0248	
2	4.979	4.979	0.000	44455957	0.0250	0.0237	
						RPD = 4.75	
6 PCB-1016							
1	4.780	4.780	0.000	19186786	0.5000	0.4932	
1	5.283	5.283	0.000	35227337	0.5000	0.4913	
1	5.907	5.907	0.000	85573522	0.5000	0.4995	
1	6.080	6.080	0.000	36213049	0.5000	0.5039	
1	6.406	6.406	0.000	14355660	0.5000	0.4794	
		Average of Peak Amounts =				0.4935	
2	5.753	5.753	0.000	15761580	0.5000	0.4709	
2	6.332	6.332	0.000	30143247	0.5000	0.4702	
2	6.942	6.942	0.000	65826059	0.5000	0.4768	
2	7.117	7.117	0.000	27914551	0.5000	0.4823	
2	7.440	7.440	0.000	15159129	0.5000	0.4573	
		Average of Peak Amounts =				0.4715	
						RPD = 4.55	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							M
1	8.117	8.117	0.000	46502426	0.5000	0.4923	M
1	8.451	8.451	0.000	76002197	0.5000	0.4908	M
1	8.916	8.916	0.000	49412342	0.5000	0.4891	M
1	9.560	9.560	0.000	133271412	0.5000	0.4980	M
1	9.879	9.879	0.000	64136455	0.5000	0.4883	M
		Average of Peak Amounts =				0.4917	
2	9.265	9.265	0.000	35931000	0.5000	0.4757	M
2	9.519	9.519	0.000	42741180	0.5000	0.4720	
2	10.049	10.049	0.000	37173867	0.5000	0.4853	
2	10.657	10.657	0.000	97656609	0.5000	0.4929	
2	11.027	11.027	0.000	66675190	0.5000	0.4898	
		Average of Peak Amounts =				0.4831	
						RPD = 1.76	
$ 12 DCB Decachlorobiphenyl							
1	11.062	11.062	0.000	68450172	0.0250	0.0235	
2	12.112	12.112	0.000	45298788	0.0250	0.0242	
						RPD = 2.86	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@0.5PPM_00083 Amount Added: 1.00 Units: mL

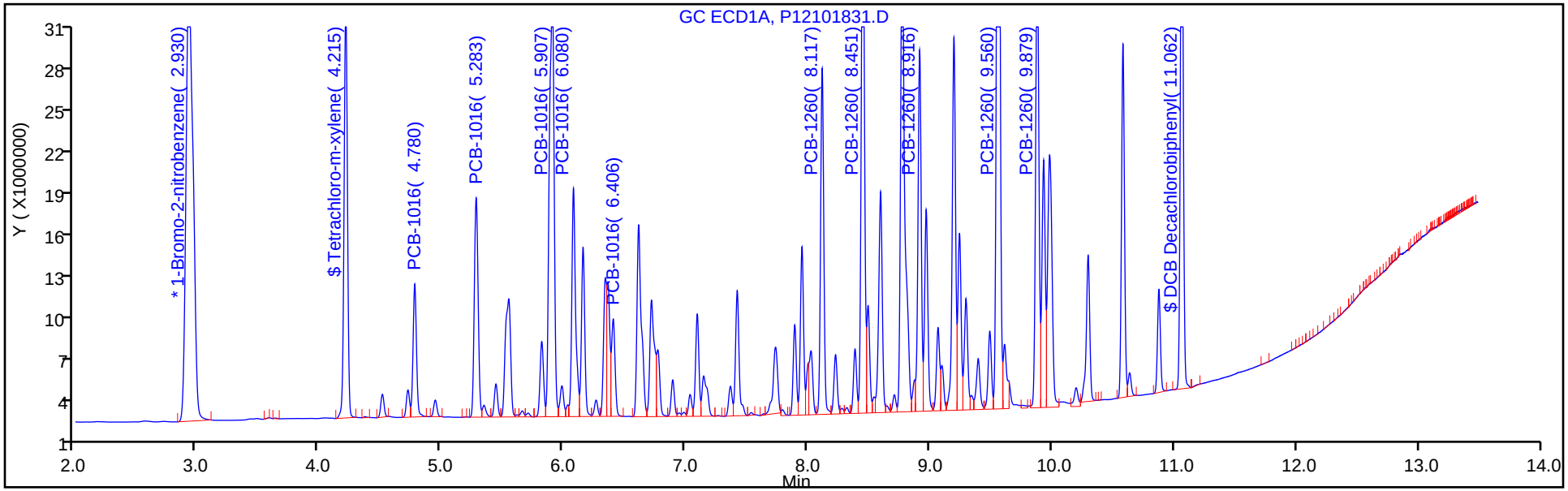
Report Date: 19-Oct-2018 13:32:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

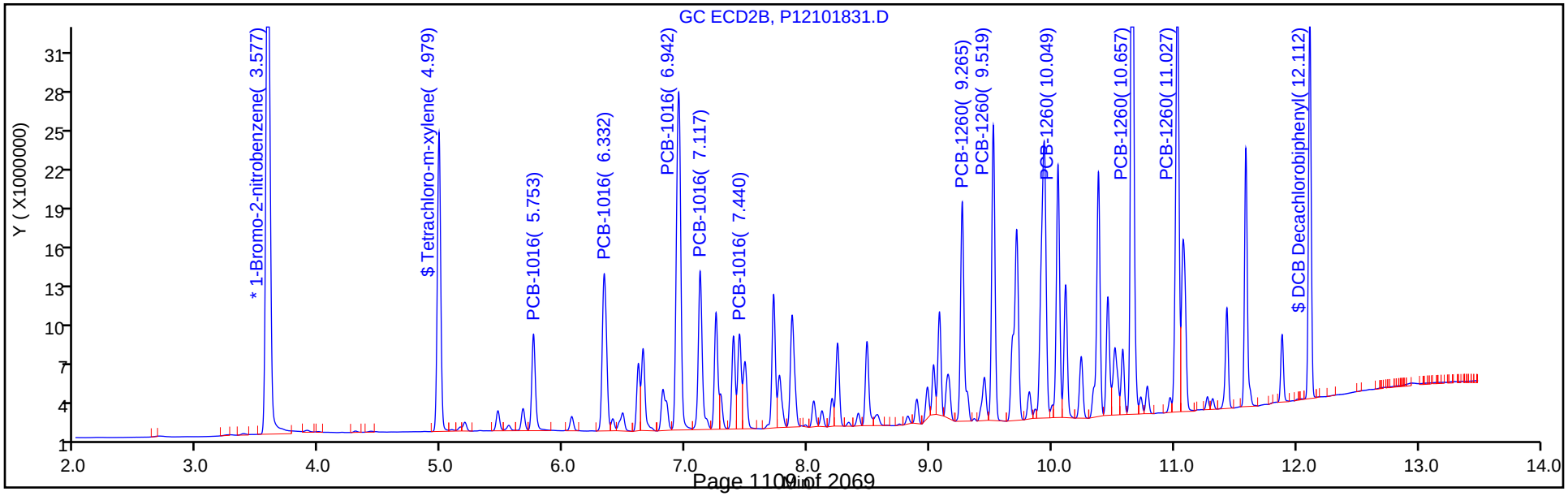
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101831.D

Injection Date:	19-Oct-2018 00:30:42	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std05 1660			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 19-Oct-2018 13:32:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101831.D

Injection Date: 19-Oct-2018 00:30:42 Instrument ID: A2HP12

Lims ID: std05 1660

Client ID:

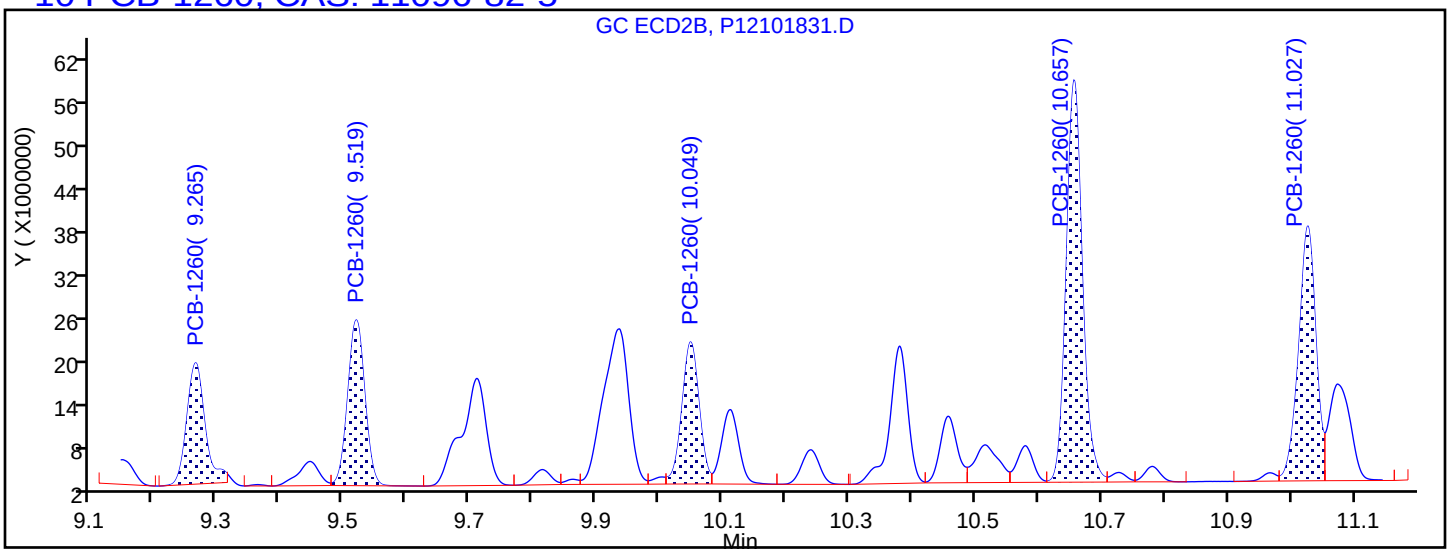
Operator ID: ALS Bottle#: 31 Worklist Smp#: 31

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

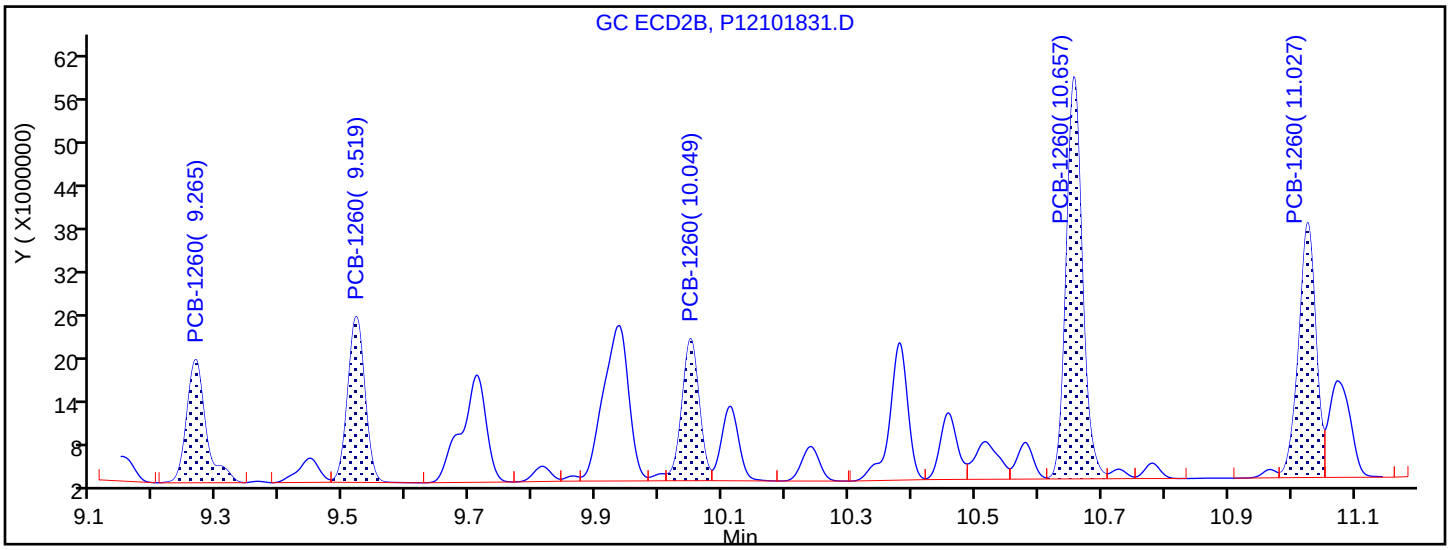
Column: Detector GC ecd2b

10 PCB-1260, CAS: 11096-82-5



Processing Integration Results

9.265	Response = 33416825
9.519	Response = 42741180
10.049	Response = 37173867
10.657	Response = 97656609
11.027	Response = 66675190



Manual Integration Results

9.265	Response = 35931000	M
9.519	Response = 42741180	
10.049	Response = 37173867	
10.657	Response = 97656609	
11.027	Response = 66675190	

Reviewer: grantk, 19-Oct-2018 13:13:59

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101832.D
Lims ID: std1 1660
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 19-Oct-2018 00:51:10 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-032
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub6

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:32:00 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:05:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.930	2.930	0.000	131748163	0.0500	0.0500	
2	3.576	3.577	0.000	103444534	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.215	4.215	0.000	115665685	0.0500	0.0486	
2	4.979	4.979	0.000	87291893	0.0500	0.0455	
						RPD = 6.71	
6 PCB-1016							
1	4.780	4.780	0.000	36487493	1.00	0.9316	
1	5.283	5.283	0.000	66717413	1.00	0.9241	
1	5.907	5.907	0.000	168123860	1.00	0.9748	
1	6.081	6.080	0.001	69814083	1.00	0.9650	
1	6.406	6.406	0.000	26704813	1.00	0.8858	
		Average of Peak Amounts =				0.9363	
2	5.752	5.753	-0.001	28892144	1.00	0.8443	
2	6.332	6.332	0.000	56650774	1.00	0.8643	
2	6.942	6.942	0.000	128081645	1.00	0.9074	
2	7.117	7.117	0.000	53017714	1.00	0.8959	
2	7.440	7.440	0.000	28301070	1.00	0.8351	
		Average of Peak Amounts =				0.8694	
						RPD = 7.41	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							M
1	8.116	8.117	-0.001	90118636	1.00	0.9477	M
1	8.449	8.451	-0.002	148006908	1.00	0.9494	M
1	8.915	8.916	-0.001	95813812	1.00	0.9420	M
1	9.560	9.560	0.000	264902671	1.00	0.9832	M
1	9.878	9.879	-0.001	123860843	1.00	0.9366	M
		Average of Peak Amounts =				0.9518	
2	9.264	9.265	-0.001	71492056	1.00	0.9258	
2	9.519	9.519	0.000	84363420	1.00	0.9112	
2	10.049	10.049	0.000	72724503	1.00	0.9286	
2	10.656	10.657	-0.001	195157564	1.00	0.9634	
2	11.027	11.027	0.000	131487420	1.00	0.9448	
		Average of Peak Amounts =				0.9347	
						RPD = 1.81	
$ 12 DCB Decachlorobiphenyl							
1	11.062	11.062	0.000	130882950	0.0500	0.0446	
2	12.111	12.112	-0.001	88950136	0.0500	0.0464	
						RPD = 3.98	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@1.0PPM_00029 Amount Added: 1.00 Units: mL

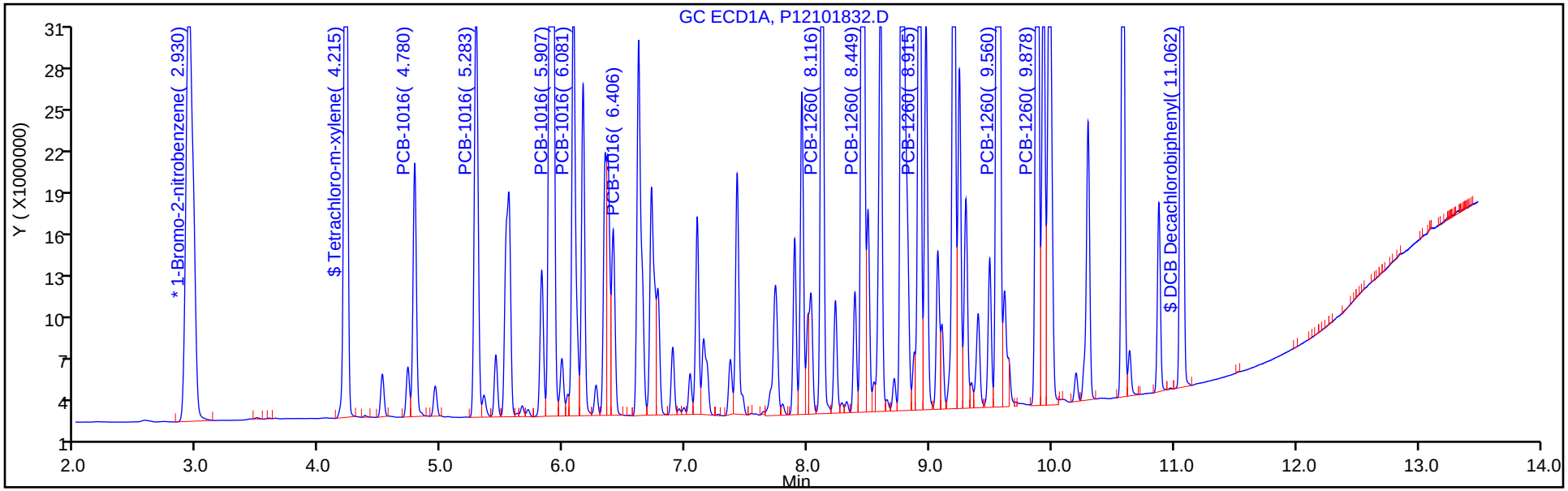
Report Date: 19-Oct-2018 13:32:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

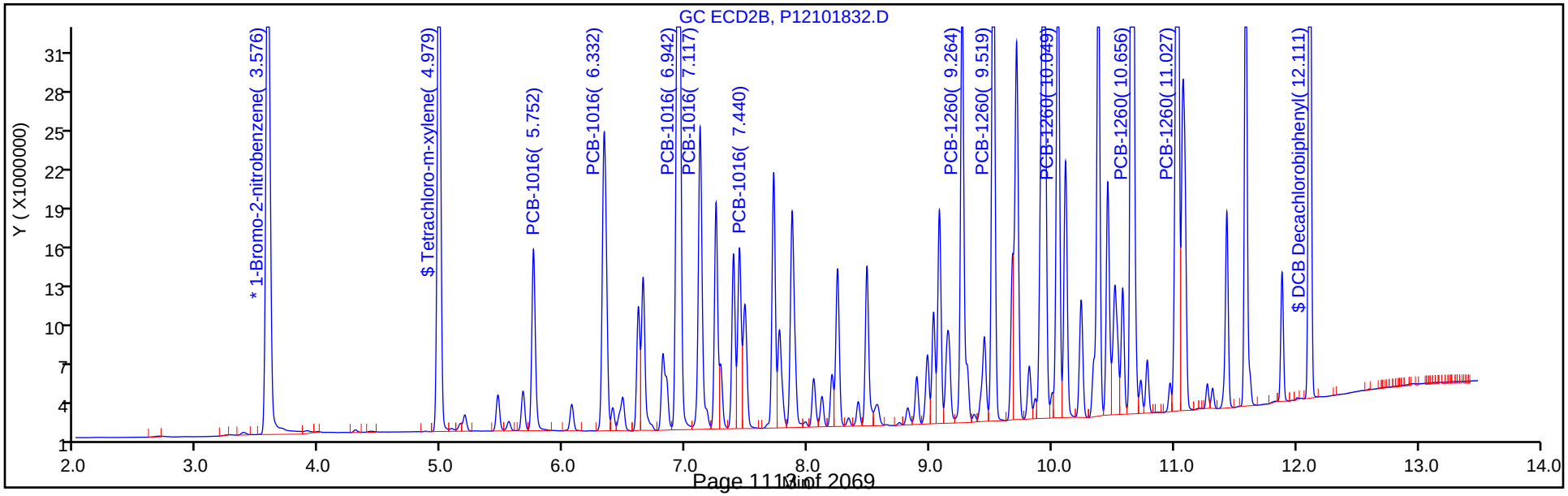
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101832.D

Injection Date:	19-Oct-2018 00:51:10	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std1 1660			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D
Lims ID: std15 1660
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 19-Oct-2018 01:11:38 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-033
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub6

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:31:43 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:06:12

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.933	2.930	0.003	134021842	0.0500	0.0500	
2	3.578	3.577	0.002	101258100	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.217	4.215	0.002	231982384	0.1000	0.0959	
2	4.979	4.979	0.000	175023733	0.1000	0.0932	
						RPD = 2.89	
6 PCB-1016							M
1	4.780	4.780	0.000	58013797	1.50	1.46	
1	5.283	5.283	0.000	103231737	1.50	1.41	
1	5.907	5.907	0.000	265652083	1.50	1.51	
1	6.081	6.080	0.001	109686257	1.50	1.49	
1	6.405	6.406	-0.001	42375655	1.50	1.38	
		Average of Peak Amounts =				1.45	
2	5.752	5.753	-0.001	44409402	1.50	1.33	
2	6.332	6.332	0.000	86846976	1.50	1.35	
2	6.942	6.942	0.000	201513339	1.50	1.46	M
2	7.117	7.117	0.000	82511275	1.50	1.42	M
2	7.440	7.440	0.000	43551365	1.50	1.31	M
		Average of Peak Amounts =				1.38	
						RPD = 5.28	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							M
1	8.117	8.117	0.000	141158095	1.50	1.46	
1	8.449	8.451	-0.002	234685013	1.50	1.48	
1	8.914	8.916	-0.002	149726401	1.50	1.45	
1	9.558	9.560	-0.002	424721830	1.50	1.55	
1	9.877	9.879	-0.002	196105245	1.50	1.46	
		Average of Peak Amounts =				1.48	
2	9.265	9.265	0.000	110495325	1.50	1.46	M
2	9.519	9.519	0.000	135828539	1.50	1.50	M
2	10.048	10.049	-0.001	113909606	1.50	1.49	
2	10.656	10.657	-0.001	313198274	1.50	1.58	
2	11.027	11.027	0.000	210934331	1.50	1.55	
		Average of Peak Amounts =				1.51	
						RPD = 2.41	
$ 12 DCB Decachlorobiphenyl							
1	11.062	11.062	0.000	260717099	0.1000	0.0874	
2	12.112	12.112	0.000	180199446	0.1000	0.0961	
						RPD = 9.51	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@1.5PPM_00005 Amount Added: 1.00 Units: mL

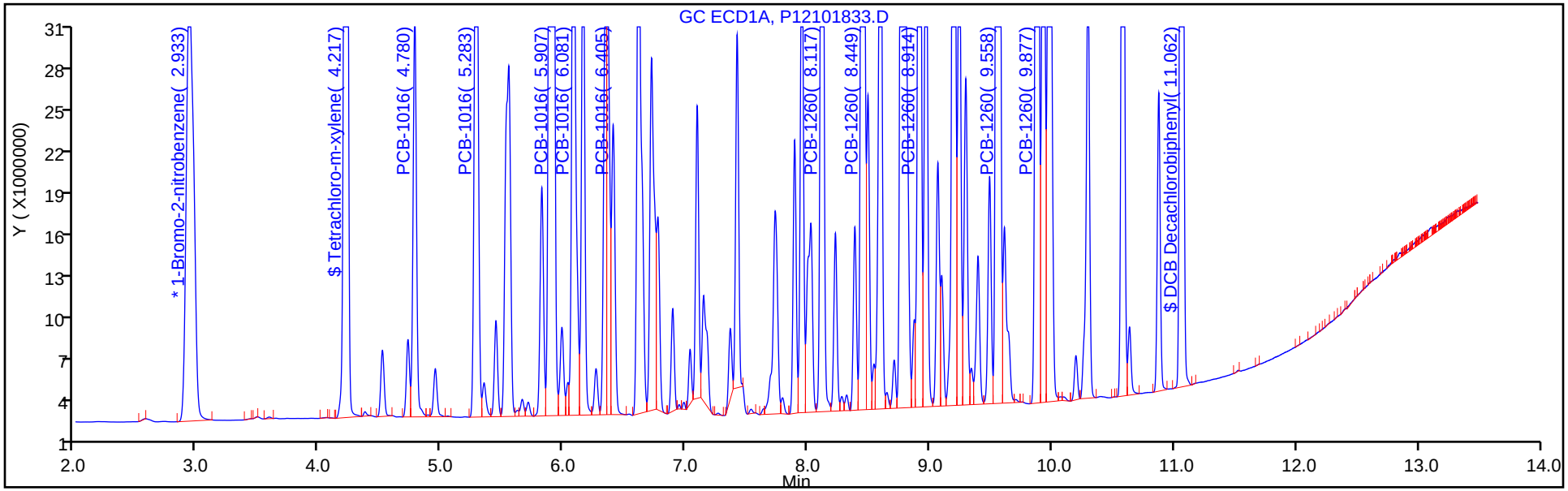
Report Date: 19-Oct-2018 13:31:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

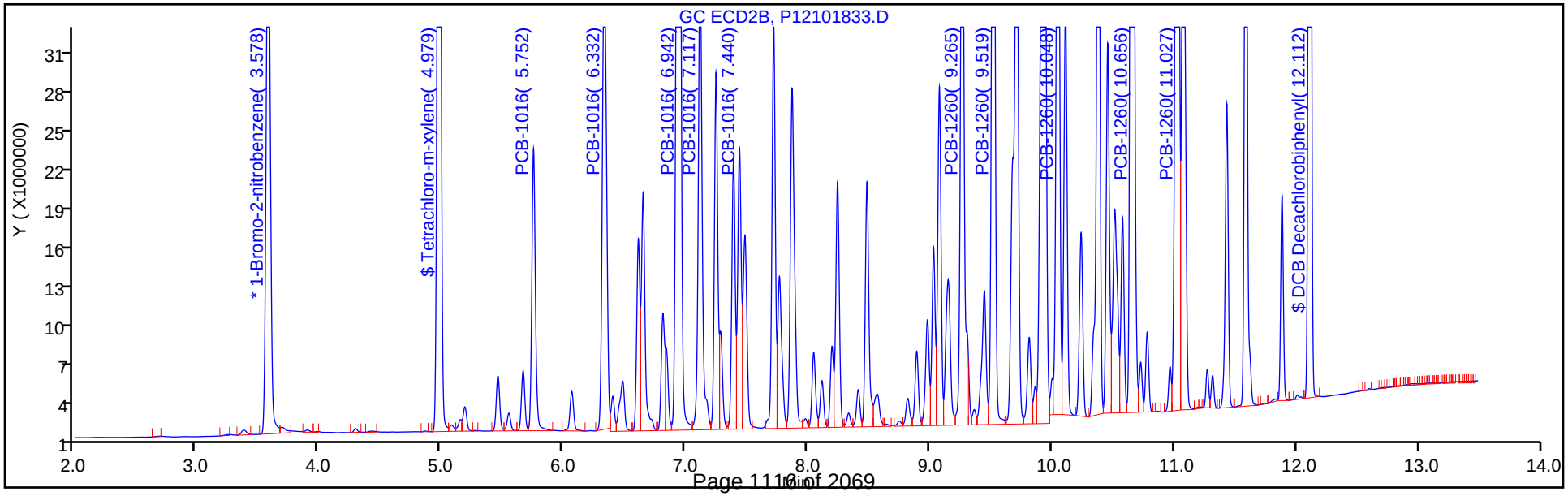
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Injection Date:	19-Oct-2018 01:11:38	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	std15 1660			Worklist Smp#:	33
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 19-Oct-2018 13:31:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Injection Date: 19-Oct-2018 01:11:38 Instrument ID: A2HP12

Lims ID: std15 1660

Client ID:

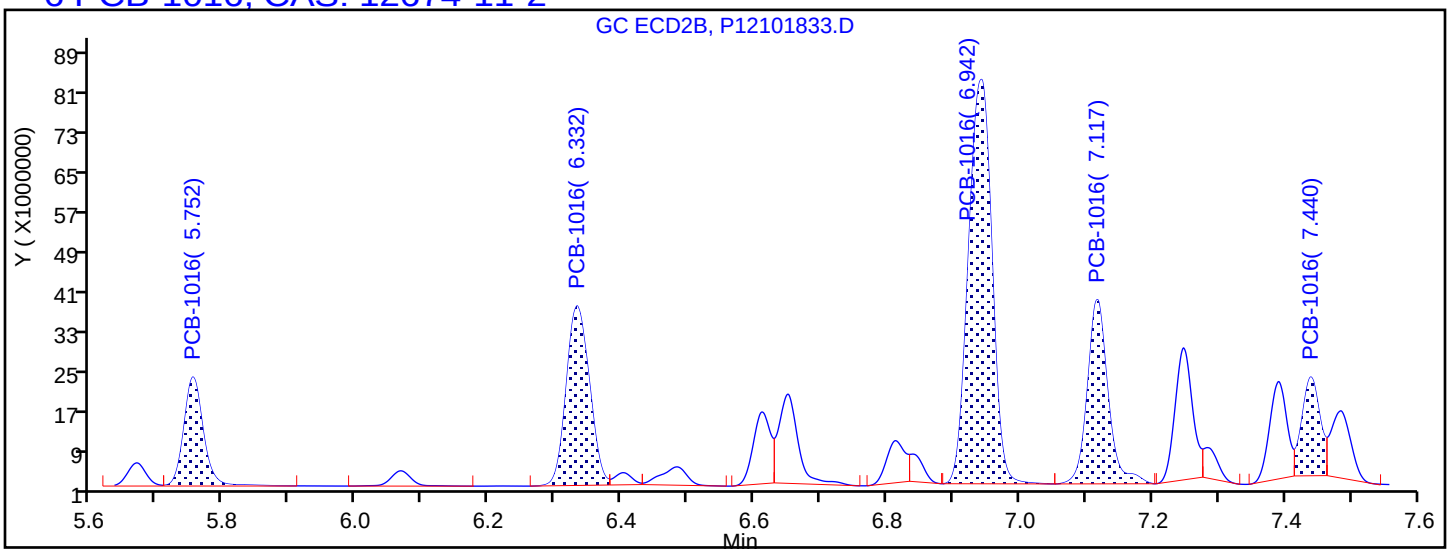
Operator ID: ALS Bottle#: 33 Worklist Smp#: 33

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

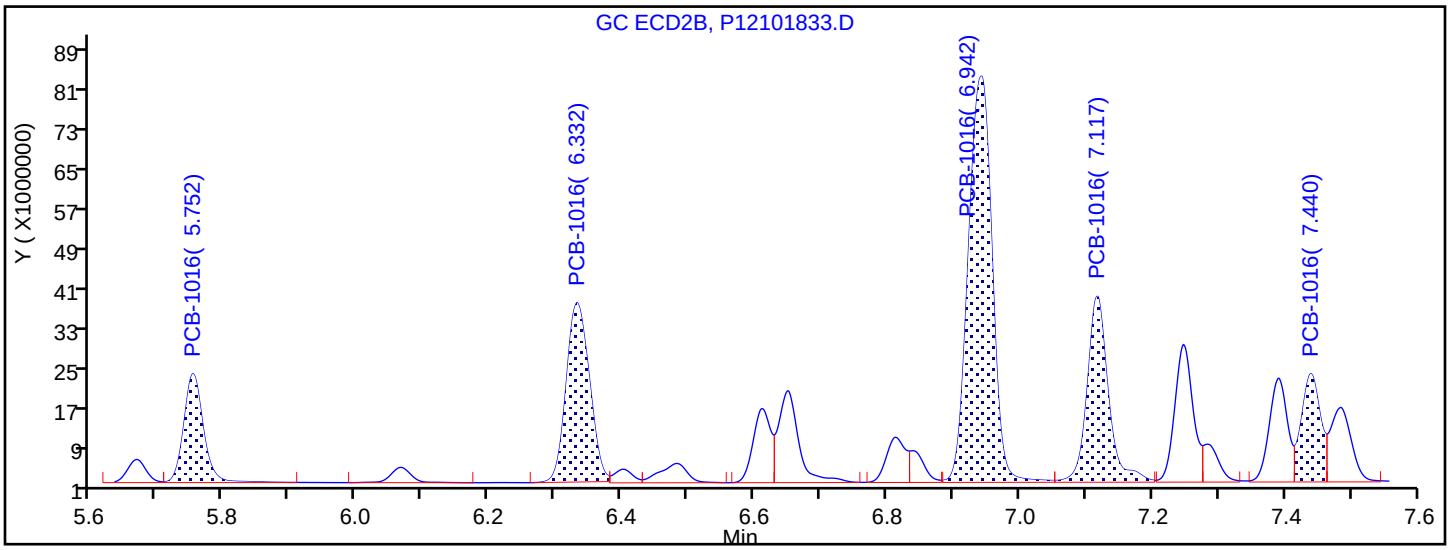
Column: Detector GC ecd2b

6 PCB-1016, CAS: 12674-11-2



Processing Integration Results

5.752	Response = 44409402
6.332	Response = 86846976
6.942	Response = 197534971
7.117	Response = 79254230
7.440	Response = 37896089



Manual Integration Results

5.752	Response = 44409402	
6.332	Response = 86846976	
6.942	Response = 201513339	M
7.117	Response = 82511275	M
7.440	Response = 43551365	M

Reviewer: hassl, 19-Oct-2018 07:06:03

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 19-Oct-2018 13:31:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Injection Date: 19-Oct-2018 01:11:38 Instrument ID: A2HP12

Lims ID: std15 1660

Client ID:

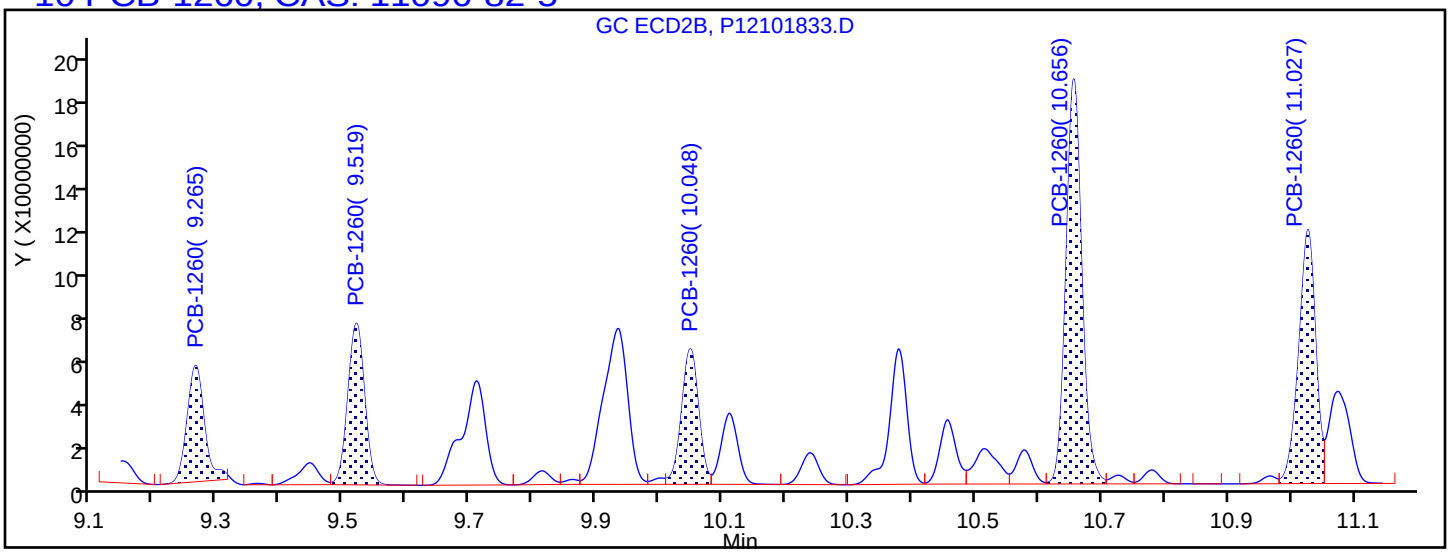
Operator ID: ALS Bottle#: 33 Worklist Smp#: 33

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

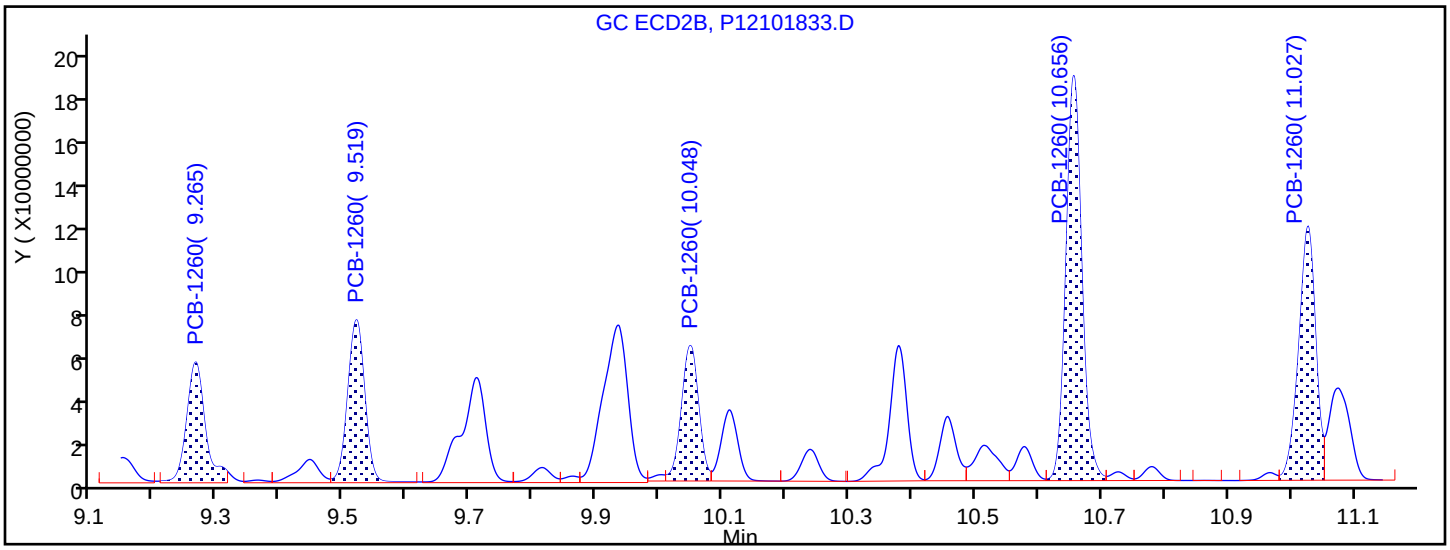
Column: Detector GC ecd2b

10 PCB-1260, CAS: 11096-82-5



Processing Integration Results

9.265	Response = 98584170
9.519	Response = 131948927
10.048	Response = 113909606
10.656	Response = 313198274
11.027	Response = 210934331



Manual Integration Results

9.265	Response = 110495325	M
9.519	Response = 135828539	M
10.048	Response = 113909606	
10.656	Response = 313198274	
11.027	Response = 210934331	

Reviewer: hassl, 19-Oct-2018 07:06:03

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 13:25 Calibration End Date: 11/06/2018 15:14 Calibration ID: 47837

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/4	P4110604.D
Level 2	STD01 240-353863/5	P4110605.D
Level 3	STD02 240-353863/6	P4110606.D
Level 4	STD05 240-353863/7	P4110607.D
Level 5	STD1 240-353863/8	P4110608.D
Level 6	STD15 240-353863/9	P4110609.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1232 Peak 1	0.0279 0.0231	0.0258	0.0260	0.0232	0.0229	Ave		0.0248				8.3		20.0			
PCB-1232 Peak 2	0.0201 0.0169	0.0194	0.0184	0.0173	0.0179	Ave		0.0183				6.7		20.0			
PCB-1232 Peak 3	0.0356 0.0328	0.0361	0.0374	0.0330	0.0366	Ave		0.0352				5.4		20.0			
PCB-1232 Peak 4	0.0173 0.0163	0.0167	0.0181	0.0164	0.0165	Ave		0.0169				4.1		20.0			
PCB-1232 Peak 5	0.0076 0.0071	0.0070	0.0072	0.0065	0.0063	Ave		0.0069				6.8		20.0			
PCB-1262 Peak 1	0.0556 0.0497	0.0558	0.0568	0.0487	0.0584	Ave		0.0542				7.3		20.0			
PCB-1262 Peak 2	0.0770 0.0659	0.0761	0.0769	0.0655	0.0790	Ave		0.0734				8.3		20.0			
PCB-1262 Peak 3	0.0625 0.0582	0.0651	0.0670	0.0575	0.0700	Ave		0.0634				7.8		20.0			
PCB-1262 Peak 4	0.1285 0.1221	0.1339	0.1404	0.1207	0.1501	Ave		0.1326				8.5		20.0			
PCB-1262 Peak 5	0.0576 0.0506	0.0588	0.0598	0.0502	0.0627	Ave		0.0566				9.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 13:25 Calibration End Date: 11/06/2018 15:14 Calibration ID: 47837

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/4	P4110604.D
Level 2	STD01 240-353863/5	P4110605.D
Level 3	STD02 240-353863/6	P4110606.D
Level 4	STD05 240-353863/7	P4110607.D
Level 5	STD1 240-353863/8	P4110608.D
Level 6	STD15 240-353863/9	P4110609.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1232 Peak 1	BNB	Ave	1252386 32429751	2530302	4843786	11015601	22374098	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 2	BNB	Ave	898724 23619312	1908741	3419712	8242141	17492375	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 3	BNB	Ave	1595308 45932443	3543161	6953578	15690032	35780014	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 4	BNB	Ave	777042 22825643	1641569	3368342	7815153	16145604	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 5	BNB	Ave	340720 9886379	690146	1338858	3095263	6157036	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 1	BNB	Ave	2491584 69637282	5479232	10562887	23152175	57065495	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 2	BNB	Ave	3450152 92301861	7471607	14307495	31117098	77211235	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 3	BNB	Ave	2799775 81563527	6389690	12471404	27352876	68422505	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 4	BNB	Ave	5756407 171119644	13149475	26110964	57406838	146750030	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 5	BNB	Ave	2579971 70939397	5772495	11120412	23873068	61277377	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110604.D
Lims ID: std005 1232 1262
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-Nov-2018 13:25:16 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-004
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub1

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:10:22 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:52:23

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	44811336	0.0500	0.0500	
2	2.554	2.555	-0.001	37656879	0.0500	0.0500	
4 PCB-1232							Ma
1	4.111	4.111	0.000	1252386	0.0500	0.0563	M
1	4.834	4.834	0.000	898724	0.0500	0.0547	
1	5.675	5.675	0.000	1595308	0.0500	0.0505	
1	5.902	5.902	0.000	777042	0.0500	0.0513	
1	6.319	6.319	0.000	340720	0.0500	0.0547	M
		Average of Peak Amounts =				0.0535	
2	5.460	5.460	0.000	927631	0.0500	0.0540	
2	6.216	6.216	0.000	659427	0.0500	0.0492	
2	6.973	6.973	0.000	1243384	0.0500	0.0518	
2	7.188	7.188	0.000	543724	0.0500	0.0502	
2	7.560	7.560	0.000	272771	0.0500	0.0508	
		Average of Peak Amounts =				0.0512	
					RPD =	4.36	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.545	8.545	0.000	2491584	0.0500	0.0513	
1	8.945	8.945	0.000	3450152	0.0500	0.0525	
1	9.176	9.176	0.000	2799775	0.0500	0.0493	
1	9.464	9.464	0.000	5756407	0.0500	0.0484	
1	9.747	9.747	0.000	2579971	0.0500	0.0509	
		Average of Peak Amounts =				0.0505	
2	9.444	9.444	0.000	1458215	0.0500	0.0525	
2	9.845	9.845	0.000	2250067	0.0500	0.0541	
2	10.099	10.099	0.000	1924132	0.0500	0.0516	
2	10.313	10.313	0.000	4076014	0.0500	0.0500	
2	10.612	10.612	0.000	3252721	0.0500	0.0534	
		Average of Peak Amounts =				0.0523	
						RPD = 3.57	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SG3262@.05PPM_00013 Amount Added: 1.00 Units: mL

Report Date: 07-Nov-2018 11:10:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110604.D

Injection Date: 06-Nov-2018 13:25:16 Instrument ID: A2HP4 Operator ID:

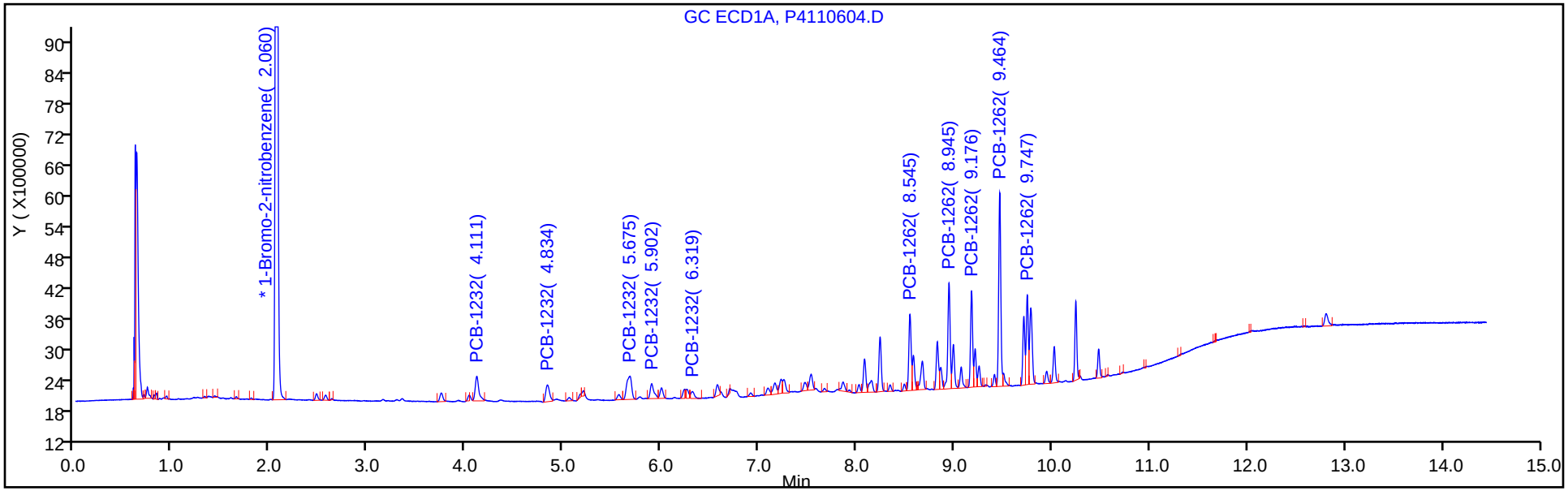
Lims ID: std005 1232 1262 Worklist Smp#: 4

Client ID:

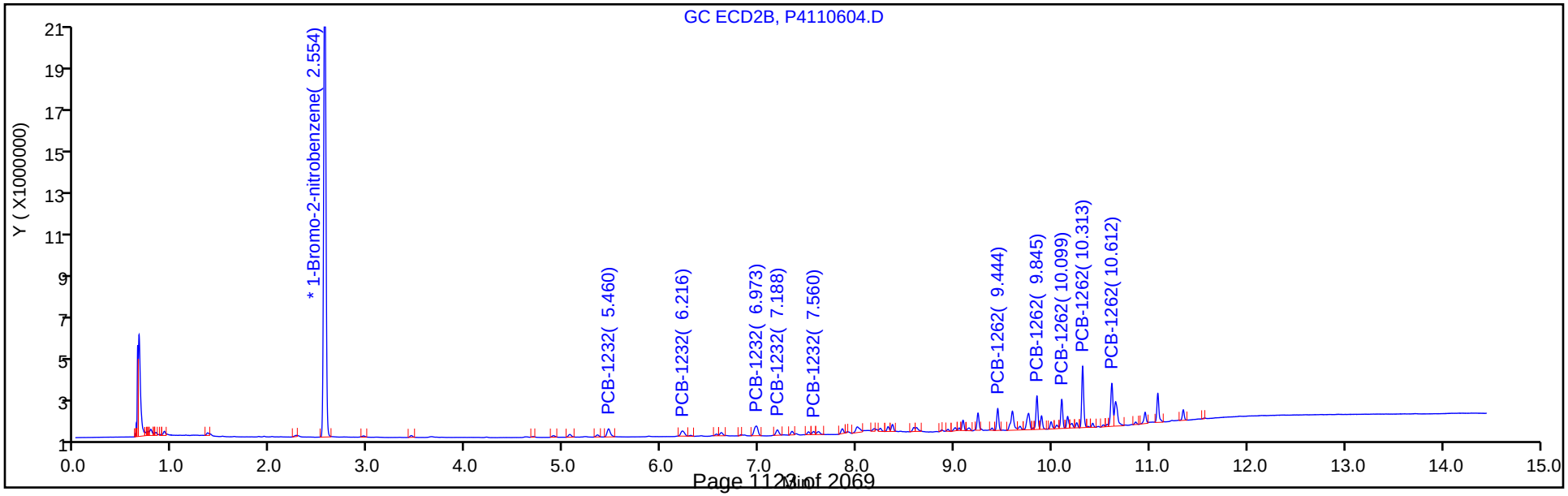
Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 4

Method: PCB4 is Limit Group: GC 8082A IS

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 07-Nov-2018 11:10:24 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110604.D

Injection Date: 06-Nov-2018 13:25:16 Instrument ID: A2HP4

Lims ID: std005 1232 1262

Client ID:

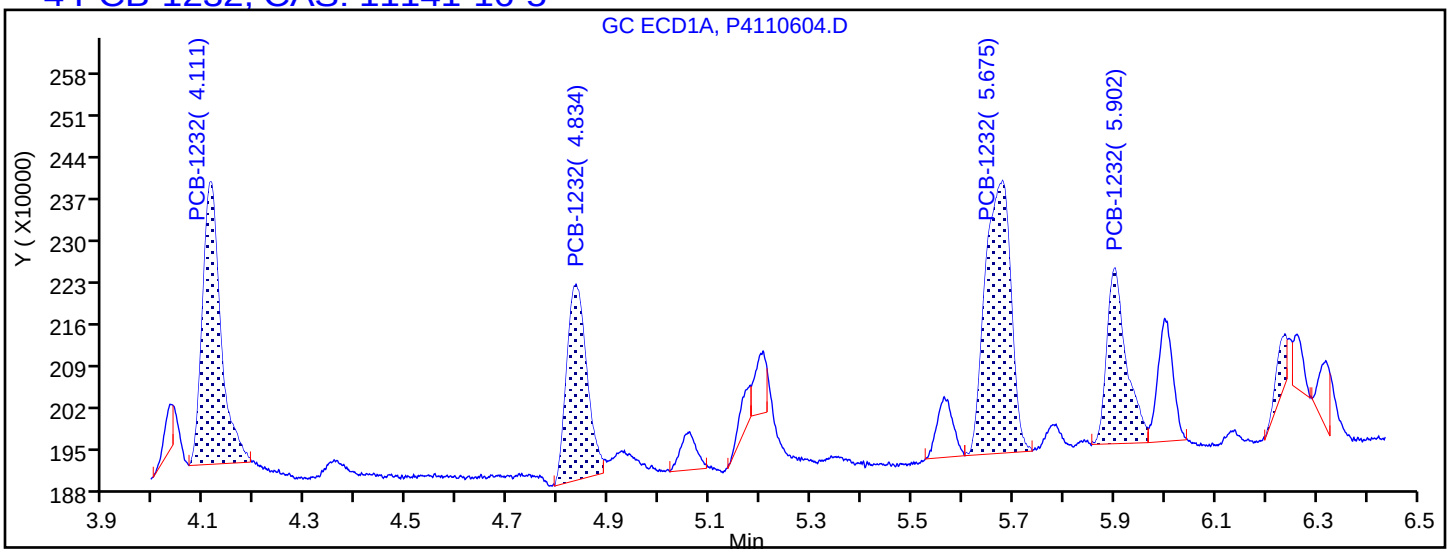
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB4 is Limit Group: GC 8082A IS

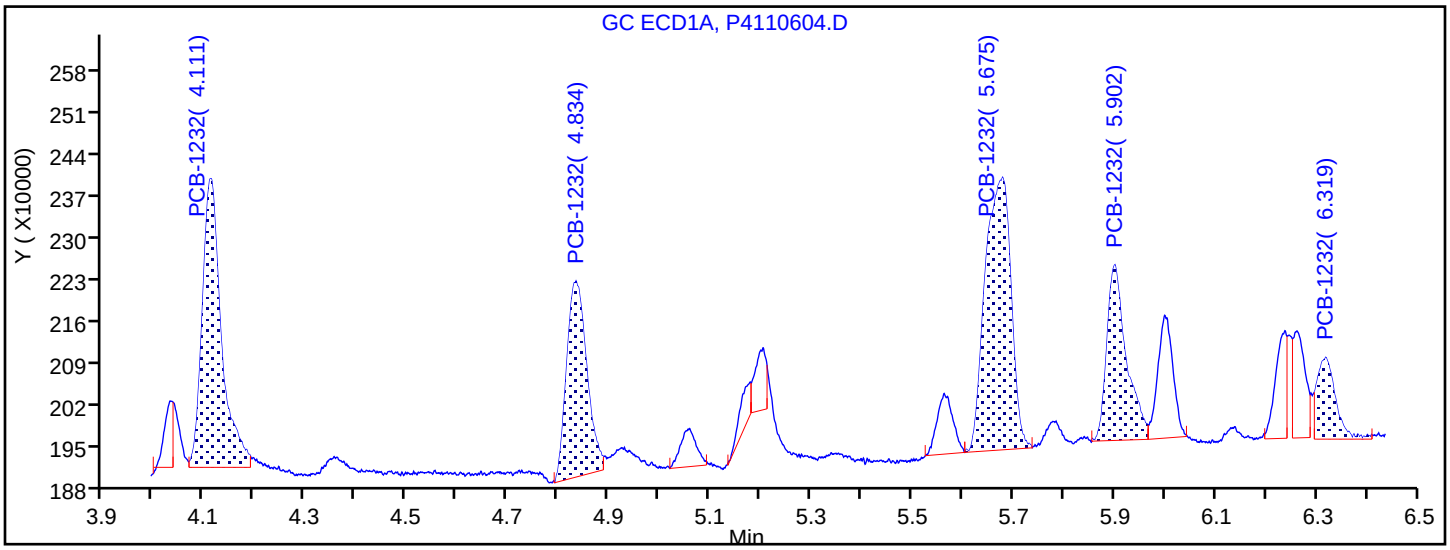
Column: Detector GC ECD1A

4 PCB-1232, CAS: 11141-16-5



Processing Integration Results

4.111	Response = 1169896
4.834	Response = 898724
5.675	Response = 1595308
5.902	Response = 777042
6.238	Response = 126589



Manual Integration Results

4.111	Response = 1252386	M
4.834	Response = 898724	
5.675	Response = 1595308	
5.902	Response = 777042	
6.319	Response = 340720	M

Reviewer: hassl, 07-Nov-2018 05:51:08

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110605.D
Lims ID: std01 1232 1262
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-Nov-2018 13:46:50 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-005
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub1

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:10:12 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:52:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	49108055	0.0500	0.0500	
2	2.553	2.555	-0.002	41251192	0.0500	0.0500	
4 PCB-1232							
1	4.110	4.111	-0.001	2530302	0.1000	0.1038	
1	4.832	4.834	-0.002	1908741	0.1000	0.1060	
1	5.677	5.675	0.002	3543161	0.1000	0.1024	
1	5.898	5.902	-0.004	1641569	0.1000	0.0989	
1	6.318	6.319	-0.001	690146	0.1000	0.1011	
		Average of Peak Amounts =				0.1024	
2	5.457	5.460	-0.003	1990839	0.1000	0.1059	
2	6.213	6.216	-0.003	1551641	0.1000	0.1058	
2	6.971	6.973	-0.002	2731636	0.1000	0.1039	
2	7.187	7.188	-0.001	1263229	0.1000	0.1064	
2	7.558	7.560	-0.002	621934	0.1000	0.1058	
		Average of Peak Amounts =				0.1056	
						RPD = 3.00	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.545	8.545	0.000	5479232	0.1000	0.1030	
1	8.945	8.945	0.000	7471607	0.1000	0.1037	
1	9.177	9.176	0.001	6389690	0.1000	0.1026	
1	9.465	9.464	0.001	13149475	0.1000	0.1010	
1	9.747	9.747	0.000	5772495	0.1000	0.1038	
		Average of Peak Amounts =				0.1028	
2	9.444	9.444	0.000	3227091	0.1000	0.1060	
2	9.846	9.845	0.001	4800798	0.1000	0.1053	
2	10.100	10.099	0.001	4296688	0.1000	0.1051	
2	10.313	10.313	0.000	9180889	0.1000	0.1028	
2	10.612	10.612	0.000	7077474	0.1000	0.1061	
		Average of Peak Amounts =				0.1051	
						RPD = 2.17	

Reagents:

SG3262@0.1PPM_00014 Amount Added: 1.00 Units: mL

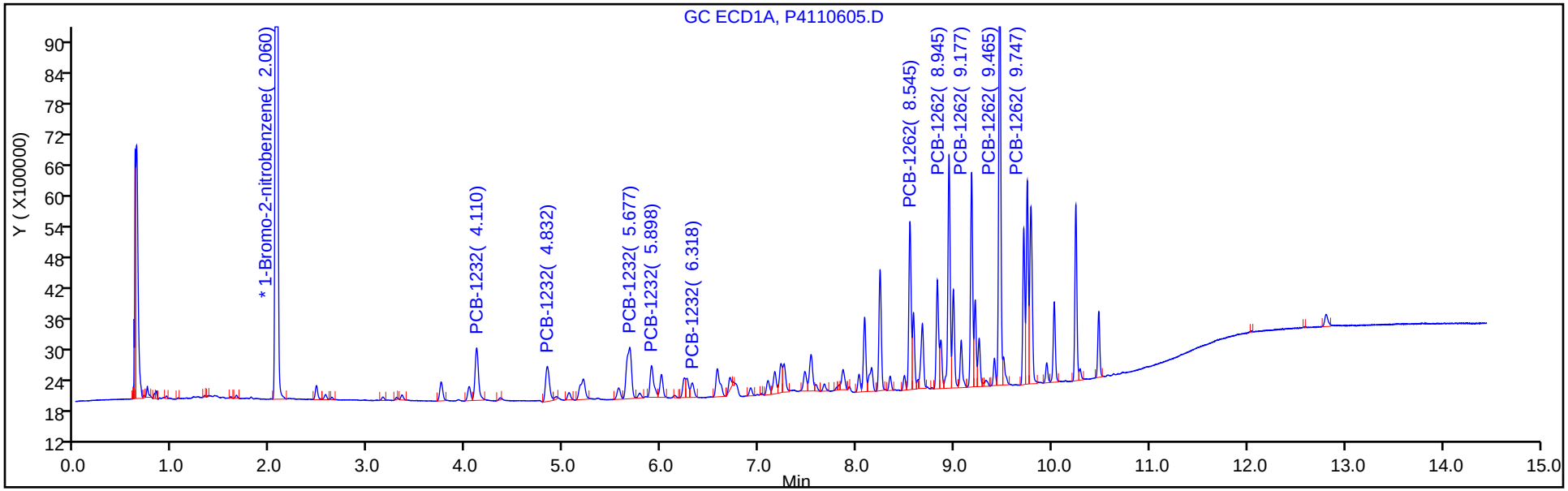
Report Date: 07-Nov-2018 11:10:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

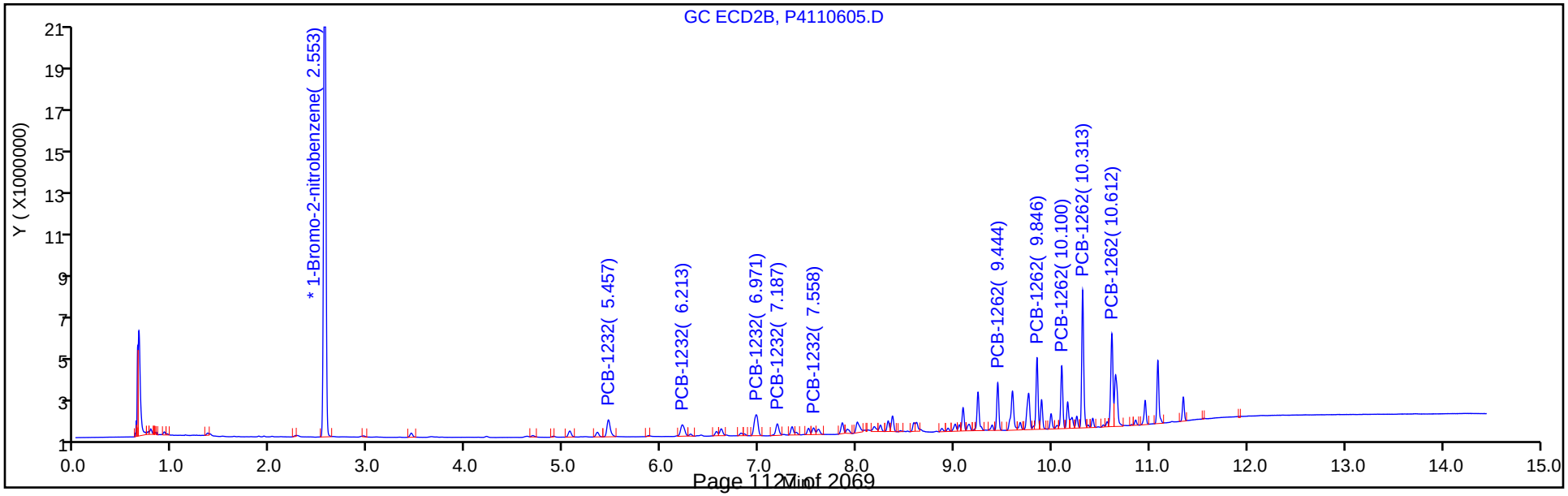
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110605.D

Injection Date:	06-Nov-2018 13:46:50	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std01 1232 1262			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110606.D
Lims ID: std02 1232 1262
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 06-Nov-2018 14:07:52 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-006
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub1

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:09:58 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:53:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.059	2.061	-0.002	46502626	0.0500	0.0500	
2	2.553	2.555	-0.002	39019786	0.0500	0.0500	
4 PCB-1232							
1	4.109	4.111	-0.002	4843786	0.2000	0.2098	
1	4.831	4.834	-0.003	3419712	0.2000	0.2006	
1	5.676	5.675	0.001	6953578	0.2000	0.2122	
1	5.899	5.902	-0.003	3368342	0.2000	0.2143	
1	6.314	6.319	-0.005	1338858	0.2000	0.2072	
		Average of Peak Amounts =				0.2088	
2	5.458	5.460	-0.002	3715869	0.2000	0.2089	
2	6.214	6.216	-0.002	2949513	0.2000	0.2126	
2	6.972	6.973	-0.001	5231513	0.2000	0.2103	
2	7.185	7.188	-0.003	2304417	0.2000	0.2052	
2	7.558	7.560	-0.002	1206205	0.2000	0.2170	
		Average of Peak Amounts =				0.2108	
						RPD = 0.95	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.544	8.545	-0.001	10562887	0.2000	0.2097	
1	8.944	8.945	-0.001	14307495	0.2000	0.2096	
1	9.174	9.176	-0.002	12471404	0.2000	0.2115	
1	9.463	9.464	-0.001	26110964	0.2000	0.2117	
1	9.744	9.747	-0.003	11120412	0.2000	0.2112	
		Average of Peak Amounts =				0.2108	
2	9.443	9.444	-0.001	6142476	0.2000	0.2133	
2	9.845	9.845	0.000	9048204	0.2000	0.2098	
2	10.099	10.099	0.000	8109619	0.2000	0.2098	
2	10.313	10.313	0.000	17593769	0.2000	0.2083	
2	10.612	10.612	0.000	13216434	0.2000	0.2095	
		Average of Peak Amounts =				0.2101	
						RPD = 0.30	

Reagents:

SG3262@.2PPM_00016 Amount Added: 1.00 Units: mL

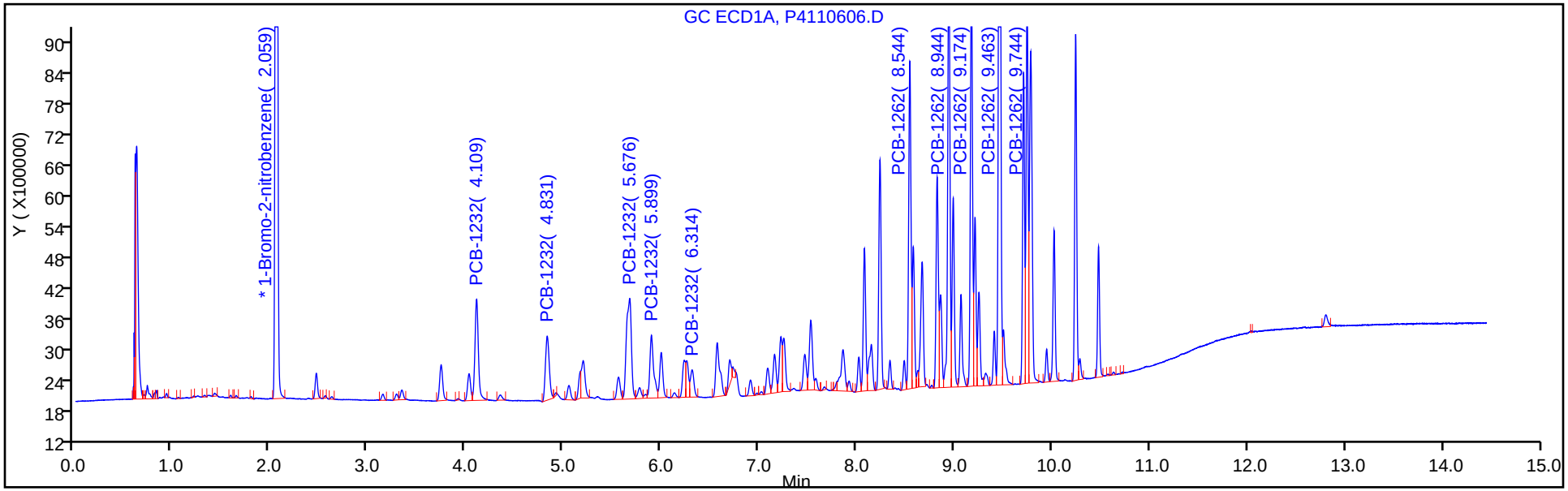
Report Date: 07-Nov-2018 11:10:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

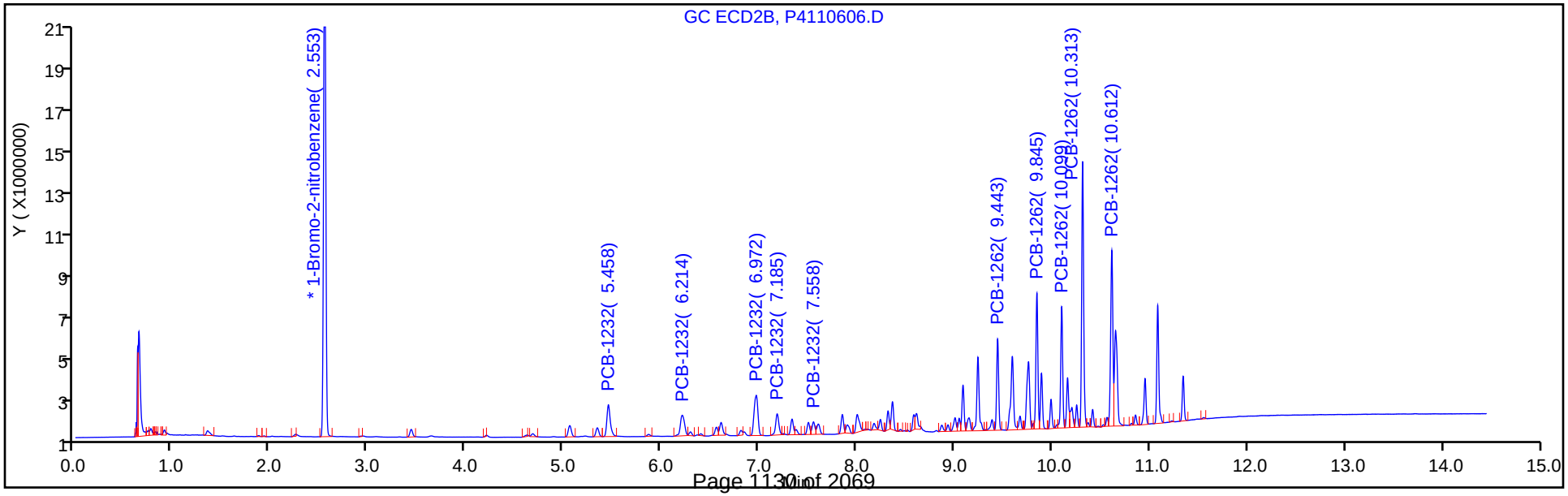
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110606.D

Injection Date:	06-Nov-2018 14:07:52	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std02 1232 1262			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110607.D
Lims ID: std05 1232 1262
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 06-Nov-2018 14:30:15 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-007
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub1

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:09:47 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:53:42

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	47542639	0.0500	0.0500	
2	2.553	2.555	-0.002	39824249	0.0500	0.0500	
4 PCB-1232							
1	4.107	4.111	-0.004	11015601	0.5000	0.4667	
1	4.830	4.834	-0.004	8242141	0.5000	0.4730	
1	5.673	5.675	-0.002	15690032	0.5000	0.4682	
1	5.895	5.902	-0.007	7815153	0.5000	0.4863	
1	6.312	6.319	-0.007	3095263	0.5000	0.4685	
		Average of Peak Amounts =				0.4725	
2	5.454	5.460	-0.006	8620833	0.5000	0.4749	
2	6.209	6.216	-0.007	7048515	0.5000	0.4977	
2	6.967	6.973	-0.006	11787590	0.5000	0.4643	
2	7.184	7.188	-0.004	5635974	0.5000	0.4918	
2	7.555	7.560	-0.005	2721798	0.5000	0.4797	
		Average of Peak Amounts =				0.4817	
						RPD = 1.92	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.545	8.545	0.000	23152175	0.5000	0.4496	
1	8.945	8.945	0.000	31117098	0.5000	0.4460	
1	9.177	9.176	0.001	27352876	0.5000	0.4538	
1	9.466	9.464	0.002	57406838	0.5000	0.4552	
1	9.748	9.747	0.001	23873068	0.5000	0.4435	
		Average of Peak Amounts =				0.4496	
2	9.445	9.444	0.001	13148324	0.5000	0.4473	
2	9.848	9.845	0.003	19408653	0.5000	0.4409	
2	10.101	10.099	0.002	17741115	0.5000	0.4497	
2	10.315	10.313	0.002	38253082	0.5000	0.4438	
2	10.614	10.612	0.002	27961324	0.5000	0.4342	
		Average of Peak Amounts =				0.4432	
						RPD = 1.44	

Reagents:

SG3262@0.5PPM_00030 Amount Added: 1.00 Units: mL

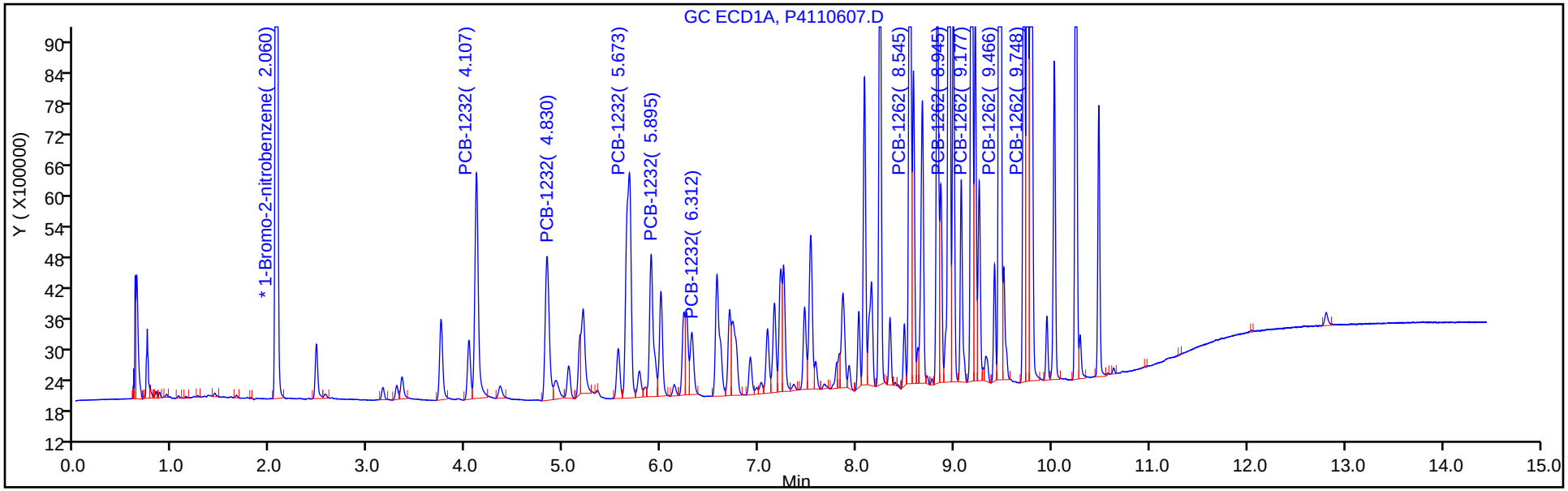
Report Date: 07-Nov-2018 11:09:50 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

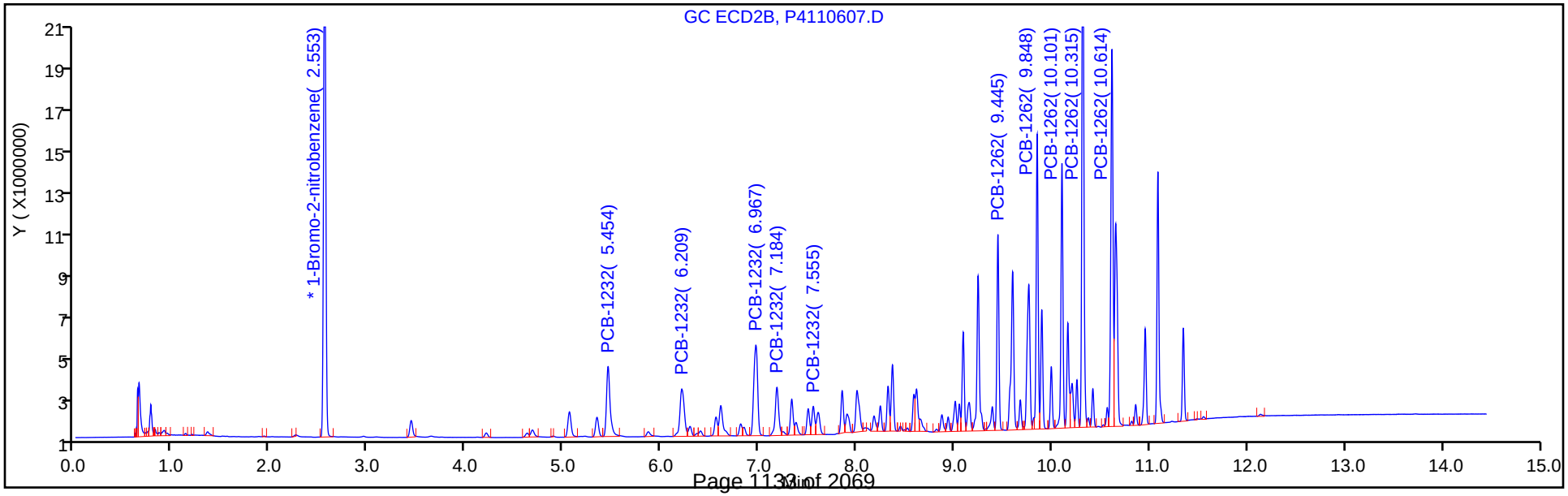
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110607.D

Injection Date:	06-Nov-2018 14:30:15	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std05 1232 1262			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110608.D
Lims ID: std1 1232 1262
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-Nov-2018 14:52:21 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-008
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub1

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:09:39 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:54:05

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.000	48876498	0.0500	0.0500	
2	2.554	2.555	-0.001	40970939	0.0500	0.0500	
4 PCB-1232							
1	4.110	4.111	-0.001	22374098	1.00	0.9220	
1	4.832	4.834	-0.002	17492375	1.00	0.9764	
1	5.677	5.675	0.002	35780014	1.00	1.04	
1	5.900	5.902	-0.002	16145604	1.00	0.9773	
1	6.316	6.319	-0.003	6157036	1.00	0.9064	
		Average of Peak Amounts =				0.9641	
2	5.458	5.460	-0.002	17218948	1.00	0.9221	
2	6.215	6.216	-0.001	13907220	1.00	0.9545	
2	6.972	6.973	-0.001	26747502	1.00	1.02	
2	7.186	7.188	-0.002	11376912	1.00	0.9649	
2	7.557	7.560	-0.003	5622756	1.00	0.9633	
		Average of Peak Amounts =				0.9658	
						RPD = 0.17	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.545	8.545	0.000	57065495	1.00	1.08	
1	8.945	8.945	0.000	77211235	1.00	1.08	
1	9.176	9.176	0.000	68422505	1.00	1.10	
1	9.464	9.464	0.000	146750030	1.00	1.13	
1	9.747	9.747	0.000	61277377	1.00	1.11	
		Average of Peak Amounts =				1.10	
2	9.443	9.444	-0.001	31776265	1.00	1.05	
2	9.845	9.845	0.000	47681676	1.00	1.05	
2	10.099	10.099	0.000	43425386	1.00	1.07	
2	10.313	10.313	0.000	99532646	1.00	1.12	
2	10.612	10.612	0.000	71382407	1.00	1.08	
		Average of Peak Amounts =				1.07	
						RPD = 2.29	

Reagents:

SG3262@1.0PPM_00019 Amount Added: 1.00 Units: mL

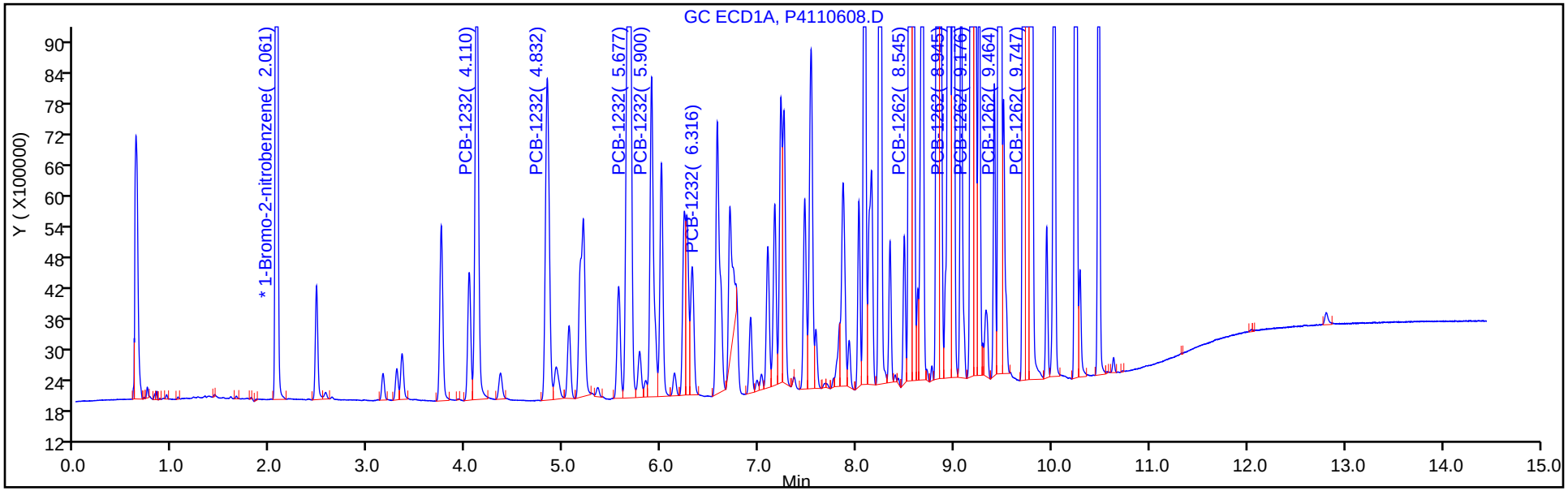
Report Date: 07-Nov-2018 11:09:41 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

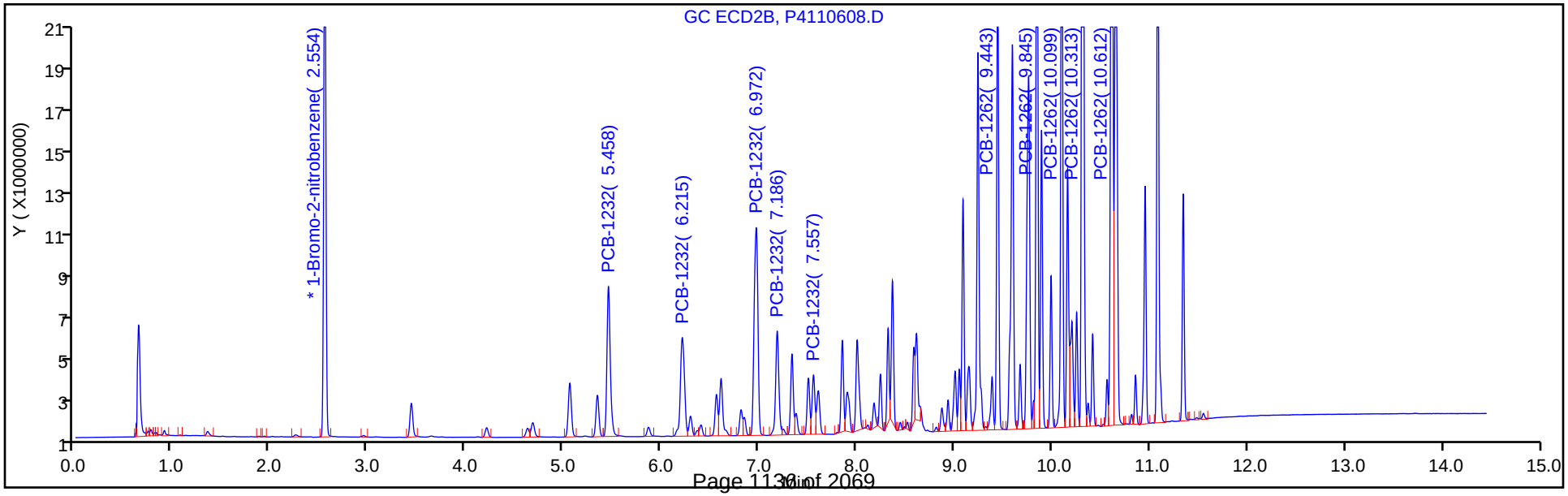
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110608.D

Injection Date:	06-Nov-2018 14:52:21	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std1 1232 1262			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110609.D
Lims ID: std15 1232 1262
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-Nov-2018 15:14:40 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-009
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub1

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:09:27 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:54:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	46707197	0.0500	0.0500	
2	2.553	2.555	-0.002	39009777	0.0500	0.0500	
4 PCB-1232							
1	4.109	4.111	-0.002	32429751	1.50	1.40	
1	4.832	4.834	-0.002	23619312	1.50	1.38	
1	5.675	5.675	0.000	45932443	1.50	1.40	
1	5.897	5.902	-0.005	22825643	1.50	1.45	
1	6.316	6.319	-0.003	9886379	1.50	1.52	
		Average of Peak Amounts =				1.43	
2	5.457	5.460	-0.003	25166791	1.50	1.42	
2	6.212	6.216	-0.004	19655942	1.50	1.42	
2	6.968	6.973	-0.005	34363969	1.50	1.38	
2	7.182	7.188	-0.006	16129155	1.50	1.44	
2	7.553	7.560	-0.007	7644221	1.50	1.38	
		Average of Peak Amounts =				1.41	
						RPD = 1.63	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.542	8.545	-0.003	69637282	1.50	1.38	
1	8.943	8.945	-0.002	92301861	1.50	1.35	
1	9.175	9.176	-0.001	81563527	1.50	1.38	
1	9.463	9.464	-0.001	171119644	1.50	1.38	
1	9.745	9.747	-0.002	70939397	1.50	1.34	
		Average of Peak Amounts =				1.36	
2	9.442	9.444	-0.002	37942915	1.50	1.32	
2	9.843	9.845	-0.002	57095216	1.50	1.32	
2	10.096	10.099	-0.003	52081789	1.50	1.35	
2	10.309	10.313	-0.004	116443222	1.50	1.38	
2	10.607	10.612	-0.005	83061297	1.50	1.32	
		Average of Peak Amounts =				1.34	
						RPD = 2.04	

Reagents:

SG3262@1.5PPM_00004 Amount Added: 1.00 Units: mL

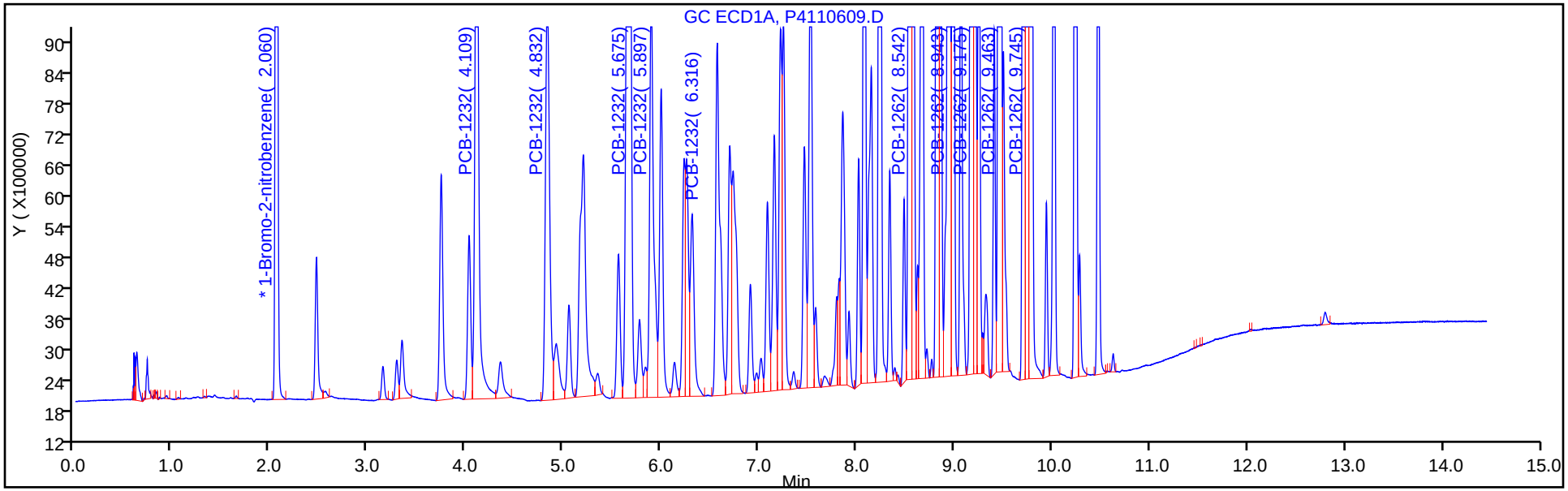
Report Date: 07-Nov-2018 11:09:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

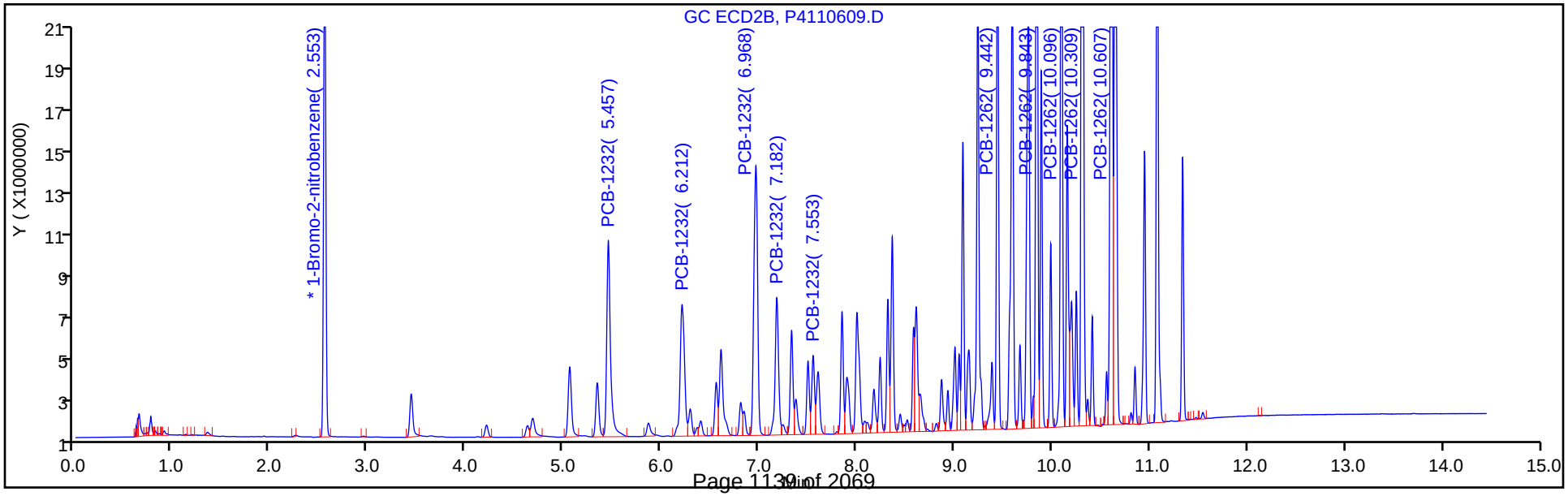
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110609.D

Injection Date:	06-Nov-2018 15:14:40	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std15 1232 1262			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 13:25 Calibration End Date: 11/06/2018 15:14 Calibration ID: 47838

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/4	P4110604.D
Level 2	STD01 240-353863/5	P4110605.D
Level 3	STD02 240-353863/6	P4110606.D
Level 4	STD05 240-353863/7	P4110607.D
Level 5	STD1 240-353863/8	P4110608.D
Level 6	STD15 240-353863/9	P4110609.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1232 Peak 1	0.0246 0.0215	0.0241	0.0238	0.0216	0.0210	Ave		0.0228				6.9		20.0			
PCB-1232 Peak 2	0.0175 0.0168	0.0188	0.0189	0.0177	0.0170	Ave		0.0178				5.0		20.0			
PCB-1232 Peak 3	0.0330 0.0294	0.0331	0.0335	0.0296	0.0326	Ave		0.0319				5.9		20.0			
PCB-1232 Peak 4	0.0144 0.0138	0.0153	0.0148	0.0142	0.0139	Ave		0.0144				4.0		20.0			
PCB-1232 Peak 5	0.0072 0.0065	0.0075	0.0077	0.0068	0.0069	Ave		0.0071				6.4		20.0			
PCB-1262 Peak 1	0.0387 0.0324	0.0391	0.0394	0.0330	0.0388	Ave		0.0369				8.8		20.0			
PCB-1262 Peak 2	0.0598 0.0488	0.0582	0.0580	0.0487	0.0582	Ave		0.0553				9.2		20.0			
PCB-1262 Peak 3	0.0511 0.0445	0.0521	0.0520	0.0445	0.0530	Ave		0.0495				7.9		20.0			
PCB-1262 Peak 4	0.1082 0.0995	0.1113	0.1127	0.0961	0.1215	Ave		0.1082				8.6		20.0			
PCB-1262 Peak 5	0.0864 0.0710	0.0858	0.0847	0.0702	0.0871	Ave		0.0809				9.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 13:25 Calibration End Date: 11/06/2018 15:14 Calibration ID: 47838

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/4	P4110604.D
Level 2	STD01 240-353863/5	P4110605.D
Level 3	STD02 240-353863/6	P4110606.D
Level 4	STD05 240-353863/7	P4110607.D
Level 5	STD1 240-353863/8	P4110608.D
Level 6	STD15 240-353863/9	P4110609.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1232 Peak 1	BNB	Ave	927631 25166791	1990839	3715869	8620833	17218948	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 2	BNB	Ave	659427 19655942	1551641	2949513	7048515	13907220	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 3	BNB	Ave	1243384 34363969	2731636	5231513	11787590	26747502	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 4	BNB	Ave	543724 16129155	1263229	2304417	5635974	11376912	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 5	BNB	Ave	272771 7644221	621934	1206205	2721798	5622756	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 1	BNB	Ave	1458215 37942915	3227091	6142476	13148324	31776265	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 2	BNB	Ave	2250067 57095216	4800798	9048204	19408653	47681676	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 3	BNB	Ave	1924132 52081789	4296688	8109619	17741115	43425386	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 4	BNB	Ave	4076014 116443222	9180889	17593769	38253082	99532646	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 5	BNB	Ave	3252721 83061297	7077474	13216434	27961324	71382407	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110604.D
Lims ID: std005 1232 1262
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-Nov-2018 13:25:16 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-004
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub1

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:10:22 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:52:23

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	44811336	0.0500	0.0500	
2	2.554	2.555	-0.001	37656879	0.0500	0.0500	
4 PCB-1232							Ma
1	4.111	4.111	0.000	1252386	0.0500	0.0563	M
1	4.834	4.834	0.000	898724	0.0500	0.0547	
1	5.675	5.675	0.000	1595308	0.0500	0.0505	
1	5.902	5.902	0.000	777042	0.0500	0.0513	
1	6.319	6.319	0.000	340720	0.0500	0.0547	M
		Average of Peak Amounts =				0.0535	
2	5.460	5.460	0.000	927631	0.0500	0.0540	
2	6.216	6.216	0.000	659427	0.0500	0.0492	
2	6.973	6.973	0.000	1243384	0.0500	0.0518	
2	7.188	7.188	0.000	543724	0.0500	0.0502	
2	7.560	7.560	0.000	272771	0.0500	0.0508	
		Average of Peak Amounts =				0.0512	
					RPD =	4.36	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.545	8.545	0.000	2491584	0.0500	0.0513	
1	8.945	8.945	0.000	3450152	0.0500	0.0525	
1	9.176	9.176	0.000	2799775	0.0500	0.0493	
1	9.464	9.464	0.000	5756407	0.0500	0.0484	
1	9.747	9.747	0.000	2579971	0.0500	0.0509	
		Average of Peak Amounts =				0.0505	
2	9.444	9.444	0.000	1458215	0.0500	0.0525	
2	9.845	9.845	0.000	2250067	0.0500	0.0541	
2	10.099	10.099	0.000	1924132	0.0500	0.0516	
2	10.313	10.313	0.000	4076014	0.0500	0.0500	
2	10.612	10.612	0.000	3252721	0.0500	0.0534	
		Average of Peak Amounts =				0.0523	
						RPD = 3.57	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SG3262@.05PPM_00013 Amount Added: 1.00 Units: mL

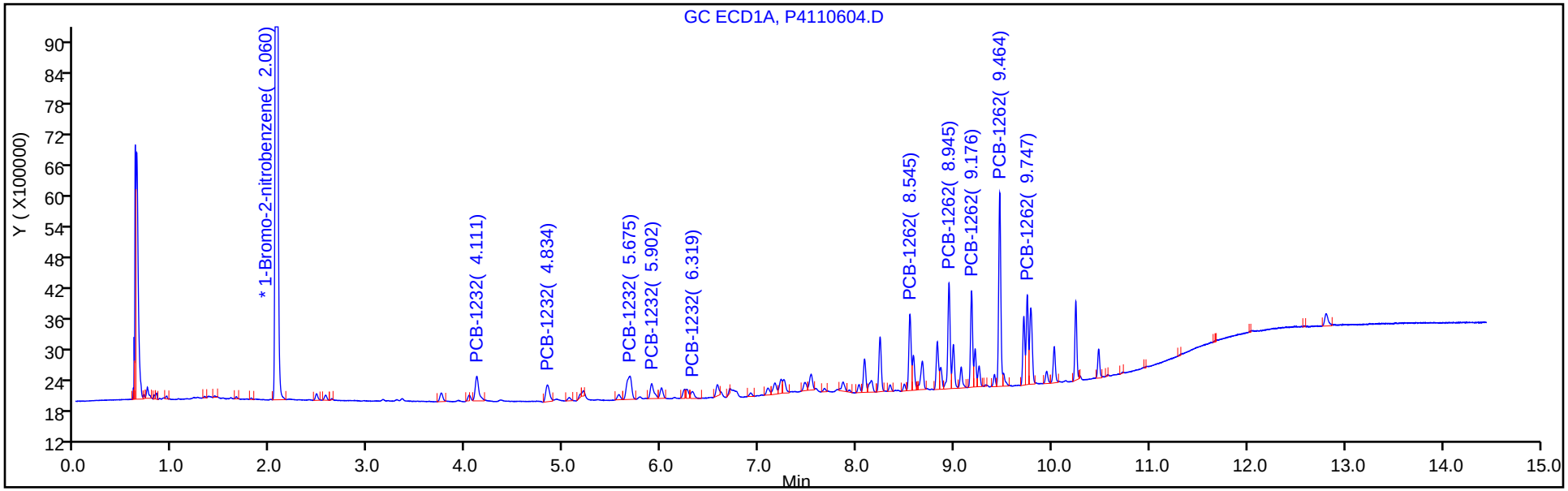
Report Date: 07-Nov-2018 11:10:24 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

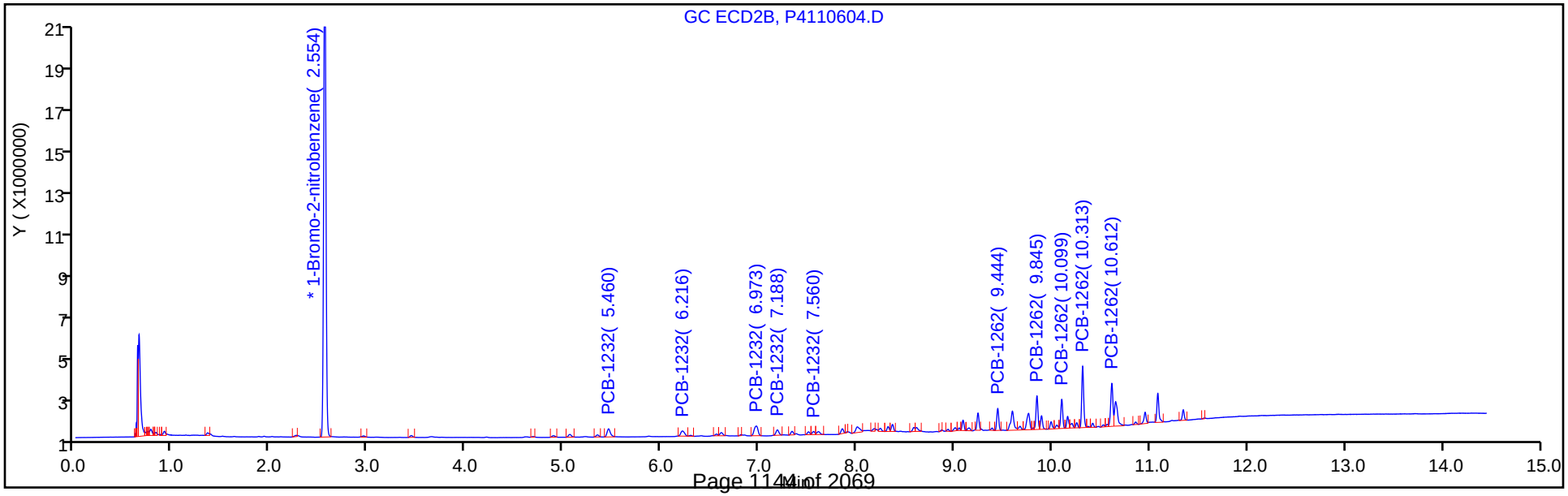
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110604.D

Injection Date:	06-Nov-2018 13:25:16	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std005 1232 1262			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110605.D
Lims ID: std01 1232 1262
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-Nov-2018 13:46:50 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-005
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub1

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:10:12 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:52:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	49108055	0.0500	0.0500	
2	2.553	2.555	-0.002	41251192	0.0500	0.0500	
4 PCB-1232							
1	4.110	4.111	-0.001	2530302	0.1000	0.1038	
1	4.832	4.834	-0.002	1908741	0.1000	0.1060	
1	5.677	5.675	0.002	3543161	0.1000	0.1024	
1	5.898	5.902	-0.004	1641569	0.1000	0.0989	
1	6.318	6.319	-0.001	690146	0.1000	0.1011	
		Average of Peak Amounts =				0.1024	
2	5.457	5.460	-0.003	1990839	0.1000	0.1059	
2	6.213	6.216	-0.003	1551641	0.1000	0.1058	
2	6.971	6.973	-0.002	2731636	0.1000	0.1039	
2	7.187	7.188	-0.001	1263229	0.1000	0.1064	
2	7.558	7.560	-0.002	621934	0.1000	0.1058	
		Average of Peak Amounts =				0.1056	
						RPD = 3.00	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.545	8.545	0.000	5479232	0.1000	0.1030	
1	8.945	8.945	0.000	7471607	0.1000	0.1037	
1	9.177	9.176	0.001	6389690	0.1000	0.1026	
1	9.465	9.464	0.001	13149475	0.1000	0.1010	
1	9.747	9.747	0.000	5772495	0.1000	0.1038	
		Average of Peak Amounts =				0.1028	
2	9.444	9.444	0.000	3227091	0.1000	0.1060	
2	9.846	9.845	0.001	4800798	0.1000	0.1053	
2	10.100	10.099	0.001	4296688	0.1000	0.1051	
2	10.313	10.313	0.000	9180889	0.1000	0.1028	
2	10.612	10.612	0.000	7077474	0.1000	0.1061	
		Average of Peak Amounts =				0.1051	
						RPD = 2.17	

Reagents:

SG3262@0.1PPM_00014 Amount Added: 1.00 Units: mL

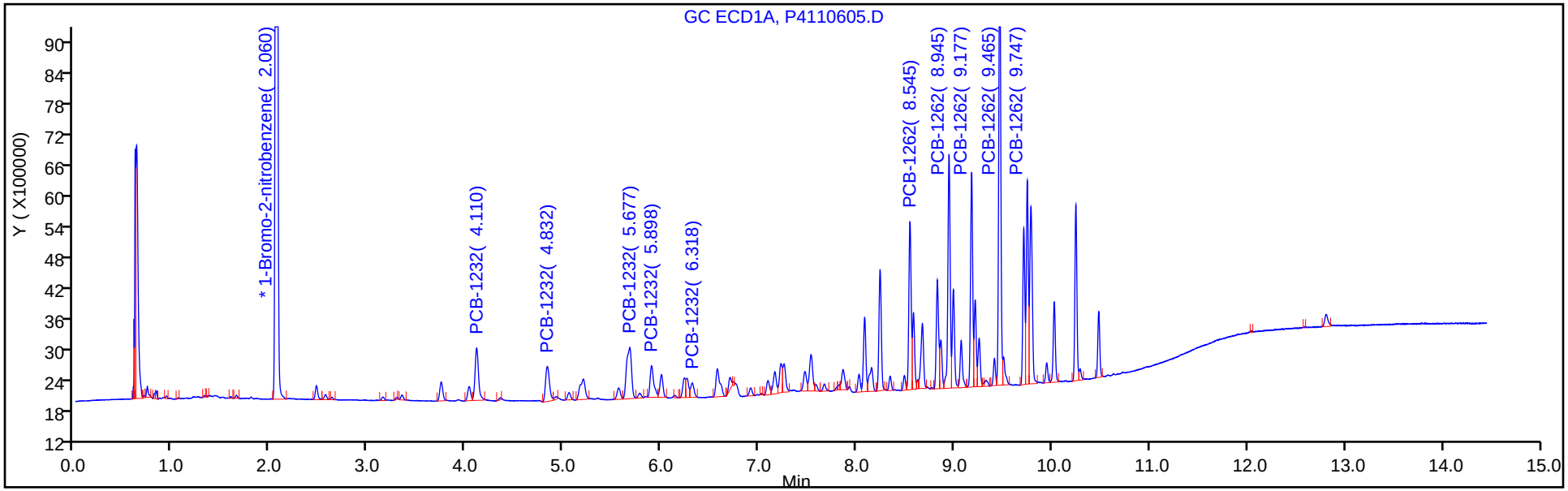
Report Date: 07-Nov-2018 11:10:15 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

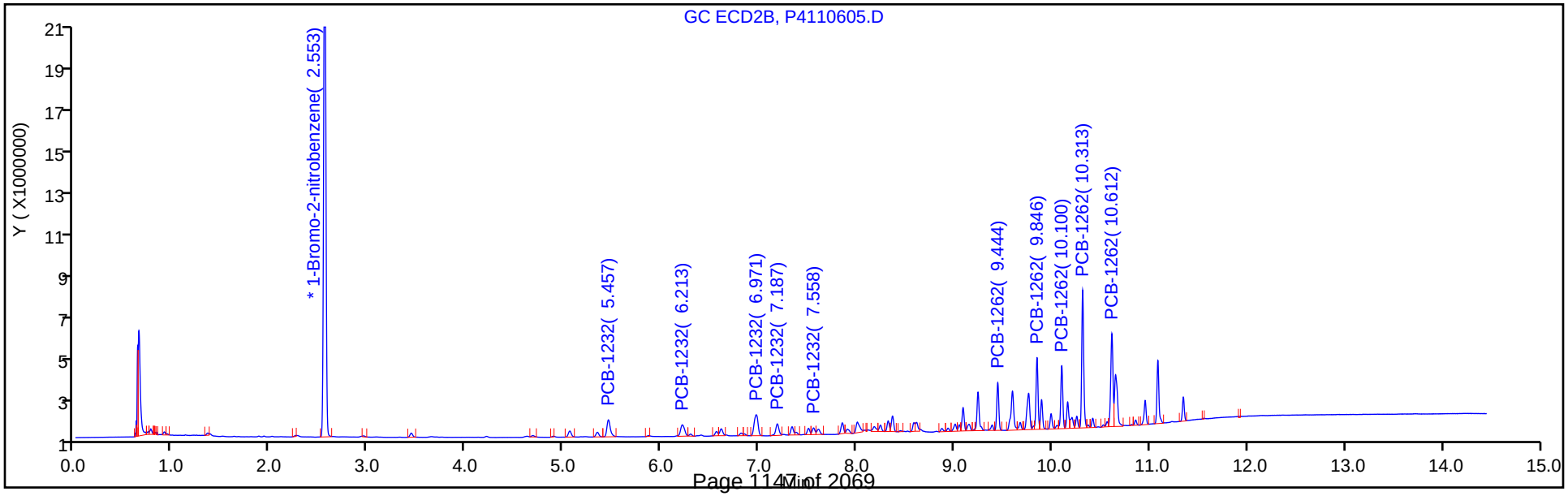
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110605.D

Injection Date:	06-Nov-2018 13:46:50	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std01 1232 1262			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110606.D
Lims ID: std02 1232 1262
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 06-Nov-2018 14:07:52 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-006
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub1

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:09:58 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:53:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.059	2.061	-0.002	46502626	0.0500	0.0500	
2	2.553	2.555	-0.002	39019786	0.0500	0.0500	
4 PCB-1232							
1	4.109	4.111	-0.002	4843786	0.2000	0.2098	
1	4.831	4.834	-0.003	3419712	0.2000	0.2006	
1	5.676	5.675	0.001	6953578	0.2000	0.2122	
1	5.899	5.902	-0.003	3368342	0.2000	0.2143	
1	6.314	6.319	-0.005	1338858	0.2000	0.2072	
		Average of Peak Amounts =				0.2088	
2	5.458	5.460	-0.002	3715869	0.2000	0.2089	
2	6.214	6.216	-0.002	2949513	0.2000	0.2126	
2	6.972	6.973	-0.001	5231513	0.2000	0.2103	
2	7.185	7.188	-0.003	2304417	0.2000	0.2052	
2	7.558	7.560	-0.002	1206205	0.2000	0.2170	
		Average of Peak Amounts =				0.2108	
						RPD = 0.95	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.544	8.545	-0.001	10562887	0.2000	0.2097	
1	8.944	8.945	-0.001	14307495	0.2000	0.2096	
1	9.174	9.176	-0.002	12471404	0.2000	0.2115	
1	9.463	9.464	-0.001	26110964	0.2000	0.2117	
1	9.744	9.747	-0.003	11120412	0.2000	0.2112	
		Average of Peak Amounts =				0.2108	
2	9.443	9.444	-0.001	6142476	0.2000	0.2133	
2	9.845	9.845	0.000	9048204	0.2000	0.2098	
2	10.099	10.099	0.000	8109619	0.2000	0.2098	
2	10.313	10.313	0.000	17593769	0.2000	0.2083	
2	10.612	10.612	0.000	13216434	0.2000	0.2095	
		Average of Peak Amounts =				0.2101	
						RPD = 0.30	

Reagents:

SG3262@.2PPM_00016 Amount Added: 1.00 Units: mL

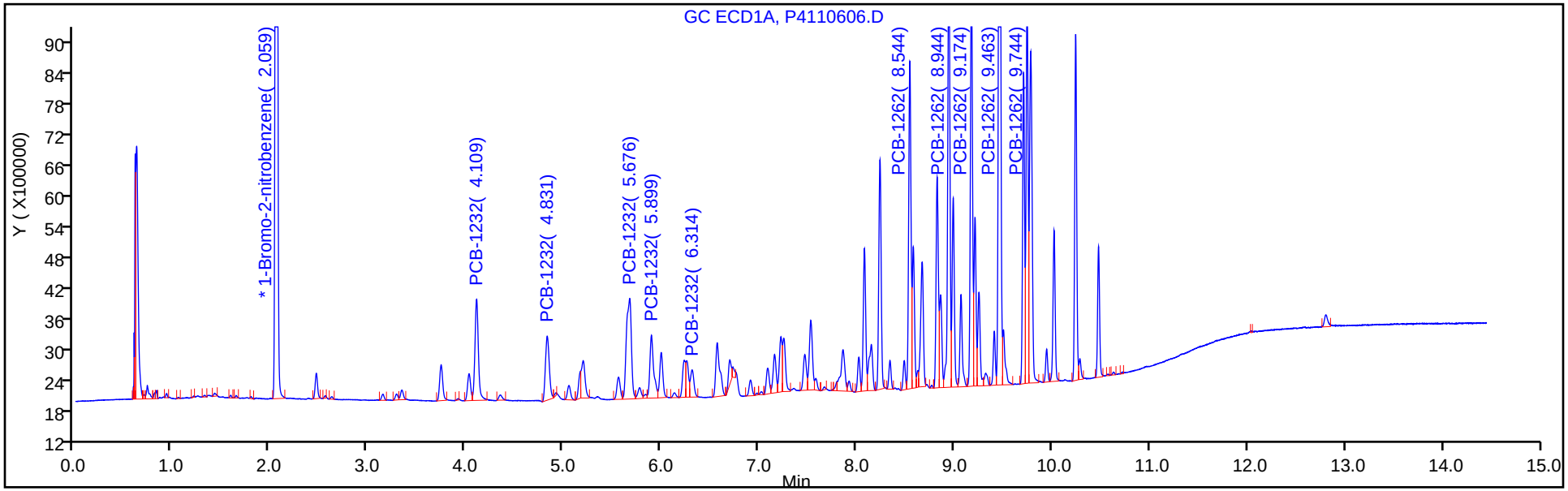
Report Date: 07-Nov-2018 11:10:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

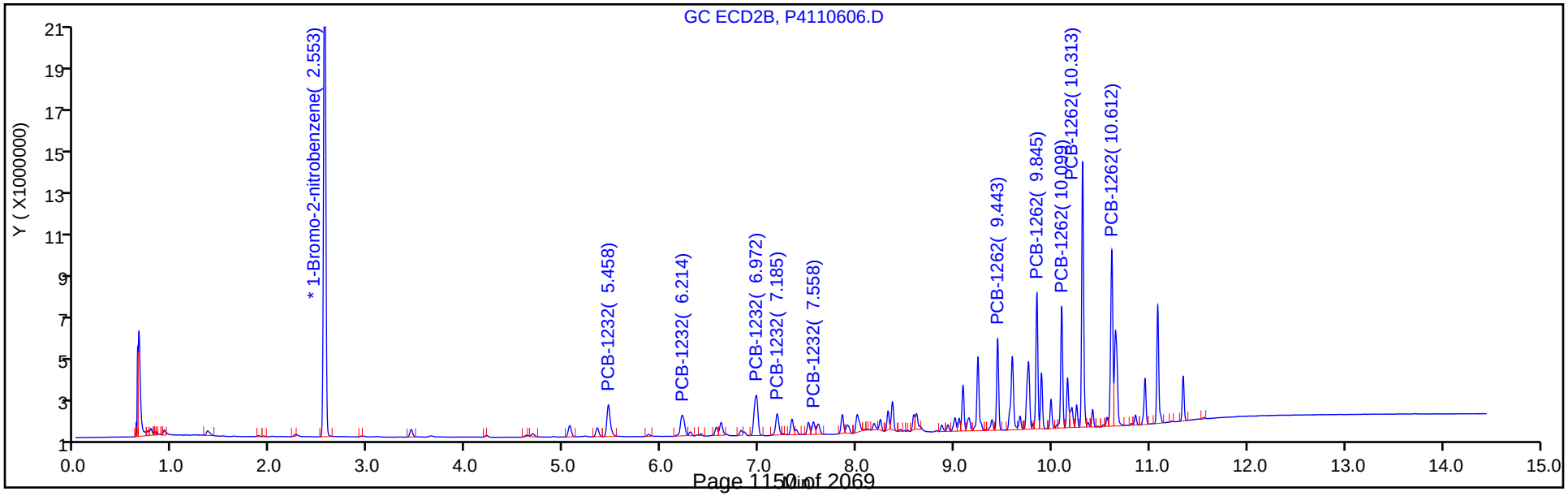
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110606.D

Injection Date:	06-Nov-2018 14:07:52	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std02 1232 1262			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110607.D
Lims ID: std05 1232 1262
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 06-Nov-2018 14:30:15 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-007
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub1

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:09:47 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:53:42

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	47542639	0.0500	0.0500	
2	2.553	2.555	-0.002	39824249	0.0500	0.0500	
4 PCB-1232							
1	4.107	4.111	-0.004	11015601	0.5000	0.4667	
1	4.830	4.834	-0.004	8242141	0.5000	0.4730	
1	5.673	5.675	-0.002	15690032	0.5000	0.4682	
1	5.895	5.902	-0.007	7815153	0.5000	0.4863	
1	6.312	6.319	-0.007	3095263	0.5000	0.4685	
		Average of Peak Amounts =				0.4725	
2	5.454	5.460	-0.006	8620833	0.5000	0.4749	
2	6.209	6.216	-0.007	7048515	0.5000	0.4977	
2	6.967	6.973	-0.006	11787590	0.5000	0.4643	
2	7.184	7.188	-0.004	5635974	0.5000	0.4918	
2	7.555	7.560	-0.005	2721798	0.5000	0.4797	
		Average of Peak Amounts =				0.4817	
						RPD = 1.92	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.545	8.545	0.000	23152175	0.5000	0.4496	
1	8.945	8.945	0.000	31117098	0.5000	0.4460	
1	9.177	9.176	0.001	27352876	0.5000	0.4538	
1	9.466	9.464	0.002	57406838	0.5000	0.4552	
1	9.748	9.747	0.001	23873068	0.5000	0.4435	
		Average of Peak Amounts =				0.4496	
2	9.445	9.444	0.001	13148324	0.5000	0.4473	
2	9.848	9.845	0.003	19408653	0.5000	0.4409	
2	10.101	10.099	0.002	17741115	0.5000	0.4497	
2	10.315	10.313	0.002	38253082	0.5000	0.4438	
2	10.614	10.612	0.002	27961324	0.5000	0.4342	
		Average of Peak Amounts =				0.4432	
						RPD = 1.44	

Reagents:

SG3262@0.5PPM_00030 Amount Added: 1.00 Units: mL

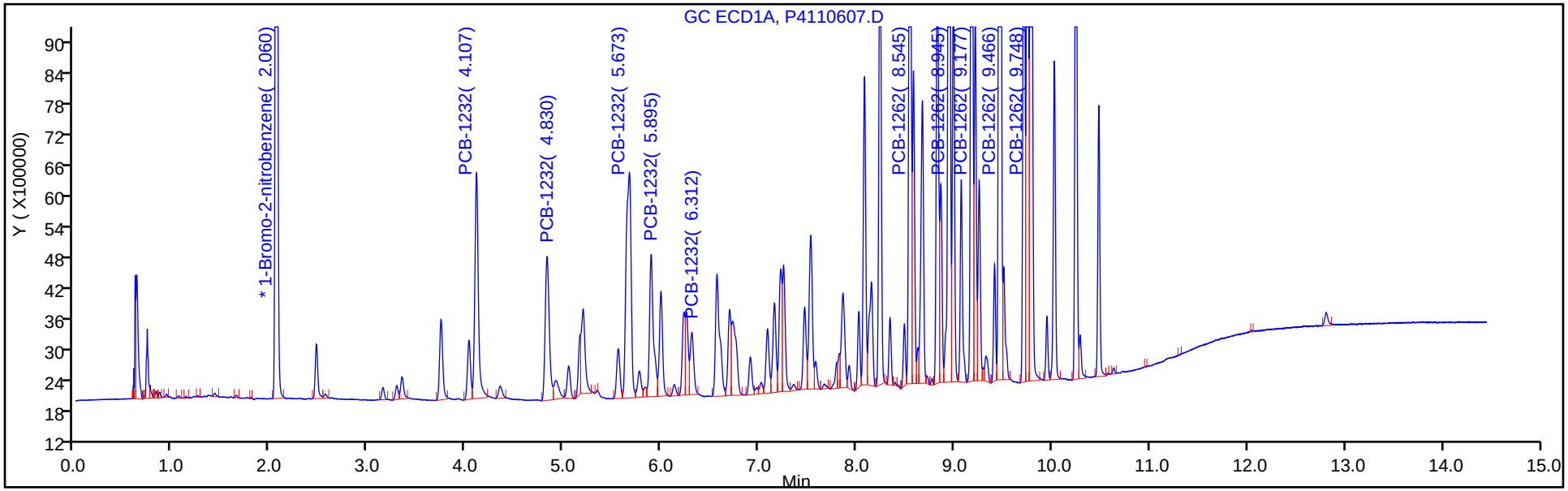
Report Date: 07-Nov-2018 11:09:51 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

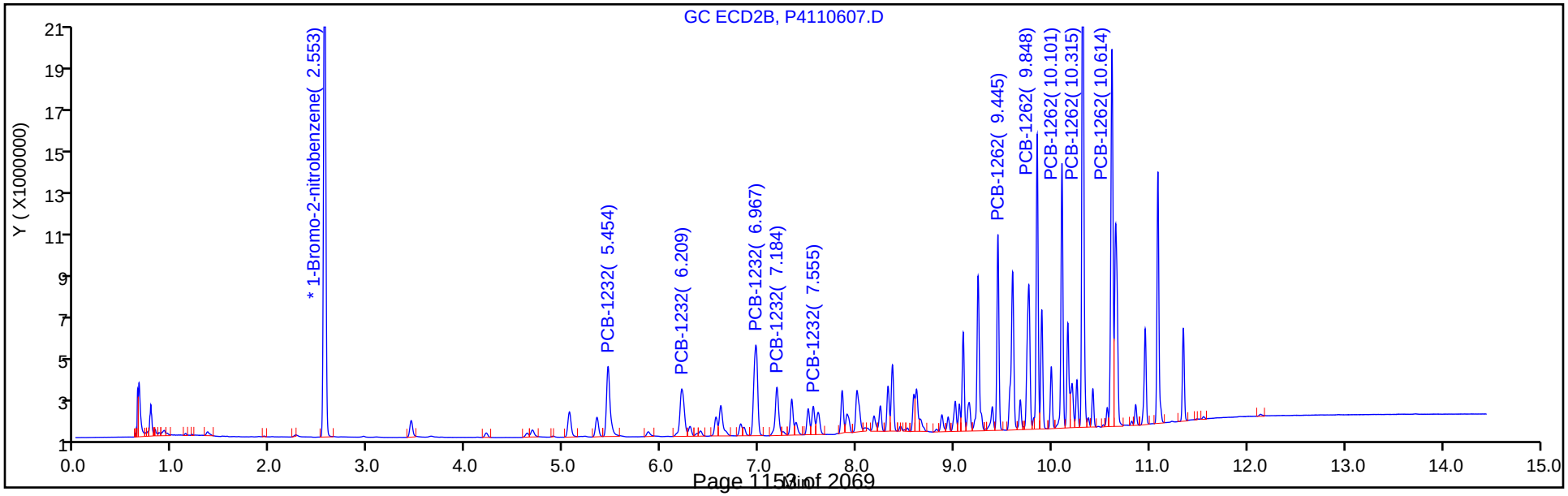
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110607.D

Injection Date:	06-Nov-2018 14:30:15	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std05 1232 1262			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110608.D
Lims ID: std1 1232 1262
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-Nov-2018 14:52:21 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-008
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub1

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:09:39 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:54:05

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.000	48876498	0.0500	0.0500	
2	2.554	2.555	-0.001	40970939	0.0500	0.0500	
4 PCB-1232							
1	4.110	4.111	-0.001	22374098	1.00	0.9220	
1	4.832	4.834	-0.002	17492375	1.00	0.9764	
1	5.677	5.675	0.002	35780014	1.00	1.04	
1	5.900	5.902	-0.002	16145604	1.00	0.9773	
1	6.316	6.319	-0.003	6157036	1.00	0.9064	
		Average of Peak Amounts =				0.9641	
2	5.458	5.460	-0.002	17218948	1.00	0.9221	
2	6.215	6.216	-0.001	13907220	1.00	0.9545	
2	6.972	6.973	-0.001	26747502	1.00	1.02	
2	7.186	7.188	-0.002	11376912	1.00	0.9649	
2	7.557	7.560	-0.003	5622756	1.00	0.9633	
		Average of Peak Amounts =				0.9658	
						RPD = 0.17	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.545	8.545	0.000	57065495	1.00	1.08	
1	8.945	8.945	0.000	77211235	1.00	1.08	
1	9.176	9.176	0.000	68422505	1.00	1.10	
1	9.464	9.464	0.000	146750030	1.00	1.13	
1	9.747	9.747	0.000	61277377	1.00	1.11	
		Average of Peak Amounts =				1.10	
2	9.443	9.444	-0.001	31776265	1.00	1.05	
2	9.845	9.845	0.000	47681676	1.00	1.05	
2	10.099	10.099	0.000	43425386	1.00	1.07	
2	10.313	10.313	0.000	99532646	1.00	1.12	
2	10.612	10.612	0.000	71382407	1.00	1.08	
		Average of Peak Amounts =				1.07	
						RPD = 2.29	

Reagents:

SG3262@1.0PPM_00019 Amount Added: 1.00 Units: mL

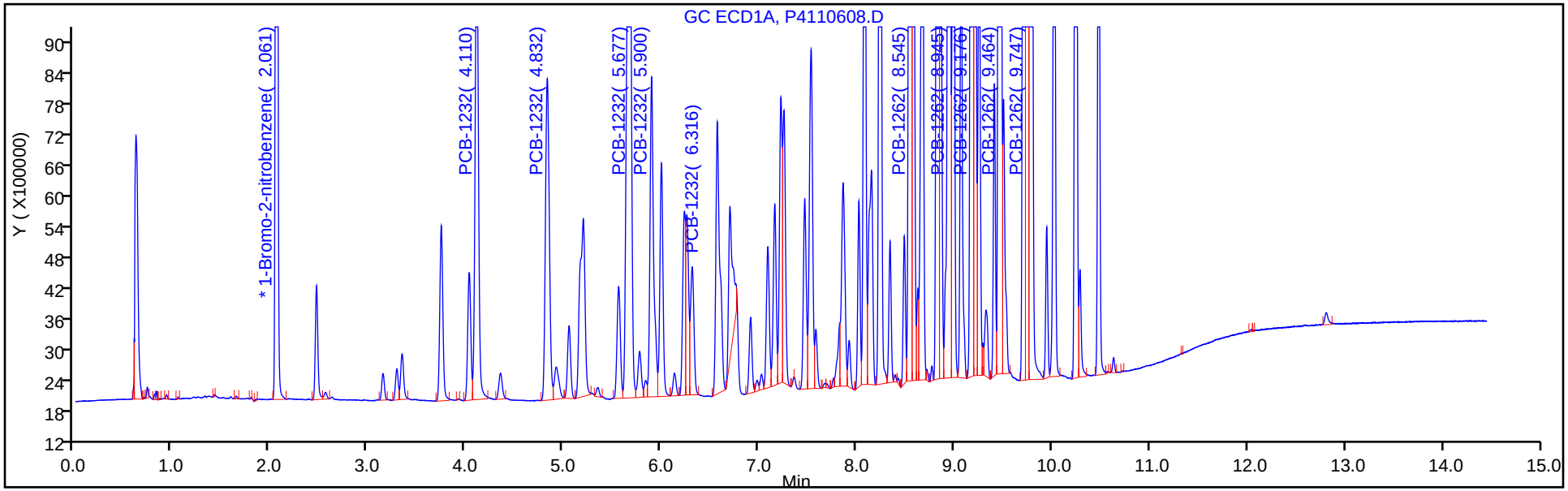
Report Date: 07-Nov-2018 11:09:41 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

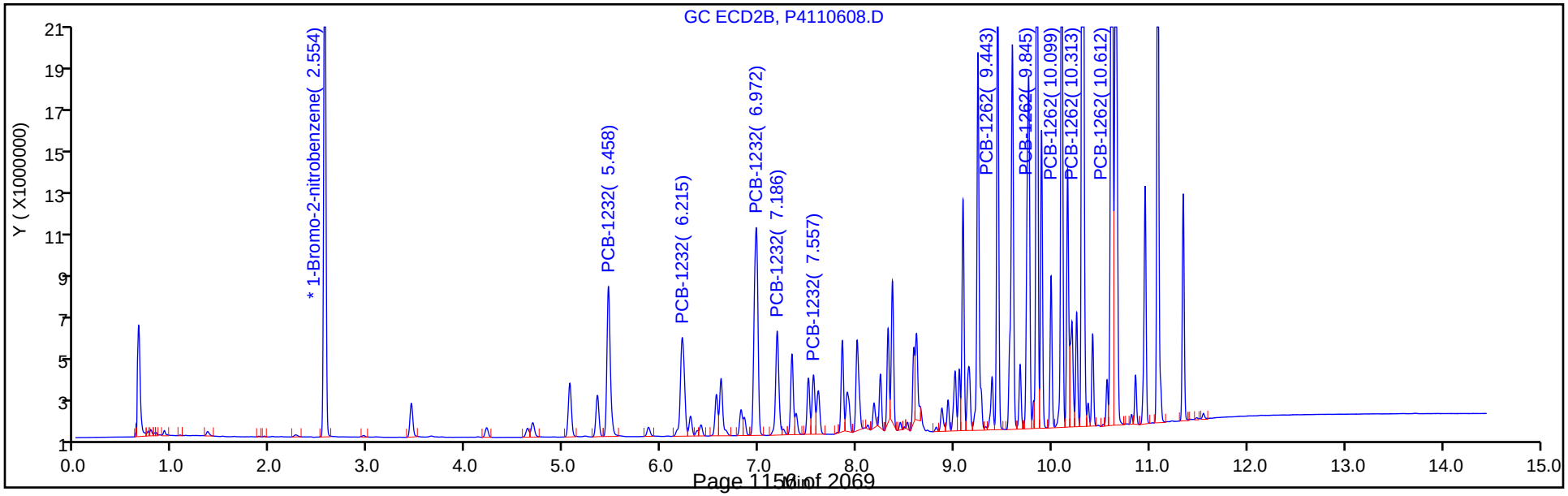
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110608.D

Injection Date:	06-Nov-2018 14:52:21	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std1 1232 1262			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110609.D
Lims ID: std15 1232 1262
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-Nov-2018 15:14:40 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-009
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub1

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:09:27 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:54:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	46707197	0.0500	0.0500	
2	2.553	2.555	-0.002	39009777	0.0500	0.0500	
4 PCB-1232							
1	4.109	4.111	-0.002	32429751	1.50	1.40	
1	4.832	4.834	-0.002	23619312	1.50	1.38	
1	5.675	5.675	0.000	45932443	1.50	1.40	
1	5.897	5.902	-0.005	22825643	1.50	1.45	
1	6.316	6.319	-0.003	9886379	1.50	1.52	
		Average of Peak Amounts =				1.43	
2	5.457	5.460	-0.003	25166791	1.50	1.42	
2	6.212	6.216	-0.004	19655942	1.50	1.42	
2	6.968	6.973	-0.005	34363969	1.50	1.38	
2	7.182	7.188	-0.006	16129155	1.50	1.44	
2	7.553	7.560	-0.007	7644221	1.50	1.38	
		Average of Peak Amounts =				1.41	
						RPD = 1.63	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.542	8.545	-0.003	69637282	1.50	1.38	
1	8.943	8.945	-0.002	92301861	1.50	1.35	
1	9.175	9.176	-0.001	81563527	1.50	1.38	
1	9.463	9.464	-0.001	171119644	1.50	1.38	
1	9.745	9.747	-0.002	70939397	1.50	1.34	
		Average of Peak Amounts =				1.36	
2	9.442	9.444	-0.002	37942915	1.50	1.32	
2	9.843	9.845	-0.002	57095216	1.50	1.32	
2	10.096	10.099	-0.003	52081789	1.50	1.35	
2	10.309	10.313	-0.004	116443222	1.50	1.38	
2	10.607	10.612	-0.005	83061297	1.50	1.32	
		Average of Peak Amounts =				1.34	
						RPD = 2.04	

Reagents:

SG3262@1.5PPM_00004 Amount Added: 1.00 Units: mL

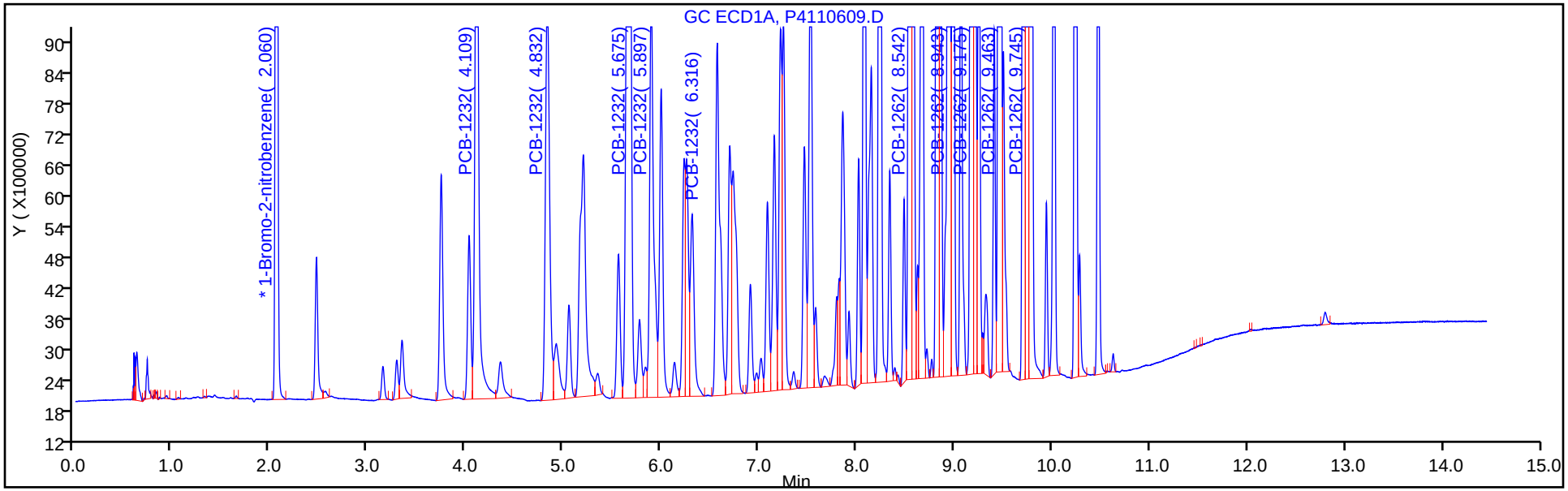
Report Date: 07-Nov-2018 11:09:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

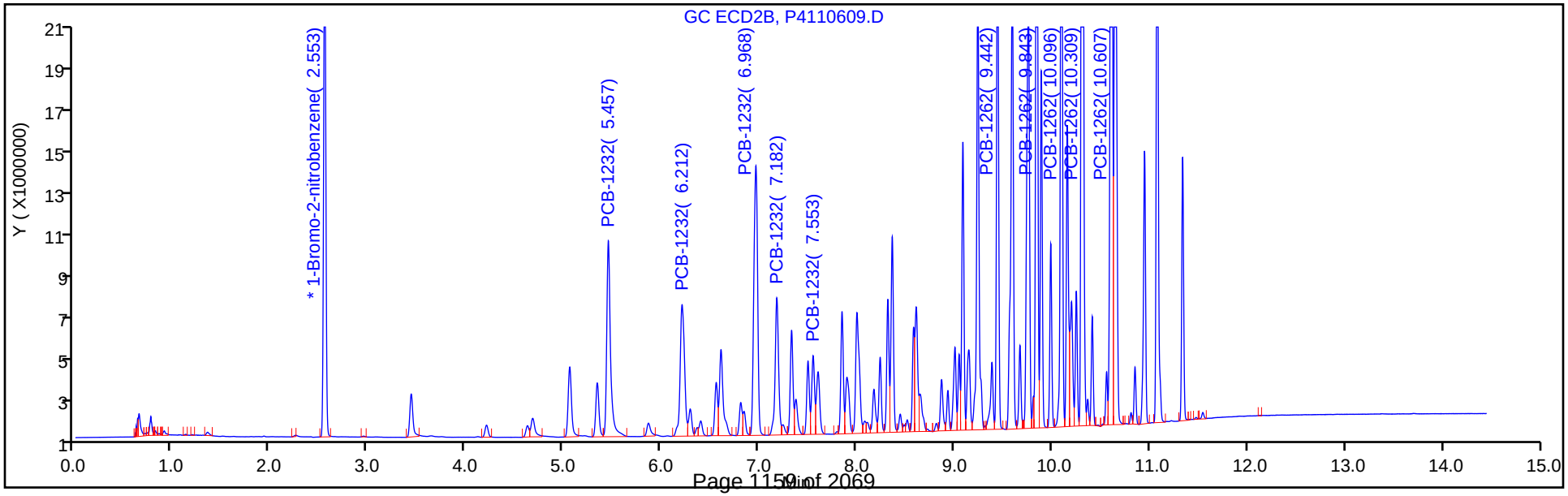
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110609.D

Injection Date:	06-Nov-2018 15:14:40	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std15 1232 1262			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 15:36 Calibration End Date: 11/06/2018 17:25 Calibration ID: 47829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/10	P4110610.D
Level 2	STD01 240-353863/11	P4110611.D
Level 3	STD02 240-353863/12	P4110612.D
Level 4	STD05 240-353863/13	P4110613.D
Level 5	STD1 240-353863/14	P4110614.D
Level 6	STD15 240-353863/15	P4110615.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1242 Peak 1	0.0171 0.0165	0.0168	0.0181	0.0171	0.0172	Ave		0.0171				3.1		20.0			
PCB-1242 Peak 2	0.0332 0.0272	0.0327	0.0312	0.0300	0.0292	Ave		0.0306				7.4		20.0			
PCB-1242 Peak 3	0.0637 0.0583	0.0642	0.0610	0.0597	0.0600	Ave		0.0611				3.8		20.0			
PCB-1242 Peak 4	0.0294 0.0266	0.0294	0.0291	0.0278	0.0277	Ave		0.0283				4.0		20.0			
PCB-1242 Peak 5	0.0133 0.0111	0.0126	0.0119	0.0115	0.0113	Ave		0.0119				7.2		20.0			
PCB-1268 Peak 1	0.1722 0.1508	0.1667	0.1495	0.1514	0.1491	Ave		0.1566				6.5		20.0			
PCB-1268 Peak 2	0.1710 0.1471	0.1635	0.1478	0.1480	0.1492	Ave		0.1544				6.6		20.0			
PCB-1268 Peak 3	0.1507 0.1285	0.1436	0.1277	0.1283	0.1287	Ave		0.1346				7.4		20.0			
PCB-1268 Peak 4	0.0599 0.0511	0.0580	0.0508	0.0507	0.0506	Ave		0.0535				8.0		20.0			
PCB-1268 Peak 5	0.4478 0.3854	0.4322	0.3872	0.3865	0.3843	Ave		0.4039				7.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 15:36 Calibration End Date: 11/06/2018 17:25 Calibration ID: 47829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/10	P4110610.D
Level 2	STD01 240-353863/11	P4110611.D
Level 3	STD02 240-353863/12	P4110612.D
Level 4	STD05 240-353863/13	P4110613.D
Level 5	STD1 240-353863/14	P4110614.D
Level 6	STD15 240-353863/15	P4110615.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1242 Peak 1	BNB	Ave	880559 24176603	1691340	3444983	8046033	15964749	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 2	BNB	Ave	1709320 39851507	3296863	5930469	14174219	27057474	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 3	BNB	Ave	3278541 85295411	6467802	11600095	28140640	55656963	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 4	BNB	Ave	1513810 38934937	2962857	5534493	13131811	25714211	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 5	BNB	Ave	685819 16182637	1267522	2256409	5421697	10491447	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 1	BNB	Ave	8862183 220789594	16790098	28457424	71440203	138257478	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 2	BNB	Ave	8802395 215258654	16467201	28121793	69799046	138362575	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 3	BNB	Ave	7758307 188129924	14464641	24309786	60541637	119410561	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 4	BNB	Ave	3083031 74741474	5846663	9668835	23925478	46976811	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 5	BNB	Ave	23047331 564058566	43535185	73692673	182347490	356479793	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110610.D
Lims ID: std005 1242 1268
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-Nov-2018 15:36:56 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-010
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub2

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:09:13 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:55:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.059	2.061	-0.001	51470422	0.0500	0.0500	
2	2.554	2.555	-0.001	43024421	0.0500	0.0500	
5 PCB-1242							Ma
1	4.111	4.111	0.000	880559	0.0500	0.0499	
1	4.834	4.834	0.000	1709320	0.0500	0.0543	
1	5.678	5.678	0.000	3278541	0.0500	0.0521	
1	5.900	5.900	0.000	1513810	0.0500	0.0519	
1	6.318	6.318	0.000	685819	0.0500	0.0558	M
		Average of Peak Amounts =				0.0528	
2	5.459	5.459	0.000	724288	0.0500	0.0507	
2	6.214	6.214	0.000	1302620	0.0500	0.0529	
2	6.972	6.972	0.000	2572175	0.0500	0.0539	
2	7.188	7.188	0.000	1030859	0.0500	0.0505	
2	7.558	7.558	0.000	659845	0.0500	0.0558	
		Average of Peak Amounts =				0.0528	
					RPD =	0.03	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.746	9.746	0.000	8862183	0.0500	0.0550	
1	9.779	9.779	0.000	8802395	0.0500	0.0554	
1	9.944	9.944	0.000	7758307	0.0500	0.0560	
1	10.243	10.243	0.000	3083031	0.0500	0.0560	
1	10.476	10.476	0.000	23047331	0.0500	0.0554	
		Average of Peak Amounts =				0.0555	
2	10.609	10.609	0.000	6543650	0.0500	0.0577	
2	10.648	10.648	0.000	6673959	0.0500	0.0583	
2	10.854	10.854	0.000	5686614	0.0500	0.0577	
2	11.082	11.082	0.000	2444628	0.0500	0.0586	
2	11.342	11.342	0.000	17246016	0.0500	0.0547	
		Average of Peak Amounts =				0.0574	
						RPD = 3.26	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SG4268@.05PPM_00014 Amount Added: 1.00 Units: mL

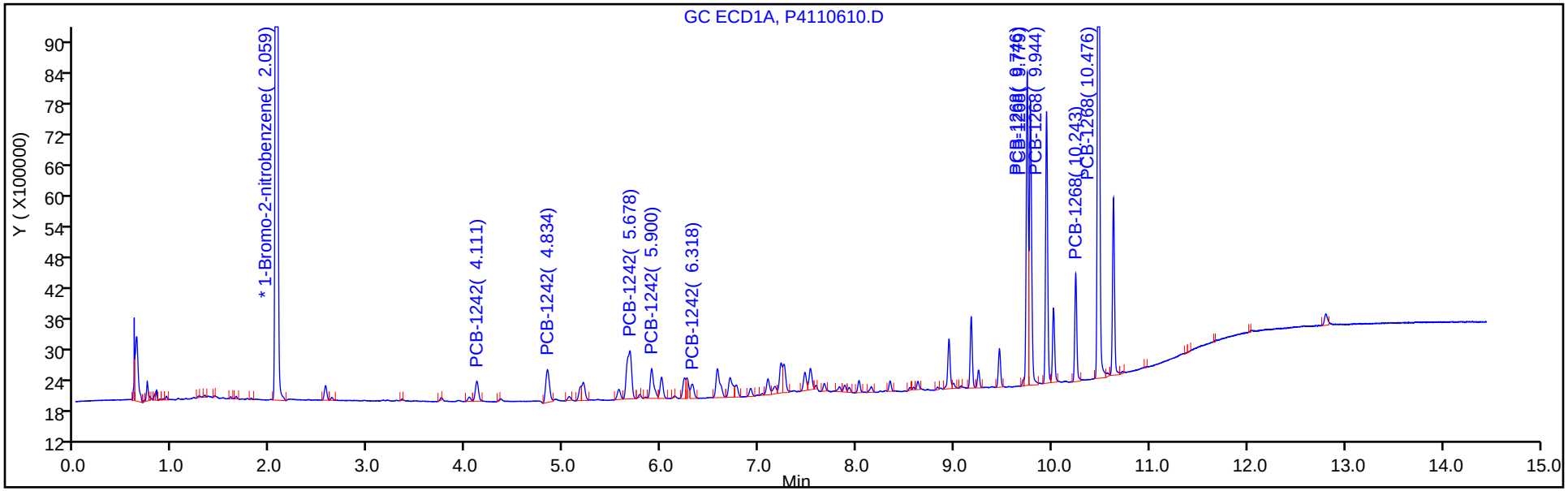
Report Date: 07-Nov-2018 11:09:16 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

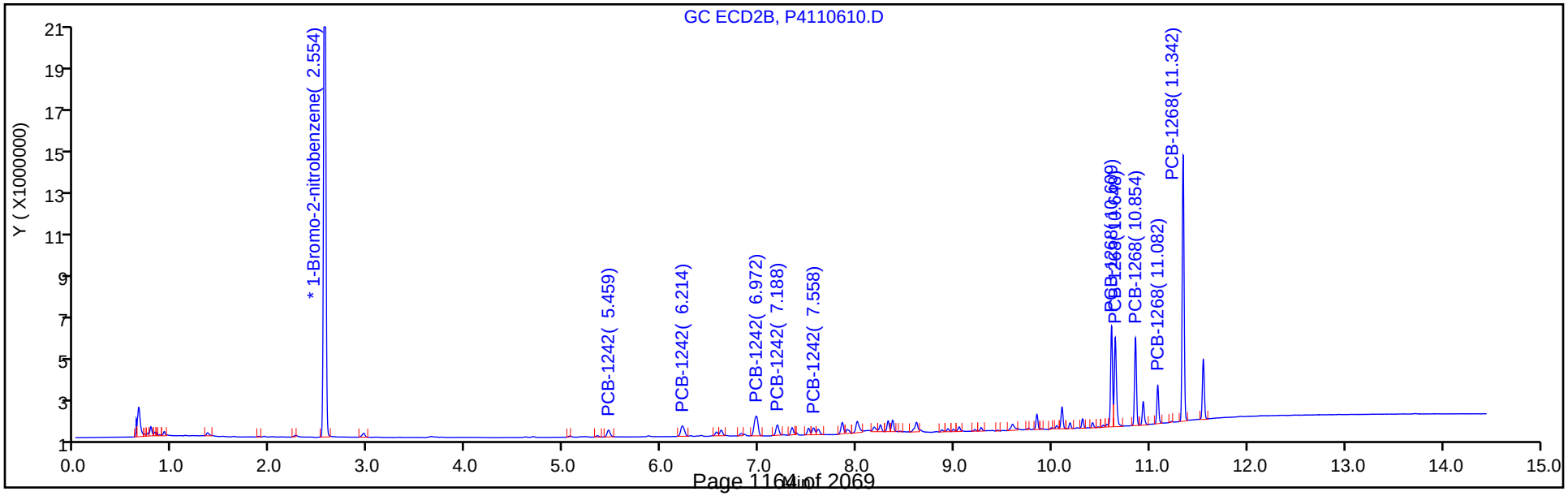
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110610.D

Injection Date:	06-Nov-2018 15:36:56	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std005 1242 1268			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 07-Nov-2018 11:09:16 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110610.D

Injection Date: 06-Nov-2018 15:36:56 Instrument ID: A2HP4

Lims ID: std005 1242 1268

Client ID:

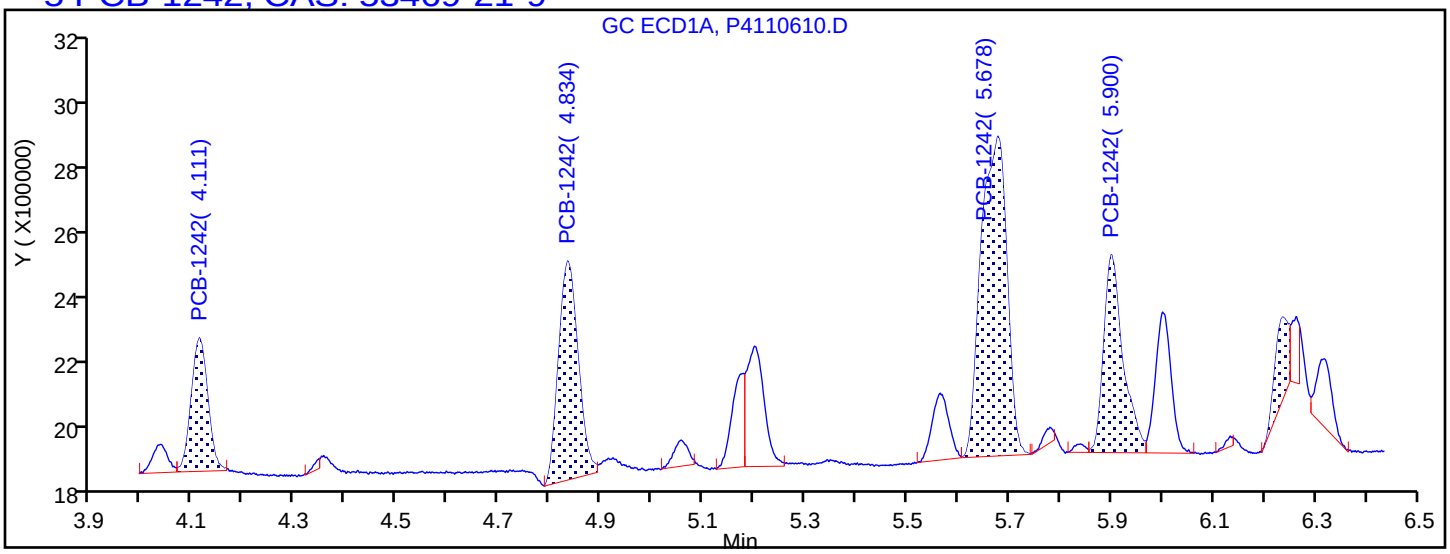
Operator ID: ALS Bottle#: 10 Worklist Smp#: 10

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB4 is Limit Group: GC 8082A IS

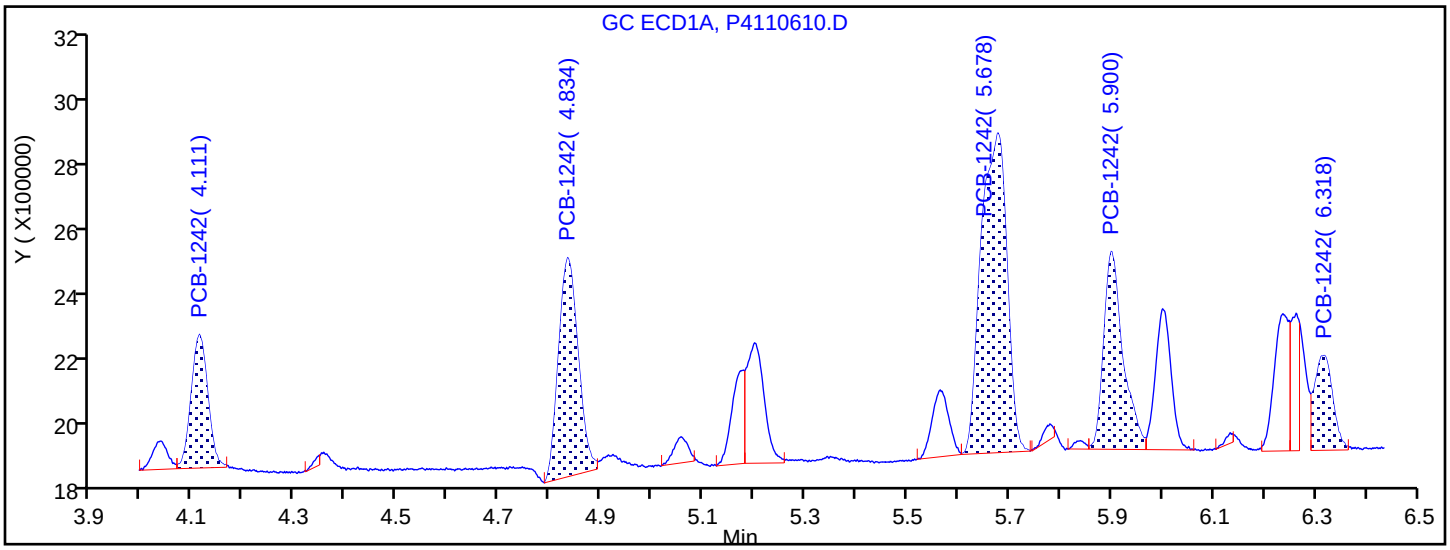
Column: Detector GC ECD1A

5 PCB-1242, CAS: 53469-21-9



Processing Integration Results

4.111	Response = 880559
4.834	Response = 1709320
5.678	Response = 3278541
5.900	Response = 1513810
6.237	Response = 446981



Manual Integration Results

4.111	Response = 880559	
4.834	Response = 1709320	
5.678	Response = 3278541	
5.900	Response = 1513810	
6.318	Response = 685819	M

Reviewer: hassl, 07-Nov-2018 05:54:57

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110611.D
Lims ID: std01 1242 1268
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-Nov-2018 15:59:09 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-011
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub2

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:08:54 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:55:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.001	50368753	0.0500	0.0500	
2	2.555	2.555	0.000	42089293	0.0500	0.0500	
5 PCB-1242							
1	4.113	4.111	0.002	1691340	0.1000	0.0980	
1	4.834	4.834	0.000	3296863	0.1000	0.1070	
1	5.677	5.678	-0.001	6467802	0.1000	0.1050	
1	5.900	5.900	0.000	2962857	0.1000	0.1038	
1	6.317	6.318	-0.001	1267522	0.1000	0.1054	
		Average of Peak Amounts =				0.1038	
2	5.460	5.459	0.001	1438457	0.1000	0.1029	
2	6.214	6.214	0.000	2539001	0.1000	0.1055	
2	6.973	6.972	0.001	4844323	0.1000	0.1038	
2	7.186	7.188	-0.002	1988197	0.1000	0.0996	
2	7.558	7.558	0.000	1228355	0.1000	0.1063	
		Average of Peak Amounts =				0.1036	
						RPD = 0.21	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.745	9.746	-0.001	16790098	0.1000	0.1064	
1	9.780	9.779	0.001	16467201	0.1000	0.1059	
1	9.944	9.944	0.000	14464641	0.1000	0.1067	
1	10.243	10.243	0.000	5846663	0.1000	0.1084	
1	10.475	10.476	-0.001	43535185	0.1000	0.1070	
		Average of Peak Amounts =				0.1069	
2	10.610	10.609	0.001	11895534	0.1000	0.1072	
2	10.647	10.648	-0.001	12174833	0.1000	0.1087	
2	10.855	10.854	0.001	10449315	0.1000	0.1083	
2	11.082	11.082	0.000	4490622	0.1000	0.1100	
2	11.342	11.342	0.000	32294489	0.1000	0.1047	
		Average of Peak Amounts =				0.1078	
						RPD = 0.84	

Reagents:

SG4268@.1PPM_00014 Amount Added: 1.00 Units: mL

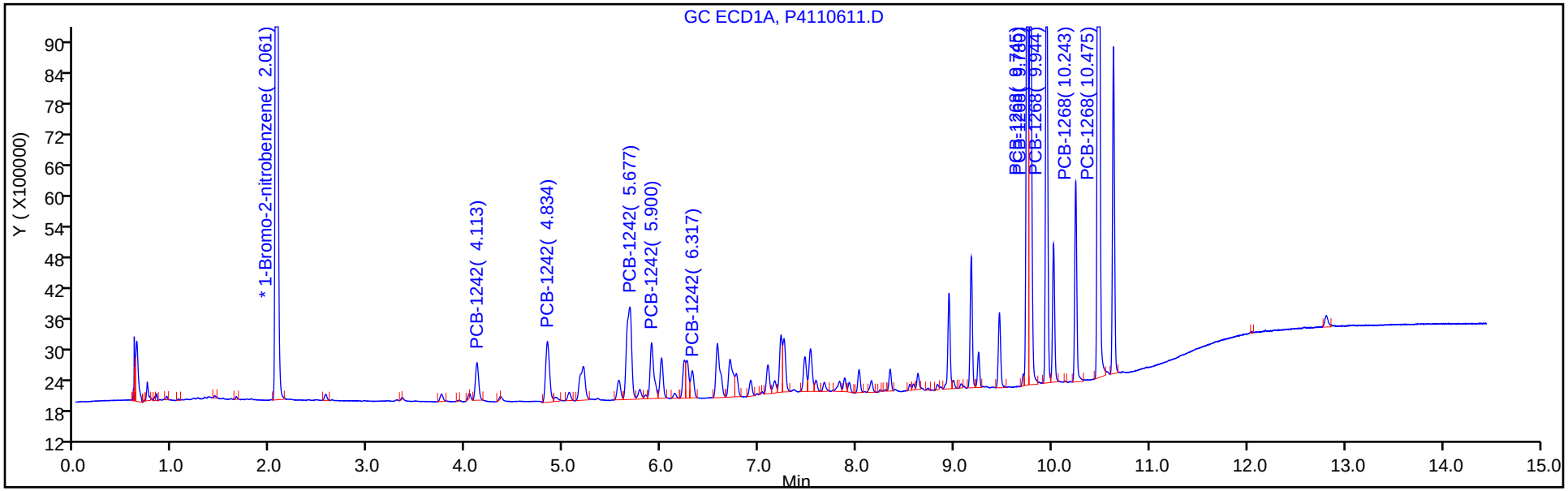
Report Date: 07-Nov-2018 11:08:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

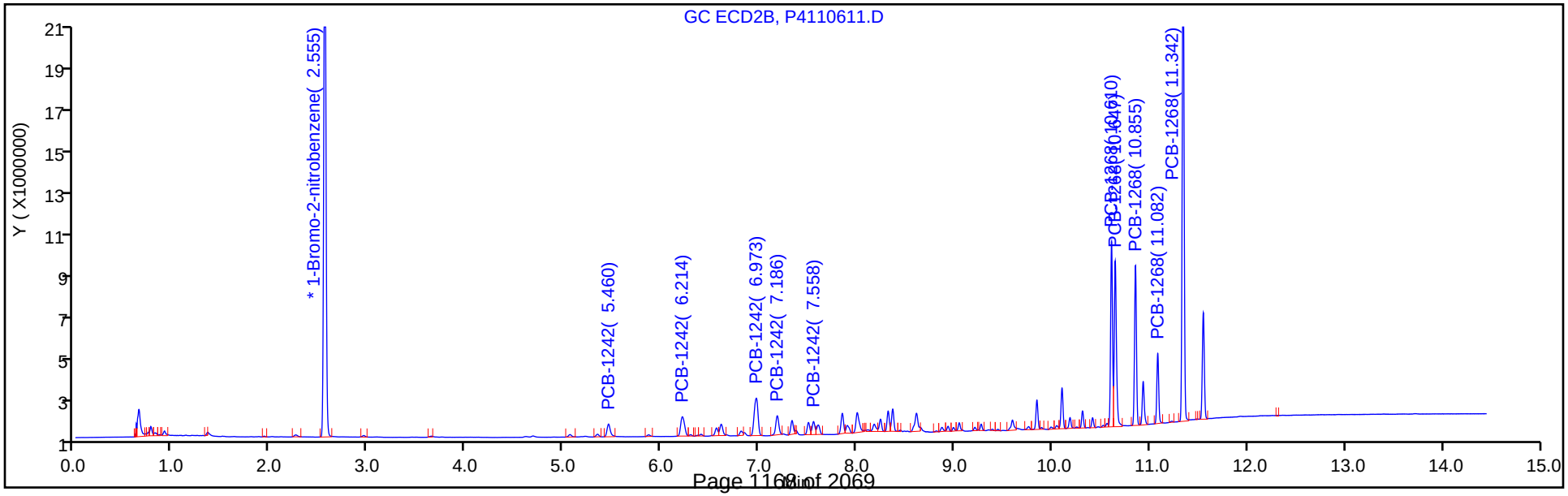
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110611.D

Injection Date:	06-Nov-2018 15:59:09	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std01 1242 1268			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110612.D
Lims ID: std02 1242 1268
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 06-Nov-2018 16:20:58 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-012
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub2

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:08:45 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:56:15

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.001	47578833	0.0500	0.0500	
2	2.555	2.555	0.001	39763746	0.0500	0.0500	
5 PCB-1242							
1	4.114	4.111	0.003	3444983	0.2000	0.2113	
1	4.835	4.834	0.001	5930469	0.2000	0.2037	
1	5.680	5.678	0.002	11600095	0.2000	0.1994	
1	5.904	5.900	0.004	5534493	0.2000	0.2052	
1	6.318	6.318	0.000	2256409	0.2000	0.1986	
		Average of Peak Amounts =				0.2037	
2	5.462	5.459	0.003	2773084	0.2000	0.2100	
2	6.219	6.214	0.005	4718961	0.2000	0.2075	
2	6.974	6.972	0.002	8676328	0.2000	0.1968	
2	7.190	7.188	0.002	3880313	0.2000	0.2058	
2	7.561	7.558	0.003	2262316	0.2000	0.2071	
		Average of Peak Amounts =				0.2054	
						RPD = 0.87	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.750	9.746	0.004	28457424	0.2000	0.1909	
1	9.784	9.779	0.005	28121793	0.2000	0.1914	
1	9.949	9.944	0.005	24309786	0.2000	0.1898	
1	10.248	10.243	0.005	9668835	0.2000	0.1898	
1	10.481	10.476	0.005	73692673	0.2000	0.1917	
		Average of Peak Amounts =				0.1907	
2	10.615	10.609	0.006	19815010	0.2000	0.1889	
2	10.653	10.648	0.005	20029482	0.2000	0.1892	
2	10.860	10.854	0.006	17228654	0.2000	0.1890	
2	11.087	11.082	0.005	7426782	0.2000	0.1926	
2	11.348	11.342	0.006	54137020	0.2000	0.1858	
		Average of Peak Amounts =				0.1891	
						RPD = 0.85	

Reagents:

SG4268@.2PPM_00014 Amount Added: 1.00 Units: mL

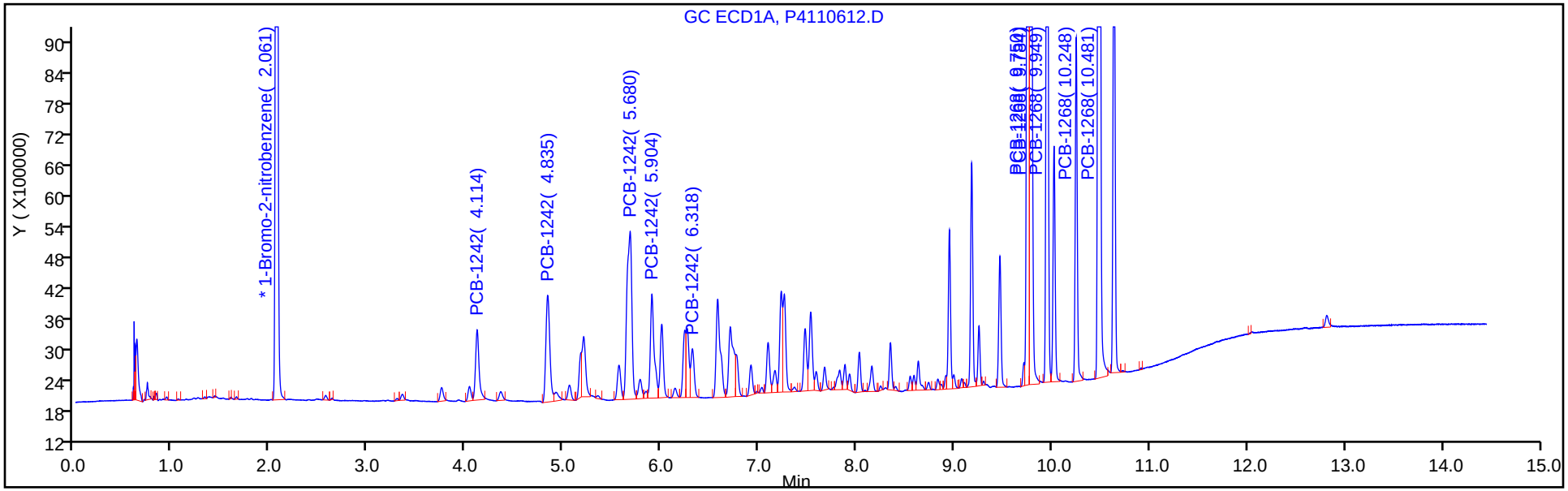
Report Date: 07-Nov-2018 11:08:47 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

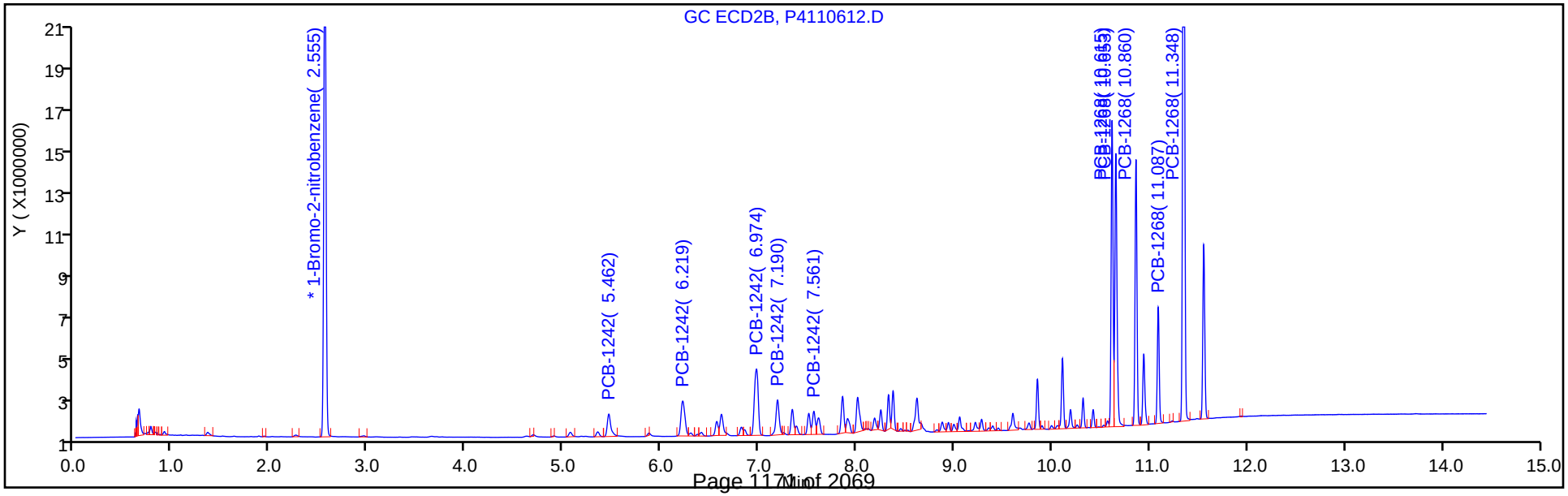
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110612.D

Injection Date:	06-Nov-2018 16:20:58	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std02 1242 1268			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110613.D
Lims ID: std05 1242 1268
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 06-Nov-2018 16:42:39 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-013
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub2

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:08:33 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:56:39

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.062	2.061	0.002	47173971	0.0500	0.0500	
2	2.556	2.555	0.002	39075729	0.0500	0.0500	
5 PCB-1242							
1	4.114	4.111	0.003	8046033	0.5000	0.4978	
1	4.835	4.834	0.001	14174219	0.5000	0.4911	
1	5.679	5.678	0.001	28140640	0.5000	0.4879	
1	5.902	5.900	0.002	13131811	0.5000	0.4911	
1	6.316	6.318	-0.002	5421697	0.5000	0.4814	
		Average of Peak Amounts =				0.4899	
2	5.461	5.459	0.002	6281304	0.5000	0.4841	
2	6.216	6.214	0.002	10997589	0.5000	0.4920	
2	6.975	6.972	0.003	21144011	0.5000	0.4881	
2	7.189	7.188	0.001	9374657	0.5000	0.5060	
2	7.559	7.558	0.001	5158437	0.5000	0.4806	
		Average of Peak Amounts =				0.4902	
						RPD = 0.06	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.747	9.746	0.001	71440203	0.5000	0.4835	
1	9.781	9.779	0.002	69799046	0.5000	0.4791	
1	9.946	9.944	0.002	60541637	0.5000	0.4767	
1	10.245	10.243	0.002	23925478	0.5000	0.4737	
1	10.478	10.476	0.002	182347490	0.5000	0.4785	
		Average of Peak Amounts =				0.4783	
2	10.611	10.609	0.002	48076851	0.5000	0.4665	
2	10.649	10.648	0.001	48459581	0.5000	0.4659	
2	10.856	10.854	0.002	41725648	0.5000	0.4659	
2	11.085	11.082	0.003	17616971	0.5000	0.4649	
2	11.345	11.342	0.003	135335804	0.5000	0.4727	
		Average of Peak Amounts =				0.4672	
						RPD = 2.35	

Reagents:

SG4268@0.5PPM_00030 Amount Added: 1.00 Units: mL

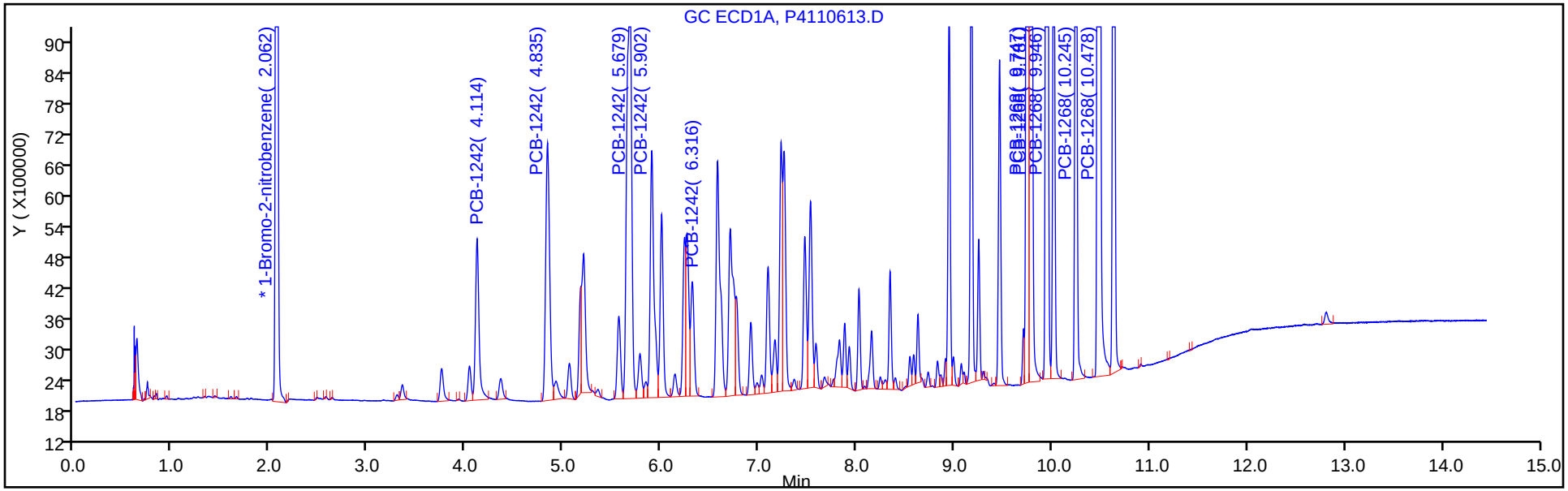
Report Date: 07-Nov-2018 11:08:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

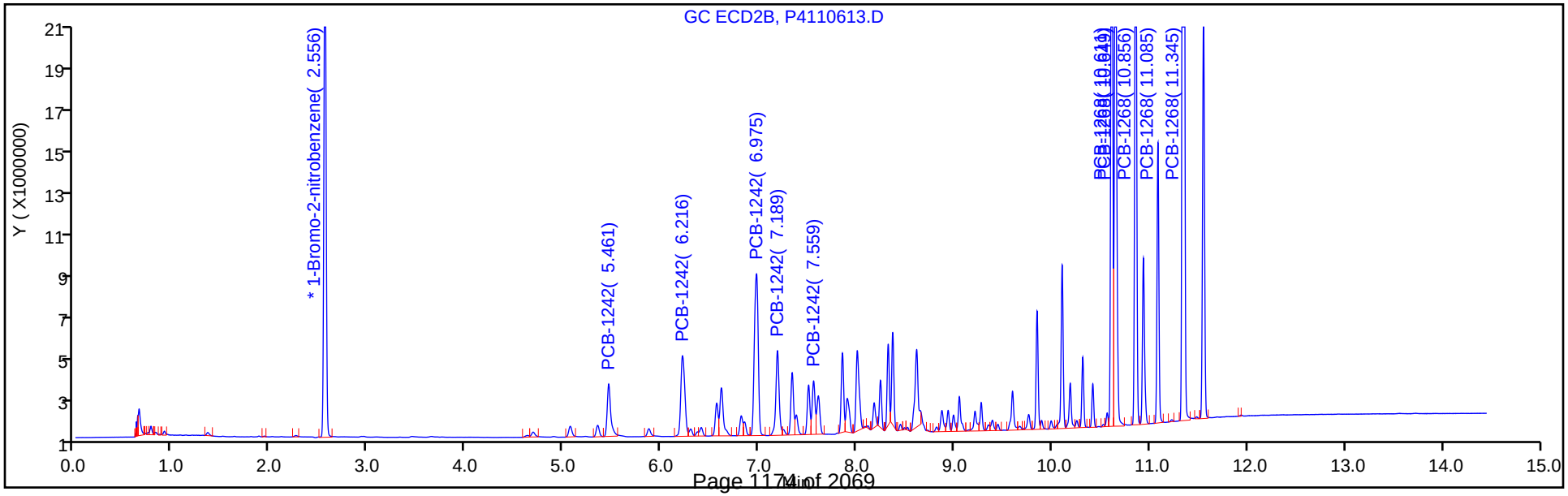
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110613.D

Injection Date:	06-Nov-2018 16:42:39	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std05 1242 1268			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110614.D
Lims ID: std1 1242 1268
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-Nov-2018 17:04:08 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-014
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub2

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:08:25 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:57:13

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.063	2.061	0.002	46376721	0.0500	0.0500	
2	2.557	2.555	0.002	38571706	0.0500	0.0500	
5 PCB-1242							
1	4.114	4.111	0.003	15964749	1.00	1.00	
1	4.837	4.834	0.003	27057474	1.00	0.9536	
1	5.681	5.678	0.003	55656963	1.00	0.9816	
1	5.903	5.900	0.003	25714211	1.00	0.9781	
1	6.318	6.318	0.000	10491447	1.00	0.9475	
		Average of Peak Amounts =				0.9731	
2	5.462	5.459	0.003	12856775	1.00	1.00	
2	6.219	6.214	0.005	21236751	1.00	0.9625	
2	6.973	6.972	0.001	41691513	1.00	0.9749	
2	7.188	7.188	0.000	18335776	1.00	1.00	
2	7.559	7.558	0.001	9971535	1.00	0.9412	
		Average of Peak Amounts =				0.9770	
						RPD = 0.40	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							M
1	9.747	9.746	0.001	138257478	1.00	0.9517	M
1	9.781	9.779	0.002	138362575	1.00	0.9661	M
1	9.946	9.944	0.002	119410561	1.00	0.9564	M
1	10.244	10.243	0.001	46976811	1.00	0.9462	
1	10.479	10.476	0.003	356479793	1.00	0.9515	
		Average of Peak Amounts =				0.9544	
2	10.612	10.609	0.003	95889655	1.00	0.9426	
2	10.650	10.648	0.002	95211832	1.00	0.9273	
2	10.857	10.854	0.003	82772862	1.00	0.9363	
2	11.085	11.082	0.003	34227065	1.00	0.9151	
2	11.346	11.342	0.004	275451114	1.00	0.9747	
		Average of Peak Amounts =				0.9392	
						RPD = 1.61	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG42/68@1.0PP_00023 Amount Added: 1.00 Units: mL

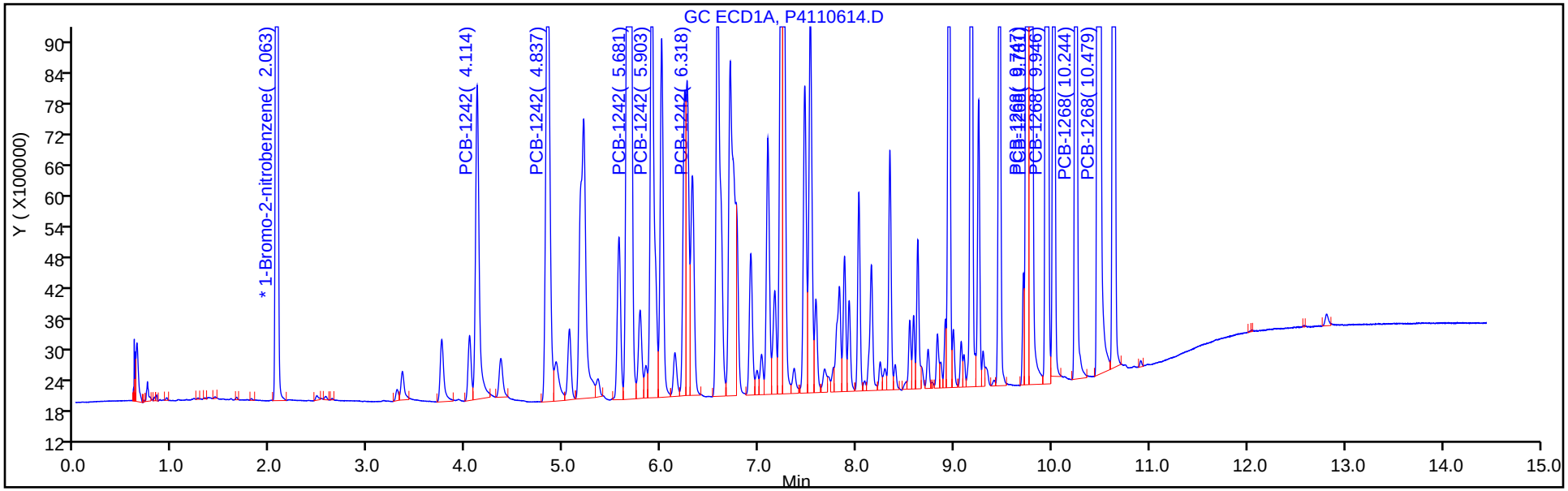
Report Date: 07-Nov-2018 11:08:27 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

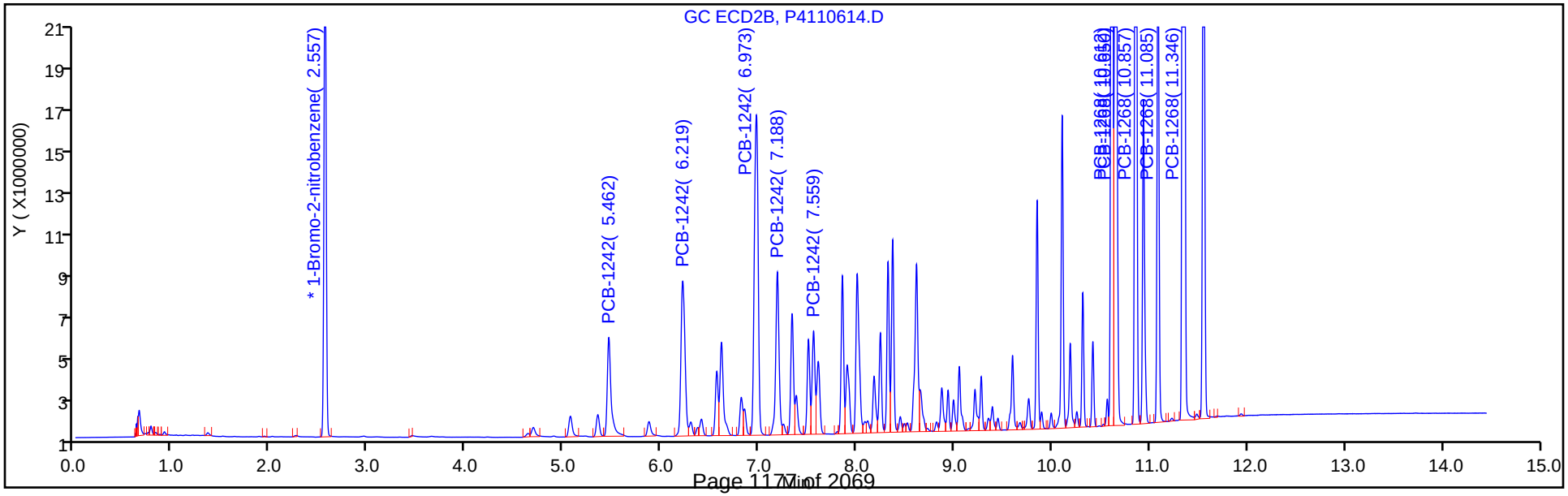
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110614.D

Injection Date:	06-Nov-2018 17:04:08	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std1 1242 1268			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 07-Nov-2018 11:08:27 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110614.D

Injection Date: 06-Nov-2018 17:04:08 Instrument ID: A2HP4

Lims ID: std1 1242 1268

Client ID:

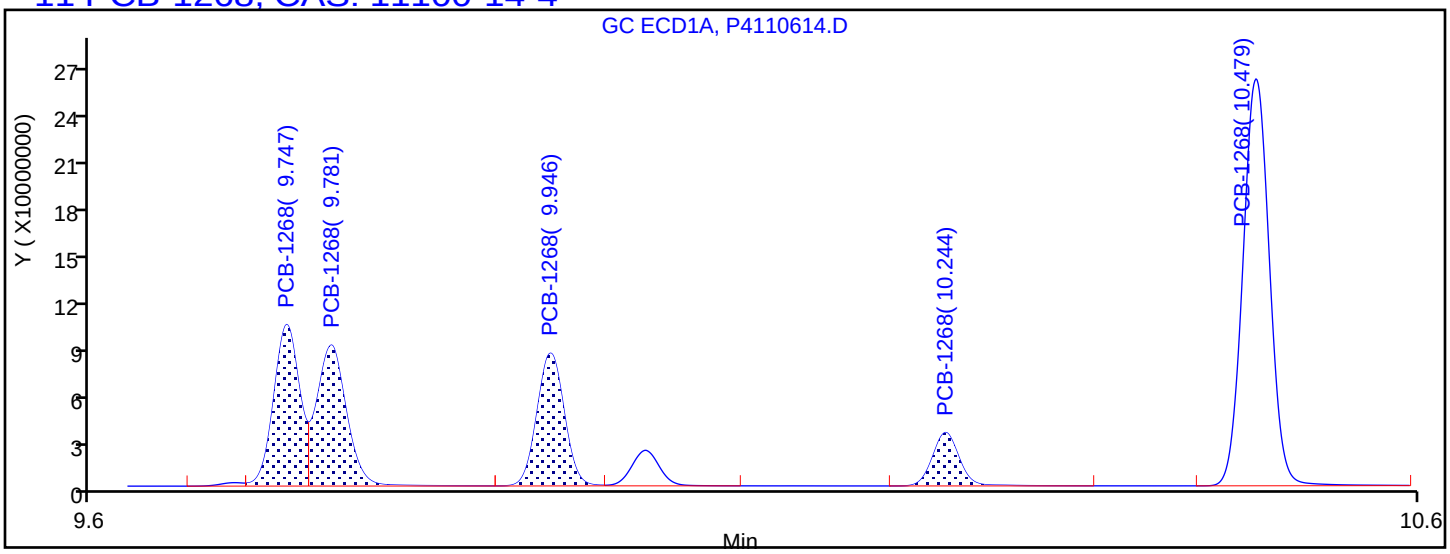
Operator ID: ALS Bottle#: 14 Worklist Smp#: 14

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB4 is Limit Group: GC 8082A IS

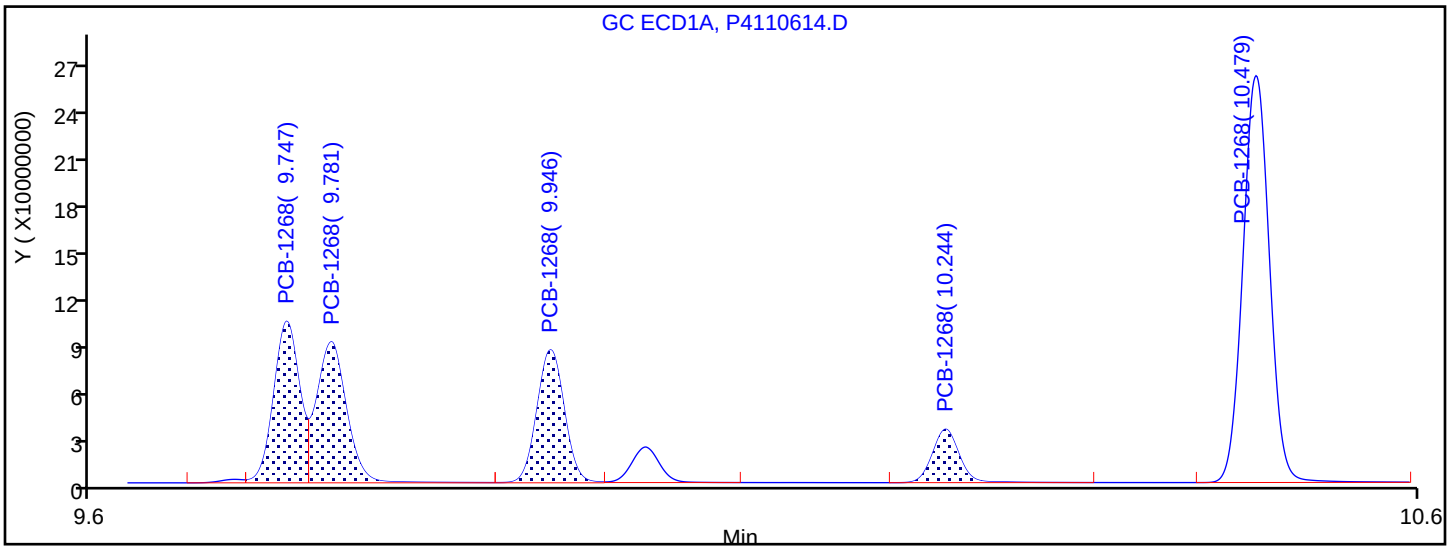
Column: Detector GC ECD1A

11 PCB-1268, CAS: 11100-14-4



Processing Integration Results

9.747	Response = 138178315
9.781	Response = 137968725
9.946	Response = 118914274
10.244	Response = 46976811
10.479	Response = 356479793



Manual Integration Results

9.747	Response = 138257478	M
9.781	Response = 138362575	M
9.946	Response = 119410561	M
10.244	Response = 46976811	
10.479	Response = 356479793	

Reviewer: hassl, 07-Nov-2018 05:57:08

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110615.D
Lims ID: std15 1242 1268
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-Nov-2018 17:25:47 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-015
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub2

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:08:17 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:01:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.064	2.061	0.003	48788161	0.0500	0.0500	
2	2.558	2.555	0.003	40670195	0.0500	0.0500	
5 PCB-1242							
1	4.114	4.111	0.003	24176603	1.50	1.45	
1	4.836	4.834	0.002	39851507	1.50	1.34	
1	5.676	5.678	-0.002	85295411	1.50	1.43	
1	5.898	5.900	-0.002	38934937	1.50	1.41	
1	6.315	6.318	-0.003	16182637	1.50	1.39	
		Average of Peak Amounts =				1.40	
2	5.461	5.459	0.002	18936439	1.50	1.40	
2	6.215	6.214	0.001	31514417	1.50	1.35	
2	6.972	6.972	0.000	64143259	1.50	1.42	
2	7.187	7.188	-0.001	27450862	1.50	1.42	
2	7.560	7.558	0.002	14791495	1.50	1.32	
		Average of Peak Amounts =				1.39	
						RPD = 1.17	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.747	9.746	0.001	220789594	1.50	1.44	
1	9.780	9.779	0.001	215258654	1.50	1.43	
1	9.946	9.944	0.002	188129924	1.50	1.43	
1	10.243	10.243	0.000	74741474	1.50	1.43	
1	10.478	10.476	0.002	564058566	1.50	1.43	
		Average of Peak Amounts =				1.43	
2	10.611	10.609	0.002	153637114	1.50	1.43	
2	10.650	10.648	0.002	153128778	1.50	1.41	
2	10.856	10.854	0.002	132871879	1.50	1.43	
2	11.084	11.082	0.002	54413377	1.50	1.38	
2	11.345	11.342	0.003	451128363	1.50	1.51	
		Average of Peak Amounts =				1.43	
						RPD = 0.03	

Reagents:

SG4268@1.5PPM_00005 Amount Added: 1.00 Units: mL

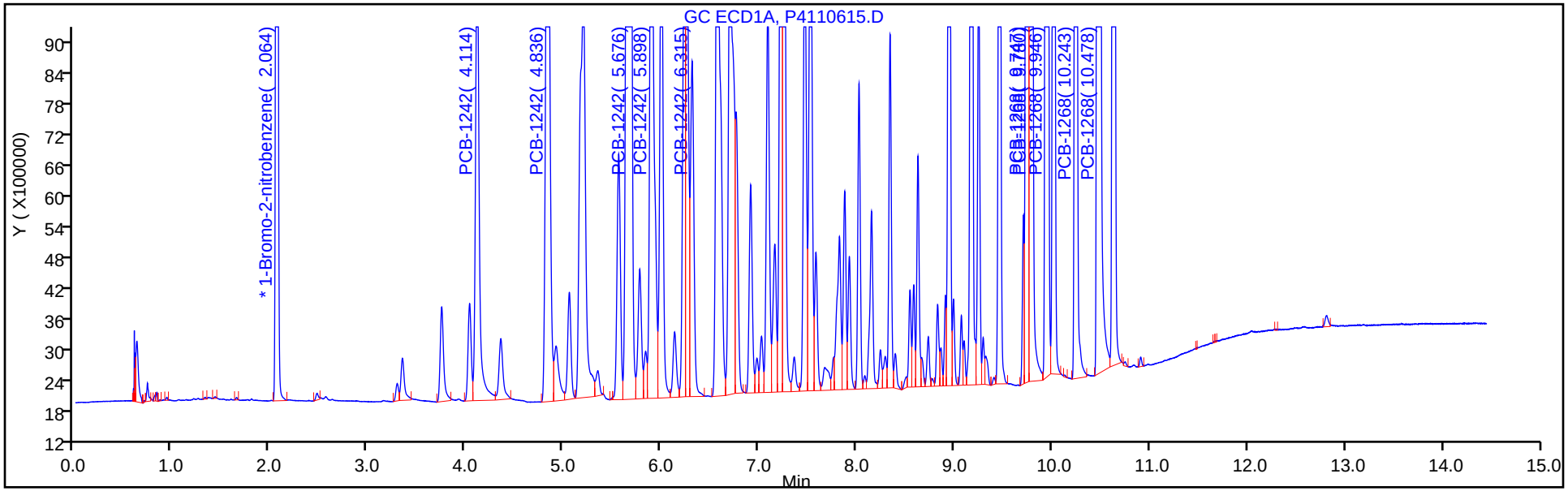
Report Date: 07-Nov-2018 11:08:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

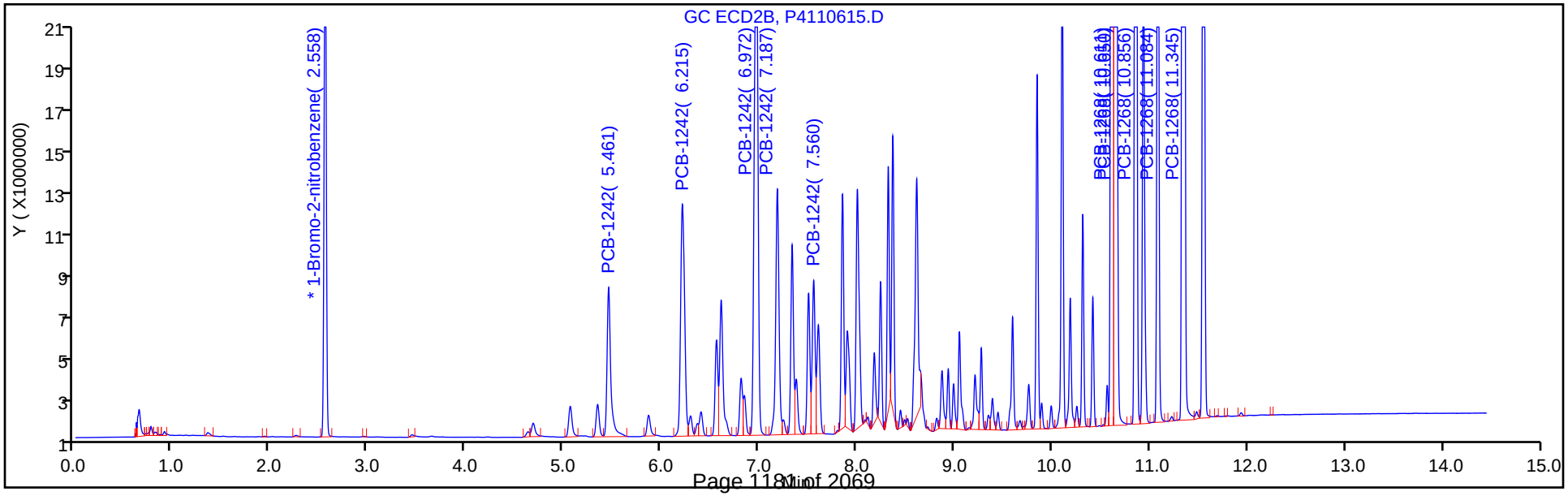
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110615.D

Injection Date:	06-Nov-2018 17:25:47	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std15 1242 1268			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 15:36 Calibration End Date: 11/06/2018 17:25 Calibration ID: 47830

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/10	P4110610.D
Level 2	STD01 240-353863/11	P4110611.D
Level 3	STD02 240-353863/12	P4110612.D
Level 4	STD05 240-353863/13	P4110613.D
Level 5	STD1 240-353863/14	P4110614.D
Level 6	STD15 240-353863/15	P4110615.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1242 Peak 1	0.0168 0.0155	0.0171	0.0174	0.0161	0.0167	Ave		0.0166				4.2		20.0			
PCB-1242 Peak 2	0.0303 0.0258	0.0302	0.0297	0.0281	0.0275	Ave		0.0286				6.1		20.0			
PCB-1242 Peak 3	0.0598 0.0526	0.0575	0.0545	0.0541	0.0540	Ave		0.0554				4.8		20.0			
PCB-1242 Peak 4	0.0240 0.0225	0.0236	0.0244	0.0240	0.0238	Ave		0.0237				2.7		20.0			
PCB-1242 Peak 5	0.0153 0.0121	0.0146	0.0142	0.0132	0.0129	Ave		0.0137				8.7		20.0			
PCB-1268 Peak 1	0.1521 0.1259	0.1413	0.1246	0.1230	0.1243	Ave		0.1319				9.1		20.0			
PCB-1268 Peak 2	0.1551 0.1255	0.1446	0.1259	0.1240	0.1234	Ave		0.1331				10.1		20.0			
PCB-1268 Peak 3	0.1322 0.1089	0.1241	0.1083	0.1068	0.1073	Ave		0.1146				9.4		20.0			
PCB-1268 Peak 4	0.0568 0.0446	0.0533	0.0467	0.0451	0.0444	Ave		0.0485				10.9		20.0			
PCB-1268 Peak 5	0.4008 0.3697	0.3836	0.3404	0.3463	0.3571	Ave		0.3663				6.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 15:36 Calibration End Date: 11/06/2018 17:25 Calibration ID: 47830

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/10	P4110610.D
Level 2	STD01 240-353863/11	P4110611.D
Level 3	STD02 240-353863/12	P4110612.D
Level 4	STD05 240-353863/13	P4110613.D
Level 5	STD1 240-353863/14	P4110614.D
Level 6	STD15 240-353863/15	P4110615.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1242 Peak 1	BNB	Ave	724288 18936439	1438457	2773084	6281304	12856775	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 2	BNB	Ave	1302620 31514417	2539001	4718961	10997589	21236751	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 3	BNB	Ave	2572175 64143259	4844323	8676328	21144011	41691513	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 4	BNB	Ave	1030859 27450862	1988197	3880313	9374657	18335776	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 5	BNB	Ave	659845 14791495	1228355	2262316	5158437	9971535	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 1	BNB	Ave	6543650 153637114	11895534	19815010	48076851	95889655	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 2	BNB	Ave	6673959 153128778	12174833	20029482	48459581	95211832	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 3	BNB	Ave	5686614 132871879	10449315	17228654	41725648	82772862	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 4	BNB	Ave	2444628 54413377	4490622	7426782	17616971	34227065	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 5	BNB	Ave	17246016 451128363	32294489	54137020	135335804	275451114	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110610.D
Lims ID: std005 1242 1268
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-Nov-2018 15:36:56 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-010
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub2

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:09:13 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:55:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.059	2.061	-0.001	51470422	0.0500	0.0500	
2	2.554	2.555	-0.001	43024421	0.0500	0.0500	
5 PCB-1242							Ma
1	4.111	4.111	0.000	880559	0.0500	0.0499	
1	4.834	4.834	0.000	1709320	0.0500	0.0543	
1	5.678	5.678	0.000	3278541	0.0500	0.0521	
1	5.900	5.900	0.000	1513810	0.0500	0.0519	
1	6.318	6.318	0.000	685819	0.0500	0.0558	M
		Average of Peak Amounts =				0.0528	
2	5.459	5.459	0.000	724288	0.0500	0.0507	
2	6.214	6.214	0.000	1302620	0.0500	0.0529	
2	6.972	6.972	0.000	2572175	0.0500	0.0539	
2	7.188	7.188	0.000	1030859	0.0500	0.0505	
2	7.558	7.558	0.000	659845	0.0500	0.0558	
		Average of Peak Amounts =				0.0528	
					RPD =	0.03	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.746	9.746	0.000	8862183	0.0500	0.0550	
1	9.779	9.779	0.000	8802395	0.0500	0.0554	
1	9.944	9.944	0.000	7758307	0.0500	0.0560	
1	10.243	10.243	0.000	3083031	0.0500	0.0560	
1	10.476	10.476	0.000	23047331	0.0500	0.0554	
		Average of Peak Amounts =				0.0555	
2	10.609	10.609	0.000	6543650	0.0500	0.0577	
2	10.648	10.648	0.000	6673959	0.0500	0.0583	
2	10.854	10.854	0.000	5686614	0.0500	0.0577	
2	11.082	11.082	0.000	2444628	0.0500	0.0586	
2	11.342	11.342	0.000	17246016	0.0500	0.0547	
		Average of Peak Amounts =				0.0574	
						RPD = 3.26	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SG4268@.05PPM_00014 Amount Added: 1.00 Units: mL

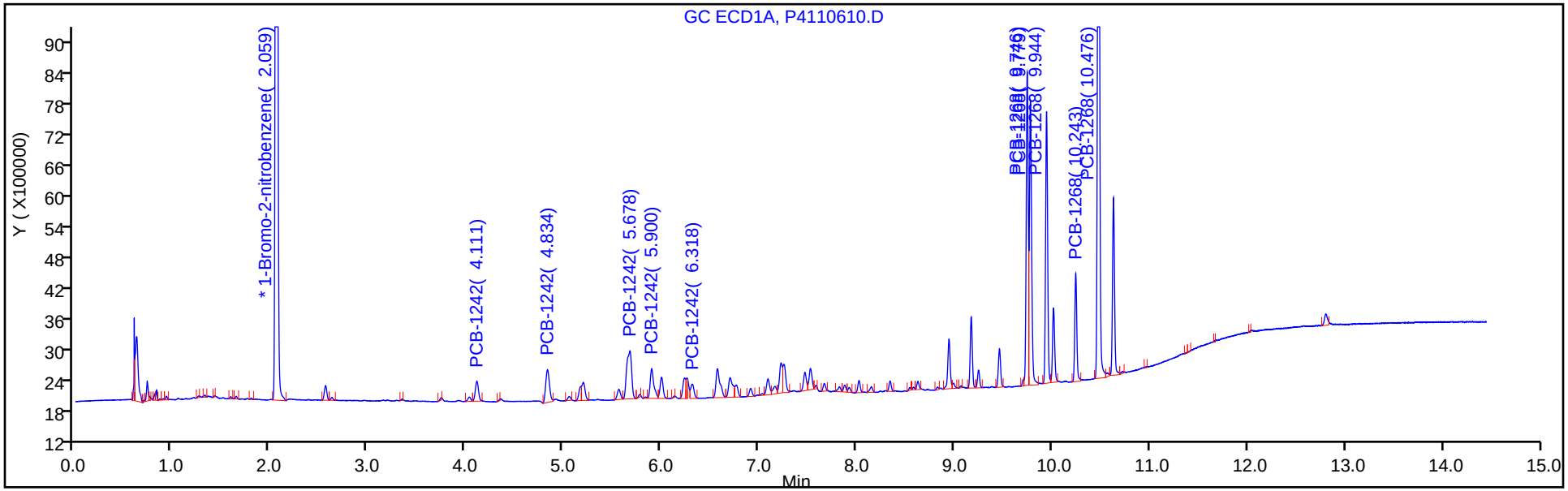
Report Date: 07-Nov-2018 11:09:17 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

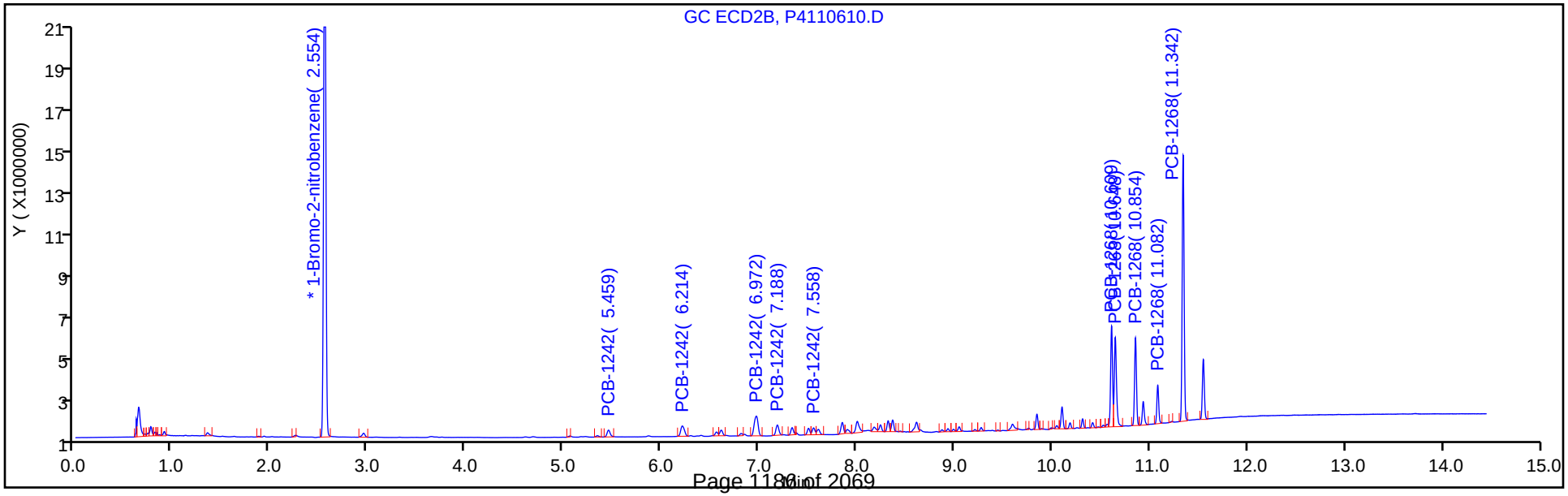
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110610.D

Injection Date:	06-Nov-2018 15:36:56	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std005 1242 1268			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110611.D
Lims ID: std01 1242 1268
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-Nov-2018 15:59:09 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-011
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub2

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:08:54 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:55:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.001	50368753	0.0500	0.0500	
2	2.555	2.555	0.000	42089293	0.0500	0.0500	
5 PCB-1242							
1	4.113	4.111	0.002	1691340	0.1000	0.0980	
1	4.834	4.834	0.000	3296863	0.1000	0.1070	
1	5.677	5.678	-0.001	6467802	0.1000	0.1050	
1	5.900	5.900	0.000	2962857	0.1000	0.1038	
1	6.317	6.318	-0.001	1267522	0.1000	0.1054	
		Average of Peak Amounts =				0.1038	
2	5.460	5.459	0.001	1438457	0.1000	0.1029	
2	6.214	6.214	0.000	2539001	0.1000	0.1055	
2	6.973	6.972	0.001	4844323	0.1000	0.1038	
2	7.186	7.188	-0.002	1988197	0.1000	0.0996	
2	7.558	7.558	0.000	1228355	0.1000	0.1063	
		Average of Peak Amounts =				0.1036	
						RPD = 0.21	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.745	9.746	-0.001	16790098	0.1000	0.1064	
1	9.780	9.779	0.001	16467201	0.1000	0.1059	
1	9.944	9.944	0.000	14464641	0.1000	0.1067	
1	10.243	10.243	0.000	5846663	0.1000	0.1084	
1	10.475	10.476	-0.001	43535185	0.1000	0.1070	
		Average of Peak Amounts =				0.1069	
2	10.610	10.609	0.001	11895534	0.1000	0.1072	
2	10.647	10.648	-0.001	12174833	0.1000	0.1087	
2	10.855	10.854	0.001	10449315	0.1000	0.1083	
2	11.082	11.082	0.000	4490622	0.1000	0.1100	
2	11.342	11.342	0.000	32294489	0.1000	0.1047	
		Average of Peak Amounts =				0.1078	
						RPD = 0.84	

Reagents:

SG4268@.1PPM_00014 Amount Added: 1.00 Units: mL

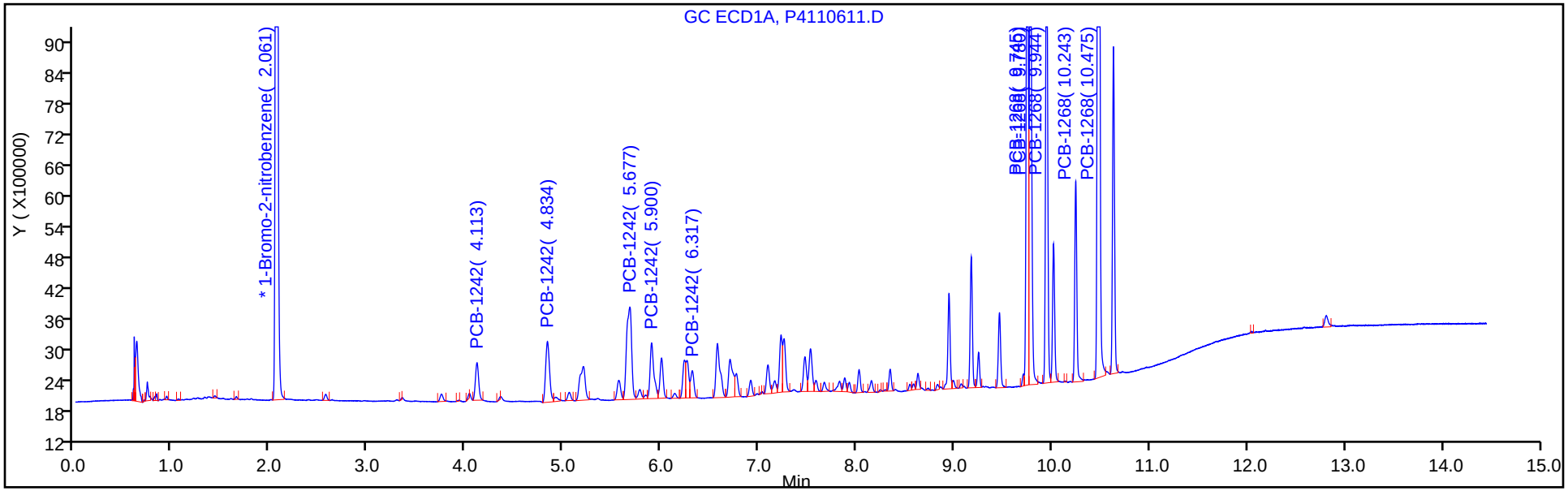
Report Date: 07-Nov-2018 11:08:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

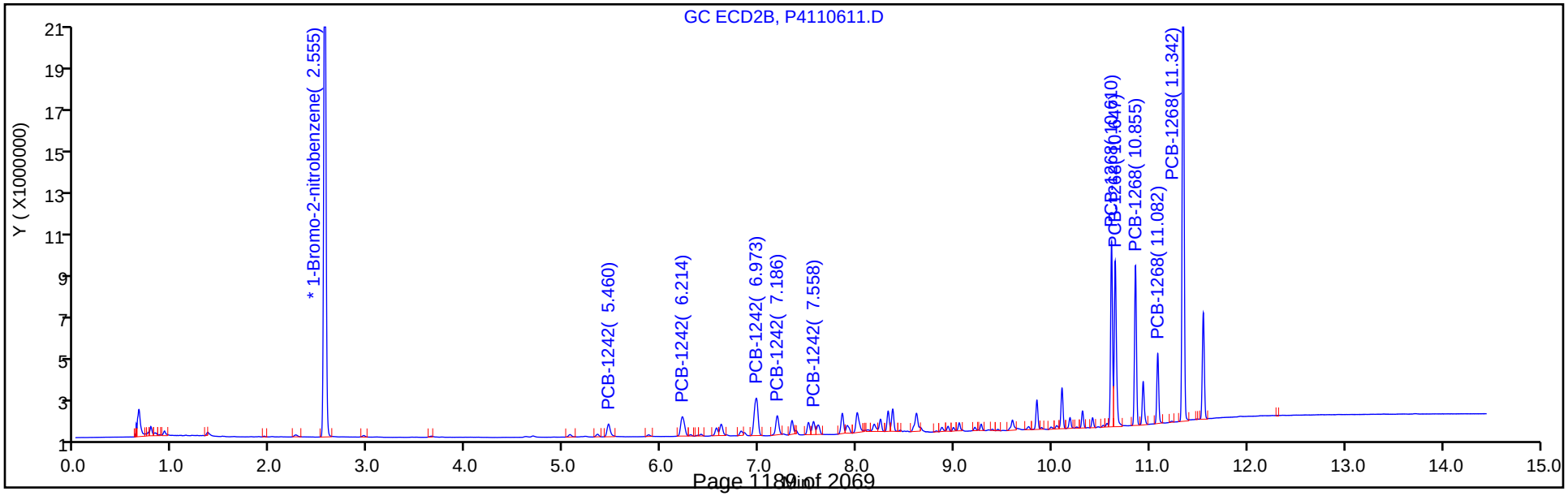
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110611.D

Injection Date:	06-Nov-2018 15:59:09	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std01 1242 1268			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110612.D
Lims ID: std02 1242 1268
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 06-Nov-2018 16:20:58 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-012
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub2

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:08:45 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:56:15

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.001	47578833	0.0500	0.0500	
2	2.555	2.555	0.001	39763746	0.0500	0.0500	
5 PCB-1242							
1	4.114	4.111	0.003	3444983	0.2000	0.2113	
1	4.835	4.834	0.001	5930469	0.2000	0.2037	
1	5.680	5.678	0.002	11600095	0.2000	0.1994	
1	5.904	5.900	0.004	5534493	0.2000	0.2052	
1	6.318	6.318	0.000	2256409	0.2000	0.1986	
		Average of Peak Amounts =				0.2037	
2	5.462	5.459	0.003	2773084	0.2000	0.2100	
2	6.219	6.214	0.005	4718961	0.2000	0.2075	
2	6.974	6.972	0.002	8676328	0.2000	0.1968	
2	7.190	7.188	0.002	3880313	0.2000	0.2058	
2	7.561	7.558	0.003	2262316	0.2000	0.2071	
		Average of Peak Amounts =				0.2054	
						RPD = 0.87	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.750	9.746	0.004	28457424	0.2000	0.1909	
1	9.784	9.779	0.005	28121793	0.2000	0.1914	
1	9.949	9.944	0.005	24309786	0.2000	0.1898	
1	10.248	10.243	0.005	9668835	0.2000	0.1898	
1	10.481	10.476	0.005	73692673	0.2000	0.1917	
		Average of Peak Amounts =				0.1907	
2	10.615	10.609	0.006	19815010	0.2000	0.1889	
2	10.653	10.648	0.005	20029482	0.2000	0.1892	
2	10.860	10.854	0.006	17228654	0.2000	0.1890	
2	11.087	11.082	0.005	7426782	0.2000	0.1926	
2	11.348	11.342	0.006	54137020	0.2000	0.1858	
		Average of Peak Amounts =				0.1891	
						RPD = 0.85	

Reagents:

SG4268@.2PPM_00014 Amount Added: 1.00 Units: mL

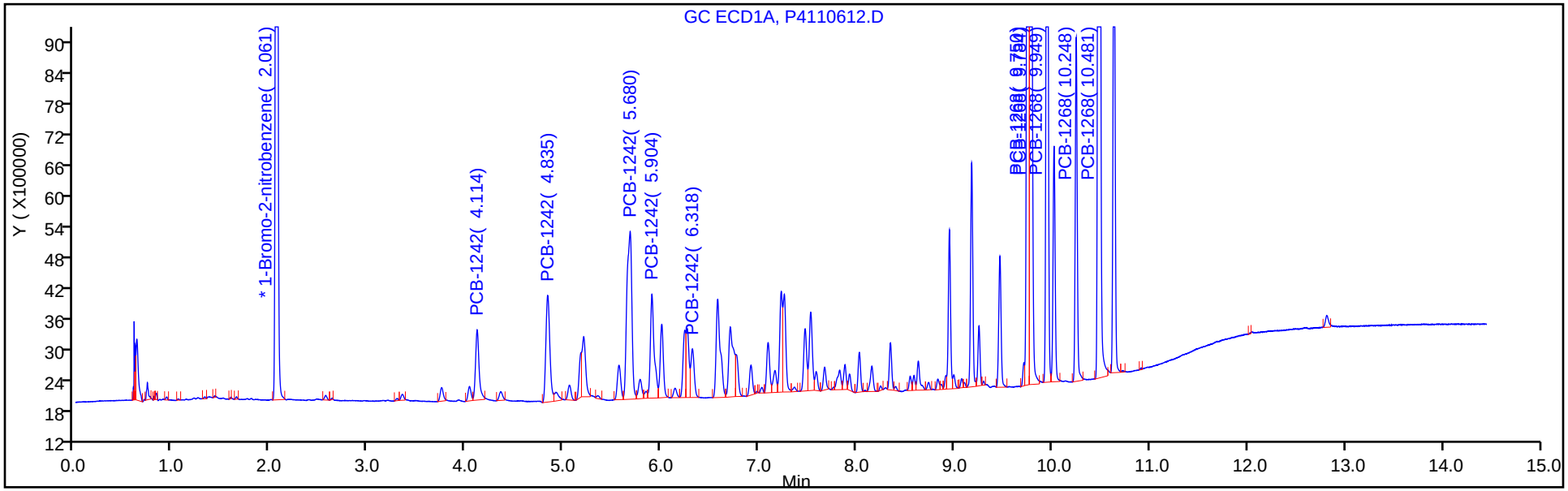
Report Date: 07-Nov-2018 11:08:47 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

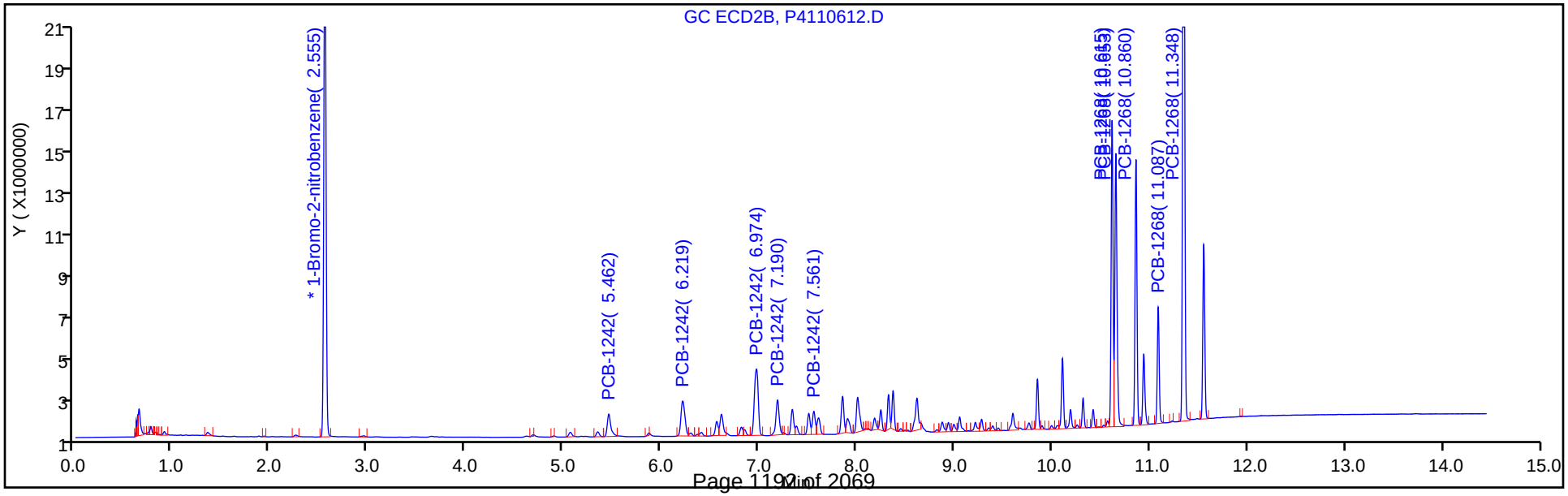
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110612.D

Injection Date:	06-Nov-2018 16:20:58	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std02 1242 1268			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110613.D
Lims ID: std05 1242 1268
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 06-Nov-2018 16:42:39 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-013
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub2

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:08:33 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:56:39

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.062	2.061	0.002	47173971	0.0500	0.0500	
2	2.556	2.555	0.002	39075729	0.0500	0.0500	
5 PCB-1242							
1	4.114	4.111	0.003	8046033	0.5000	0.4978	
1	4.835	4.834	0.001	14174219	0.5000	0.4911	
1	5.679	5.678	0.001	28140640	0.5000	0.4879	
1	5.902	5.900	0.002	13131811	0.5000	0.4911	
1	6.316	6.318	-0.002	5421697	0.5000	0.4814	
		Average of Peak Amounts =				0.4899	
2	5.461	5.459	0.002	6281304	0.5000	0.4841	
2	6.216	6.214	0.002	10997589	0.5000	0.4920	
2	6.975	6.972	0.003	21144011	0.5000	0.4881	
2	7.189	7.188	0.001	9374657	0.5000	0.5060	
2	7.559	7.558	0.001	5158437	0.5000	0.4806	
		Average of Peak Amounts =				0.4902	
						RPD = 0.06	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.747	9.746	0.001	71440203	0.5000	0.4835	
1	9.781	9.779	0.002	69799046	0.5000	0.4791	
1	9.946	9.944	0.002	60541637	0.5000	0.4767	
1	10.245	10.243	0.002	23925478	0.5000	0.4737	
1	10.478	10.476	0.002	182347490	0.5000	0.4785	
		Average of Peak Amounts =				0.4783	
2	10.611	10.609	0.002	48076851	0.5000	0.4665	
2	10.649	10.648	0.001	48459581	0.5000	0.4659	
2	10.856	10.854	0.002	41725648	0.5000	0.4659	
2	11.085	11.082	0.003	17616971	0.5000	0.4649	
2	11.345	11.342	0.003	135335804	0.5000	0.4727	
		Average of Peak Amounts =				0.4672	
						RPD = 2.35	

Reagents:

SG4268@0.5PPM_00030 Amount Added: 1.00 Units: mL

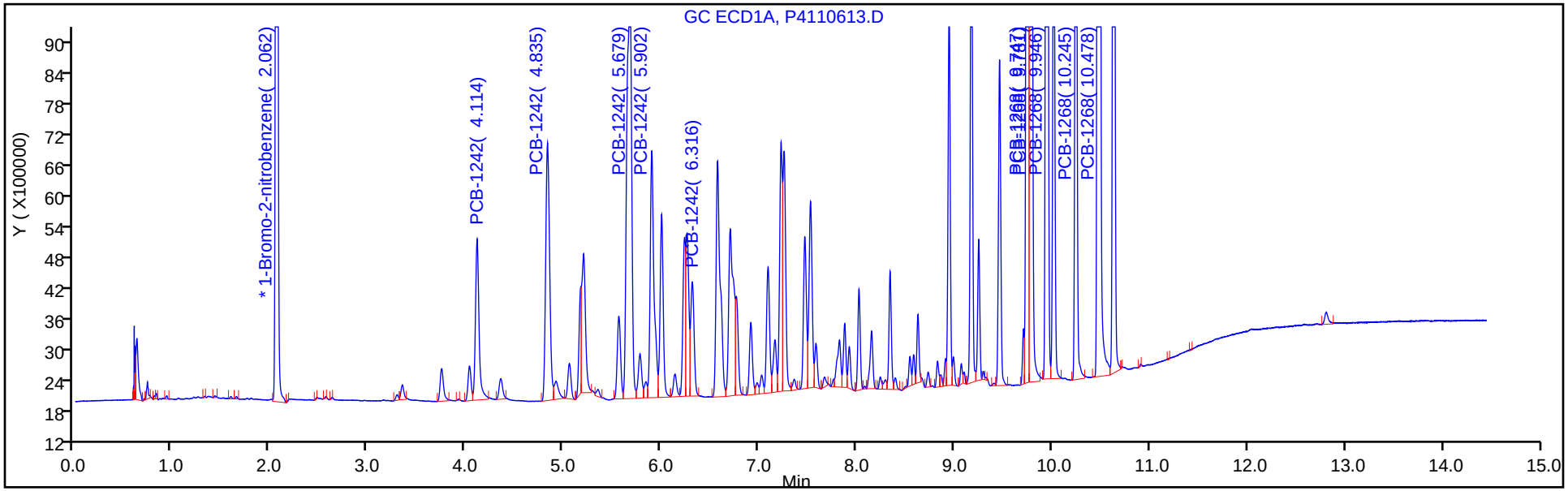
Report Date: 07-Nov-2018 11:08:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

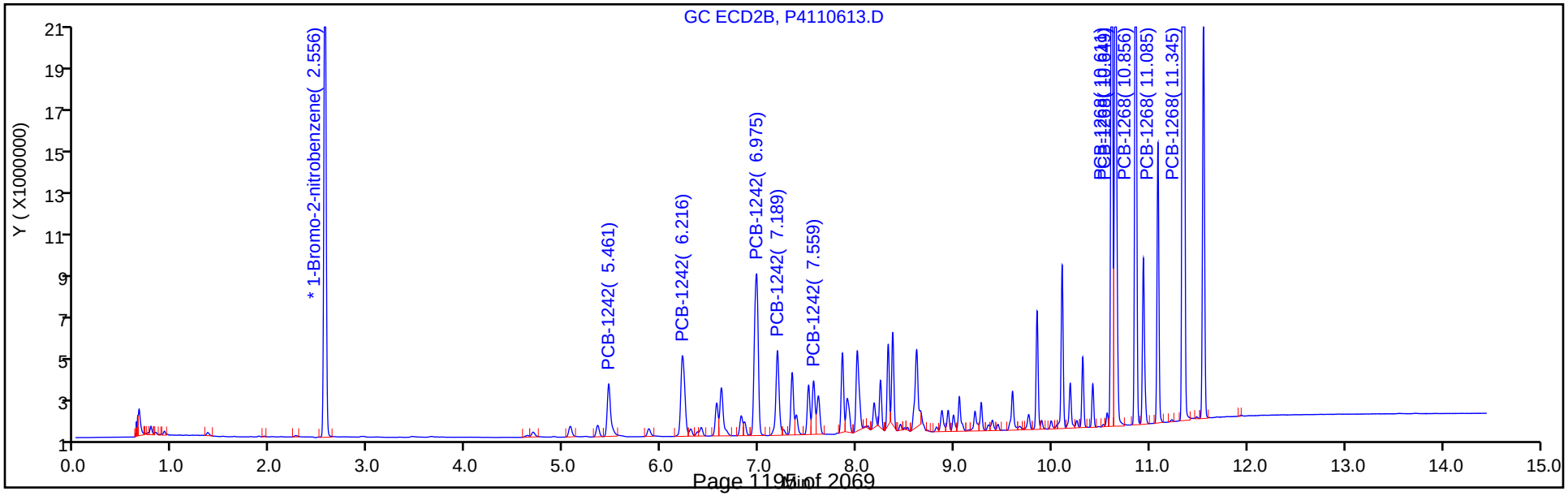
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110613.D

Injection Date:	06-Nov-2018 16:42:39	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std05 1242 1268			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110614.D
Lims ID: std1 1242 1268
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-Nov-2018 17:04:08 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-014
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub2

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:08:25 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 05:57:13

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.063	2.061	0.002	46376721	0.0500	0.0500	
2	2.557	2.555	0.002	38571706	0.0500	0.0500	
5 PCB-1242							
1	4.114	4.111	0.003	15964749	1.00	1.00	
1	4.837	4.834	0.003	27057474	1.00	0.9536	
1	5.681	5.678	0.003	55656963	1.00	0.9816	
1	5.903	5.900	0.003	25714211	1.00	0.9781	
1	6.318	6.318	0.000	10491447	1.00	0.9475	
		Average of Peak Amounts =				0.9731	
2	5.462	5.459	0.003	12856775	1.00	1.00	
2	6.219	6.214	0.005	21236751	1.00	0.9625	
2	6.973	6.972	0.001	41691513	1.00	0.9749	
2	7.188	7.188	0.000	18335776	1.00	1.00	
2	7.559	7.558	0.001	9971535	1.00	0.9412	
		Average of Peak Amounts =				0.9770	
						RPD = 0.40	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							M
1	9.747	9.746	0.001	138257478	1.00	0.9517	M
1	9.781	9.779	0.002	138362575	1.00	0.9661	M
1	9.946	9.944	0.002	119410561	1.00	0.9564	M
1	10.244	10.243	0.001	46976811	1.00	0.9462	
1	10.479	10.476	0.003	356479793	1.00	0.9515	
		Average of Peak Amounts =				0.9544	
2	10.612	10.609	0.003	95889655	1.00	0.9426	
2	10.650	10.648	0.002	95211832	1.00	0.9273	
2	10.857	10.854	0.003	82772862	1.00	0.9363	
2	11.085	11.082	0.003	34227065	1.00	0.9151	
2	11.346	11.342	0.004	275451114	1.00	0.9747	
		Average of Peak Amounts =				0.9392	
						RPD = 1.61	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG42/68@1.0PP_00023 Amount Added: 1.00 Units: mL

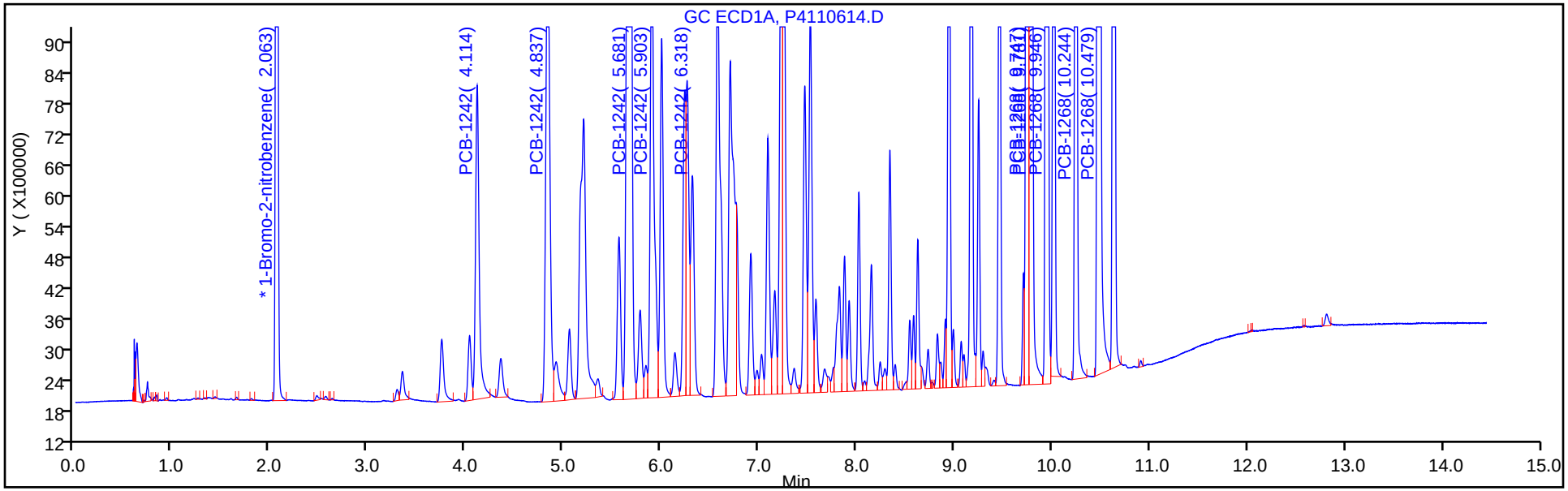
Report Date: 07-Nov-2018 11:08:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

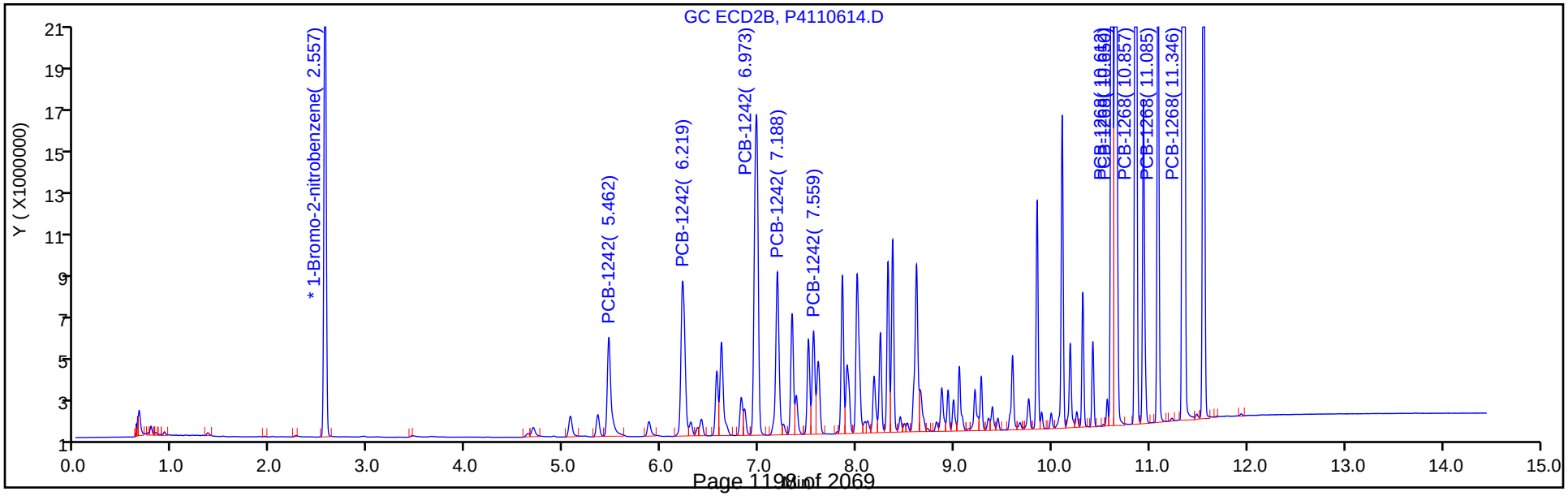
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110614.D

Injection Date:	06-Nov-2018 17:04:08	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std1 1242 1268			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110615.D
Lims ID: std15 1242 1268
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-Nov-2018 17:25:47 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-015
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub2

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:08:17 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:01:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.064	2.061	0.003	48788161	0.0500	0.0500	
2	2.558	2.555	0.003	40670195	0.0500	0.0500	
5 PCB-1242							
1	4.114	4.111	0.003	24176603	1.50	1.45	
1	4.836	4.834	0.002	39851507	1.50	1.34	
1	5.676	5.678	-0.002	85295411	1.50	1.43	
1	5.898	5.900	-0.002	38934937	1.50	1.41	
1	6.315	6.318	-0.003	16182637	1.50	1.39	
		Average of Peak Amounts =				1.40	
2	5.461	5.459	0.002	18936439	1.50	1.40	
2	6.215	6.214	0.001	31514417	1.50	1.35	
2	6.972	6.972	0.000	64143259	1.50	1.42	
2	7.187	7.188	-0.001	27450862	1.50	1.42	
2	7.560	7.558	0.002	14791495	1.50	1.32	
		Average of Peak Amounts =				1.39	
						RPD = 1.17	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.747	9.746	0.001	220789594	1.50	1.44	
1	9.780	9.779	0.001	215258654	1.50	1.43	
1	9.946	9.944	0.002	188129924	1.50	1.43	
1	10.243	10.243	0.000	74741474	1.50	1.43	
1	10.478	10.476	0.002	564058566	1.50	1.43	
		Average of Peak Amounts =				1.43	
2	10.611	10.609	0.002	153637114	1.50	1.43	
2	10.650	10.648	0.002	153128778	1.50	1.41	
2	10.856	10.854	0.002	132871879	1.50	1.43	
2	11.084	11.082	0.002	54413377	1.50	1.38	
2	11.345	11.342	0.003	451128363	1.50	1.51	
		Average of Peak Amounts =				1.43	
						RPD = 0.03	

Reagents:

SG4268@1.5PPM_00005 Amount Added: 1.00 Units: mL

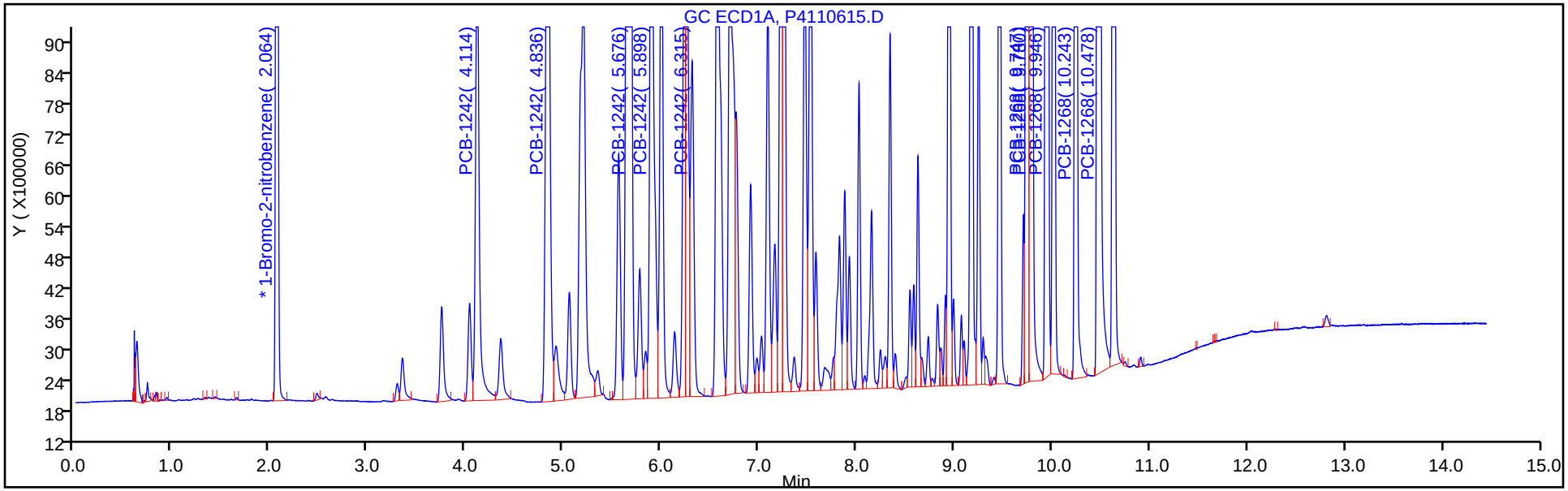
Report Date: 07-Nov-2018 11:08:20 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

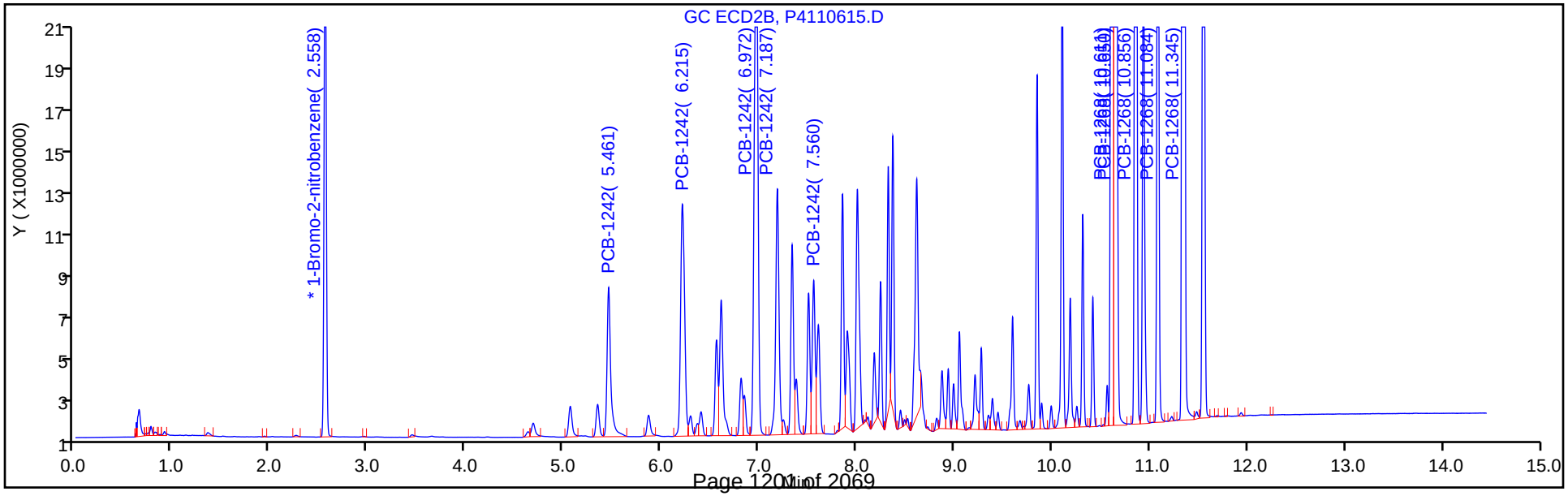
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110615.D

Injection Date:	06-Nov-2018 17:25:47	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std15 1242 1268			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 17:48 Calibration End Date: 11/06/2018 19:37 Calibration ID: 47821

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/16	P4110616.D
Level 2	STD01 240-353863/17	P4110617.D
Level 3	STD02 240-353863/18	P4110618.D
Level 4	STD05 240-353863/19	P4110619.D
Level 5	STD1 240-353863/20	P4110620.D
Level 6	STD15 240-353863/21	P4110621.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1248 Peak 1	0.0192 0.0156	0.0179	0.0164	0.0156	0.0153	Ave		0.0167				9.3		20.0			
PCB-1248 Peak 2	0.0484 0.0435	0.0473	0.0455	0.0423	0.0422	Lin1	0.0004	0.0426							1.0000		0.9900
PCB-1248 Peak 3	0.0400 0.0381	0.0388	0.0373	0.0369	0.0371	Ave		0.0380				3.1		20.0			
PCB-1248 Peak 4	0.0344 0.0314	0.0322	0.0318	0.0298	0.0303	Ave		0.0316				5.2		20.0			
PCB-1248 Peak 5	0.0217 0.0208	0.0208	0.0207	0.0194	0.0199	Ave		0.0206				3.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 17:48 Calibration End Date: 11/06/2018 19:37 Calibration ID: 47821

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/16	P4110616.D
Level 2	STD01 240-353863/17	P4110617.D
Level 3	STD02 240-353863/18	P4110618.D
Level 4	STD05 240-353863/19	P4110619.D
Level 5	STD1 240-353863/20	P4110620.D
Level 6	STD15 240-353863/21	P4110621.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1248 Peak 1	BNB	Ave	945777 23694923	1815527	3544508	8219566	15818906	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 2	BNB	Lin1	2385016 65835684	4788416	9848561	22299708	43476437	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 3	BNB	Ave	1970207 57660829	3928864	8085056	19442822	38273290	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 4	BNB	Ave	1696754 47500911	3261636	6886984	15728618	31181277	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 5	BNB	Ave	1069778 31439514	2107911	4489634	10243804	20480870	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110616.D
Lims ID: std005 1248
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-Nov-2018 17:48:09 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-016
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub3

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:08:10 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:01:57

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.059	2.061	-0.002	49265675	0.0500	0.0500	
2	2.551	2.555	-0.004	41058564	0.0500	0.0500	
7 PCB-1248							
1	4.828	4.828	0.000	945777	0.0500	0.0576	
1	6.571	6.571	0.000	2385016	0.0500	0.0486	
1	7.224	7.224	0.000	1970207	0.0500	0.0526	
1	7.529	7.529	0.000	1696754	0.0500	0.0544	
1	8.024	8.024	0.000	1069778	0.0500	0.0528	
		Average of Peak Amounts =				0.0532	
2	6.211	6.211	0.000	691831	0.0500	0.0544	
2	6.968	6.968	0.000	1623137	0.0500	0.0497	
2	7.854	7.854	0.000	1340166	0.0500	0.0562	
2	8.368	8.368	0.000	1491311	0.0500	0.0524	
2	9.051	9.051	0.000	880115	0.0500	0.0563	
		Average of Peak Amounts =				0.0538	
						RPD = 1.13	

Reagents:

SG1248@.05ppm_00025 Amount Added: 1.00 Units: mL

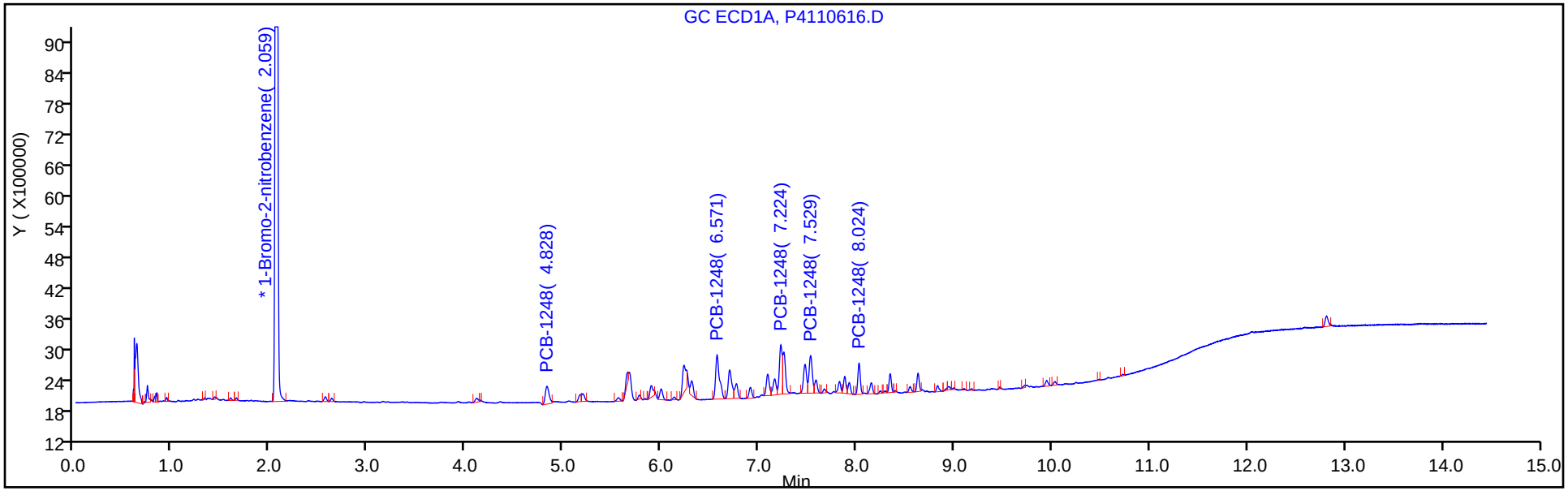
Report Date: 07-Nov-2018 11:08:12 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

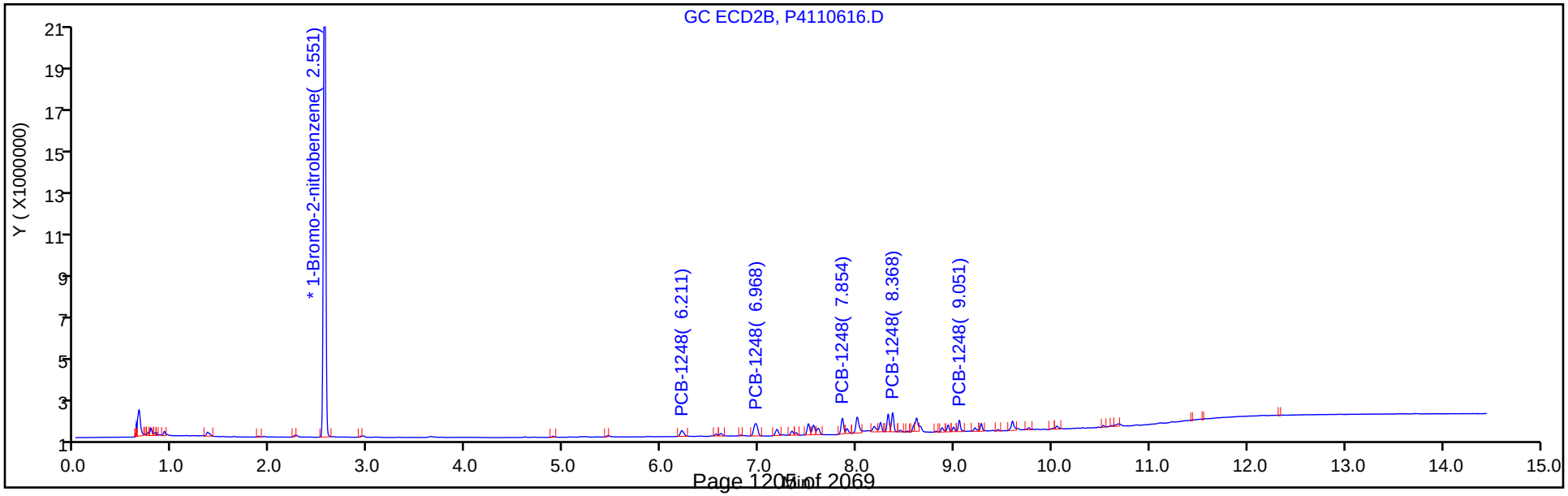
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110616.D

Injection Date:	06-Nov-2018 17:48:09	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std005 1248			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110617.D
Lims ID: std01 1248
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-Nov-2018 18:10:46 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-017
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub3

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:08:02 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:02:13

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.065	2.061	0.005	50608579	0.0500	0.0500	
2	2.560	2.555	0.005	42133198	0.0500	0.0500	
7 PCB-1248							
1	4.840	4.828	0.012	1815527	0.1000	0.1075	
1	6.580	6.571	0.009	4788416	0.1000	0.1028	
1	7.231	7.224	0.007	3928864	0.1000	0.1021	
1	7.534	7.529	0.005	3261636	0.1000	0.1018	
1	8.028	8.024	0.004	2107911	0.1000	0.1013	
		Average of Peak Amounts =				0.1031	
2	6.219	6.211	0.008	1402927	0.1000	0.1075	
2	6.975	6.968	0.007	3235480	0.1000	0.1031	
2	7.859	7.854	0.005	2620300	0.1000	0.1071	
2	8.371	8.368	0.003	3062835	0.1000	0.1048	
2	9.054	9.051	0.003	1711714	0.1000	0.1068	
		Average of Peak Amounts =				0.1058	
						RPD = 2.61	

Reagents:

SG1248@0.1PPM_00027 Amount Added: 1.00 Units: mL

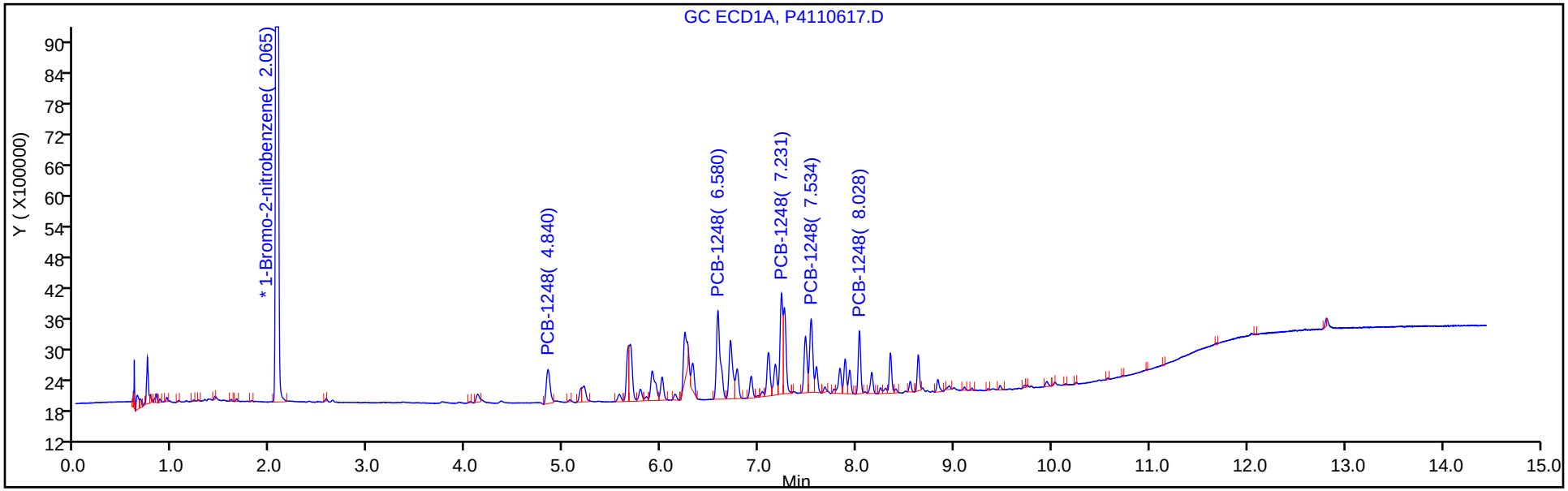
Report Date: 07-Nov-2018 11:08:04 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

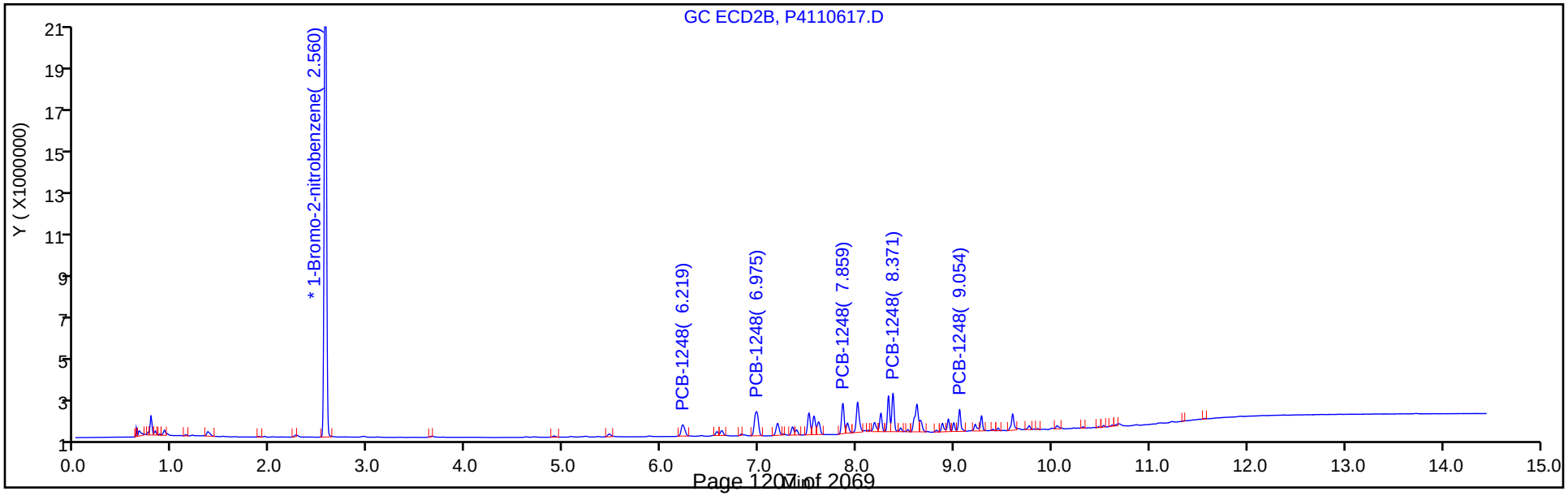
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110617.D

Injection Date:	06-Nov-2018 18:10:46	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std01 1248			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110618.D
Lims ID: std02 1248
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 06-Nov-2018 18:32:39 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-018
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub3

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:07:54 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: grantk Date: 07-Nov-2018 09:38:01

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.062	2.061	0.002	54158579	0.0500	0.0500	
2	2.557	2.555	0.002	45364020	0.0500	0.0500	
7 PCB-1248							
1	4.835	4.828	0.007	3544508	0.2000	0.1962	
1	6.577	6.571	0.006	9848561	0.2000	0.2053	
1	7.227	7.224	0.003	8085056	0.2000	0.1963	
1	7.532	7.529	0.003	6886984	0.2000	0.2009	
1	8.025	8.024	0.001	4489634	0.2000	0.2017	
		Average of Peak Amounts =				0.2001	
2	6.216	6.211	0.005	2825958	0.2000	0.2011	
2	6.971	6.968	0.003	6607017	0.2000	0.2017	
2	7.855	7.854	0.001	5384733	0.2000	0.2043	
2	8.370	8.368	0.002	6272063	0.2000	0.1994	
2	9.052	9.051	0.001	3498158	0.2000	0.2027	
		Average of Peak Amounts =				0.2018	
						RPD = 0.88	

Reagents:

SG1248@0.2ppm_00024 Amount Added: 1.00 Units: mL

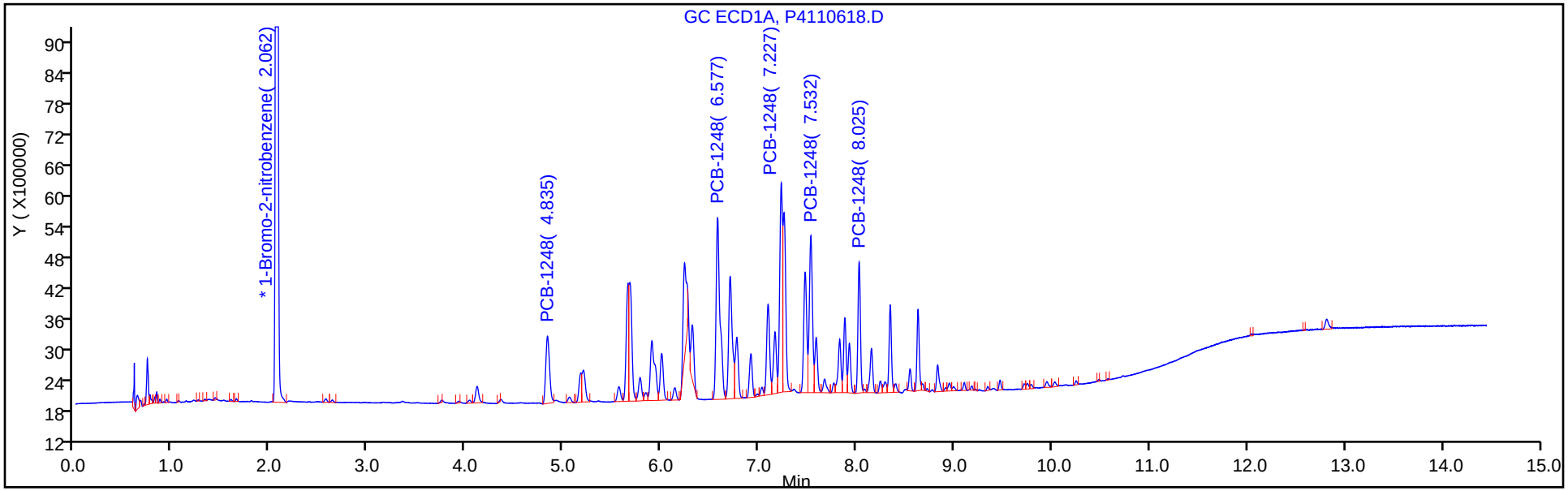
Report Date: 07-Nov-2018 11:07:55 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

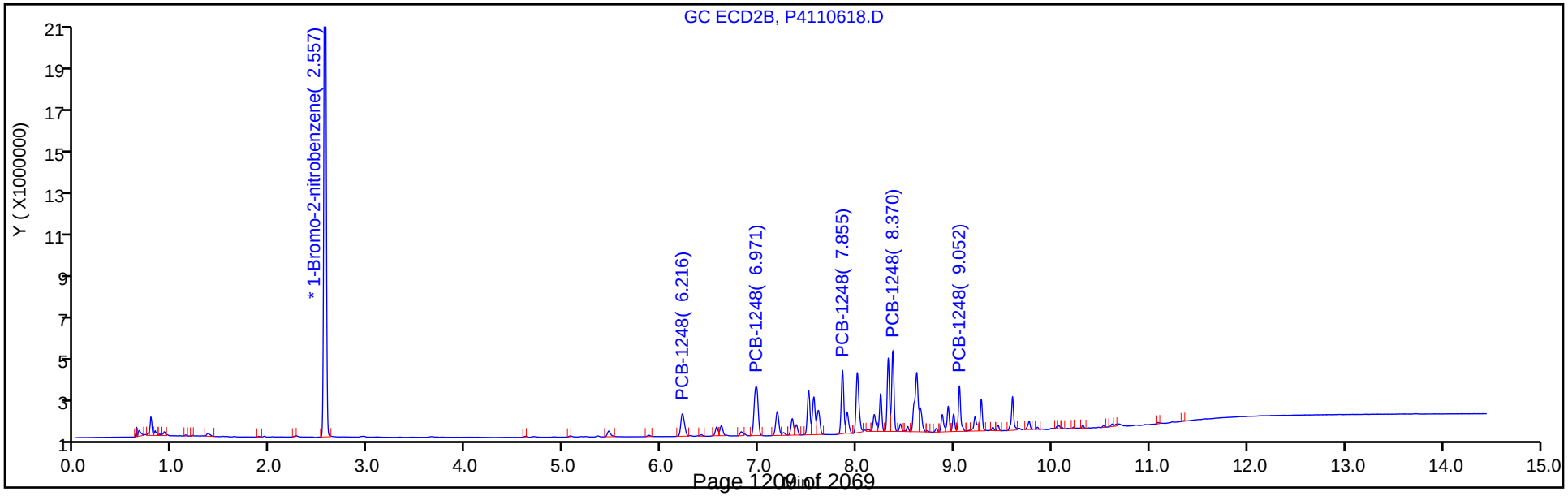
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110618.D

Injection Date:	06-Nov-2018 18:32:39	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std02 1248			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110619.D
Lims ID: std05 1248
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 06-Nov-2018 18:54:14 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-019
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub3

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:07:37 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:02:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							M
1	2.061	2.061	0.000	52746431	0.0500	0.0500	M
2	2.555	2.555	0.000	44304789	0.0500	0.0500	
7 PCB-1248							M
1	4.832	4.828	0.004	8219566	0.5000	0.4672	
1	6.574	6.571	0.003	22299708	0.5000	0.4882	
1	7.226	7.224	0.002	19442822	0.5000	0.4846	
1	7.530	7.529	0.001	15728618	0.5000	0.4711	M
1	8.023	8.024	-0.001	10243804	0.5000	0.4725	
		Average of Peak Amounts =				0.4767	
2	6.215	6.211	0.004	6475391	0.5000	0.4718	
2	6.970	6.968	0.002	15115991	0.5000	0.4819	
2	7.855	7.854	0.001	11946605	0.5000	0.4642	
2	8.369	8.368	0.001	14725881	0.5000	0.4793	
2	9.051	9.051	0.000	7754170	0.5000	0.4600	
		Average of Peak Amounts =				0.4714	
						RPD = 1.11	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

SG1248@0.5ppm_00036 Amount Added: 1.00 Units: mL

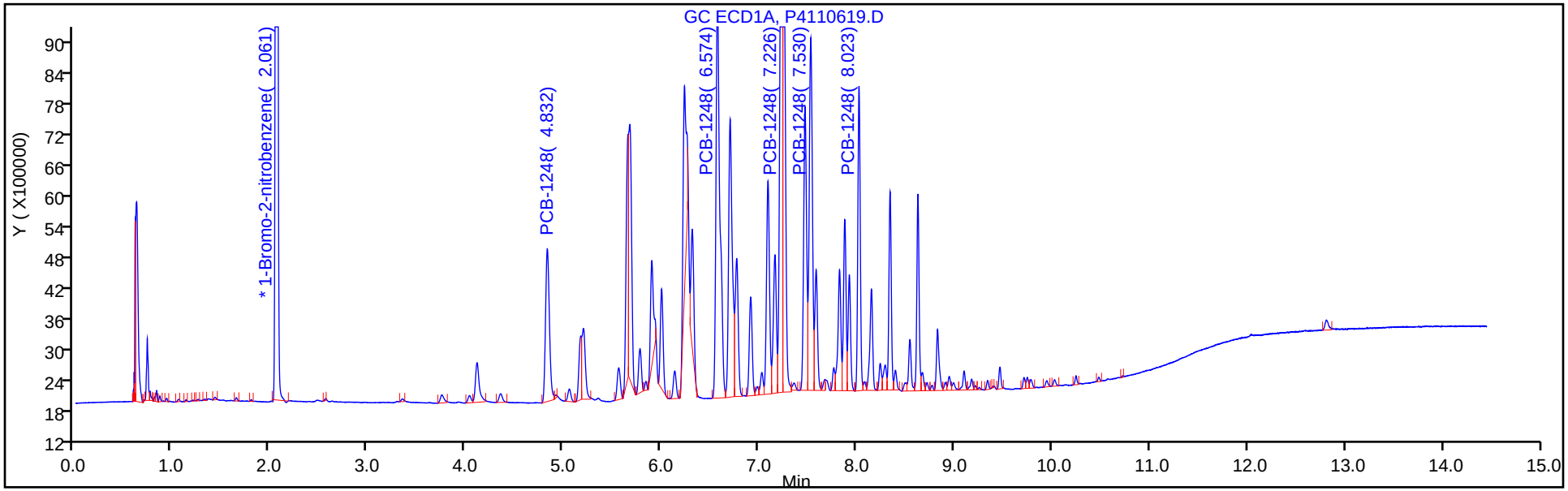
Report Date: 07-Nov-2018 11:07:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

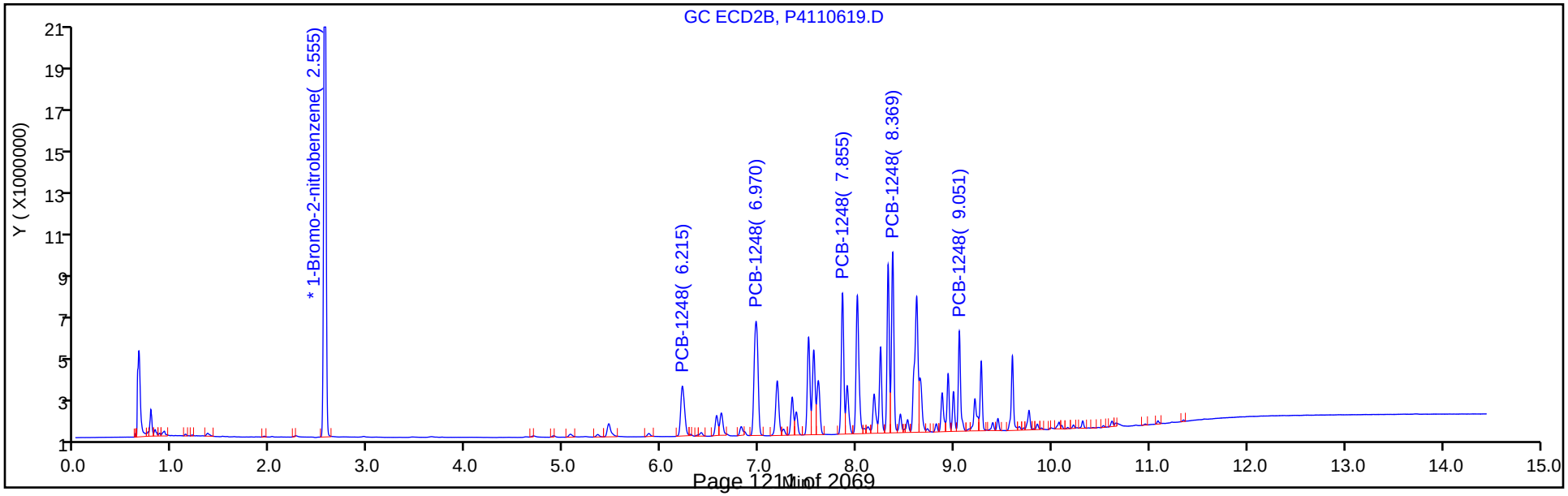
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110619.D

Injection Date:	06-Nov-2018 18:54:14	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std05 1248			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Manual Integration/User Assign Peak Report

TestAmerica Canton

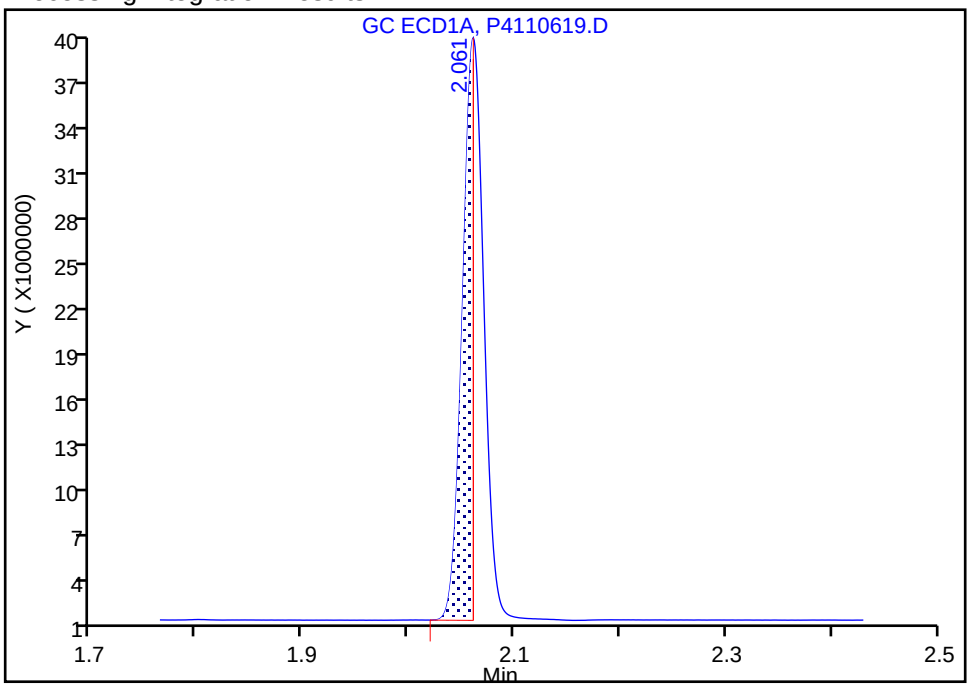
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110619.D
Injection Date: 06-Nov-2018 18:54:14 Instrument ID: A2HP4
Lims ID: std05 1248
Client ID:
Operator ID: ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PCB4 is Limit Group: GC 8082A IS
Column: Detector GC ECD1A

* 14 1-Bromo-2-nitrobenzene, CAS: 577-19-5

Signal: 1

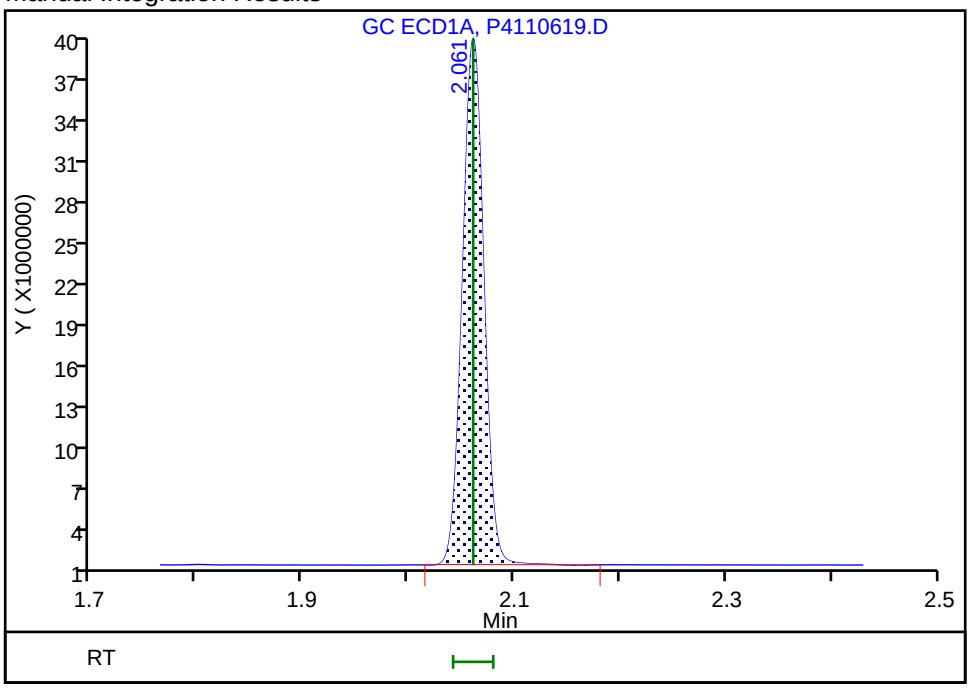
Processing Integration Results

RT: 2.06
Area: 26394537
Amount: 0.050000
Amount Units: ng/ul



Manual Integration Results

RT: 2.06
Area: 52746431
Amount: 0.050000
Amount Units: ng/ul



Reviewer: hassl, 07-Nov-2018 06:44:30
Audit Action: Manually Integrated Audit Reason: Split Peak

Report Date: 07-Nov-2018 11:07:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110619.D

Injection Date: 06-Nov-2018 18:54:14 Instrument ID: A2HP4

Lims ID: std05 1248

Client ID:

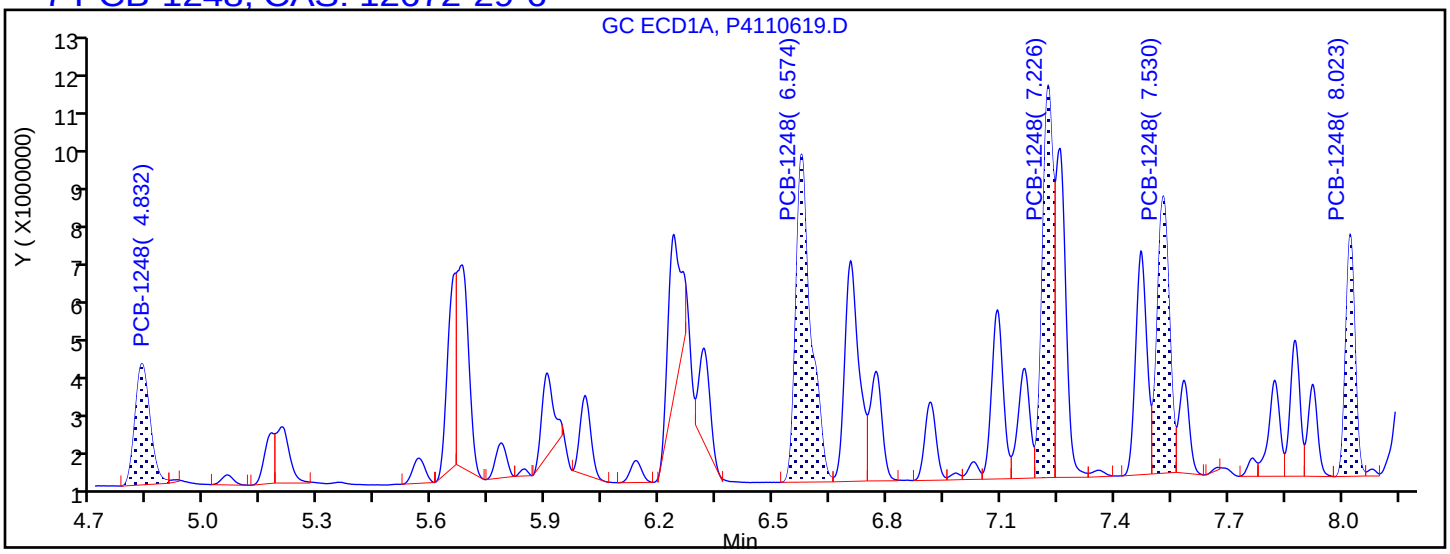
Operator ID: ALS Bottle#: 19 Worklist Smp#: 19

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB4 is Limit Group: GC 8082A IS

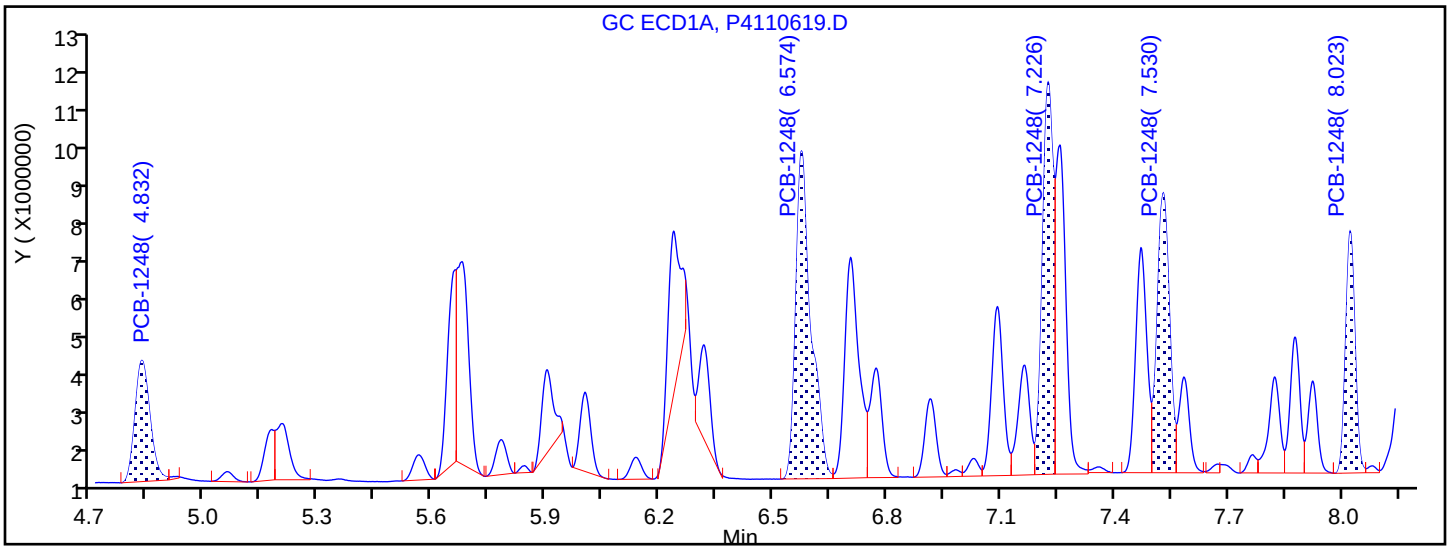
Column: Detector GC ECD1A

7 PCB-1248, CAS: 12672-29-6



Processing Integration Results

4.832	Response = 8219566
6.574	Response = 22299708
7.226	Response = 19442822
7.530	Response = 15454834
8.023	Response = 10243804



Manual Integration Results

4.832	Response = 8219566	
6.574	Response = 22299708	
7.226	Response = 19442822	
7.530	Response = 15728618	M
8.023	Response = 10243804	

Reviewer: hassl, 07-Nov-2018 06:45:40

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110620.D
Lims ID: std1 1248
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-Nov-2018 19:15:09 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-020
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub3

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:07:27 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:03:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.059	2.061	-0.002	51533134	0.0500	0.0500	
2	2.554	2.555	-0.001	43112720	0.0500	0.0500	
7 PCB-1248							
1	4.830	4.828	0.002	15818906	1.00	0.9202	
1	6.572	6.571	0.001	43476437	1.00	0.9824	
1	7.224	7.224	0.000	38273290	1.00	0.9764	
1	7.528	7.529	-0.001	31181277	1.00	0.9559	
1	8.023	8.024	-0.001	20480870	1.00	0.9669	
		Average of Peak Amounts =				0.9604	
2	6.213	6.211	0.002	12645992	1.00	0.9468	
2	6.968	6.968	0.000	29755409	1.00	0.9820	
2	7.855	7.854	0.001	22845216	1.00	0.9121	
2	8.368	8.368	0.000	28547266	1.00	0.9548	
2	9.051	9.051	0.000	15062686	1.00	0.9183	
		Average of Peak Amounts =				0.9428	
						RPD = 1.85	

Reagents:

SG1248@1.0ppm_00027 Amount Added: 1.00 Units: mL

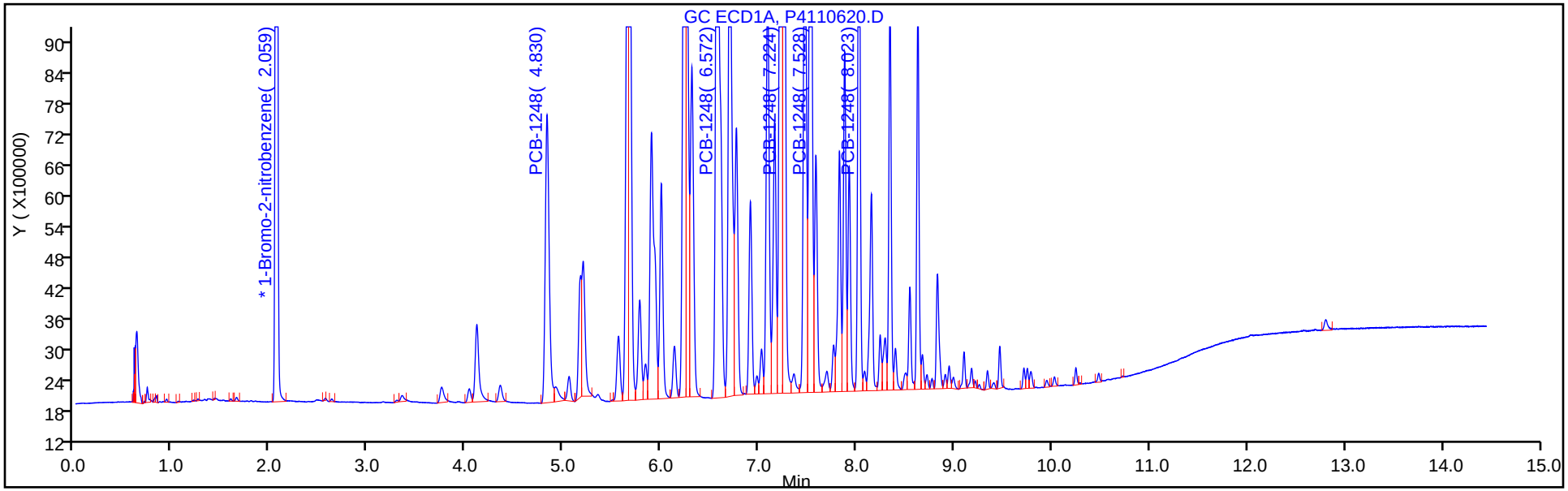
Report Date: 07-Nov-2018 11:07:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

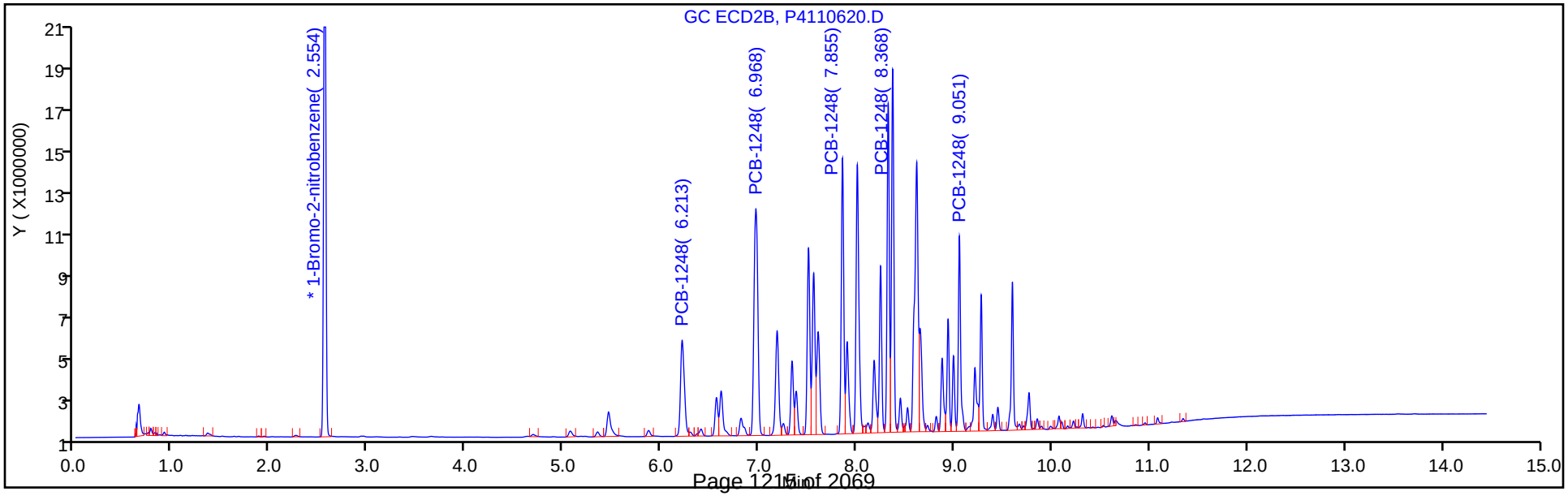
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110620.D

Injection Date:	06-Nov-2018 19:15:09	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std1 1248			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110621.D
Lims ID: std15 1248
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-Nov-2018 19:37:08 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-021
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub3

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:07:18 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:03:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.055	2.061	-0.006	50489405	0.0500	0.0500	
2	2.548	2.555	-0.007	42137978	0.0500	0.0500	
7 PCB-1248							
1	4.829	4.828	0.001	23694923	1.50	1.41	
1	6.571	6.571	0.000	65835684	1.50	1.52	
1	7.223	7.224	-0.001	57660829	1.50	1.50	
1	7.527	7.529	-0.002	47500911	1.50	1.49	
1	8.023	8.024	-0.001	31439514	1.50	1.51	
		Average of Peak Amounts =				1.49	
2	6.212	6.211	0.001	18440062	1.50	1.41	
2	6.967	6.968	-0.001	45248451	1.50	1.53	
2	7.853	7.854	-0.001	34652903	1.50	1.42	
2	8.368	8.368	0.000	43578323	1.50	1.49	
2	9.051	9.051	0.000	22928668	1.50	1.43	
		Average of Peak Amounts =				1.46	
						RPD = 2.06	

Reagents:

SG1248@1.5ppm_00004 Amount Added: 1.00 Units: mL

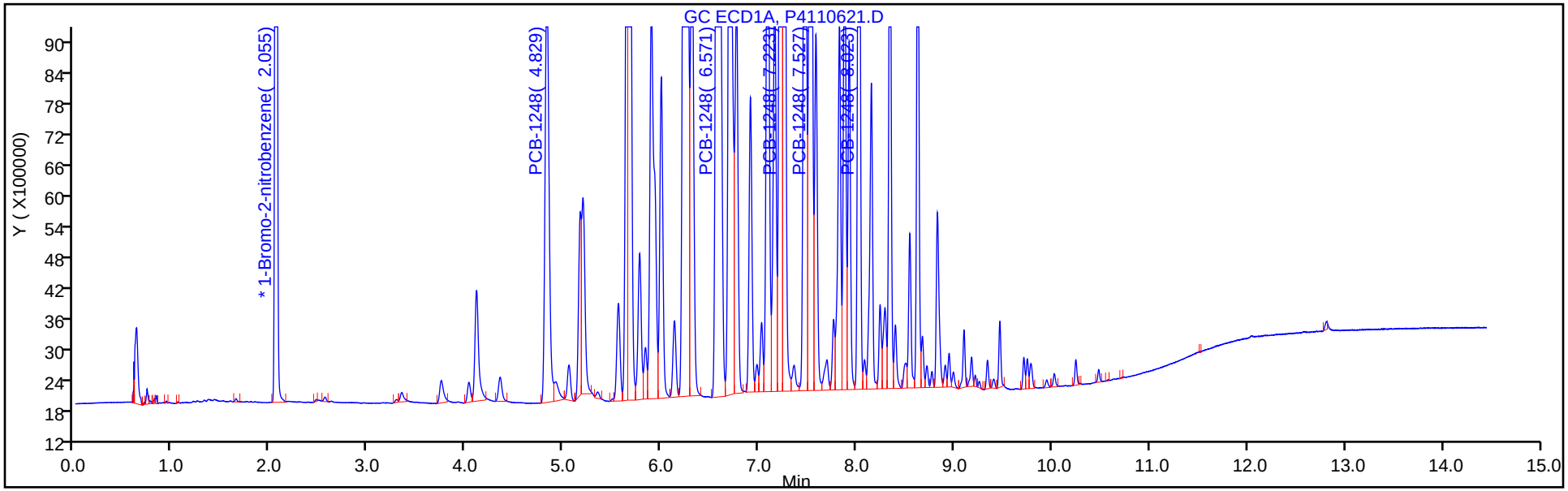
Report Date: 07-Nov-2018 11:07:20 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

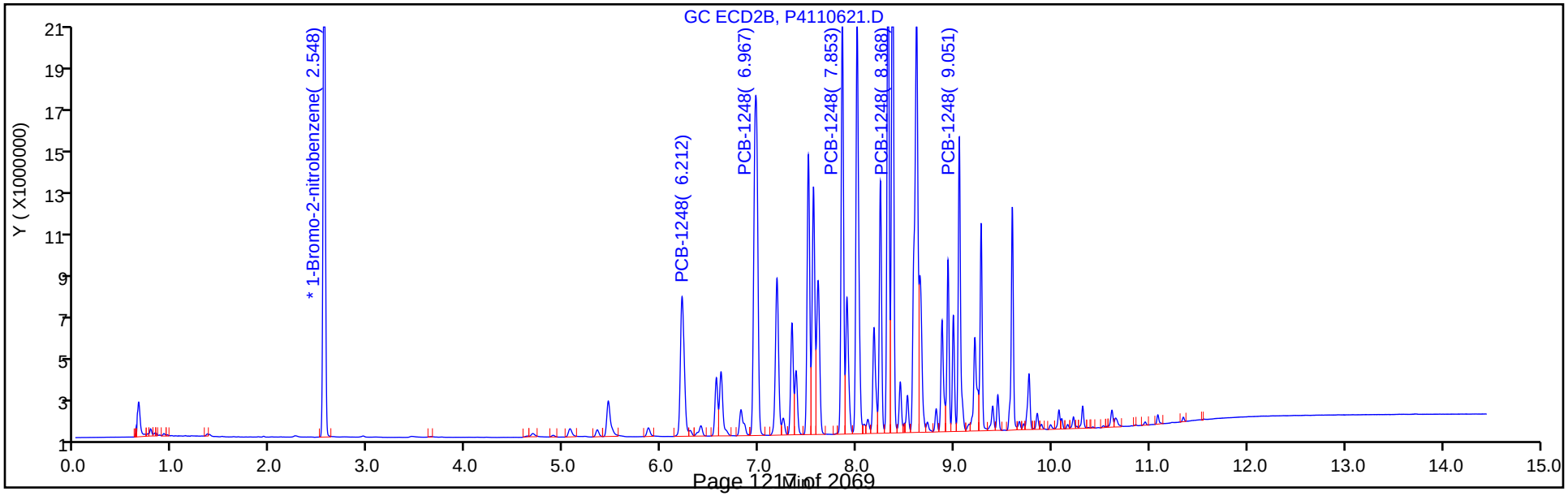
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110621.D

Injection Date:	06-Nov-2018 19:37:08	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std15 1248			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 17:48 Calibration End Date: 11/06/2018 19:37 Calibration ID: 47822

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/16	P4110616.D
Level 2	STD01 240-353863/17	P4110617.D
Level 3	STD02 240-353863/18	P4110618.D
Level 4	STD05 240-353863/19	P4110619.D
Level 5	STD1 240-353863/20	P4110620.D
Level 6	STD15 240-353863/21	P4110621.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1248 Peak 1	0.0168 0.0146	0.0166	0.0156	0.0146	0.0147	Ave		0.0155				6.7		20.0			
PCB-1248 Peak 2	0.0395 0.0358	0.0384	0.0364	0.0341	0.0345	Lin1	0.0002	0.0349							0.9990		0.9900
PCB-1248 Peak 3	0.0326 0.0274	0.0311	0.0297	0.0270	0.0265	Ave		0.0290				8.6		20.0			
PCB-1248 Peak 4	0.0363 0.0345	0.0363	0.0346	0.0332	0.0331	Ave		0.0347				4.1		20.0			
PCB-1248 Peak 5	0.0214 0.0181	0.0203	0.0193	0.0175	0.0175	Ave		0.0190				8.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton | Job No.: 240-104089-1 | Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 | GC Column: CLP-2 (0.53 ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 17:48 | Calibration End Date: 11/06/2018 19:37 | Calibration ID: 47822

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/16	P4110616.D
Level 2	STD01 240-353863/17	P4110617.D
Level 3	STD02 240-353863/18	P4110618.D
Level 4	STD05 240-353863/19	P4110619.D
Level 5	STD1 240-353863/20	P4110620.D
Level 6	STD15 240-353863/21	P4110621.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1248 Peak 1	BNB	Ave	691831 18440062	1402927	2825958	6475391	12645992	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 2	BNB	Lin1	1623137 45248451	3235480	6607017	15115991	29755409	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 3	BNB	Ave	1340166 34652903	2620300	5384733	11946605	22845216	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 4	BNB	Ave	1491311 43578323	3062835	6272063	14725881	28547266	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 5	BNB	Ave	880115 22928668	1711714	3498158	7754170	15062686	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110616.D
Lims ID: std005 1248
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-Nov-2018 17:48:09 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-016
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub3

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:08:10 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:01:57

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.059	2.061	-0.002	49265675	0.0500	0.0500	
2	2.551	2.555	-0.004	41058564	0.0500	0.0500	
7 PCB-1248							
1	4.828	4.828	0.000	945777	0.0500	0.0576	
1	6.571	6.571	0.000	2385016	0.0500	0.0486	
1	7.224	7.224	0.000	1970207	0.0500	0.0526	
1	7.529	7.529	0.000	1696754	0.0500	0.0544	
1	8.024	8.024	0.000	1069778	0.0500	0.0528	
		Average of Peak Amounts =				0.0532	
2	6.211	6.211	0.000	691831	0.0500	0.0544	
2	6.968	6.968	0.000	1623137	0.0500	0.0497	
2	7.854	7.854	0.000	1340166	0.0500	0.0562	
2	8.368	8.368	0.000	1491311	0.0500	0.0524	
2	9.051	9.051	0.000	880115	0.0500	0.0563	
		Average of Peak Amounts =				0.0538	
						RPD = 1.13	

Reagents:

SG1248@.05ppm_00025 Amount Added: 1.00 Units: mL

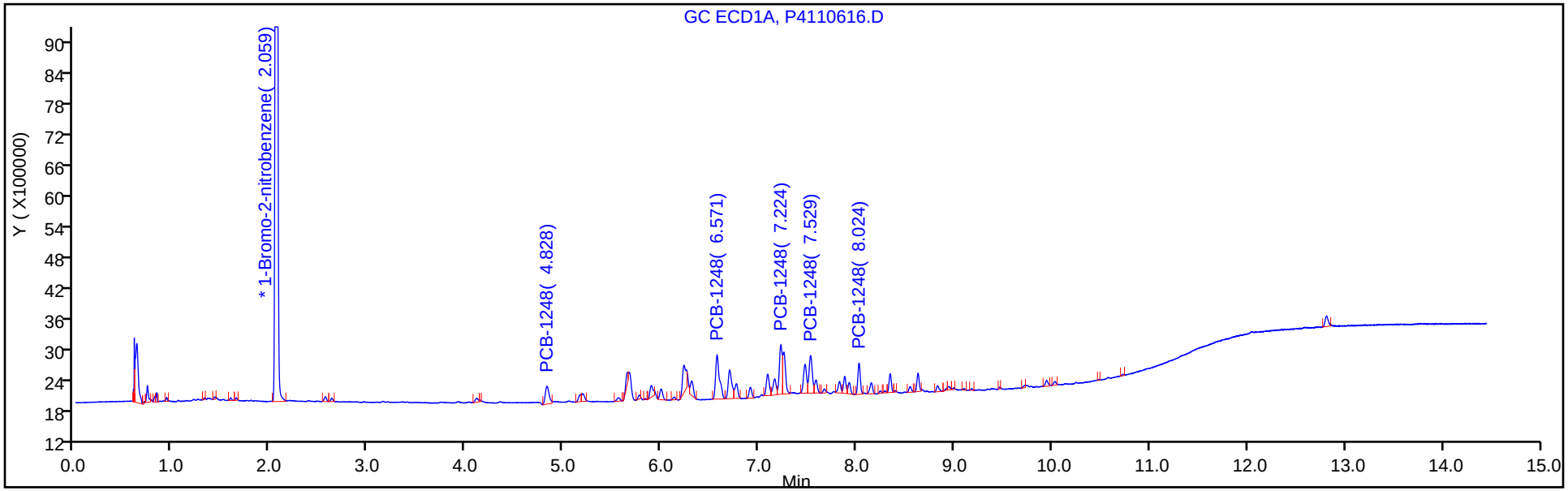
Report Date: 07-Nov-2018 11:08:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

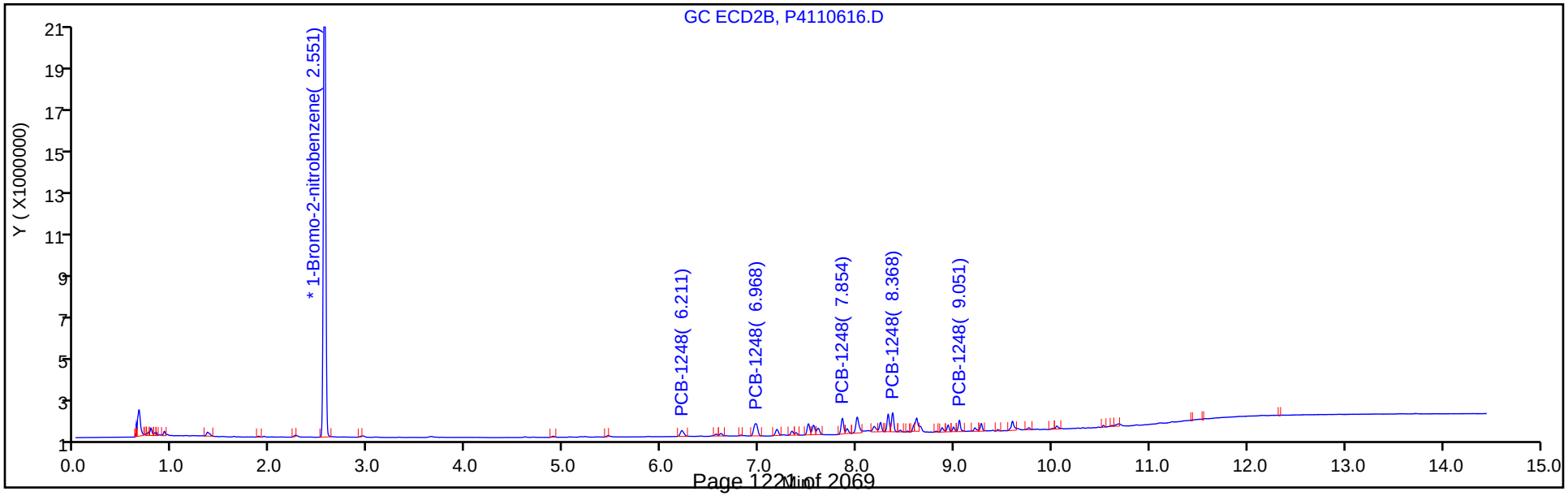
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110616.D

Injection Date:	06-Nov-2018 17:48:09	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std005 1248			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110617.D
Lims ID: std01 1248
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-Nov-2018 18:10:46 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-017
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub3

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:08:02 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:02:13

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.065	2.061	0.005	50608579	0.0500	0.0500	
2	2.560	2.555	0.005	42133198	0.0500	0.0500	
7 PCB-1248							
1	4.840	4.828	0.012	1815527	0.1000	0.1075	
1	6.580	6.571	0.009	4788416	0.1000	0.1028	
1	7.231	7.224	0.007	3928864	0.1000	0.1021	
1	7.534	7.529	0.005	3261636	0.1000	0.1018	
1	8.028	8.024	0.004	2107911	0.1000	0.1013	
		Average of Peak Amounts =				0.1031	
2	6.219	6.211	0.008	1402927	0.1000	0.1075	
2	6.975	6.968	0.007	3235480	0.1000	0.1031	
2	7.859	7.854	0.005	2620300	0.1000	0.1071	
2	8.371	8.368	0.003	3062835	0.1000	0.1048	
2	9.054	9.051	0.003	1711714	0.1000	0.1068	
		Average of Peak Amounts =				0.1058	
						RPD = 2.61	

Reagents:

SG1248@0.1PPM_00027 Amount Added: 1.00 Units: mL

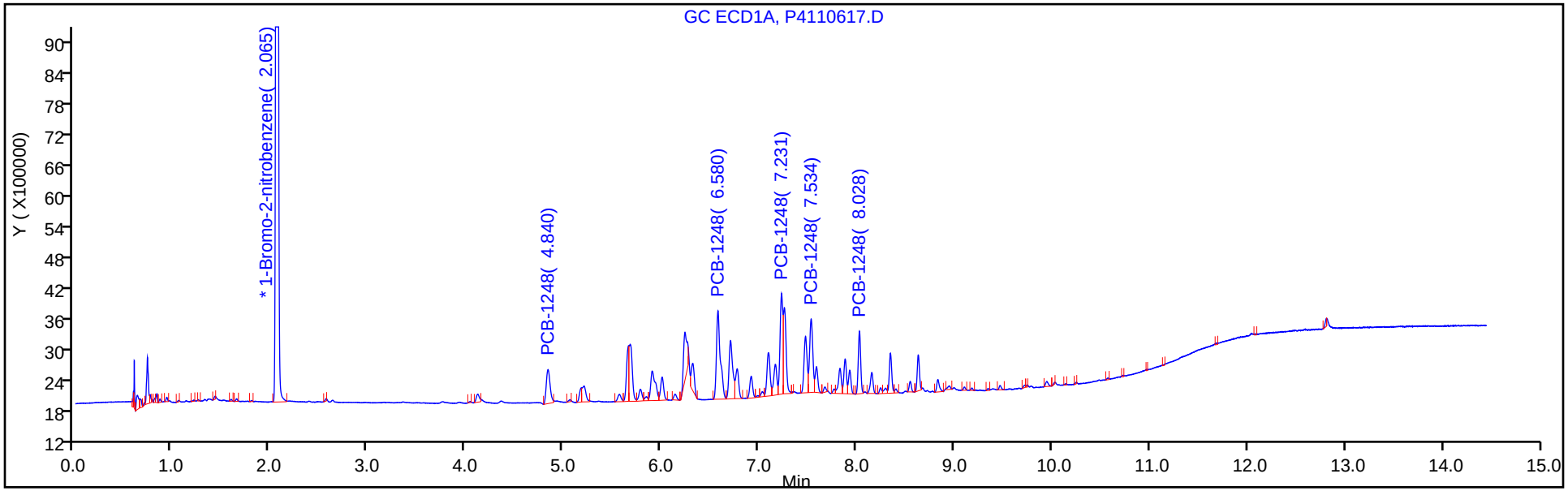
Report Date: 07-Nov-2018 11:08:04 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

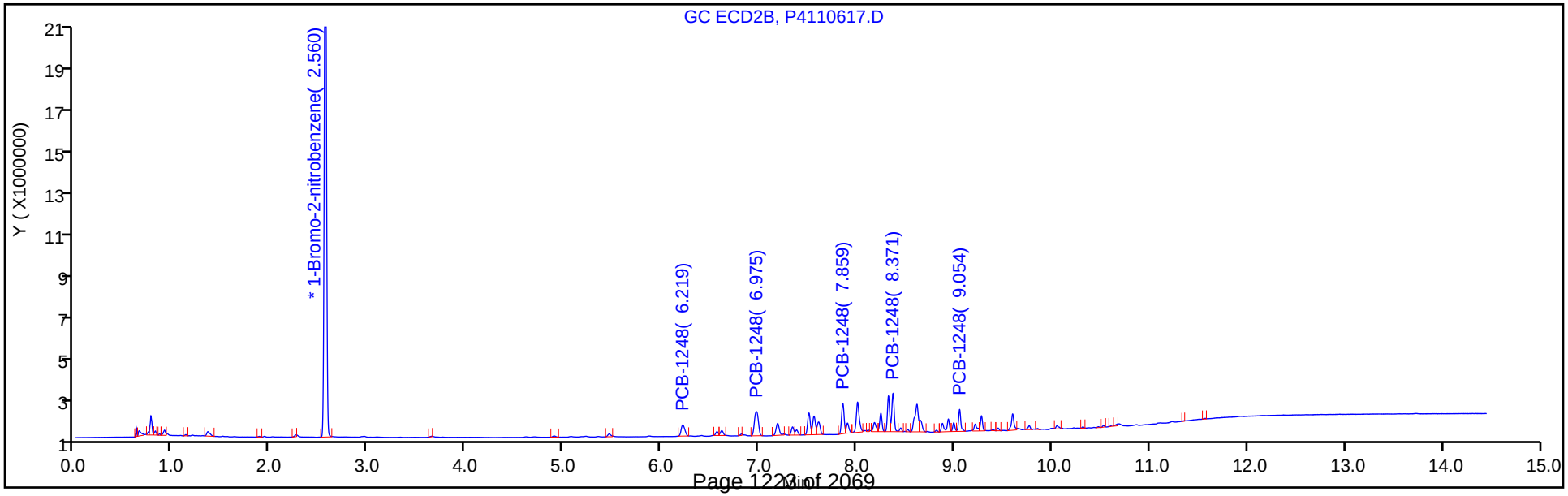
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110617.D

Injection Date:	06-Nov-2018 18:10:46	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std01 1248			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110618.D
Lims ID: std02 1248
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 06-Nov-2018 18:32:39 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-018
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub3

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:07:54 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: grantk Date: 07-Nov-2018 09:38:01

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.062	2.061	0.002	54158579	0.0500	0.0500	
2	2.557	2.555	0.002	45364020	0.0500	0.0500	
7 PCB-1248							
1	4.835	4.828	0.007	3544508	0.2000	0.1962	
1	6.577	6.571	0.006	9848561	0.2000	0.2053	
1	7.227	7.224	0.003	8085056	0.2000	0.1963	
1	7.532	7.529	0.003	6886984	0.2000	0.2009	
1	8.025	8.024	0.001	4489634	0.2000	0.2017	
		Average of Peak Amounts =				0.2001	
2	6.216	6.211	0.005	2825958	0.2000	0.2011	
2	6.971	6.968	0.003	6607017	0.2000	0.2017	
2	7.855	7.854	0.001	5384733	0.2000	0.2043	
2	8.370	8.368	0.002	6272063	0.2000	0.1994	
2	9.052	9.051	0.001	3498158	0.2000	0.2027	
		Average of Peak Amounts =				0.2018	
						RPD = 0.88	

Reagents:

SG1248@0.2ppm_00024 Amount Added: 1.00 Units: mL

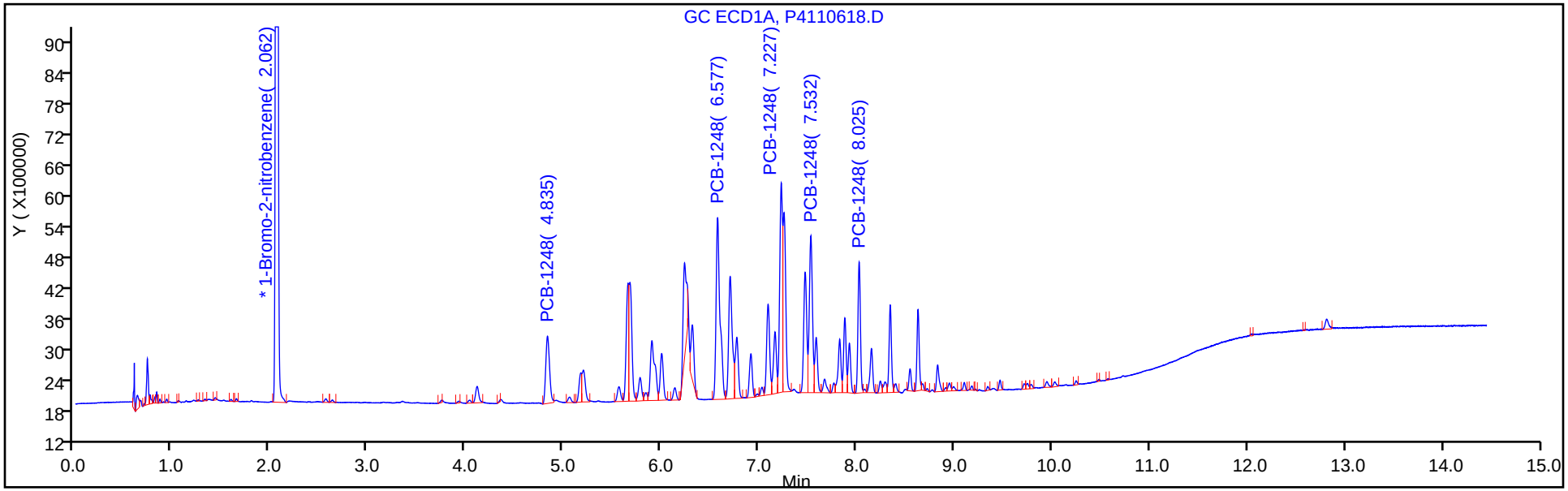
Report Date: 07-Nov-2018 11:07:55 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

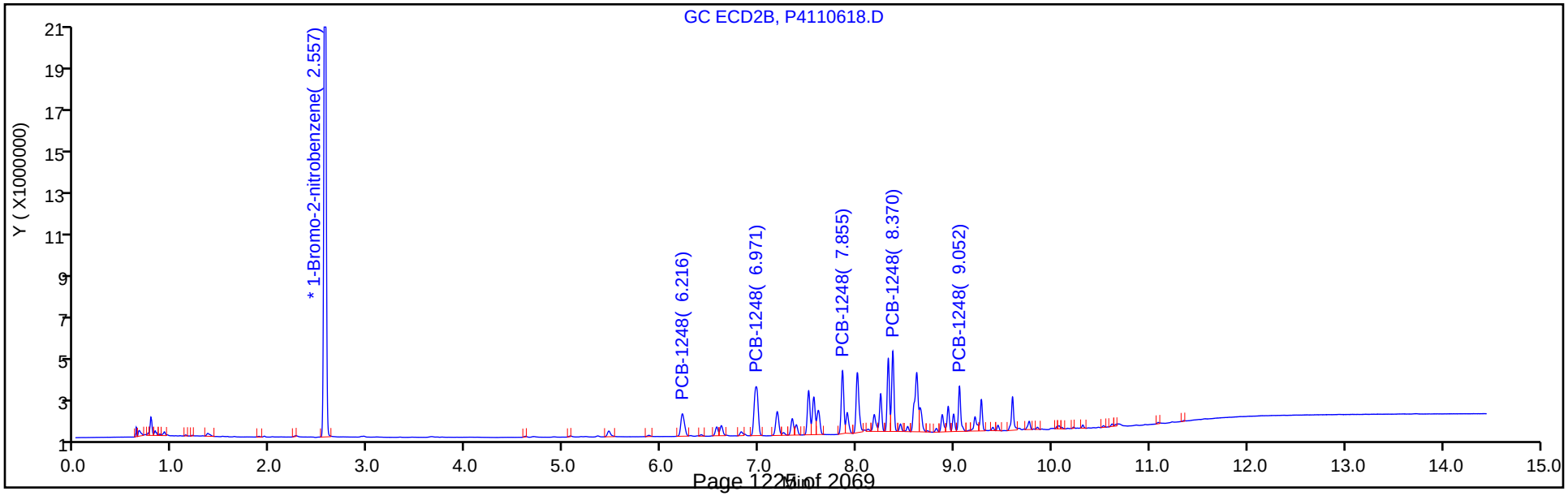
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110618.D

Injection Date:	06-Nov-2018 18:32:39	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std02 1248			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110619.D
Lims ID: std05 1248
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 06-Nov-2018 18:54:14 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-019
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub3

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:07:37 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:02:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							M
1	2.061	2.061	0.000	52746431	0.0500	0.0500	M
2	2.555	2.555	0.000	44304789	0.0500	0.0500	
7 PCB-1248							M
1	4.832	4.828	0.004	8219566	0.5000	0.4672	
1	6.574	6.571	0.003	22299708	0.5000	0.4882	
1	7.226	7.224	0.002	19442822	0.5000	0.4846	
1	7.530	7.529	0.001	15728618	0.5000	0.4711	M
1	8.023	8.024	-0.001	10243804	0.5000	0.4725	
		Average of Peak Amounts =				0.4767	
2	6.215	6.211	0.004	6475391	0.5000	0.4718	
2	6.970	6.968	0.002	15115991	0.5000	0.4819	
2	7.855	7.854	0.001	11946605	0.5000	0.4642	
2	8.369	8.368	0.001	14725881	0.5000	0.4793	
2	9.051	9.051	0.000	7754170	0.5000	0.4600	
		Average of Peak Amounts =				0.4714	
						RPD = 1.11	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

SG1248@0.5ppm_00036 Amount Added: 1.00 Units: mL

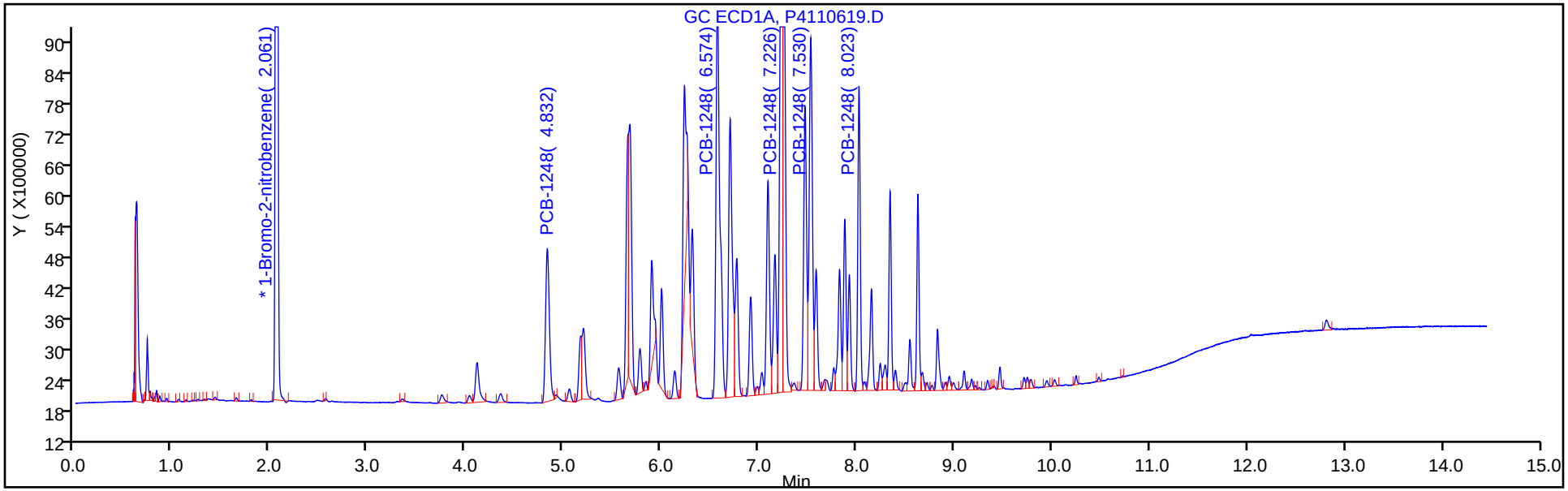
Report Date: 07-Nov-2018 11:07:40 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

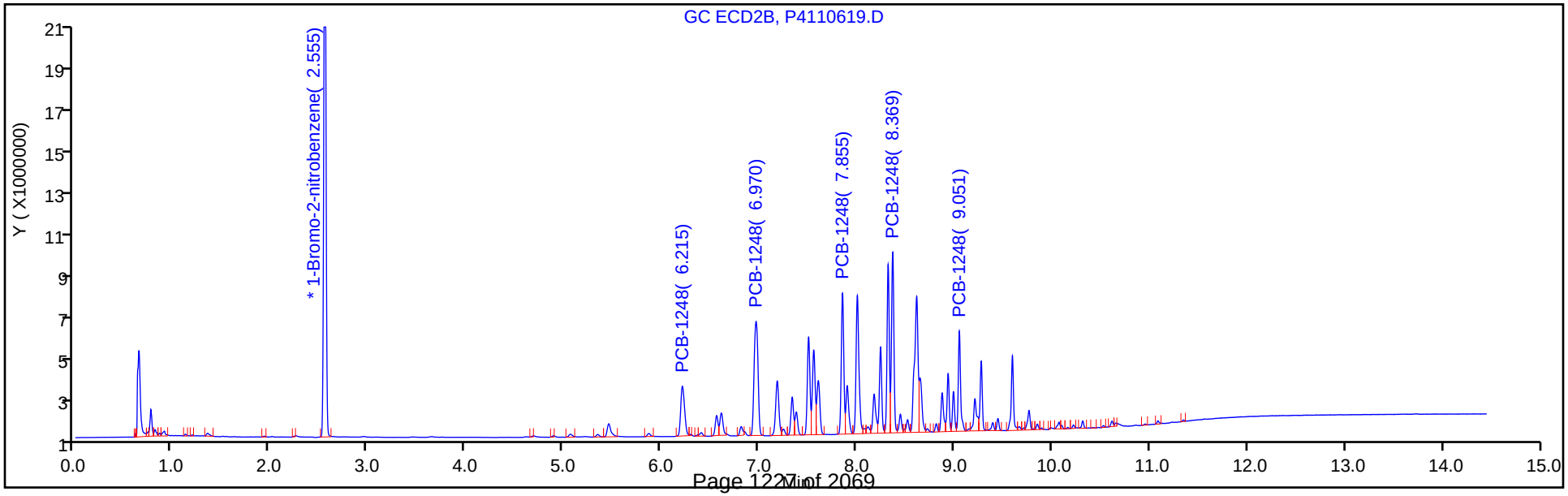
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110619.D

Injection Date:	06-Nov-2018 18:54:14	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std05 1248			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110620.D
Lims ID: std1 1248
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-Nov-2018 19:15:09 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-020
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub3

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:07:27 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:03:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.059	2.061	-0.002	51533134	0.0500	0.0500	
2	2.554	2.555	-0.001	43112720	0.0500	0.0500	
7 PCB-1248							
1	4.830	4.828	0.002	15818906	1.00	0.9202	
1	6.572	6.571	0.001	43476437	1.00	0.9824	
1	7.224	7.224	0.000	38273290	1.00	0.9764	
1	7.528	7.529	-0.001	31181277	1.00	0.9559	
1	8.023	8.024	-0.001	20480870	1.00	0.9669	
		Average of Peak Amounts =				0.9604	
2	6.213	6.211	0.002	12645992	1.00	0.9468	
2	6.968	6.968	0.000	29755409	1.00	0.9820	
2	7.855	7.854	0.001	22845216	1.00	0.9121	
2	8.368	8.368	0.000	28547266	1.00	0.9548	
2	9.051	9.051	0.000	15062686	1.00	0.9183	
		Average of Peak Amounts =				0.9428	
						RPD = 1.85	

Reagents:

SG1248@1.0ppm_00027 Amount Added: 1.00 Units: mL

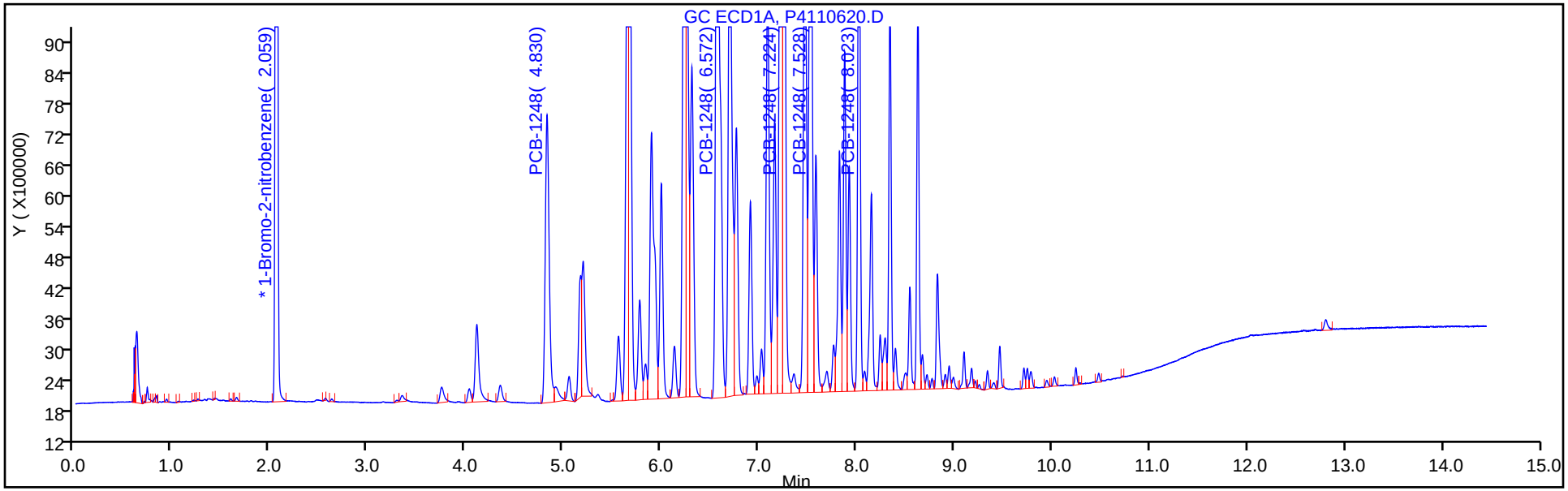
Report Date: 07-Nov-2018 11:07:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

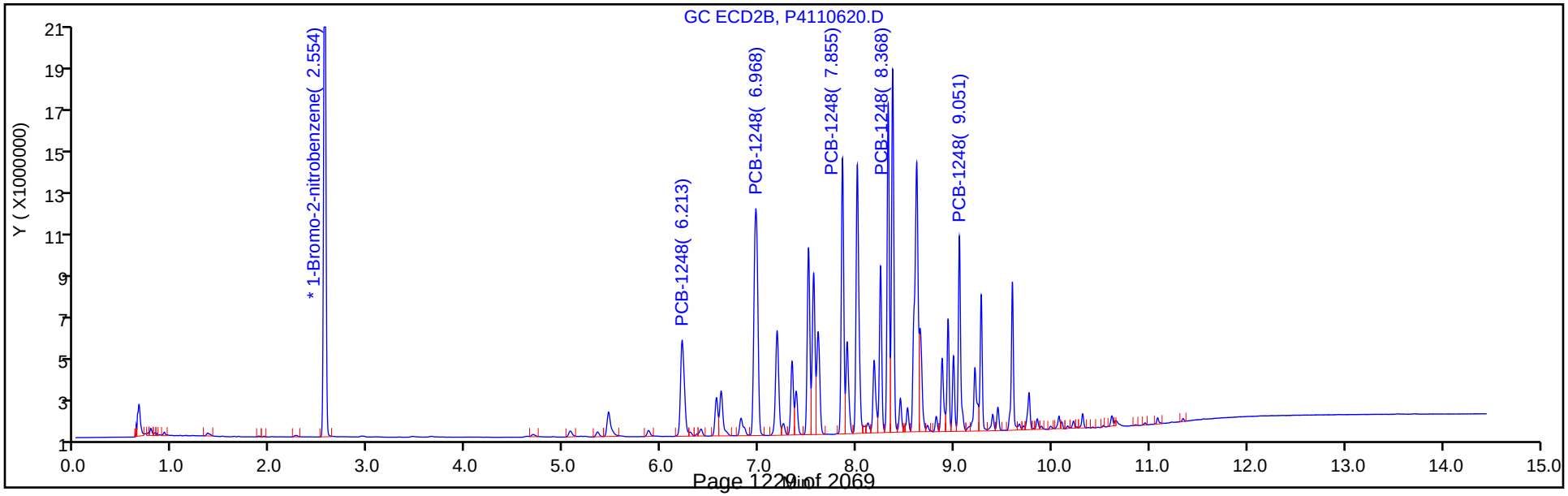
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110620.D

Injection Date:	06-Nov-2018 19:15:09	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std1 1248			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110621.D
Lims ID: std15 1248
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-Nov-2018 19:37:08 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-021
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub3

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:07:18 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:03:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.055	2.061	-0.006	50489405	0.0500	0.0500	
2	2.548	2.555	-0.007	42137978	0.0500	0.0500	
7 PCB-1248							
1	4.829	4.828	0.001	23694923	1.50	1.41	
1	6.571	6.571	0.000	65835684	1.50	1.52	
1	7.223	7.224	-0.001	57660829	1.50	1.50	
1	7.527	7.529	-0.002	47500911	1.50	1.49	
1	8.023	8.024	-0.001	31439514	1.50	1.51	
		Average of Peak Amounts =				1.49	
2	6.212	6.211	0.001	18440062	1.50	1.41	
2	6.967	6.968	-0.001	45248451	1.50	1.53	
2	7.853	7.854	-0.001	34652903	1.50	1.42	
2	8.368	8.368	0.000	43578323	1.50	1.49	
2	9.051	9.051	0.000	22928668	1.50	1.43	
		Average of Peak Amounts =				1.46	
						RPD = 2.06	

Reagents:

SG1248@1.5ppm_00004 Amount Added: 1.00 Units: mL

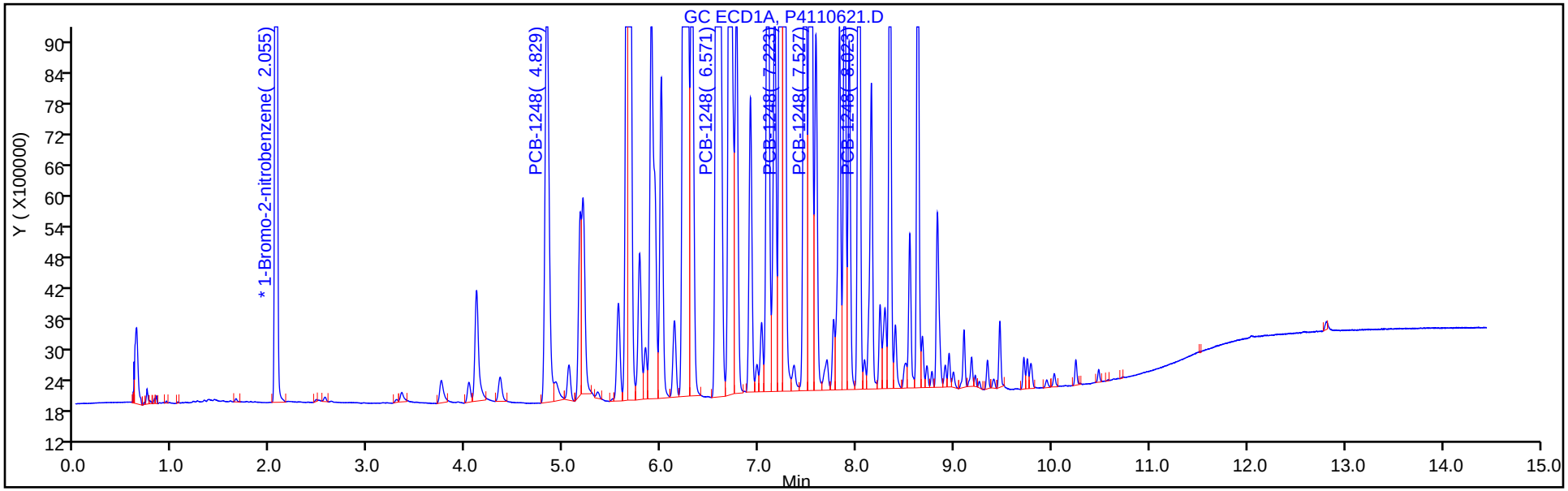
Report Date: 07-Nov-2018 11:07:20 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

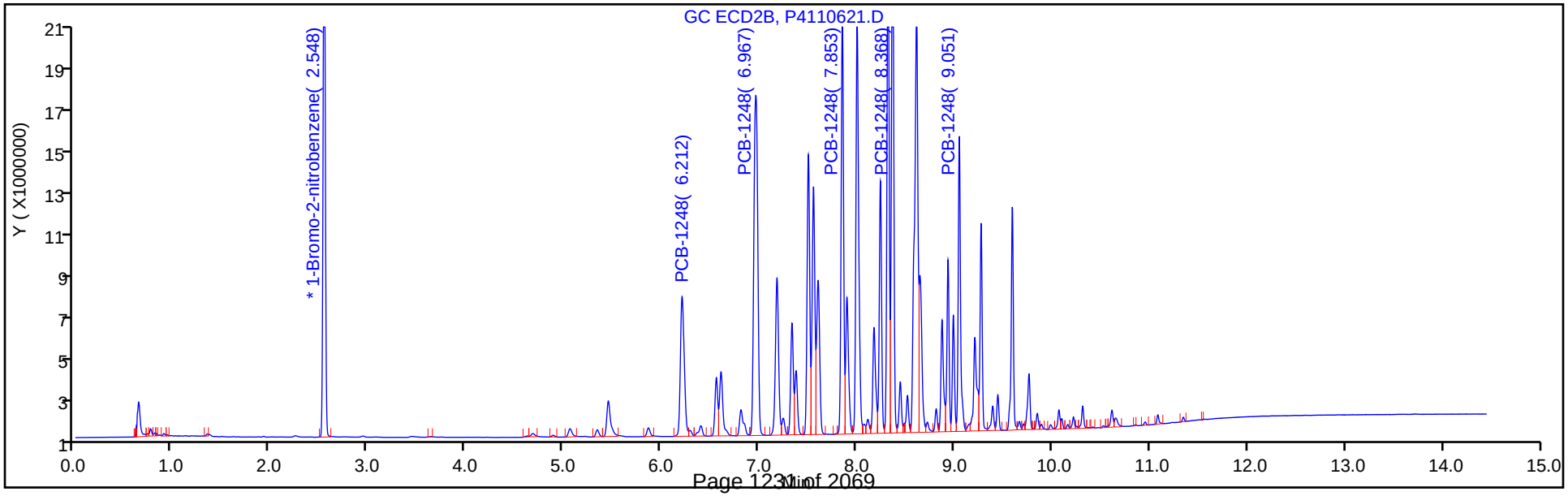
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110621.D

Injection Date:	06-Nov-2018 19:37:08	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std15 1248			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 19:58 Calibration End Date: 11/06/2018 21:49 Calibration ID: 47813

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/22	P4110622.D
Level 2	STD01 240-353863/23	P4110623.D
Level 3	STD02 240-353863/24	P4110624.D
Level 4	STD05 240-353863/25	P4110625.D
Level 5	STD1 240-353863/26	P4110626.D
Level 6	STD15 240-353863/27	P4110627.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1221 Peak 1	0.0130 0.0105	0.0126	0.0123	0.0117	0.0108	Ave		0.0118				8.4		20.0			
PCB-1221 Peak 2	0.0081 0.0066	0.0086	0.0082	0.0075	0.0070	Ave		0.0077				9.9		20.0			
PCB-1221 Peak 3	0.0319 0.0254	0.0320	0.0308	0.0277	0.0257	Ave		0.0289				10.4		20.0			
PCB-1254 Peak 1	0.0410 0.0314	0.0382	0.0360	0.0337	0.0333	Ave		0.0356				9.9		20.0			
PCB-1254 Peak 2	0.0644 0.0612	0.0658	0.0640	0.0639	0.0660	Ave		0.0642				2.7		20.0			
PCB-1254 Peak 3	0.0402 0.0432	0.0443	0.0441	0.0446	0.0470	Ave		0.0439				5.0		20.0			
PCB-1254 Peak 4	0.0452 0.0412	0.0464	0.0435	0.0432	0.0448	Ave		0.0441				4.1		20.0			
PCB-1254 Peak 5	0.0631 0.0618	0.0664	0.0631	0.0639	0.0673	Ave		0.0643				3.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 19:58 Calibration End Date: 11/06/2018 21:49 Calibration ID: 47813

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/22	P4110622.D
Level 2	STD01 240-353863/23	P4110623.D
Level 3	STD02 240-353863/24	P4110624.D
Level 4	STD05 240-353863/25	P4110625.D
Level 5	STD1 240-353863/26	P4110626.D
Level 6	STD15 240-353863/27	P4110627.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1221 Peak 1	BNB	Ave	634664 16504844	1273174	2403965	5901155	11648089	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1221 Peak 2	BNB	Ave	397906 10425868	864711	1607611	3747886	7576755	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1221 Peak 3	BNB	Ave	1561214 40027806	3225856	6015363	13926012	27675544	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 1	BNB	Ave	2008298 49588423	3856905	7034060	16963784	35755737	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 2	BNB	Ave	3155261 96572063	6636669	12514485	32143652	70983951	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 3	BNB	Ave	1967615 68045860	4465118	8629885	22444070	50469601	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 4	BNB	Ave	2212443 64964247	4685478	8505778	21730895	48135820	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 5	BNB	Ave	3091926 97450713	6697928	12341219	32146217	72380018	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110622.D
Lims ID: std005 ar2154
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-Nov-2018 19:58:58 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-022
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:07:11 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:04:04

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.001	48975850	0.0500	0.0500	
2	2.555	2.555	0.000	40843995	0.0500	0.0500	
3 PCB-1221							
1	3.748	3.748	0.000	634664	0.0500	0.0548	
1	4.035	4.035	0.000	397906	0.0500	0.0529	
1	4.111	4.111	0.000	1561214	0.0500	0.0551	
		Average of Peak Amounts =				0.0543	
2	5.064	5.064	0.000	482544	0.0500	0.0544	
2	5.347	5.347	0.000	324930	0.0500	0.0547	
2	5.459	5.459	0.000	1283912	0.0500	0.0577	
		Average of Peak Amounts =				0.0556	
						RPD = 2.38	
8 PCB-1254							
1	7.162	7.162	0.000	2008298	0.0500	0.0576	
1	8.023	8.023	0.000	3155261	0.0500	0.0501	
1	8.341	8.341	0.000	1967615	0.0500	0.0458	
1	8.545	8.545	0.000	2212443	0.0500	0.0513	
1	8.827	8.827	0.000	3091926	0.0500	0.0491	
		Average of Peak Amounts =				0.0508	
2	8.363	8.363	0.000	1429793	0.0500	0.0549	
2	8.583	8.583	0.000	1705129	0.0500	0.0559	
2	9.051	9.051	0.000	2268070	0.0500	0.0530	
2	9.275	9.275	0.000	1622836	0.0500	0.0527	
2	9.765	9.765	0.000	2187878	0.0500	0.0519	
		Average of Peak Amounts =				0.0537	
						RPD = 5.60	

Reagents:

SG2154@0.05PP_00020 Amount Added: 1.00 Units: mL

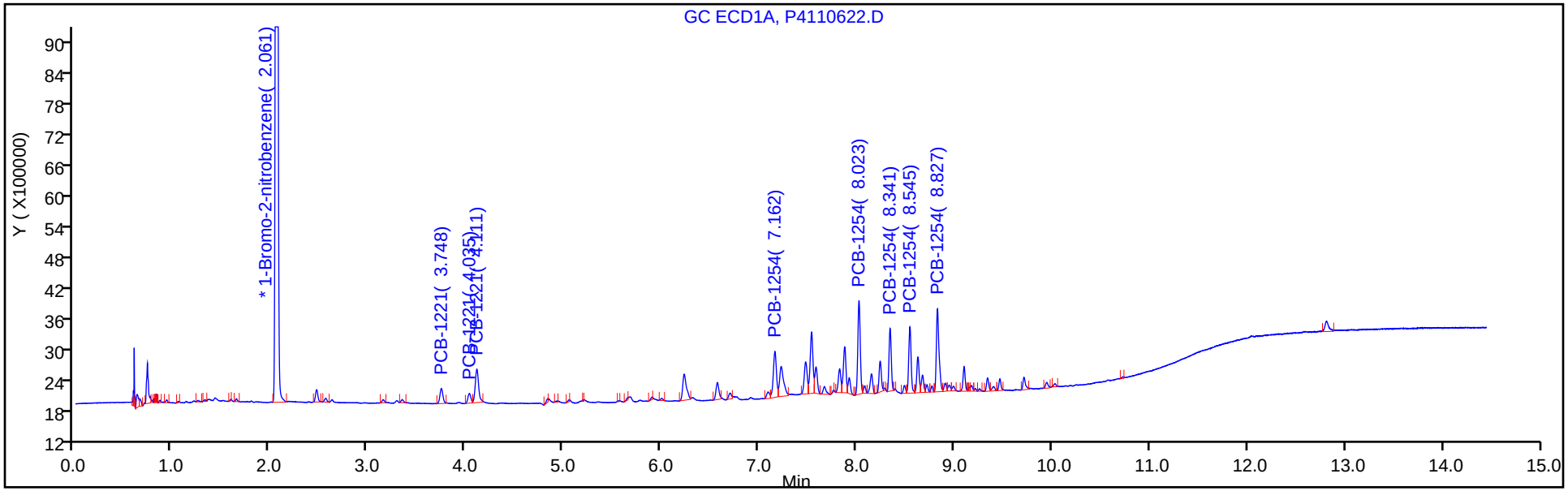
Report Date: 07-Nov-2018 11:07:12 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

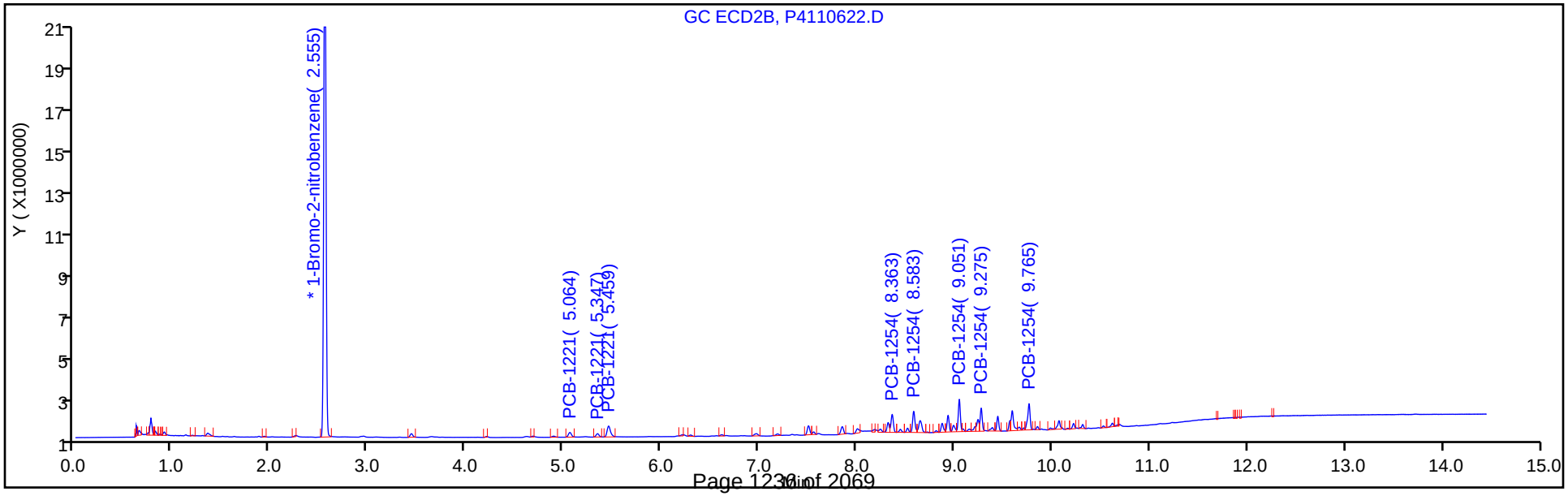
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110622.D

Injection Date:	06-Nov-2018 19:58:58	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std005 ar2154			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110623.D
Lims ID: std01 ar2154
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-Nov-2018 20:20:59 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-023
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:07:00 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:04:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.065	2.061	0.005	50438686	0.0500	0.0500	
2	2.559	2.555	0.004	42128529	0.0500	0.0500	
3 PCB-1221							
1	3.750	3.748	0.002	1273174	0.1000	0.1068	
1	4.038	4.035	0.003	864711	0.1000	0.1117	
1	4.113	4.111	0.002	3225856	0.1000	0.1106	
		Average of Peak Amounts =				0.1097	
2	5.065	5.064	0.001	984586	0.1000	0.1076	
2	5.349	5.347	0.002	668955	0.1000	0.1092	
2	5.461	5.459	0.002	2494290	0.1000	0.1088	
		Average of Peak Amounts =				0.1085	
						RPD = 1.10	
8 PCB-1254							
1	7.161	7.162	-0.001	3856905	0.1000	0.1074	
1	8.020	8.023	-0.003	6636669	0.1000	0.1024	
1	8.338	8.341	-0.003	4465118	0.1000	0.1009	
1	8.541	8.545	-0.004	4685478	0.1000	0.1054	
1	8.824	8.827	-0.003	6697928	0.1000	0.1033	
		Average of Peak Amounts =				0.1039	
2	8.359	8.363	-0.004	2875534	0.1000	0.1071	
2	8.580	8.583	-0.003	3397188	0.1000	0.1080	
2	9.046	9.051	-0.005	4622804	0.1000	0.1047	
2	9.270	9.275	-0.005	3384505	0.1000	0.1066	
2	9.760	9.765	-0.005	4639861	0.1000	0.1067	
		Average of Peak Amounts =				0.1066	
						RPD = 2.63	

Reagents:

SG2154@O.1PPM_00021 Amount Added: 1.00 Units: mL

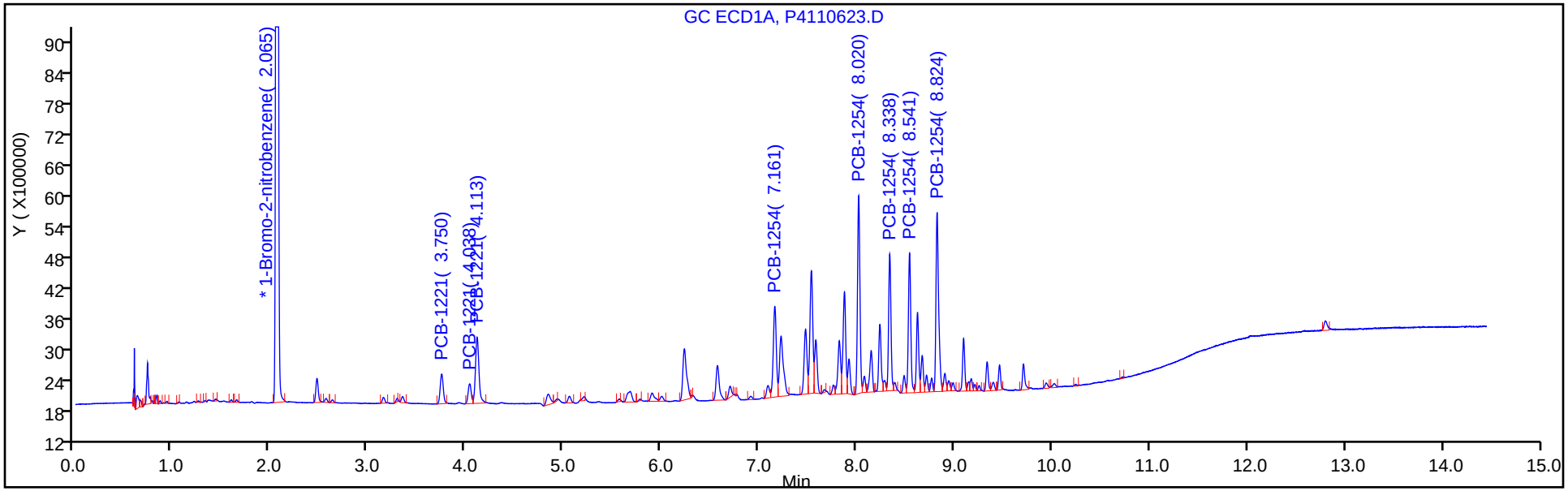
Report Date: 07-Nov-2018 11:07:03 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

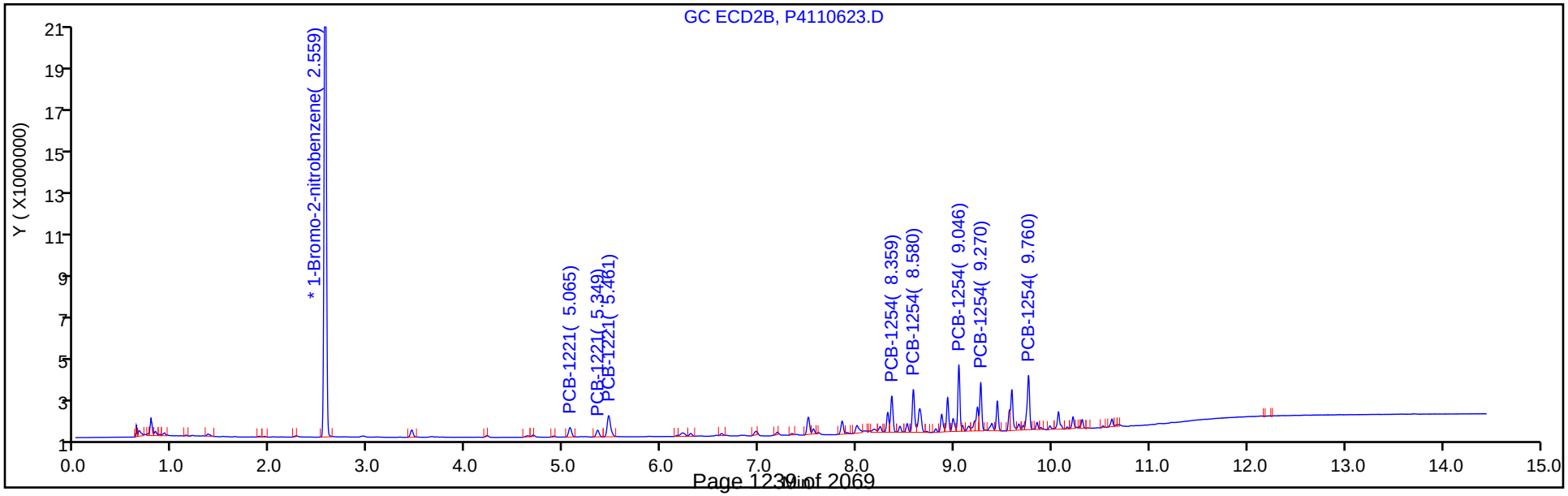
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110623.D

Injection Date:	06-Nov-2018 20:20:59	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std01 ar2154			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110624.D
Lims ID: std02 ar2154
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 06-Nov-2018 20:42:53 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-024
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:06:49 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:04:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.062	2.061	0.001	48879726	0.0500	0.0500	
2	2.556	2.555	0.001	40738701	0.0500	0.0500	
3 PCB-1221							
1	3.749	3.748	0.001	2403965	0.2000	0.2081	
1	4.036	4.035	0.001	1607611	0.2000	0.2143	
1	4.112	4.111	0.001	6015363	0.2000	0.2129	
		Average of Peak Amounts =				0.2118	
2	5.064	5.064	0.000	1864183	0.2000	0.2107	
2	5.347	5.347	0.000	1260054	0.2000	0.2126	
2	5.460	5.459	0.001	4599192	0.2000	0.2074	
		Average of Peak Amounts =				0.2102	
						RPD = 0.72	
8 PCB-1254							
1	7.159	7.162	-0.003	7034060	0.2000	0.2021	
1	8.019	8.023	-0.004	12514485	0.2000	0.1993	
1	8.336	8.341	-0.005	8629885	0.2000	0.2012	
1	8.539	8.545	-0.006	8505778	0.2000	0.1975	
1	8.822	8.827	-0.005	12341219	0.2000	0.1964	
		Average of Peak Amounts =				0.1993	
2	8.358	8.363	-0.005	5286943	0.2000	0.2036	
2	8.579	8.583	-0.004	6163174	0.2000	0.2027	
2	9.045	9.051	-0.006	8476588	0.2000	0.1985	
2	9.269	9.275	-0.006	6081529	0.2000	0.1981	
2	9.759	9.765	-0.006	8387009	0.2000	0.1995	
		Average of Peak Amounts =				0.2005	
						RPD = 0.61	

Reagents:

SG2154@0.2PPM_00020 Amount Added: 1.00 Units: mL

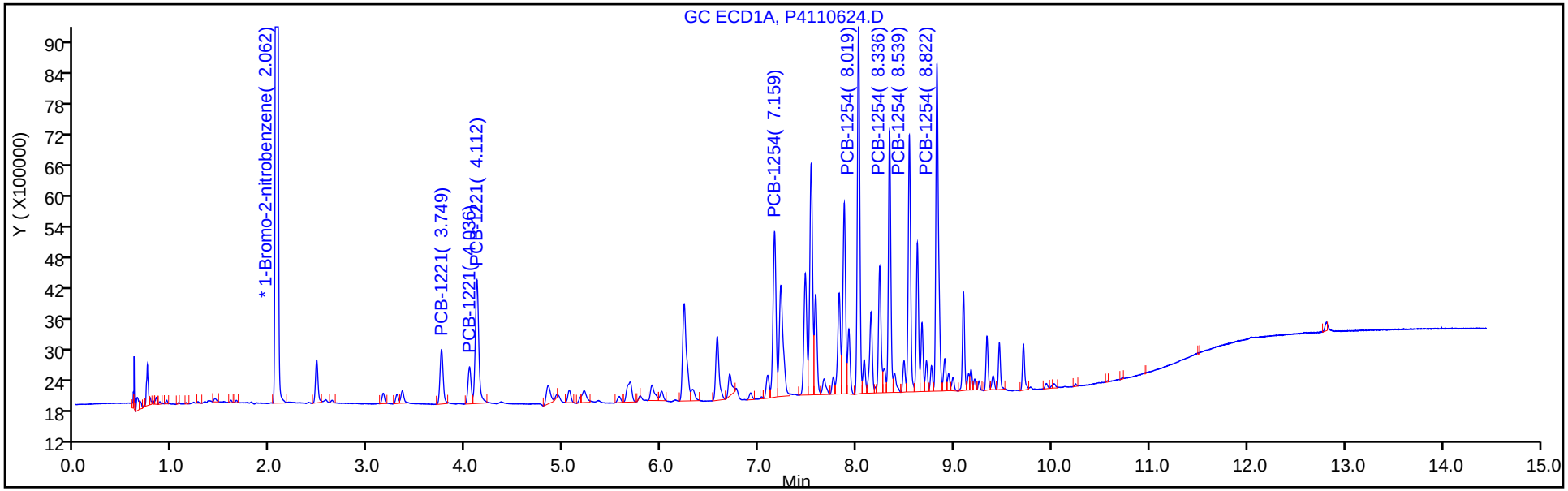
Report Date: 07-Nov-2018 11:06:51 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

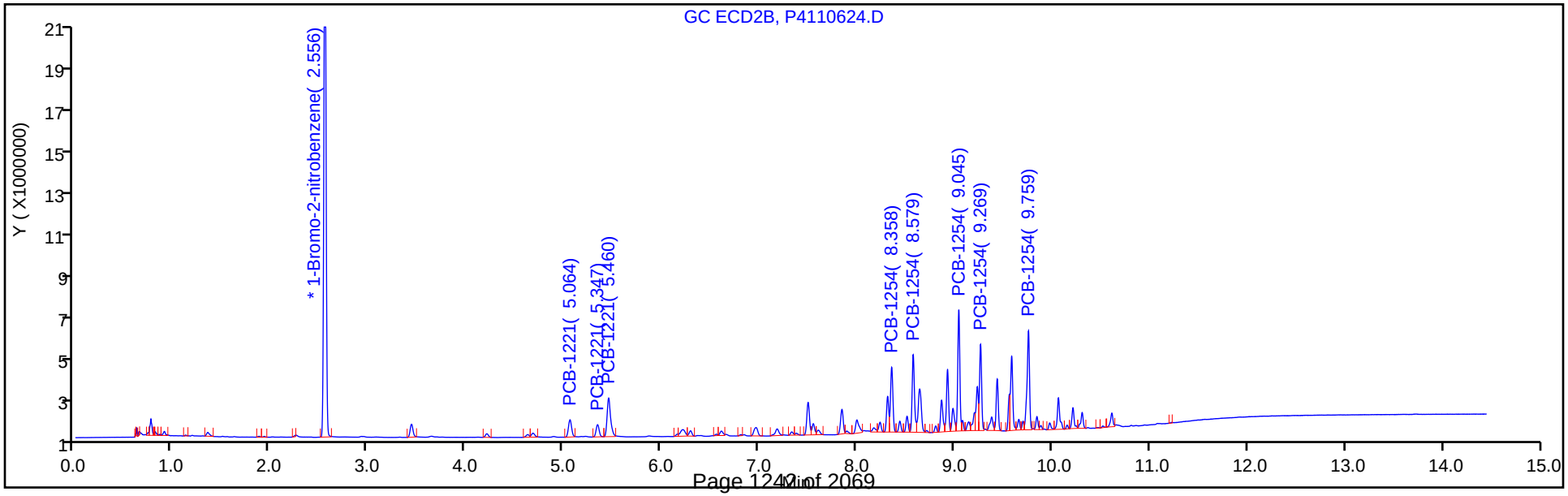
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110624.D

Injection Date:	06-Nov-2018 20:42:53	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std02 ar2154			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110625.D
Lims ID: std05 ar2154
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 06-Nov-2018 21:04:59 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-025
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:06:34 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:05:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.062	2.061	0.001	50281910	0.0500	0.0500	
2	2.555	2.555	0.000	42063897	0.0500	0.0500	
3 PCB-1221							
1	3.749	3.748	0.001	5901155	0.5000	0.4965	
1	4.036	4.035	0.001	3747886	0.5000	0.4858	
1	4.112	4.111	0.001	13926012	0.5000	0.4790	
		Average of Peak Amounts =				0.4871	
2	5.066	5.064	0.002	4442873	0.5000	0.4864	
2	5.347	5.347	0.000	2960561	0.5000	0.4838	
2	5.462	5.459	0.003	10860295	0.5000	0.4742	
		Average of Peak Amounts =				0.4815	
						RPD = 1.16	
8 PCB-1254							
1	7.162	7.162	0.000	16963784	0.5000	0.4737	
1	8.024	8.023	0.001	32143652	0.5000	0.4976	
1	8.342	8.341	0.001	22444070	0.5000	0.5086	
1	8.545	8.545	0.000	21730895	0.5000	0.4905	
1	8.827	8.827	0.000	32146217	0.5000	0.4972	
		Average of Peak Amounts =				0.4935	
2	8.363	8.363	0.000	12858872	0.5000	0.4797	
2	8.585	8.583	0.002	14910486	0.5000	0.4750	
2	9.051	9.051	0.000	21463630	0.5000	0.4868	
2	9.274	9.275	-0.001	15439465	0.5000	0.4870	
2	9.764	9.765	-0.001	20759667	0.5000	0.4783	
		Average of Peak Amounts =				0.4814	
						RPD = 2.49	

Reagents:

SG2154@0.5PPM_00040 Amount Added: 1.00 Units: mL

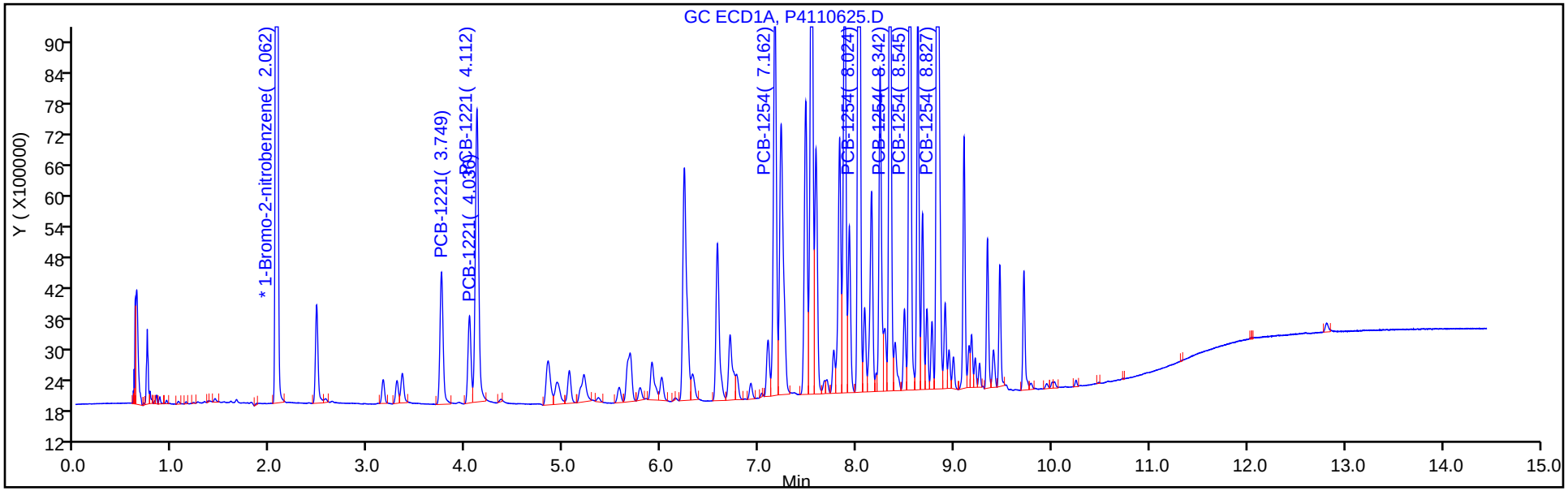
Report Date: 07-Nov-2018 11:06:37 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

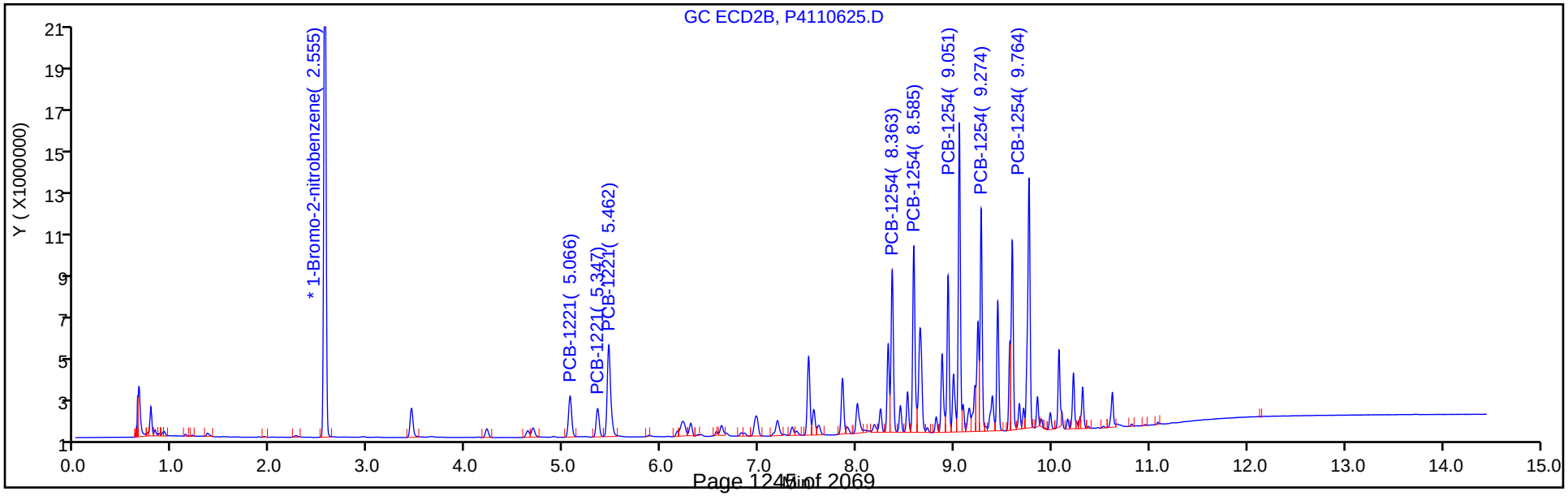
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110625.D

Injection Date:	06-Nov-2018 21:04:59	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std05 ar2154			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110626.D
Lims ID: std1 ar2154
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-Nov-2018 21:27:13 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-026
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:06:20 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:05:26

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	53746144	0.0500	0.0500	
2	2.553	2.555	-0.002	44823682	0.0500	0.0500	
3 PCB-1221							
1	3.747	3.748	-0.001	11648089	1.00	0.9168	
1	4.033	4.035	-0.002	7576755	1.00	0.9187	
1	4.110	4.111	-0.001	27675544	1.00	0.8906	
		Average of Peak Amounts =				0.9087	
2	5.063	5.064	-0.001	8938098	1.00	0.9182	
2	5.345	5.347	-0.002	5926026	1.00	0.9089	
2	5.458	5.459	-0.001	21748725	1.00	0.8912	
		Average of Peak Amounts =				0.9061	
						RPD = 0.29	
8 PCB-1254							
1	7.163	7.162	0.001	35755737	1.00	0.9341	
1	8.023	8.023	0.000	70983951	1.00	1.03	
1	8.340	8.341	-0.001	50469601	1.00	1.07	
1	8.543	8.545	-0.002	48135820	1.00	1.02	
1	8.826	8.827	-0.001	72380018	1.00	1.05	
		Average of Peak Amounts =				1.02	
2	8.363	8.363	0.000	27123043	1.00	0.9495	
2	8.584	8.583	0.001	31744135	1.00	0.9489	
2	9.050	9.051	-0.001	46726646	1.00	0.99	
2	9.274	9.275	-0.001	33657030	1.00	1.00	
2	9.763	9.765	-0.002	47060705	1.00	1.02	
		Average of Peak Amounts =				0.9814	
						RPD = 3.78	

Reagents:

SG2154@1.0PPM_00028 Amount Added: 1.00 Units: mL

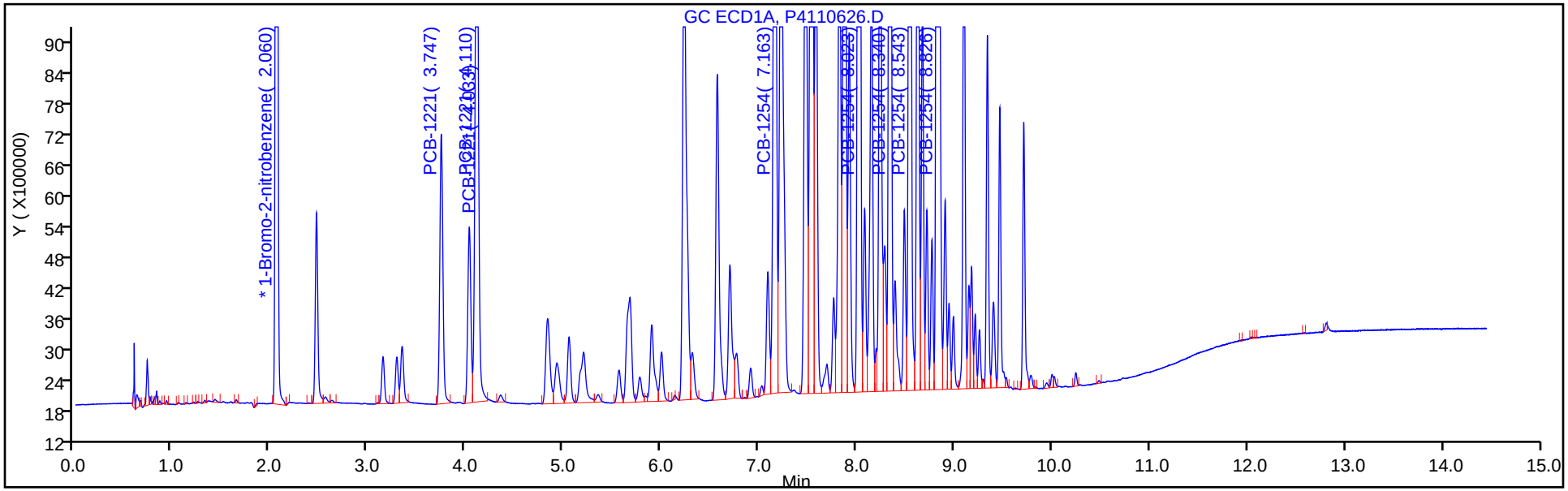
Report Date: 07-Nov-2018 11:06:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

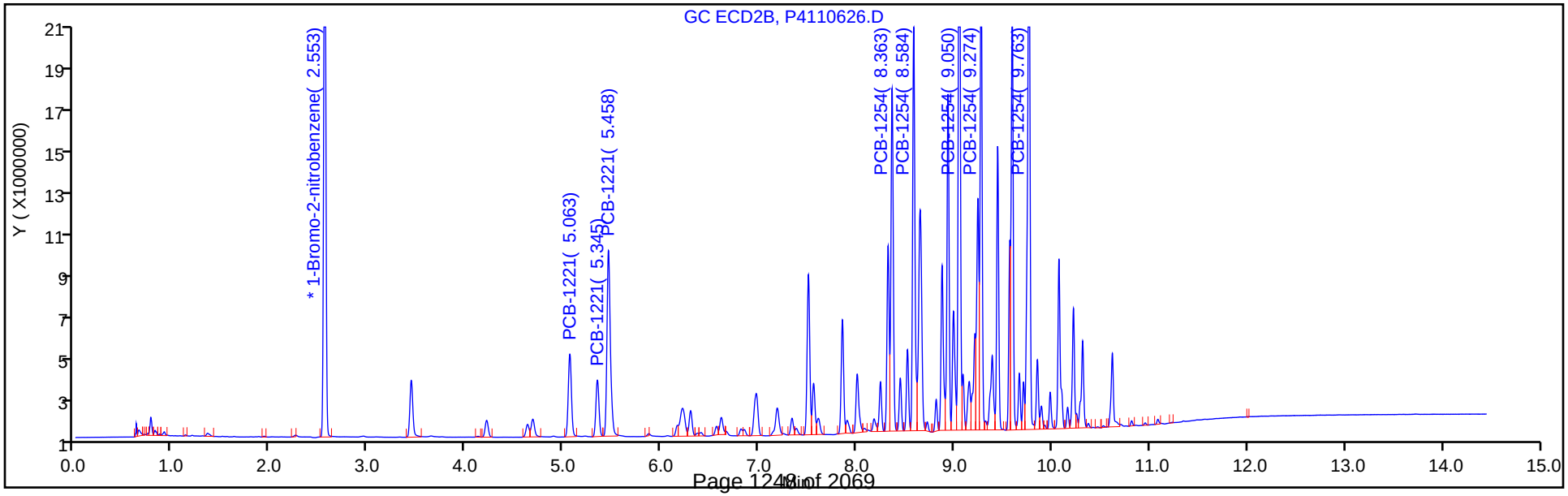
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110626.D

Injection Date:	06-Nov-2018 21:27:13	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std1 ar2154			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110627.D
Lims ID: std15 ar2154
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-Nov-2018 21:49:00 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-027
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:06:11 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:05:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.001	52563963	0.0500	0.0500	
2	2.555	2.555	0.000	43821175	0.0500	0.0500	
3 PCB-1221							
1	3.747	3.748	-0.001	16504844	1.50	1.33	
1	4.034	4.035	-0.001	10425868	1.50	1.29	
1	4.110	4.111	-0.001	40027806	1.50	1.32	
		Average of Peak Amounts =				1.31	
2	5.064	5.064	0.000	12722996	1.50	1.34	
2	5.346	5.347	-0.001	8365510	1.50	1.31	
2	5.461	5.459	0.002	31529082	1.50	1.32	
		Average of Peak Amounts =				1.32	
						RPD = 0.83	
8 PCB-1254							
1	7.163	7.162	0.001	49588423	1.50	1.32	
1	8.023	8.023	0.000	96572063	1.50	1.43	
1	8.341	8.341	0.000	68045860	1.50	1.47	
1	8.545	8.545	0.000	64964247	1.50	1.40	
1	8.826	8.827	-0.001	97450713	1.50	1.44	
		Average of Peak Amounts =				1.41	
2	8.363	8.363	0.000	37844042	1.50	1.36	
2	8.584	8.583	0.001	43582780	1.50	1.33	
2	9.051	9.051	0.000	64247005	1.50	1.40	
2	9.275	9.275	0.000	45528152	1.50	1.38	
2	9.764	9.765	-0.001	62558817	1.50	1.38	
		Average of Peak Amounts =				1.37	
						RPD = 3.24	

Reagents:

SG2154@1.5PPM_00004 Amount Added: 1.00 Units: mL

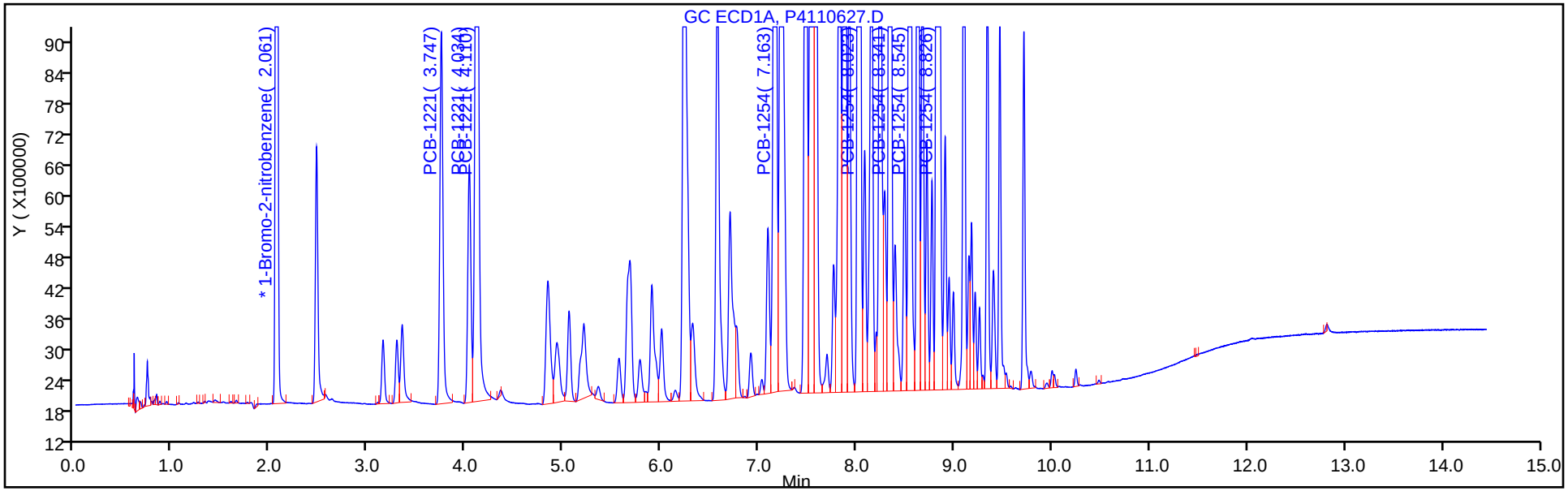
Report Date: 07-Nov-2018 11:06:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

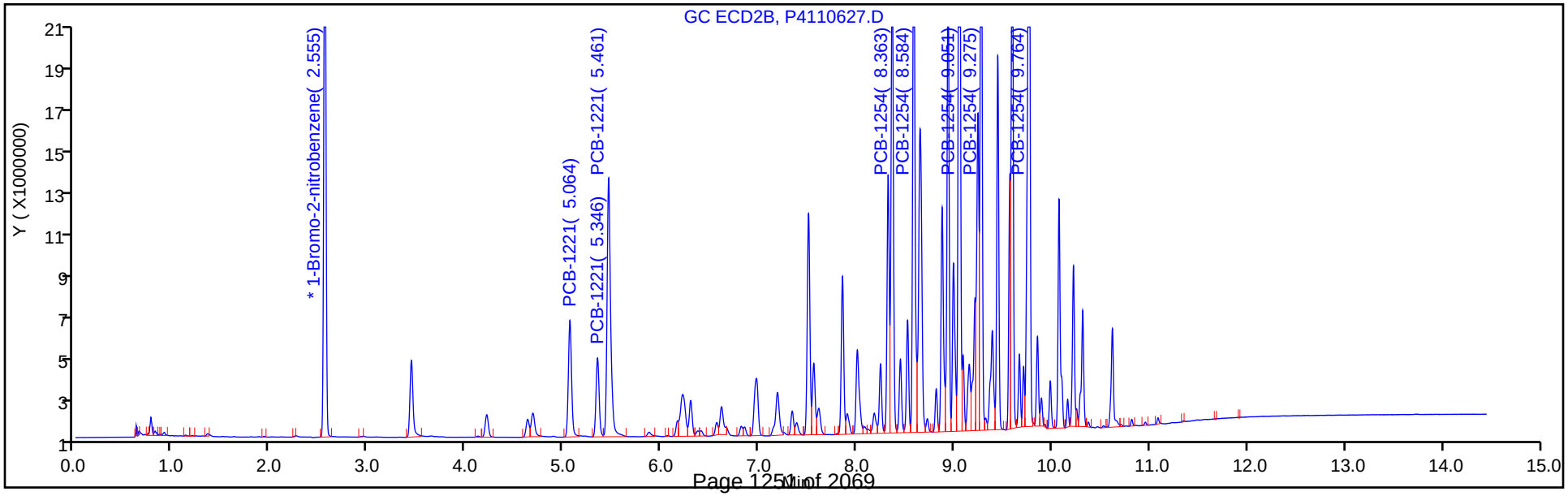
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110627.D

Injection Date:	06-Nov-2018 21:49:00	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std15 ar2154			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 19:58 Calibration End Date: 11/06/2018 21:49 Calibration ID: 47814

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/22	P4110622.D
Level 2	STD01 240-353863/23	P4110623.D
Level 3	STD02 240-353863/24	P4110624.D
Level 4	STD05 240-353863/25	P4110625.D
Level 5	STD1 240-353863/26	P4110626.D
Level 6	STD15 240-353863/27	P4110627.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1221 Peak 1	0.0118 0.0097	0.0117	0.0114	0.0106	0.0100	Ave		0.0109				8.4		20.0			
PCB-1221 Peak 2	0.0080 0.0064	0.0079	0.0077	0.0070	0.0066	Ave		0.0073				9.6		20.0			
PCB-1221 Peak 3	0.0314 0.0240	0.0296	0.0282	0.0258	0.0243	Ave		0.0272				11.1		20.0			
PCB-1254 Peak 1	0.0350 0.0288	0.0341	0.0324	0.0306	0.0303	Ave		0.0319				7.6		20.0			
PCB-1254 Peak 2	0.0417 0.0332	0.0403	0.0378	0.0354	0.0354	Ave		0.0373				8.8		20.0			
PCB-1254 Peak 3	0.0555 0.0489	0.0549	0.0520	0.0510	0.0521	Ave		0.0524				4.7		20.0			
PCB-1254 Peak 4	0.0397 0.0346	0.0402	0.0373	0.0367	0.0375	Ave		0.0377				5.4		20.0			
PCB-1254 Peak 5	0.0536 0.0476	0.0551	0.0515	0.0494	0.0525	Ave		0.0516				5.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 19:58 Calibration End Date: 11/06/2018 21:49 Calibration ID: 47814

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/22	P4110622.D
Level 2	STD01 240-353863/23	P4110623.D
Level 3	STD02 240-353863/24	P4110624.D
Level 4	STD05 240-353863/25	P4110625.D
Level 5	STD1 240-353863/26	P4110626.D
Level 6	STD15 240-353863/27	P4110627.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1221 Peak 1	BNB	Ave	482544 12722996	984586	1864183	4442873	8938098	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1221 Peak 2	BNB	Ave	324930 8365510	668955	1260054	2960561	5926026	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1221 Peak 3	BNB	Ave	1283912 31529082	2494290	4599192	10860295	21748725	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 1	BNB	Ave	1429793 37844042	2875534	5286943	12858872	27123043	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 2	BNB	Ave	1705129 43582780	3397188	6163174	14910486	31744135	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 3	BNB	Ave	2268070 64247005	4622804	8476588	21463630	46726646	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 4	BNB	Ave	1622836 45528152	3384505	6081529	15439465	33657030	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 5	BNB	Ave	2187878 62558817	4639861	8387009	20759667	47060705	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110622.D
Lims ID: std005 ar2154
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-Nov-2018 19:58:58 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-022
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:07:11 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:04:04

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.001	48975850	0.0500	0.0500	
2	2.555	2.555	0.000	40843995	0.0500	0.0500	
3 PCB-1221							
1	3.748	3.748	0.000	634664	0.0500	0.0548	
1	4.035	4.035	0.000	397906	0.0500	0.0529	
1	4.111	4.111	0.000	1561214	0.0500	0.0551	
		Average of Peak Amounts =				0.0543	
2	5.064	5.064	0.000	482544	0.0500	0.0544	
2	5.347	5.347	0.000	324930	0.0500	0.0547	
2	5.459	5.459	0.000	1283912	0.0500	0.0577	
		Average of Peak Amounts =				0.0556	
						RPD = 2.38	
8 PCB-1254							
1	7.162	7.162	0.000	2008298	0.0500	0.0576	
1	8.023	8.023	0.000	3155261	0.0500	0.0501	
1	8.341	8.341	0.000	1967615	0.0500	0.0458	
1	8.545	8.545	0.000	2212443	0.0500	0.0513	
1	8.827	8.827	0.000	3091926	0.0500	0.0491	
		Average of Peak Amounts =				0.0508	
2	8.363	8.363	0.000	1429793	0.0500	0.0549	
2	8.583	8.583	0.000	1705129	0.0500	0.0559	
2	9.051	9.051	0.000	2268070	0.0500	0.0530	
2	9.275	9.275	0.000	1622836	0.0500	0.0527	
2	9.765	9.765	0.000	2187878	0.0500	0.0519	
		Average of Peak Amounts =				0.0537	
						RPD = 5.60	

Reagents:

SG2154@0.05PP_00020 Amount Added: 1.00 Units: mL

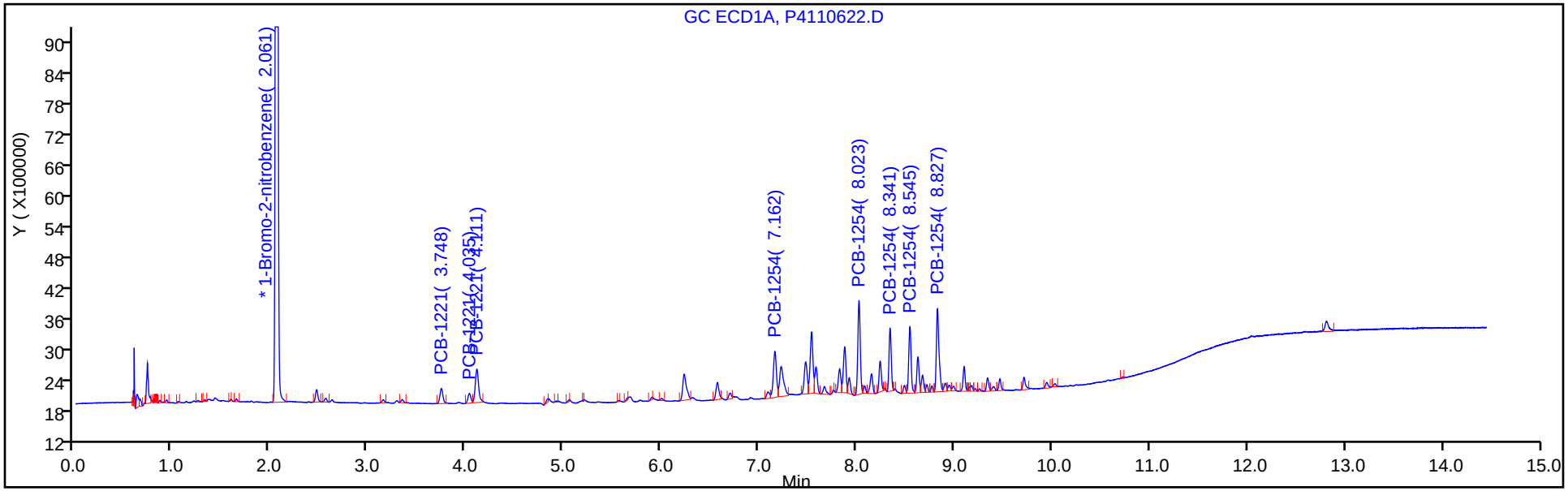
Report Date: 07-Nov-2018 11:07:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

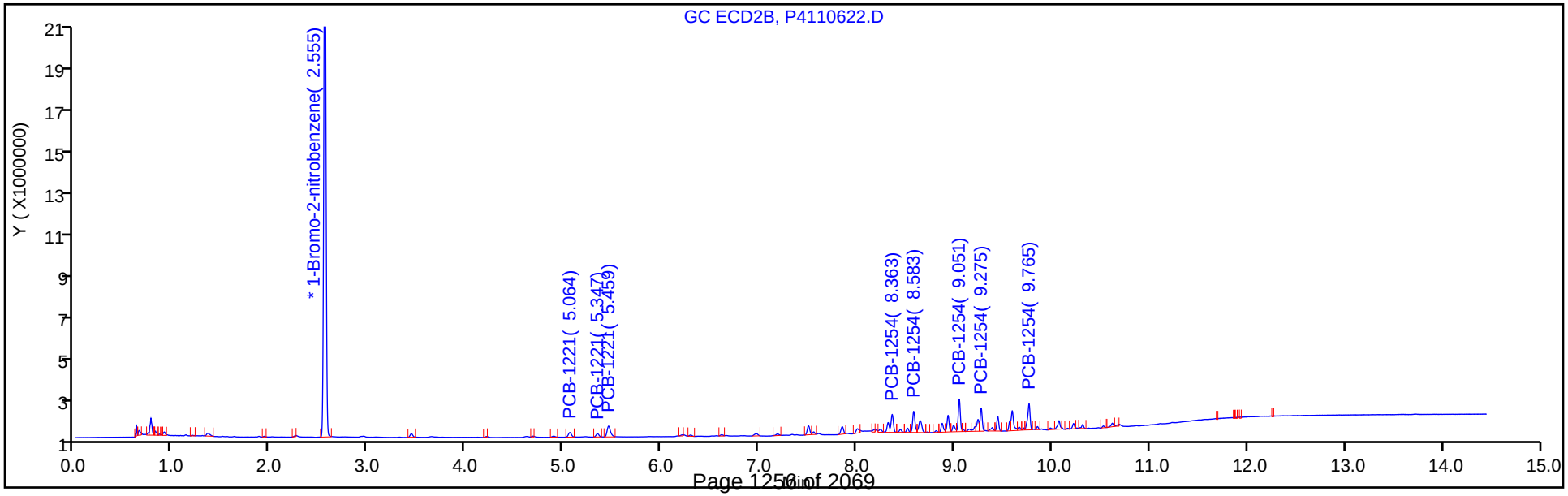
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110622.D

Injection Date:	06-Nov-2018 19:58:58	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std005 ar2154			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110623.D
Lims ID: std01 ar2154
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-Nov-2018 20:20:59 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-023
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:07:00 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:04:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.065	2.061	0.005	50438686	0.0500	0.0500	
2	2.559	2.555	0.004	42128529	0.0500	0.0500	
3 PCB-1221							
1	3.750	3.748	0.002	1273174	0.1000	0.1068	
1	4.038	4.035	0.003	864711	0.1000	0.1117	
1	4.113	4.111	0.002	3225856	0.1000	0.1106	
		Average of Peak Amounts =				0.1097	
2	5.065	5.064	0.001	984586	0.1000	0.1076	
2	5.349	5.347	0.002	668955	0.1000	0.1092	
2	5.461	5.459	0.002	2494290	0.1000	0.1088	
		Average of Peak Amounts =				0.1085	
						RPD = 1.10	
8 PCB-1254							
1	7.161	7.162	-0.001	3856905	0.1000	0.1074	
1	8.020	8.023	-0.003	6636669	0.1000	0.1024	
1	8.338	8.341	-0.003	4465118	0.1000	0.1009	
1	8.541	8.545	-0.004	4685478	0.1000	0.1054	
1	8.824	8.827	-0.003	6697928	0.1000	0.1033	
		Average of Peak Amounts =				0.1039	
2	8.359	8.363	-0.004	2875534	0.1000	0.1071	
2	8.580	8.583	-0.003	3397188	0.1000	0.1080	
2	9.046	9.051	-0.005	4622804	0.1000	0.1047	
2	9.270	9.275	-0.005	3384505	0.1000	0.1066	
2	9.760	9.765	-0.005	4639861	0.1000	0.1067	
		Average of Peak Amounts =				0.1066	
						RPD = 2.63	

Reagents:

SG2154@O.1PPM_00021 Amount Added: 1.00 Units: mL

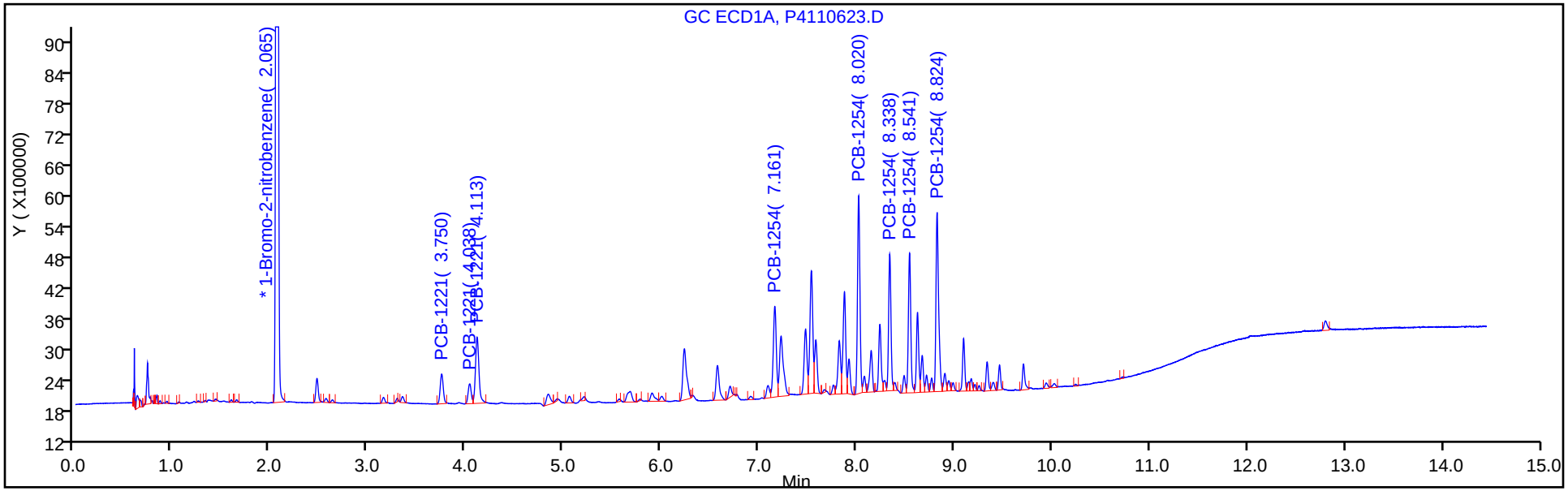
Report Date: 07-Nov-2018 11:07:03 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

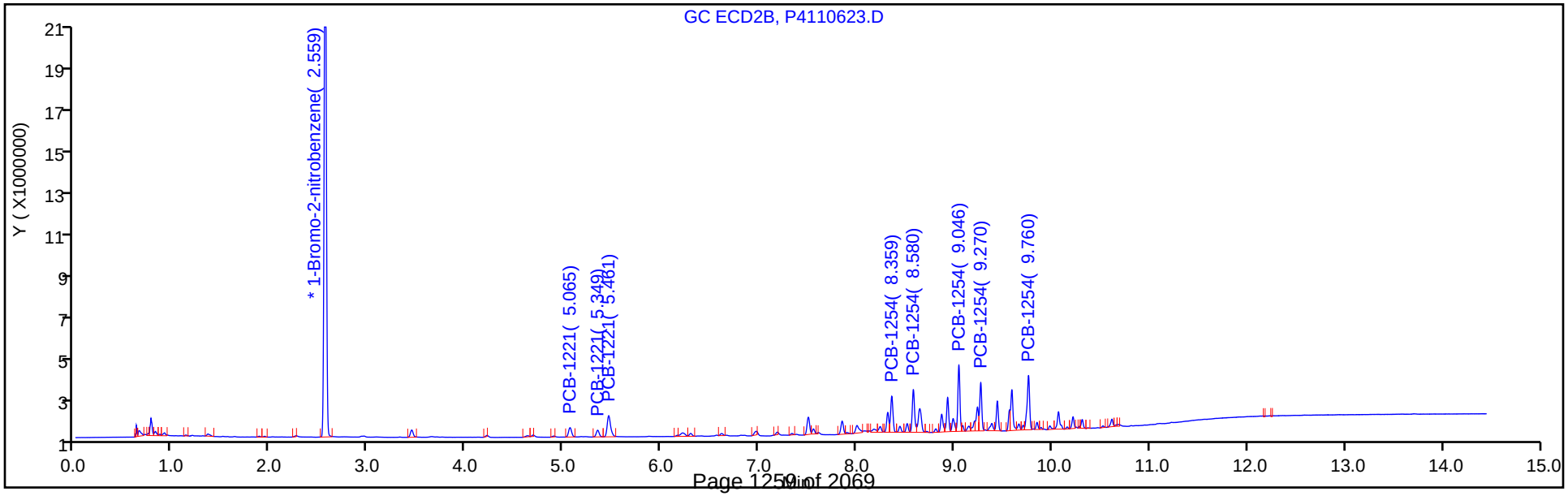
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110623.D

Injection Date:	06-Nov-2018 20:20:59	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std01 ar2154			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110624.D
Lims ID: std02 ar2154
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 06-Nov-2018 20:42:53 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-024
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:06:49 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:04:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.062	2.061	0.001	48879726	0.0500	0.0500	
2	2.556	2.555	0.001	40738701	0.0500	0.0500	
3 PCB-1221							
1	3.749	3.748	0.001	2403965	0.2000	0.2081	
1	4.036	4.035	0.001	1607611	0.2000	0.2143	
1	4.112	4.111	0.001	6015363	0.2000	0.2129	
		Average of Peak Amounts =				0.2118	
2	5.064	5.064	0.000	1864183	0.2000	0.2107	
2	5.347	5.347	0.000	1260054	0.2000	0.2126	
2	5.460	5.459	0.001	4599192	0.2000	0.2074	
		Average of Peak Amounts =				0.2102	
						RPD = 0.72	
8 PCB-1254							
1	7.159	7.162	-0.003	7034060	0.2000	0.2021	
1	8.019	8.023	-0.004	12514485	0.2000	0.1993	
1	8.336	8.341	-0.005	8629885	0.2000	0.2012	
1	8.539	8.545	-0.006	8505778	0.2000	0.1975	
1	8.822	8.827	-0.005	12341219	0.2000	0.1964	
		Average of Peak Amounts =				0.1993	
2	8.358	8.363	-0.005	5286943	0.2000	0.2036	
2	8.579	8.583	-0.004	6163174	0.2000	0.2027	
2	9.045	9.051	-0.006	8476588	0.2000	0.1985	
2	9.269	9.275	-0.006	6081529	0.2000	0.1981	
2	9.759	9.765	-0.006	8387009	0.2000	0.1995	
		Average of Peak Amounts =				0.2005	
						RPD = 0.61	

Reagents:

SG2154@0.2PPM_00020 Amount Added: 1.00 Units: mL

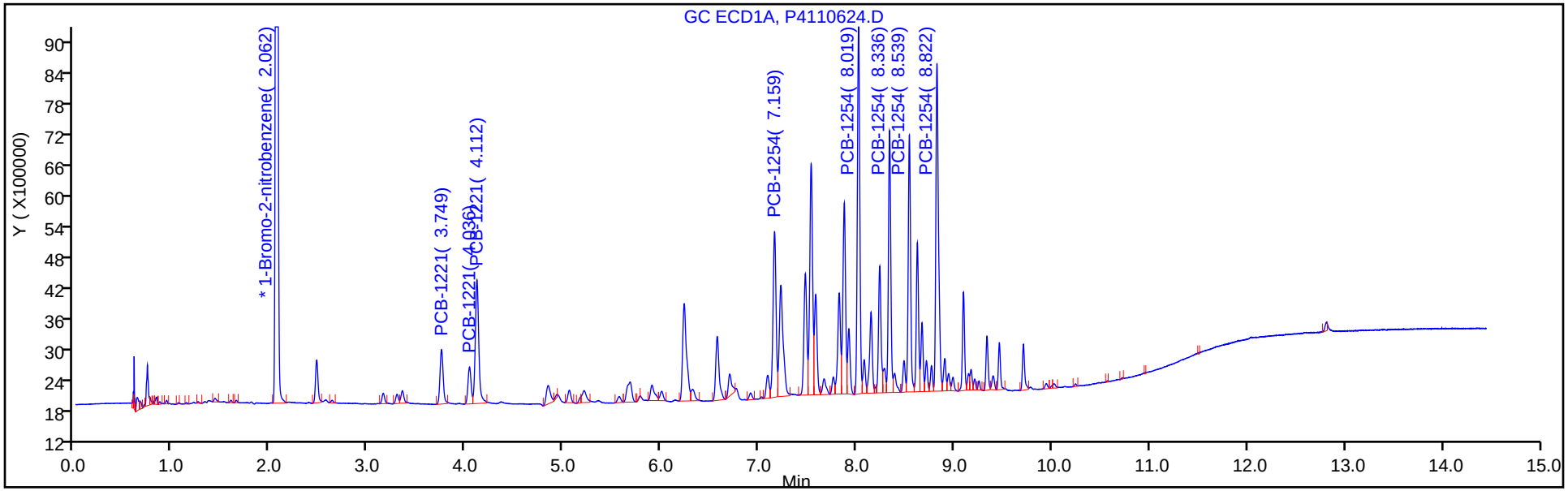
Report Date: 07-Nov-2018 11:06:51 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

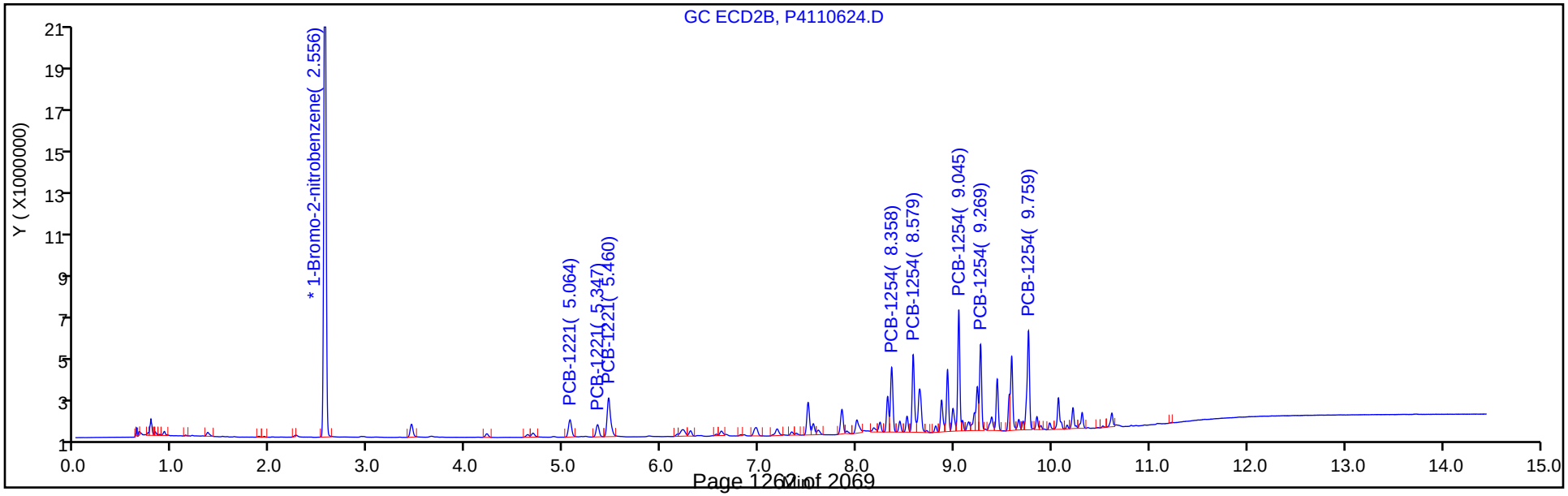
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110624.D

Injection Date:	06-Nov-2018 20:42:53	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std02 ar2154			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110625.D
Lims ID: std05 ar2154
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 06-Nov-2018 21:04:59 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-025
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:06:34 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:05:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.062	2.061	0.001	50281910	0.0500	0.0500	
2	2.555	2.555	0.000	42063897	0.0500	0.0500	
3 PCB-1221							
1	3.749	3.748	0.001	5901155	0.5000	0.4965	
1	4.036	4.035	0.001	3747886	0.5000	0.4858	
1	4.112	4.111	0.001	13926012	0.5000	0.4790	
		Average of Peak Amounts =				0.4871	
2	5.066	5.064	0.002	4442873	0.5000	0.4864	
2	5.347	5.347	0.000	2960561	0.5000	0.4838	
2	5.462	5.459	0.003	10860295	0.5000	0.4742	
		Average of Peak Amounts =				0.4815	
						RPD = 1.16	
8 PCB-1254							
1	7.162	7.162	0.000	16963784	0.5000	0.4737	
1	8.024	8.023	0.001	32143652	0.5000	0.4976	
1	8.342	8.341	0.001	22444070	0.5000	0.5086	
1	8.545	8.545	0.000	21730895	0.5000	0.4905	
1	8.827	8.827	0.000	32146217	0.5000	0.4972	
		Average of Peak Amounts =				0.4935	
2	8.363	8.363	0.000	12858872	0.5000	0.4797	
2	8.585	8.583	0.002	14910486	0.5000	0.4750	
2	9.051	9.051	0.000	21463630	0.5000	0.4868	
2	9.274	9.275	-0.001	15439465	0.5000	0.4870	
2	9.764	9.765	-0.001	20759667	0.5000	0.4783	
		Average of Peak Amounts =				0.4814	
						RPD = 2.49	

Reagents:

SG2154@0.5PPM_00040 Amount Added: 1.00 Units: mL

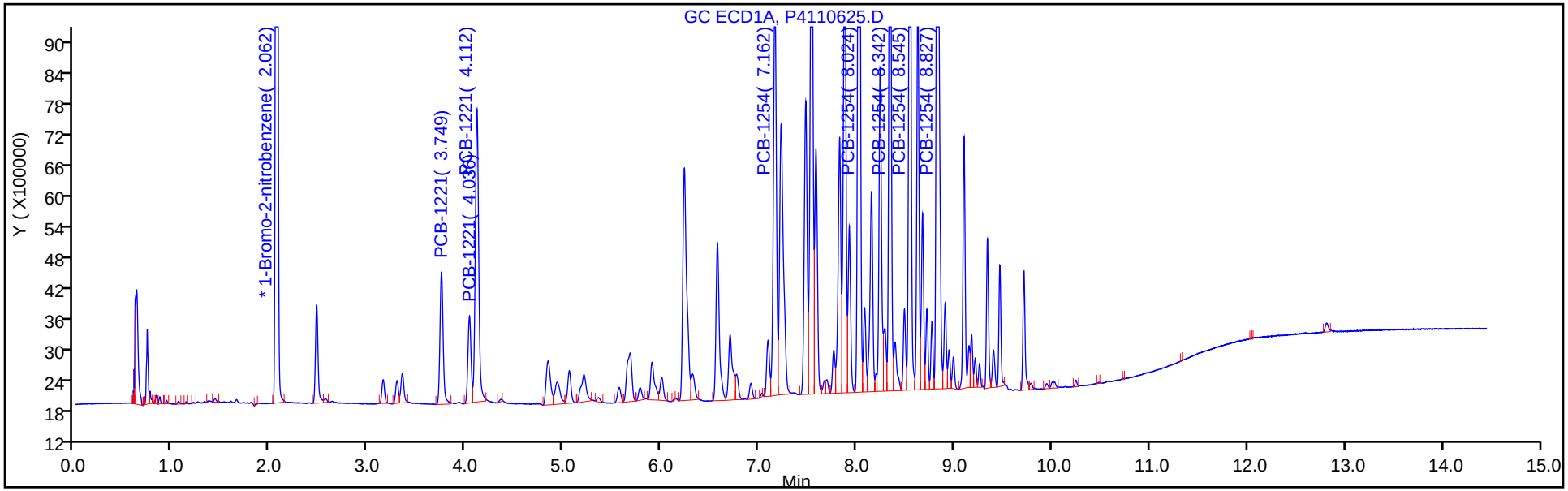
Report Date: 07-Nov-2018 11:06:37 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

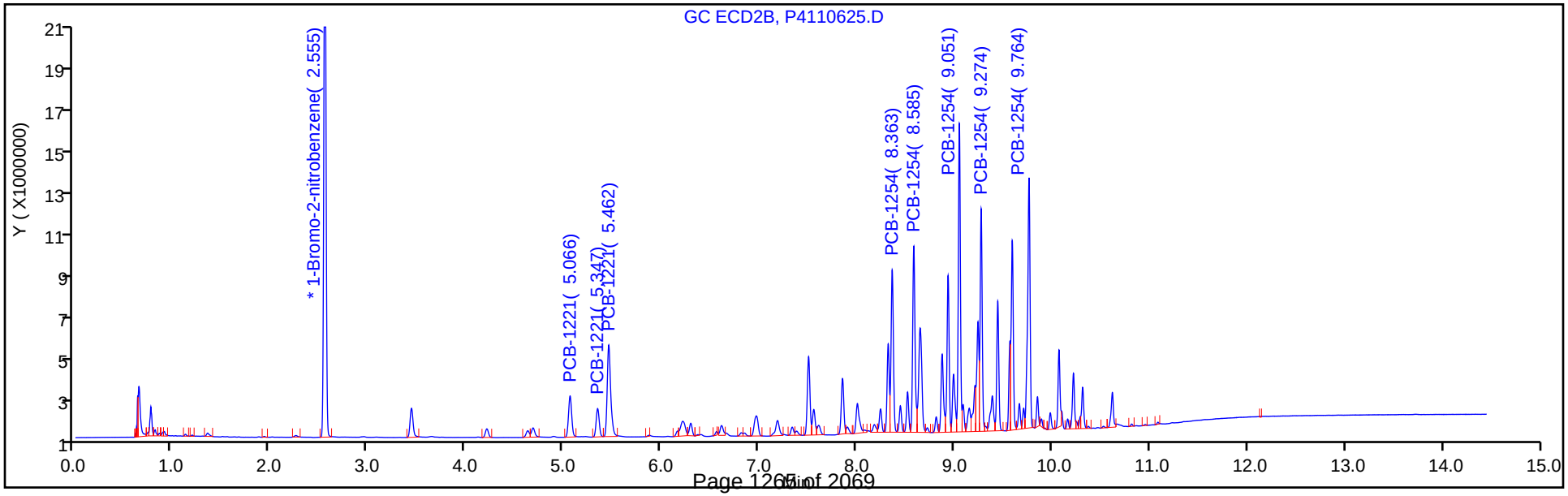
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110625.D

Injection Date:	06-Nov-2018 21:04:59	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std05 ar2154			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110626.D
Lims ID: std1 ar2154
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-Nov-2018 21:27:13 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-026
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:06:20 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:05:26

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	53746144	0.0500	0.0500	
2	2.553	2.555	-0.002	44823682	0.0500	0.0500	
3 PCB-1221							
1	3.747	3.748	-0.001	11648089	1.00	0.9168	
1	4.033	4.035	-0.002	7576755	1.00	0.9187	
1	4.110	4.111	-0.001	27675544	1.00	0.8906	
		Average of Peak Amounts =				0.9087	
2	5.063	5.064	-0.001	8938098	1.00	0.9182	
2	5.345	5.347	-0.002	5926026	1.00	0.9089	
2	5.458	5.459	-0.001	21748725	1.00	0.8912	
		Average of Peak Amounts =				0.9061	
						RPD = 0.29	
8 PCB-1254							
1	7.163	7.162	0.001	35755737	1.00	0.9341	
1	8.023	8.023	0.000	70983951	1.00	1.03	
1	8.340	8.341	-0.001	50469601	1.00	1.07	
1	8.543	8.545	-0.002	48135820	1.00	1.02	
1	8.826	8.827	-0.001	72380018	1.00	1.05	
		Average of Peak Amounts =				1.02	
2	8.363	8.363	0.000	27123043	1.00	0.9495	
2	8.584	8.583	0.001	31744135	1.00	0.9489	
2	9.050	9.051	-0.001	46726646	1.00	0.99	
2	9.274	9.275	-0.001	33657030	1.00	1.00	
2	9.763	9.765	-0.002	47060705	1.00	1.02	
		Average of Peak Amounts =				0.9814	
						RPD = 3.78	

Reagents:

SG2154@1.0PPM_00028 Amount Added: 1.00 Units: mL

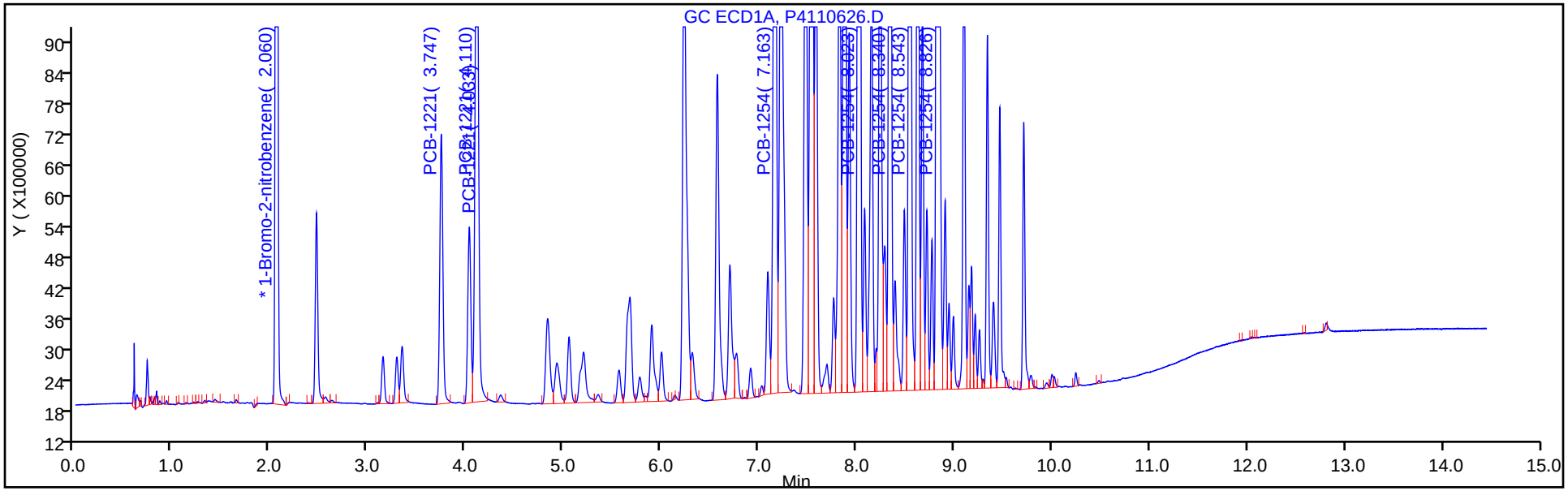
Report Date: 07-Nov-2018 11:06:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

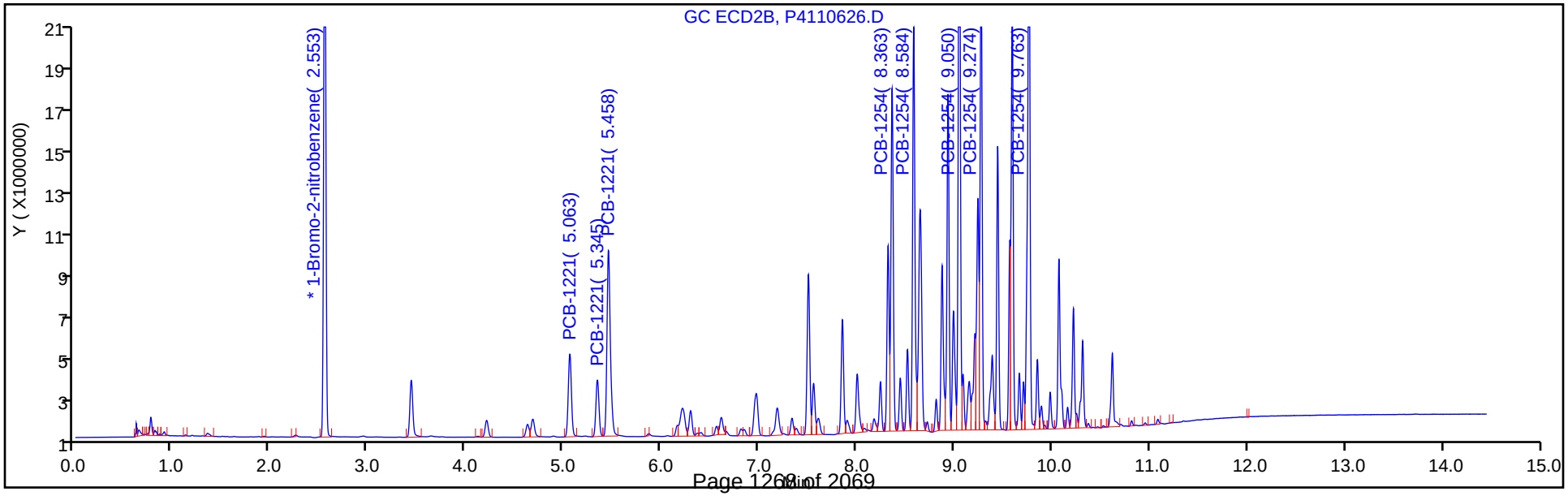
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110626.D

Injection Date:	06-Nov-2018 21:27:13	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std1 ar2154			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110627.D
Lims ID: std15 ar2154
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-Nov-2018 21:49:00 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-027
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:06:11 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:05:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.001	52563963	0.0500	0.0500	
2	2.555	2.555	0.000	43821175	0.0500	0.0500	
3 PCB-1221							
1	3.747	3.748	-0.001	16504844	1.50	1.33	
1	4.034	4.035	-0.001	10425868	1.50	1.29	
1	4.110	4.111	-0.001	40027806	1.50	1.32	
		Average of Peak Amounts =				1.31	
2	5.064	5.064	0.000	12722996	1.50	1.34	
2	5.346	5.347	-0.001	8365510	1.50	1.31	
2	5.461	5.459	0.002	31529082	1.50	1.32	
		Average of Peak Amounts =				1.32	
						RPD = 0.83	
8 PCB-1254							
1	7.163	7.162	0.001	49588423	1.50	1.32	
1	8.023	8.023	0.000	96572063	1.50	1.43	
1	8.341	8.341	0.000	68045860	1.50	1.47	
1	8.545	8.545	0.000	64964247	1.50	1.40	
1	8.826	8.827	-0.001	97450713	1.50	1.44	
		Average of Peak Amounts =				1.41	
2	8.363	8.363	0.000	37844042	1.50	1.36	
2	8.584	8.583	0.001	43582780	1.50	1.33	
2	9.051	9.051	0.000	64247005	1.50	1.40	
2	9.275	9.275	0.000	45528152	1.50	1.38	
2	9.764	9.765	-0.001	62558817	1.50	1.38	
		Average of Peak Amounts =				1.37	
						RPD = 3.24	

Reagents:

SG2154@1.5PPM_00004 Amount Added: 1.00 Units: mL

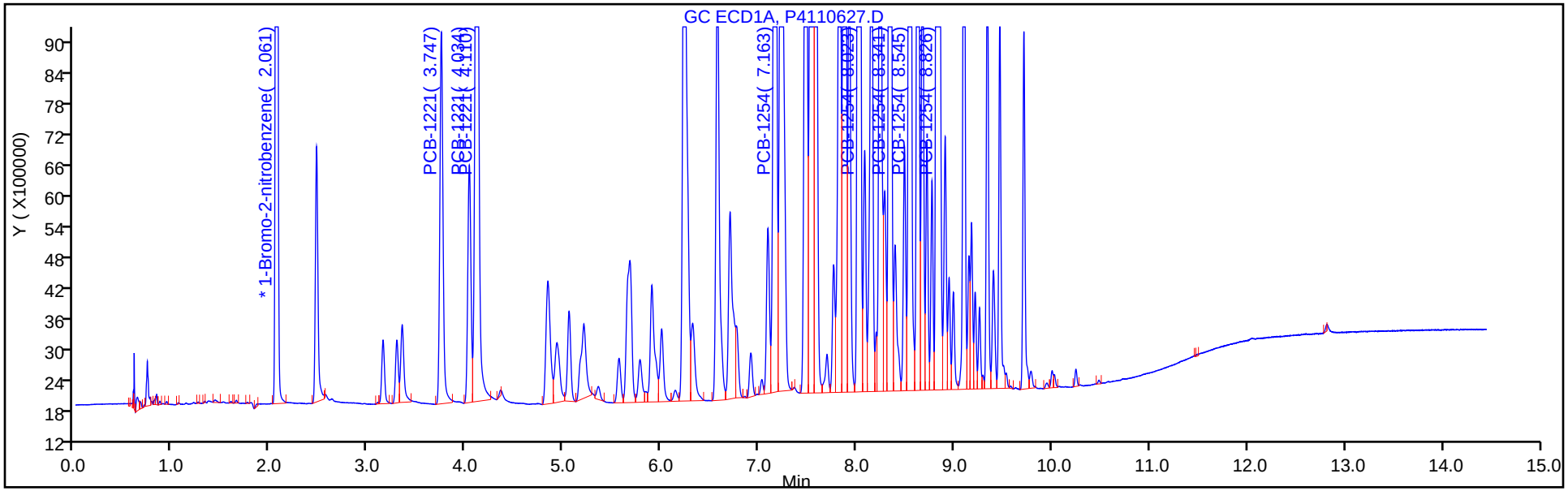
Report Date: 07-Nov-2018 11:06:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

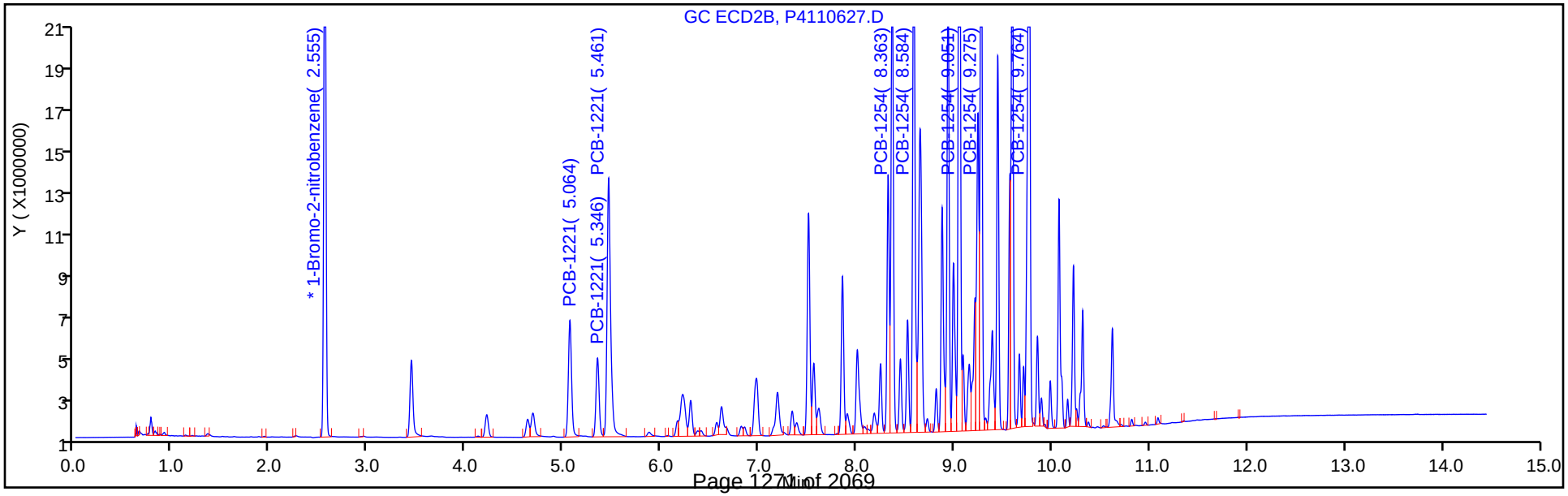
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110627.D

Injection Date:	06-Nov-2018 21:49:00	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std15 ar2154			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 22:10 Calibration End Date: 11/06/2018 23:56 Calibration ID: 47805

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/28	P4110628.D
Level 2	STD01 240-353863/29	P4110629.D
Level 3	STD02 240-353863/30	P4110630.D
Level 4	STD05 240-353863/31	P4110631.D
Level 5	STD1 240-353863/32	P4110632.D
Level 6	STD15 240-353863/33	P4110633.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1016 Peak 1	0.0223 0.0211	0.0227	0.0215	0.0205	0.0208	Ave		0.0215				3.9		20.0			
PCB-1016 Peak 2	0.0429 0.0377	0.0408	0.0402	0.0379	0.0360	Ave		0.0392				6.4		20.0			
PCB-1016 Peak 3	0.0843 0.0774	0.0784	0.0766	0.0764	0.0739	Ave		0.0778				4.5		20.0			
PCB-1016 Peak 4	0.0398 0.0352	0.0371	0.0362	0.0353	0.0340	Ave		0.0363				5.6		20.0			
PCB-1016 Peak 5	0.0170 0.0159	0.0173	0.0162	0.0158	0.0158	Ave		0.0163				4.1		20.0			
PCB-1260 Peak 1	0.0506 0.0461	0.0458	0.0445	0.0453	0.0429	Ave		0.0459				5.6		20.0			
PCB-1260 Peak 2	0.0779 0.0717	0.0693	0.0688	0.0710	0.0667	Ave		0.0709				5.4		20.0			
PCB-1260 Peak 3	0.0839 0.0799	0.0750	0.0748	0.0783	0.0732	Ave		0.0775				5.2		20.0			
PCB-1260 Peak 4	0.1148 0.1129	0.1030	0.1035	0.1110	0.1024	Ave		0.1079				5.2		20.0			
PCB-1260 Peak 5	0.0569 0.0547	0.0503	0.0500	0.0532	0.0489	Ave		0.0523				6.0		20.0			
Tetrachloro-m-xylene	1.2192 1.2173	1.2461	1.2283	1.2379	1.2503	Ave		1.2332				1.1		20.0			
DCB Decachlorobiphenyl	1.3231 1.0422	1.1356	1.0830	1.0934	0.9770	Ave		1.1090				10.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 22:10 Calibration End Date: 11/06/2018 23:56 Calibration ID: 47805

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/28	P4110628.D
Level 2	STD01 240-353863/29	P4110629.D
Level 3	STD02 240-353863/30	P4110630.D
Level 4	STD05 240-353863/31	P4110631.D
Level 5	STD1 240-353863/32	P4110632.D
Level 6	STD15 240-353863/33	P4110633.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 1	BNB	Ave	1110709 31151311	2232298	4255211	10000580	20115213	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 2	BNB	Ave	2138423 55662832	4015717	7937690	18452741	34804744	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 3	BNB	Ave	4197223 114208117	7713862	15136148	37202613	71507309	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 4	BNB	Ave	1982755 51907614	3656664	7162603	17184180	32896892	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 5	BNB	Ave	847789 23456485	1706941	3195265	7708519	15238751	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 1	BNB	Ave	2519778 68032536	4508396	8796804	22051329	41520267	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 2	BNB	Ave	3878444 105805192	6818885	13592005	34561194	64465098	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 3	BNB	Ave	4181309 117847095	7381187	14778383	38156975	70837005	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 4	BNB	Ave	5717976 166421516	10137319	20466236	54072973	99063857	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 5	BNB	Ave	2835514 80599623	4952270	9875354	25905905	47249110	0.0500 1.50	0.100	0.200	0.500	1.00
Tetrachloro-m-xylene	BNB	Ave	3036728 119679205	6133810	12139396	30143571	60460202	0.00250 0.100	0.00500	0.0100	0.0250	0.0500
DCB Decachlorobiphenyl	BNB	Ave	3295570 102461909	5589872	10703053	26625391	47243461	0.00250 0.100	0.00500	0.0100	0.0250	0.0500

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110628.D
Lims ID: std005 1660
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-Nov-2018 22:10:44 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-028
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub5

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:05:54 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:06:29

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.064	2.061	0.004	49815446	0.0500	0.0500	
2	2.559	2.555	0.004	41535515	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.354	3.349	0.005	3036728	0.002500	0.002472	
2	4.376	4.371	0.005	2153325	0.002500	0.002524	
						RPD = 2.10	
6 PCB-1016							a
1	4.117	4.111	0.006	1110709	0.0500	0.0519	
1	4.839	4.832	0.007	2138423	0.0500	0.0547	
1	5.685	5.678	0.007	4197223	0.0500	0.0541	
1	5.906	5.900	0.006	1982755	0.0500	0.0549	
1	6.322	6.316	0.006	847789	0.0500	0.0521	a
		Average of Peak Amounts =				0.0535	
2	5.465	5.460	0.005	848267	0.0500	0.0518	
2	6.220	6.216	0.004	1652704	0.0500	0.0536	
2	6.976	6.971	0.005	3150832	0.0500	0.0536	
2	7.191	7.187	0.004	1352943	0.0500	0.0538	
2	7.560	7.560	0.000	818102	0.0500	0.0562	
		Average of Peak Amounts =				0.0538	
						RPD = 0.51	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.241	8.240	0.001	2519778	0.0500	0.0551	
1	8.548	8.545	0.003	3878444	0.0500	0.0549	
1	8.828	8.826	0.002	4181309	0.0500	0.0541	
1	9.468	9.464	0.004	5717976	0.0500	0.0532	
1	9.713	9.711	0.002	2835514	0.0500	0.0544	
		Average of Peak Amounts =				0.0544	
2	9.244	9.242	0.002	1770864	0.0500	0.0532	
2	9.446	9.444	0.002	2118164	0.0500	0.0572	
2	9.764	9.762	0.002	2892161	0.0500	0.0551	
2	10.316	10.313	0.003	4269274	0.0500	0.0553	
2	10.617	10.614	0.003	3188882	0.0500	0.0572	
		Average of Peak Amounts =				0.0556	
						RPD = 2.27	
$ 12 DCB Decachlorobiphenyl							
1	10.633	10.630	0.003	3295570	0.002500	0.002983	
2	11.551	11.549	0.002	2843196	0.002500	0.003238	
						RPD = 8.22	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SG1660@.05PPM_00024 Amount Added: 1.00 Units: mL

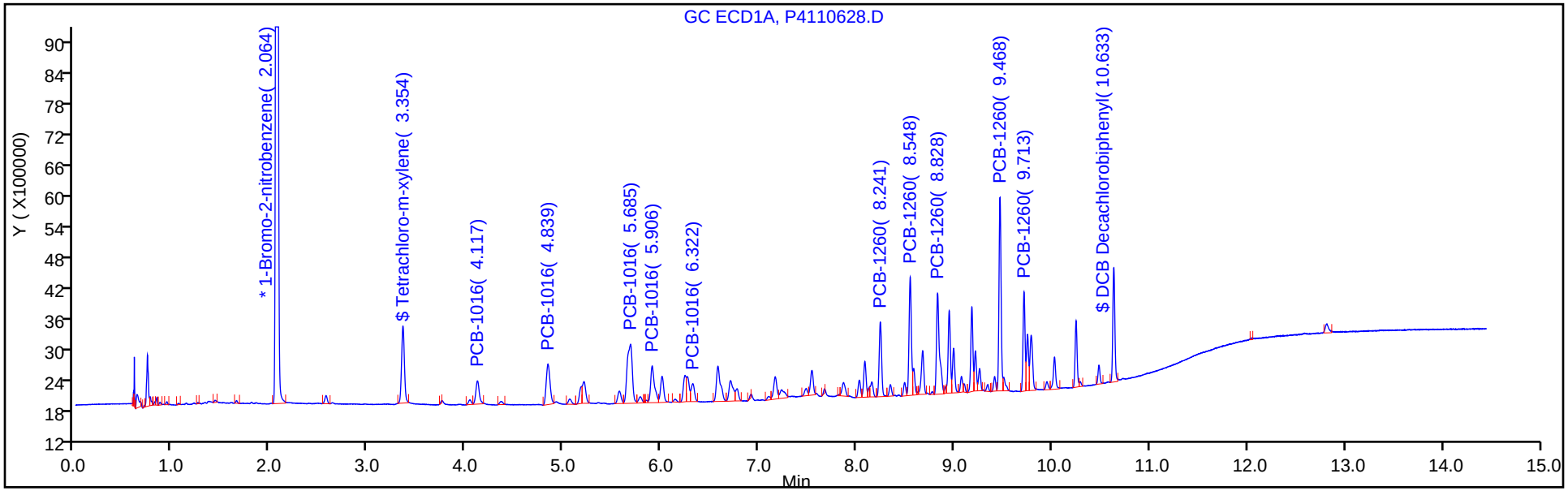
Report Date: 07-Nov-2018 11:05:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

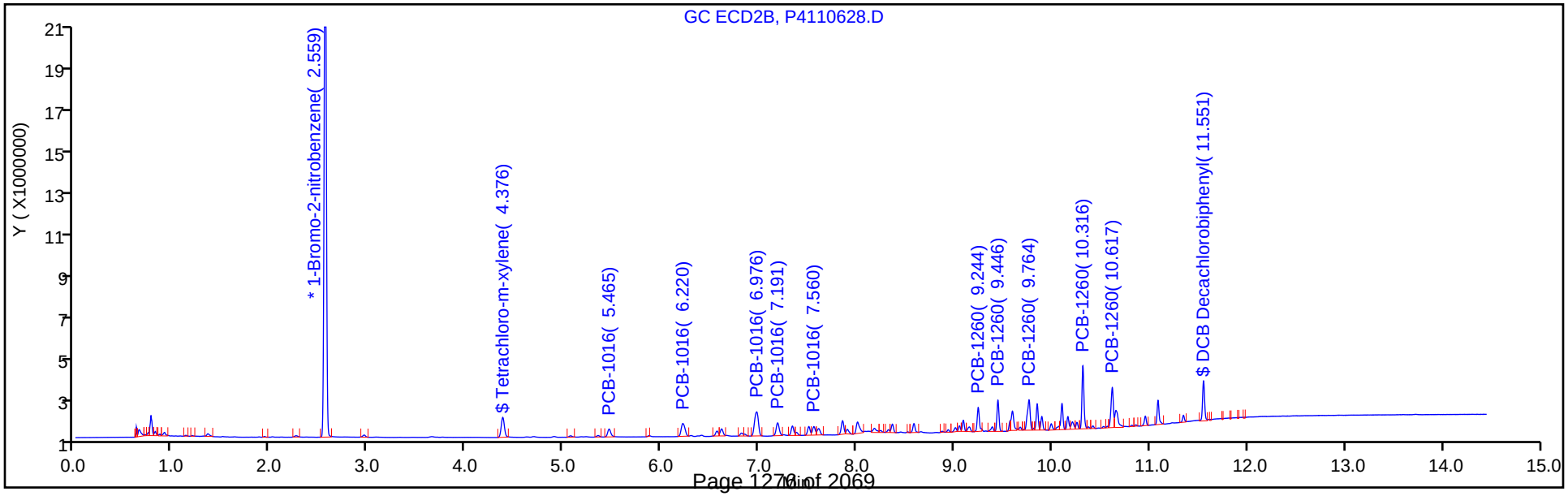
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110628.D

Injection Date:	06-Nov-2018 22:10:44	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std005 1660			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 07-Nov-2018 11:05:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110628.D

Injection Date: 06-Nov-2018 22:10:44 Instrument ID: A2HP4

Lims ID: std005 1660

Client ID:

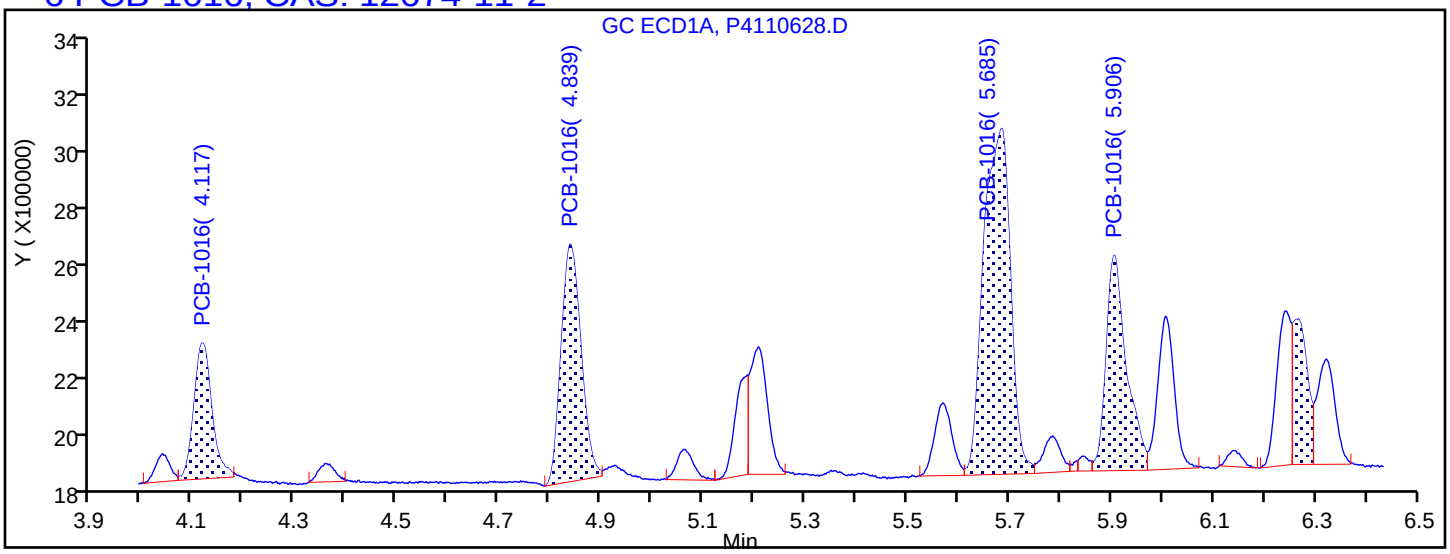
Operator ID: ALS Bottle#: 28 Worklist Smp#: 28

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB4 is Limit Group: GC 8082A IS

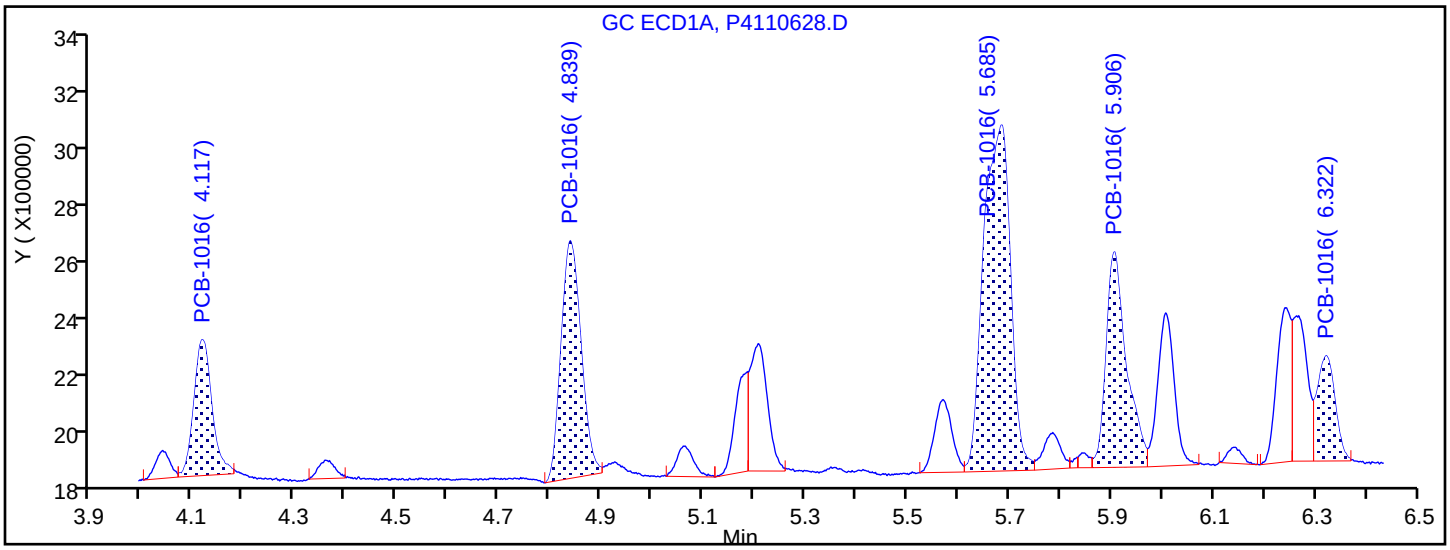
Column: Detector GC ECD1A

6 PCB-1016, CAS: 12674-11-2



Processing Integration Results

4.117	Response = 1110709
4.839	Response = 2138423
5.685	Response = 4197223
5.906	Response = 1982755
6.264	Response = 957842



Manual Integration Results

4.117	Response = 1110709	
4.839	Response = 2138423	
5.685	Response = 4197223	
5.906	Response = 1982755	
6.322	Response = 847789	M

Reviewer: hassl, 07-Nov-2018 06:06:16

Audit Action: Assigned Compound ID Audit Reason:

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110629.D
Lims ID: std01 1660
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-Nov-2018 22:32:01 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-029
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub5

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:05:44 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:06:49

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	49224090	0.0500	0.0500	
2	2.553	2.555	-0.002	40937837	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.348	3.349	-0.001	6133810	0.005000	0.005052	
2	4.370	4.371	-0.001	4145631	0.005000	0.004930	
						RPD = 2.44	
6 PCB-1016							
1	4.111	4.111	0.000	2232298	0.1000	0.1055	
1	4.833	4.832	0.001	4015717	0.1000	0.1039	
1	5.679	5.678	0.001	7713862	0.1000	0.1007	
1	5.900	5.900	0.000	3656664	0.1000	0.1024	
1	6.316	6.316	0.000	1706941	0.1000	0.1061	
		Average of Peak Amounts =				0.1037	
2	5.458	5.460	-0.002	1687768	0.1000	0.1046	
2	6.215	6.216	-0.001	3152116	0.1000	0.1036	
2	6.972	6.971	0.001	5785541	0.1000	0.0999	
2	7.187	7.187	0.000	2528444	0.1000	0.1020	
2	7.559	7.560	-0.001	1530248	0.1000	0.1067	
		Average of Peak Amounts =				0.1034	
						RPD = 0.35	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.240	8.240	0.000	4508396	0.1000	0.0998	
1	8.545	8.545	0.000	6818885	0.1000	0.0977	
1	8.827	8.826	0.001	7381187	0.1000	0.0967	
1	9.465	9.464	0.001	10137319	0.1000	0.0954	
1	9.711	9.711	0.000	4952270	0.1000	0.0962	
		Average of Peak Amounts =				0.0972	
2	9.243	9.242	0.001	3494576	0.1000	0.1066	
2	9.445	9.444	0.001	3713021	0.1000	0.1017	
2	9.763	9.762	0.001	5237852	0.1000	0.1012	
2	10.313	10.313	0.000	7425537	0.1000	0.0977	
2	10.614	10.614	0.000	5531905	0.1000	0.1006	
		Average of Peak Amounts =				0.1016	
						RPD = 4.42	
$ 12 DCB Decachlorobiphenyl							
1	10.630	10.630	0.000	5589872	0.005000	0.005120	
2	11.549	11.549	0.000	4583623	0.005000	0.005297	
						RPD = 3.40	

Reagents:

SG1660STD@0.1_00024 Amount Added: 1.00 Units: mL

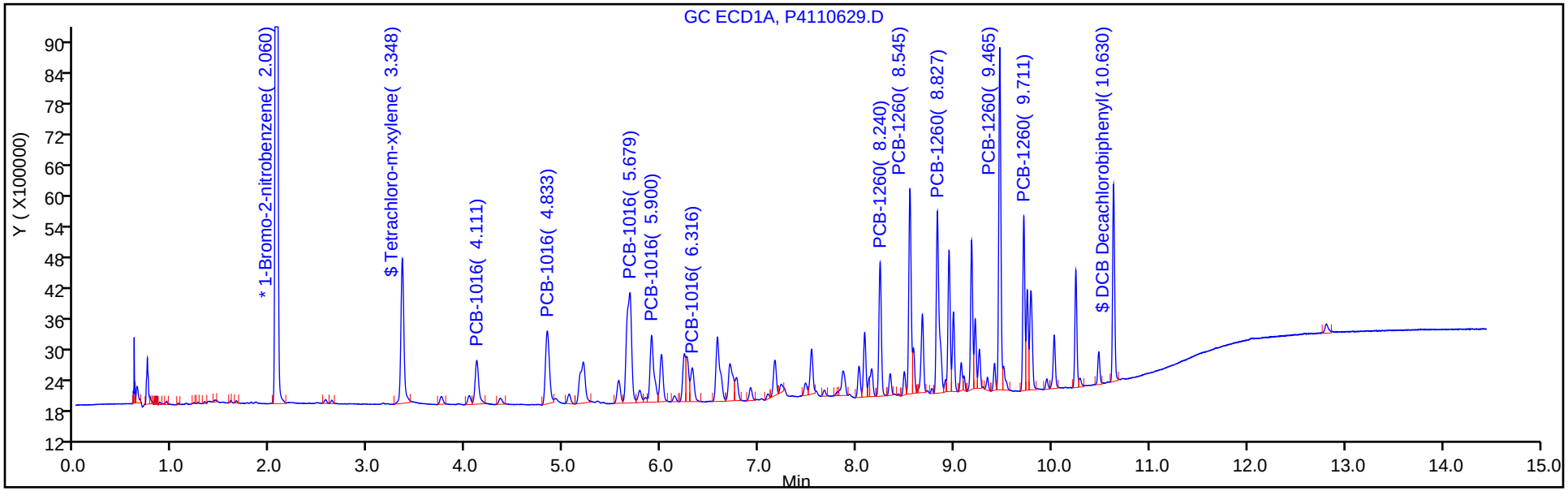
Report Date: 07-Nov-2018 11:05:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

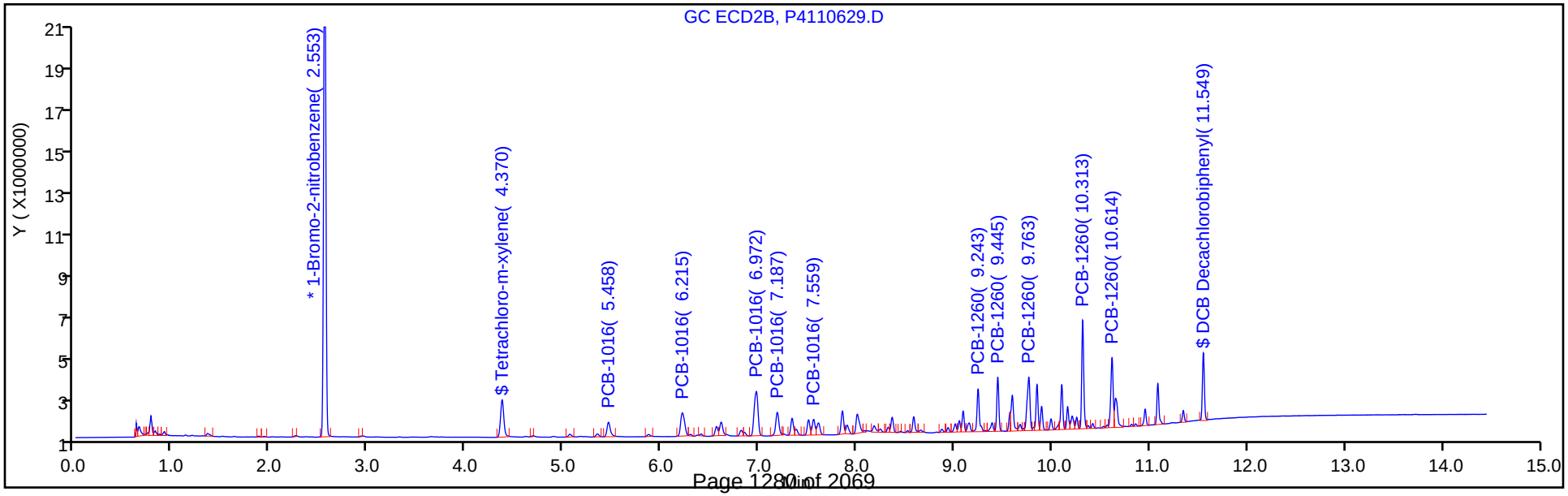
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110629.D

Injection Date:	06-Nov-2018 22:32:01	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std01 1660			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110630.D
Lims ID: std02 1660
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 06-Nov-2018 22:53:08 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-030
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub5

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:05:33 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:07:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.055	2.061	-0.006	49413933	0.0500	0.0500	
2	2.548	2.555	-0.007	40828974	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.343	3.349	-0.006	12139396	0.0100	0.0100	
2	4.363	4.371	-0.008	8161375	0.0100	0.009732	
						RPD = 2.32	
6 PCB-1016							
1	4.103	4.111	-0.008	4255211	0.2000	0.2003	
1	4.826	4.832	-0.006	7937690	0.2000	0.2046	
1	5.672	5.678	-0.006	15136148	0.2000	0.1968	
1	5.896	5.900	-0.004	7162603	0.2000	0.1998	
1	6.313	6.316	-0.003	3195265	0.2000	0.1979	
		Average of Peak Amounts =				0.1999	
2	5.455	5.460	-0.005	3222656	0.2000	0.2002	
2	6.212	6.216	-0.004	6241722	0.2000	0.2058	
2	6.969	6.971	-0.002	11318048	0.2000	0.1960	
2	7.183	7.187	-0.004	4871548	0.2000	0.1971	
2	7.557	7.560	-0.003	2853341	0.2000	0.1995	
		Average of Peak Amounts =				0.1997	
						RPD = 0.10	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.238	8.240	-0.002	8796804	0.2000	0.1940	
1	8.543	8.545	-0.002	13592005	0.2000	0.1940	
1	8.824	8.826	-0.002	14778383	0.2000	0.1929	
1	9.463	9.464	-0.001	20466236	0.2000	0.1919	
1	9.710	9.711	-0.001	9875354	0.2000	0.1910	
		Average of Peak Amounts =				0.1928	
2	9.242	9.242	0.000	6126974	0.2000	0.1874	
2	9.443	9.444	-0.001	7133586	0.2000	0.1958	
2	9.761	9.762	-0.001	10136643	0.2000	0.1964	
2	10.313	10.313	0.000	14565739	0.2000	0.1921	
2	10.613	10.614	-0.001	10678657	0.2000	0.1947	
		Average of Peak Amounts =				0.1933	
						RPD = 0.27	
$ 12 DCB Decachlorobiphenyl							
1	10.629	10.630	-0.001	10703053	0.0100	0.009765	
2	11.549	11.549	0.000	8288375	0.0100	0.009604	
						RPD = 1.67	

Reagents:

SG1660@0.2ppm_00027 Amount Added: 1.00 Units: mL

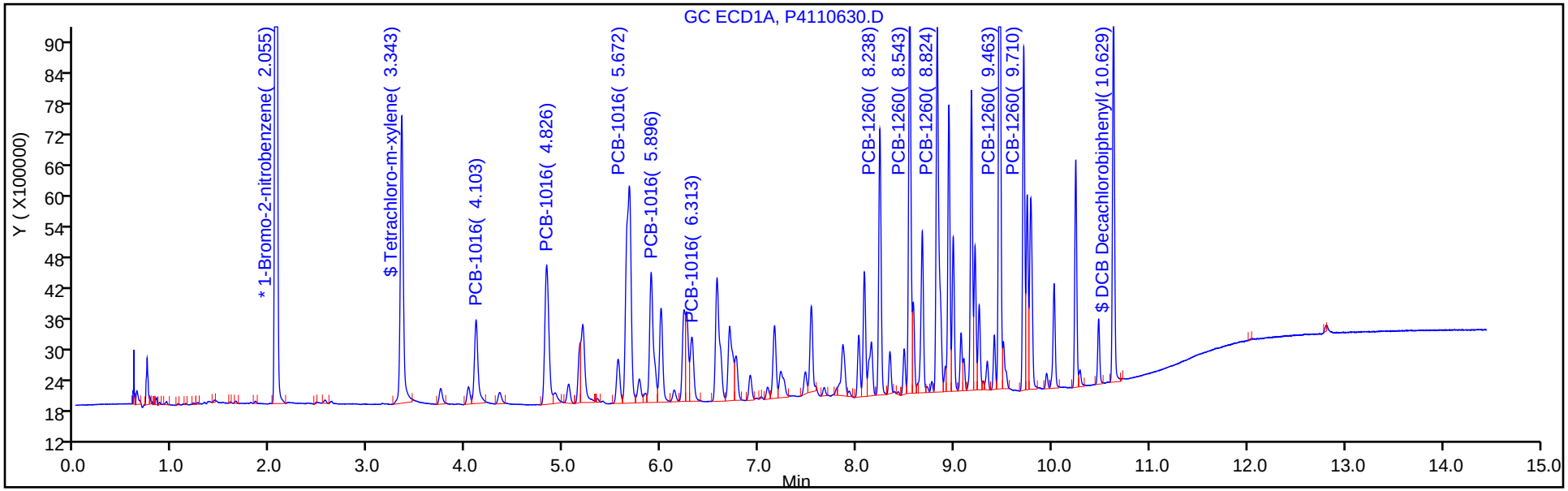
Report Date: 07-Nov-2018 11:05:36 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

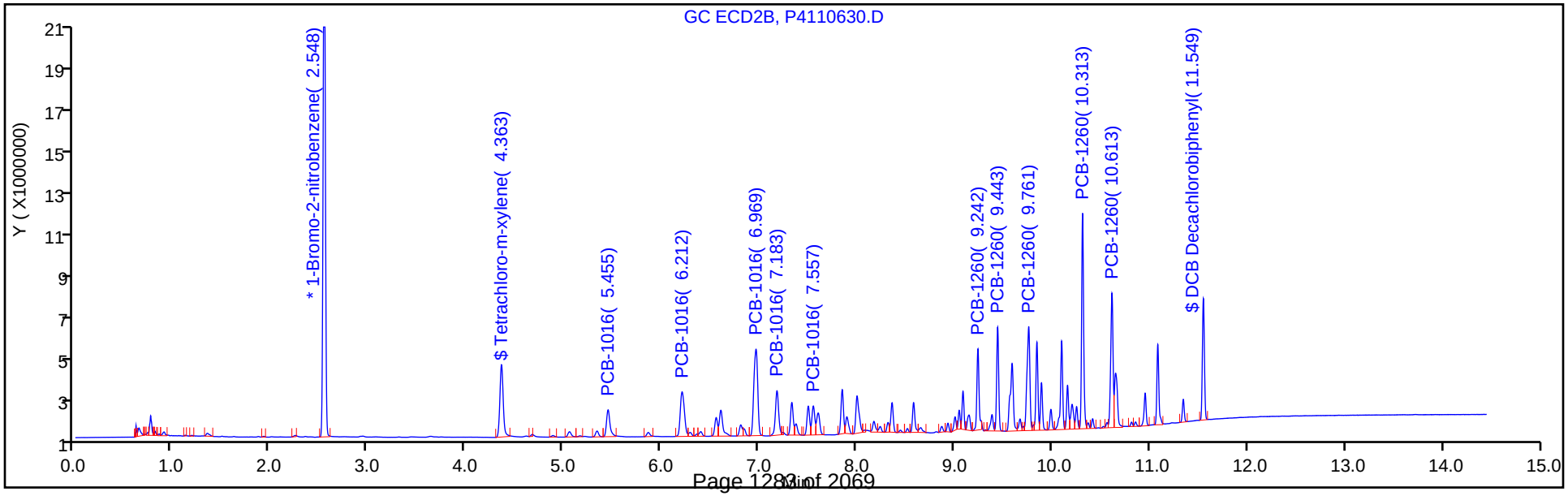
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110630.D

Injection Date:	06-Nov-2018 22:53:08	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std02 1660			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110631.D
Lims ID: std05 1660
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 06-Nov-2018 23:14:15 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-031
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub5

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:05:16 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:07:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.000	48702694	0.0500	0.0500	
2	2.555	2.555	0.000	40377428	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.349	3.349	0.000	30143571	0.0250	0.0251	
2	4.371	4.371	0.000	20526025	0.0250	0.0248	
						RPD = 1.38	
6 PCB-1016							
1	4.111	4.111	0.000	10000580	0.5000	0.4777	
1	4.832	4.832	0.000	18452741	0.5000	0.4827	
1	5.678	5.678	0.000	37202613	0.5000	0.4908	
1	5.900	5.900	0.000	17184180	0.5000	0.4863	
1	6.316	6.316	0.000	7708519	0.5000	0.4845	
		Average of Peak Amounts =				0.4844	
2	5.460	5.460	0.000	7658519	0.5000	0.4810	
2	6.216	6.216	0.000	14671318	0.5000	0.4890	
2	6.971	6.971	0.000	28158410	0.5000	0.4930	
2	7.187	7.187	0.000	12056069	0.5000	0.4932	
2	7.560	7.560	0.000	6851843	0.5000	0.4844	
		Average of Peak Amounts =				0.4881	
						RPD = 0.78	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.240	8.240	0.000	22051329	0.5000	0.4935	
1	8.545	8.545	0.000	34561194	0.5000	0.5006	
1	8.826	8.826	0.000	38156975	0.5000	0.5053	
1	9.464	9.464	0.000	54072973	0.5000	0.5143	
1	9.711	9.711	0.000	25905905	0.5000	0.5084	
		Average of Peak Amounts =				0.5044	
2	9.242	9.242	0.000	16546167	0.5000	0.5118	
2	9.444	9.444	0.000	17705711	0.5000	0.4915	
2	9.762	9.762	0.000	25184121	0.5000	0.4934	
2	10.313	10.313	0.000	37304830	0.5000	0.4975	
2	10.614	10.614	0.000	26699684	0.5000	0.4923	
		Average of Peak Amounts =				0.4973	
						RPD = 1.42	
$ 12 DCB Decachlorobiphenyl							
1	10.630	10.630	0.000	26625391	0.0250	0.0246	
2	11.549	11.549	0.000	20452359	0.0250	0.0240	
						RPD = 2.81	

Reagents:

SG1660@0.5PPM_00083 Amount Added: 1.00 Units: mL

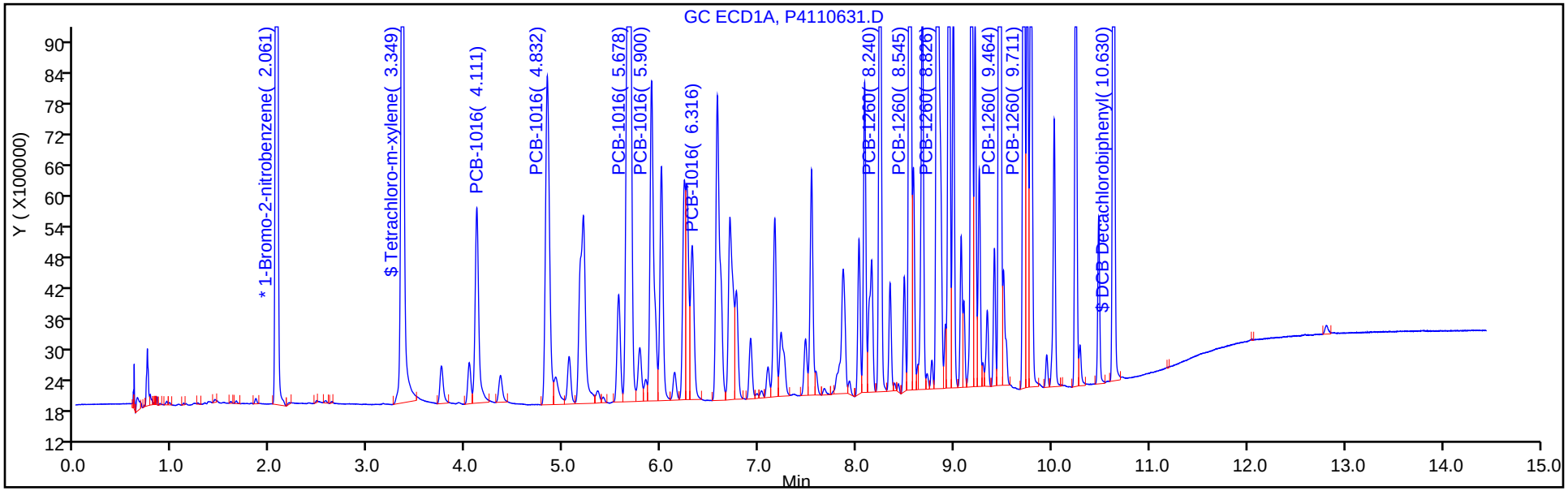
Report Date: 07-Nov-2018 11:05:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

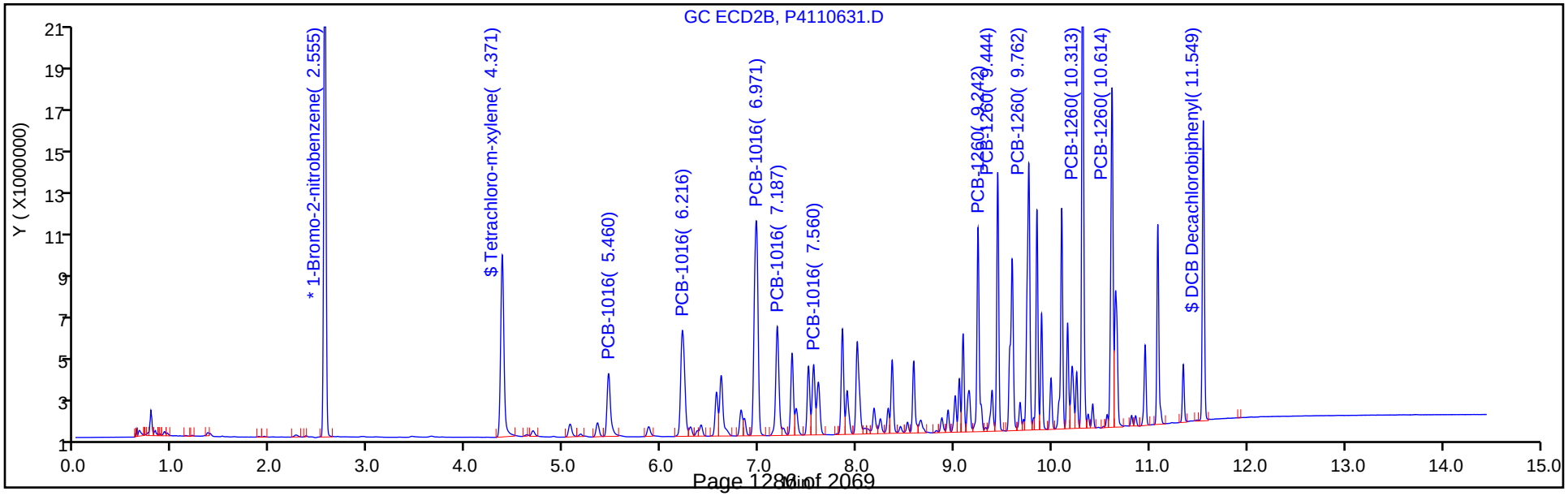
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110631.D

Injection Date:	06-Nov-2018 23:14:15	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std05 1660			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110632.D
Lims ID: std1 1660
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-Nov-2018 23:35:10 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-032
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub5

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:04:59 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:08:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	48357734	0.0500	0.0500	
2	2.553	2.555	-0.002	40023886	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.348	3.349	-0.001	60460202	0.0500	0.0507	
2	4.370	4.371	-0.001	41605391	0.0500	0.0506	
						RPD = 0.16	
6 PCB-1016							
1	4.109	4.111	-0.002	20115213	1.00	0.9677	
1	4.832	4.832	0.000	34804744	1.00	0.9169	
1	5.676	5.678	-0.002	71507309	1.00	0.9500	
1	5.899	5.900	-0.001	32896892	1.00	0.9375	
1	6.315	6.316	-0.001	15238751	1.00	0.9645	
		Average of Peak Amounts =				0.9473	
2	5.459	5.460	-0.001	15367575	1.00	0.9737	
2	6.215	6.216	-0.001	27762988	1.00	0.9336	
2	6.971	6.971	0.000	54014768	1.00	0.9541	
2	7.187	7.187	0.000	22952059	1.00	0.9473	
2	7.558	7.560	-0.002	12661554	1.00	0.9031	
		Average of Peak Amounts =				0.9424	
						RPD = 0.53	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							M
1	8.239	8.240	-0.001	41520267	1.00	0.9359	
1	8.544	8.545	-0.001	64465098	1.00	0.9404	
1	8.825	8.826	-0.001	70837005	1.00	0.9447	
1	9.464	9.464	0.000	99063857	1.00	0.9490	
1	9.711	9.711	0.000	47249110	1.00	0.9338	
		Average of Peak Amounts =				0.9408	
2	9.242	9.242	0.000	29345896	1.00	0.9157	M
2	9.445	9.444	0.001	31938342	1.00	0.8944	M
2	9.763	9.762	0.001	46103714	1.00	0.9112	
2	10.314	10.313	0.001	68639029	1.00	0.9235	
2	10.616	10.614	0.002	48059882	1.00	0.8940	
		Average of Peak Amounts =				0.9078	
						RPD = 3.57	
$ 12 DCB Decachlorobiphenyl							
1	10.630	10.630	0.000	47243461	0.0500	0.0440	
2	11.551	11.549	0.002	35437716	0.0500	0.0419	
						RPD = 5.02	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@1.0PPM_00029 Amount Added: 1.00 Units: mL

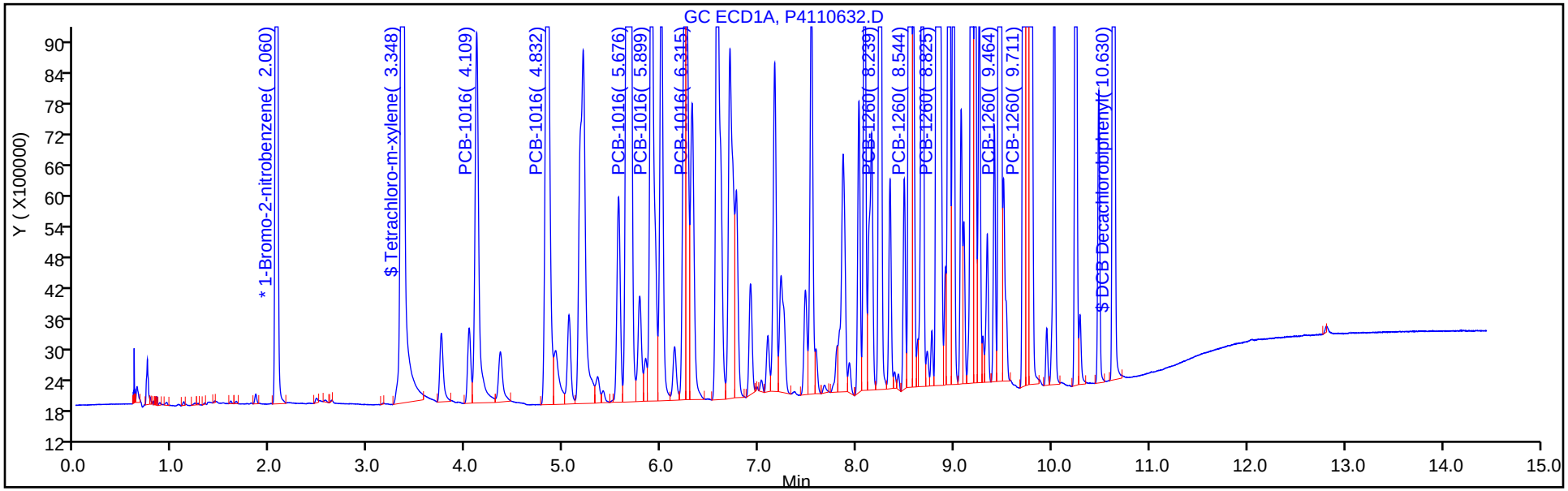
Report Date: 07-Nov-2018 11:05:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

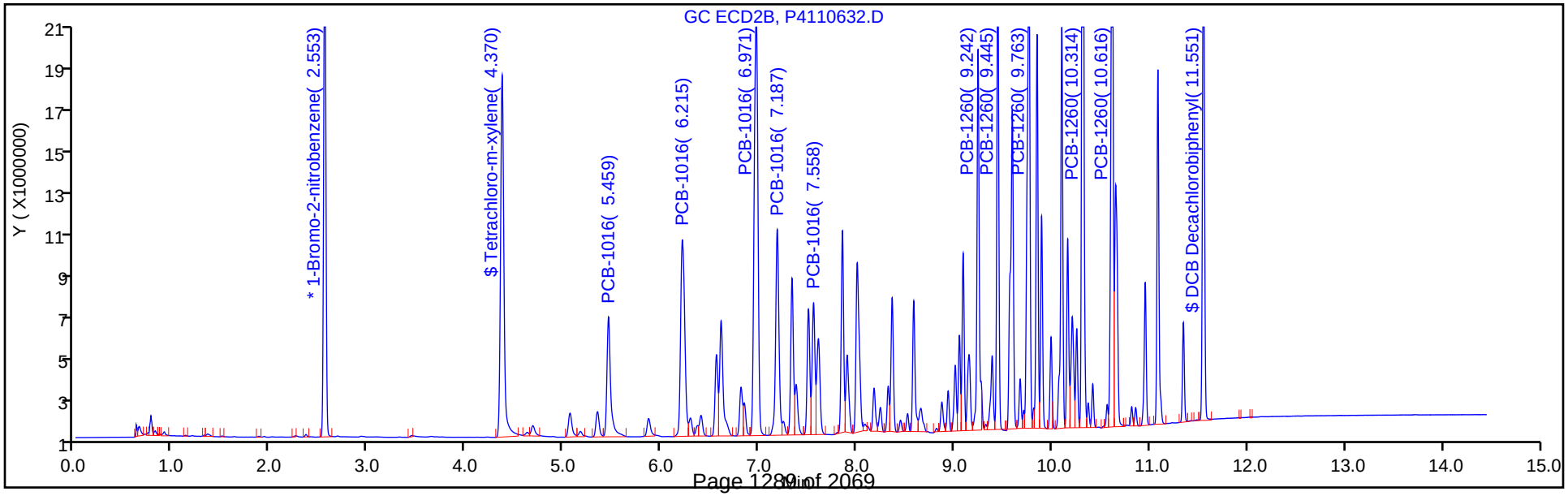
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110632.D

Injection Date:	06-Nov-2018 23:35:10	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std1 1660			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D
Lims ID: std15 1660
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-Nov-2018 23:56:16 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-033
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub5

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:04:46 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:08:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.000	49156133	0.0500	0.0500	
2	2.555	2.555	0.000	40533433	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.349	3.349	0.000	119679205	0.1000	0.0987	
2	4.371	4.371	0.000	85651403	0.1000	0.1029	
						RPD = 4.13	
6 PCB-1016							
1	4.110	4.111	-0.001	31151311	1.50	1.47	
1	4.832	4.832	0.000	55662832	1.50	1.44	
1	5.674	5.678	-0.004	114208117	1.50	1.49	
1	5.897	5.900	-0.003	51907614	1.50	1.46	
1	6.313	6.316	-0.003	23456485	1.50	1.46	
		Average of Peak Amounts =				1.47	
2	5.458	5.460	-0.002	23542805	1.50	1.47	
2	6.213	6.216	-0.003	43012520	1.50	1.43	
2	6.969	6.971	-0.002	86695114	1.50	1.51	
2	7.184	7.187	-0.003	36228752	1.50	1.48	
2	7.557	7.560	-0.003	20001903	1.50	1.41	
		Average of Peak Amounts =				1.46	
						RPD = 0.37	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							M
1	8.238	8.240	-0.002	68032536	1.50	1.51	
1	8.544	8.545	-0.001	105805192	1.50	1.52	
1	8.824	8.826	-0.002	117847095	1.50	1.55	
1	9.463	9.464	-0.001	166421516	1.50	1.57	
1	9.709	9.711	-0.002	80599623	1.50	1.57	
		Average of Peak Amounts =				1.54	
2	9.241	9.242	-0.001	48313988	1.50	1.49	M
2	9.443	9.444	-0.001	53359762	1.50	1.48	M
2	9.762	9.762	0.000	77342885	1.50	1.51	
2	10.313	10.313	0.000	117104396	1.50	1.56	
2	10.614	10.614	0.000	81567480	1.50	1.50	
		Average of Peak Amounts =				1.51	
						RPD = 2.38	
$ 12 DCB Decachlorobiphenyl							
1	10.629	10.630	-0.001	102461909	0.1000	0.0940	
2	11.548	11.549	-0.001	76133566	0.1000	0.0889	
						RPD = 5.59	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@1.5PPM_00005 Amount Added: 1.00 Units: mL

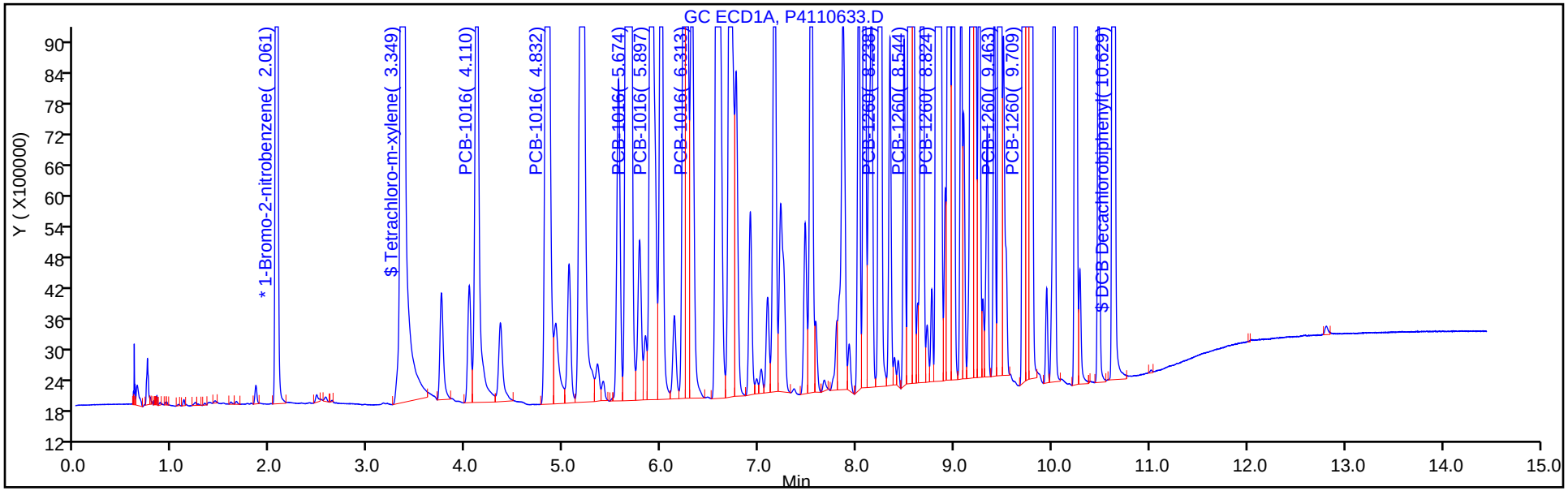
Report Date: 07-Nov-2018 11:04:48 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

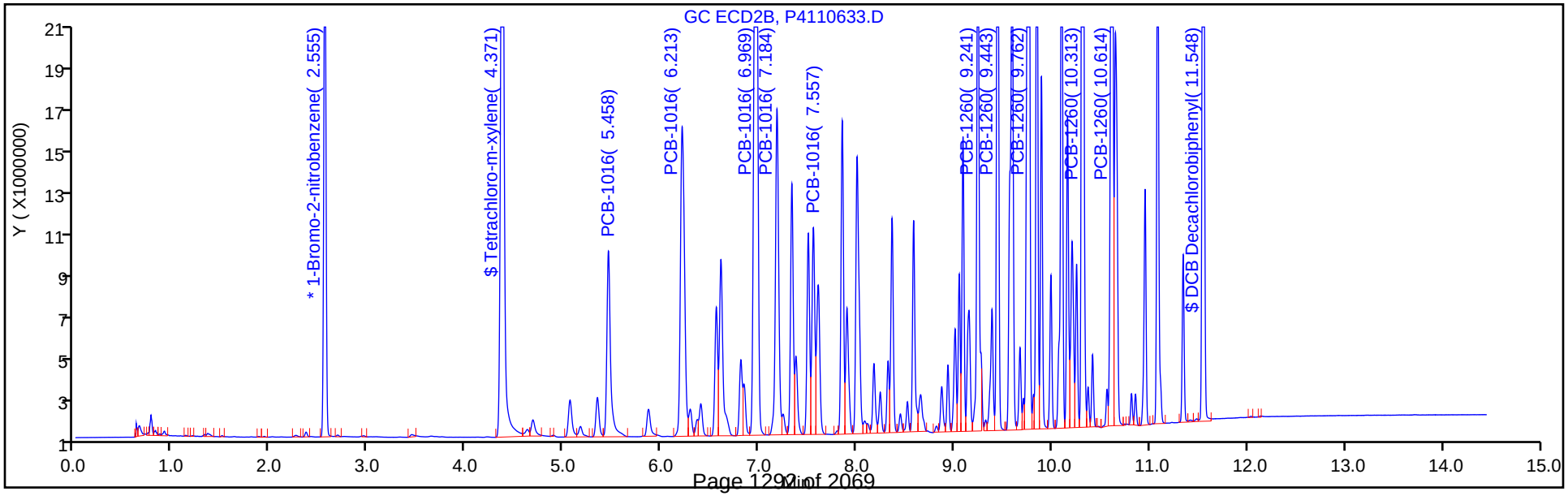
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Injection Date:	06-Nov-2018 23:56:16	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std15 1660			Worklist Smp#:	33
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 22:10 Calibration End Date: 11/06/2018 23:56 Calibration ID: 47806

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/28	P4110628.D
Level 2	STD01 240-353863/29	P4110629.D
Level 3	STD02 240-353863/30	P4110630.D
Level 4	STD05 240-353863/31	P4110631.D
Level 5	STD1 240-353863/32	P4110632.D
Level 6	STD15 240-353863/33	P4110633.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1016 Peak 1	0.0204 0.0194	0.0206	0.0197	0.0190	0.0192	Ave		0.0197				3.4		20.0			
PCB-1016 Peak 2	0.0398 0.0354	0.0385	0.0382	0.0363	0.0347	Ave		0.0371				5.4		20.0			
PCB-1016 Peak 3	0.0759 0.0713	0.0707	0.0693	0.0697	0.0675	Ave		0.0707				4.0		20.0			
PCB-1016 Peak 4	0.0326 0.0298	0.0309	0.0298	0.0299	0.0287	Ave		0.0303				4.4		20.0			
PCB-1016 Peak 5	0.0197 0.0164	0.0187	0.0175	0.0170	0.0158	Ave		0.0175				8.3		20.0			
PCB-1260 Peak 1	0.0426 0.0397	0.0427	0.0375	0.0410	0.0367	Ave		0.0400				6.4		20.0			
PCB-1260 Peak 2	0.0510 0.0439	0.0453	0.0437	0.0439	0.0399	Ave		0.0446				8.1		20.0			
PCB-1260 Peak 3	0.0696 0.0636	0.0640	0.0621	0.0624	0.0576	Ave		0.0632				6.1		20.0			
PCB-1260 Peak 4	0.1028 0.0963	0.0907	0.0892	0.0924	0.0857	Ave		0.0929				6.5		20.0			
PCB-1260 Peak 5	0.0768 0.0671	0.0676	0.0654	0.0661	0.0600	Ave		0.0672				8.1		20.0			
Tetrachloro-m-xylene	1.0369 1.0566	1.0127	0.9995	1.0167	1.0395	Ave		1.0270				2.0		20.0			
DCB Decachlorobiphenyl	1.3690 0.9391	1.1197	1.0150	1.0131	0.8854	Ave		1.0569				16.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-104089-1 Analy Batch No.: 353863

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/06/2018 22:10 Calibration End Date: 11/06/2018 23:56 Calibration ID: 47806

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-353863/28	P4110628.D
Level 2	STD01 240-353863/29	P4110629.D
Level 3	STD02 240-353863/30	P4110630.D
Level 4	STD05 240-353863/31	P4110631.D
Level 5	STD1 240-353863/32	P4110632.D
Level 6	STD15 240-353863/33	P4110633.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 1	BNB	Ave	848267 23542805	1687768	3222656	7658519	15367575	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 2	BNB	Ave	1652704 43012520	3152116	6241722	14671318	27762988	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 3	BNB	Ave	3150832 86695114	5785541	11318048	28158410	54014768	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 4	BNB	Ave	1352943 36228752	2528444	4871548	12056069	22952059	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 5	BNB	Ave	818102 20001903	1530248	2853341	6851843	12661554	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 1	BNB	Ave	1770864 48313988	3494576	6126974	16546167	29345896	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 2	BNB	Ave	2118164 53359762	3713021	7133586	17705711	31938342	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 3	BNB	Ave	2892161 77342885	5237852	10136643	25184121	46103714	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 4	BNB	Ave	4269274 117104396	7425537	14565739	37304830	68639029	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 5	BNB	Ave	3188882 81567480	5531905	10678657	26699684	48059882	0.0500 1.50	0.100	0.200	0.500	1.00
Tetrachloro-m-xylene	BNB	Ave	2153325 85651403	4145631	8161375	20526025	41605391	0.00250 0.100	0.00500	0.0100	0.0250	0.0500
DCB Decachlorobiphenyl	BNB	Ave	2843196 76133566	4583623	8288375	20452359	35437716	0.00250 0.100	0.00500	0.0100	0.0250	0.0500

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110628.D
Lims ID: std005 1660
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-Nov-2018 22:10:44 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-028
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub5

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:05:54 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:06:29

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.064	2.061	0.004	49815446	0.0500	0.0500	
2	2.559	2.555	0.004	41535515	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.354	3.349	0.005	3036728	0.002500	0.002472	
2	4.376	4.371	0.005	2153325	0.002500	0.002524	
						RPD = 2.10	
6 PCB-1016							a
1	4.117	4.111	0.006	1110709	0.0500	0.0519	
1	4.839	4.832	0.007	2138423	0.0500	0.0547	
1	5.685	5.678	0.007	4197223	0.0500	0.0541	
1	5.906	5.900	0.006	1982755	0.0500	0.0549	
1	6.322	6.316	0.006	847789	0.0500	0.0521	a
		Average of Peak Amounts =				0.0535	
2	5.465	5.460	0.005	848267	0.0500	0.0518	
2	6.220	6.216	0.004	1652704	0.0500	0.0536	
2	6.976	6.971	0.005	3150832	0.0500	0.0536	
2	7.191	7.187	0.004	1352943	0.0500	0.0538	
2	7.560	7.560	0.000	818102	0.0500	0.0562	
		Average of Peak Amounts =				0.0538	
						RPD = 0.51	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.241	8.240	0.001	2519778	0.0500	0.0551	
1	8.548	8.545	0.003	3878444	0.0500	0.0549	
1	8.828	8.826	0.002	4181309	0.0500	0.0541	
1	9.468	9.464	0.004	5717976	0.0500	0.0532	
1	9.713	9.711	0.002	2835514	0.0500	0.0544	
		Average of Peak Amounts =				0.0544	
2	9.244	9.242	0.002	1770864	0.0500	0.0532	
2	9.446	9.444	0.002	2118164	0.0500	0.0572	
2	9.764	9.762	0.002	2892161	0.0500	0.0551	
2	10.316	10.313	0.003	4269274	0.0500	0.0553	
2	10.617	10.614	0.003	3188882	0.0500	0.0572	
		Average of Peak Amounts =				0.0556	
						RPD = 2.27	
$ 12 DCB Decachlorobiphenyl							
1	10.633	10.630	0.003	3295570	0.002500	0.002983	
2	11.551	11.549	0.002	2843196	0.002500	0.003238	
						RPD = 8.22	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SG1660@.05PPM_00024 Amount Added: 1.00 Units: mL

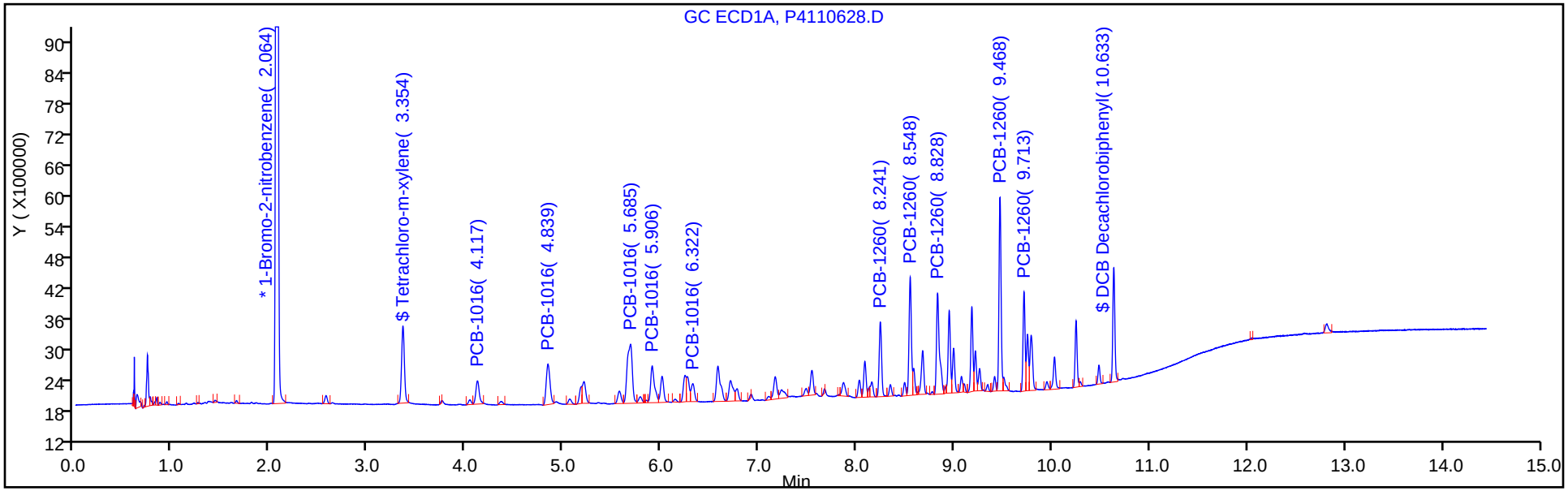
Report Date: 07-Nov-2018 11:05:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

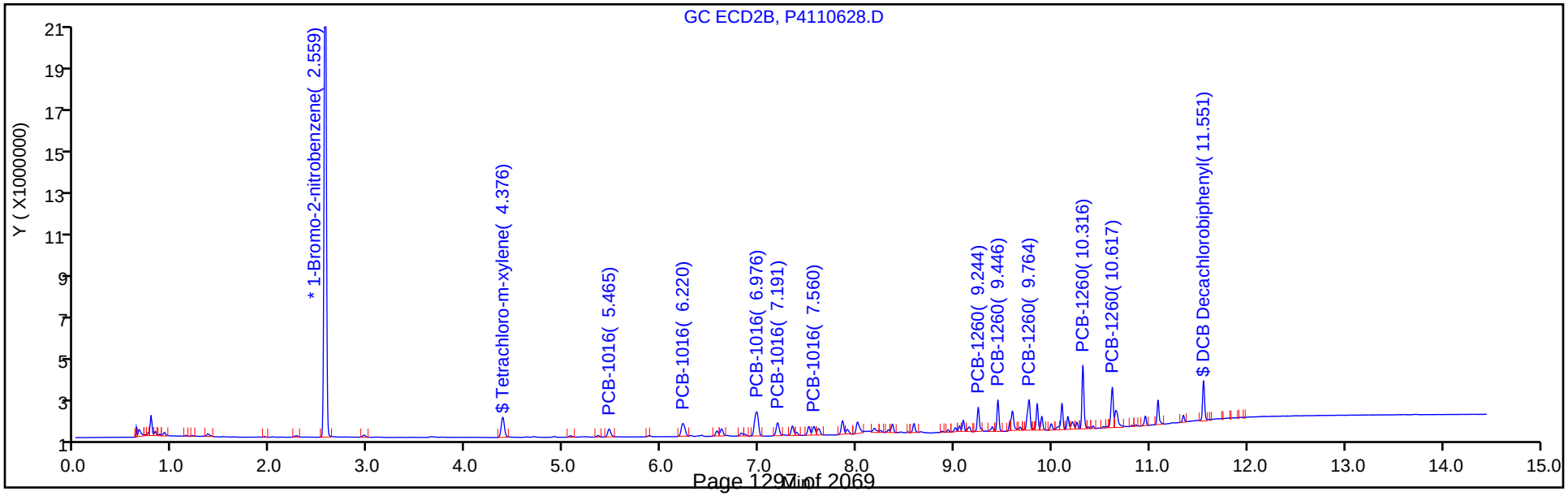
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110628.D

Injection Date:	06-Nov-2018 22:10:44	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std005 1660			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110629.D
Lims ID: std01 1660
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-Nov-2018 22:32:01 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-029
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub5

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:05:44 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:06:49

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	49224090	0.0500	0.0500	
2	2.553	2.555	-0.002	40937837	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.348	3.349	-0.001	6133810	0.005000	0.005052	
2	4.370	4.371	-0.001	4145631	0.005000	0.004930	
						RPD = 2.44	
6 PCB-1016							
1	4.111	4.111	0.000	2232298	0.1000	0.1055	
1	4.833	4.832	0.001	4015717	0.1000	0.1039	
1	5.679	5.678	0.001	7713862	0.1000	0.1007	
1	5.900	5.900	0.000	3656664	0.1000	0.1024	
1	6.316	6.316	0.000	1706941	0.1000	0.1061	
		Average of Peak Amounts =				0.1037	
2	5.458	5.460	-0.002	1687768	0.1000	0.1046	
2	6.215	6.216	-0.001	3152116	0.1000	0.1036	
2	6.972	6.971	0.001	5785541	0.1000	0.0999	
2	7.187	7.187	0.000	2528444	0.1000	0.1020	
2	7.559	7.560	-0.001	1530248	0.1000	0.1067	
		Average of Peak Amounts =				0.1034	
						RPD = 0.35	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.240	8.240	0.000	4508396	0.1000	0.0998	
1	8.545	8.545	0.000	6818885	0.1000	0.0977	
1	8.827	8.826	0.001	7381187	0.1000	0.0967	
1	9.465	9.464	0.001	10137319	0.1000	0.0954	
1	9.711	9.711	0.000	4952270	0.1000	0.0962	
		Average of Peak Amounts =				0.0972	
2	9.243	9.242	0.001	3494576	0.1000	0.1066	
2	9.445	9.444	0.001	3713021	0.1000	0.1017	
2	9.763	9.762	0.001	5237852	0.1000	0.1012	
2	10.313	10.313	0.000	7425537	0.1000	0.0977	
2	10.614	10.614	0.000	5531905	0.1000	0.1006	
		Average of Peak Amounts =				0.1016	
						RPD = 4.42	
$ 12 DCB Decachlorobiphenyl							
1	10.630	10.630	0.000	5589872	0.005000	0.005120	
2	11.549	11.549	0.000	4583623	0.005000	0.005297	
						RPD = 3.40	

Reagents:

SG1660STD@0.1_00024 Amount Added: 1.00 Units: mL

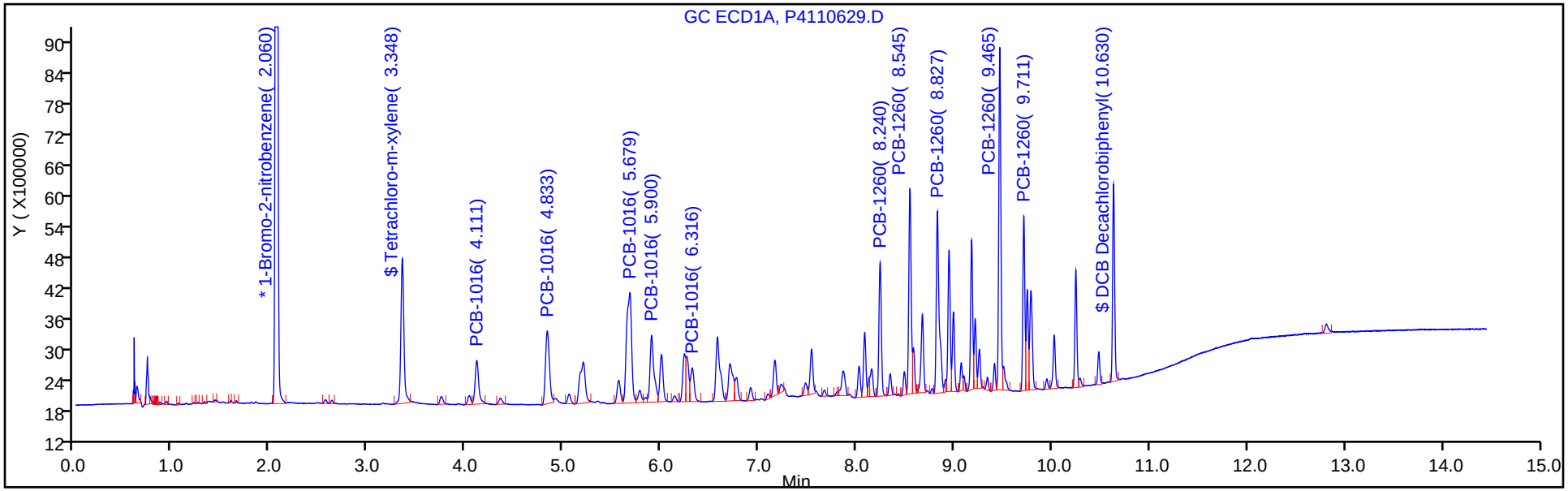
Report Date: 07-Nov-2018 11:05:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

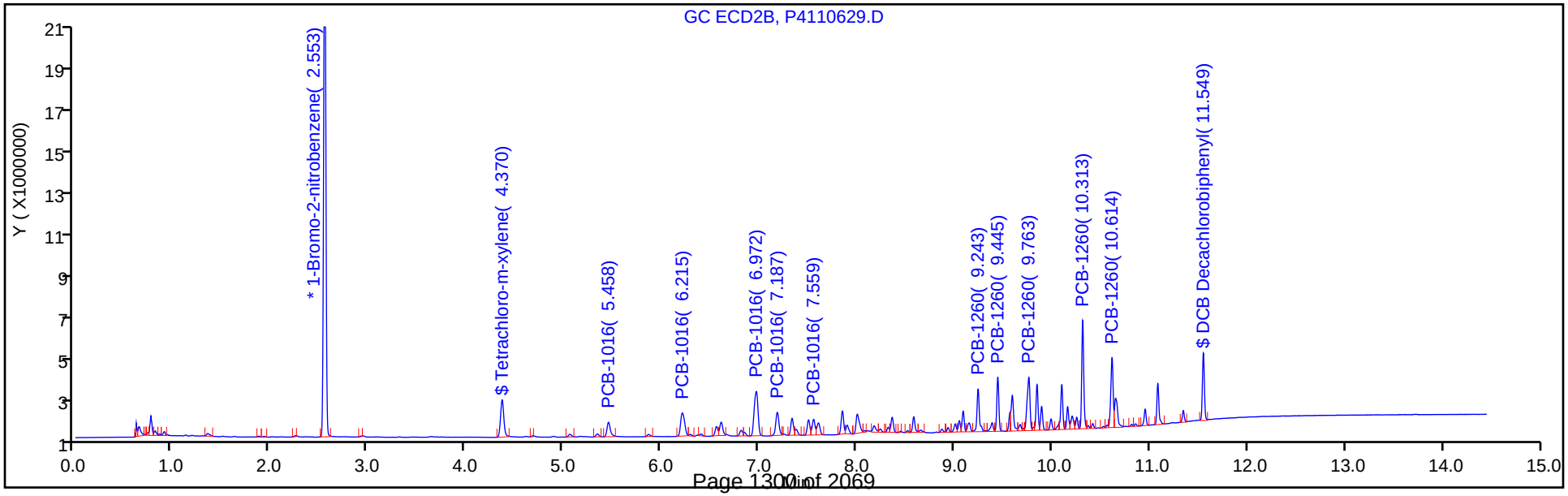
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110629.D

Injection Date:	06-Nov-2018 22:32:01	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std01 1660			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110630.D
Lims ID: std02 1660
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 06-Nov-2018 22:53:08 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-030
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub5

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:05:33 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:07:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.055	2.061	-0.006	49413933	0.0500	0.0500	
2	2.548	2.555	-0.007	40828974	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.343	3.349	-0.006	12139396	0.0100	0.0100	
2	4.363	4.371	-0.008	8161375	0.0100	0.009732	
						RPD = 2.32	
6 PCB-1016							
1	4.103	4.111	-0.008	4255211	0.2000	0.2003	
1	4.826	4.832	-0.006	7937690	0.2000	0.2046	
1	5.672	5.678	-0.006	15136148	0.2000	0.1968	
1	5.896	5.900	-0.004	7162603	0.2000	0.1998	
1	6.313	6.316	-0.003	3195265	0.2000	0.1979	
		Average of Peak Amounts =				0.1999	
2	5.455	5.460	-0.005	3222656	0.2000	0.2002	
2	6.212	6.216	-0.004	6241722	0.2000	0.2058	
2	6.969	6.971	-0.002	11318048	0.2000	0.1960	
2	7.183	7.187	-0.004	4871548	0.2000	0.1971	
2	7.557	7.560	-0.003	2853341	0.2000	0.1995	
		Average of Peak Amounts =				0.1997	
						RPD = 0.10	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.238	8.240	-0.002	8796804	0.2000	0.1940	
1	8.543	8.545	-0.002	13592005	0.2000	0.1940	
1	8.824	8.826	-0.002	14778383	0.2000	0.1929	
1	9.463	9.464	-0.001	20466236	0.2000	0.1919	
1	9.710	9.711	-0.001	9875354	0.2000	0.1910	
		Average of Peak Amounts =				0.1928	
2	9.242	9.242	0.000	6126974	0.2000	0.1874	
2	9.443	9.444	-0.001	7133586	0.2000	0.1958	
2	9.761	9.762	-0.001	10136643	0.2000	0.1964	
2	10.313	10.313	0.000	14565739	0.2000	0.1921	
2	10.613	10.614	-0.001	10678657	0.2000	0.1947	
		Average of Peak Amounts =				0.1933	
						RPD = 0.27	
$ 12 DCB Decachlorobiphenyl							
1	10.629	10.630	-0.001	10703053	0.0100	0.009765	
2	11.549	11.549	0.000	8288375	0.0100	0.009604	
						RPD = 1.67	

Reagents:

SG1660@0.2ppm_00027 Amount Added: 1.00 Units: mL

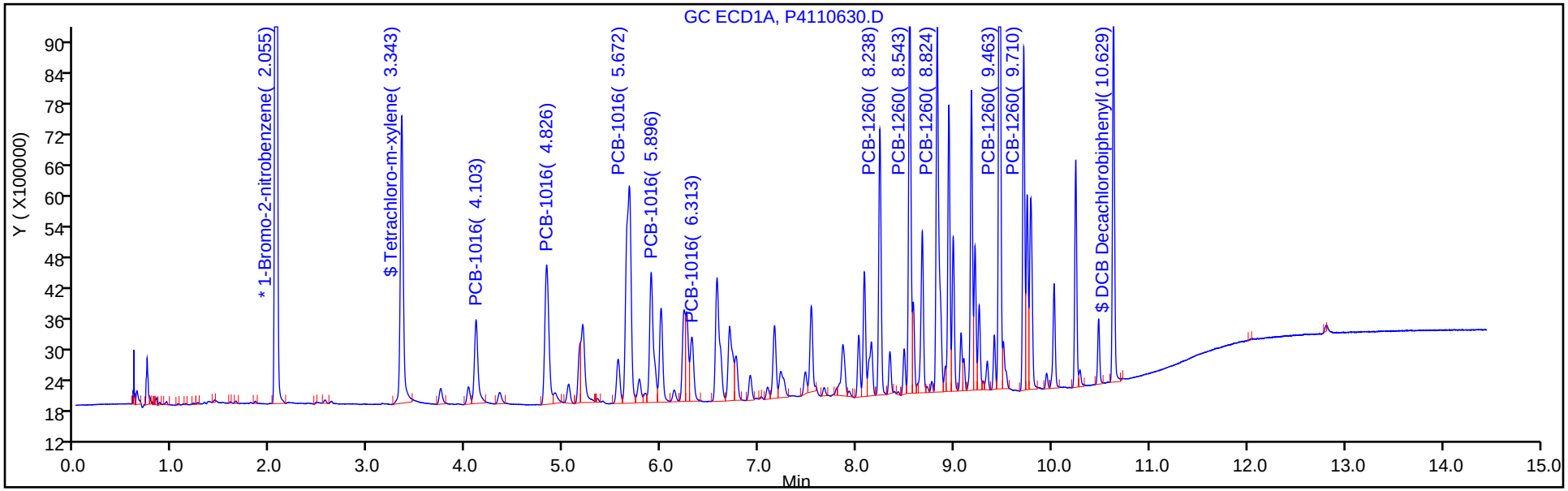
Report Date: 07-Nov-2018 11:05:36 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

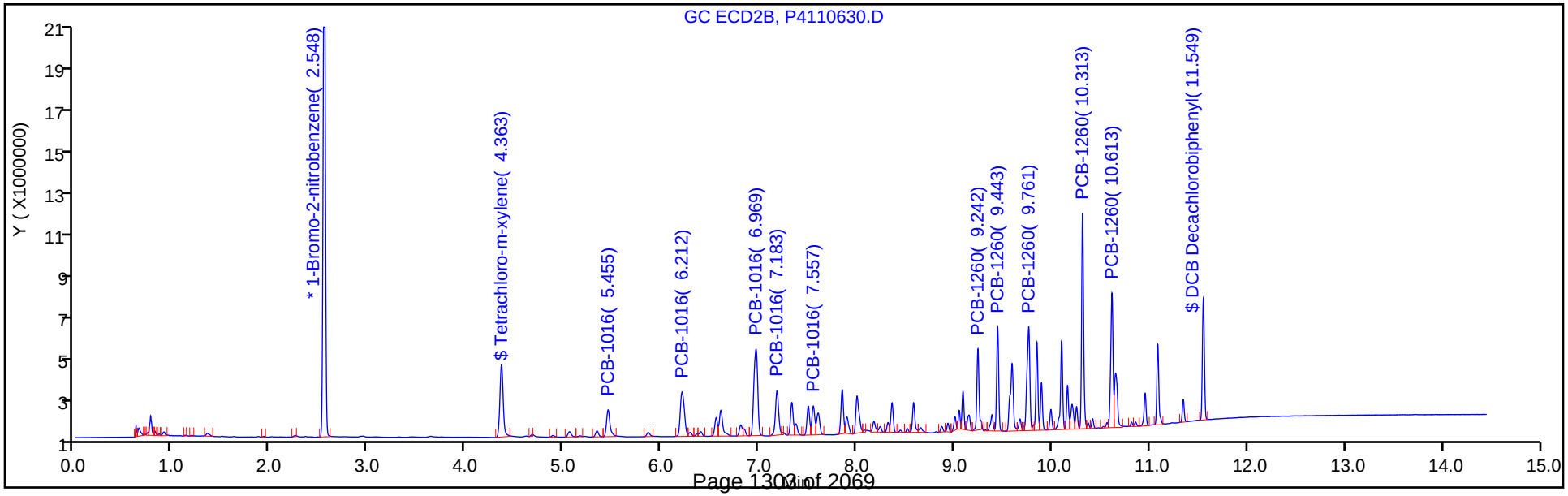
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110630.D

Injection Date:	06-Nov-2018 22:53:08	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std02 1660			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110631.D
Lims ID: std05 1660
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 06-Nov-2018 23:14:15 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-031
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub5

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:05:16 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:07:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.000	48702694	0.0500	0.0500	
2	2.555	2.555	0.000	40377428	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.349	3.349	0.000	30143571	0.0250	0.0251	
2	4.371	4.371	0.000	20526025	0.0250	0.0248	
						RPD = 1.38	
6 PCB-1016							
1	4.111	4.111	0.000	10000580	0.5000	0.4777	
1	4.832	4.832	0.000	18452741	0.5000	0.4827	
1	5.678	5.678	0.000	37202613	0.5000	0.4908	
1	5.900	5.900	0.000	17184180	0.5000	0.4863	
1	6.316	6.316	0.000	7708519	0.5000	0.4845	
		Average of Peak Amounts =				0.4844	
2	5.460	5.460	0.000	7658519	0.5000	0.4810	
2	6.216	6.216	0.000	14671318	0.5000	0.4890	
2	6.971	6.971	0.000	28158410	0.5000	0.4930	
2	7.187	7.187	0.000	12056069	0.5000	0.4932	
2	7.560	7.560	0.000	6851843	0.5000	0.4844	
		Average of Peak Amounts =				0.4881	
						RPD = 0.78	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.240	8.240	0.000	22051329	0.5000	0.4935	
1	8.545	8.545	0.000	34561194	0.5000	0.5006	
1	8.826	8.826	0.000	38156975	0.5000	0.5053	
1	9.464	9.464	0.000	54072973	0.5000	0.5143	
1	9.711	9.711	0.000	25905905	0.5000	0.5084	
		Average of Peak Amounts =				0.5044	
2	9.242	9.242	0.000	16546167	0.5000	0.5118	
2	9.444	9.444	0.000	17705711	0.5000	0.4915	
2	9.762	9.762	0.000	25184121	0.5000	0.4934	
2	10.313	10.313	0.000	37304830	0.5000	0.4975	
2	10.614	10.614	0.000	26699684	0.5000	0.4923	
		Average of Peak Amounts =				0.4973	
						RPD = 1.42	
$ 12 DCB Decachlorobiphenyl							
1	10.630	10.630	0.000	26625391	0.0250	0.0246	
2	11.549	11.549	0.000	20452359	0.0250	0.0240	
						RPD = 2.81	

Reagents:

SG1660@0.5PPM_00083 Amount Added: 1.00 Units: mL

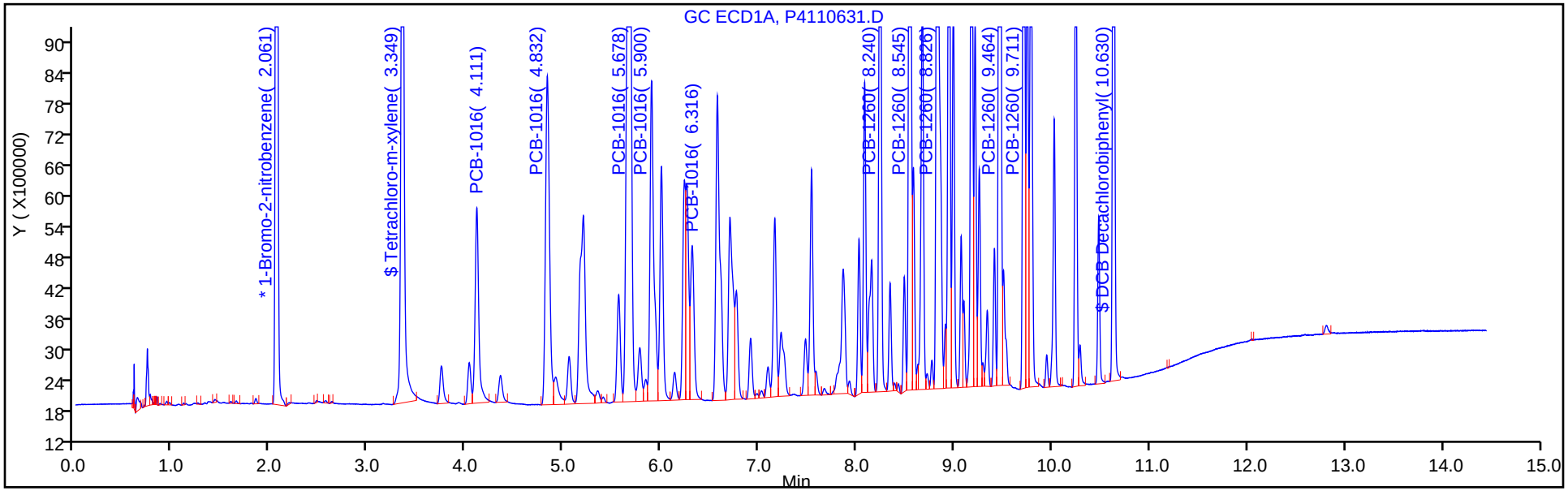
Report Date: 07-Nov-2018 11:05:20 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

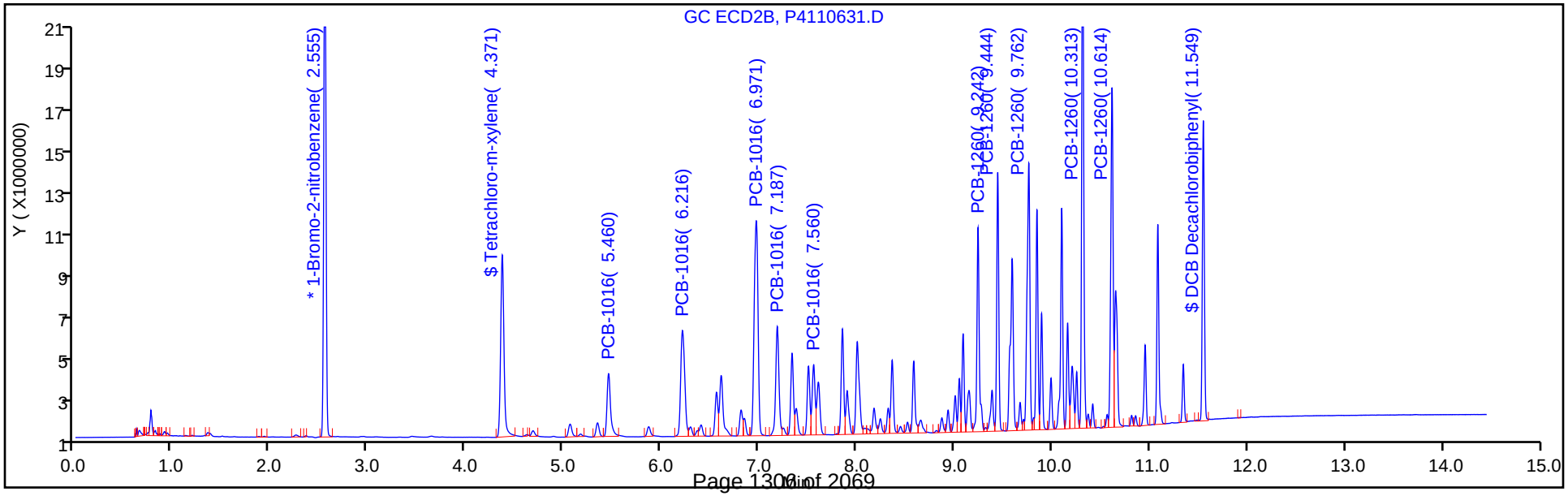
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110631.D

Injection Date:	06-Nov-2018 23:14:15	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std05 1660			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110632.D
Lims ID: std1 1660
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-Nov-2018 23:35:10 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-032
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub5

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:04:59 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:08:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	48357734	0.0500	0.0500	
2	2.553	2.555	-0.002	40023886	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.348	3.349	-0.001	60460202	0.0500	0.0507	
2	4.370	4.371	-0.001	41605391	0.0500	0.0506	
						RPD = 0.16	
6 PCB-1016							
1	4.109	4.111	-0.002	20115213	1.00	0.9677	
1	4.832	4.832	0.000	34804744	1.00	0.9169	
1	5.676	5.678	-0.002	71507309	1.00	0.9500	
1	5.899	5.900	-0.001	32896892	1.00	0.9375	
1	6.315	6.316	-0.001	15238751	1.00	0.9645	
		Average of Peak Amounts =				0.9473	
2	5.459	5.460	-0.001	15367575	1.00	0.9737	
2	6.215	6.216	-0.001	27762988	1.00	0.9336	
2	6.971	6.971	0.000	54014768	1.00	0.9541	
2	7.187	7.187	0.000	22952059	1.00	0.9473	
2	7.558	7.560	-0.002	12661554	1.00	0.9031	
		Average of Peak Amounts =				0.9424	
						RPD = 0.53	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							M
1	8.239	8.240	-0.001	41520267	1.00	0.9359	
1	8.544	8.545	-0.001	64465098	1.00	0.9404	
1	8.825	8.826	-0.001	70837005	1.00	0.9447	
1	9.464	9.464	0.000	99063857	1.00	0.9490	
1	9.711	9.711	0.000	47249110	1.00	0.9338	
		Average of Peak Amounts =				0.9408	
2	9.242	9.242	0.000	29345896	1.00	0.9157	M
2	9.445	9.444	0.001	31938342	1.00	0.8944	M
2	9.763	9.762	0.001	46103714	1.00	0.9112	
2	10.314	10.313	0.001	68639029	1.00	0.9235	
2	10.616	10.614	0.002	48059882	1.00	0.8940	
		Average of Peak Amounts =				0.9078	
						RPD = 3.57	
$ 12 DCB Decachlorobiphenyl							
1	10.630	10.630	0.000	47243461	0.0500	0.0440	
2	11.551	11.549	0.002	35437716	0.0500	0.0419	
						RPD = 5.02	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@1.0PPM_00029 Amount Added: 1.00 Units: mL

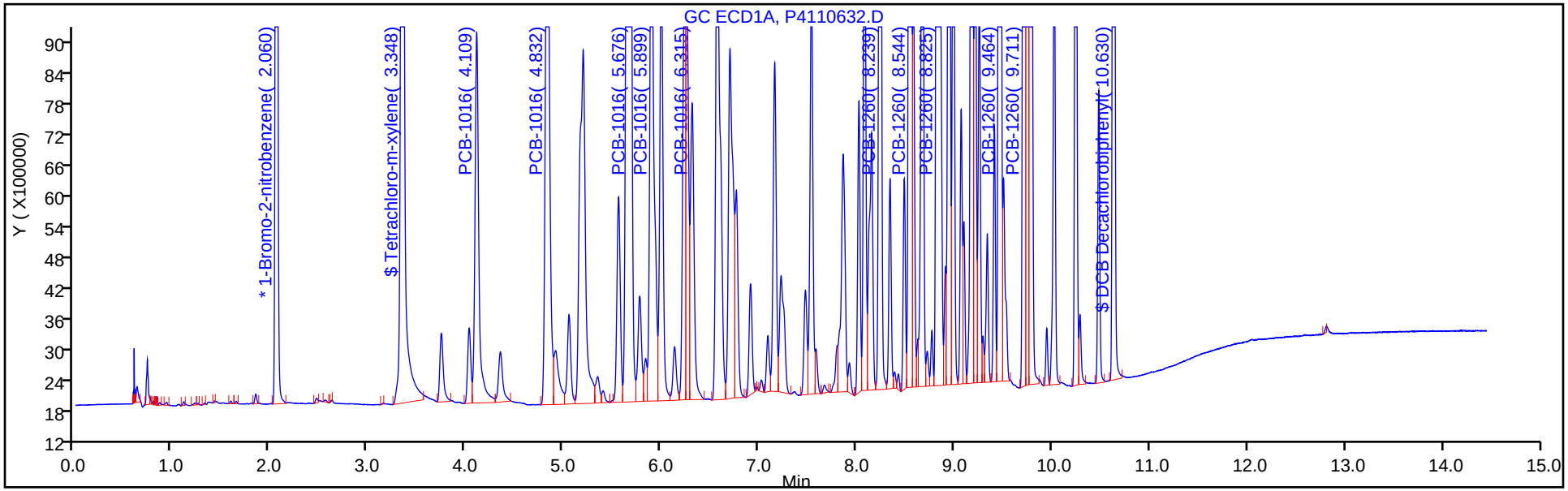
Report Date: 07-Nov-2018 11:05:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

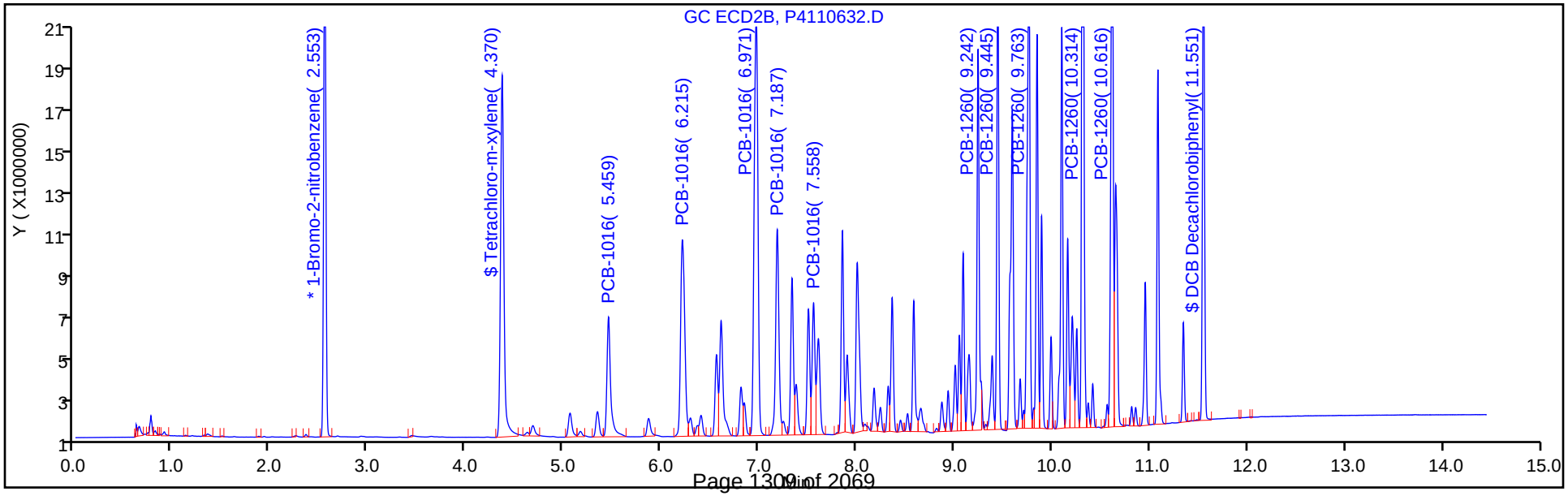
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110632.D

Injection Date:	06-Nov-2018 23:35:10	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std1 1660			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 07-Nov-2018 11:05:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110632.D

Injection Date: 06-Nov-2018 23:35:10 Instrument ID: A2HP4

Lims ID: std1 1660

Client ID:

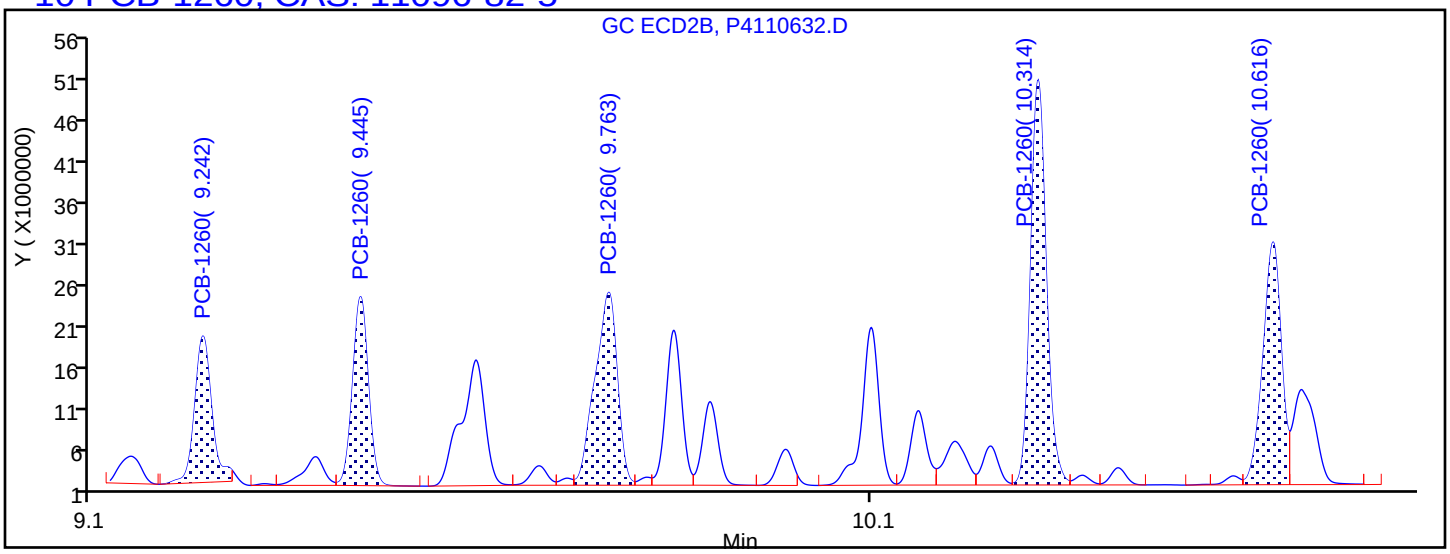
Operator ID: ALS Bottle#: 32 Worklist Smp#: 32

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB4 is Limit Group: GC 8082A IS

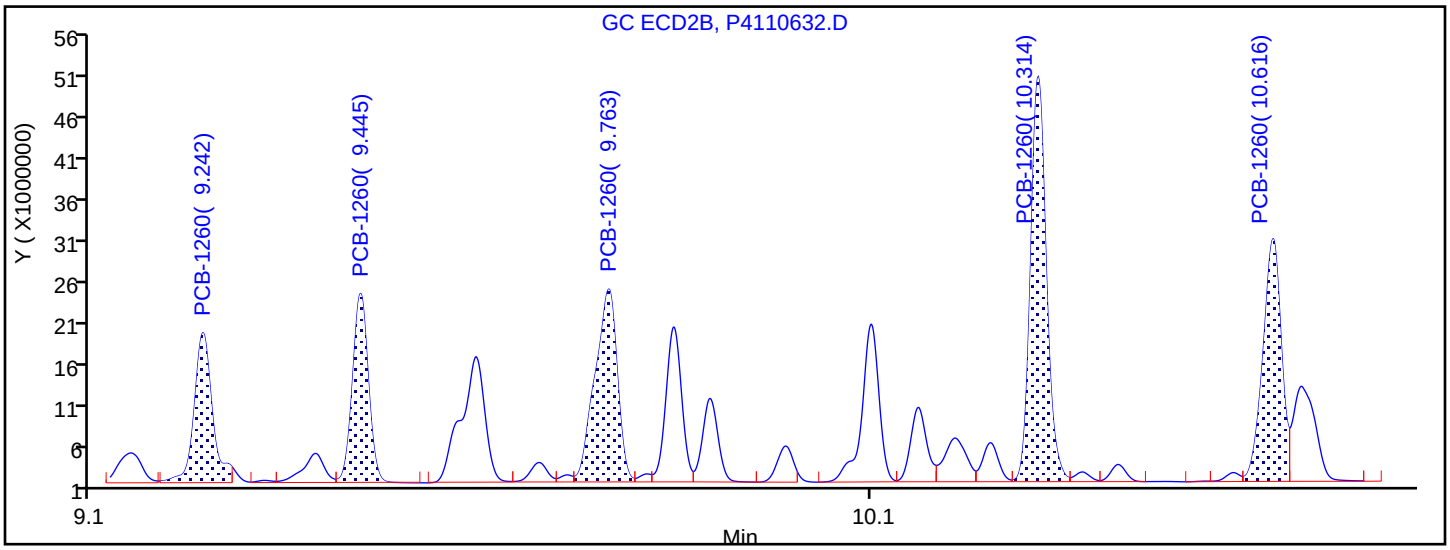
Column: Detector GC ecd2b

10 PCB-1260, CAS: 11096-82-5



Processing Integration Results

9.242	Response = 27203502
9.445	Response = 32034264
9.763	Response = 46103714
10.314	Response = 68639029
10.616	Response = 48059882



Manual Integration Results

9.242	Response = 29345896	M
9.445	Response = 31938342	M
9.763	Response = 46103714	
10.314	Response = 68639029	
10.616	Response = 48059882	

Reviewer: hassl, 07-Nov-2018 06:08:58

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D
Lims ID: std15 1660
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-Nov-2018 23:56:16 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-033
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub5

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:04:46 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:08:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.000	49156133	0.0500	0.0500	
2	2.555	2.555	0.000	40533433	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.349	3.349	0.000	119679205	0.1000	0.0987	
2	4.371	4.371	0.000	85651403	0.1000	0.1029	
						RPD = 4.13	
6 PCB-1016							
1	4.110	4.111	-0.001	31151311	1.50	1.47	
1	4.832	4.832	0.000	55662832	1.50	1.44	
1	5.674	5.678	-0.004	114208117	1.50	1.49	
1	5.897	5.900	-0.003	51907614	1.50	1.46	
1	6.313	6.316	-0.003	23456485	1.50	1.46	
		Average of Peak Amounts =				1.47	
2	5.458	5.460	-0.002	23542805	1.50	1.47	
2	6.213	6.216	-0.003	43012520	1.50	1.43	
2	6.969	6.971	-0.002	86695114	1.50	1.51	
2	7.184	7.187	-0.003	36228752	1.50	1.48	
2	7.557	7.560	-0.003	20001903	1.50	1.41	
		Average of Peak Amounts =				1.46	
						RPD = 0.37	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							M
1	8.238	8.240	-0.002	68032536	1.50	1.51	
1	8.544	8.545	-0.001	105805192	1.50	1.52	
1	8.824	8.826	-0.002	117847095	1.50	1.55	
1	9.463	9.464	-0.001	166421516	1.50	1.57	
1	9.709	9.711	-0.002	80599623	1.50	1.57	
		Average of Peak Amounts =				1.54	
2	9.241	9.242	-0.001	48313988	1.50	1.49	M
2	9.443	9.444	-0.001	53359762	1.50	1.48	M
2	9.762	9.762	0.000	77342885	1.50	1.51	
2	10.313	10.313	0.000	117104396	1.50	1.56	
2	10.614	10.614	0.000	81567480	1.50	1.50	
		Average of Peak Amounts =				1.51	
						RPD = 2.38	
$ 12 DCB Decachlorobiphenyl							
1	10.629	10.630	-0.001	102461909	0.1000	0.0940	
2	11.548	11.549	-0.001	76133566	0.1000	0.0889	
						RPD = 5.59	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@1.5PPM_00005 Amount Added: 1.00 Units: mL

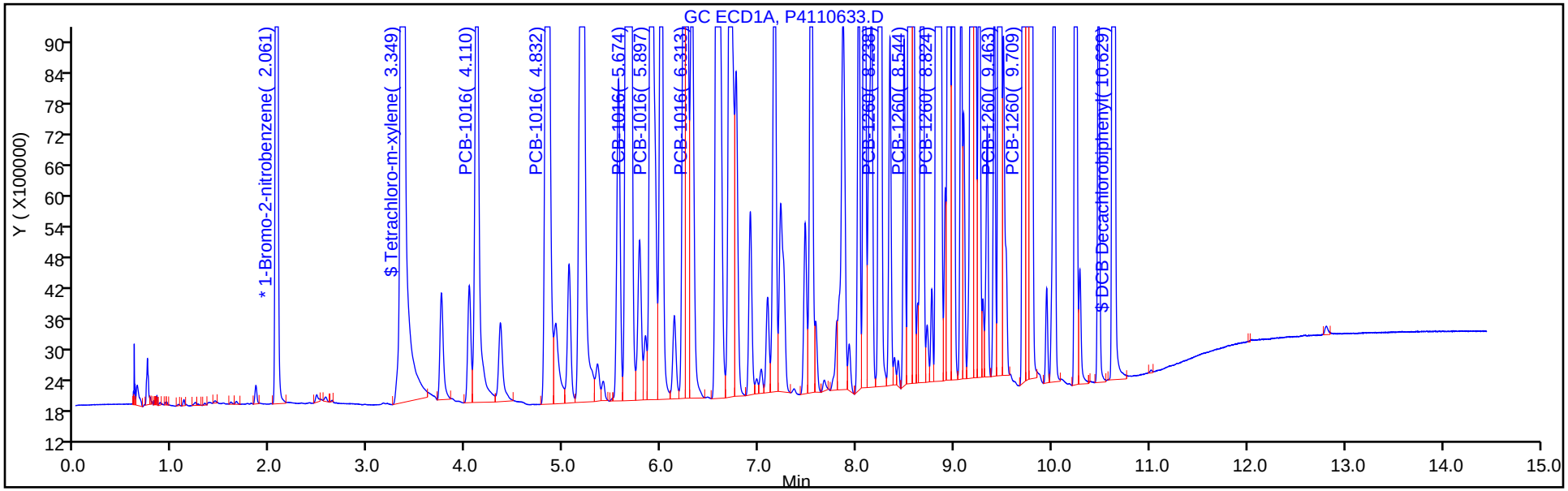
Report Date: 07-Nov-2018 11:04:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

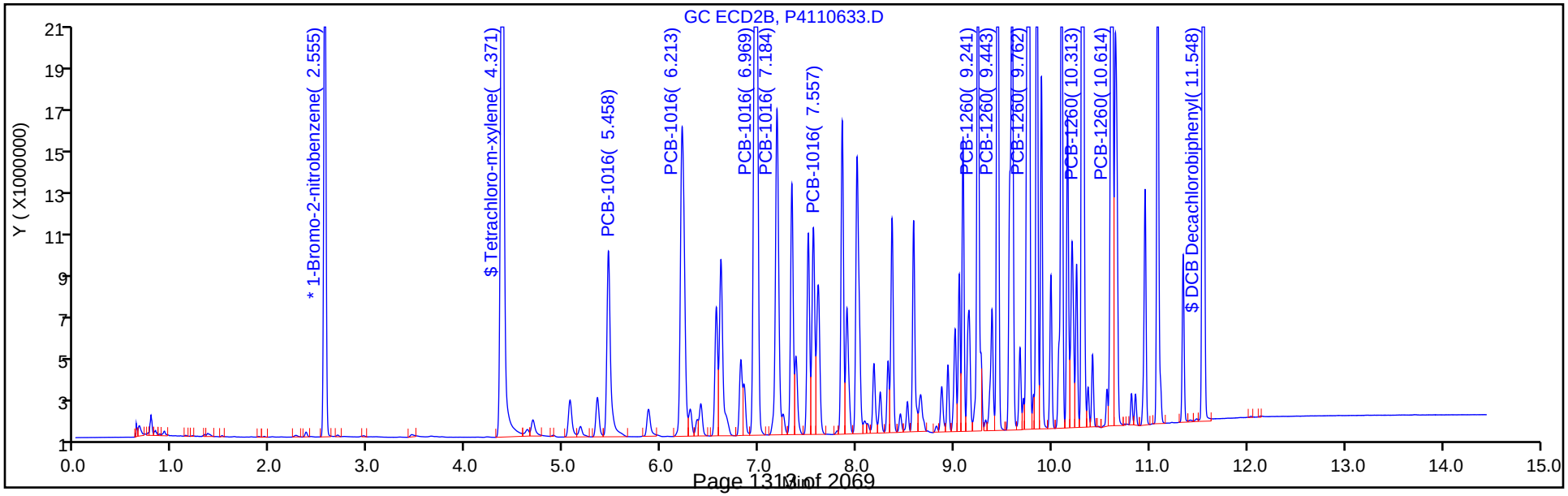
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Injection Date:	06-Nov-2018 23:56:16	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	std15 1660			Worklist Smp#:	33
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 07-Nov-2018 11:04:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Injection Date: 06-Nov-2018 23:56:16 Instrument ID: A2HP4

Lims ID: std15 1660

Client ID:

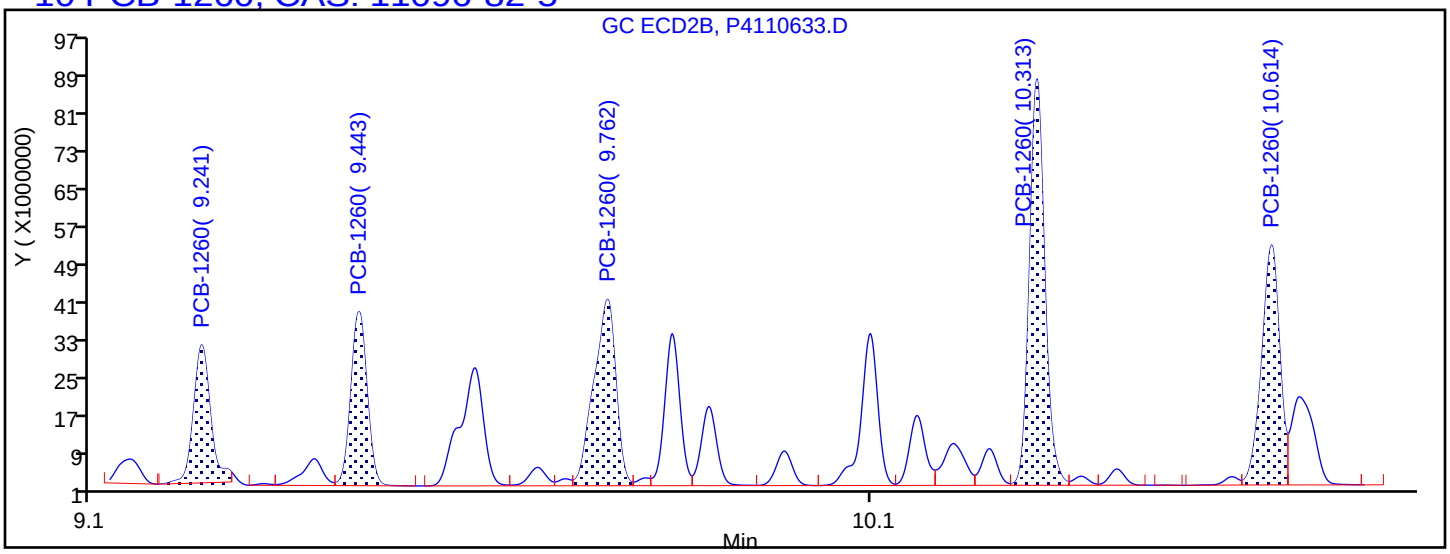
Operator ID: ALS Bottle#: 33 Worklist Smp#: 33

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB4 is Limit Group: GC 8082A IS

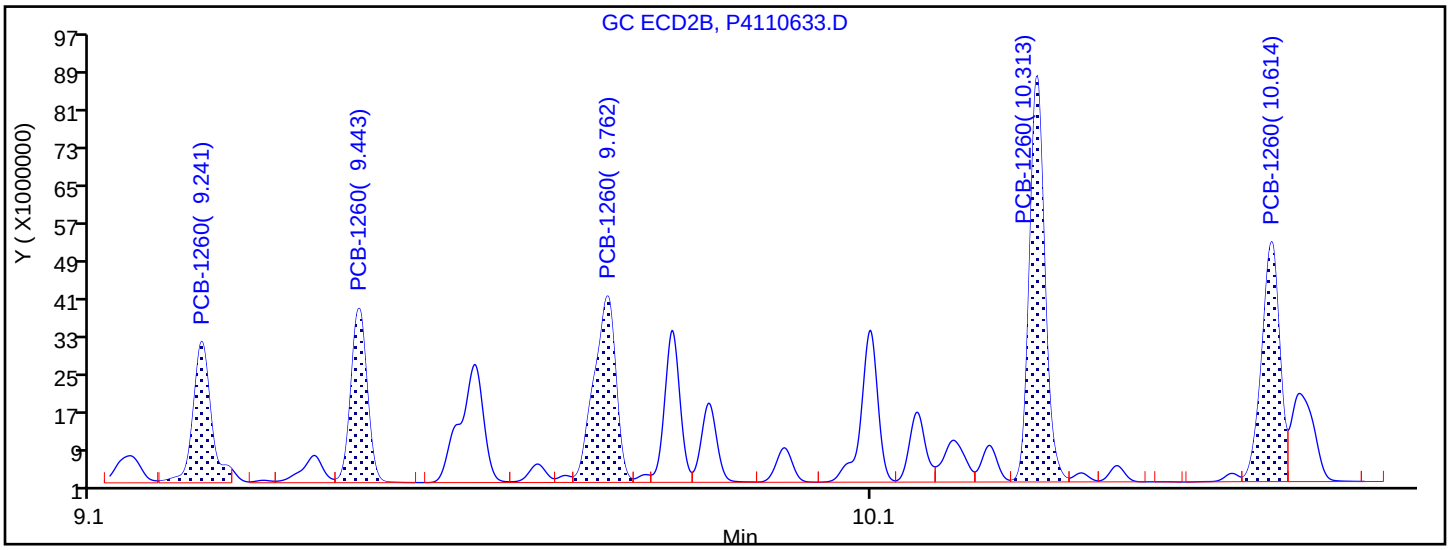
Column: Detector GC ecd2b

10 PCB-1260, CAS: 11096-82-5



Processing Integration Results

9.241	Response = 44683679
9.443	Response = 53047666
9.762	Response = 77342885
10.313	Response = 117104396
10.614	Response = 81567480



Manual Integration Results

9.241	Response = 48313988	M
9.443	Response = 53359762	M
9.762	Response = 77342885	
10.313	Response = 117104396	
10.614	Response = 81567480	

Reviewer: hassl, 07-Nov-2018 06:08:41

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/35 Calibration Date: 10/19/2018 01:52

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 15:16

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 16:58

Lab File ID: P12101835.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Ave	0.0183	0.0178		0.486	0.500	-2.7	20.0
PCB-1232 Peak 2	Ave	0.0126	0.0137		0.541	0.500	8.3	20.0
PCB-1232 Peak 3	Ave	0.0299	0.0277		0.463	0.500	-7.3	20.0
PCB-1232 Peak 4	Ave	0.0130	0.0141		0.544	0.500	8.8	20.0
PCB-1232 Peak 5	Ave	0.0046	0.0049		0.528	0.500	5.5	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/35 Calibration Date: 10/19/2018 01:52

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 15:16

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 16:58

Lab File ID: P12101835.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	4.78	4.77	4.80
PCB-1232 Peak 2	5.28	5.27	5.31
PCB-1232 Peak 3	5.91	5.89	5.93
PCB-1232 Peak 4	6.08	6.07	6.10
PCB-1232 Peak 5	6.41	6.39	6.43

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101835.D
Lims ID: icv 1232
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 01:52:40 ALS Bottle#: 35 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-035
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:28 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:08:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.931	2.930	0.002	114611351	0.0500	0.0500	
2	3.576	3.577	-0.001	89575361	0.0500	0.0500	
4 PCB-1232							
1	4.779	4.784	-0.005	20373726	0.5000	0.4864	
1	5.282	5.287	-0.005	15656255	0.5000	0.5413	
1	5.908	5.912	-0.004	31773902	0.5000	0.4635	
1	6.080	6.085	-0.005	16197772	0.5000	0.5441	
1	6.405	6.408	-0.003	5605233	0.5000	0.5277	
		Average of Peak Amounts =				0.5126	
2	5.751	5.756	-0.005	18039395	0.5000	0.4906	
2	6.331	6.335	-0.004	14559254	0.5000	0.4988	
2	6.941	6.947	-0.006	29668358	0.5000	0.5178	
2	7.117	7.121	-0.004	12850228	0.5000	0.5425	
2	7.440	7.438	0.002	6536738	0.5000	0.5665	
		Average of Peak Amounts =				0.5232	
						RPD = 2.05	

Reagents:

SG1232ICV@1.0_00023 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

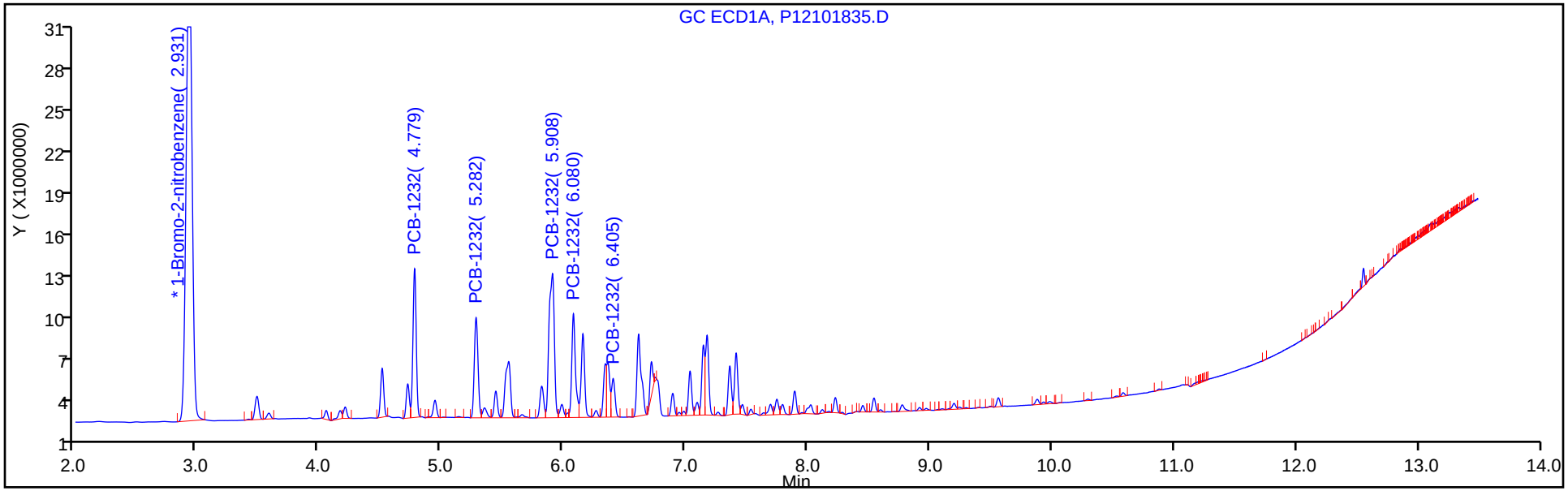
Report Date: 19-Oct-2018 13:36:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

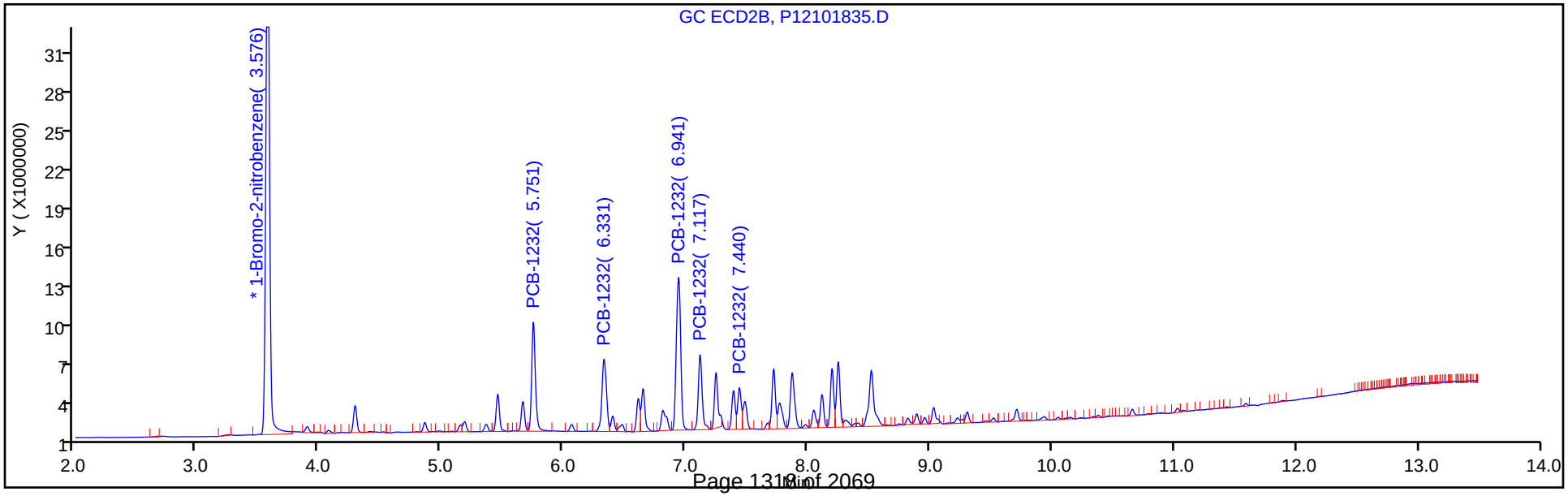
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101835.D

Injection Date:	19-Oct-2018 01:52:40	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	icv 1232			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/35 Calibration Date: 10/19/2018 01:52

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 15:16

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 16:58

Lab File ID: P12101835.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Ave	0.0205	0.0201		0.491	0.500	-1.9	20.0
PCB-1232 Peak 2	Ave	0.0163	0.0163		0.499	0.500	-0.2	20.0
PCB-1232 Peak 3	Ave	0.0320	0.0331		0.518	0.500	3.6	20.0
PCB-1232 Peak 4	Ave	0.0132	0.0144		0.542	0.500	8.5	20.0
PCB-1232 Peak 5	Lin1		0.0073		0.566	0.500	13.3	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/35 Calibration Date: 10/19/2018 01:52

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 15:16

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 16:58

Lab File ID: P12101835.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	5.75	5.74	5.78
PCB-1232 Peak 2	6.33	6.32	6.35
PCB-1232 Peak 3	6.94	6.93	6.97
PCB-1232 Peak 4	7.12	7.10	7.14
PCB-1232 Peak 5	7.44	7.42	7.46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101835.D
Lims ID: icv 1232
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 01:52:40 ALS Bottle#: 35 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-035
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:28 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:08:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.931	2.930	0.002	114611351	0.0500	0.0500	
2	3.576	3.577	-0.001	89575361	0.0500	0.0500	
4 PCB-1232							
1	4.779	4.784	-0.005	20373726	0.5000	0.4864	
1	5.282	5.287	-0.005	15656255	0.5000	0.5413	
1	5.908	5.912	-0.004	31773902	0.5000	0.4635	
1	6.080	6.085	-0.005	16197772	0.5000	0.5441	
1	6.405	6.408	-0.003	5605233	0.5000	0.5277	
		Average of Peak Amounts =				0.5126	
2	5.751	5.756	-0.005	18039395	0.5000	0.4906	
2	6.331	6.335	-0.004	14559254	0.5000	0.4988	
2	6.941	6.947	-0.006	29668358	0.5000	0.5178	
2	7.117	7.121	-0.004	12850228	0.5000	0.5425	
2	7.440	7.438	0.002	6536738	0.5000	0.5665	
		Average of Peak Amounts =				0.5232	
						RPD = 2.05	

Reagents:

SG1232ICV@1.0_00023 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

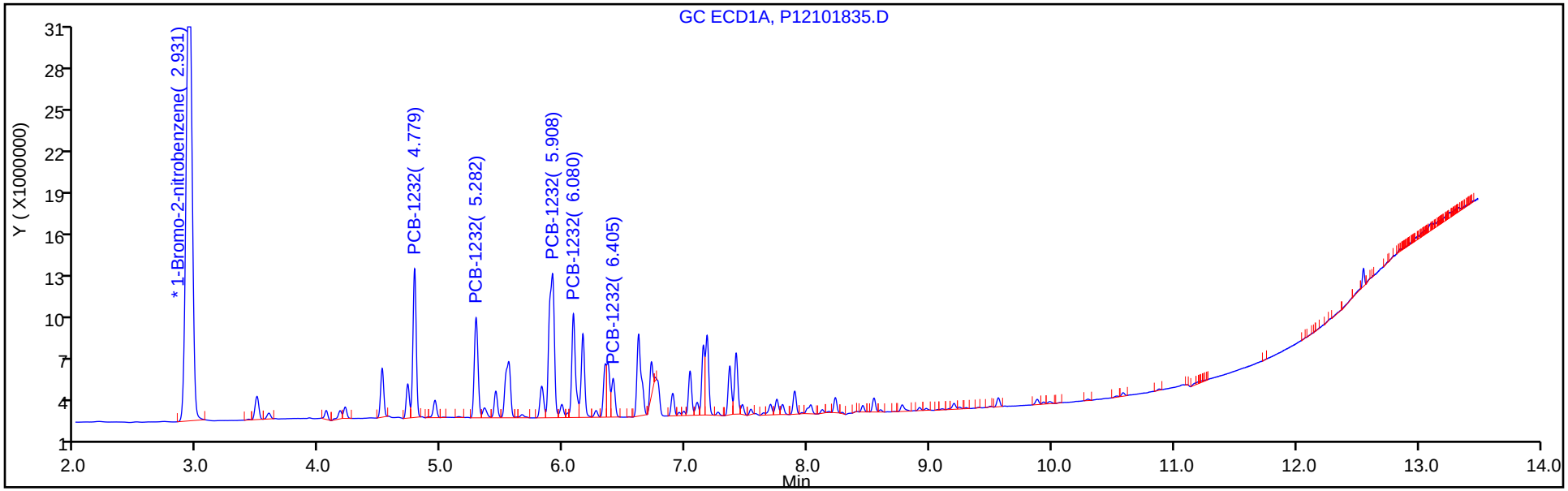
Report Date: 19-Oct-2018 13:37:00 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

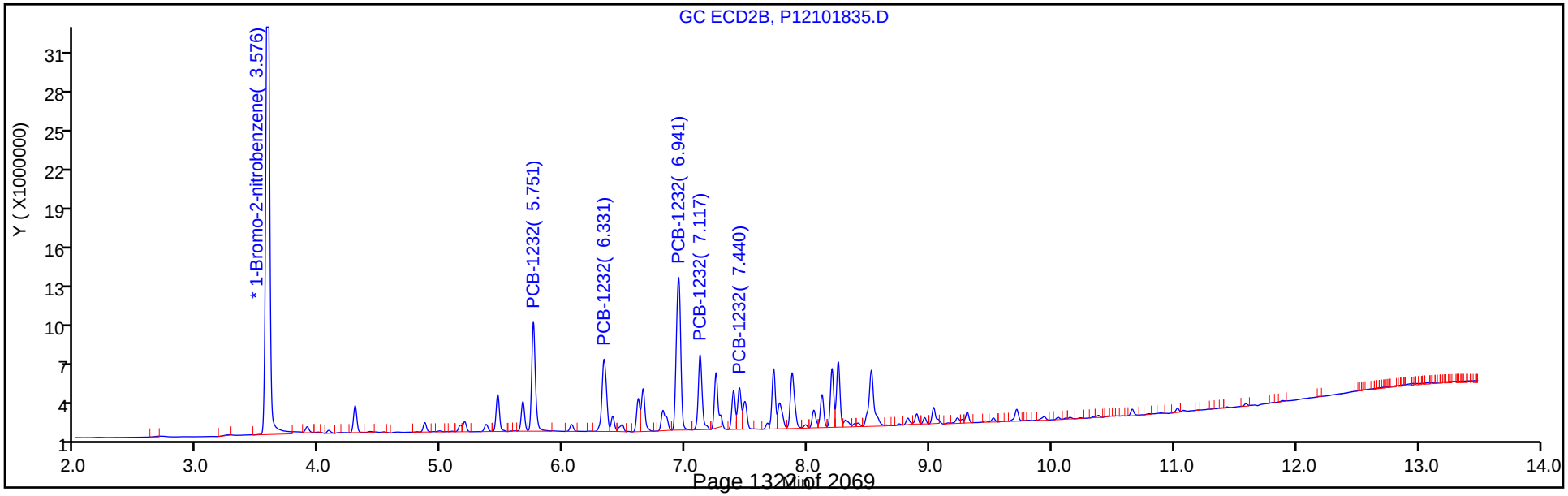
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101835.D

Injection Date:	19-Oct-2018 01:52:40	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	icv 1232			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/36 Calibration Date: 10/19/2018 02:13

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 17:19

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 19:02

Lab File ID: P12101836.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Ave	0.0125	0.0114		0.456	0.500	-8.8	20.0
PCB-1242 Peak 2	Ave	0.0220	0.0228		0.519	0.500	3.8	20.0
PCB-1242 Peak 3	Ave	0.0525	0.0480		0.457	0.500	-8.7	20.0
PCB-1242 Peak 4	Ave	0.0227	0.0237		0.523	0.500	4.6	20.0
PCB-1242 Peak 5	Ave	0.0228	0.0234		0.513	0.500	2.6	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/36 Calibration Date: 10/19/2018 02:13

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 17:19

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 19:02

Lab File ID: P12101836.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	4.78	4.76	4.80
PCB-1242 Peak 2	5.28	5.27	5.31
PCB-1242 Peak 3	5.91	5.89	5.93
PCB-1242 Peak 4	6.08	6.06	6.10
PCB-1242 Peak 5	6.61	6.60	6.64

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101836.D
Lims ID: icv 1242
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 02:13:09 ALS Bottle#: 36 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-036
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:28 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:08:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.932	2.930	0.002	122376078	0.0500	0.0500	
2	3.577	3.577	0.000	94886566	0.0500	0.0500	
5 PCB-1242							
1	4.780	4.783	-0.003	13938413	0.5000	0.4561	
1	5.283	5.287	-0.004	27921920	0.5000	0.5190	
1	5.908	5.911	-0.003	58720637	0.5000	0.4567	
1	6.079	6.082	-0.003	29008775	0.5000	0.5229	
1	6.613	6.617	-0.004	28623480	0.5000	0.5129	
		Average of Peak Amounts =				0.4935	
2	5.752	5.756	-0.004	14172144	0.5000	0.5247	
2	6.331	6.335	-0.004	23994600	0.5000	0.4909	
2	6.942	6.946	-0.004	53351072	0.5000	0.5161	
2	7.117	7.120	-0.003	23205140	0.5000	0.5405	
2	7.440	7.441	-0.001	12644601	0.5000	0.4892	
		Average of Peak Amounts =				0.5123	
						RPD = 3.73	

Reagents:

SG1242ICV@1.0_00024 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

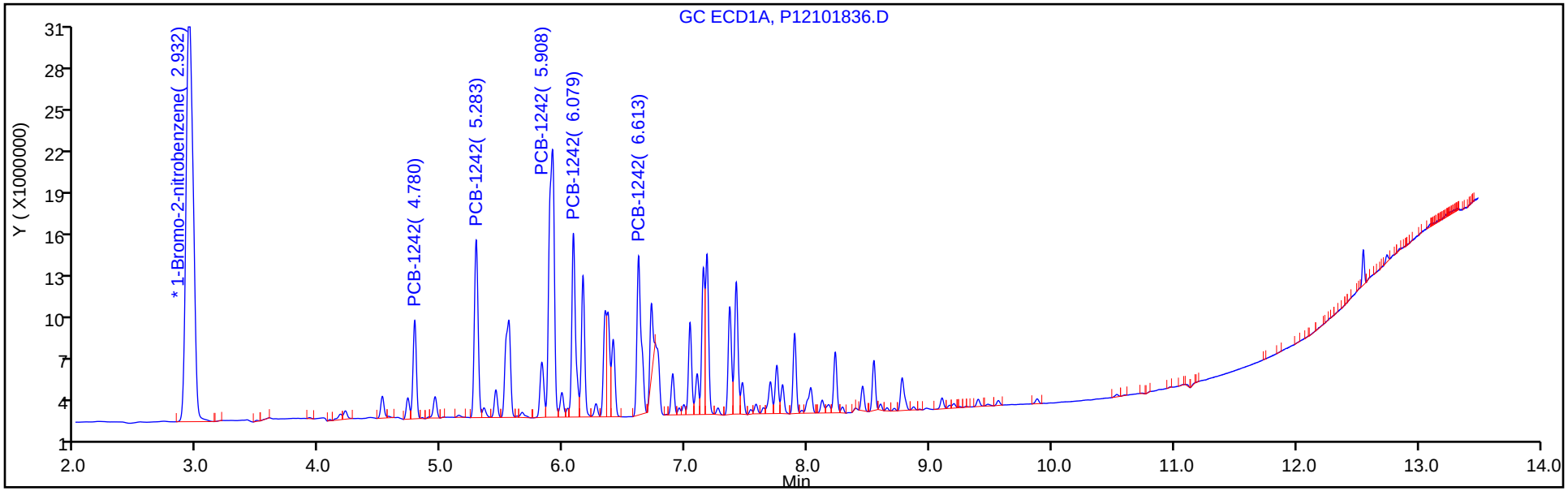
Report Date: 19-Oct-2018 13:36:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

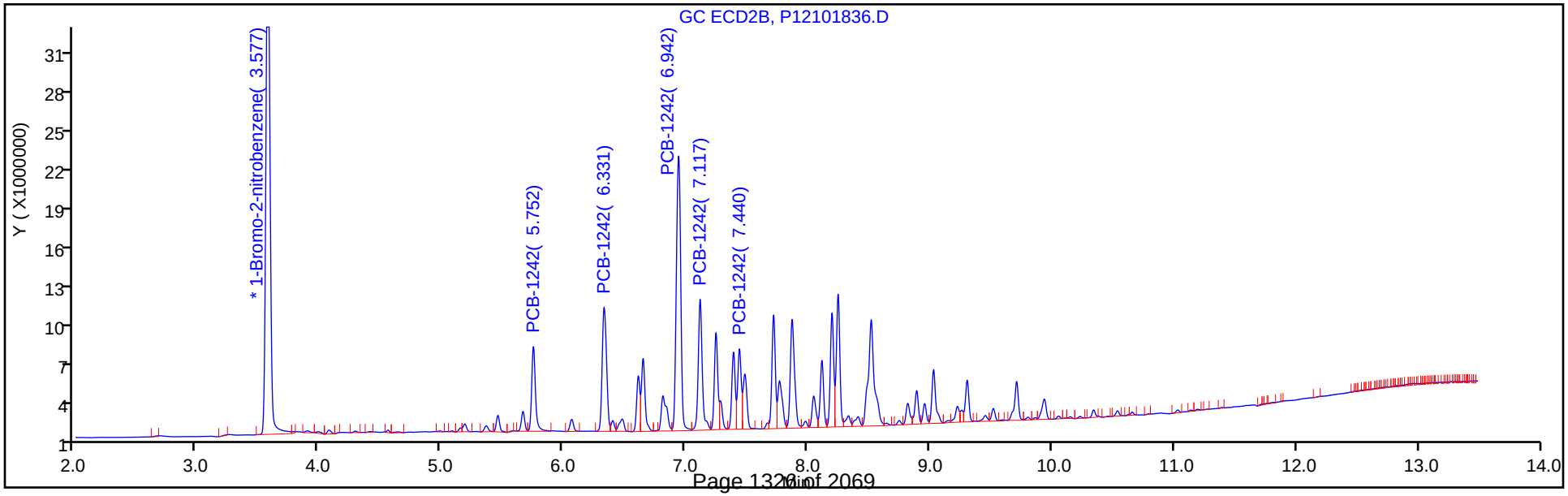
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101836.D

Injection Date:	19-Oct-2018 02:13:09	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	icv 1242			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	36
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/36 Calibration Date: 10/19/2018 02:13

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 17:19

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 19:02

Lab File ID: P12101836.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Ave	0.0142	0.0149		0.525	0.500	4.9	20.0
PCB-1242 Peak 2	Ave	0.0258	0.0253		0.491	0.500	-1.8	20.0
PCB-1242 Peak 3	Ave	0.0545	0.0562		0.516	0.500	3.2	20.0
PCB-1242 Peak 4	Ave	0.0226	0.0245		0.540	0.500	8.1	20.0
PCB-1242 Peak 5	Ave	0.0136	0.0133		0.489	0.500	-2.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/36 Calibration Date: 10/19/2018 02:13

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 17:19

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 19:02

Lab File ID: P12101836.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	5.75	5.74	5.78
PCB-1242 Peak 2	6.33	6.32	6.35
PCB-1242 Peak 3	6.94	6.93	6.97
PCB-1242 Peak 4	7.12	7.10	7.14
PCB-1242 Peak 5	7.44	7.42	7.46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101836.D
Lims ID: icv 1242
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 02:13:09 ALS Bottle#: 36 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-036
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:28 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:08:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.932	2.930	0.002	122376078	0.0500	0.0500	
2	3.577	3.577	0.000	94886566	0.0500	0.0500	
5 PCB-1242							
1	4.780	4.783	-0.003	13938413	0.5000	0.4561	
1	5.283	5.287	-0.004	27921920	0.5000	0.5190	
1	5.908	5.911	-0.003	58720637	0.5000	0.4567	
1	6.079	6.082	-0.003	29008775	0.5000	0.5229	
1	6.613	6.617	-0.004	28623480	0.5000	0.5129	
		Average of Peak Amounts =				0.4935	
2	5.752	5.756	-0.004	14172144	0.5000	0.5247	
2	6.331	6.335	-0.004	23994600	0.5000	0.4909	
2	6.942	6.946	-0.004	53351072	0.5000	0.5161	
2	7.117	7.120	-0.003	23205140	0.5000	0.5405	
2	7.440	7.441	-0.001	12644601	0.5000	0.4892	
		Average of Peak Amounts =				0.5123	
						RPD = 3.73	

Reagents:

SG1242ICV@1.0_00024 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

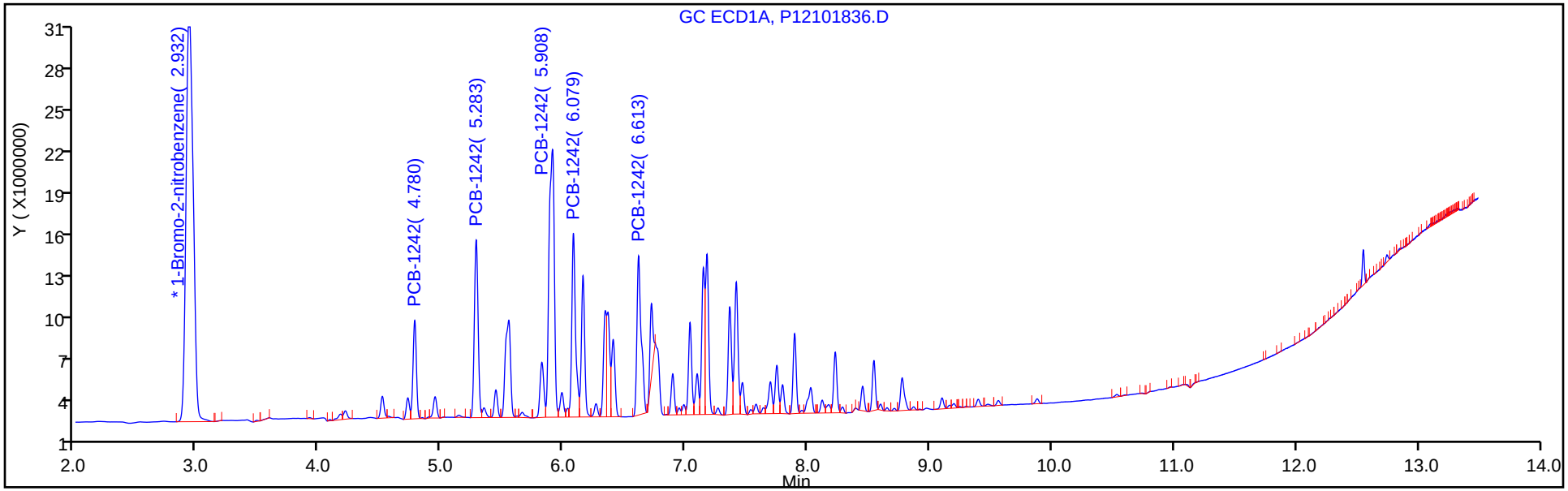
Report Date: 19-Oct-2018 13:36:50 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

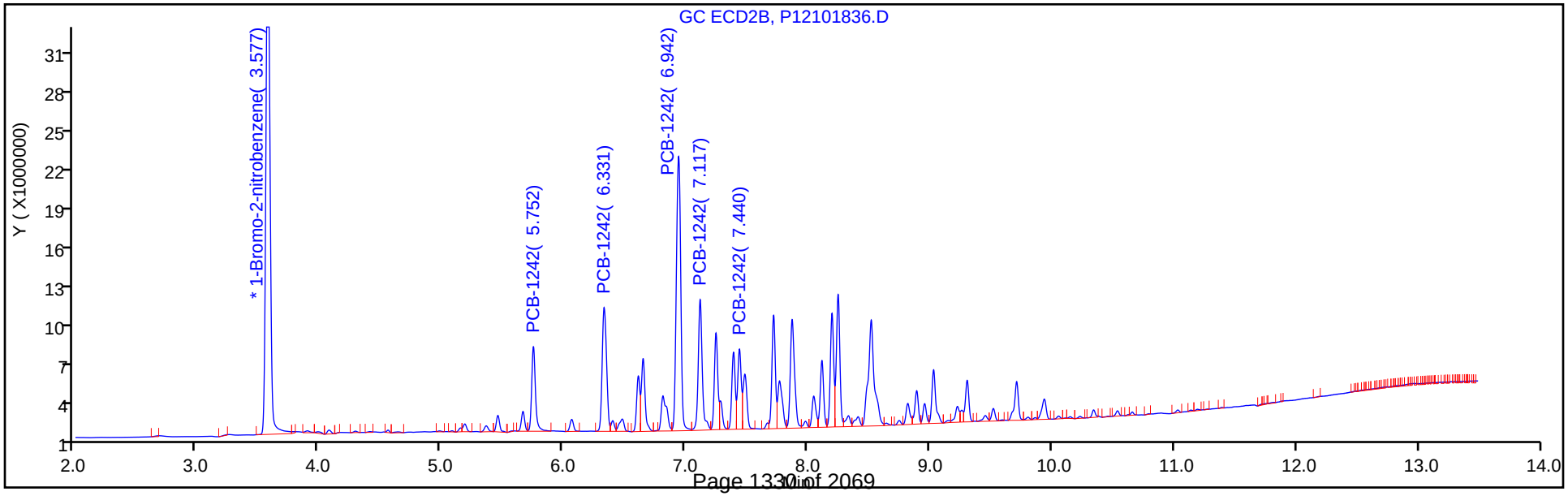
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101836.D

Injection Date:	19-Oct-2018 02:13:09	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	icv 1242			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	36
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/37 Calibration Date: 10/19/2018 02:33

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 19:22

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 21:05

Lab File ID: P12101837.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Ave	0.0115	0.0106		0.461	0.500	-7.7	20.0
PCB-1248 Peak 2	Ave	0.0351	0.0350		0.499	0.500	-0.2	20.0
PCB-1248 Peak 3	Ave	0.0314	0.0281		0.447	0.500	-10.6	20.0
PCB-1248 Peak 4	Ave	0.0263	0.0270		0.513	0.500	2.5	20.0
PCB-1248 Peak 5	Ave	0.0170	0.0161		0.475	0.500	-5.0	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/37 Calibration Date: 10/19/2018 02:33

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 19:22

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 21:05

Lab File ID: P12101837.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	5.28	5.27	5.30
PCB-1248 Peak 2	6.61	6.60	6.63
PCB-1248 Peak 3	7.15	7.13	7.17
PCB-1248 Peak 4	7.41	7.40	7.44
PCB-1248 Peak 5	7.89	7.88	7.91

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101837.D
Lims ID: icv 1248
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 02:33:44 ALS Bottle#: 37 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-037
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:28 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:08:53

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.934	2.930	0.005	122652464	0.0500	0.0500	
2	3.578	3.577	0.001	95330215	0.0500	0.0500	
7 PCB-1248							
1	5.282	5.284	-0.002	12989401	0.5000	0.4614	
1	6.613	6.615	-0.002	42923890	0.5000	0.4990	
1	7.145	7.148	-0.003	34447818	0.5000	0.4472	
1	7.414	7.417	-0.003	33093530	0.5000	0.5125	
1	7.892	7.895	-0.003	19763610	0.5000	0.4752	
		Average of Peak Amounts =				0.4790	
2	6.330	6.332	-0.002	12154394	0.5000	0.4479	
2	6.942	6.942	0.000	37067199	0.5000	0.5359	
2	7.720	7.722	-0.002	25071499	0.5000	0.4761	
2	8.249	8.251	-0.002	34569365	0.5000	0.5203	
2	9.030	9.032	-0.002	16107710	0.5000	0.4543	
		Average of Peak Amounts =				0.4869	
						RPD = 1.63	

Reagents:

SG1248ICV@1.0_00027 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

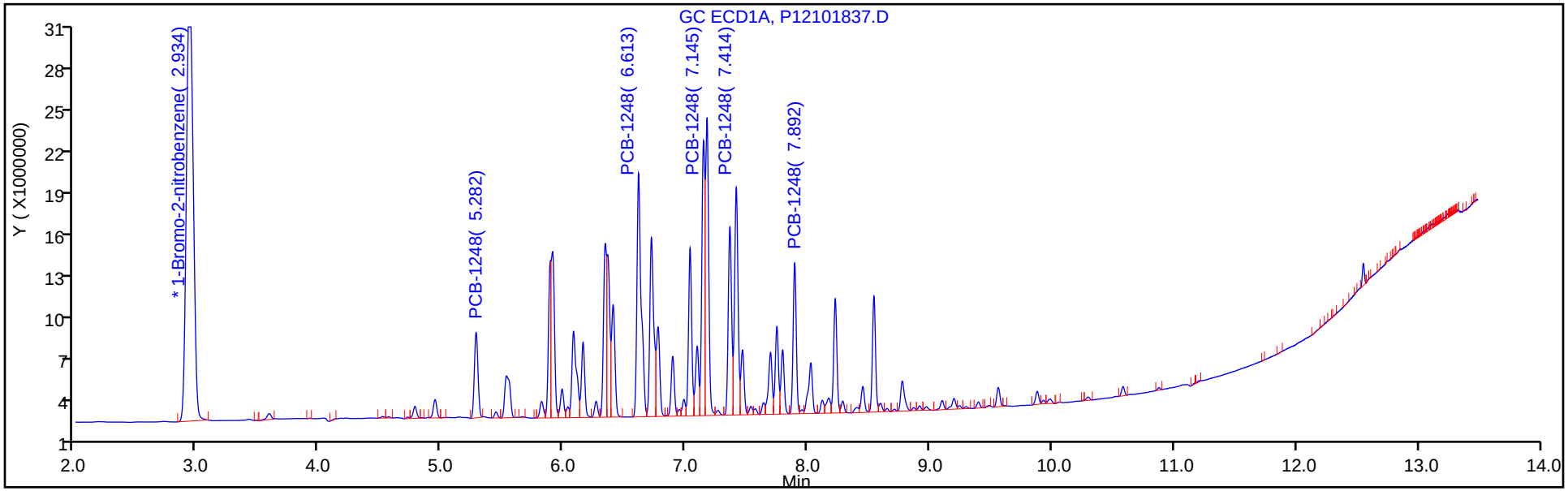
Report Date: 19-Oct-2018 13:36:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

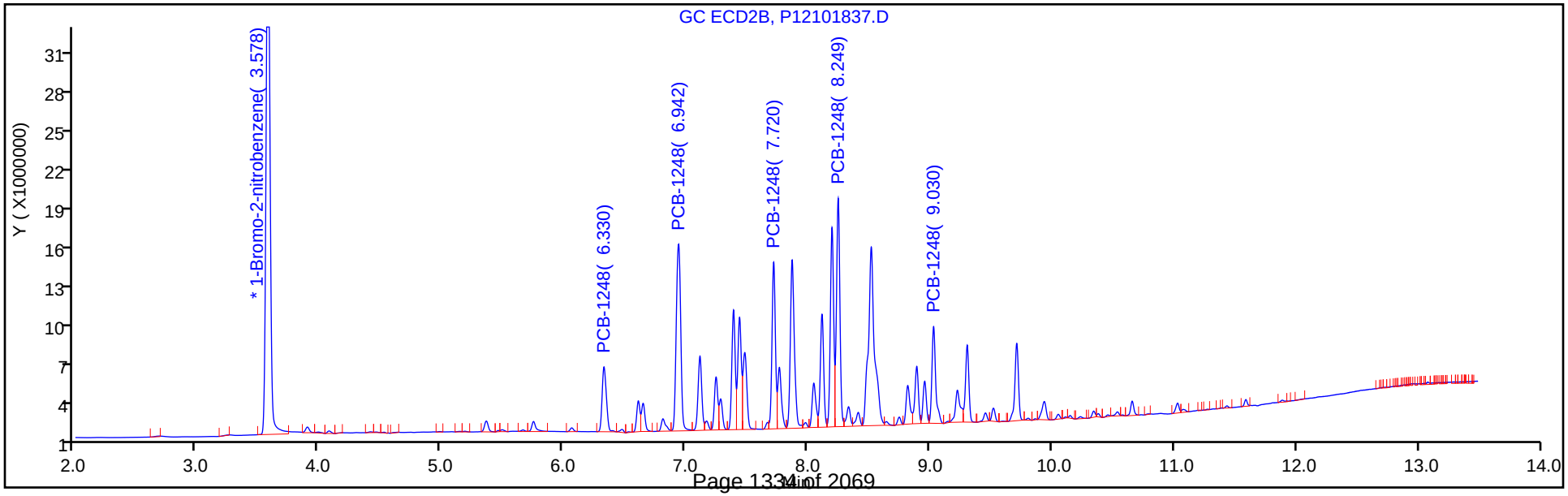
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101837.D

Injection Date:	19-Oct-2018 02:33:44	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	icv 1248			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/37 Calibration Date: 10/19/2018 02:33

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 19:22

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 21:05

Lab File ID: P12101837.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Ave	0.0142	0.0128		0.448	0.500	-10.4	20.0
PCB-1248 Peak 2	Ave	0.0363	0.0389		0.536	0.500	7.2	20.0
PCB-1248 Peak 3	Ave	0.0276	0.0263		0.476	0.500	-4.8	20.0
PCB-1248 Peak 4	Ave	0.0348	0.0363		0.520	0.500	4.1	20.0
PCB-1248 Peak 5	Ave	0.0186	0.0169		0.454	0.500	-9.1	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/37 Calibration Date: 10/19/2018 02:33

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 19:22

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 21:05

Lab File ID: P12101837.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	6.33	6.31	6.35
PCB-1248 Peak 2	6.94	6.92	6.96
PCB-1248 Peak 3	7.72	7.70	7.74
PCB-1248 Peak 4	8.25	8.23	8.27
PCB-1248 Peak 5	9.03	9.01	9.05

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101837.D
Lims ID: icv 1248
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 02:33:44 ALS Bottle#: 37 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-037
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:28 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 07:08:53

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.934	2.930	0.005	122652464	0.0500	0.0500	
2	3.578	3.577	0.001	95330215	0.0500	0.0500	
7 PCB-1248							
1	5.282	5.284	-0.002	12989401	0.5000	0.4614	
1	6.613	6.615	-0.002	42923890	0.5000	0.4990	
1	7.145	7.148	-0.003	34447818	0.5000	0.4472	
1	7.414	7.417	-0.003	33093530	0.5000	0.5125	
1	7.892	7.895	-0.003	19763610	0.5000	0.4752	
		Average of Peak Amounts =				0.4790	
2	6.330	6.332	-0.002	12154394	0.5000	0.4479	
2	6.942	6.942	0.000	37067199	0.5000	0.5359	
2	7.720	7.722	-0.002	25071499	0.5000	0.4761	
2	8.249	8.251	-0.002	34569365	0.5000	0.5203	
2	9.030	9.032	-0.002	16107710	0.5000	0.4543	
		Average of Peak Amounts =				0.4869	
						RPD = 1.63	

Reagents:

SG1248ICV@1.0_00027 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

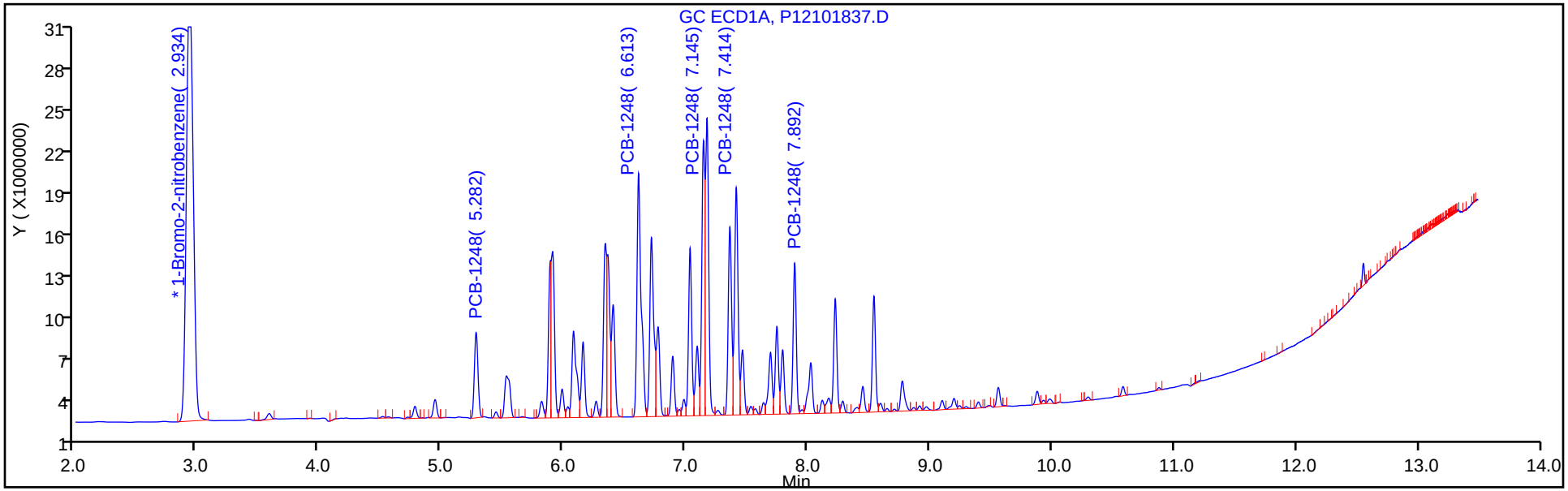
Report Date: 19-Oct-2018 13:36:40 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

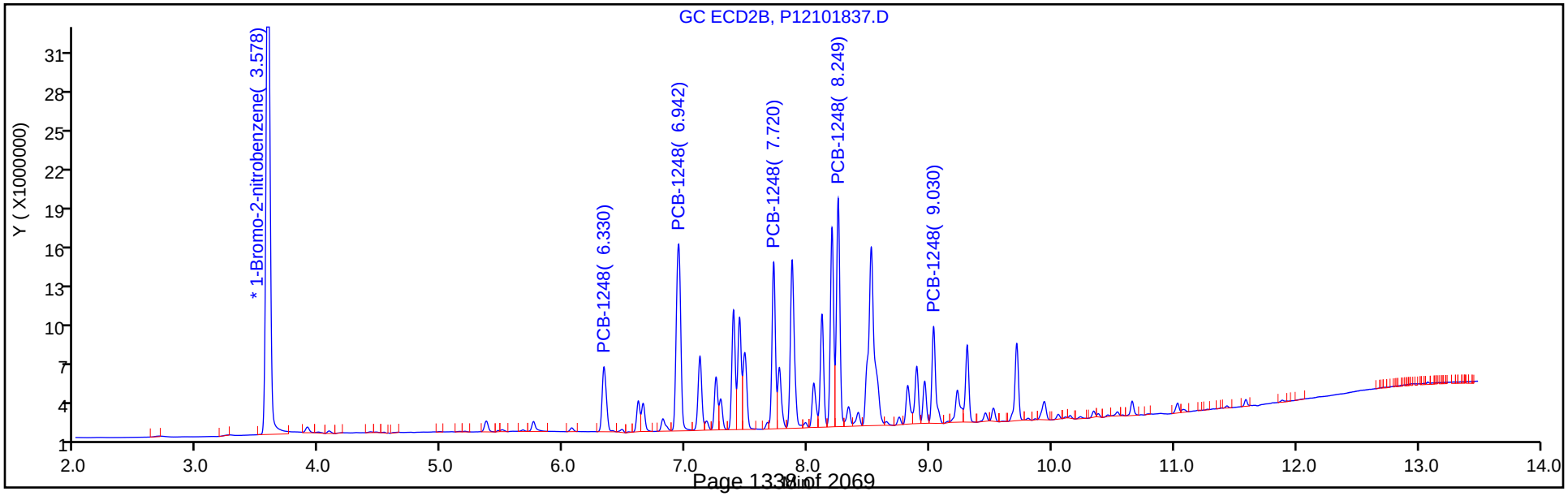
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101837.D

Injection Date:	19-Oct-2018 02:33:44	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	icv 1248			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/42 Calibration Date: 10/19/2018 08:35

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 21:26

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 23:08

Lab File ID: P12101842.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1254 Peak 1	Ave	0.0368	0.0340		0.462	0.500	-7.6	20.0
PCB-1254 Peak 2	Ave	0.0537	0.0501		0.467	0.500	-6.7	20.0
PCB-1254 Peak 3	Ave	0.0404	0.0389		0.481	0.500	-3.9	20.0
PCB-1254 Peak 4	Ave	0.0350	0.0349		0.497	0.500	-0.5	20.0
PCB-1254 Peak 5	Ave	0.0545	0.0550		0.505	0.500	0.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/42 Calibration Date: 10/19/2018 08:35

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 21:26

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 23:08

Lab File ID: P12101842.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1254 Peak 1	7.42	7.40	7.44
PCB-1254 Peak 2	7.89	7.88	7.91
PCB-1254 Peak 3	8.23	8.21	8.25
PCB-1254 Peak 4	8.45	8.43	8.47
PCB-1254 Peak 5	8.78	8.76	8.80

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101842.D
Lims ID: icv 1254
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 08:35:33 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-042
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:28 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 09:05:23

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.940	2.930	0.010	118523757	0.0500	0.0500	
2	3.571	3.577	-0.006	97447882	0.0500	0.0500	
8 PCB-1254							
1	7.422	7.423	-0.001	40264382	0.5000	0.4621	
1	7.894	7.894	0.000	59391309	0.5000	0.4666	
1	8.226	8.228	-0.002	46064554	0.5000	0.4806	
1	8.452	8.452	0.000	41328929	0.5000	0.4974	
1	8.776	8.777	-0.001	65133221	0.5000	0.5046	
		Average of Peak Amounts =				0.4823	
2	8.239	8.244	-0.005	25323908	0.5000	0.4234	
2	8.481	8.486	-0.005	29669668	0.5000	0.4423	
2	9.026	9.033	-0.007	41687320	0.5000	0.4264	
2	9.302	9.307	-0.005	32230888	0.5000	0.4329	
2	9.933	9.940	-0.007	45787529	0.5000	0.4689	
		Average of Peak Amounts =				0.4388	
						RPD = 9.44	

Reagents:

SG1254ICV@1.0_00024 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

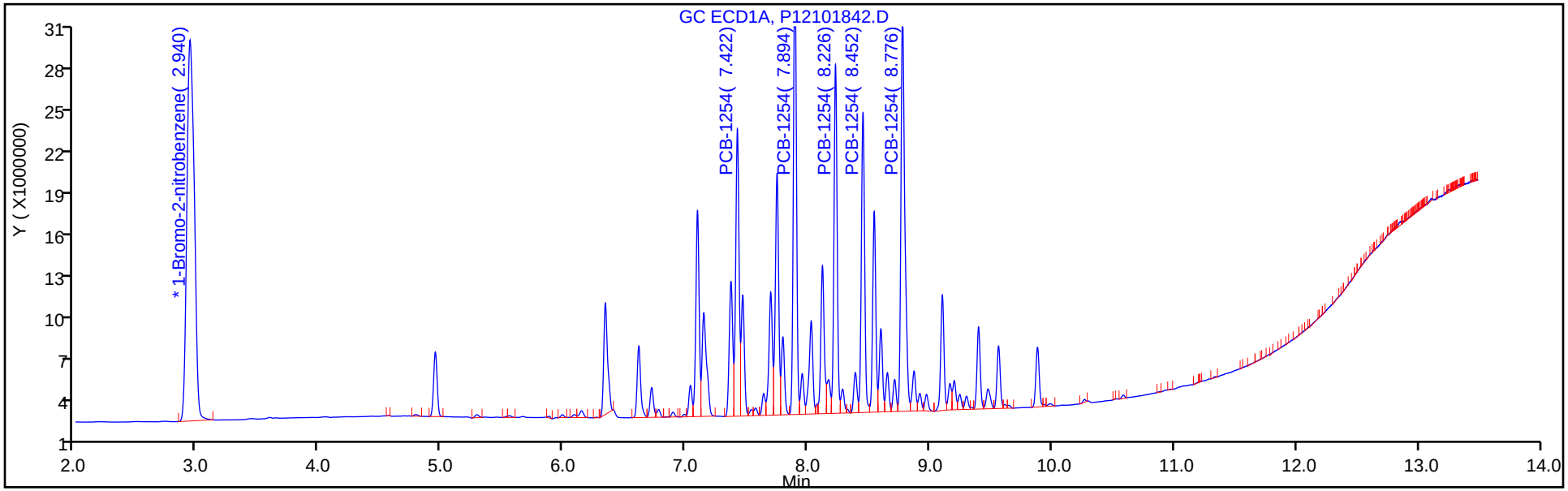
Report Date: 19-Oct-2018 13:37:34 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

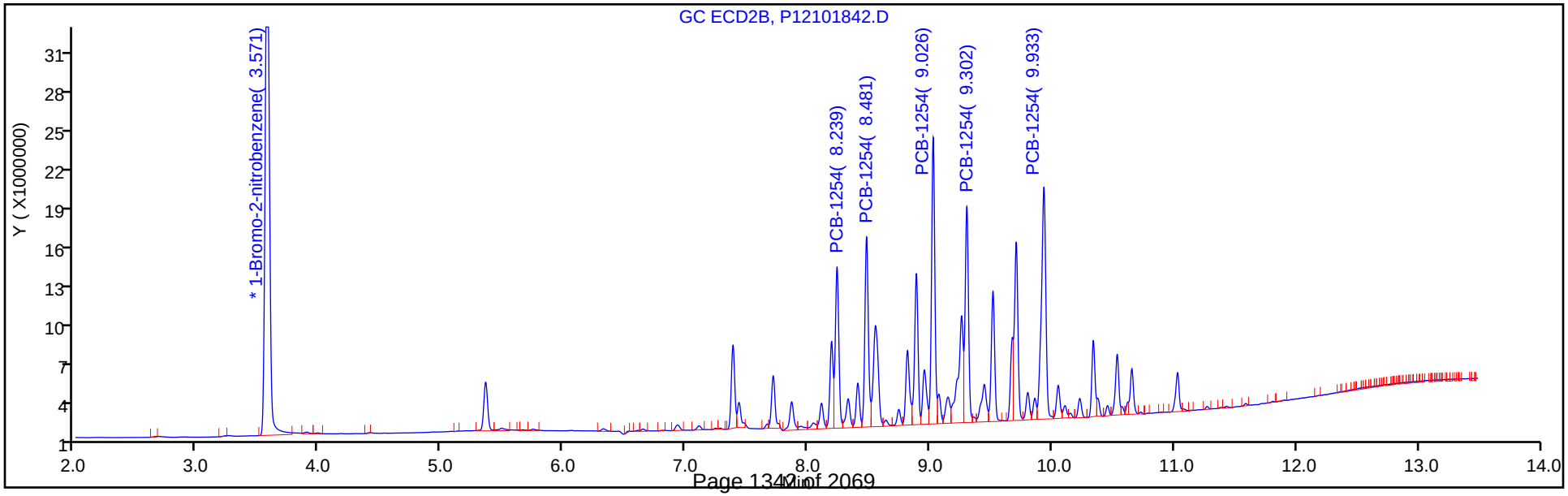
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101842.D

Injection Date:	19-Oct-2018 08:35:33	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	icv 1254			Worklist Smp#:	42
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	42
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/42 Calibration Date: 10/19/2018 08:35

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 21:26

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 23:08

Lab File ID: P12101842.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1254 Peak 1	Ave	0.0307	0.0260		0.423	0.500	-15.3	20.0
PCB-1254 Peak 2	Ave	0.0344	0.0305		0.442	0.500	-11.5	20.0
PCB-1254 Peak 3	Ave	0.0502	0.0428		0.426	0.500	-14.7	20.0
PCB-1254 Peak 4	Ave	0.0382	0.0331		0.433	0.500	-13.4	20.0
PCB-1254 Peak 5	Ave	0.0501	0.0470		0.469	0.500	-6.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/42 Calibration Date: 10/19/2018 08:35

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 21:26

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 23:08

Lab File ID: P12101842.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1254 Peak 1	8.24	8.23	8.26
PCB-1254 Peak 2	8.48	8.47	8.51
PCB-1254 Peak 3	9.03	9.01	9.05
PCB-1254 Peak 4	9.30	9.29	9.33
PCB-1254 Peak 5	9.93	9.92	9.96

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101842.D
Lims ID: icv 1254
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 08:35:33 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-042
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:28 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 09:05:23

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.940	2.930	0.010	118523757	0.0500	0.0500	
2	3.571	3.577	-0.006	97447882	0.0500	0.0500	
8 PCB-1254							
1	7.422	7.423	-0.001	40264382	0.5000	0.4621	
1	7.894	7.894	0.000	59391309	0.5000	0.4666	
1	8.226	8.228	-0.002	46064554	0.5000	0.4806	
1	8.452	8.452	0.000	41328929	0.5000	0.4974	
1	8.776	8.777	-0.001	65133221	0.5000	0.5046	
		Average of Peak Amounts =				0.4823	
2	8.239	8.244	-0.005	25323908	0.5000	0.4234	
2	8.481	8.486	-0.005	29669668	0.5000	0.4423	
2	9.026	9.033	-0.007	41687320	0.5000	0.4264	
2	9.302	9.307	-0.005	32230888	0.5000	0.4329	
2	9.933	9.940	-0.007	45787529	0.5000	0.4689	
		Average of Peak Amounts =				0.4388	
						RPD = 9.44	

Reagents:

SG1254ICV@1.0_00024 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

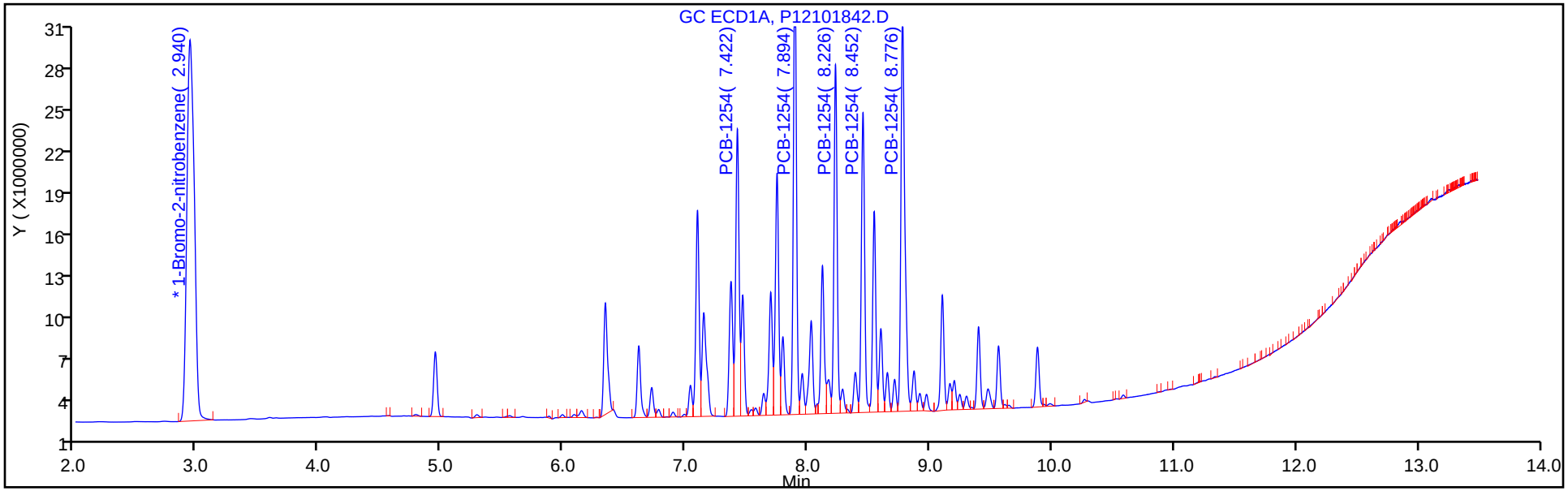
Report Date: 19-Oct-2018 13:37:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

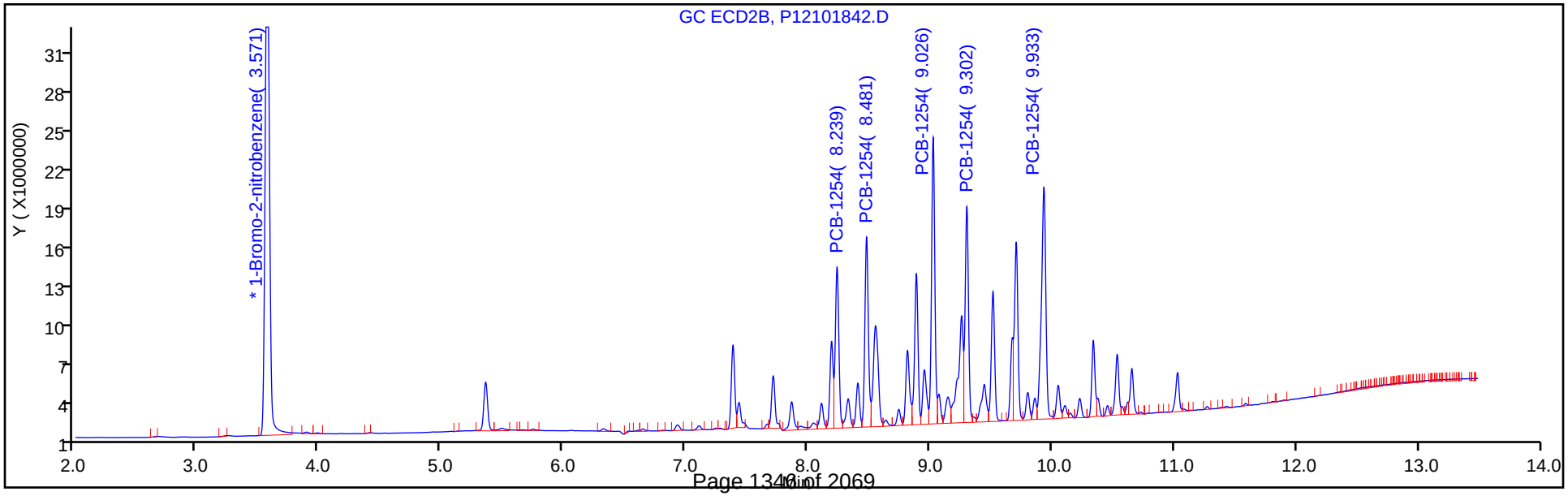
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101842.D

Injection Date:	19-Oct-2018 08:35:33	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	icv 1254			Worklist Smp#:	42
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	42
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/43 Calibration Date: 10/19/2018 08:56

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 23:29

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 10/19/2018 01:11

Lab File ID: P12101843.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	0.0149	0.0149		0.503	0.500	0.5	20.0
PCB-1016 Peak 2	Ave	0.0274	0.0251		0.458	0.500	-8.3	20.0
PCB-1016 Peak 3	Ave	0.0655	0.0454		0.347	0.500	-30.6*	20.0
PCB-1016 Peak 4	Ave	0.0275	0.0263		0.480	0.500	-4.1	20.0
PCB-1016 Peak 5	Ave	0.0114	0.0103		0.449	0.500	-10.1	20.0
PCB-1260 Peak 1	Ave	0.0361	0.0373		0.517	0.500	3.4	20.0
PCB-1260 Peak 2	Ave	0.0592	0.0627		0.530	0.500	5.9	20.0
PCB-1260 Peak 3	Ave	0.0386	0.0329		0.426	0.500	-14.7	20.0
PCB-1260 Peak 4	Ave	0.1023	0.0920		0.450	0.500	-10.0	20.0
PCB-1260 Peak 5	Ave	0.0502	0.0480		0.478	0.500	-4.4	20.0
Tetrachloro-m-xylene	Ave	0.9025	0.8635		0.0239	0.0250	-4.3	20.0
DCB Decachlorobiphenyl	Ave	1.113	1.010		0.0227	0.0250	-9.3	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/43 Calibration Date: 10/19/2018 08:56

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 23:29

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 10/19/2018 01:11

Lab File ID: P12101843.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	4.78	4.76	4.80
PCB-1016 Peak 2	5.28	5.26	5.30
PCB-1016 Peak 3	5.91	5.89	5.93
PCB-1016 Peak 4	6.08	6.06	6.10
PCB-1016 Peak 5	6.41	6.39	6.43
PCB-1260 Peak 1	8.12	8.10	8.14
PCB-1260 Peak 2	8.45	8.43	8.47
PCB-1260 Peak 3	8.91	8.90	8.94
PCB-1260 Peak 4	9.56	9.54	9.58
PCB-1260 Peak 5	9.88	9.86	9.90
Tetrachloro-m-xylene	4.21	4.20	4.23
DCB Decachlorobiphenyl	11.06	11.04	11.08

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101843.D
Lims ID: icv 1660
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 08:56:00 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-043
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:28 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 09:42:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.935	2.930	0.006	118527198	0.0500	0.0500	
2	3.573	3.577	-0.004	93101097	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.214	4.215	-0.001	51171891	0.0250	0.0239	
2	4.975	4.979	-0.004	39341562	0.0250	0.0228	
						RPD = 4.89	
6 PCB-1016							M
1	4.779	4.780	-0.001	17713333	0.5000	0.5027	
1	5.282	5.283	-0.001	29768881	0.5000	0.4583	
1	5.909	5.907	0.002	53859555	0.5000	0.3471	
1	6.080	6.080	0.000	31221388	0.5000	0.4797	
1	6.405	6.406	-0.001	12184741	0.5000	0.4493	
		Average of Peak Amounts =				0.4474	
2	5.749	5.753	-0.004	14631401	0.5000	0.4751	
2	6.327	6.332	-0.005	23904302	0.5000	0.4052	M
2	6.939	6.942	-0.003	56174753	0.5000	0.4422	M
2	7.114	7.117	-0.003	23847620	0.5000	0.4478	
2	7.436	7.440	-0.004	13161969	0.5000	0.4315	
		Average of Peak Amounts =				0.4404	
						RPD = 1.59	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							M
1	8.115	8.117	-0.002	44223536	0.5000	0.5169	
1	8.448	8.451	-0.003	74282418	0.5000	0.5296	M
1	8.913	8.916	-0.003	39026350	0.5000	0.4265	M
1	9.558	9.560	-0.002	109032300	0.5000	0.4498	M
1	9.877	9.879	-0.002	56866403	0.5000	0.4780	M
		Average of Peak Amounts =				0.4802	
2	9.261	9.265	-0.004	34751408	0.5000	0.5000	
2	9.516	9.519	-0.003	41825802	0.5000	0.5019	
2	10.045	10.049	-0.004	30208299	0.5000	0.4286	
2	10.653	10.657	-0.004	81045733	0.5000	0.4445	
2	11.024	11.027	-0.003	55305339	0.5000	0.4415	
		Average of Peak Amounts =				0.4633	
						RPD = 3.57	
$ 12 DCB Decachlorobiphenyl							
1	11.061	11.062	-0.001	59833324	0.0250	0.0227	
2	12.109	12.112	-0.003	39850119	0.0250	0.0231	
						RPD = 1.92	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660ICV@1.0_00037	Amount Added:	0.50	Units: mL	
SGPCBISTD_00016	Amount Added:	5.00	Units: uL	Run Reagent

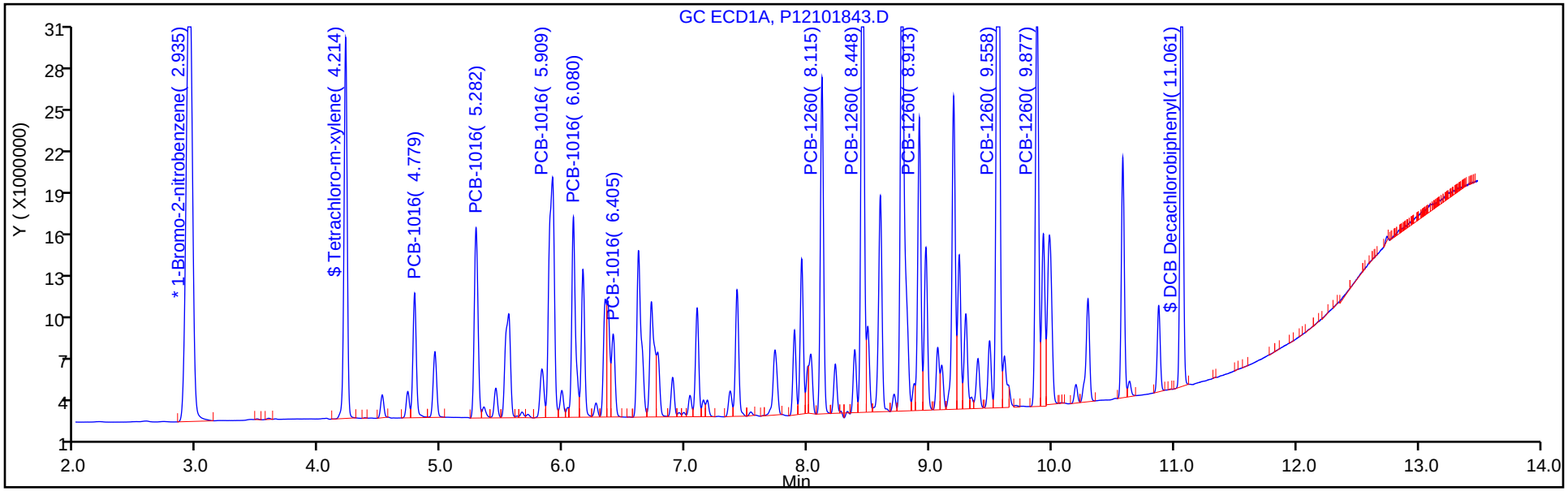
Report Date: 19-Oct-2018 13:37:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

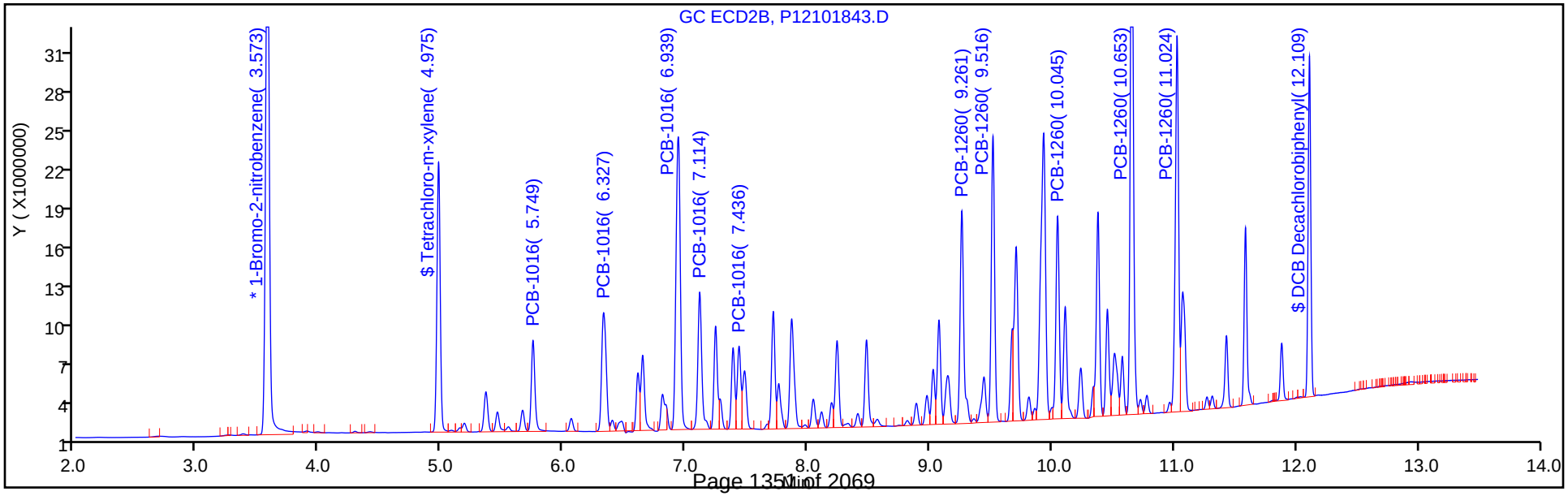
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101843.D

Injection Date:	19-Oct-2018 08:56:00	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	icv 1660			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 19-Oct-2018 13:37:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101843.D

Injection Date: 19-Oct-2018 08:56:00 Instrument ID: A2HP12

Lims ID: icv 1660

Client ID:

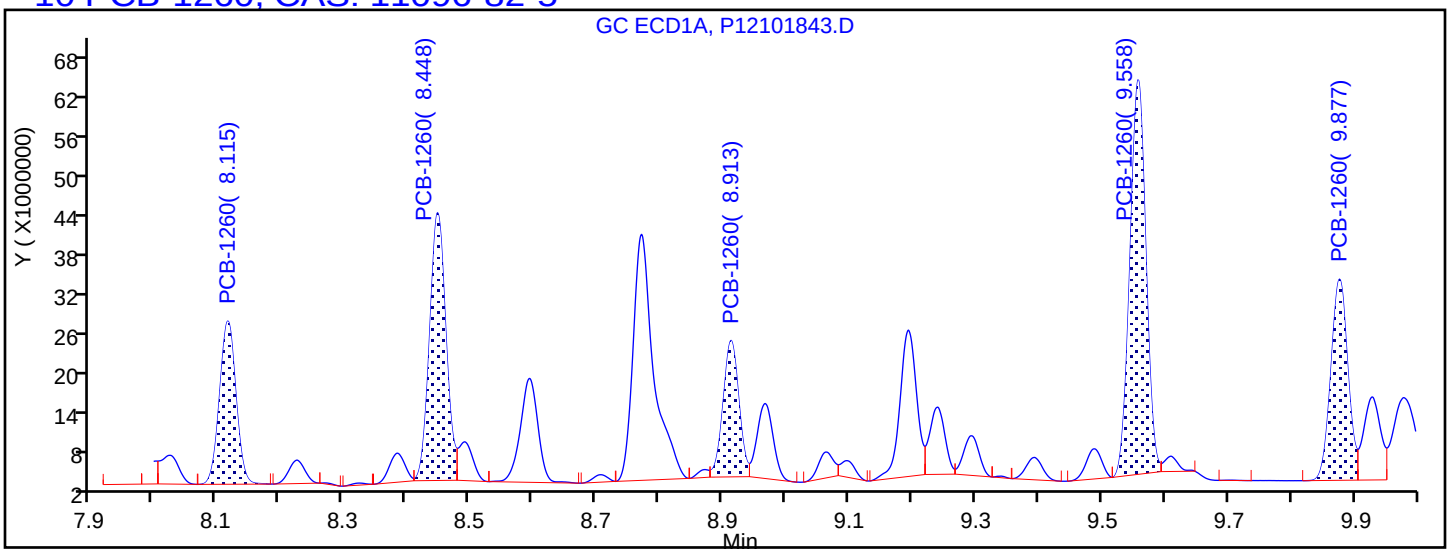
Operator ID: ALS Bottle#: 43 Worklist Smp#: 43

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

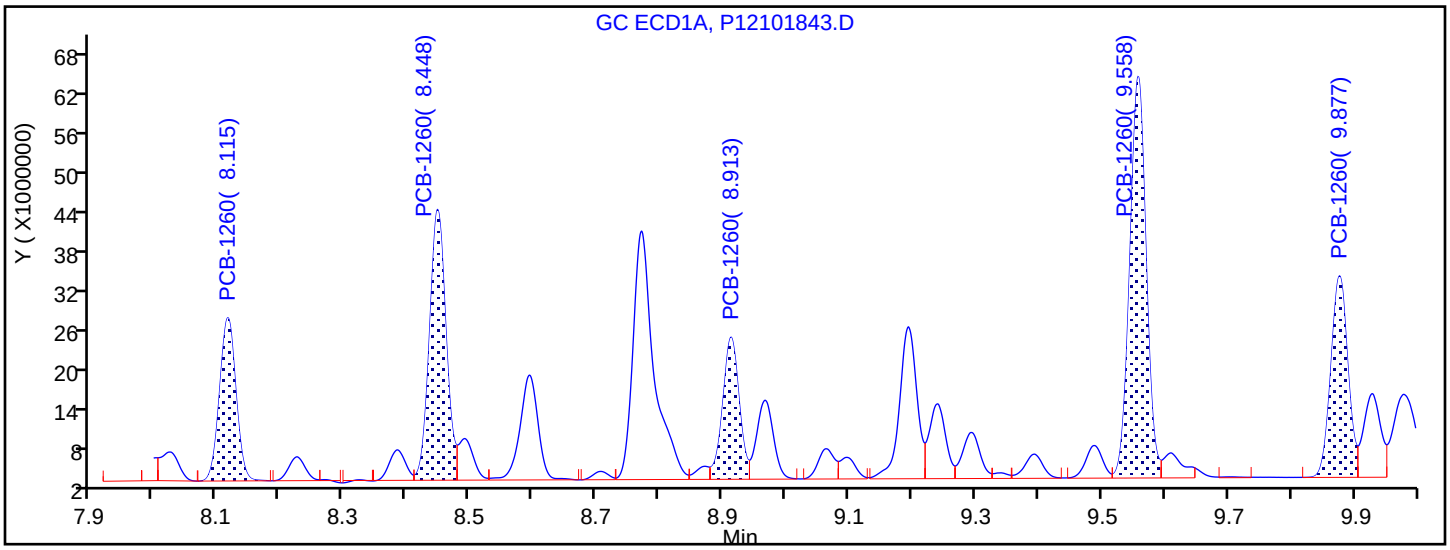
Column: Detector GC ECD1A

10 PCB-1260, CAS: 11096-82-5



Processing Integration Results

8.115	Response = 44223536	
8.448	Response = 72410292	
8.913	Response = 35802300	
9.558	Response = 104264415	
9.877	Response = 56644838	



Manual Integration Results

8.115	Response = 44223536	
8.448	Response = 74282418	M
8.913	Response = 39026350	M
9.558	Response = 109032300	M
9.877	Response = 56866403	M

Reviewer: hassl, 19-Oct-2018 09:38:27

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/43 Calibration Date: 10/19/2018 08:56

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 23:29

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/19/2018 01:11

Lab File ID: P12101843.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	0.0165	0.0157		0.475	0.500	-5.0	20.0
PCB-1016 Peak 2	Ave	0.0317	0.0257		0.405	0.500	-19.0	20.0
PCB-1016 Peak 3	Ave	0.0682	0.0603		0.442	0.500	-11.6	20.0
PCB-1016 Peak 4	Ave	0.0286	0.0256		0.448	0.500	-10.4	20.0
PCB-1016 Peak 5	Ave	0.0164	0.0141		0.432	0.500	-13.7	20.0
PCB-1260 Peak 1	Ave	0.0373	0.0373		0.500	0.500	0.0	20.0
PCB-1260 Peak 2	Ave	0.0448	0.0449		0.502	0.500	0.4	20.0
PCB-1260 Peak 3	Ave	0.0379	0.0325		0.429	0.500	-14.3	20.0
PCB-1260 Peak 4	Ave	0.0979	0.0871		0.445	0.500	-11.1	20.0
PCB-1260 Peak 5	Ave	0.0673	0.0594		0.442	0.500	-11.7	20.0
Tetrachloro-m-xylene	Ave	0.9276	0.8451		0.0228	0.0250	-8.9	20.0
DCB Decachlorobiphenyl	Ave	0.9256	0.8561		0.0231	0.0250	-7.5	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/43 Calibration Date: 10/19/2018 08:56

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 23:29

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/19/2018 01:11

Lab File ID: P12101843.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	5.75	5.73	5.77
PCB-1016 Peak 2	6.33	6.31	6.35
PCB-1016 Peak 3	6.94	6.92	6.96
PCB-1016 Peak 4	7.11	7.10	7.14
PCB-1016 Peak 5	7.44	7.42	7.46
PCB-1260 Peak 1	9.26	9.25	9.28
PCB-1260 Peak 2	9.52	9.50	9.54
PCB-1260 Peak 3	10.05	10.03	10.07
PCB-1260 Peak 4	10.65	10.64	10.68
PCB-1260 Peak 5	11.02	11.01	11.05
Tetrachloro-m-xylene	4.98	4.96	5.00
DCB Decachlorobiphenyl	12.11	12.09	12.13

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101843.D
Lims ID: icv 1660
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 08:56:00 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-043
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:28 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: hassl Date: 19-Oct-2018 09:42:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.935	2.930	0.006	118527198	0.0500	0.0500	
2	3.573	3.577	-0.004	93101097	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.214	4.215	-0.001	51171891	0.0250	0.0239	
2	4.975	4.979	-0.004	39341562	0.0250	0.0228	
						RPD = 4.89	
6 PCB-1016							M
1	4.779	4.780	-0.001	17713333	0.5000	0.5027	
1	5.282	5.283	-0.001	29768881	0.5000	0.4583	
1	5.909	5.907	0.002	53859555	0.5000	0.3471	
1	6.080	6.080	0.000	31221388	0.5000	0.4797	
1	6.405	6.406	-0.001	12184741	0.5000	0.4493	
		Average of Peak Amounts =				0.4474	
2	5.749	5.753	-0.004	14631401	0.5000	0.4751	
2	6.327	6.332	-0.005	23904302	0.5000	0.4052	M
2	6.939	6.942	-0.003	56174753	0.5000	0.4422	M
2	7.114	7.117	-0.003	23847620	0.5000	0.4478	
2	7.436	7.440	-0.004	13161969	0.5000	0.4315	
		Average of Peak Amounts =				0.4404	
						RPD = 1.59	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							M
1	8.115	8.117	-0.002	44223536	0.5000	0.5169	
1	8.448	8.451	-0.003	74282418	0.5000	0.5296	M
1	8.913	8.916	-0.003	39026350	0.5000	0.4265	M
1	9.558	9.560	-0.002	109032300	0.5000	0.4498	M
1	9.877	9.879	-0.002	56866403	0.5000	0.4780	M
		Average of Peak Amounts =				0.4802	
2	9.261	9.265	-0.004	34751408	0.5000	0.5000	
2	9.516	9.519	-0.003	41825802	0.5000	0.5019	
2	10.045	10.049	-0.004	30208299	0.5000	0.4286	
2	10.653	10.657	-0.004	81045733	0.5000	0.4445	
2	11.024	11.027	-0.003	55305339	0.5000	0.4415	
		Average of Peak Amounts =				0.4633	
						RPD = 3.57	
$ 12 DCB Decachlorobiphenyl							
1	11.061	11.062	-0.001	59833324	0.0250	0.0227	
2	12.109	12.112	-0.003	39850119	0.0250	0.0231	
						RPD = 1.92	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660ICV@1.0_00037	Amount Added:	0.50	Units: mL	
SGPCBISTD_00016	Amount Added:	5.00	Units: uL	Run Reagent

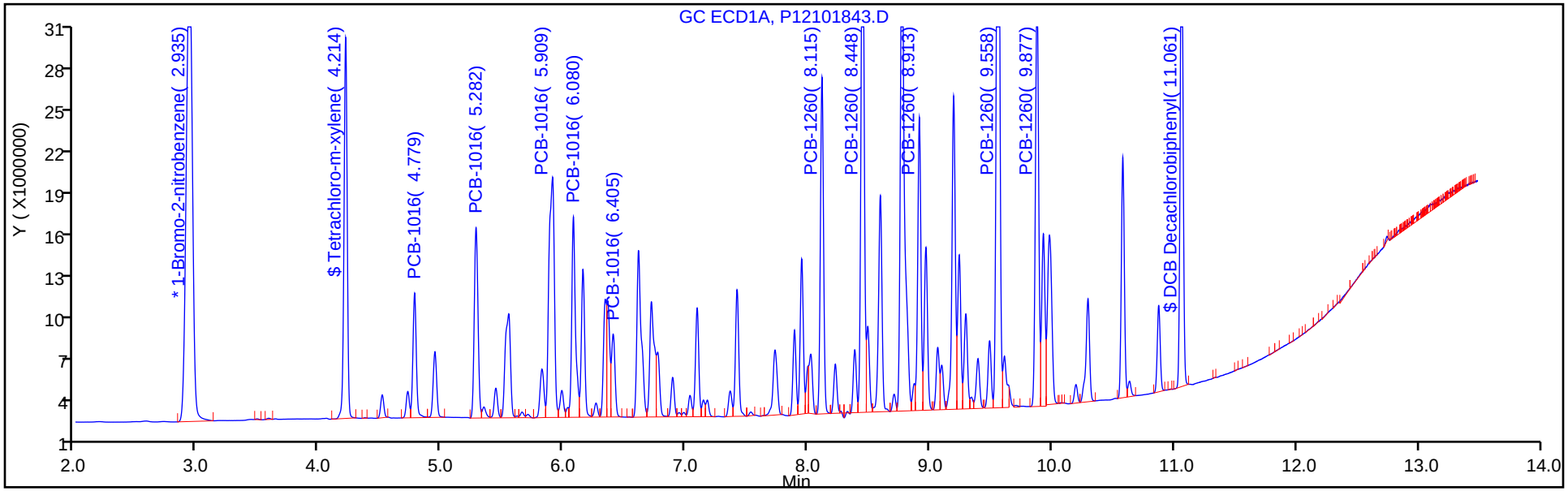
Report Date: 19-Oct-2018 13:37:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

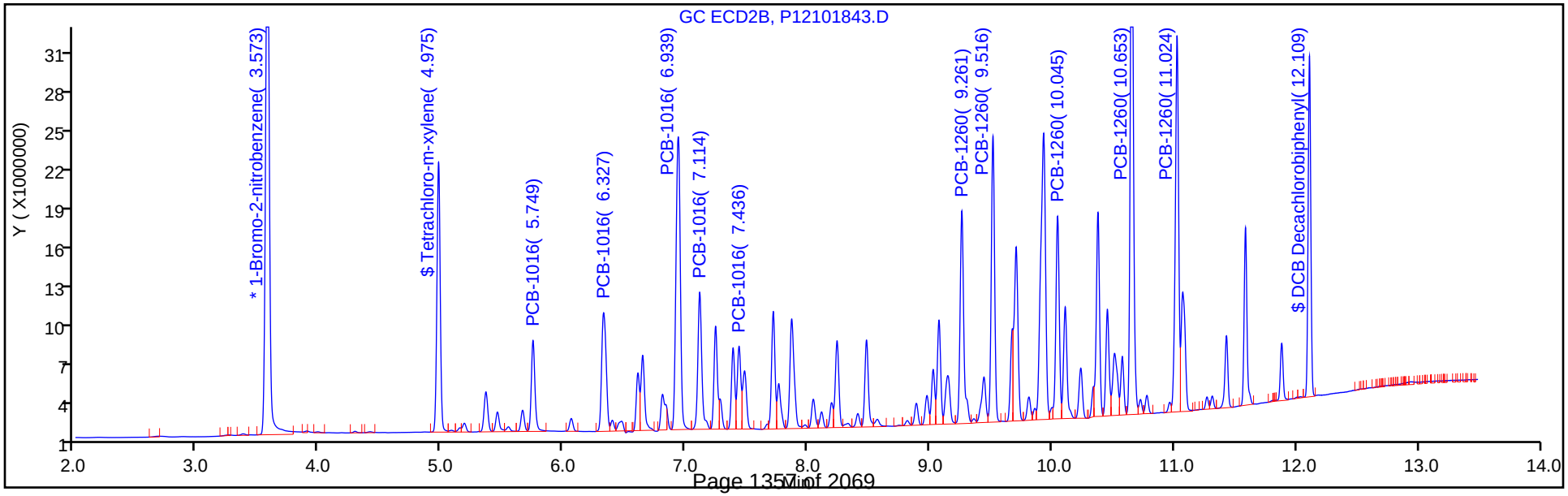
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101843.D

Injection Date:	19-Oct-2018 08:56:00	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	icv 1660			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 19-Oct-2018 13:37:24 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101843.D

Injection Date: 19-Oct-2018 08:56:00 Instrument ID: A2HP12

Lims ID: icv 1660

Client ID:

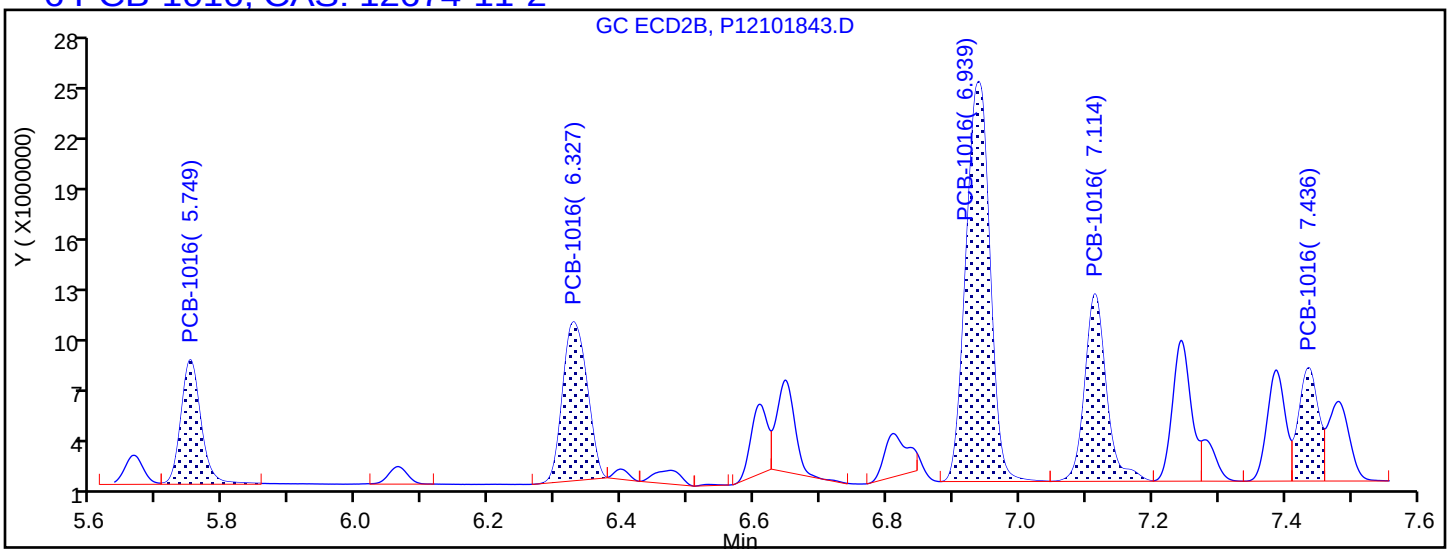
Operator ID: ALS Bottle#: 43 Worklist Smp#: 43

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

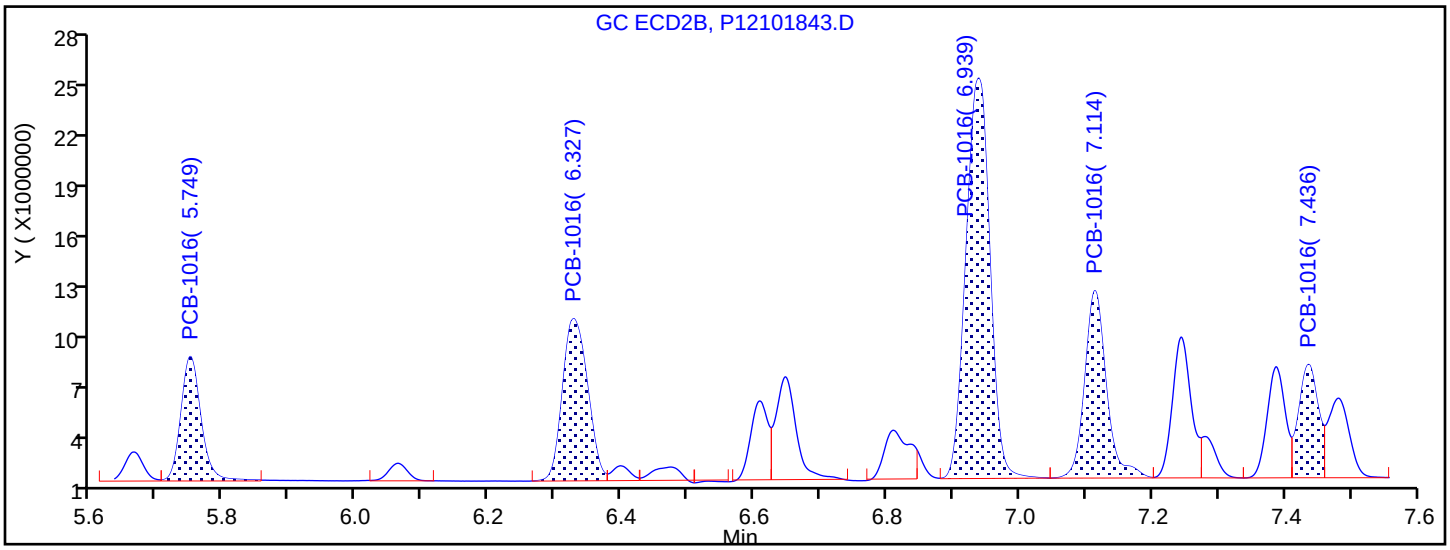
Column: Detector GC ecd2b

6 PCB-1016, CAS: 12674-11-2



Processing Integration Results

5.749	Response = 14631401	
6.327	Response = 22729486	
6.939	Response = 56066313	
7.114	Response = 23847620	
7.436	Response = 13161969	



Manual Integration Results

5.749	Response = 14631401	
6.327	Response = 23904302	M
6.939	Response = 56174753	M
7.114	Response = 23847620	
7.436	Response = 13161969	

Reviewer: hassl, 19-Oct-2018 09:39:03

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/44 Calibration Date: 10/19/2018 09:26

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 21:26

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 23:08

Lab File ID: P12101844.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Ave	0.0087	0.0084		0.483	0.500	-3.5	20.0
PCB-1221 Peak 2	Ave	0.0060	0.0055		0.459	0.500	-8.2	20.0
PCB-1221 Peak 3	Ave	0.0223	0.0198		0.443	0.500	-11.4	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/44 Calibration Date: 10/19/2018 09:26

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 21:26

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 23:08

Lab File ID: P12101844.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	4.52	4.50	4.54
PCB-1221 Peak 2	4.73	4.71	4.75
PCB-1221 Peak 3	4.78	4.76	4.80

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101844.D
Lims ID: ICV 1221
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 09:26:48 ALS Bottle#: 44 Worklist Smp#: 44
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-044
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:28 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 13:28:05

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.940	2.930	0.010	120178694	0.0500	0.0500	
2	3.568	3.577	-0.008	95510711	0.0500	0.0500	
3 PCB-1221							
1	4.517	4.517	0.000	10045941	0.5000	0.4825	
1	4.727	4.726	0.001	6584159	0.5000	0.4592	
1	4.782	4.781	0.001	23737212	0.5000	0.4428	
		Average of Peak Amounts =				0.4615	
2	5.454	5.463	-0.009	9278380	0.5000	0.4596	
2	5.661	5.669	-0.008	5892247	0.5000	0.4382	
2	5.748	5.754	-0.006	20342058	0.5000	0.4303	
		Average of Peak Amounts =				0.4427	
						RPD = 4.16	

Reagents:

SG1221ICV@1.0_00025 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

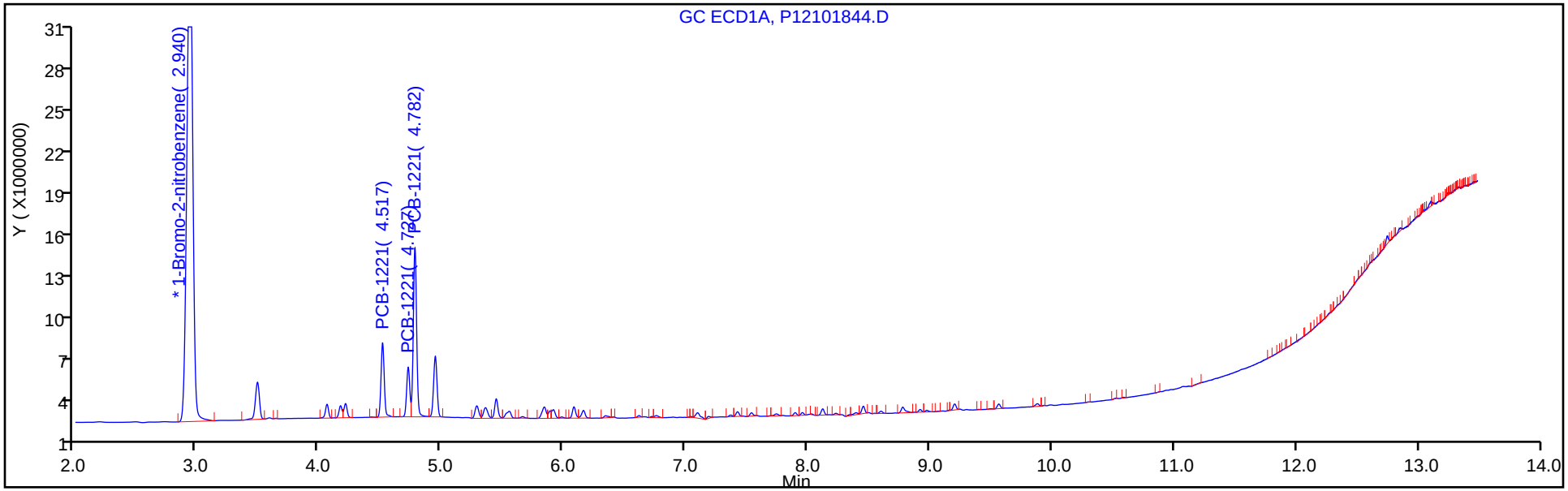
Report Date: 19-Oct-2018 13:37:12 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

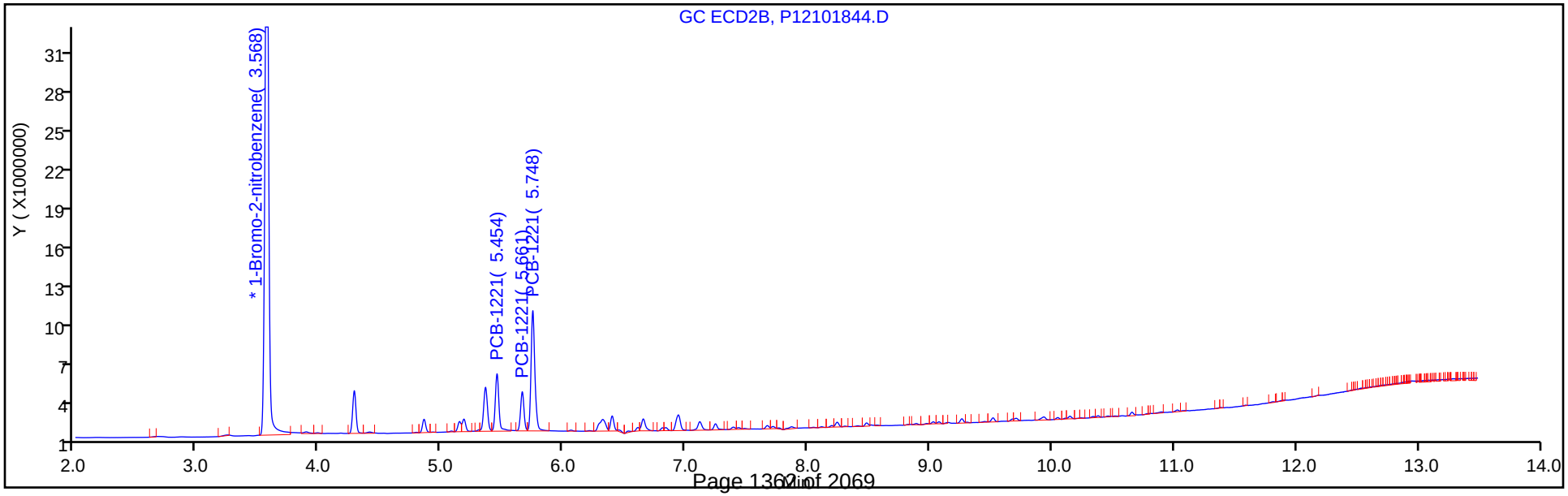
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101844.D

Injection Date:	19-Oct-2018 09:26:48	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	ICV 1221			Worklist Smp#:	44
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	44
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/44 Calibration Date: 10/19/2018 09:26

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 21:26

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 23:08

Lab File ID: P12101844.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Ave	0.0106	0.0097		0.460	0.500	-8.1	20.0
PCB-1221 Peak 2	Ave	0.0070	0.0062		0.438	0.500	-12.4	20.0
PCB-1221 Peak 3	Ave	0.0247	0.0213		0.430	0.500	-13.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-350710/44 Calibration Date: 10/19/2018 09:26

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 21:26

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 23:08

Lab File ID: P12101844.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	5.45	5.44	5.48
PCB-1221 Peak 2	5.66	5.65	5.69
PCB-1221 Peak 3	5.75	5.74	5.77

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101844.D
Lims ID: ICV 1221
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 09:26:48 ALS Bottle#: 44 Worklist Smp#: 44
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-044
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 19-Oct-2018 13:36:28 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0307

First Level Reviewer: grantk Date: 19-Oct-2018 13:28:05

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.940	2.930	0.010	120178694	0.0500	0.0500	
2	3.568	3.577	-0.008	95510711	0.0500	0.0500	
3 PCB-1221							
1	4.517	4.517	0.000	10045941	0.5000	0.4825	
1	4.727	4.726	0.001	6584159	0.5000	0.4592	
1	4.782	4.781	0.001	23737212	0.5000	0.4428	
		Average of Peak Amounts =				0.4615	
2	5.454	5.463	-0.009	9278380	0.5000	0.4596	
2	5.661	5.669	-0.008	5892247	0.5000	0.4382	
2	5.748	5.754	-0.006	20342058	0.5000	0.4303	
		Average of Peak Amounts =				0.4427	
						RPD = 4.16	

Reagents:

SG1221ICV@1.0_00025 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

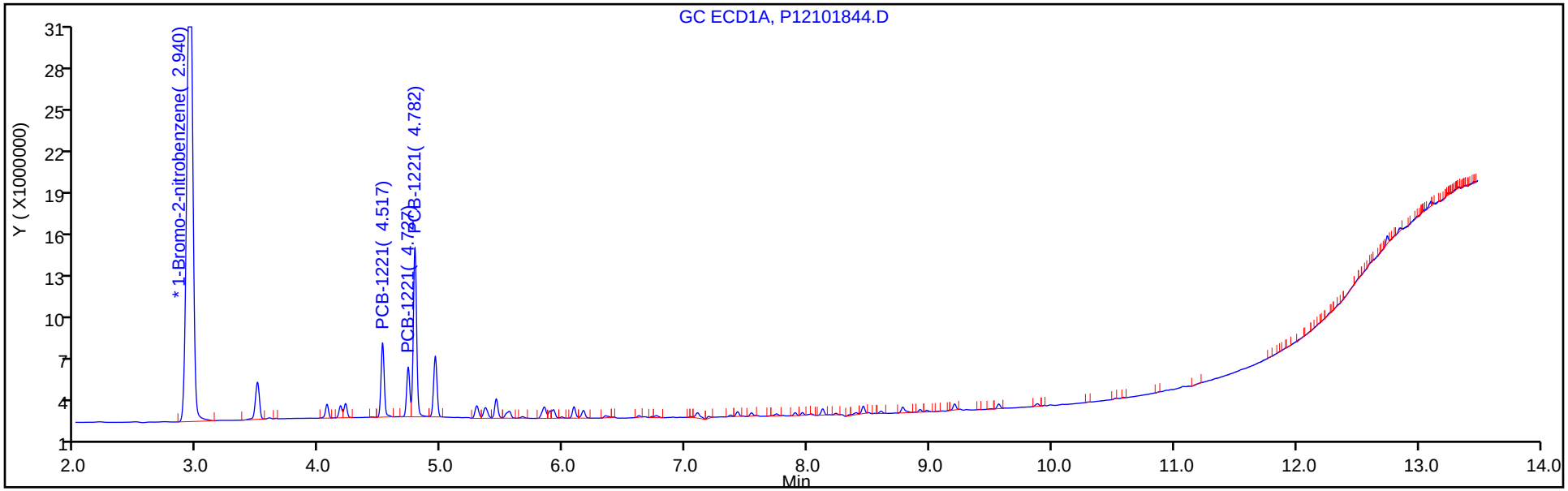
Report Date: 19-Oct-2018 13:37:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

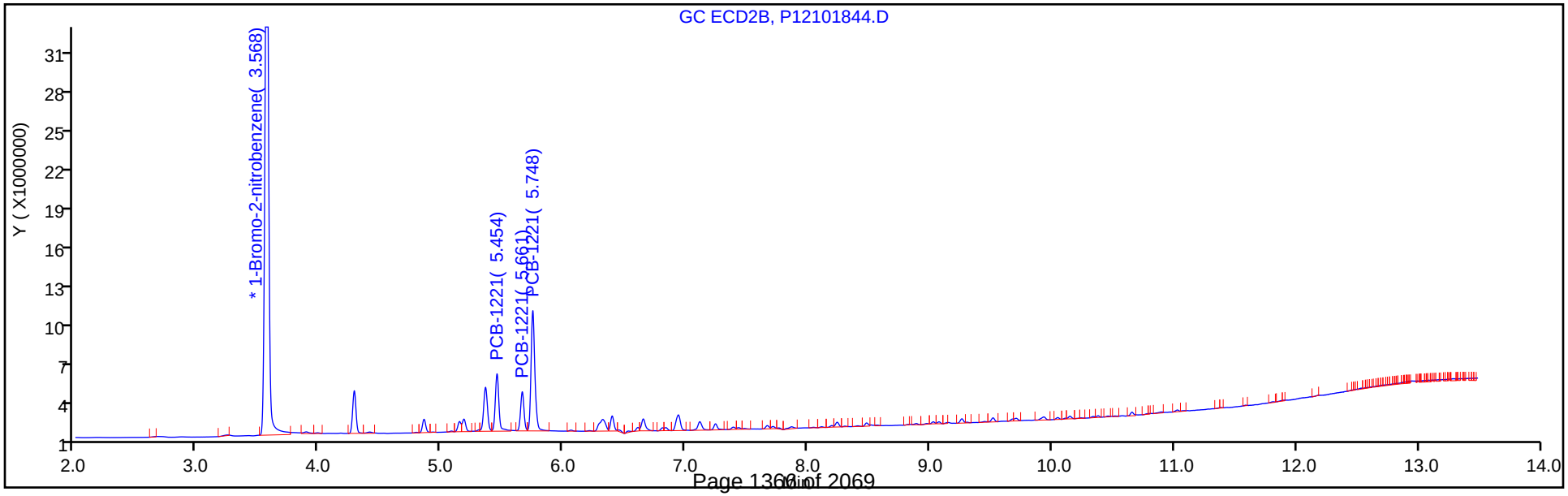
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101844.D

Injection Date:	19-Oct-2018 09:26:48	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	ICV 1221			Worklist Smp#:	44
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	44
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355209/3 Calibration Date: 11/13/2018 18:27

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 23:29

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/19/2018 01:11

Lab File ID: P12111340.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	0.0165	0.0151		0.456	0.500	-8.8	20.0
PCB-1016 Peak 2	Ave	0.0317	0.0292		0.461	0.500	-7.9	20.0
PCB-1016 Peak 3	Ave	0.0682	0.0658		0.482	0.500	-3.5	20.0
PCB-1016 Peak 4	Ave	0.0286	0.0277		0.484	0.500	-3.1	20.0
PCB-1016 Peak 5	Ave	0.0164	0.0148		0.452	0.500	-9.7	20.0
PCB-1260 Peak 1	Ave	0.0373	0.0332		0.444	0.500	-11.2	20.0
PCB-1260 Peak 2	Ave	0.0448	0.0436		0.487	0.500	-2.6	20.0
PCB-1260 Peak 3	Ave	0.0379	0.0376		0.497	0.500	-0.7	20.0
PCB-1260 Peak 4	Ave	0.0979	0.0982		0.501	0.500	0.3	20.0
PCB-1260 Peak 5	Ave	0.0673	0.0670		0.498	0.500	-0.5	20.0
Tetrachloro-m-xylene	Ave	0.9276	0.8798		0.0237	0.0250	-5.2	20.0
DCB Decachlorobiphenyl	Ave	0.9256	0.8897		0.0240	0.0250	-3.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355209/3 Calibration Date: 11/13/2018 18:27

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 23:29

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/19/2018 01:11

Lab File ID: P12111340.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	5.47	5.46	5.49
PCB-1016 Peak 2	6.05	6.03	6.07
PCB-1016 Peak 3	6.65	6.64	6.67
PCB-1016 Peak 4	6.83	6.81	6.85
PCB-1016 Peak 5	7.15	7.13	7.17
PCB-1260 Peak 1	8.96	8.94	8.98
PCB-1260 Peak 2	9.22	9.20	9.24
PCB-1260 Peak 3	9.74	9.72	9.76
PCB-1260 Peak 4	10.37	10.35	10.39
PCB-1260 Peak 5	10.75	10.73	10.77
Tetrachloro-m-xylene	4.72	4.70	4.74
DCB Decachlorobiphenyl	11.86	11.84	11.88

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111340.D
Lims ID: CCV AR1660
Client ID:
Sample Type: CCVIS
Inject. Date: 13-Nov-2018 18:27:49 ALS Bottle#: 40 Worklist Smp#: 3
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-003
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub6

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:26:21 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 09:23:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.802	2.802	0.000	146521692	0.0500	0.0500	
2	3.313	3.313	0.000	113414801	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.122	4.122	0.000	64601384	0.0250	0.0244	
2	4.721	4.721	0.000	49893086	0.0250	0.0237	
						RPD = 2.97	
6 PCB-1016							
1	4.676	4.676	0.000	20019791	0.5000	0.4596	
1	5.175	5.175	0.000	39298019	0.5000	0.4895	
1	5.794	5.794	0.000	97774271	0.5000	0.5098	
1	5.964	5.964	0.000	40646975	0.5000	0.5052	
1	6.290	6.290	0.000	15776913	0.5000	0.4706	
		Average of Peak Amounts =				0.4869	
2	5.474	5.474	0.000	17102045	0.5000	0.4558	
2	6.047	6.047	0.000	33093537	0.5000	0.4605	
2	6.654	6.654	0.000	74659112	0.5000	0.4824	
2	6.826	6.826	0.000	31433211	0.5000	0.4845	
2	7.150	7.150	0.000	16781016	0.5000	0.4516	
		Average of Peak Amounts =				0.4670	
						RPD = 4.18	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							Ma
1	7.993	7.993	0.000	53800046	0.5000	0.5087	
1	8.325	8.325	0.000	90467525	0.5000	0.5218	M
1	8.788	8.788	0.000	58246421	0.5000	0.5149	M
1	9.431	9.431	0.000	157551248	0.5000	0.5258	M
1	9.747	9.747	0.000	72354101	0.5000	0.4920	a
		Average of Peak Amounts =				0.5126	
2	8.962	8.962	0.000	37610943	0.5000	0.4442	
2	9.221	9.221	0.000	49439044	0.5000	0.4870	
2	9.741	9.741	0.000	42646802	0.5000	0.4967	
2	10.372	10.372	0.000	111343663	0.5000	0.5013	
2	10.752	10.752	0.000	75942438	0.5000	0.4977	
		Average of Peak Amounts =				0.4854	
						RPD = 5.46	
$ 12 DCB Decachlorobiphenyl							
1	10.948	10.948	0.000	75788430	0.0250	0.0232	
2	11.862	11.862	0.000	50451412	0.0250	0.0240	
						RPD = 3.34	
16 1260 Res 1							a
1	9.747	9.747	0.000	72354101	NR	NR	a
2	0.0	10.605	0.000	0	NR	NR	
13 1260 Res 2							a
1	9.799	9.799	0.000	38796219	NR	NR	a
2	0.0	10.668	0.000	0	NR	NR	
15 1260 Res 3							a
1	9.846	9.846	0.000	50877734	NR	NR	a
2	0.0	2.881	0.000	0	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SG 1260 res_00002	Amount Added:	1.00	Units: mL
SG1660@0.5PPM_00085	Amount Added:	1.00	Units: mL

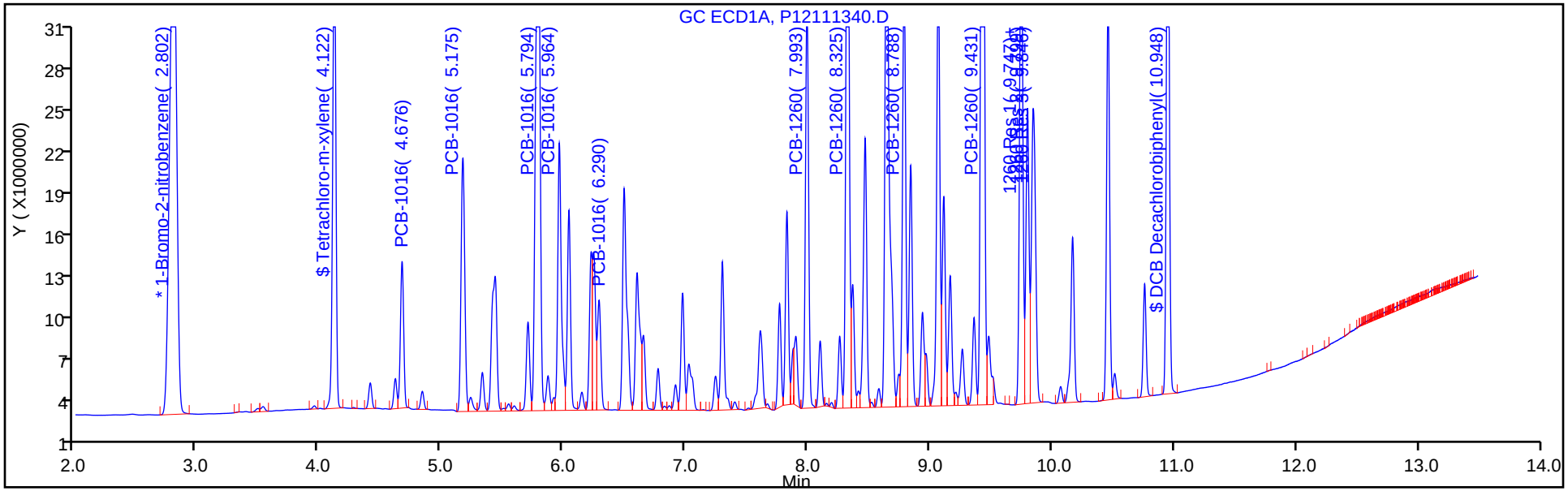
Report Date: 14-Nov-2018 11:26:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

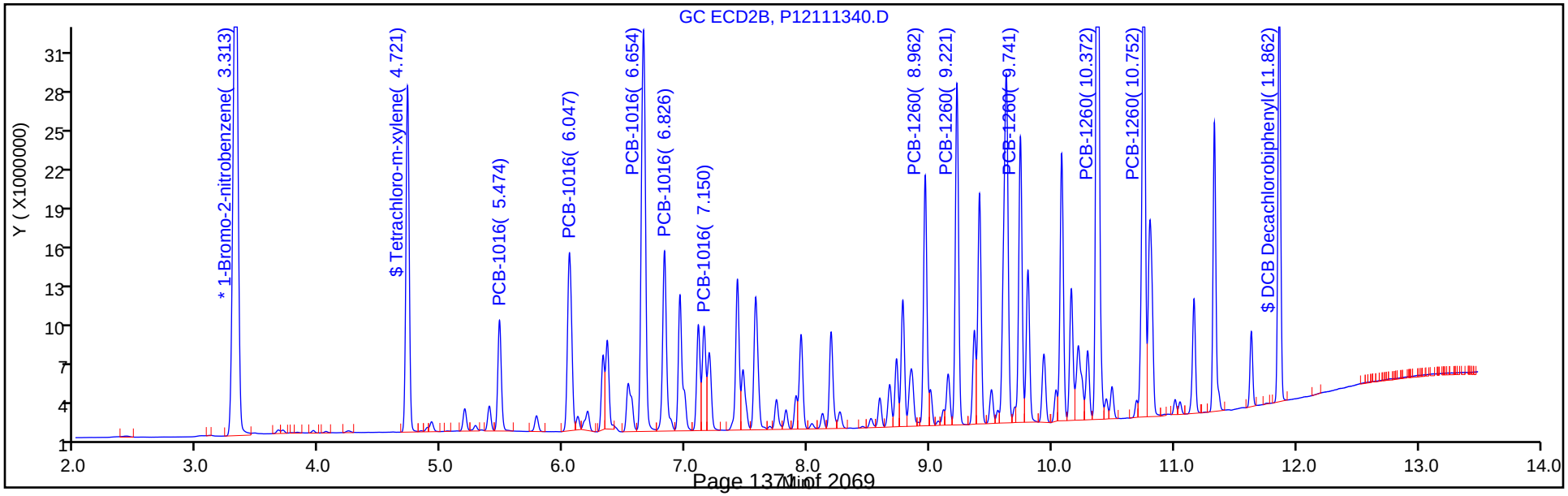
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111340.D

Injection Date:	13-Nov-2018 18:27:49	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	CCV AR1660			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	40
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355209/4 Calibration Date: 11/13/2018 18:48

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 15:16

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 16:58

Lab File ID: P12111341.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Ave	0.0205	0.0182		0.443	0.500	-11.3	20.0
PCB-1232 Peak 2	Ave	0.0163	0.0147		0.451	0.500	-9.7	20.0
PCB-1232 Peak 3	Ave	0.0320	0.0294		0.459	0.500	-8.1	20.0
PCB-1232 Peak 4	Ave	0.0132	0.0128		0.484	0.500	-3.1	20.0
PCB-1232 Peak 5	Lin1		0.0062		0.469	0.500	-6.2	20.0
PCB-1262 Peak 1	Ave	0.0372	0.0354		0.476	0.500	-4.9	20.0
PCB-1262 Peak 2	Ave	0.0578	0.0550		0.476	0.500	-4.8	20.0
PCB-1262 Peak 3	Ave	0.0484	0.0465		0.480	0.500	-3.9	20.0
PCB-1262 Peak 4	Ave	0.1169	0.1120		0.479	0.500	-4.2	20.0
PCB-1262 Peak 5	Ave	0.0834	0.0791		0.474	0.500	-5.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355209/4 Calibration Date: 11/13/2018 18:48

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 15:16

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 16:58

Lab File ID: P12111341.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	5.47	5.46	5.49
PCB-1232 Peak 2	6.05	6.03	6.07
PCB-1232 Peak 3	6.65	6.64	6.67
PCB-1232 Peak 4	6.83	6.81	6.84
PCB-1232 Peak 5	7.15	7.13	7.17
PCB-1262 Peak 1	9.22	9.20	9.24
PCB-1262 Peak 2	9.74	9.72	9.76
PCB-1262 Peak 3	10.08	10.06	10.10
PCB-1262 Peak 4	10.37	10.35	10.39
PCB-1262 Peak 5	10.75	10.73	10.77

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111341.D
Lims ID: CCV AR1232/1262
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 18:48:20 ALS Bottle#: 41 Worklist Smp#: 4
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-004
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:26:26 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 09:27:17

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.800	2.800	0.000	147133100	0.0500	0.0500	
2	3.312	3.312	0.000	113726490	0.0500	0.0500	
4 PCB-1232							
1	4.676	4.676	0.000	24169629	0.5000	0.4495	
1	5.174	5.174	0.000	18096990	0.5000	0.4874	
1	5.795	5.795	0.000	42442192	0.5000	0.4823	
1	5.965	5.965	0.000	18117455	0.5000	0.4740	
1	6.290	6.290	0.000	6319277	0.5000	0.4634	
		Average of Peak Amounts =				0.4713	
2	5.474	5.474	0.000	20694875	0.5000	0.4433	
2	6.048	6.048	0.000	16726849	0.5000	0.4513	
2	6.654	6.654	0.000	33419054	0.5000	0.4594	
2	6.825	6.825	0.000	14568150	0.5000	0.4844	
2	7.150	7.150	0.000	7014618	0.5000	0.4688	
		Average of Peak Amounts =				0.4614	
						RPD = 2.12	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	7.994	7.994	0.000	45209120	0.5000	0.4991	
1	8.326	8.326	0.000	66539329	0.5000	0.5019	
1	9.069	9.069	0.000	78049847	0.5000	0.4898	
1	9.431	9.431	0.000	185931462	0.5000	0.5081	
1	9.799	9.799	0.000	75130319	0.5000	0.4873	
		Average of Peak Amounts =				0.4972	
2	9.221	9.221	0.000	40239545	0.5000	0.4755	
2	9.740	9.740	0.000	62544688	0.5000	0.4760	
2	10.079	10.079	0.000	52889746	0.5000	0.4804	
2	10.372	10.372	0.000	127324271	0.5000	0.4788	
2	10.751	10.751	0.000	89901452	0.5000	0.4742	
		Average of Peak Amounts =				0.4770	
						RPD = 4.16	

Reagents:

SG3262@0.5PPM_00031 Amount Added: 1.00 Units: mL

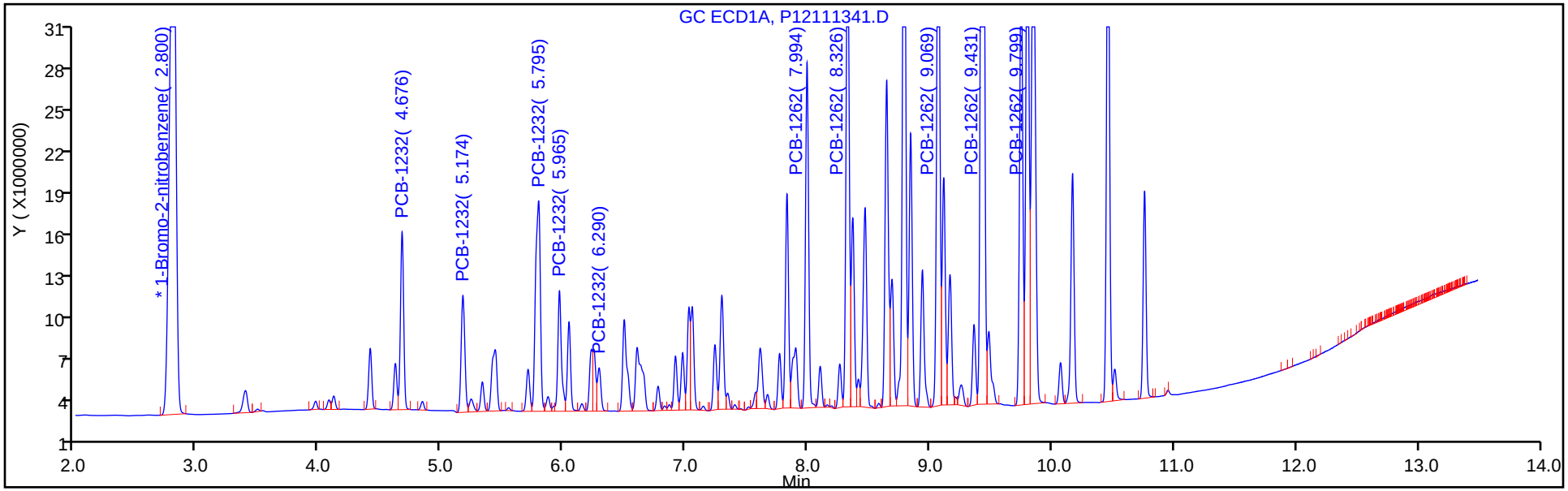
Report Date: 14-Nov-2018 11:26:27 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

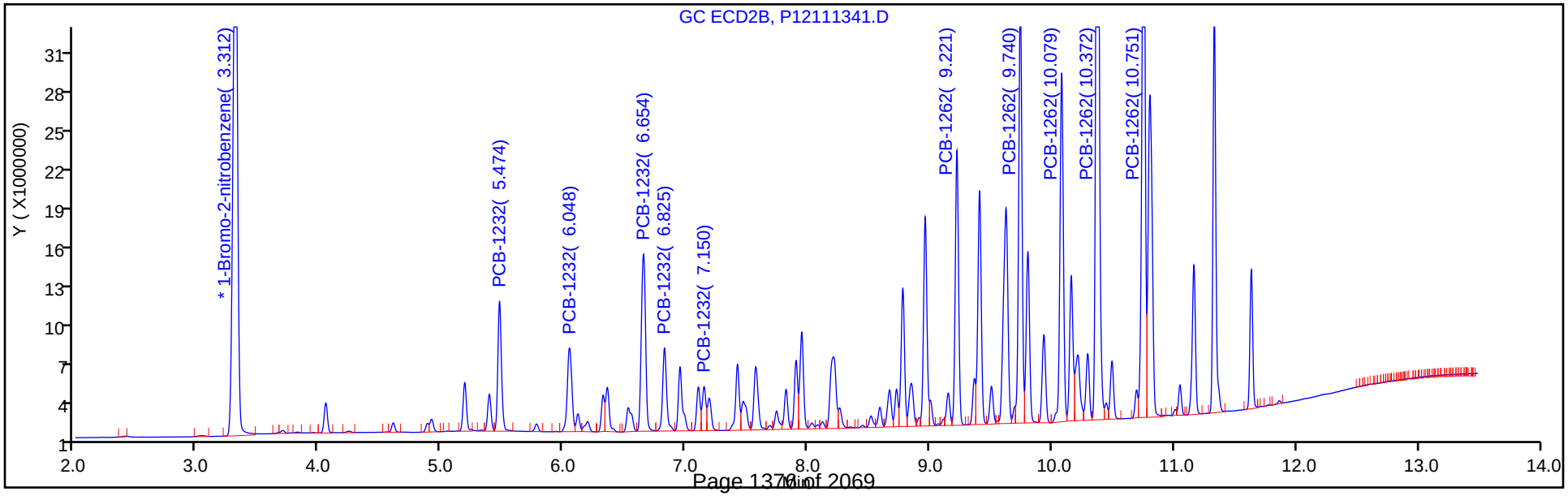
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111341.D

Injection Date:	13-Nov-2018 18:48:20	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	CCV AR1232/1262			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	41
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355209/5 Calibration Date: 11/13/2018 19:08

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 17:19

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 19:02

Lab File ID: P12111342.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Ave	0.0142	0.0130		0.458	0.500	-8.4	20.0
PCB-1242 Peak 2	Ave	0.0258	0.0240		0.465	0.500	-7.0	20.0
PCB-1242 Peak 3	Ave	0.0545	0.0522		0.479	0.500	-4.2	20.0
PCB-1242 Peak 4	Ave	0.0226	0.0224		0.494	0.500	-1.2	20.0
PCB-1242 Peak 5	Ave	0.0136	0.0119		0.436	0.500	-12.7	20.0
PCB-1268 Peak 1	Ave	0.1405	0.1376		0.490	0.500	-2.1	20.0
PCB-1268 Peak 2	Ave	0.1348	0.1326		0.492	0.500	-1.7	20.0
PCB-1268 Peak 3	Ave	0.1194	0.1160		0.486	0.500	-2.8	20.0
PCB-1268 Peak 4	Ave	0.0501	0.0473		0.472	0.500	-5.6	20.0
PCB-1268 Peak 5	Ave	0.3737	0.3645		0.488	0.500	-2.5	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355209/5 Calibration Date: 11/13/2018 19:08

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 17:19

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 19:02

Lab File ID: P12111342.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	5.47	5.45	5.49
PCB-1242 Peak 2	6.05	6.03	6.07
PCB-1242 Peak 3	6.65	6.63	6.67
PCB-1242 Peak 4	6.82	6.81	6.84
PCB-1242 Peak 5	7.15	7.13	7.17
PCB-1268 Peak 1	10.75	10.73	10.77
PCB-1268 Peak 2	10.80	10.78	10.82
PCB-1268 Peak 3	11.05	11.03	11.07
PCB-1268 Peak 4	11.33	11.31	11.35
PCB-1268 Peak 5	11.63	11.61	11.65

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111342.D
Lims ID: CCV AR1242/1268
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 19:08:49 ALS Bottle#: 42 Worklist Smp#: 5
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-005
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:26:30 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 09:29:06

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.801	2.801	0.000	144085547	0.0500	0.0500	
2	3.312	3.312	0.000	111022023	0.0500	0.0500	
5 PCB-1242							
1	4.676	4.676	0.000	16675516	0.5000	0.4634	
1	5.173	5.173	0.000	31009017	0.5000	0.4895	
1	5.793	5.793	0.000	75458639	0.5000	0.4985	
1	5.963	5.963	0.000	31754121	0.5000	0.4861	
1	6.494	6.494	0.000	32152029	0.5000	0.4893	
		Average of Peak Amounts =				0.4854	
2	5.473	5.473	0.000	14477352	0.5000	0.4581	
2	6.047	6.047	0.000	26598558	0.5000	0.4651	
2	6.653	6.653	0.000	57960433	0.5000	0.4792	
2	6.824	6.824	0.000	24812117	0.5000	0.4939	
2	7.150	7.150	0.000	13197920	0.5000	0.4364	
		Average of Peak Amounts =				0.4665	
						RPD = 3.96	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.798	9.798	0.000	226154821	0.5000	0.5307	
1	9.841	9.841	0.000	219444225	0.5000	0.5193	
1	10.069	10.069	0.000	191631489	0.5000	0.5143	
1	10.458	10.458	0.000	76465266	0.5000	0.4972	
1	10.758	10.758	0.000	610930908	0.5000	0.5104	
		Average of Peak Amounts =				0.5144	
2	10.751	10.751	0.000	152747071	0.5000	0.4897	
2	10.798	10.798	0.000	147228696	0.5000	0.4917	
2	11.048	11.048	0.000	128812769	0.5000	0.4860	
2	11.330	11.330	0.000	52463604	0.5000	0.4721	
2	11.633	11.633	0.000	404681110	0.5000	0.4877	
		Average of Peak Amounts =				0.4854	
						RPD = 5.79	

Reagents:

SG4268@0.5PPM_00031 Amount Added: 1.00 Units: mL

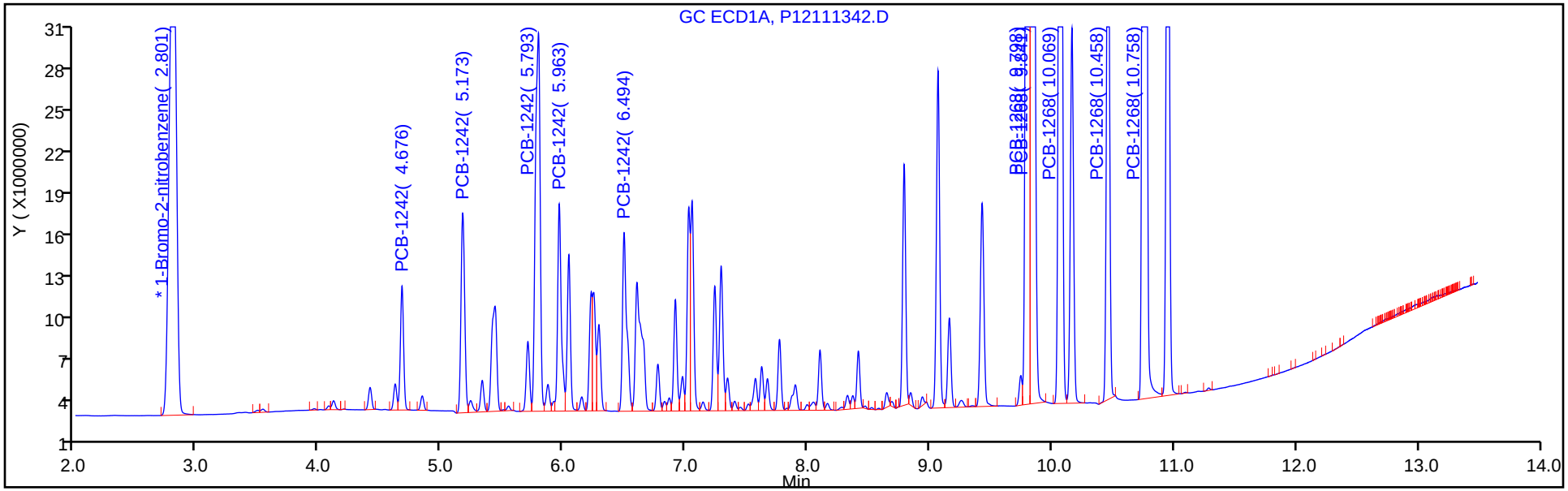
Report Date: 14-Nov-2018 11:26:32 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

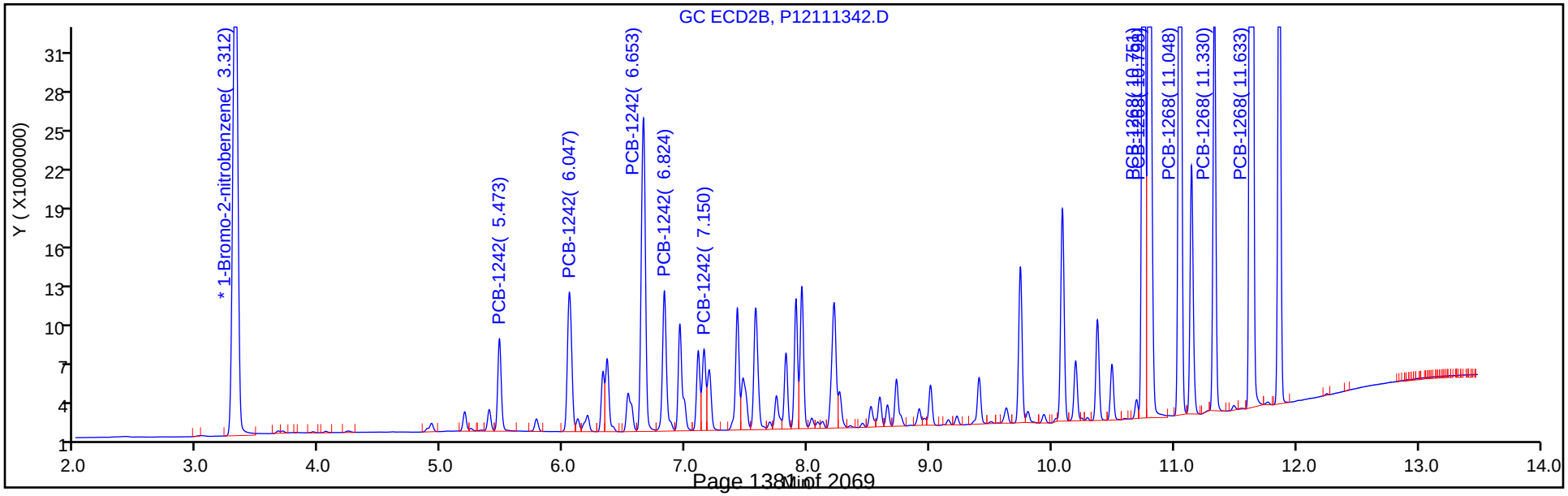
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111342.D

Injection Date:	13-Nov-2018 19:08:49	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	CCV AR1242/1268			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	42
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355209/6 Calibration Date: 11/13/2018 19:29

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 19:22

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 21:05

Lab File ID: P12111343.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Ave	0.0142	0.0127		0.448	0.500	-10.5	20.0
PCB-1248 Peak 2	Ave	0.0363	0.0333		0.459	0.500	-8.3	20.0
PCB-1248 Peak 3	Ave	0.0276	0.0250		0.453	0.500	-9.4	20.0
PCB-1248 Peak 4	Ave	0.0348	0.0314		0.451	0.500	-9.8	20.0
PCB-1248 Peak 5	Ave	0.0186	0.0171		0.458	0.500	-8.3	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355209/6 Calibration Date: 11/13/2018 19:29

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 19:22

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 21:05

Lab File ID: P12111343.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	6.05	6.03	6.07
PCB-1248 Peak 2	6.65	6.63	6.67
PCB-1248 Peak 3	7.42	7.41	7.44
PCB-1248 Peak 4	7.95	7.93	7.97
PCB-1248 Peak 5	8.73	8.71	8.75

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111343.D
Lims ID: CCV AR1248
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 19:29:28 ALS Bottle#: 43 Worklist Smp#: 6
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-006
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub4

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:26:34 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 09:30:23

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.814	2.814	0.000	148497352	0.0500	0.0500	
2	3.319	3.319	0.000	114162902	0.0500	0.0500	
7 PCB-1248							
1	5.176	5.176	0.000	16082696	0.5000	0.4718	
1	6.497	6.497	0.000	48651893	0.5000	0.4671	
1	7.054	7.054	0.000	39206072	0.5000	0.4204	
1	7.293	7.293	0.000	38357513	0.5000	0.4907	
1	7.768	7.768	0.000	25092679	0.5000	0.4983	
		Average of Peak Amounts =				0.4697	
2	6.047	6.047	0.000	14548093	0.5000	0.4476	
2	6.653	6.653	0.000	37987279	0.5000	0.4586	
2	7.424	7.424	0.000	28561856	0.5000	0.4529	
2	7.951	7.951	0.000	35896573	0.5000	0.4512	
2	8.726	8.726	0.000	19461389	0.5000	0.4583	
		Average of Peak Amounts =				0.4537	
						RPD = 3.45	

Reagents:

SG1248@0.5ppm_00037 Amount Added: 1.00 Units: mL

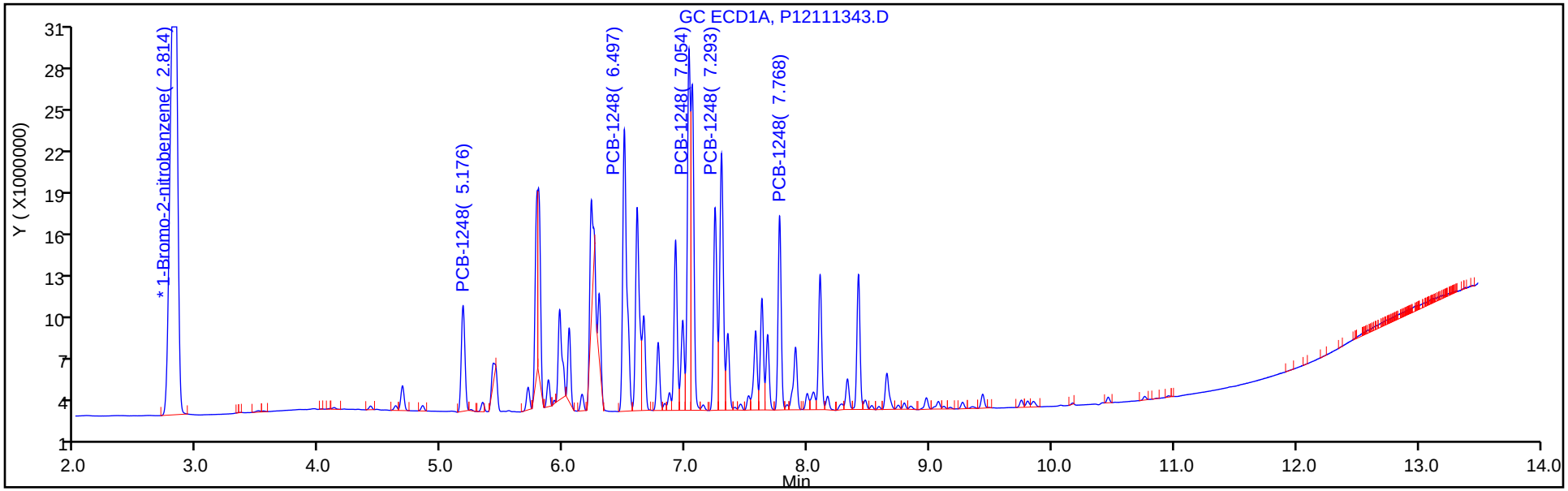
Report Date: 14-Nov-2018 11:26:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

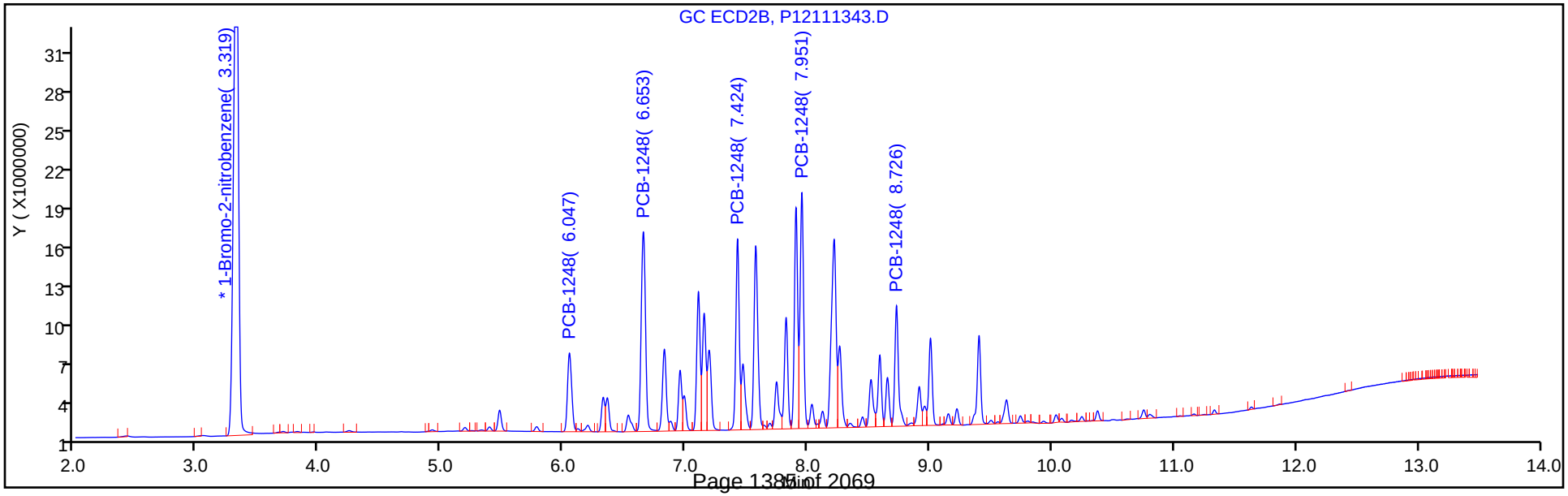
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111343.D

Injection Date:	13-Nov-2018 19:29:28	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	CCV AR1248			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355209/7 Calibration Date: 11/13/2018 19:49

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 21:26

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 23:08

Lab File ID: P12111344.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Ave	0.0106	0.0099		0.468	0.500	-6.4	20.0
PCB-1221 Peak 2	Ave	0.0070	0.0067		0.476	0.500	-4.9	20.0
PCB-1221 Peak 3	Ave	0.0247	0.0232		0.468	0.500	-6.4	20.0
PCB-1254 Peak 1	Ave	0.0307	0.0291		0.474	0.500	-5.3	20.0
PCB-1254 Peak 2	Ave	0.0344	0.0344		0.500	0.500	-0.0	20.0
PCB-1254 Peak 3	Ave	0.0502	0.0487		0.485	0.500	-3.0	20.0
PCB-1254 Peak 4	Ave	0.0382	0.0371		0.485	0.500	-3.0	20.0
PCB-1254 Peak 5	Ave	0.0501	0.0502		0.501	0.500	0.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355209/7 Calibration Date: 11/13/2018 19:49

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 21:26

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 23:08

Lab File ID: P12111344.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	5.19	5.17	5.21
PCB-1221 Peak 2	5.39	5.37	5.41
PCB-1221 Peak 3	5.47	5.46	5.49
PCB-1254 Peak 1	7.94	7.93	7.96
PCB-1254 Peak 2	8.19	8.17	8.21
PCB-1254 Peak 3	8.73	8.71	8.74
PCB-1254 Peak 4	9.00	8.99	9.02
PCB-1254 Peak 5	9.63	9.61	9.65

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111344.D
Lims ID: CCV AR1221/1254
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 19:49:58 ALS Bottle#: 44 Worklist Smp#: 7
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-007
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:26:38 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 09:34:26

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.800	2.800	0.000	147237185	0.0500	0.0500	
2	3.312	3.312	0.000	112204161	0.0500	0.0500	
3 PCB-1221							
1	4.415	4.415	0.000	12541355	0.5000	0.4917	
1	4.621	4.621	0.000	8444299	0.5000	0.4807	
1	4.676	4.676	0.000	31412858	0.5000	0.4783	
		Average of Peak Amounts =				0.4836	
2	5.188	5.188	0.000	11096672	0.5000	0.4679	
2	5.391	5.391	0.000	7512044	0.5000	0.4755	
2	5.474	5.474	0.000	25981359	0.5000	0.4678	
		Average of Peak Amounts =				0.4704	
						RPD = 2.75	
8 PCB-1254							
1	7.299	7.299	0.000	54223696	0.5000	0.5010	
1	7.767	7.767	0.000	82834275	0.5000	0.5239	
1	8.099	8.099	0.000	63211232	0.5000	0.5309	
1	8.323	8.323	0.000	54351876	0.5000	0.5266	
1	8.647	8.647	0.000	86413585	0.5000	0.5389	
		Average of Peak Amounts =				0.5242	
2	7.944	7.944	0.000	32609722	0.5000	0.4736	
2	8.191	8.191	0.000	38601438	0.5000	0.4998	
2	8.725	8.725	0.000	54621066	0.5000	0.4852	
2	9.004	9.004	0.000	41590859	0.5000	0.4851	
2	9.626	9.626	0.000	56311093	0.5000	0.5008	
		Average of Peak Amounts =				0.4889	
						RPD = 6.98	

Reagents:

SG2154@0.5PPM_00041 Amount Added: 1.00 Units: mL

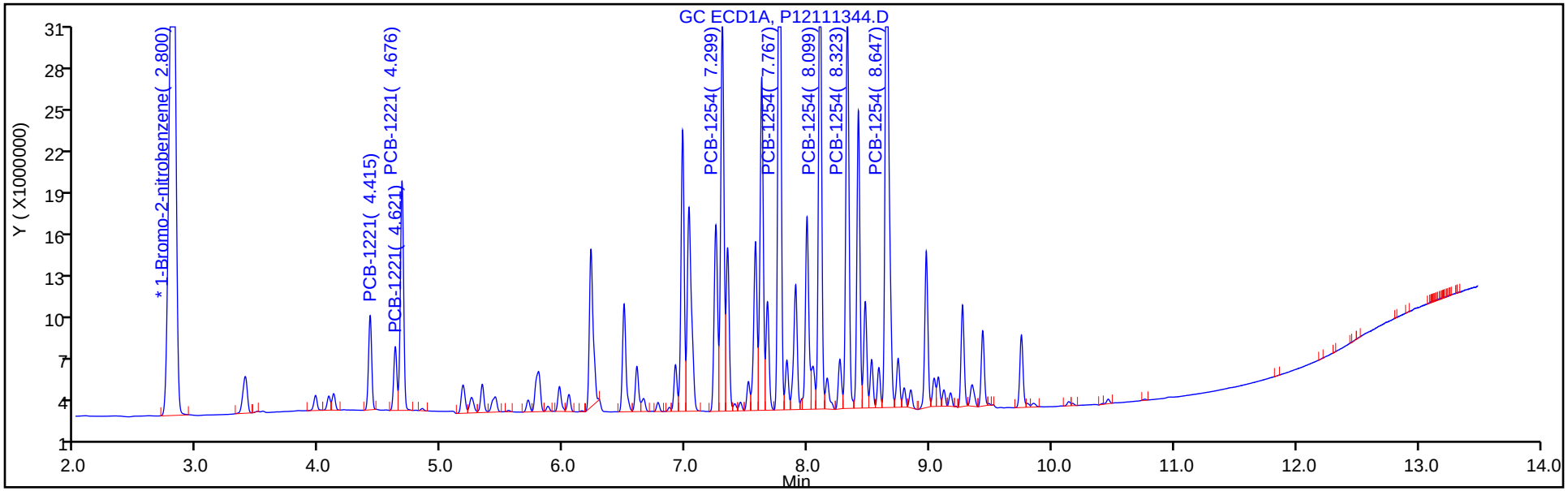
Report Date: 14-Nov-2018 11:26:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

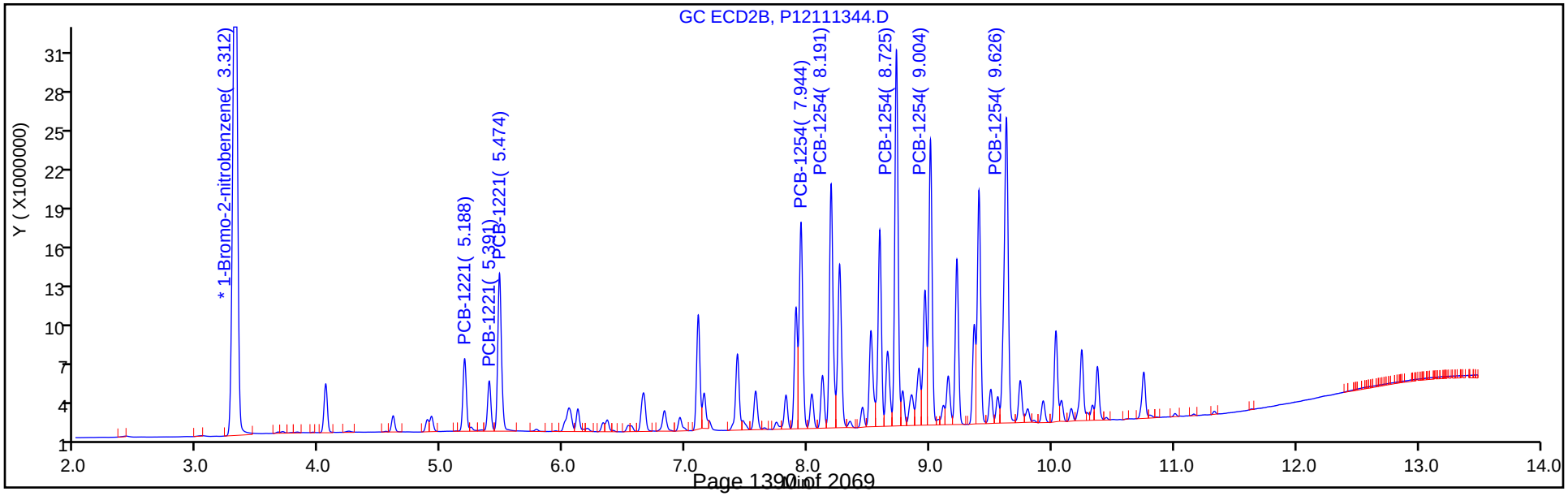
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111344.D

Injection Date:	13-Nov-2018 19:49:58	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	CCV AR1221/1254			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	44
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355209/16 Calibration Date: 11/13/2018 22:54

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 21:26

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 23:08

Lab File ID: P12111353.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Ave	0.0106	0.0099		0.470	0.500	-6.0	20.0
PCB-1221 Peak 2	Ave	0.0070	0.0065		0.464	0.500	-7.2	20.0
PCB-1221 Peak 3	Ave	0.0247	0.0227		0.458	0.500	-8.3	20.0
PCB-1254 Peak 1	Ave	0.0307	0.0284		0.462	0.500	-7.5	20.0
PCB-1254 Peak 2	Ave	0.0344	0.0333		0.484	0.500	-3.2	20.0
PCB-1254 Peak 3	Ave	0.0502	0.0471		0.469	0.500	-6.1	20.0
PCB-1254 Peak 4	Ave	0.0382	0.0360		0.471	0.500	-5.9	20.0
PCB-1254 Peak 5	Ave	0.0501	0.0488		0.487	0.500	-2.5	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355209/16 Calibration Date: 11/13/2018 22:54

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 21:26

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/18/2018 23:08

Lab File ID: P12111353.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	5.19	5.17	5.21
PCB-1221 Peak 2	5.39	5.37	5.41
PCB-1221 Peak 3	5.47	5.46	5.49
PCB-1254 Peak 1	7.94	7.93	7.96
PCB-1254 Peak 2	8.19	8.17	8.21
PCB-1254 Peak 3	8.72	8.71	8.74
PCB-1254 Peak 4	9.00	8.99	9.02
PCB-1254 Peak 5	9.63	9.61	9.65

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111353.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 22:54:50 ALS Bottle#: 53 Worklist Smp#: 16
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-016
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:25:32 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 10:47:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.791	2.800	-0.009	135724622	0.0500	0.0500	
2	3.305	3.312	-0.007	103094723	0.0500	0.0500	
3 PCB-1221							
1	4.413	4.415	-0.002	11964172	0.5000	0.5088	
1	4.619	4.621	-0.002	7826721	0.5000	0.4834	
1	4.674	4.676	-0.002	29031436	0.5000	0.4795	
		Average of Peak Amounts =				0.4906	
2	5.187	5.188	-0.001	10237493	0.5000	0.4698	
2	5.389	5.391	-0.002	6731778	0.5000	0.4638	
2	5.472	5.474	-0.002	23392462	0.5000	0.4584	
		Average of Peak Amounts =				0.4640	
						RPD = 5.56	
8 PCB-1254							
1	7.299	7.299	0.000	49132568	0.5000	0.4924	
1	7.767	7.767	0.000	74028604	0.5000	0.5079	
1	8.100	8.099	0.001	57461415	0.5000	0.5235	
1	8.322	8.323	-0.001	49383322	0.5000	0.5190	
1	8.645	8.647	-0.002	78339113	0.5000	0.5300	
		Average of Peak Amounts =				0.5146	
2	7.943	7.944	-0.001	29258162	0.5000	0.4624	
2	8.189	8.191	-0.002	34355027	0.5000	0.4841	
2	8.724	8.725	-0.001	48540660	0.5000	0.4693	
2	9.003	9.004	-0.001	37079567	0.5000	0.4707	
2	9.625	9.626	-0.001	50350142	0.5000	0.4874	
		Average of Peak Amounts =				0.4748	
						RPD = 8.04	

Reagents:

SG2154@0.5PPM_00041 Amount Added: 1.00 Units: mL

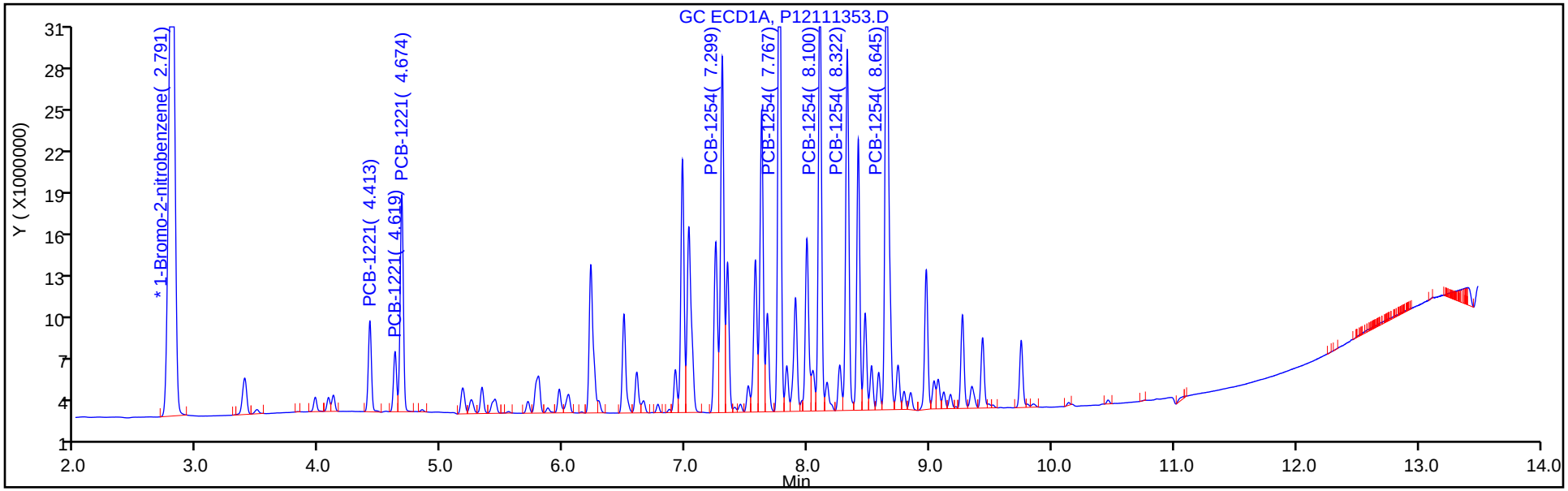
Report Date: 14-Nov-2018 11:25:34 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

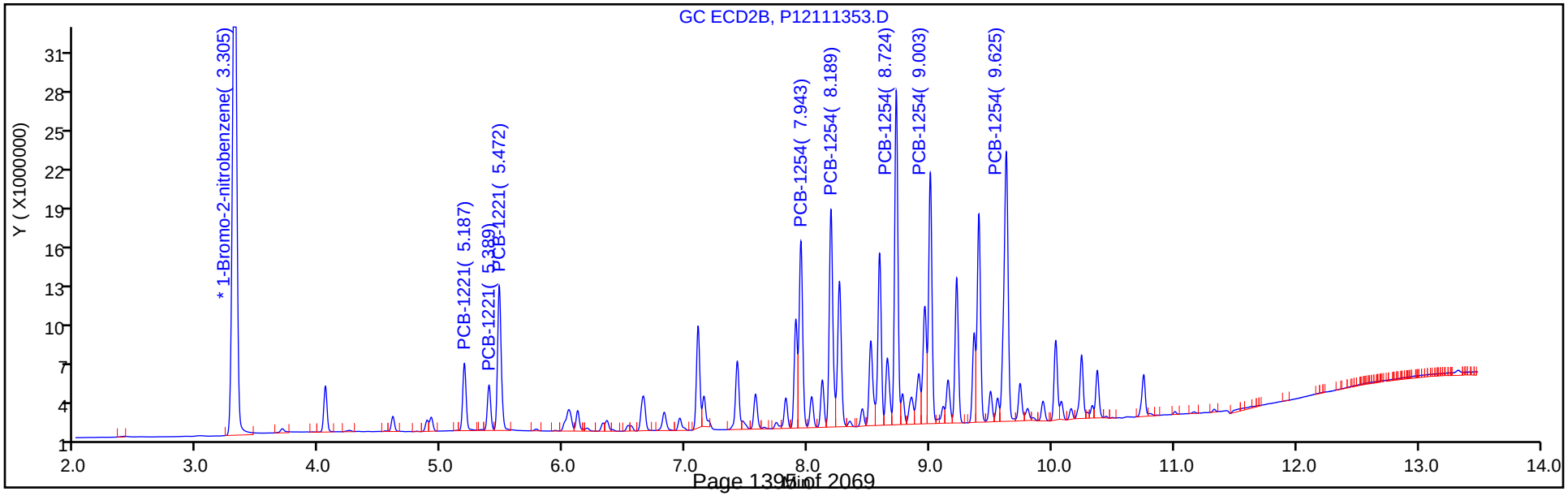
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111353.D

Injection Date:	13-Nov-2018 22:54:50	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	53
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCVIS 240-355209/17 Calibration Date: 11/13/2018 23:15

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 23:29

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/19/2018 01:11

Lab File ID: P12111354.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	0.0165	0.0150		0.452	0.500	-9.5	20.0
PCB-1016 Peak 2	Ave	0.0317	0.0296		0.466	0.500	-6.7	20.0
PCB-1016 Peak 3	Ave	0.0682	0.0653		0.479	0.500	-4.3	20.0
PCB-1016 Peak 4	Ave	0.0286	0.0274		0.480	0.500	-4.1	20.0
PCB-1016 Peak 5	Ave	0.0164	0.0145		0.443	0.500	-11.3	20.0
PCB-1260 Peak 1	Ave	0.0373	0.0328		0.439	0.500	-12.2	20.0
PCB-1260 Peak 2	Ave	0.0448	0.0432		0.482	0.500	-3.5	20.0
PCB-1260 Peak 3	Ave	0.0379	0.0373		0.493	0.500	-1.4	20.0
PCB-1260 Peak 4	Ave	0.0979	0.0976		0.498	0.500	-0.3	20.0
PCB-1260 Peak 5	Ave	0.0673	0.0667		0.496	0.500	-0.9	20.0
Tetrachloro-m-xylene	Ave	0.9276	0.8755		0.0236	0.0250	-5.6	20.0
DCB Decachlorobiphenyl	Ave	0.9256	0.9030		0.0244	0.0250	-2.4	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCVIS 240-355209/17 Calibration Date: 11/13/2018 23:15

Instrument ID: A2HP12 Calib Start Date: 10/18/2018 23:29

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 10/19/2018 01:11

Lab File ID: P12111354.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	5.47	5.45	5.49
PCB-1016 Peak 2	6.05	6.03	6.06
PCB-1016 Peak 3	6.65	6.63	6.67
PCB-1016 Peak 4	6.82	6.80	6.84
PCB-1016 Peak 5	7.15	7.13	7.17
PCB-1260 Peak 1	8.96	8.94	8.98
PCB-1260 Peak 2	9.22	9.20	9.24
PCB-1260 Peak 3	9.74	9.72	9.76
PCB-1260 Peak 4	10.37	10.35	10.39
PCB-1260 Peak 5	10.75	10.73	10.77
Tetrachloro-m-xylene	4.72	4.70	4.74
DCB Decachlorobiphenyl	11.86	11.84	11.88

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111354.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 13-Nov-2018 23:15:18 ALS Bottle#: 54 Worklist Smp#: 17
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-017
Operator ID: Instrument ID: A2HP12
Sublist: chrom-PCB12IS*sub6

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:25:35 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 10:58:01

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.785	2.785	0.000	142461986	0.0500	0.0500	
2	3.303	3.303	0.000	107418355	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.118	4.118	0.000	63213299	0.0250	0.0246	
2	4.718	4.718	0.000	47020177	0.0250	0.0236	
						RPD = 4.11	
6 PCB-1016							
1	4.673	4.673	0.000	19513340	0.5000	0.4607	
1	5.171	5.171	0.000	38303429	0.5000	0.4907	
1	5.792	5.792	0.000	95034123	0.5000	0.5096	
1	5.963	5.963	0.000	39865208	0.5000	0.5096	
1	6.288	6.288	0.000	15460161	0.5000	0.4743	
		Average of Peak Amounts =				0.4890	
2	5.472	5.472	0.000	16078090	0.5000	0.4524	
2	6.045	6.045	0.000	31749513	0.5000	0.4665	
2	6.651	6.651	0.000	70153897	0.5000	0.4786	
2	6.823	6.823	0.000	29470739	0.5000	0.4796	
2	7.148	7.148	0.000	15606879	0.5000	0.4435	
		Average of Peak Amounts =				0.4641	
						RPD = 5.21	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							M
1	7.992	7.992	0.000	52624369	0.5000	0.5118	
1	8.324	8.324	0.000	88737216	0.5000	0.5264	M
1	8.787	8.787	0.000	57019530	0.5000	0.5184	M
1	9.430	9.430	0.000	154471168	0.5000	0.5302	M
1	9.748	9.748	0.000	71696243	0.5000	0.5014	M
		Average of Peak Amounts =				0.5176	
2	8.959	8.959	0.000	35205970	0.5000	0.4390	
2	9.219	9.219	0.000	46388658	0.5000	0.4825	
2	9.738	9.738	0.000	40100535	0.5000	0.4931	
2	10.370	10.370	0.000	104821871	0.5000	0.4983	
2	10.748	10.748	0.000	71617801	0.5000	0.4956	
		Average of Peak Amounts =				0.4817	
						RPD = 7.19	
$ 12 DCB Decachlorobiphenyl							
1	10.947	10.947	0.000	74703729	0.0250	0.0236	
2	11.859	11.859	0.000	48498074	0.0250	0.0244	
						RPD = 3.45	
16 1260 Res 1							
1		9.747			ND	ND	
2		10.605					
13 1260 Res 2							
1		9.799			ND	ND	
2		10.668					
15 1260 Res 3							
1		9.846			ND	ND	
2		2.881					

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

SG1660@0.5PPM_00085 Amount Added: 1.00 Units: mL

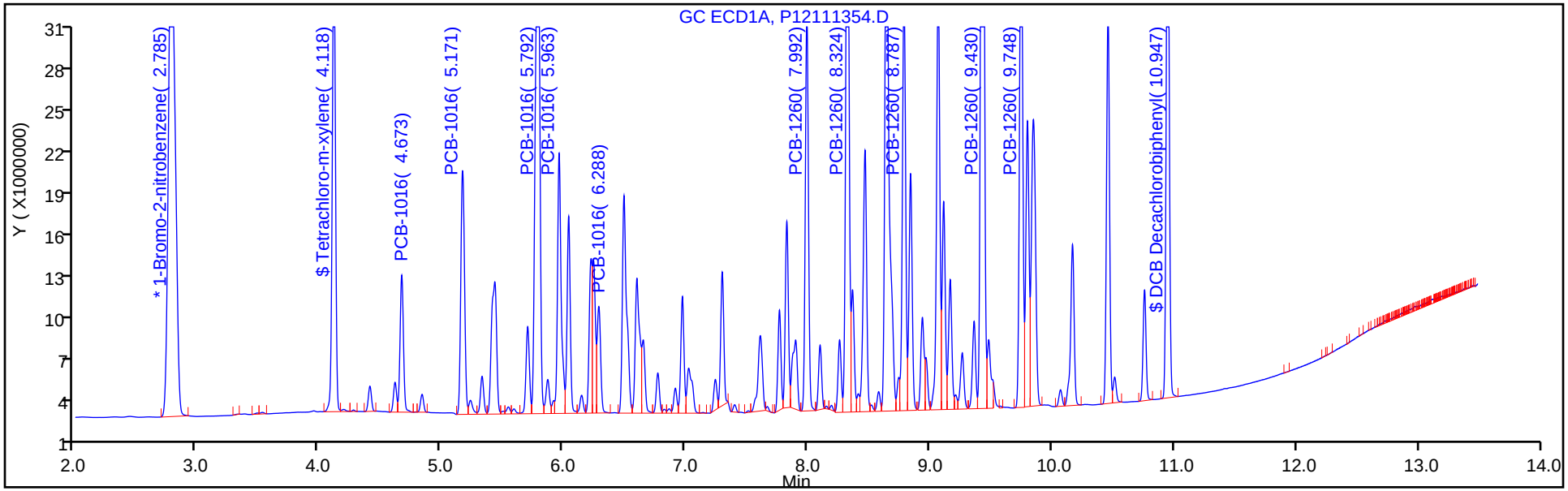
Report Date: 14-Nov-2018 11:25:36 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

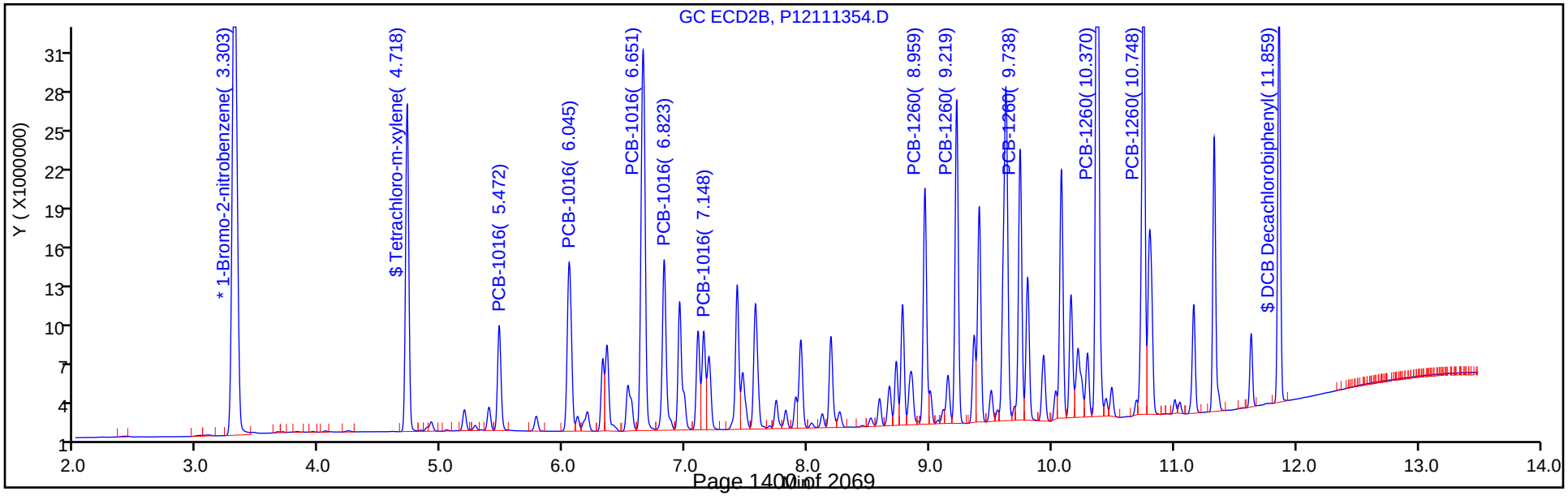
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111354.D

Injection Date:	13-Nov-2018 23:15:18	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	54
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/34 Calibration Date: 11/07/2018 00:17

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 19:58

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 21:49

Lab File ID: P4110634.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Ave	0.0118	0.0118		0.498	0.500	-0.5	20.0
PCB-1221 Peak 2	Ave	0.0077	0.0078		0.509	0.500	1.8	20.0
PCB-1221 Peak 3	Ave	0.0289	0.0283		0.490	0.500	-2.1	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/34 Calibration Date: 11/07/2018 00:17

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 19:58

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 21:49

Lab File ID: P4110634.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	3.75	3.73	3.77
PCB-1221 Peak 2	4.03	4.02	4.05
PCB-1221 Peak 3	4.11	4.09	4.13

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110634.D
Lims ID: icv 1221
Client ID:
Sample Type: ICV
Inject. Date: 07-Nov-2018 00:17:30 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-034
Operator ID: Instrument ID: A2HP4
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:02:44 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:21:43

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.001	46352211	0.0500	0.0500	
2	2.556	2.555	0.001	38420696	0.0500	0.0500	
3 PCB-1221							
1	3.748	3.748	0.000	5452326	0.5000	0.4976	
1	4.034	4.035	-0.001	3618796	0.5000	0.5088	
1	4.111	4.111	0.000	13121552	0.5000	0.4896	
		Average of Peak Amounts =				0.4987	
2	5.064	5.064	0.000	4107677	0.5000	0.4923	
2	5.347	5.347	0.000	2854913	0.5000	0.5108	
2	5.461	5.459	0.002	10169432	0.5000	0.4862	
		Average of Peak Amounts =				0.4964	
						RPD = 0.45	

Reagents:

SG1221ICV@1.0_00025 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

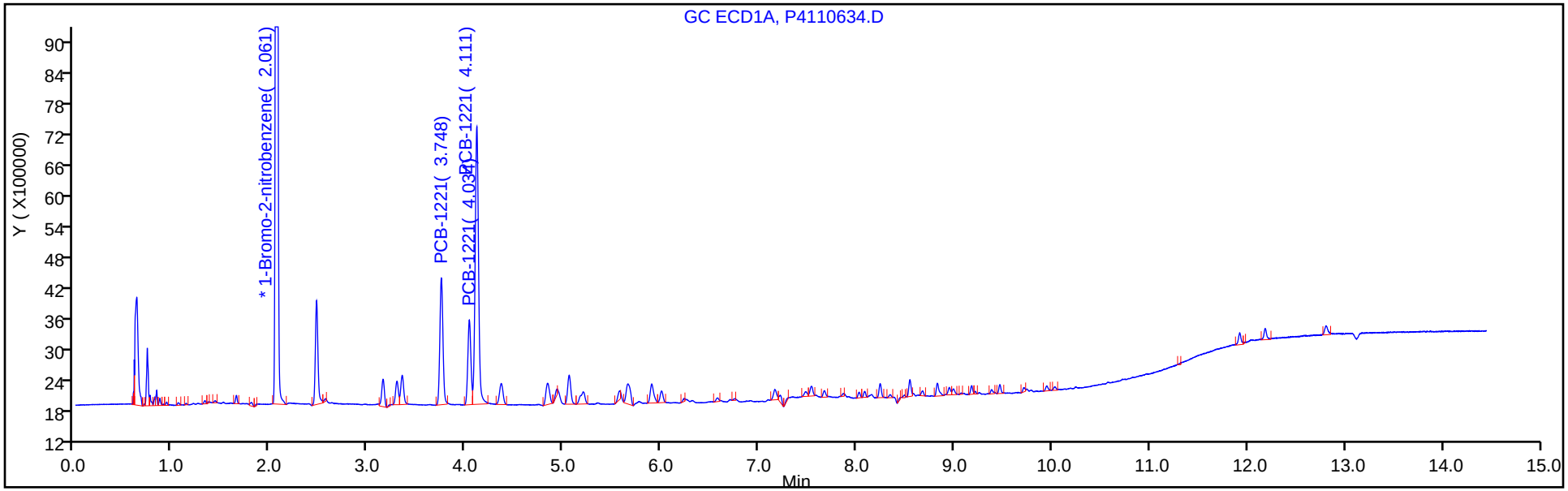
Report Date: 07-Nov-2018 11:04:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

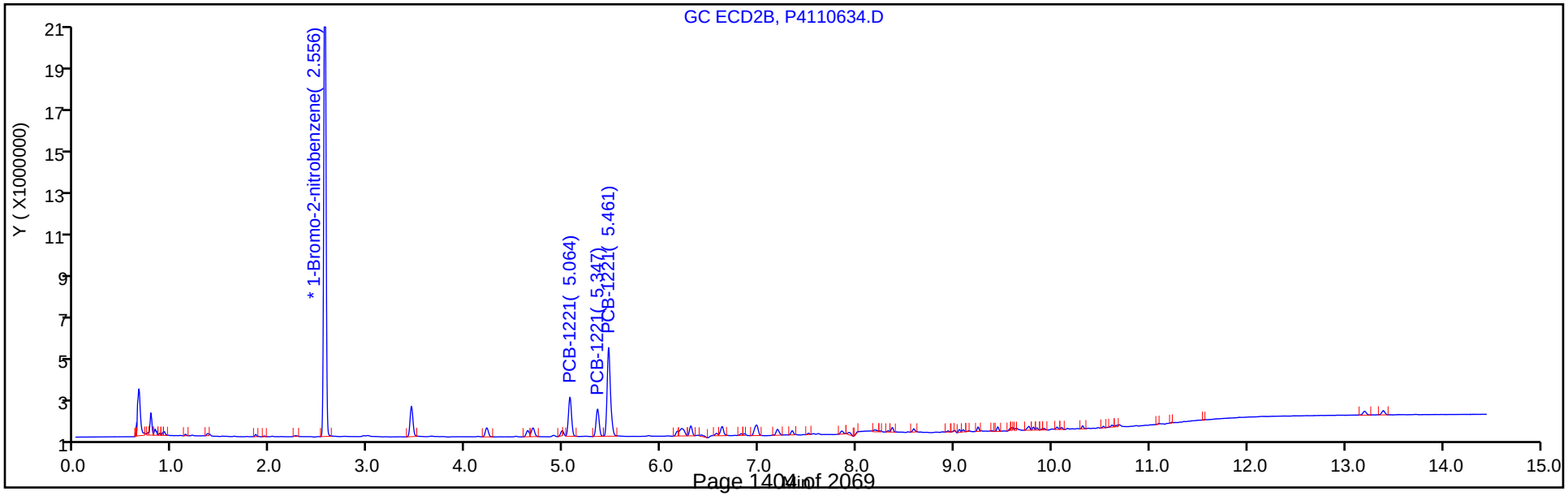
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110634.D

Injection Date:	07-Nov-2018 00:17:30	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	icv 1221			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/34 Calibration Date: 11/07/2018 00:17

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 19:58

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 21:49

Lab File ID: P4110634.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Ave	0.0109	0.0107		0.492	0.500	-1.5	20.0
PCB-1221 Peak 2	Ave	0.0073	0.0074		0.511	0.500	2.2	20.0
PCB-1221 Peak 3	Ave	0.0272	0.0265		0.486	0.500	-2.8	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/34 Calibration Date: 11/07/2018 00:17

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 19:58

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 21:49

Lab File ID: P4110634.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	5.06	5.05	5.08
PCB-1221 Peak 2	5.35	5.33	5.37
PCB-1221 Peak 3	5.46	5.44	5.48

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110634.D
Lims ID: icv 1221
Client ID:
Sample Type: ICV
Inject. Date: 07-Nov-2018 00:17:30 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-034
Operator ID: Instrument ID: A2HP4
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:02:44 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:21:43

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.061	2.061	0.001	46352211	0.0500	0.0500	
2	2.556	2.555	0.001	38420696	0.0500	0.0500	
3 PCB-1221							
1	3.748	3.748	0.000	5452326	0.5000	0.4976	
1	4.034	4.035	-0.001	3618796	0.5000	0.5088	
1	4.111	4.111	0.000	13121552	0.5000	0.4896	
		Average of Peak Amounts =				0.4987	
2	5.064	5.064	0.000	4107677	0.5000	0.4923	
2	5.347	5.347	0.000	2854913	0.5000	0.5108	
2	5.461	5.459	0.002	10169432	0.5000	0.4862	
		Average of Peak Amounts =				0.4964	
						RPD = 0.45	

Reagents:

SG1221ICV@1.0_00025 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

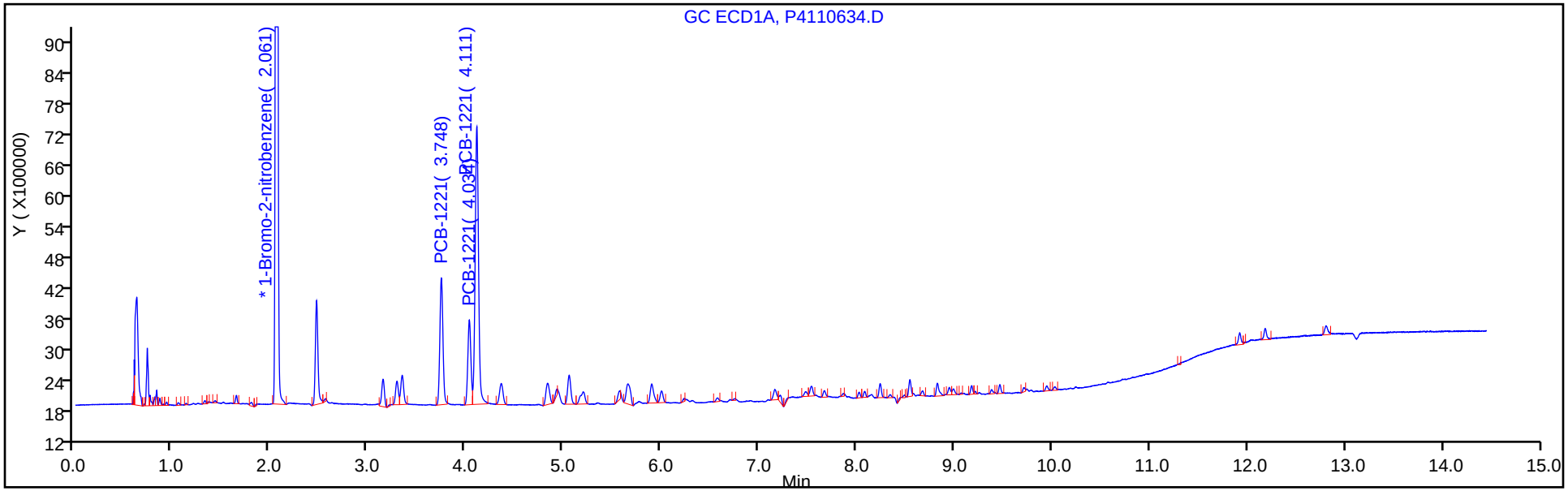
Report Date: 07-Nov-2018 11:04:24 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

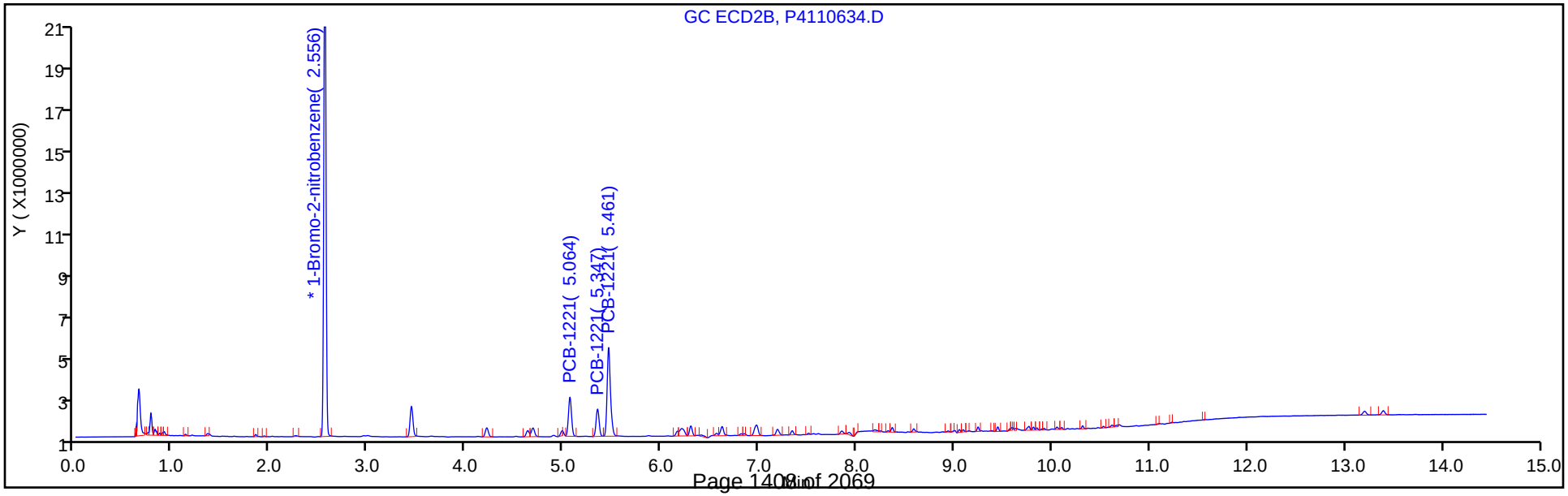
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110634.D

Injection Date:	07-Nov-2018 00:17:30	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	icv 1221			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/35 Calibration Date: 11/07/2018 00:38

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 13:25

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 15:14

Lab File ID: P4110635.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Ave	0.0248	0.0220		0.444	0.500	-11.2	20.0
PCB-1232 Peak 2	Ave	0.0183	0.0183		0.499	0.500	-0.3	20.0
PCB-1232 Peak 3	Ave	0.0352	0.0327		0.465	0.500	-7.1	20.0
PCB-1232 Peak 4	Ave	0.0169	0.0178		0.526	0.500	5.1	20.0
PCB-1232 Peak 5	Ave	0.0069	0.0062		0.446	0.500	-10.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/35 Calibration Date: 11/07/2018 00:38

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 13:25

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 15:14

Lab File ID: P4110635.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	4.11	4.09	4.13
PCB-1232 Peak 2	4.83	4.82	4.85
PCB-1232 Peak 3	5.67	5.66	5.69
PCB-1232 Peak 4	5.90	5.88	5.92
PCB-1232 Peak 5	6.31	6.30	6.34

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110635.D
Lims ID: icv 1232
Client ID:
Sample Type: ICV
Inject. Date: 07-Nov-2018 00:38:25 ALS Bottle#: 35 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-035
Operator ID: Instrument ID: A2HP4
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:02:44 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:22:43

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	50695253	0.0500	0.0500	
2	2.554	2.555	-0.001	42222927	0.0500	0.0500	
4 PCB-1232							M
1	4.109	4.111	-0.002	11172481	0.5000	0.4439	
1	4.831	4.834	-0.003	9264469	0.5000	0.4986	
1	5.669	5.675	-0.006	16599156	0.5000	0.4646	M
1	5.899	5.902	-0.003	9005997	0.5000	0.5256	
1	6.314	6.319	-0.005	3144233	0.5000	0.4463	
		Average of Peak Amounts =				0.4758	
2	5.459	5.460	-0.001	8904943	0.5000	0.4627	
2	6.214	6.216	-0.002	7879131	0.5000	0.5248	
2	6.971	6.973	-0.002	14776747	0.5000	0.5490	
2	7.187	7.188	-0.001	6053416	0.5000	0.4982	
2	7.559	7.560	-0.001	3125658	0.5000	0.5196	
		Average of Peak Amounts =				0.5109	
						RPD = 7.11	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

SG1232ICV@1.0_00023 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

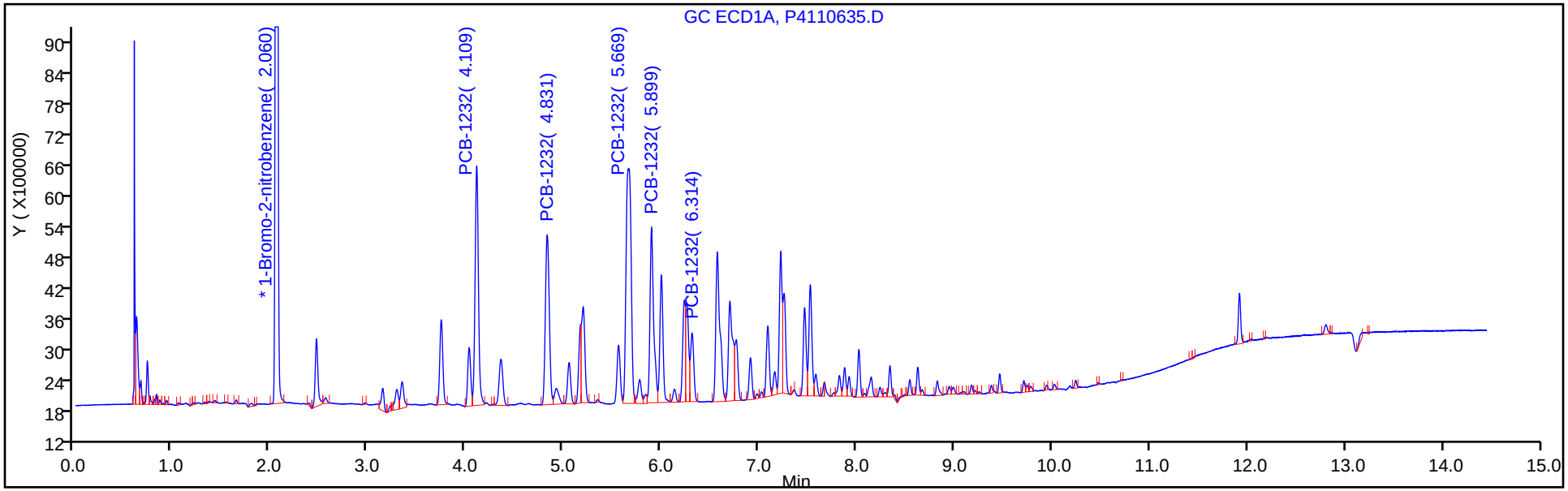
Report Date: 07-Nov-2018 11:03:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

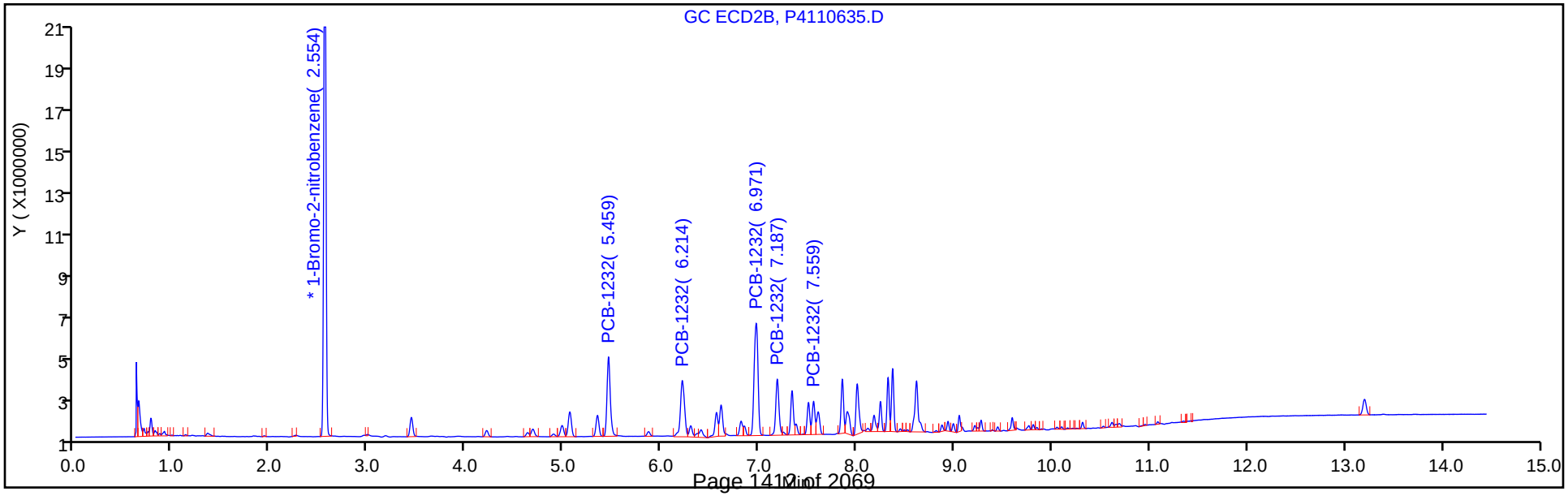
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110635.D

Injection Date:	07-Nov-2018 00:38:25	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	icv 1232			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 07-Nov-2018 11:03:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110635.D

Injection Date: 07-Nov-2018 00:38:25 Instrument ID: A2HP4

Lims ID: icv 1232

Client ID:

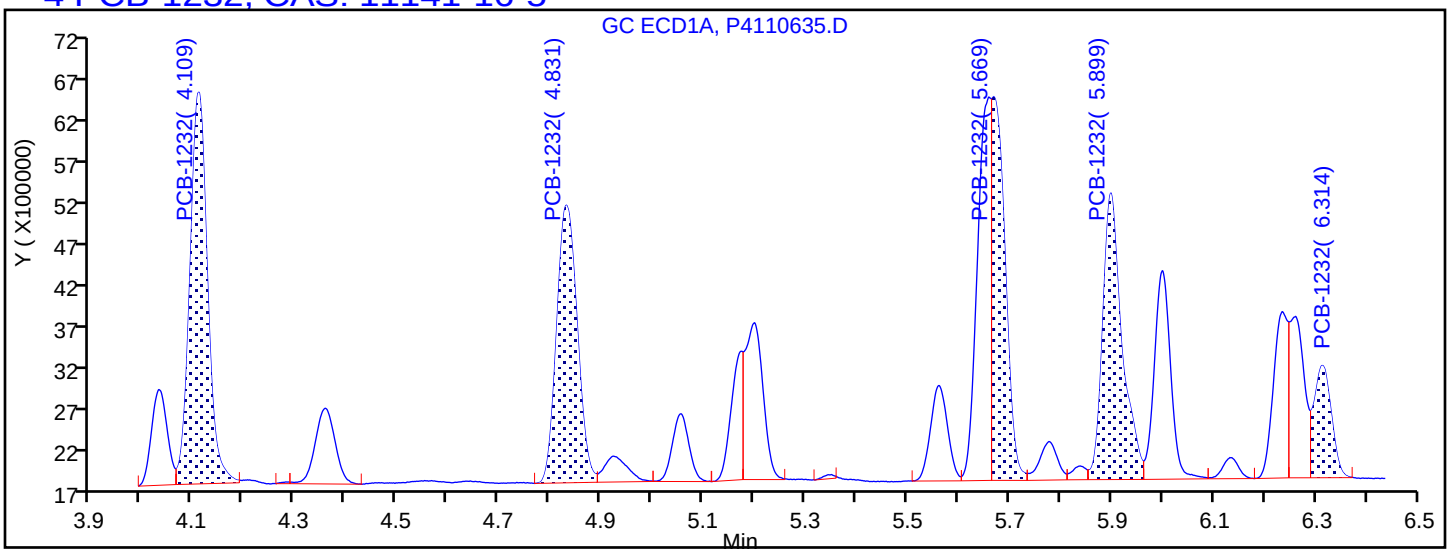
Operator ID: ALS Bottle#: 35 Worklist Smp#: 35

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB4 is Limit Group: GC 8082A IS

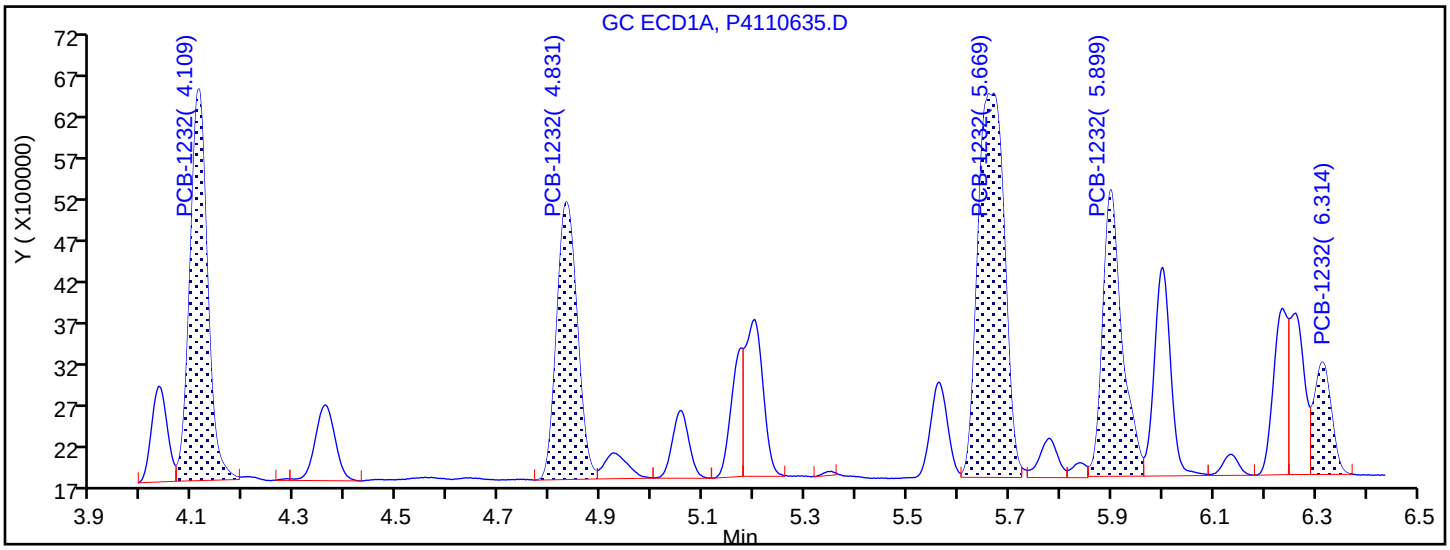
Column: Detector GC ECD1A

4 PCB-1232, CAS: 11141-16-5



Processing Integration Results

4.109	Response = 11172481
4.831	Response = 9264469
5.669	Response = 8272631
5.899	Response = 9005997
6.314	Response = 3144233



Manual Integration Results

4.109	Response = 11172481	
4.831	Response = 9264469	
5.669	Response = 16599156	M
5.899	Response = 9005997	
6.314	Response = 3144233	

Reviewer: hassl, 07-Nov-2018 06:22:40

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/35 Calibration Date: 11/07/2018 00:38

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 13:25

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 15:14

Lab File ID: P4110635.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Ave	0.0228	0.0211		0.463	0.500	-7.5	20.0
PCB-1232 Peak 2	Ave	0.0178	0.0187		0.525	0.500	5.0	20.0
PCB-1232 Peak 3	Ave	0.0319	0.0350		0.549	0.500	9.8	20.0
PCB-1232 Peak 4	Ave	0.0144	0.0143		0.498	0.500	-0.4	20.0
PCB-1232 Peak 5	Ave	0.0071	0.0074		0.520	0.500	3.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/35 Calibration Date: 11/07/2018 00:38

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 13:25

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 15:14

Lab File ID: P4110635.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	5.46	5.44	5.48
PCB-1232 Peak 2	6.21	6.20	6.24
PCB-1232 Peak 3	6.97	6.95	6.99
PCB-1232 Peak 4	7.19	7.17	7.21
PCB-1232 Peak 5	7.56	7.54	7.58

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110635.D
Lims ID: icv 1232
Client ID:
Sample Type: ICV
Inject. Date: 07-Nov-2018 00:38:25 ALS Bottle#: 35 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-035
Operator ID: Instrument ID: A2HP4
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:02:44 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:22:43

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	50695253	0.0500	0.0500	
2	2.554	2.555	-0.001	42222927	0.0500	0.0500	
4 PCB-1232							M
1	4.109	4.111	-0.002	11172481	0.5000	0.4439	
1	4.831	4.834	-0.003	9264469	0.5000	0.4986	
1	5.669	5.675	-0.006	16599156	0.5000	0.4646	M
1	5.899	5.902	-0.003	9005997	0.5000	0.5256	
1	6.314	6.319	-0.005	3144233	0.5000	0.4463	
		Average of Peak Amounts =				0.4758	
2	5.459	5.460	-0.001	8904943	0.5000	0.4627	
2	6.214	6.216	-0.002	7879131	0.5000	0.5248	
2	6.971	6.973	-0.002	14776747	0.5000	0.5490	
2	7.187	7.188	-0.001	6053416	0.5000	0.4982	
2	7.559	7.560	-0.001	3125658	0.5000	0.5196	
		Average of Peak Amounts =				0.5109	
						RPD = 7.11	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

SG1232ICV@1.0_00023 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

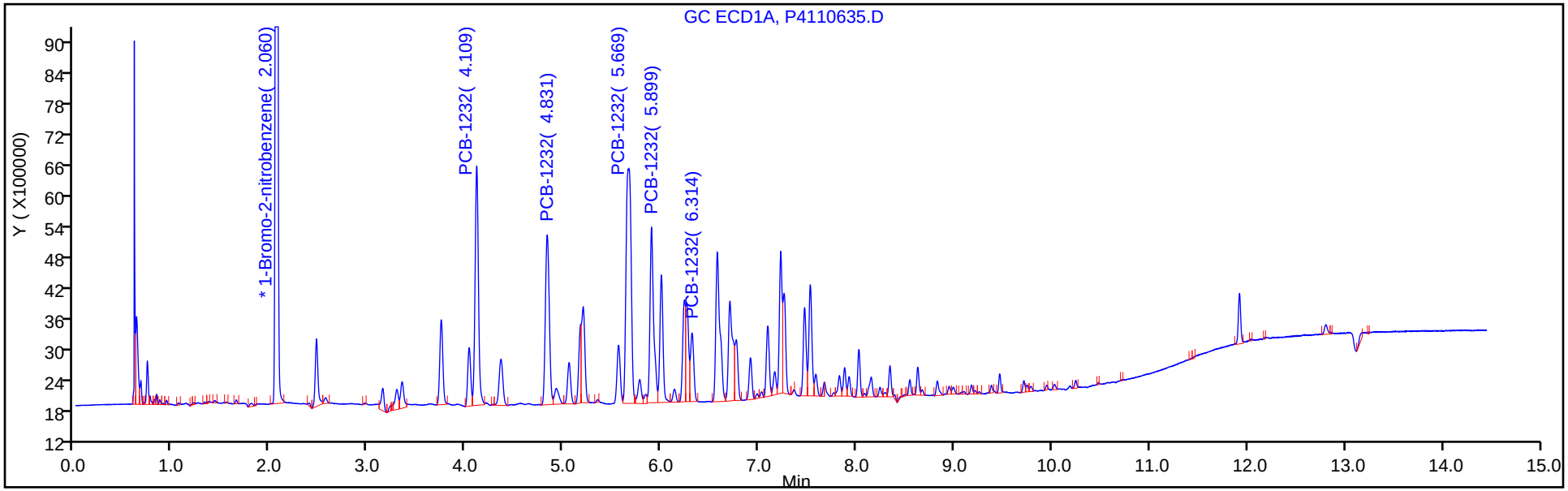
Report Date: 07-Nov-2018 11:03:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

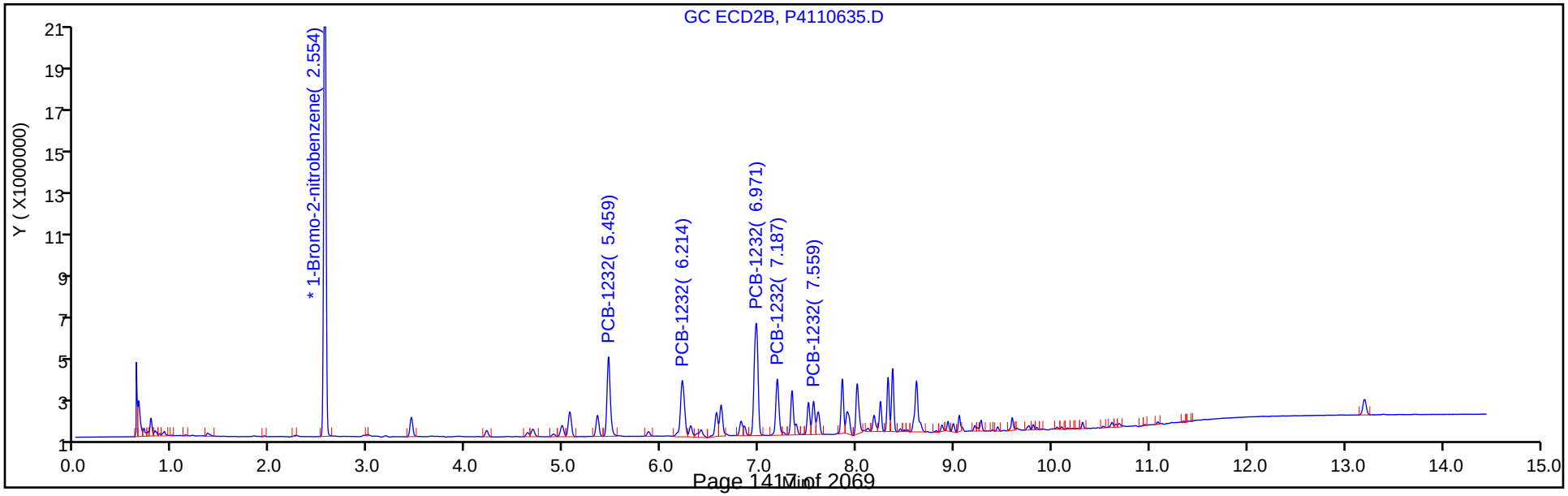
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110635.D

Injection Date:	07-Nov-2018 00:38:25	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	icv 1232			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/36 Calibration Date: 11/07/2018 00:58

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 15:36

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 17:25

Lab File ID: P4110636.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Ave	0.0171	0.0154		0.450	0.500	-10.0	20.0
PCB-1242 Peak 2	Ave	0.0306	0.0318		0.520	0.500	3.9	20.0
PCB-1242 Peak 3	Ave	0.0611	0.0603		0.493	0.500	-1.3	20.0
PCB-1242 Peak 4	Ave	0.0283	0.0312		0.551	0.500	10.2	20.0
PCB-1242 Peak 5	Ave	0.0119	0.0128		0.537	0.500	7.4	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/36 Calibration Date: 11/07/2018 00:58

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 15:36

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 17:25

Lab File ID: P4110636.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	4.11	4.09	4.13
PCB-1242 Peak 2	4.83	4.82	4.85
PCB-1242 Peak 3	5.66	5.66	5.70
PCB-1242 Peak 4	5.90	5.88	5.92
PCB-1242 Peak 5	6.31	6.30	6.34

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110636.D
Lims ID: icv 1242
Client ID:
Sample Type: ICV
Inject. Date: 07-Nov-2018 00:58:57 ALS Bottle#: 36 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-036
Operator ID: Instrument ID: A2HP4
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:02:44 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:23:57

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.058	2.061	-0.003	51758497	0.0500	0.0500	
2	2.552	2.555	-0.003	43111540	0.0500	0.0500	
5 PCB-1242							M
1	4.107	4.111	-0.004	7982654	0.5000	0.4501	
1	4.829	4.834	-0.005	16455846	0.5000	0.5197	
1	5.657	5.678	-0.021	31223451	0.5000	0.4934	M
1	5.898	5.900	-0.002	16166417	0.5000	0.5510	M
1	6.314	6.318	-0.004	6633809	0.5000	0.5368	
		Average of Peak Amounts =				0.5102	
2	5.457	5.459	-0.002	6785734	0.5000	0.4740	
2	6.213	6.214	-0.001	13099376	0.5000	0.5312	
2	6.972	6.972	0.000	25956891	0.5000	0.5431	
2	7.187	7.188	-0.001	10747011	0.5000	0.5258	
2	7.557	7.558	-0.001	6423461	0.5000	0.5424	
		Average of Peak Amounts =				0.5233	
						RPD = 2.53	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

SG1242ICV@1.0_00024 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

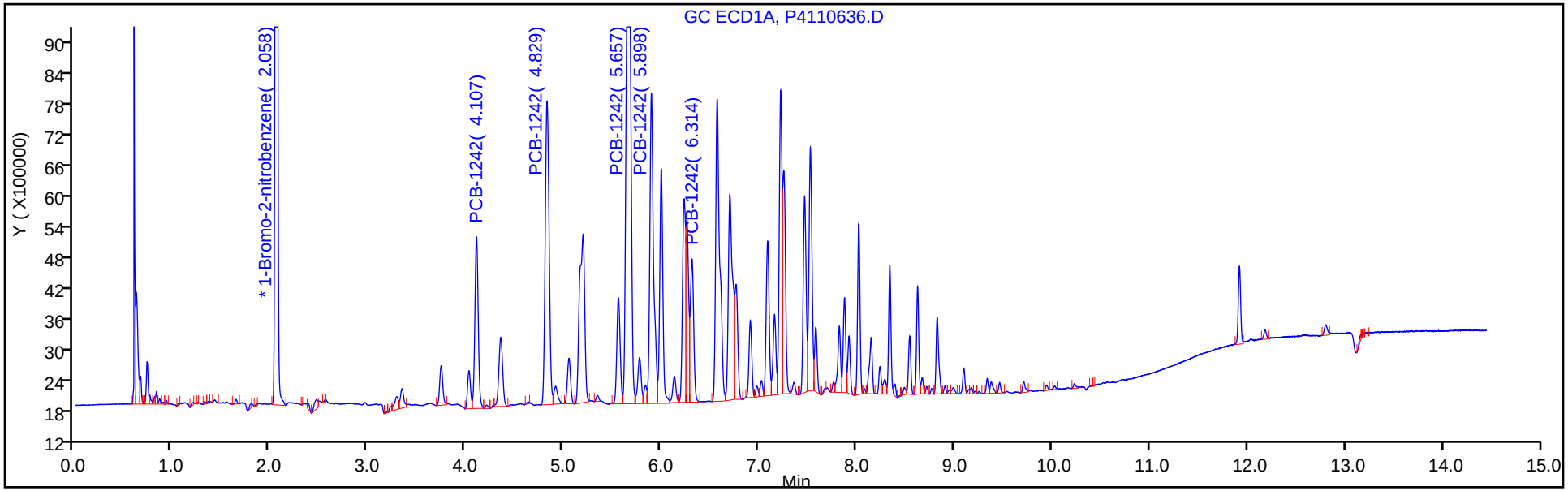
Report Date: 07-Nov-2018 11:03:44 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

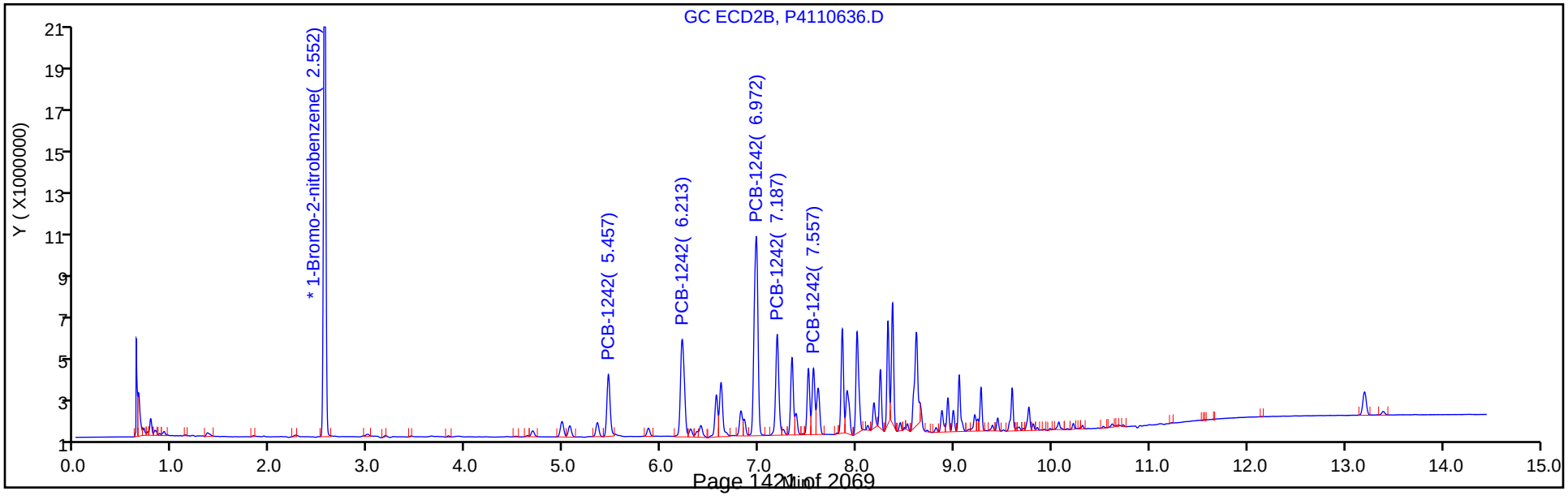
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110636.D

Injection Date:	07-Nov-2018 00:58:57	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	icv 1242			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	36
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 07-Nov-2018 11:03:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110636.D

Injection Date: 07-Nov-2018 00:58:57 Instrument ID: A2HP4

Lims ID: icv 1242

Client ID:

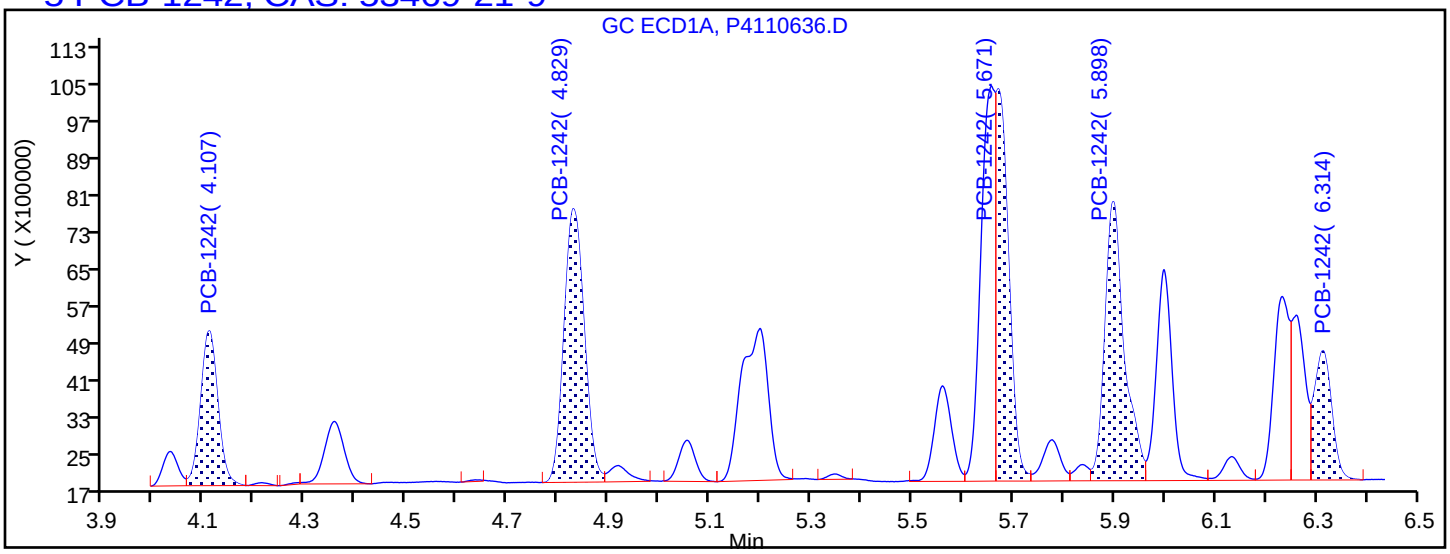
Operator ID: ALS Bottle#: 36 Worklist Smp#: 36

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB4 is Limit Group: GC 8082A IS

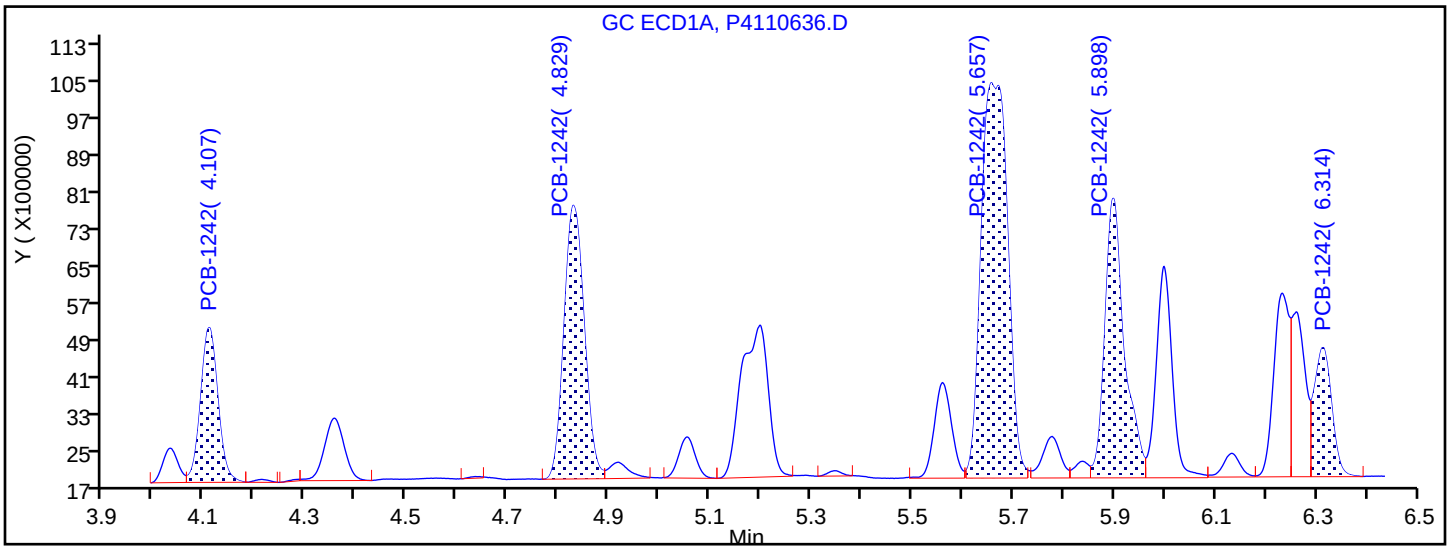
Column: Detector GC ECD1A

5 PCB-1242, CAS: 53469-21-9



Processing Integration Results

4.107	Response = 7982654	
4.829	Response = 16455846	
5.671	Response = 14603018	
5.898	Response = 16105646	
6.314	Response = 6633809	



Manual Integration Results

4.107	Response = 7982654	
4.829	Response = 16455846	
5.657	Response = 31223451	M
5.898	Response = 16166417	M
6.314	Response = 6633809	

Reviewer: hassl, 07-Nov-2018 06:23:52

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/36 Calibration Date: 11/07/2018 00:58

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 15:36

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 17:25

Lab File ID: P4110636.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Ave	0.0166	0.0157		0.474	0.500	-5.2	20.0
PCB-1242 Peak 2	Ave	0.0286	0.0304		0.531	0.500	6.2	20.0
PCB-1242 Peak 3	Ave	0.0554	0.0602		0.543	0.500	8.6	20.0
PCB-1242 Peak 4	Ave	0.0237	0.0249		0.526	0.500	5.2	20.0
PCB-1242 Peak 5	Ave	0.0137	0.0149		0.542	0.500	8.5	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/36 Calibration Date: 11/07/2018 00:58

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 15:36

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 17:25

Lab File ID: P4110636.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	5.46	5.44	5.48
PCB-1242 Peak 2	6.21	6.20	6.23
PCB-1242 Peak 3	6.97	6.95	6.99
PCB-1242 Peak 4	7.19	7.17	7.21
PCB-1242 Peak 5	7.56	7.54	7.58

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110636.D
Lims ID: icv 1242
Client ID:
Sample Type: ICV
Inject. Date: 07-Nov-2018 00:58:57 ALS Bottle#: 36 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-036
Operator ID: Instrument ID: A2HP4
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:02:44 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:23:57

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.058	2.061	-0.003	51758497	0.0500	0.0500	
2	2.552	2.555	-0.003	43111540	0.0500	0.0500	
5 PCB-1242							M
1	4.107	4.111	-0.004	7982654	0.5000	0.4501	
1	4.829	4.834	-0.005	16455846	0.5000	0.5197	
1	5.657	5.678	-0.021	31223451	0.5000	0.4934	M
1	5.898	5.900	-0.002	16166417	0.5000	0.5510	M
1	6.314	6.318	-0.004	6633809	0.5000	0.5368	
		Average of Peak Amounts =				0.5102	
2	5.457	5.459	-0.002	6785734	0.5000	0.4740	
2	6.213	6.214	-0.001	13099376	0.5000	0.5312	
2	6.972	6.972	0.000	25956891	0.5000	0.5431	
2	7.187	7.188	-0.001	10747011	0.5000	0.5258	
2	7.557	7.558	-0.001	6423461	0.5000	0.5424	
		Average of Peak Amounts =				0.5233	
						RPD = 2.53	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

SG1242ICV@1.0_00024 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

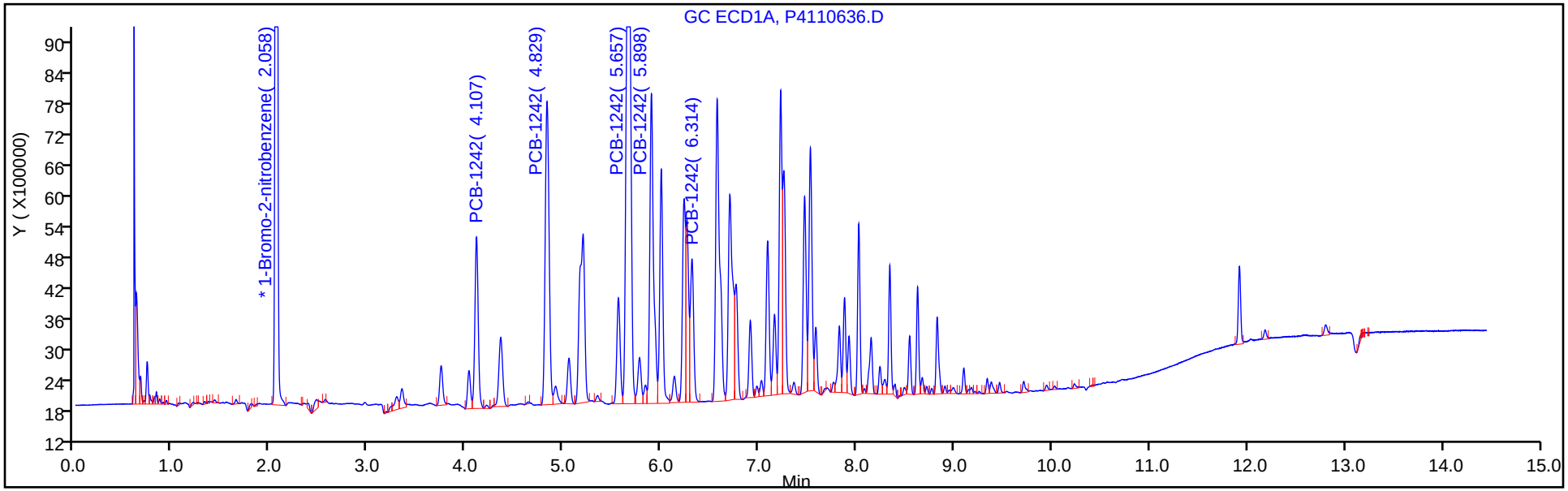
Report Date: 07-Nov-2018 11:03:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

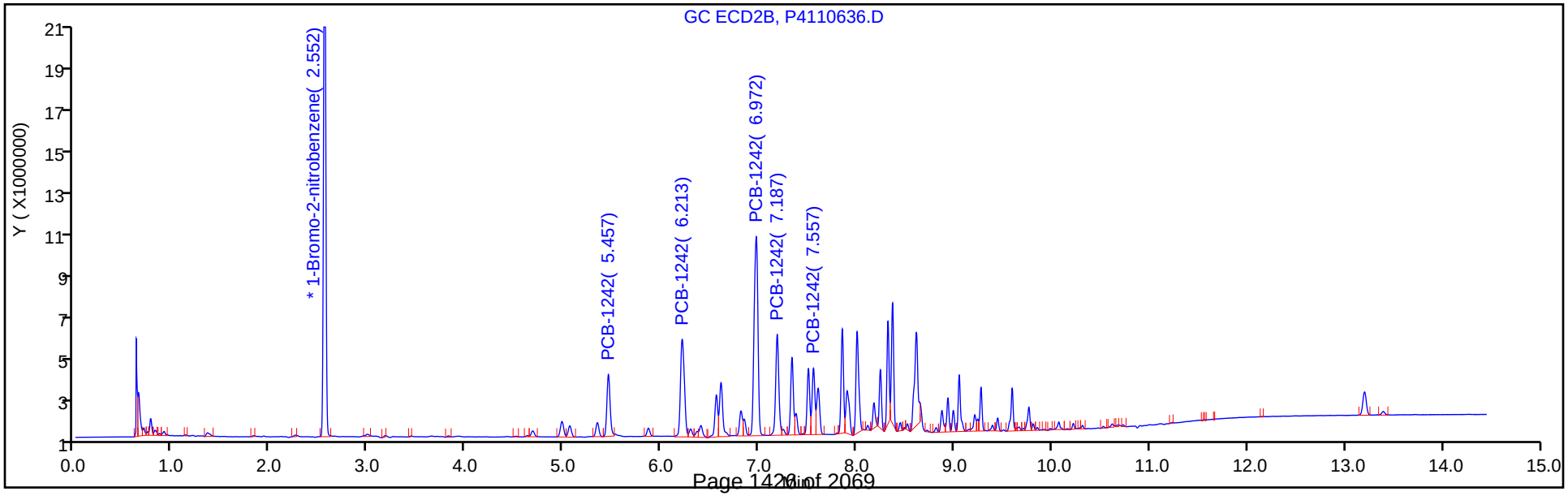
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110636.D

Injection Date:	07-Nov-2018 00:58:57	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	icv 1242			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	36
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/37 Calibration Date: 11/07/2018 01:19

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 17:48

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 19:37

Lab File ID: P4110637.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Ave	0.0167	0.0153		0.459	0.500	-8.3	20.0
PCB-1248 Peak 2	Lin1		0.0470		0.544	0.500	8.8	20.0
PCB-1248 Peak 3	Ave	0.0380	0.0406		0.534	0.500	6.7	20.0
PCB-1248 Peak 4	Ave	0.0316	0.0339		0.535	0.500	7.1	20.0
PCB-1248 Peak 5	Ave	0.0206	0.0206		0.500	0.500	0.0	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/37 Calibration Date: 11/07/2018 01:19

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 17:48

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 19:37

Lab File ID: P4110637.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	4.83	4.81	4.85
PCB-1248 Peak 2	6.57	6.55	6.59
PCB-1248 Peak 3	7.22	7.21	7.24
PCB-1248 Peak 4	7.53	7.51	7.55
PCB-1248 Peak 5	8.02	8.01	8.04

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110637.D
Lims ID: icv 1248
Client ID:
Sample Type: ICV
Inject. Date: 07-Nov-2018 01:19:45 ALS Bottle#: 37 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-037
Operator ID: Instrument ID: A2HP4
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:02:44 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:25:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	50451600	0.0500	0.0500	
2	2.554	2.555	-0.001	41888916	0.0500	0.0500	
7 PCB-1248							M
1	4.830	4.828	0.002	7717488	0.5000	0.4586	
1	6.572	6.571	0.001	23731240	0.5000	0.5440	
1	7.221	7.224	-0.003	20474471	0.5000	0.5335	
1	7.526	7.529	-0.003	17093670	0.5000	0.5353	
1	8.022	8.024	-0.002	10372423	0.5000	0.5002	
		Average of Peak Amounts =				0.5143	
2	6.213	6.211	0.002	6305345	0.5000	0.4859	
2	6.968	6.968	0.000	18512662	0.5000	0.6263	M
2	7.853	7.854	-0.001	12498789	0.5000	0.5136	
2	8.368	8.368	0.000	17042645	0.5000	0.5867	
2	9.050	9.051	-0.001	7782794	0.5000	0.4884	
		Average of Peak Amounts =				0.5402	
						RPD = 4.90	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

SG1248ICV@1.0_00027 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

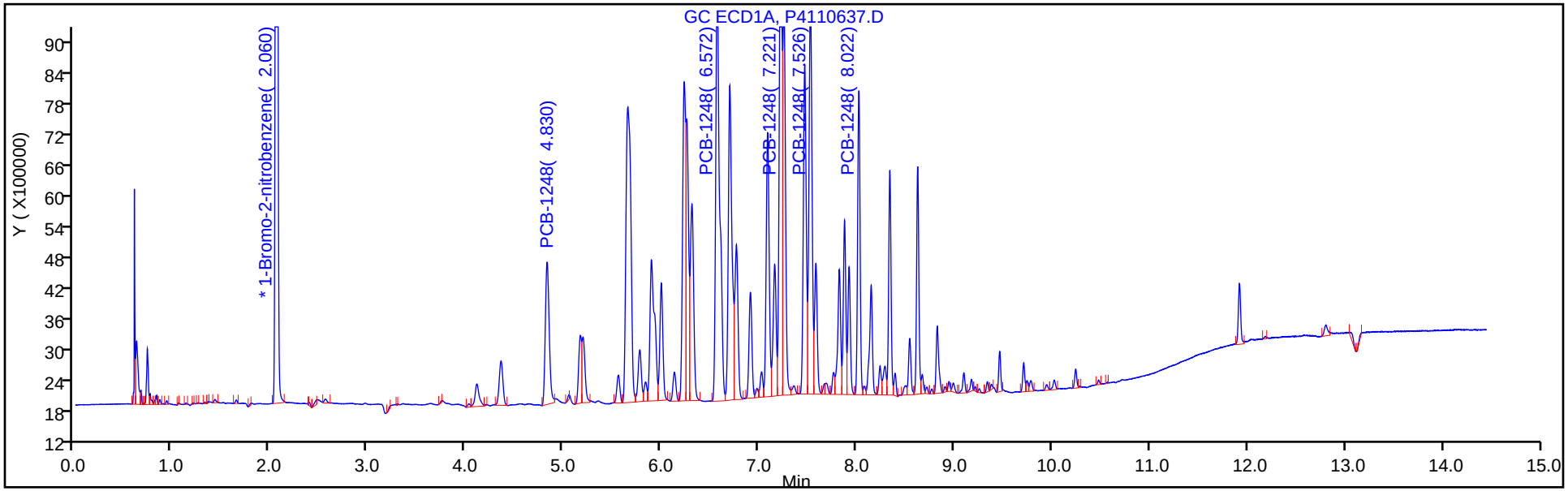
Report Date: 07-Nov-2018 11:03:27 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

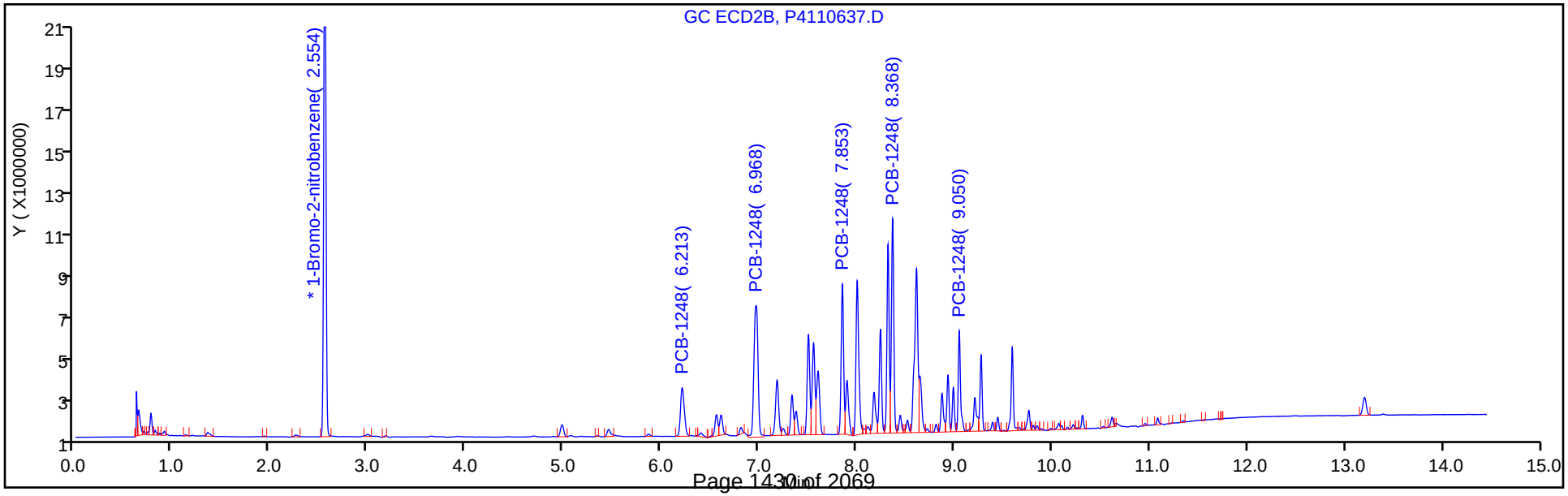
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110637.D

Injection Date:	07-Nov-2018 01:19:45	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	icv 1248			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/37 Calibration Date: 11/07/2018 01:19

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 17:48

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 19:37

Lab File ID: P4110637.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Ave	0.0155	0.0151		0.486	0.500	-2.8	20.0
PCB-1248 Peak 2	Lin1		0.0442		0.626	0.500	25.3*	20.0
PCB-1248 Peak 3	Ave	0.0290	0.0298		0.514	0.500	2.7	20.0
PCB-1248 Peak 4	Ave	0.0347	0.0407		0.587	0.500	17.3	20.0
PCB-1248 Peak 5	Ave	0.0190	0.0186		0.488	0.500	-2.3	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/37 Calibration Date: 11/07/2018 01:19

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 17:48

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 19:37

Lab File ID: P4110637.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	6.21	6.19	6.23
PCB-1248 Peak 2	6.97	6.95	6.99
PCB-1248 Peak 3	7.85	7.84	7.87
PCB-1248 Peak 4	8.37	8.35	8.39
PCB-1248 Peak 5	9.05	9.03	9.07

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110637.D
Lims ID: icv 1248
Client ID:
Sample Type: ICV
Inject. Date: 07-Nov-2018 01:19:45 ALS Bottle#: 37 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-037
Operator ID: Instrument ID: A2HP4
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:02:44 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:25:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	50451600	0.0500	0.0500	
2	2.554	2.555	-0.001	41888916	0.0500	0.0500	
7 PCB-1248							M
1	4.830	4.828	0.002	7717488	0.5000	0.4586	
1	6.572	6.571	0.001	23731240	0.5000	0.5440	
1	7.221	7.224	-0.003	20474471	0.5000	0.5335	
1	7.526	7.529	-0.003	17093670	0.5000	0.5353	
1	8.022	8.024	-0.002	10372423	0.5000	0.5002	
		Average of Peak Amounts =				0.5143	
2	6.213	6.211	0.002	6305345	0.5000	0.4859	
2	6.968	6.968	0.000	18512662	0.5000	0.6263	M
2	7.853	7.854	-0.001	12498789	0.5000	0.5136	
2	8.368	8.368	0.000	17042645	0.5000	0.5867	
2	9.050	9.051	-0.001	7782794	0.5000	0.4884	
		Average of Peak Amounts =				0.5402	
						RPD = 4.90	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

SG1248ICV@1.0_00027 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

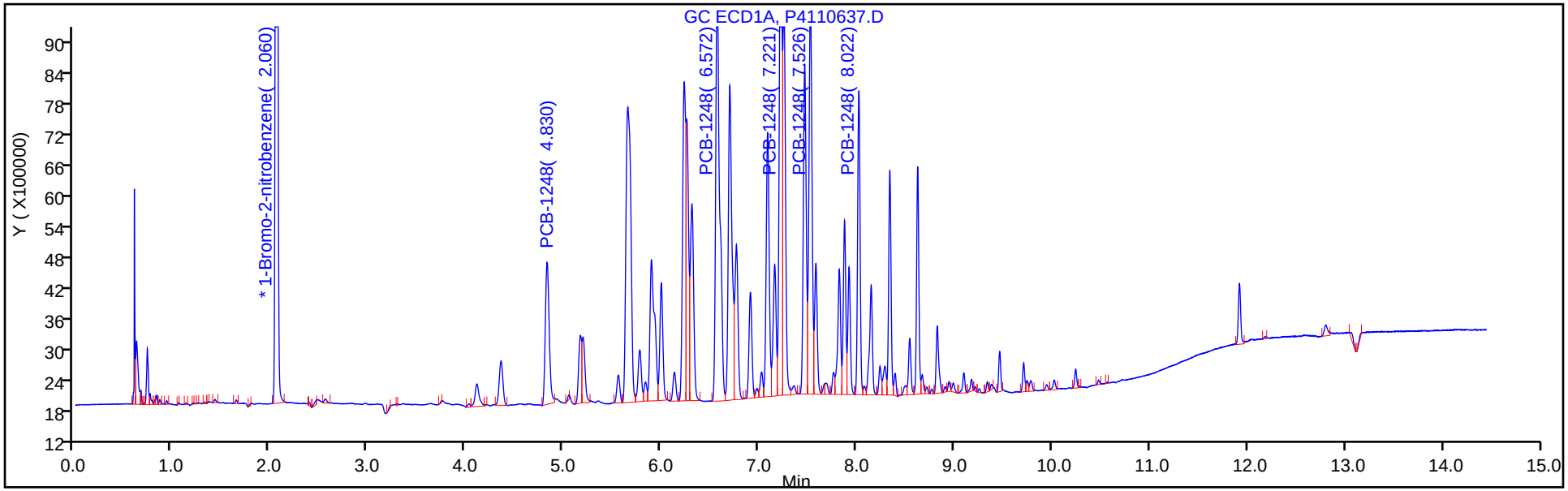
Report Date: 07-Nov-2018 11:03:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

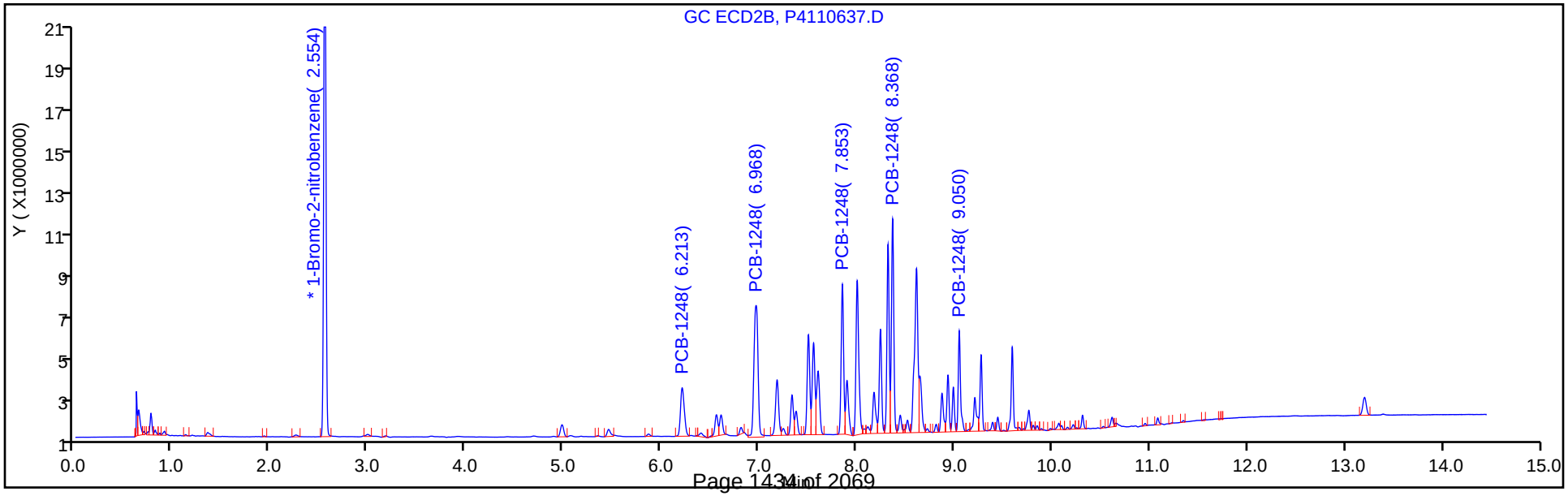
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110637.D

Injection Date:	07-Nov-2018 01:19:45	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	icv 1248			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 07-Nov-2018 11:03:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110637.D

Injection Date: 07-Nov-2018 01:19:45 Instrument ID: A2HP4

Lims ID: icv 1248

Client ID:

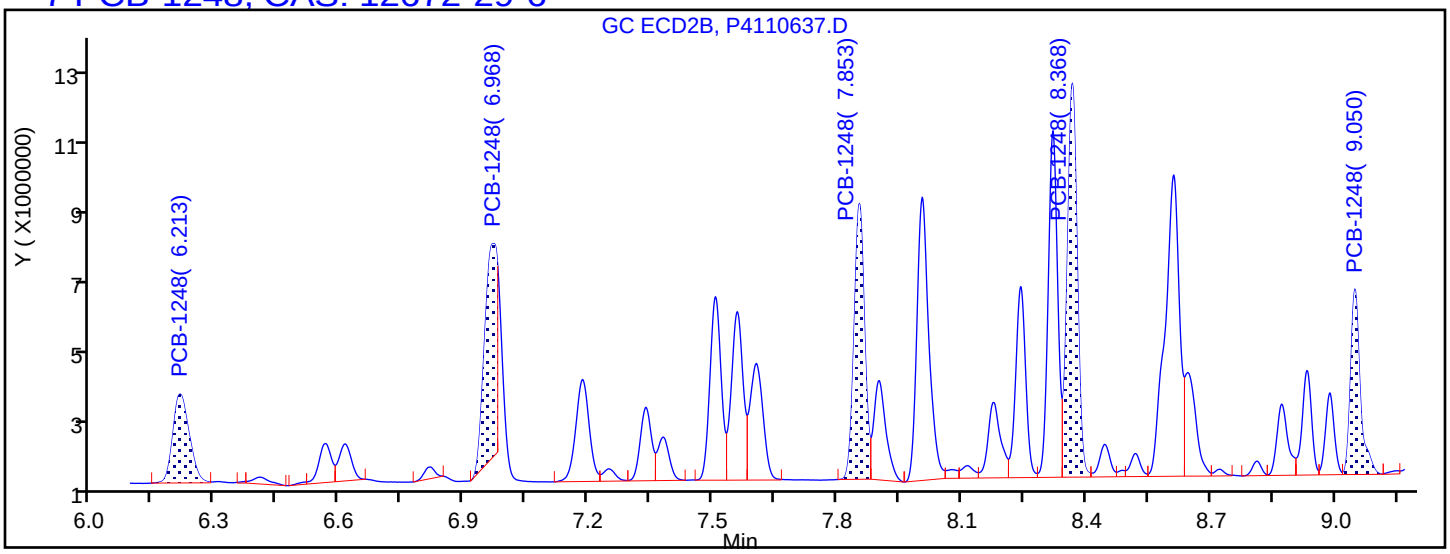
Operator ID: ALS Bottle#: 37 Worklist Smp#: 37

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB4 is Limit Group: GC 8082A IS

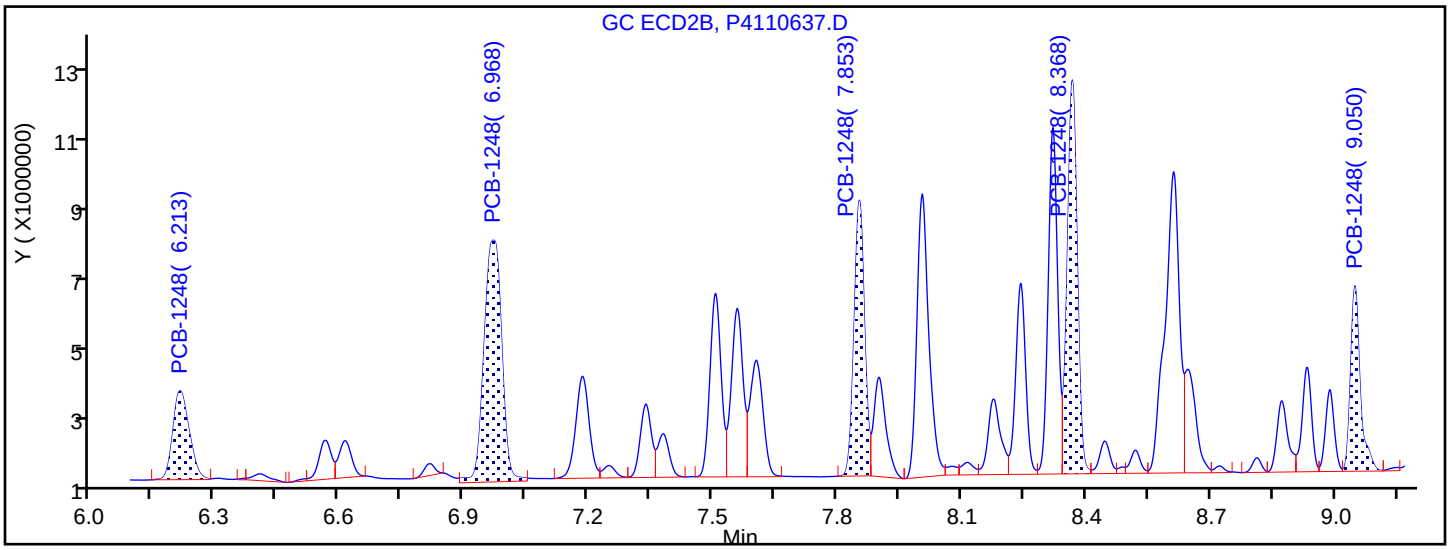
Column: Detector GC ecd2b

7 PCB-1248, CAS: 12672-29-6



Processing Integration Results

6.213	Response = 6305345
6.968	Response = 11323527
7.853	Response = 12498789
8.368	Response = 17042645
9.050	Response = 7782794



Manual Integration Results

6.213	Response = 6305345	
6.968	Response = 18512662	M
7.853	Response = 12498789	
8.368	Response = 17042645	
9.050	Response = 7782794	

Reviewer: hassl, 07-Nov-2018 06:24:49

Audit Action: Manually Integrated Audit Reason: Split Peak

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/39 Calibration Date: 11/07/2018 02:01

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 22:10

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 23:56

Lab File ID: P4110639.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	0.0215	0.0184		0.428	0.500	-14.4	20.0
PCB-1016 Peak 2	Ave	0.0392	0.0334		0.426	0.500	-14.8	20.0
PCB-1016 Peak 3	Ave	0.0778	0.0579		0.372	0.500	-25.6*	20.0
PCB-1016 Peak 4	Ave	0.0363	0.0316		0.435	0.500	-12.9	20.0
PCB-1016 Peak 5	Ave	0.0163	0.0137		0.419	0.500	-16.2	20.0
PCB-1260 Peak 1	Ave	0.0459	0.0474		0.517	0.500	3.4	20.0
PCB-1260 Peak 2	Ave	0.0709	0.0765		0.540	0.500	8.0	20.0
PCB-1260 Peak 3	Ave	0.0775	0.0871		0.562	0.500	12.4	20.0
PCB-1260 Peak 4	Ave	0.1079	0.1016		0.470	0.500	-5.9	20.0
PCB-1260 Peak 5	Ave	0.0523	0.0533		0.510	0.500	2.0	20.0
Tetrachloro-m-xylene	Ave	1.233	1.074		0.0218	0.0250	-12.9	20.0
DCB Decachlorobiphenyl	Ave	1.109	1.068		0.0241	0.0250	-3.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/39 Calibration Date: 11/07/2018 02:01

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 22:10

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 23:56

Lab File ID: P4110639.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	4.11	4.09	4.13
PCB-1016 Peak 2	4.83	4.81	4.85
PCB-1016 Peak 3	5.65	5.66	5.70
PCB-1016 Peak 4	5.90	5.88	5.92
PCB-1016 Peak 5	6.31	6.30	6.34
PCB-1260 Peak 1	8.24	8.22	8.26
PCB-1260 Peak 2	8.54	8.53	8.56
PCB-1260 Peak 3	8.82	8.81	8.85
PCB-1260 Peak 4	9.46	9.45	9.48
PCB-1260 Peak 5	9.71	9.69	9.73
Tetrachloro-m-xylene	3.35	3.33	3.37
DCB Decachlorobiphenyl	10.63	10.61	10.65

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110639.D
Lims ID: icv 1660
Client ID:
Sample Type: ICV
Inject. Date: 07-Nov-2018 02:01:07 ALS Bottle#: 39 Worklist Smp#: 39
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-039
Operator ID: Instrument ID: A2HP4
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:10:22 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:26:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	52921770	0.0500	0.0500	
2	2.553	2.555	-0.002	43534523	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.348	3.349	-0.001	28420370	0.0250	0.0218	
2	4.370	4.371	-0.001	19630444	0.0250	0.0220	
						RPD = 0.82	
6 PCB-1016							a
1	4.108	4.111	-0.003	9740293	0.5000	0.4282	
1	4.831	4.832	-0.001	17699178	0.5000	0.4260	
1	5.654	5.678	-0.024	30624213	0.5000	0.3718	a
1	5.899	5.900	-0.001	16720515	0.5000	0.4354	
1	6.314	6.316	-0.002	7241441	0.5000	0.4188	
		Average of Peak Amounts =				0.4160	
2	5.458	5.460	-0.002	7337474	0.5000	0.4274	
2	6.214	6.216	-0.002	14086669	0.5000	0.4355	
2	6.970	6.971	-0.001	28067045	0.5000	0.4558	
2	7.186	7.187	-0.001	11565359	0.5000	0.4388	
2	7.557	7.560	-0.003	6614887	0.5000	0.4337	
		Average of Peak Amounts =				0.4383	
						RPD = 5.20	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.238	8.240	-0.002	25099427	0.5000	0.5170	
1	8.543	8.545	-0.002	40497564	0.5000	0.5398	
1	8.824	8.826	-0.002	46106541	0.5000	0.5619	
1	9.462	9.464	-0.002	53739494	0.5000	0.4704	
1	9.709	9.711	-0.002	28228162	0.5000	0.5098	
		Average of Peak Amounts =				0.5198	
2	9.240	9.242	-0.002	17642088	0.5000	0.5061	
2	9.442	9.444	-0.002	20150757	0.5000	0.5188	
2	9.761	9.762	-0.001	29874617	0.5000	0.5428	
2	10.312	10.313	-0.001	37159378	0.5000	0.4596	
2	10.614	10.614	0.000	26770312	0.5000	0.4578	
		Average of Peak Amounts =				0.4970	
						RPD = 4.47	
$ 12 DCB Decachlorobiphenyl							
1	10.629	10.630	-0.001	28251775	0.0250	0.0241	
2	11.548	11.549	-0.001	21767637	0.0250	0.0237	
						RPD = 1.73	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SG1660ICV@1.0_00037	Amount Added:	0.50	Units: mL	
SGPCBISTD_00016	Amount Added:	5.00	Units: uL	Run Reagent

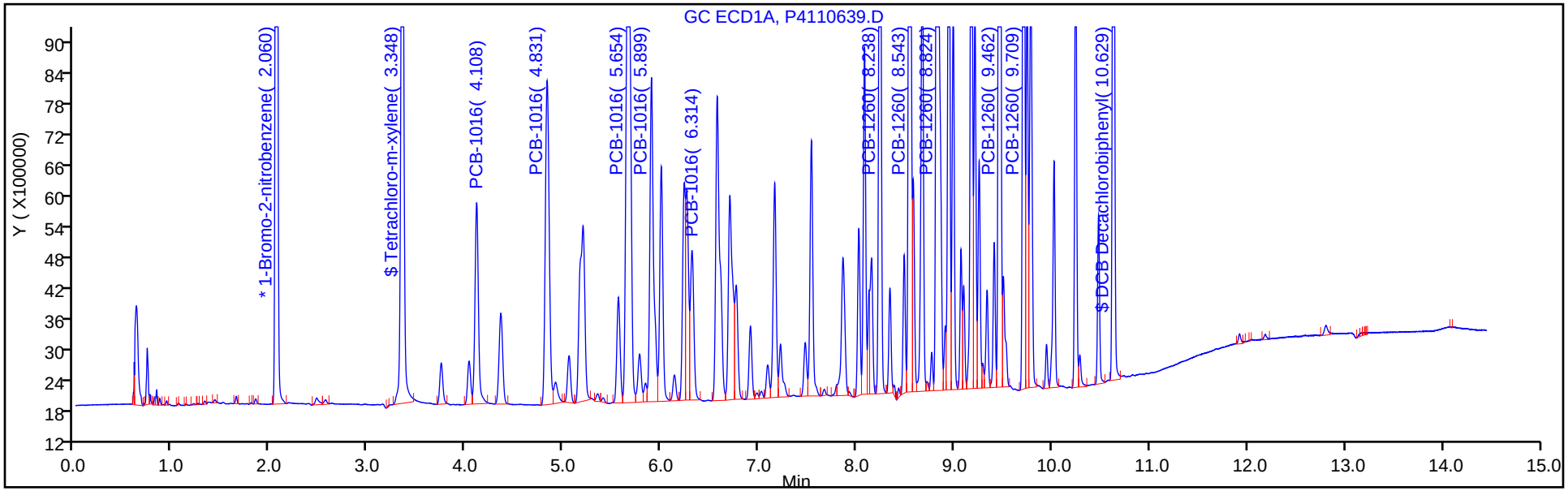
Report Date: 07-Nov-2018 11:10:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

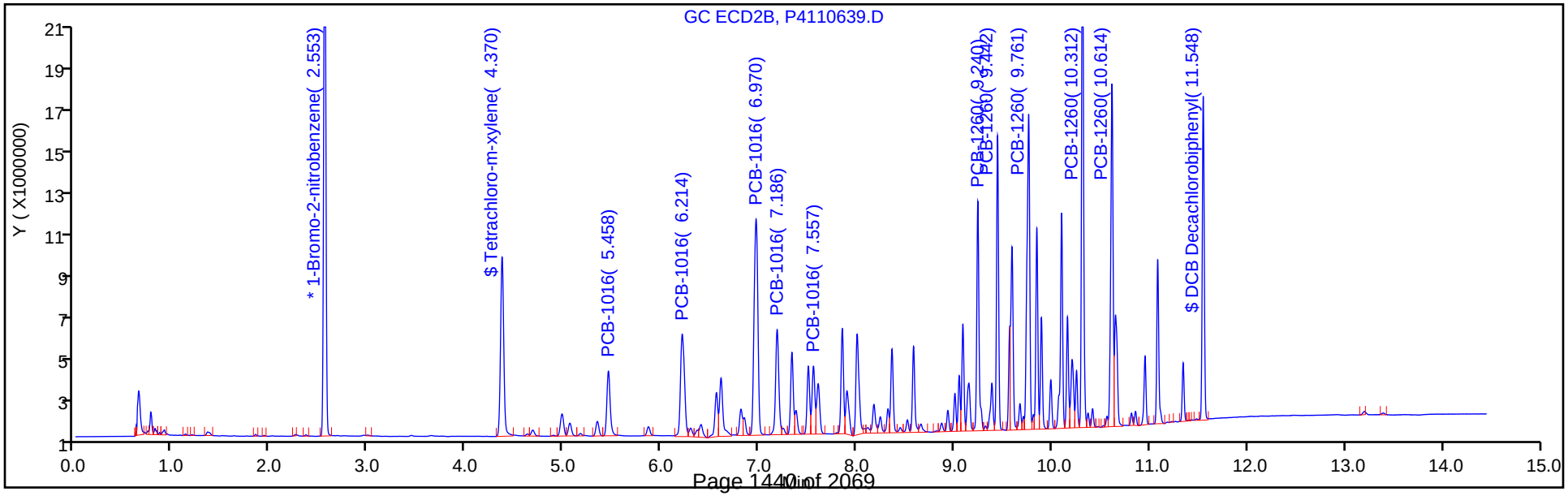
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110639.D

Injection Date:	07-Nov-2018 02:01:07	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	icv 1660			Worklist Smp#:	39
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	39
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 07-Nov-2018 11:10:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110639.D

Injection Date: 07-Nov-2018 02:01:07 Instrument ID: A2HP4

Lims ID: icv 1660

Client ID:

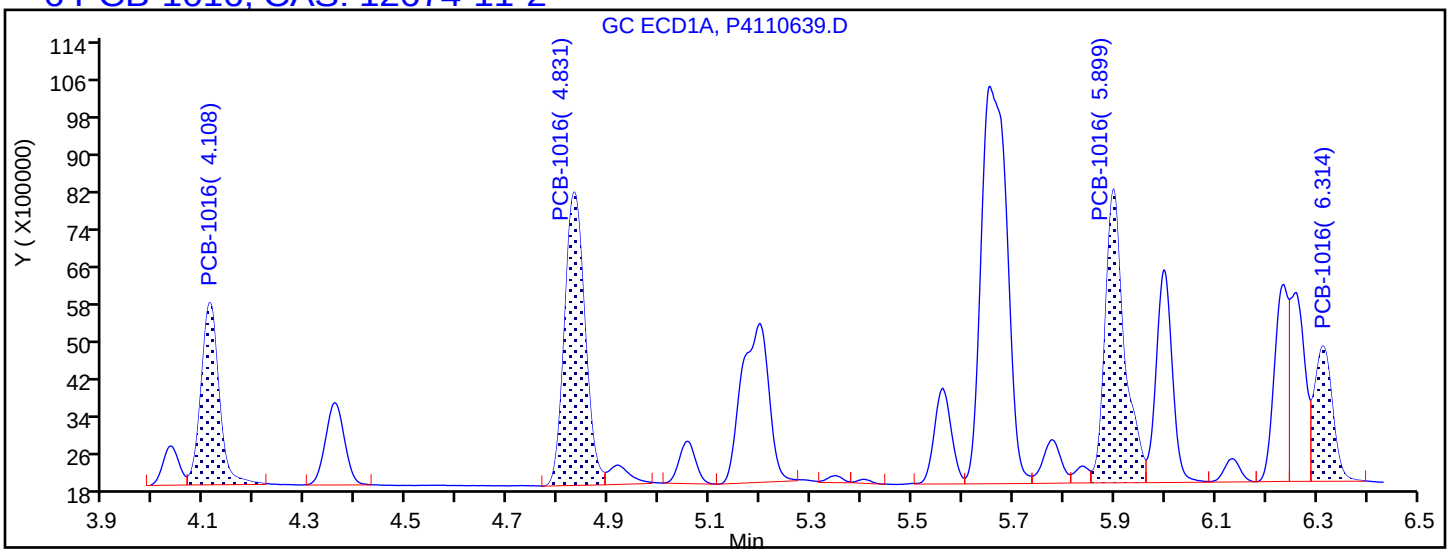
Operator ID: ALS Bottle#: 39 Worklist Smp#: 39

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB4 is Limit Group: GC 8082A IS

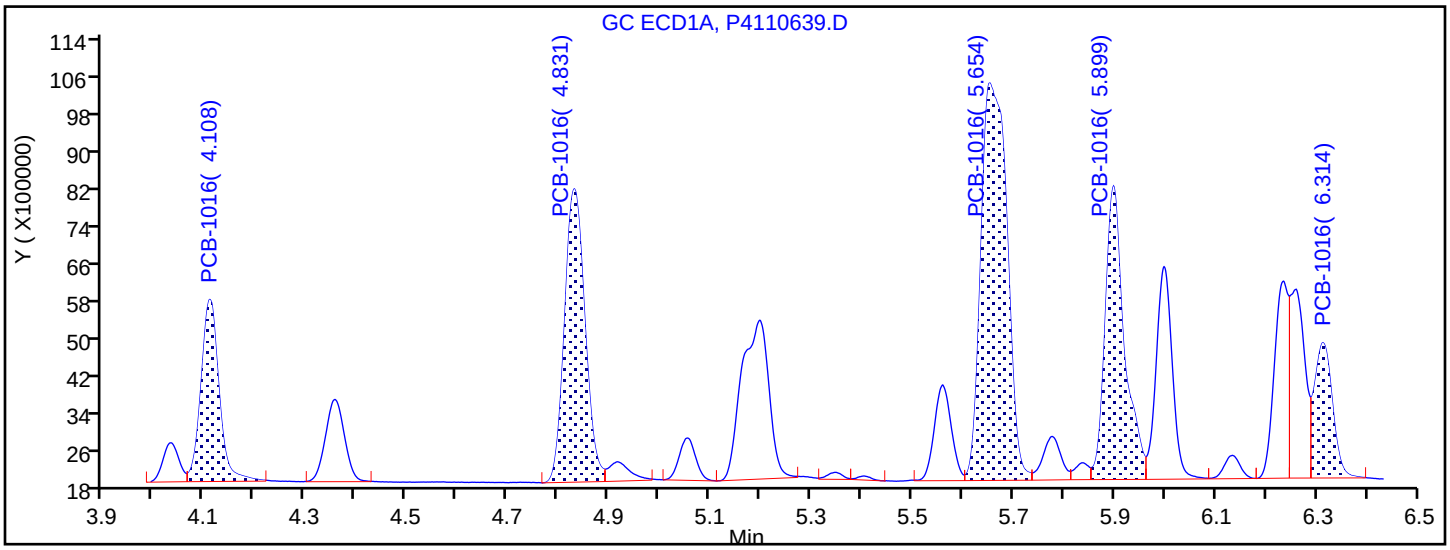
Column: Detector GC ECD1A

6 PCB-1016, CAS: 12674-11-2



Processing Integration Results

4.108	Response = 9740293
4.831	Response = 17699178
5.678	Response = 0
5.899	Response = 16720515
6.314	Response = 7241441



Manual Integration Results

4.108	Response = 9740293	
4.831	Response = 17699178	
5.654	Response = 30624213	M
5.899	Response = 16720515	
6.314	Response = 7241441	

Reviewer: hassl, 07-Nov-2018 06:26:14

Audit Action: Assigned Compound ID Audit Reason:

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/39 Calibration Date: 11/07/2018 02:01

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 22:10

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 23:56

Lab File ID: P4110639.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	0.0197	0.0169		0.427	0.500	-14.5	20.0
PCB-1016 Peak 2	Ave	0.0371	0.0324		0.436	0.500	-12.9	20.0
PCB-1016 Peak 3	Ave	0.0707	0.0645		0.456	0.500	-8.8	20.0
PCB-1016 Peak 4	Ave	0.0303	0.0266		0.439	0.500	-12.2	20.0
PCB-1016 Peak 5	Ave	0.0175	0.0152		0.434	0.500	-13.3	20.0
PCB-1260 Peak 1	Ave	0.0400	0.0405		0.506	0.500	1.2	20.0
PCB-1260 Peak 2	Ave	0.0446	0.0463		0.519	0.500	3.8	20.0
PCB-1260 Peak 3	Ave	0.0632	0.0686		0.543	0.500	8.6	20.0
PCB-1260 Peak 4	Ave	0.0929	0.0854		0.460	0.500	-8.1	20.0
PCB-1260 Peak 5	Ave	0.0672	0.0615		0.458	0.500	-8.4	20.0
Tetrachloro-m-xylene	Ave	1.027	0.9018		0.0220	0.0250	-12.2	20.0
DCB Decachlorobiphenyl	Ave	1.057	1.000		0.0237	0.0250	-5.4	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/39 Calibration Date: 11/07/2018 02:01

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 22:10

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 23:56

Lab File ID: P4110639.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	5.46	5.44	5.48
PCB-1016 Peak 2	6.21	6.20	6.24
PCB-1016 Peak 3	6.97	6.95	6.99
PCB-1016 Peak 4	7.19	7.17	7.21
PCB-1016 Peak 5	7.56	7.54	7.58
PCB-1260 Peak 1	9.24	9.22	9.26
PCB-1260 Peak 2	9.44	9.43	9.46
PCB-1260 Peak 3	9.76	9.74	9.78
PCB-1260 Peak 4	10.31	10.29	10.33
PCB-1260 Peak 5	10.61	10.60	10.63
Tetrachloro-m-xylene	4.37	4.35	4.39
DCB Decachlorobiphenyl	11.55	11.53	11.57

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110639.D
Lims ID: icv 1660
Client ID:
Sample Type: ICV
Inject. Date: 07-Nov-2018 02:01:07 ALS Bottle#: 39 Worklist Smp#: 39
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0081623-039
Operator ID: Instrument ID: A2HP4
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:10:22 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: hassl Date: 07-Nov-2018 06:26:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.060	2.061	-0.001	52921770	0.0500	0.0500	
2	2.553	2.555	-0.002	43534523	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.348	3.349	-0.001	28420370	0.0250	0.0218	
2	4.370	4.371	-0.001	19630444	0.0250	0.0220	
						RPD = 0.82	
6 PCB-1016							a
1	4.108	4.111	-0.003	9740293	0.5000	0.4282	
1	4.831	4.832	-0.001	17699178	0.5000	0.4260	
1	5.654	5.678	-0.024	30624213	0.5000	0.3718	a
1	5.899	5.900	-0.001	16720515	0.5000	0.4354	
1	6.314	6.316	-0.002	7241441	0.5000	0.4188	
		Average of Peak Amounts =				0.4160	
2	5.458	5.460	-0.002	7337474	0.5000	0.4274	
2	6.214	6.216	-0.002	14086669	0.5000	0.4355	
2	6.970	6.971	-0.001	28067045	0.5000	0.4558	
2	7.186	7.187	-0.001	11565359	0.5000	0.4388	
2	7.557	7.560	-0.003	6614887	0.5000	0.4337	
		Average of Peak Amounts =				0.4383	
						RPD = 5.20	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.238	8.240	-0.002	25099427	0.5000	0.5170	
1	8.543	8.545	-0.002	40497564	0.5000	0.5398	
1	8.824	8.826	-0.002	46106541	0.5000	0.5619	
1	9.462	9.464	-0.002	53739494	0.5000	0.4704	
1	9.709	9.711	-0.002	28228162	0.5000	0.5098	
		Average of Peak Amounts =				0.5198	
2	9.240	9.242	-0.002	17642088	0.5000	0.5061	
2	9.442	9.444	-0.002	20150757	0.5000	0.5188	
2	9.761	9.762	-0.001	29874617	0.5000	0.5428	
2	10.312	10.313	-0.001	37159378	0.5000	0.4596	
2	10.614	10.614	0.000	26770312	0.5000	0.4578	
		Average of Peak Amounts =				0.4970	
						RPD = 4.47	
$ 12 DCB Decachlorobiphenyl							
1	10.629	10.630	-0.001	28251775	0.0250	0.0241	
2	11.548	11.549	-0.001	21767637	0.0250	0.0237	
						RPD = 1.73	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SG1660ICV@1.0_00037	Amount Added:	0.50	Units: mL	
SGPCBISTD_00016	Amount Added:	5.00	Units: uL	Run Reagent

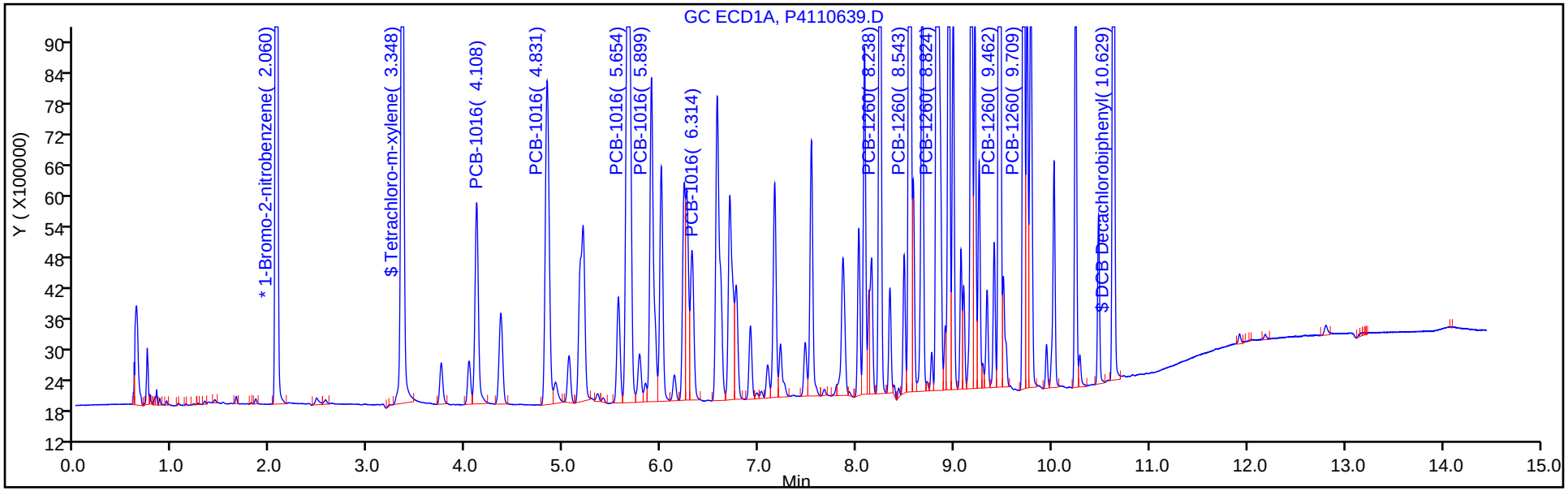
Report Date: 07-Nov-2018 11:10:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

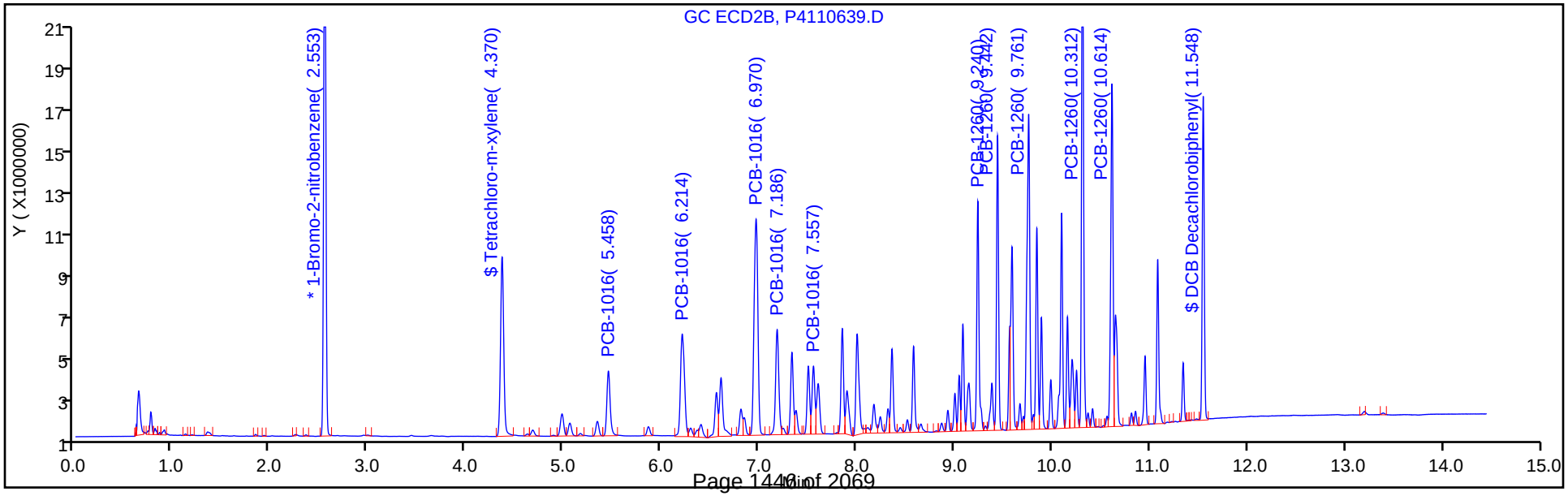
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110639.D

Injection Date:	07-Nov-2018 02:01:07	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	icv 1660			Worklist Smp#:	39
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	39
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/43 Calibration Date: 11/07/2018 07:38

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 19:58

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 21:49

Lab File ID: P4110643.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1254 Peak 1	Ave	0.0356	0.0327		0.459	0.500	-8.2	20.0
PCB-1254 Peak 2	Ave	0.0642	0.0610		0.475	0.500	-5.0	20.0
PCB-1254 Peak 3	Ave	0.0439	0.0442		0.504	0.500	0.7	20.0
PCB-1254 Peak 4	Ave	0.0441	0.0439		0.498	0.500	-0.4	20.0
PCB-1254 Peak 5	Ave	0.0643	0.0656		0.510	0.500	2.0	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/43 Calibration Date: 11/07/2018 07:38

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 19:58

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 21:49

Lab File ID: P4110643.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1254 Peak 1	7.17	7.14	7.18
PCB-1254 Peak 2	8.03	8.00	8.04
PCB-1254 Peak 3	8.35	8.32	8.36
PCB-1254 Peak 4	8.55	8.53	8.56
PCB-1254 Peak 5	8.83	8.81	8.85

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110643.D
Lims ID: icv 1254
Client ID:
Sample Type: ICV
Inject. Date: 07-Nov-2018 07:38:47 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A2HP4
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:10:22 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: grantk Date: 07-Nov-2018 11:02:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.066	2.061	0.005	43441328	0.0500	0.0500	
2	2.555	2.555	0.000	35164896	0.0500	0.0500	
8 PCB-1254							
1	7.168	7.162	0.006	14205828	0.5000	0.4592	
1	8.028	8.023	0.005	26513548	0.5000	0.4751	
1	8.345	8.341	0.004	19207631	0.5000	0.5037	
1	8.547	8.545	0.002	19057474	0.5000	0.4979	
1	8.831	8.827	0.004	28479659	0.5000	0.5099	
		Average of Peak Amounts =				0.4892	
2	8.363	8.363	0.000	10237112	0.5000	0.4568	
2	8.585	8.583	0.002	12088664	0.5000	0.4606	
2	9.051	9.051	0.000	16811749	0.5000	0.4561	
2	9.274	9.275	-0.001	12901669	0.5000	0.4868	
2	9.764	9.765	-0.001	17772987	0.5000	0.4898	
		Average of Peak Amounts =				0.4700	
						RPD = 3.99	

Reagents:

SG1254ICV@1.0_00025 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

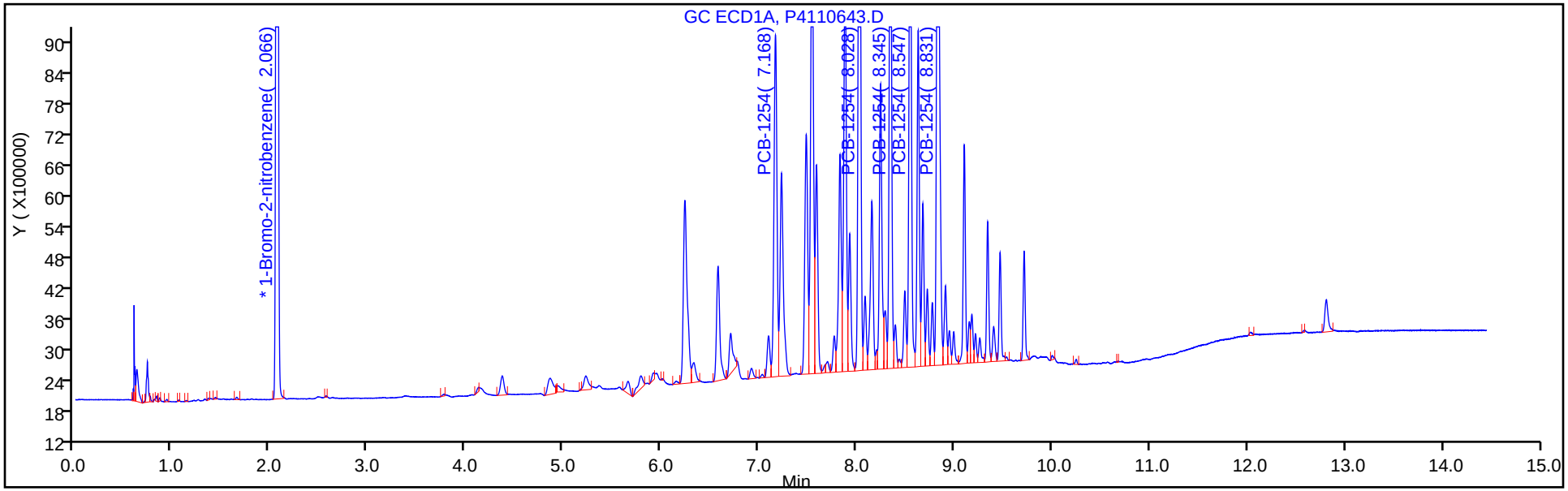
Report Date: 07-Nov-2018 11:11:07 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

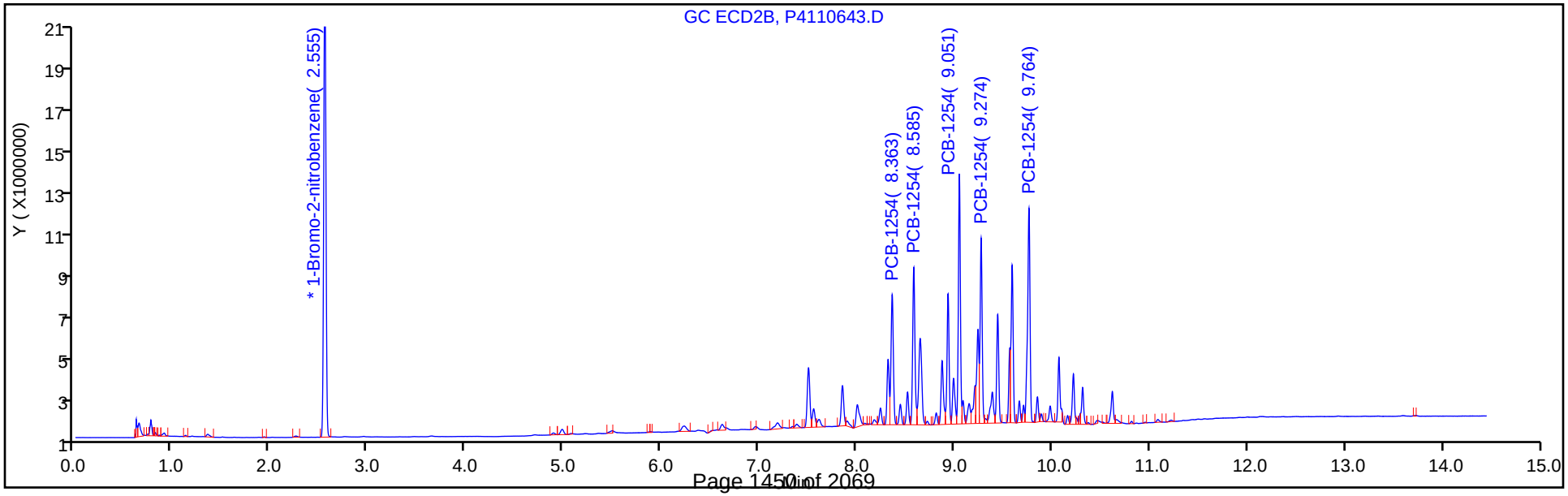
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110643.D

Injection Date:	07-Nov-2018 07:38:47	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	icv 1254			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/43 Calibration Date: 11/07/2018 07:38

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 19:58

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 21:49

Lab File ID: P4110643.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1254 Peak 1	Ave	0.0319	0.0291		0.457	0.500	-8.6	20.0
PCB-1254 Peak 2	Ave	0.0373	0.0344		0.461	0.500	-7.9	20.0
PCB-1254 Peak 3	Ave	0.0524	0.0478		0.456	0.500	-8.8	20.0
PCB-1254 Peak 4	Ave	0.0377	0.0367		0.487	0.500	-2.6	20.0
PCB-1254 Peak 5	Ave	0.0516	0.0505		0.490	0.500	-2.0	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICV 240-353863/43 Calibration Date: 11/07/2018 07:38

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 19:58

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 21:49

Lab File ID: P4110643.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1254 Peak 1	8.36	8.34	8.38
PCB-1254 Peak 2	8.59	8.56	8.60
PCB-1254 Peak 3	9.05	9.03	9.07
PCB-1254 Peak 4	9.27	9.26	9.29
PCB-1254 Peak 5	9.76	9.75	9.78

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110643.D
Lims ID: icv 1254
Client ID:
Sample Type: ICV
Inject. Date: 07-Nov-2018 07:38:47 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A2HP4
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 07-Nov-2018 11:10:22 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK001

First Level Reviewer: grantk Date: 07-Nov-2018 11:02:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.066	2.061	0.005	43441328	0.0500	0.0500	
2	2.555	2.555	0.000	35164896	0.0500	0.0500	
8 PCB-1254							
1	7.168	7.162	0.006	14205828	0.5000	0.4592	
1	8.028	8.023	0.005	26513548	0.5000	0.4751	
1	8.345	8.341	0.004	19207631	0.5000	0.5037	
1	8.547	8.545	0.002	19057474	0.5000	0.4979	
1	8.831	8.827	0.004	28479659	0.5000	0.5099	
		Average of Peak Amounts =				0.4892	
2	8.363	8.363	0.000	10237112	0.5000	0.4568	
2	8.585	8.583	0.002	12088664	0.5000	0.4606	
2	9.051	9.051	0.000	16811749	0.5000	0.4561	
2	9.274	9.275	-0.001	12901669	0.5000	0.4868	
2	9.764	9.765	-0.001	17772987	0.5000	0.4898	
		Average of Peak Amounts =				0.4700	
						RPD = 3.99	

Reagents:

SG1254ICV@1.0_00025 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

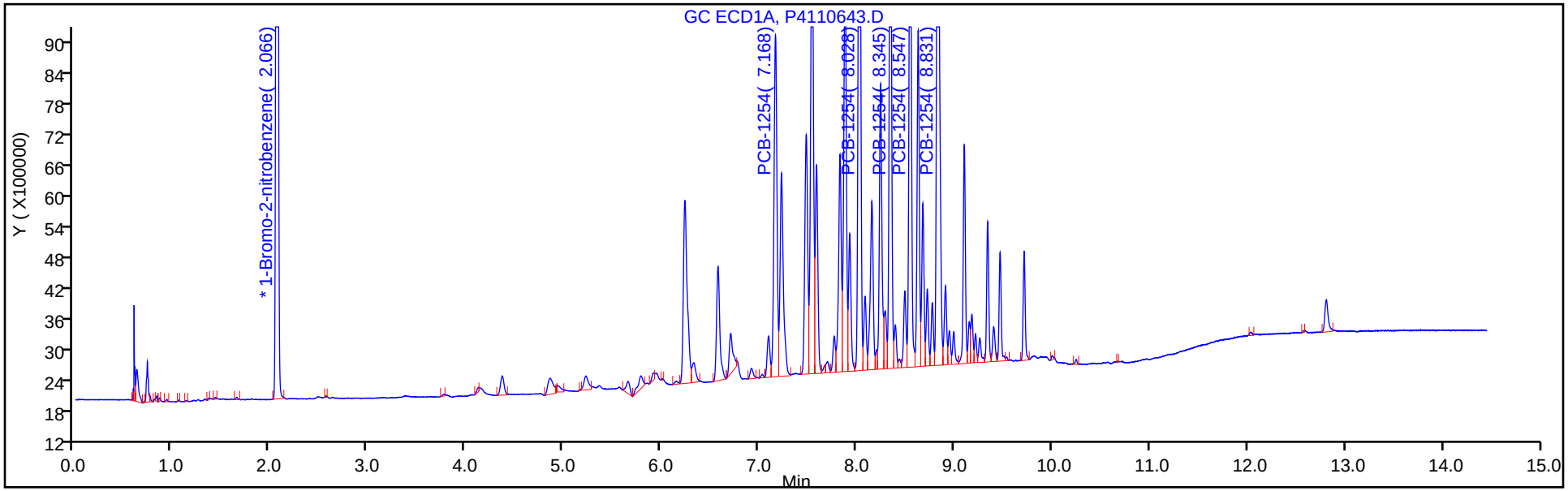
Report Date: 07-Nov-2018 11:11:08 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

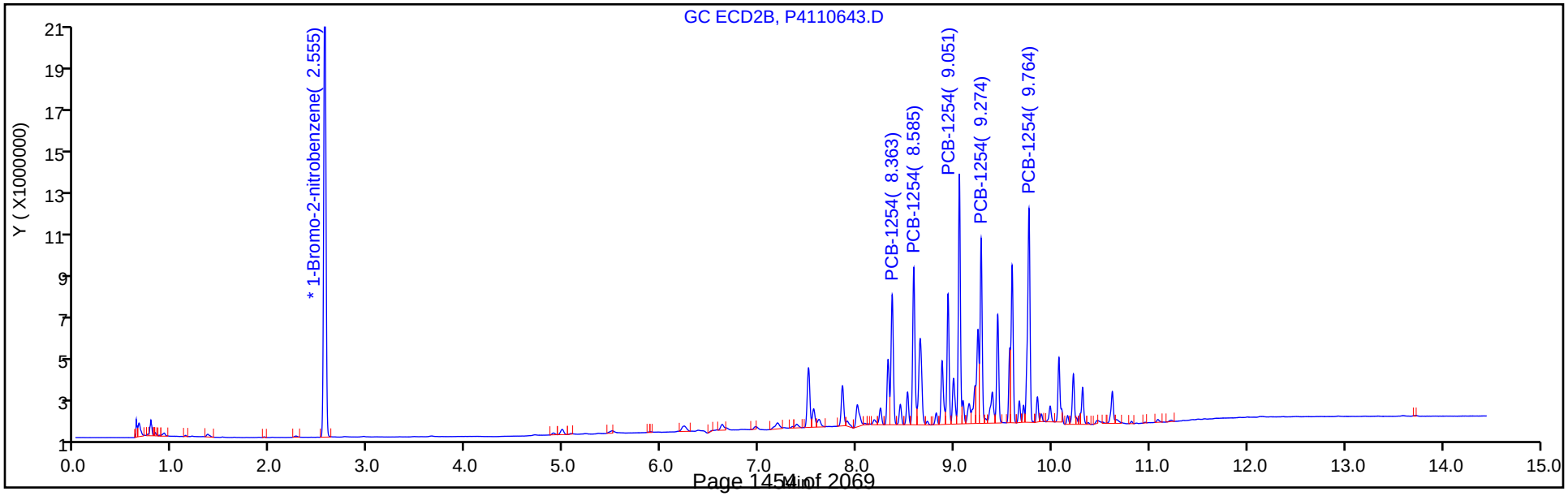
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110643.D

Injection Date:	07-Nov-2018 07:38:47	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	icv 1254			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355036/3 Calibration Date: 11/13/2018 05:48

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 22:10

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 23:56

Lab File ID: P4111303.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	0.0215	0.0169		0.392	0.500	-21.5*	20.0
PCB-1016 Peak 2	Ave	0.0392	0.0309		0.393	0.500	-21.4*	20.0
PCB-1016 Peak 3	Ave	0.0778	0.0734		0.472	0.500	-5.6	20.0
PCB-1016 Peak 4	Ave	0.0363	0.0313		0.431	0.500	-13.8	20.0
PCB-1016 Peak 5	Ave	0.0163	0.0149		0.457	0.500	-8.6	20.0
PCB-1260 Peak 1	Ave	0.0459	0.0418		0.455	0.500	-9.0	20.0
PCB-1260 Peak 2	Ave	0.0709	0.0667		0.470	0.500	-5.9	20.0
PCB-1260 Peak 3	Ave	0.0775	0.0736		0.474	0.500	-5.1	20.0
PCB-1260 Peak 4	Ave	0.1079	0.1039		0.481	0.500	-3.7	20.0
PCB-1260 Peak 5	Ave	0.0523	0.0495		0.473	0.500	-5.4	20.0
Tetrachloro-m-xylene	Ave	1.233	0.9900		0.0201	0.0250	-19.7	20.0
DCB Decachlorobiphenyl	Ave	1.109	0.9569		0.0216	0.0250	-13.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355036/3 Calibration Date: 11/13/2018 05:48

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 22:10

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 23:56

Lab File ID: P4111303.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	4.10	4.08	4.12
PCB-1016 Peak 2	4.82	4.80	4.84
PCB-1016 Peak 3	5.66	5.64	5.68
PCB-1016 Peak 4	5.89	5.87	5.91
PCB-1016 Peak 5	6.30	6.28	6.32
PCB-1260 Peak 1	8.23	8.21	8.25
PCB-1260 Peak 2	8.53	8.52	8.55
PCB-1260 Peak 3	8.81	8.79	8.83
PCB-1260 Peak 4	9.45	9.43	9.47
PCB-1260 Peak 5	9.70	9.68	9.72
Tetrachloro-m-xylene	3.34	3.32	3.36
DCB Decachlorobiphenyl	10.62	10.60	10.64

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111303.D
Lims ID: CCV AR1660
Client ID:
Sample Type: CCVIS
Inject. Date: 13-Nov-2018 05:48:23 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081870-003
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub5

Method: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 06:28:06 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0306

First Level Reviewer: coastc Date: 13-Nov-2018 06:59:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.052	2.052	0.000	55378823	0.0500	0.0500	
2	2.543	2.543	0.000	40669775	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.337	3.337	0.000	27413741	0.0250	0.0201	
2	4.354	4.354	0.000	19714149	0.0250	0.0236	
						RPD = 16.16	
6 PCB-1016							
1	4.097	4.097	0.000	9338815	0.5000	0.3923	
1	4.819	4.819	0.000	17084041	0.5000	0.3930	
1	5.663	5.663	0.000	40668093	0.5000	0.4718	
1	5.886	5.886	0.000	17316267	0.5000	0.4309	
1	6.301	6.301	0.000	8268017	0.5000	0.4570	
		Average of Peak Amounts =				0.4290	
2	5.442	5.442	0.000	6893924	0.5000	0.4299	
2	6.198	6.198	0.000	13892037	0.5000	0.4597	
2	6.957	6.957	0.000	29169946	0.5000	0.5071	
2	7.172	7.172	0.000	11833186	0.5000	0.4806	
2	7.544	7.544	0.000	6886973	0.5000	0.4834	
		Average of Peak Amounts =				0.4721	
						RPD = 9.58	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	8.228	8.228	0.000	23119644	0.5000	0.4551	
1	8.534	8.534	0.000	36915547	0.5000	0.4703	
1	8.813	8.813	0.000	40742512	0.5000	0.4745	
1	9.452	9.452	0.000	57542555	0.5000	0.4813	
1	9.697	9.697	0.000	27412280	0.5000	0.4731	
		Average of Peak Amounts =				0.4708	
2	9.229	9.229	0.000	17193743	0.5000	0.5280	
2	9.430	9.430	0.000	18685438	0.5000	0.5150	
2	9.748	9.748	0.000	26458793	0.5000	0.5146	
2	10.299	10.299	0.000	38879401	0.5000	0.5148	
2	10.601	10.601	0.000	27816672	0.5000	0.5092	
		Average of Peak Amounts =				0.5163	
						RPD = 9.21	
$ 12 DCB Decachlorobiphenyl							
1	10.617	10.617	0.000	26496055	0.0250	0.0216	
2	11.534	11.534	0.000	20454481	0.0250	0.0238	
						RPD = 9.80	
16 1260 Res 1							
1	9.697	9.697	0.000	27412280	NR	NR	
2	8.922	8.922	0.000	1698752	NR	NR	
13 1260 Res 2							a
1	9.734	9.734	0.000	14387993	NR	NR	a
2	0.0	8.971	0.000	0	NR	NR	
15 1260 Res 3							a
1	9.772	9.772	0.000	18504759	NR	NR	a
2	0.0	0.704	0.000	0	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Review Flags

a - User Assigned ID

Reagents:

SG 1260 res_00002	Amount Added:	1.00	Units: mL
SG1660@0.5PPM_00084	Amount Added:	1.00	Units: mL

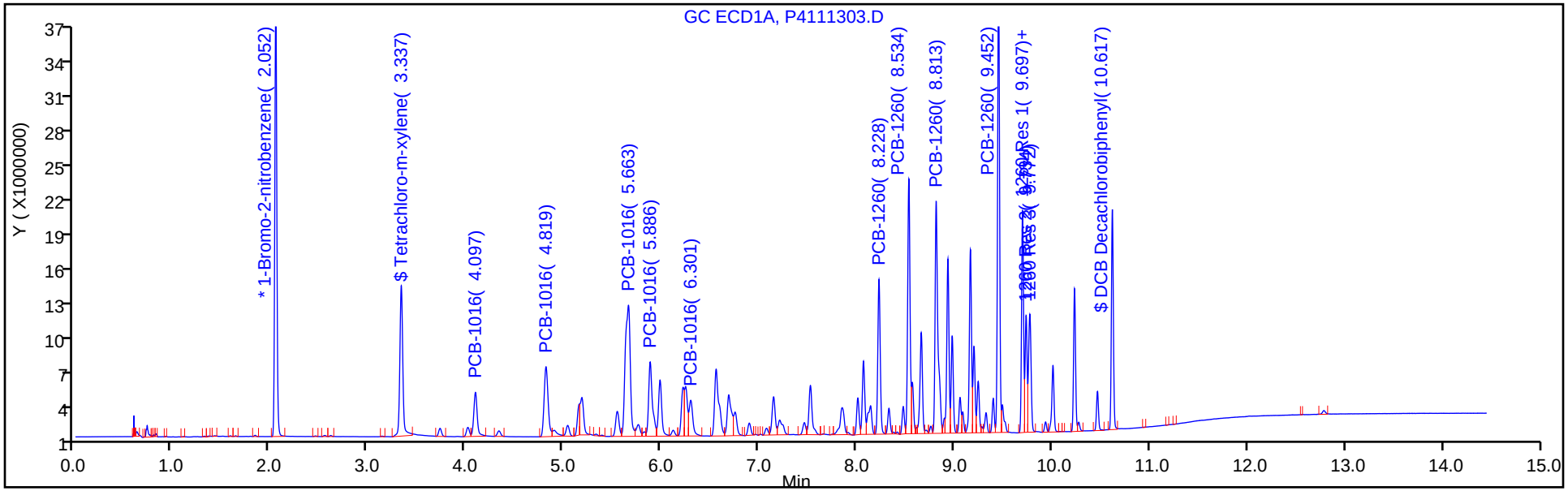
Report Date: 14-Nov-2018 06:28:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

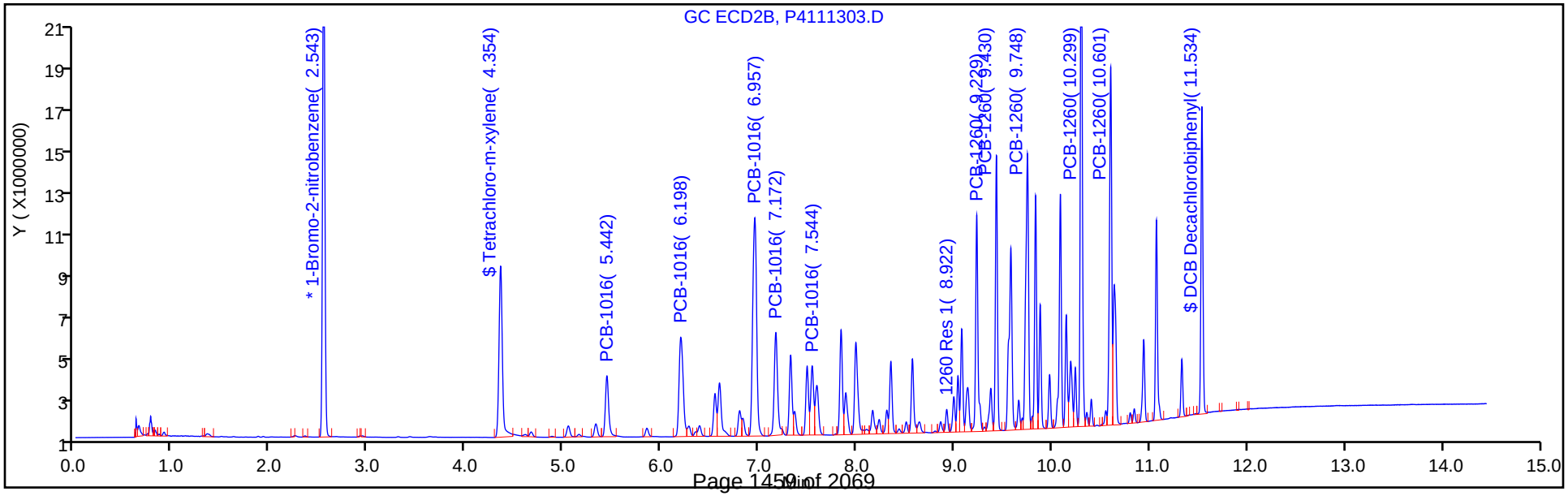
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111303.D

Injection Date:	13-Nov-2018 05:48:23	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	CCV AR1660			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355036/4 Calibration Date: 11/13/2018 06:09

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 13:25

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 15:14

Lab File ID: P4111304.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Ave	0.0248	0.0197		0.397	0.500	-20.5*	20.0
PCB-1232 Peak 2	Ave	0.0183	0.0147		0.401	0.500	-19.8	20.0
PCB-1232 Peak 3	Ave	0.0352	0.0324		0.459	0.500	-8.2	20.0
PCB-1232 Peak 4	Ave	0.0169	0.0140		0.414	0.500	-17.1	20.0
PCB-1232 Peak 5	Ave	0.0069	0.0055		0.399	0.500	-20.3*	20.0
PCB-1262 Peak 1	Ave	0.0542	0.0486		0.449	0.500	-10.3	20.0
PCB-1262 Peak 2	Ave	0.0734	0.0656		0.447	0.500	-10.7	20.0
PCB-1262 Peak 3	Ave	0.0634	0.0573		0.452	0.500	-9.7	20.0
PCB-1262 Peak 4	Ave	0.1326	0.1222		0.461	0.500	-7.8	20.0
PCB-1262 Peak 5	Ave	0.0566	0.0500		0.442	0.500	-11.6	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355036/4 Calibration Date: 11/13/2018 06:09

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 13:25

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 15:14

Lab File ID: P4111304.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	4.09	4.07	4.11
PCB-1232 Peak 2	4.82	4.80	4.83
PCB-1232 Peak 3	5.66	5.64	5.68
PCB-1232 Peak 4	5.88	5.86	5.90
PCB-1232 Peak 5	6.30	6.28	6.32
PCB-1262 Peak 1	8.53	8.51	8.55
PCB-1262 Peak 2	8.93	8.91	8.95
PCB-1262 Peak 3	9.16	9.14	9.18
PCB-1262 Peak 4	9.45	9.43	9.47
PCB-1262 Peak 5	9.73	9.71	9.75

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111304.D
Lims ID: CCV AR1232/1262
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 06:09:18 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081870-004
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub1

Method: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 06:28:08 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0306

First Level Reviewer: coastc Date: 13-Nov-2018 06:59:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.050	2.050	0.000	55900470	0.0500	0.0500	
2	2.540	2.540	0.000	41242126	0.0500	0.0500	
4 PCB-1232							
1	4.093	4.093	0.000	11030036	0.5000	0.3974	
1	4.815	4.815	0.000	8215643	0.5000	0.4010	
1	5.659	5.659	0.000	18094013	0.5000	0.4592	
1	5.882	5.882	0.000	7830116	0.5000	0.4144	
1	6.298	6.298	0.000	3096346	0.5000	0.3986	
		Average of Peak Amounts =				0.4141	
2	5.439	5.439	0.000	8427330	0.5000	0.4483	
2	6.197	6.197	0.000	6851295	0.5000	0.4672	
2	6.953	6.953	0.000	13043215	0.5000	0.4961	
2	7.168	7.168	0.000	5429563	0.5000	0.4575	
2	7.541	7.541	0.000	2828748	0.5000	0.4815	
		Average of Peak Amounts =				0.4701	
						RPD = 12.66	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	8.531	8.531	0.000	27160682	0.5000	0.4486	
1	8.931	8.931	0.000	36647200	0.5000	0.4467	
1	9.162	9.162	0.000	32002515	0.5000	0.4516	
1	9.450	9.450	0.000	68330370	0.5000	0.4609	
1	9.733	9.733	0.000	27971163	0.5000	0.4420	
		Average of Peak Amounts =				0.4499	
2	9.429	9.429	0.000	15383288	0.5000	0.5054	
2	9.830	9.830	0.000	23131681	0.5000	0.5074	
2	10.083	10.083	0.000	21007392	0.5000	0.5142	
2	10.298	10.298	0.000	45113531	0.5000	0.5054	
2	10.596	10.596	0.000	33186297	0.5000	0.4976	
		Average of Peak Amounts =				0.5060	
						RPD = 11.73	

Reagents:

SG3262@0.5PPM_00031 Amount Added: 1.00 Units: mL

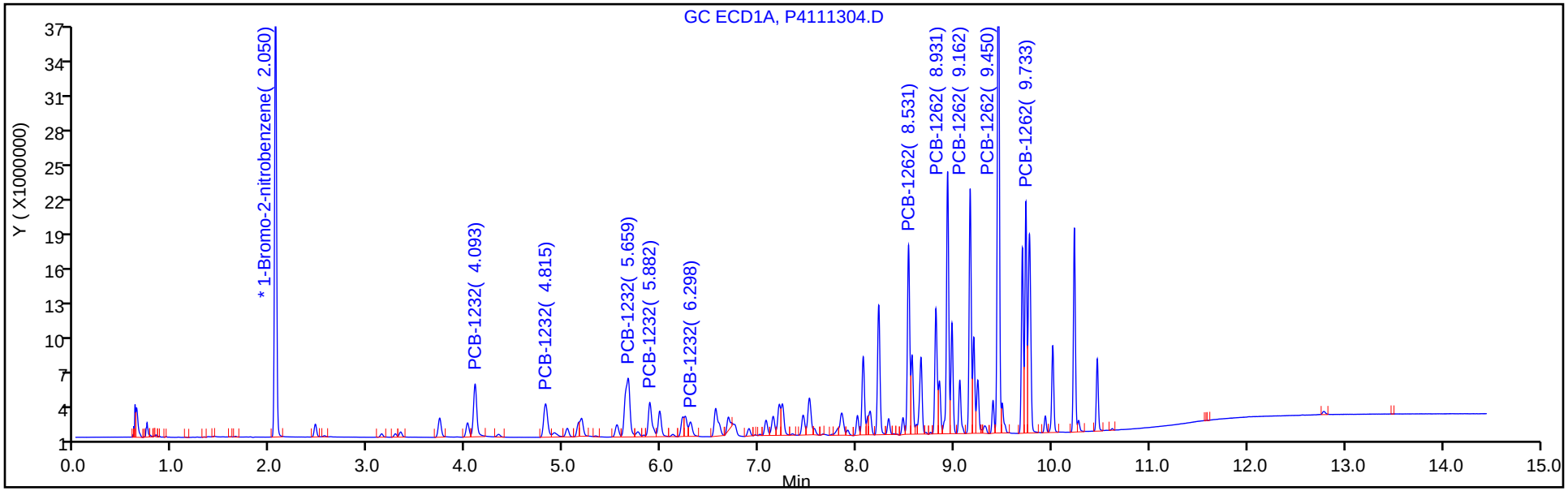
Report Date: 14-Nov-2018 06:28:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

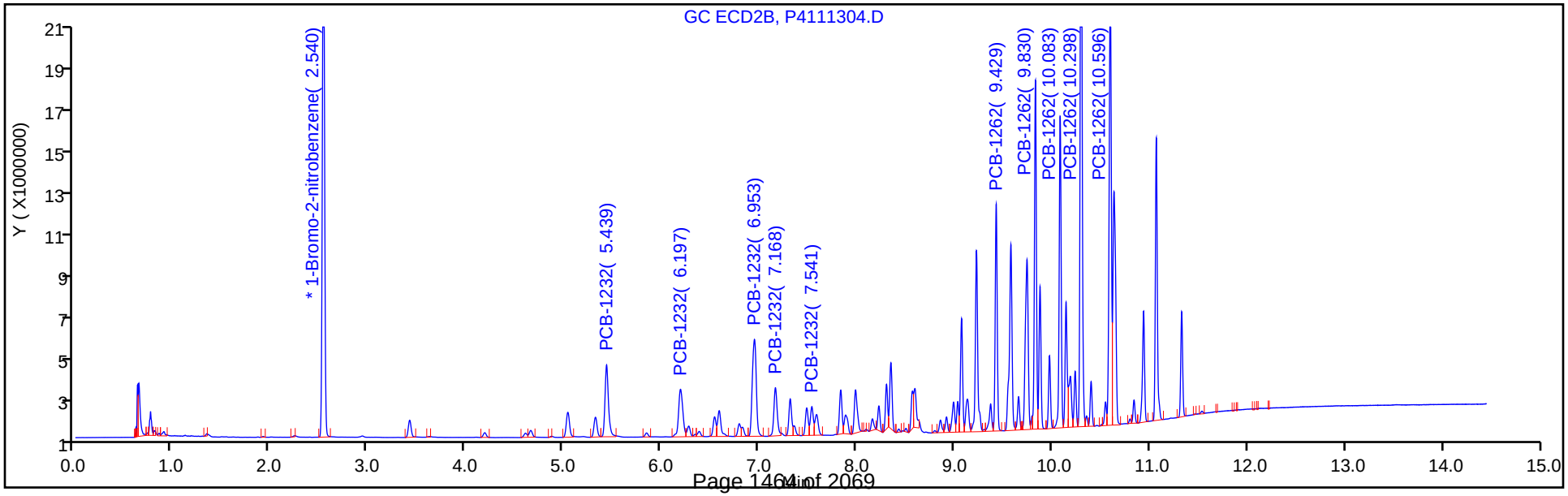
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111304.D

Injection Date:	13-Nov-2018 06:09:18	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	CCV AR1232/1262			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355036/5 Calibration Date: 11/13/2018 06:30

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 15:36

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 17:25

Lab File ID: P4111305.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Ave	0.0171	0.0136		0.395	0.500	-20.9*	20.0
PCB-1242 Peak 2	Ave	0.0306	0.0247		0.403	0.500	-19.4	20.0
PCB-1242 Peak 3	Ave	0.0611	0.0575		0.470	0.500	-5.9	20.0
PCB-1242 Peak 4	Ave	0.0283	0.0248		0.437	0.500	-12.6	20.0
PCB-1242 Peak 5	Ave	0.0119	0.0116		0.487	0.500	-2.6	20.0
PCB-1268 Peak 1	Ave	0.1566	0.1487		0.475	0.500	-5.1	20.0
PCB-1268 Peak 2	Ave	0.1544	0.1439		0.466	0.500	-6.8	20.0
PCB-1268 Peak 3	Ave	0.1346	0.1229		0.457	0.500	-8.7	20.0
PCB-1268 Peak 4	Ave	0.0535	0.0490		0.458	0.500	-8.4	20.0
PCB-1268 Peak 5	Ave	0.4039	0.3624		0.449	0.500	-10.3	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355036/5 Calibration Date: 11/13/2018 06:30

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 15:36

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 17:25

Lab File ID: P4111305.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	4.10	4.08	4.11
PCB-1242 Peak 2	4.82	4.80	4.84
PCB-1242 Peak 3	5.66	5.64	5.68
PCB-1242 Peak 4	5.88	5.87	5.90
PCB-1242 Peak 5	6.30	6.28	6.32
PCB-1268 Peak 1	9.73	9.72	9.75
PCB-1268 Peak 2	9.77	9.75	9.79
PCB-1268 Peak 3	9.93	9.92	9.95
PCB-1268 Peak 4	10.23	10.21	10.25
PCB-1268 Peak 5	10.47	10.45	10.48

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111305.D
Lims ID: CCV AR1242/1268
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 06:30:03 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081870-005
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub2

Method: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 06:28:10 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0306

First Level Reviewer: coastc Date: 13-Nov-2018 07:00:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.050	2.050	0.000	55304075	0.0500	0.0500	
2	2.541	2.541	0.000	40707078	0.0500	0.0500	
5 PCB-1242							
1	4.095	4.095	0.000	7491347	0.5000	0.3954	
1	4.816	4.816	0.000	13632765	0.5000	0.4029	
1	5.662	5.662	0.000	31797114	0.5000	0.4703	
1	5.884	5.884	0.000	13703846	0.5000	0.4371	
1	6.300	6.300	0.000	6432739	0.5000	0.4872	
		Average of Peak Amounts =				0.4386	
2	5.442	5.442	0.000	5798619	0.5000	0.4290	
2	6.198	6.198	0.000	11038695	0.5000	0.4741	
2	6.954	6.954	0.000	22870121	0.5000	0.5067	
2	7.169	7.169	0.000	9338510	0.5000	0.4839	
2	7.542	7.542	0.000	5497113	0.5000	0.4916	
		Average of Peak Amounts =				0.4771	
						RPD = 8.41	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	9.734	9.734	0.000	82223662	0.5000	0.4746	
1	9.767	9.767	0.000	79571544	0.5000	0.4659	
1	9.934	9.934	0.000	67984538	0.5000	0.4566	
1	10.231	10.231	0.000	27122427	0.5000	0.4581	
1	10.465	10.465	0.000	200435882	0.5000	0.4487	
		Average of Peak Amounts =				0.4608	
2	10.597	10.597	0.000	56332955	0.5000	0.5247	
2	10.635	10.635	0.000	55426105	0.5000	0.5115	
2	10.841	10.841	0.000	48106047	0.5000	0.5156	
2	11.069	11.069	0.000	19611668	0.5000	0.4968	
2	11.330	11.330	0.000	150997123	0.5000	0.5063	
		Average of Peak Amounts =				0.5110	
						RPD = 10.33	

Reagents:

SG4268@0.5PPM_00030 Amount Added: 1.00 Units: mL

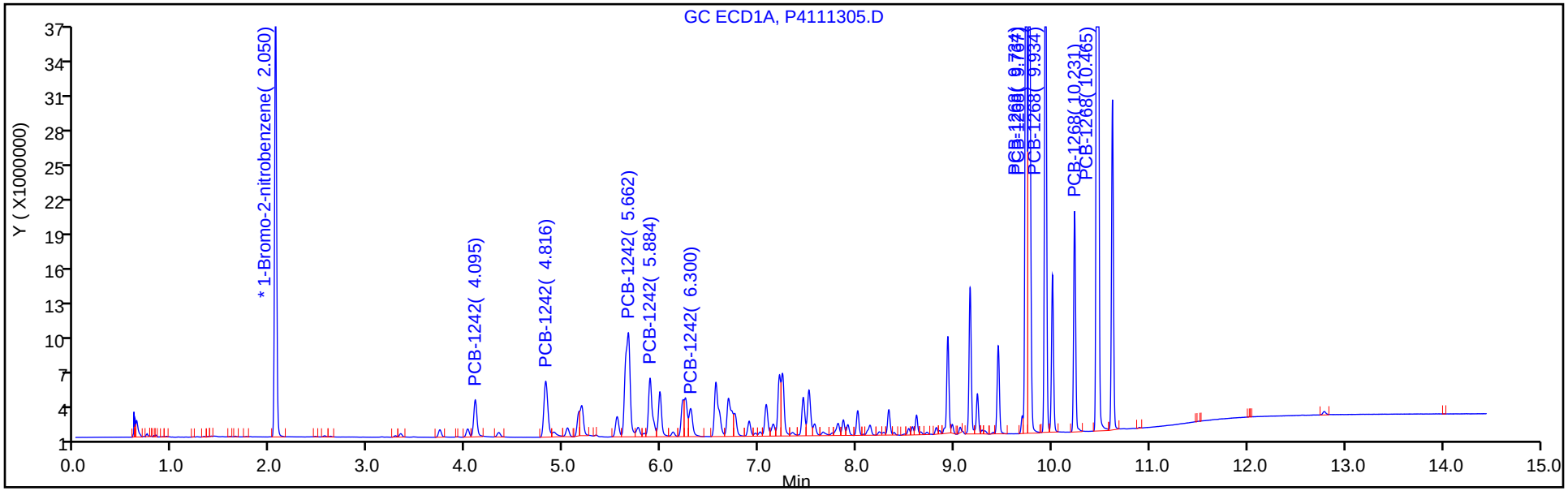
Report Date: 14-Nov-2018 06:28:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

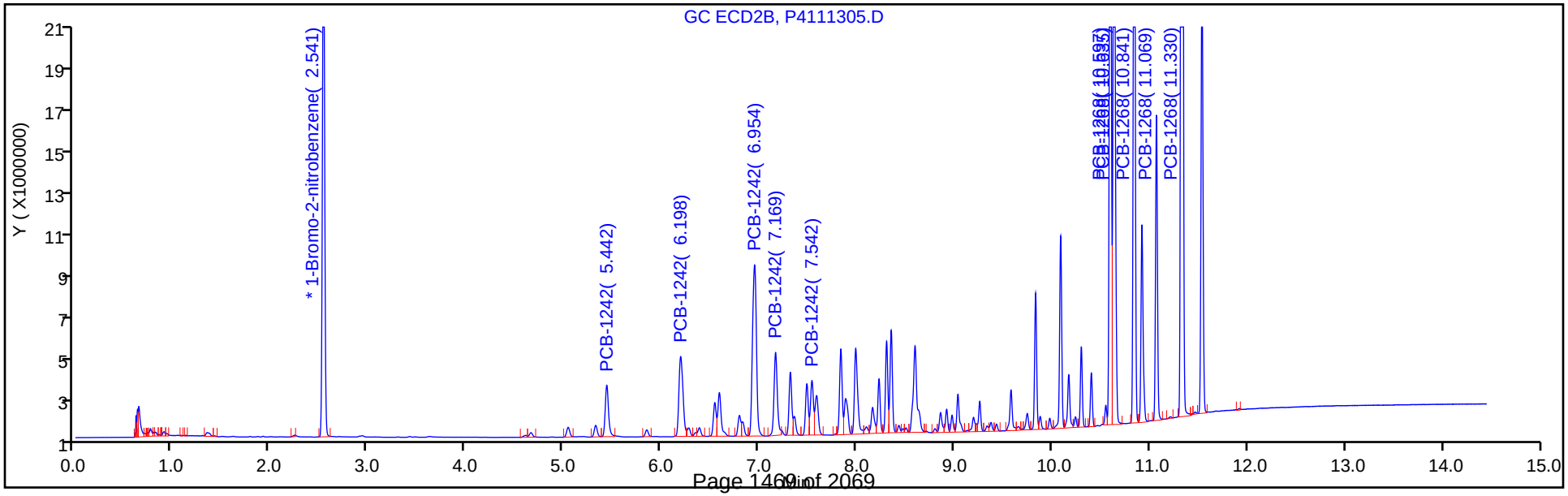
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111305.D

Injection Date:	13-Nov-2018 06:30:03	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	CCV AR1242/1268			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355036/6 Calibration Date: 11/13/2018 06:50

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 17:48

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 19:37

Lab File ID: P4111306.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Ave	0.0167	0.0132		0.394	0.500	-21.1*	20.0
PCB-1248 Peak 2	Lin1		0.0385		0.444	0.500	-11.3	20.0
PCB-1248 Peak 3	Ave	0.0380	0.0339		0.445	0.500	-10.9	20.0
PCB-1248 Peak 4	Ave	0.0316	0.0283		0.446	0.500	-10.7	20.0
PCB-1248 Peak 5	Ave	0.0206	0.0180		0.438	0.500	-12.3	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355036/6 Calibration Date: 11/13/2018 06:50

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 17:48

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 19:37

Lab File ID: P4111306.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	4.82	4.80	4.84
PCB-1248 Peak 2	6.56	6.54	6.58
PCB-1248 Peak 3	7.21	7.19	7.23
PCB-1248 Peak 4	7.52	7.50	7.54
PCB-1248 Peak 5	8.01	7.99	8.03

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111306.D
Lims ID: CCV AR1248
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 06:50:35 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081870-006
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub3

Method: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 06:28:12 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0306

First Level Reviewer: coastc Date: 13-Nov-2018 07:09:31

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.052	2.052	0.000	58089833	0.0500	0.0500	
2	2.542	2.542	0.000	42717453	0.0500	0.0500	
7 PCB-1248							
1	4.816	4.816	0.000	7640526	0.5000	0.3943	
1	6.559	6.559	0.000	22358546	0.5000	0.4437	
1	7.212	7.212	0.000	19682453	0.5000	0.4455	
1	7.516	7.516	0.000	16416445	0.5000	0.4465	
1	8.012	8.012	0.000	10466911	0.5000	0.4384	
		Average of Peak Amounts =				0.4337	
2	6.197	6.197	0.000	6034424	0.5000	0.4560	
2	6.954	6.954	0.000	15152687	0.5000	0.5013	
2	7.840	7.840	0.000	11819396	0.5000	0.4763	
2	8.355	8.355	0.000	14377600	0.5000	0.4853	
2	9.037	9.037	0.000	7765709	0.5000	0.4778	
		Average of Peak Amounts =				0.4793	
						RPD = 10.01	

Reagents:

SG1248@0.5ppm_00037 Amount Added: 1.00 Units: mL

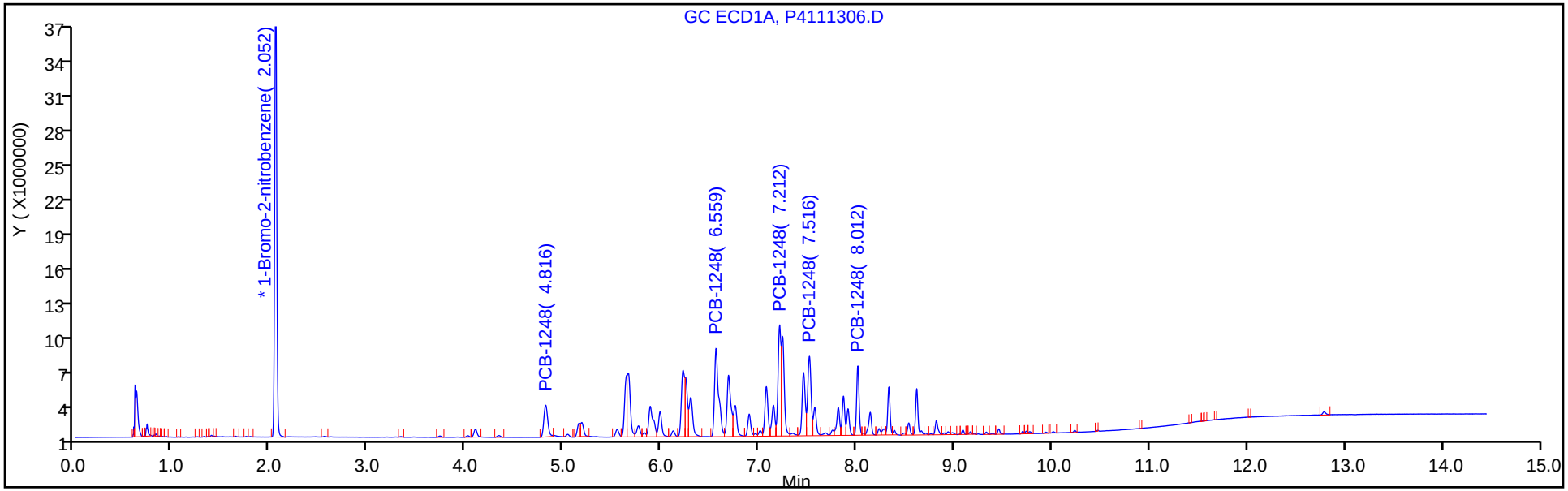
Report Date: 14-Nov-2018 06:28:12 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

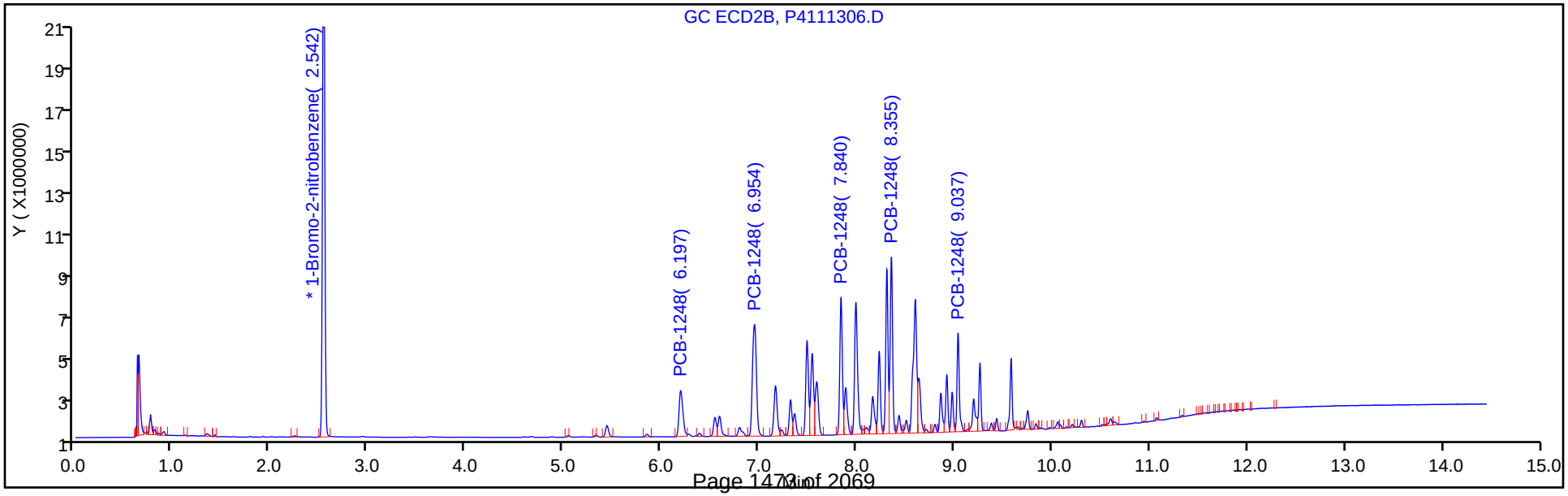
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111306.D

Injection Date:	13-Nov-2018 06:50:35	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	CCV AR1248			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355036/7 Calibration Date: 11/13/2018 07:11

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 19:58

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 21:49

Lab File ID: P4111307.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Ave	0.0118	0.0101		0.426	0.500	-14.9	20.0
PCB-1221 Peak 2	Ave	0.0077	0.0066		0.430	0.500	-14.1	20.0
PCB-1221 Peak 3	Ave	0.0289	0.0251		0.434	0.500	-13.1	20.0
PCB-1254 Peak 1	Ave	0.0356	0.0300		0.421	0.500	-15.8	20.0
PCB-1254 Peak 2	Ave	0.0642	0.0596		0.464	0.500	-7.2	20.0
PCB-1254 Peak 3	Ave	0.0439	0.0426		0.485	0.500	-3.0	20.0
PCB-1254 Peak 4	Ave	0.0441	0.0403		0.457	0.500	-8.5	20.0
PCB-1254 Peak 5	Ave	0.0643	0.0599		0.466	0.500	-6.8	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: CCV 240-355036/7 Calibration Date: 11/13/2018 07:11

Instrument ID: A2HP4 Calib Start Date: 11/06/2018 19:58

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/06/2018 21:49

Lab File ID: P4111307.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	3.73	3.71	3.75
PCB-1221 Peak 2	4.02	4.00	4.03
PCB-1221 Peak 3	4.09	4.07	4.11
PCB-1254 Peak 1	7.14	7.12	7.16
PCB-1254 Peak 2	8.01	7.99	8.03
PCB-1254 Peak 3	8.33	8.31	8.34
PCB-1254 Peak 4	8.53	8.51	8.55
PCB-1254 Peak 5	8.81	8.79	8.83

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111307.D
Lims ID: CCV AR1221/1254
Client ID:
Sample Type: CCV
Inject. Date: 13-Nov-2018 07:11:29 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081870-007
Operator ID: Instrument ID: A2HP4
Sublist: chrom-PCB4 is*sub4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 06:28:13 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0306

First Level Reviewer: coastc Date: 13-Nov-2018 07:32:22

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.051	2.051	0.000	56213584	0.0500	0.0500	
2	2.540	2.540	0.000	41276476	0.0500	0.0500	
3 PCB-1221							
1	3.729	3.729	0.000	5654684	0.5000	0.4256	
1	4.015	4.015	0.000	3706504	0.5000	0.4297	
1	4.090	4.090	0.000	14119800	0.5000	0.4345	
		Average of Peak Amounts =				0.4299	
2	5.041	5.041	0.000	4312849	0.5000	0.4811	
2	5.325	5.325	0.000	2881841	0.5000	0.4800	
2	5.437	5.437	0.000	10570344	0.5000	0.4704	
		Average of Peak Amounts =				0.4772	
						RPD = 10.42	
8 PCB-1254							
1	7.143	7.143	0.000	16851899	0.5000	0.4209	
1	8.007	8.007	0.000	33514897	0.5000	0.4641	
1	8.325	8.325	0.000	23918289	0.5000	0.4848	
1	8.529	8.529	0.000	22653446	0.5000	0.4574	
1	8.810	8.810	0.000	33668512	0.5000	0.4658	
		Average of Peak Amounts =				0.4586	
2	8.345	8.345	0.000	13190707	0.5000	0.5014	
2	8.567	8.567	0.000	15486698	0.5000	0.5027	
2	9.033	9.033	0.000	22261492	0.5000	0.5146	
2	9.257	9.257	0.000	15522132	0.5000	0.4990	
2	9.747	9.747	0.000	21050540	0.5000	0.4943	
		Average of Peak Amounts =				0.5024	
						RPD = 9.12	

Reagents:

SG2154@0.5PPM_00041 Amount Added: 1.00 Units: mL

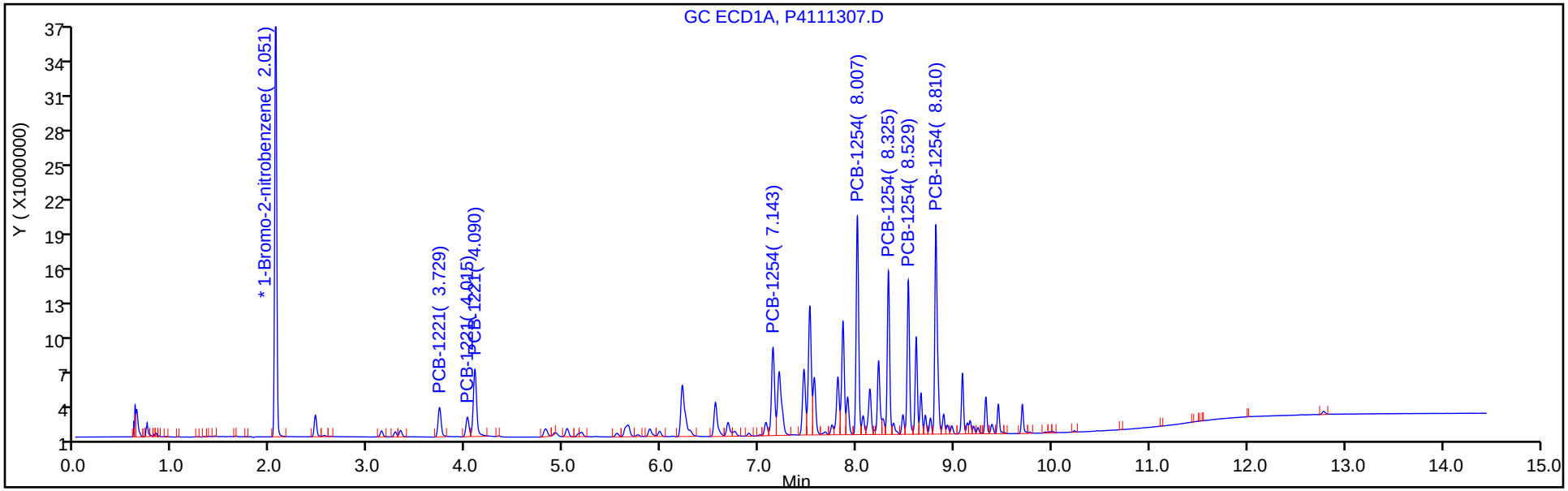
Report Date: 14-Nov-2018 06:28:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

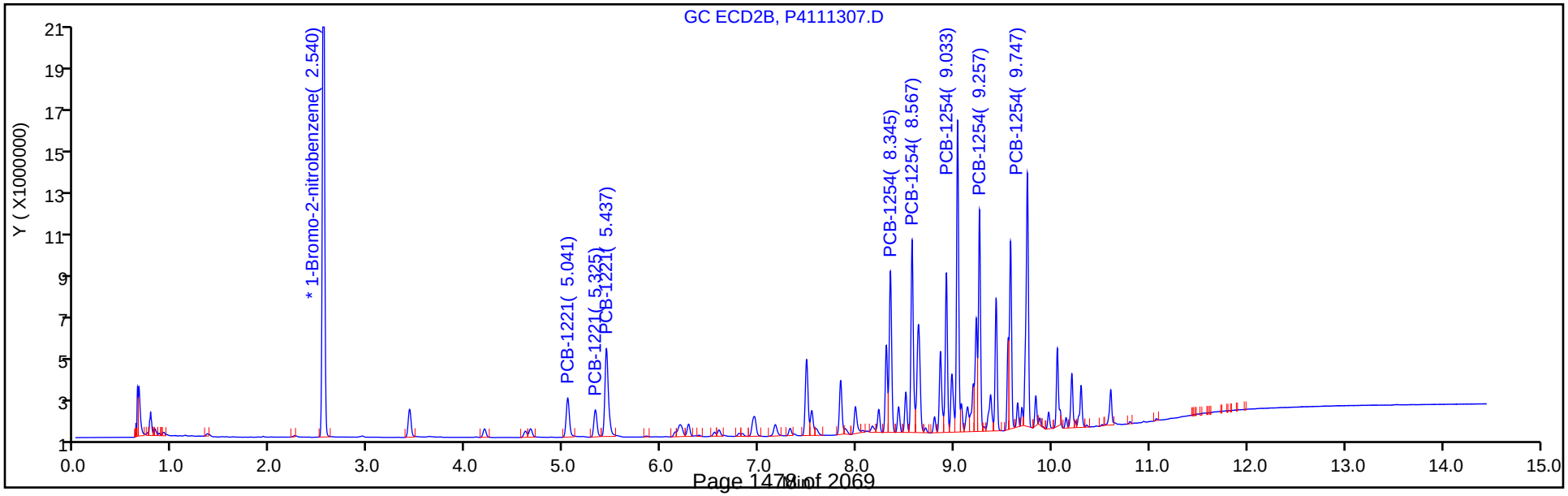
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111307.D

Injection Date:	13-Nov-2018 07:11:29	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	CCV AR1221/1254			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-354524/16-A

Matrix: Water | Lab File ID: P4111309.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3520C | Date Extracted: 11/09/2018 08:13

Sample wt/vol: 1000(mL) | Date Analyzed: 11/13/2018 07:53

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-1 (0.53mm) ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 355036 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor-1016	0.056	U	0.10	0.056
11104-28-2	Aroclor-1221	0.057	U	0.10	0.057
11141-16-5	Aroclor-1232	0.074	U	0.10	0.074
53469-21-9	Aroclor-1242	0.076	U	0.10	0.076
12672-29-6	Aroclor-1248	0.050	U	0.10	0.050
11097-69-1	Aroclor-1254	0.040	U	0.10	0.040
11096-82-5	Aroclor-1260	0.046	U	0.10	0.046

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	105		22-120
2051-24-3	DCB Decachlorobiphenyl	82		10-120

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111309.D
Lims ID: MB 240-354524/16-A
Client ID:
Sample Type: MB
Inject. Date: 13-Nov-2018 07:53:21 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081870-009
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 06:27:30 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0306

First Level Reviewer: coastc Date: 14-Nov-2018 06:08:34

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
S 1 Polychlorinated biphenyls, Total							
1		1.000				ND	
* 14 1-Bromo-2-nitrobenzene							
1	2.050	2.051	-0.001	54023776	0.0500	0.0500	
2	2.540	2.540	-0.001	39154424	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.334	3.337	-0.003	139995390	0.1000	0.1051	
2	4.349	4.354	-0.005	103242014	0.1000	0.1284	
						RPD = 19.97	
3 PCB-1221							
1		3.729				ND	
1		4.015					
1		4.090					
2		5.041					
2		5.325					
2		5.437					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
4 PCB-1232							
1		4.093				ND	
1		4.815					
1		5.659					
1		5.882					
1		6.298					
2		5.439					
2		6.197					
2		6.953					
2		7.168					
2		7.541					
5 PCB-1242							
1		4.095				ND	
1		4.816					
1		5.662					
1		5.884					
1		6.300					
2		5.442					
2		6.198					
2		6.954					
2		7.169					
2		7.542					
6 PCB-1016							
1		4.097				ND	
1		4.819					
1		5.663					
1		5.886					
1		6.301					
2		5.442					
2		6.198					
2		6.957					
2		7.172					
2		7.544					
7 PCB-1248							
1		4.816				ND	
1		6.559					
1		7.212					
1		7.516					
1		8.012					
2		6.197					
2		6.954					
2		7.840					
2		8.355					
2		9.037					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
8 PCB-1254							
1		7.143				ND	
1		8.007					
1		8.325					
1		8.529					
1		8.810					
2		8.345					
2		8.567					
2		9.033					
2		9.257					
2		9.747					
10 PCB-1260							
1		8.228				ND	
1		8.534					
1		8.813					
1		9.452					
1		9.697					
2		9.229					
2		9.430					
2		9.748					
2		10.299					
2		10.601					
9 PCB-1262							
1		8.531				ND	
1		8.931					
1		9.162					
1		9.450					
1		9.733					
2		9.429					
2		9.830					
2		10.083					
2		10.298					
2		10.596					
11 PCB-1268							
1		9.734				ND	
1		9.767					
1		9.934					
1		10.231					
1		10.465					
2		10.597					
2		10.635					
2		10.841					
2		11.069					
2		11.330					
$ 12 DCB Decachlorobiphenyl							
1	10.615	10.617	-0.002	98007390	0.1000	0.0818	
2	11.532	11.534	-0.002	73570150	0.1000	0.0889	
						RPD = 8.32	
16 1260 Res 1							
1	9.715	9.697	0.017	52057		NR	
2	8.919	8.922	-0.003	42382		NR	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
13 1260 Res 2							
1		9.734				ND	
2		8.971					
15 1260 Res 3							
1		9.772				ND	
2		0.704					

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

SGPCBISTD_00015 Amount Added: 5.00 Units: uL Run Reagent

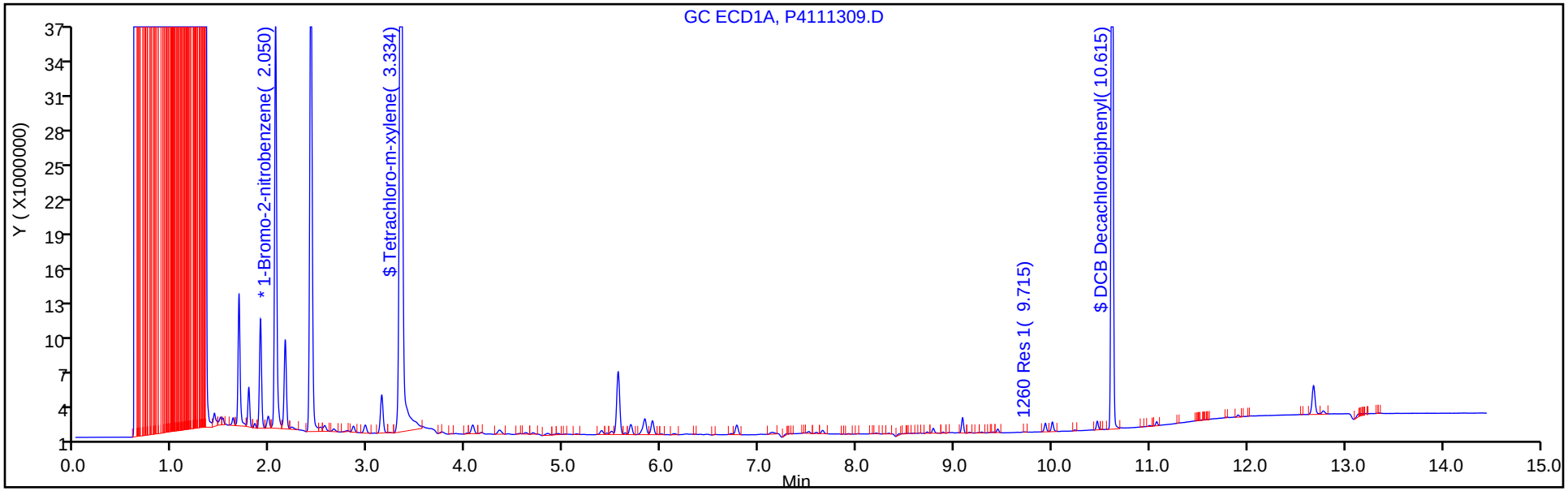
Report Date: 14-Nov-2018 06:27:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

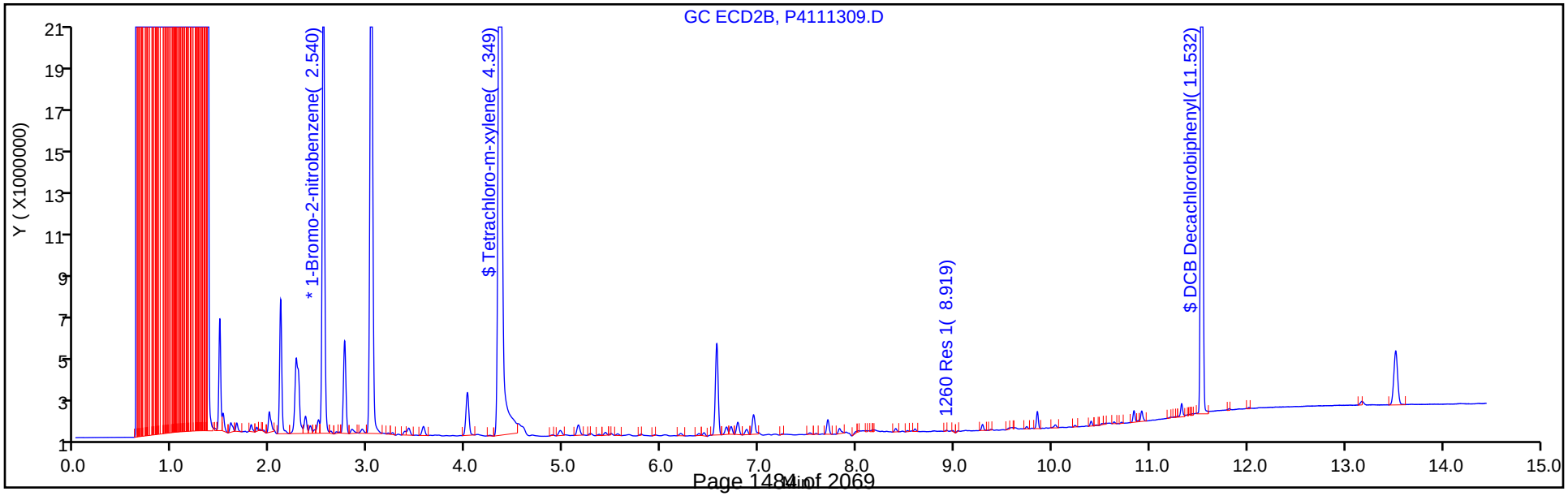
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111309.D

Injection Date:	13-Nov-2018 07:53:21	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	MB 240-354524/16-A			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111309.D
Lims ID: MB 240-354524/16-A
Client ID:
Sample Type: MB
Inject. Date: 13-Nov-2018 07:53:21 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081870-009
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 06:27:30 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0306

First Level Reviewer: coastc Date: 14-Nov-2018 06:08:34

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.1000	0.1051	105.07
$ 12 DCB Decachlorobiphenyl	0.1000	0.0818	81.79

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.1000	0.1284	128.38
$ 12 DCB Decachlorobiphenyl	0.1000	0.0889	88.89

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-354879/23-A

Matrix: Solid | Lab File ID: P12111351.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3540C | Date Extracted: 11/12/2018 08:27

Sample wt/vol: 10(g) | Date Analyzed: 11/13/2018 22:13

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-2 (0.53mm) ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 355209 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor-1016	22	U	50	22
11104-28-2	Aroclor-1221	24	U	50	24
11141-16-5	Aroclor-1232	23	U	50	23
53469-21-9	Aroclor-1242	19	U	50	19
12672-29-6	Aroclor-1248	24	U	50	24
11097-69-1	Aroclor-1254	23	U	50	23
11096-82-5	Aroclor-1260	22	U	50	22

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	82		14-128
2051-24-3	DCB Decachlorobiphenyl	90		10-132

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111351.D
Lims ID: MB 240-354879/23-A
Client ID:
Sample Type: MB
Inject. Date: 13-Nov-2018 22:13:44 ALS Bottle#: 51 Worklist Smp#: 14
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-014
Operator ID: Instrument ID: A2HP12

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:23:34 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
S 1 Polychlorinated biphenyls, Total							
1		1.000				ND	
* 14 1-Bromo-2-nitrobenzene							
1	2.789	2.800	-0.011	144196632	0.0500	0.0500	
2	3.305	3.312	-0.006	108673852	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.119	4.122	-0.003	42567660	0.0200	0.0164	
2	4.719	4.721	-0.002	32912298	0.0200	0.0163	
						RPD = 0.19	
3 PCB-1221							
1		4.415				ND	
1		4.621					
1		4.676					
2		5.188					
2		5.391					
2		5.474					
6 PCB-1016							
1		4.676				ND	
1		5.175					
1		5.794					
1		5.964					
1		6.290					
2		5.474					
2		6.047					
2		6.654					
2		6.826					
2		7.150					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
5 PCB-1242							
1		4.676				ND	
1		5.173					
1		5.793					
1		5.963					
1		6.494					
2		5.473					
2		6.047					
2		6.653					
2		6.824					
2		7.150					
4 PCB-1232							
1		4.676				ND	
1		5.174					
1		5.795					
1		5.965					
1		6.290					
2		5.474					
2		6.048					
2		6.654					
2		6.825					
2		7.150					
7 PCB-1248							
1		5.176				ND	
1		6.497					
1		7.054					
1		7.293					
1		7.768					
2		6.047					
2		6.653					
2		7.424					
2		7.951					
2		8.726					
8 PCB-1254							
1		7.299				ND	
1		7.767					
1		8.099					
1		8.323					
1		8.647					
2		7.944					
2		8.191					
2		8.725					
2		9.004					
2		9.626					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1		7.993				ND	
1		8.325					
1		8.788					
1		9.431					
1		9.747					
2		8.962					
2		9.221					
2		9.741					
2		10.372					
2		10.752					
9 PCB-1262							
1		7.994				ND	
1		8.326					
1		9.069					
1		9.431					
1		9.799					
2		9.221					
2		9.740					
2		10.079					
2		10.372					
2		10.751					
11 PCB-1268							
1		9.798				ND	
1		9.841					
1		10.069					
1		10.458					
1		10.758					
2		10.751					
2		10.798					
2		11.048					
2		11.330					
2		11.633					
$ 12 DCB Decachlorobiphenyl							
1	10.948	10.948	0.000	56299281	0.0200	0.0175	
2	11.860	11.862	-0.002	36375870	0.0200	0.0181	
						RPD = 3.02	
16 1260 Res 1							
1		9.747				ND	
2		10.605					
13 1260 Res 2							
1		9.799				ND	
2		10.668					
15 1260 Res 3							
1		9.846				ND	
2		2.881					

Reagents:

SGPCBISTD_00015 Amount Added: 5.00 Units: uL Run Reagent

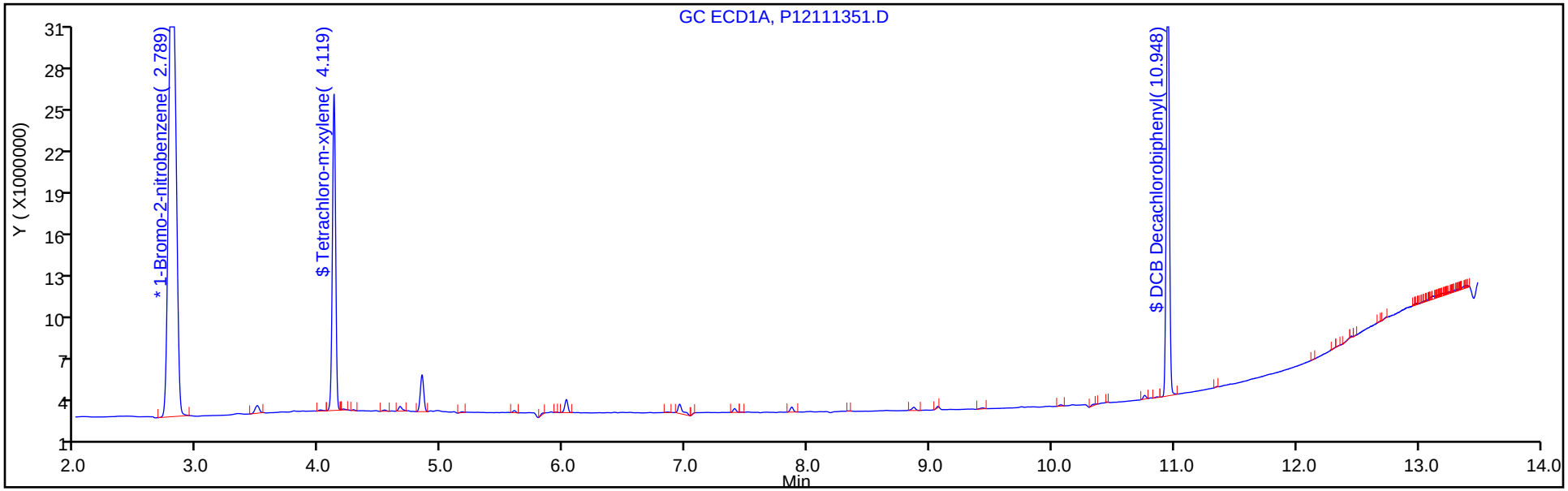
Report Date: 14-Nov-2018 11:25:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

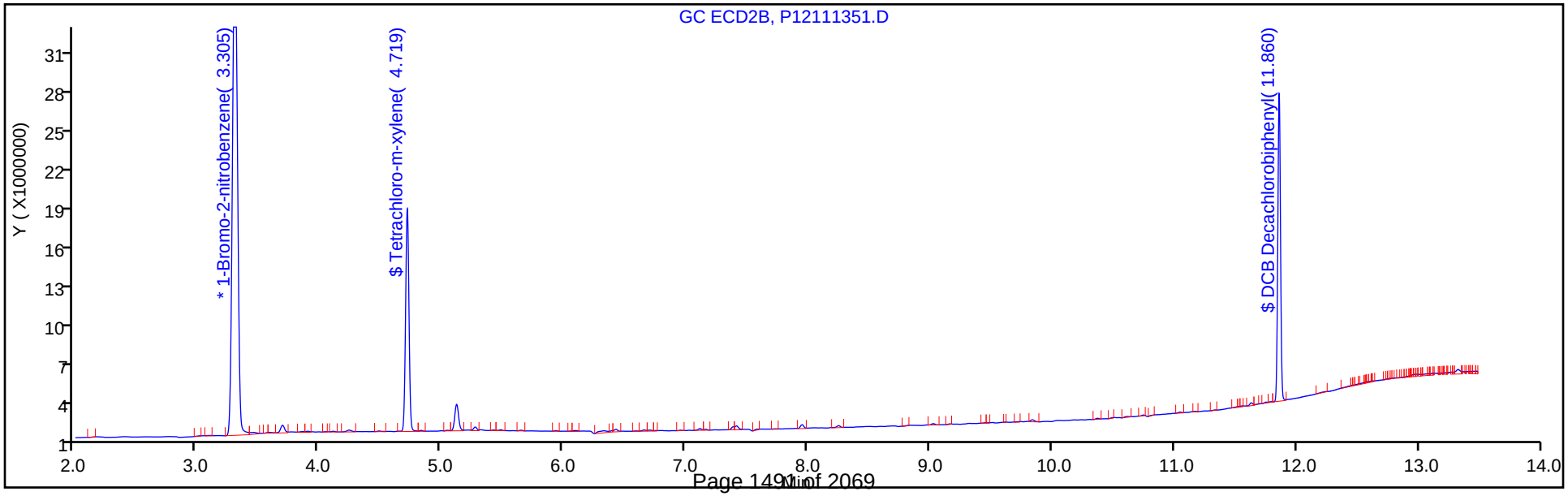
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111351.D

Injection Date:	13-Nov-2018 22:13:44	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	MB 240-354879/23-A			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	51
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111351.D
Lims ID: MB 240-354879/23-A
Client ID:
Sample Type: MB
Inject. Date: 13-Nov-2018 22:13:44 ALS Bottle#: 51 Worklist Smp#: 14
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-014
Operator ID: Instrument ID: A2HP12

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:23:34 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0164	81.78
$ 12 DCB Decachlorobiphenyl	0.0200	0.0175	87.71

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0163	81.62
$ 12 DCB Decachlorobiphenyl	0.0200	0.0181	90.40

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-354524/17-A

Matrix: Water | Lab File ID: P4111310.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3520C | Date Extracted: 11/09/2018 08:13

Sample wt/vol: 1000(mL) | Date Analyzed: 11/13/2018 08:14

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-1 (0.53mm) ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 355036 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor-1016	1.89		0.10	0.056
11096-82-5	Aroclor-1260	2.04		0.10	0.046

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	58		22-120
2051-24-3	DCB Decachlorobiphenyl	45		10-120

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111310.D
Lims ID: LCS 240-354524/17-A
Client ID:
Sample Type: LCS
Inject. Date: 13-Nov-2018 08:14:32 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081870-010
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 06:27:30 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0306

First Level Reviewer: coastc Date: 14-Nov-2018 06:09:12

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.049	2.051	-0.002	64339466	0.0500	0.0500	
2	2.539	2.540	-0.002	46459390	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	3.332	3.337	-0.005	91360763	0.1000	0.0576	
2	4.346	4.354	-0.008	70327163	0.1000	0.0737	
						RPD = 24.57	
6 PCB-1016							M
1	4.090	4.097	-0.007	22344842	1.25	0.8079	
1	4.814	4.819	-0.005	35477075	1.25	0.7024	
1	5.681	5.663	0.018	118319949	1.25	1.18	
1	5.880	5.886	-0.006	43123806	1.25	0.9237	
1	6.298	6.301	-0.003	23154586	1.25	1.10	
		Average of Peak Amounts =				0.9434	
2	5.435	5.442	-0.007	17769167	1.25	0.9699	M
2	6.193	6.198	-0.005	31905888	1.25	0.9243	M
2	0.000	6.957	0.000	0	1.25	0	
2	7.164	7.172	-0.008	31259619	1.25	1.11	M
2	7.538	7.544	-0.006	14543272	1.25	0.8936	M
		Average of Peak Amounts =				0.9748	
						RPD = 3.27	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							M
1	8.225	8.228	-0.003	56943291	1.25	0.9647	
1	8.530	8.534	-0.004	90912832	1.25	1.00	
1	8.810	8.813	-0.003	103059540	1.25	1.03	
1	9.450	9.452	-0.002	145208187	1.25	1.05	
1	9.696	9.697	-0.001	70609442	1.25	1.05	
		Average of Peak Amounts =				1.02	
2	9.225	9.229	-0.004	39544333	1.25	1.06	M
2	9.428	9.430	-0.002	45183901	1.25	1.09	M
2	9.745	9.748	-0.003	62056683	1.25	1.06	M
2	10.298	10.299	-0.001	100920389	1.25	1.17	M
2	10.598	10.601	-0.003	68243810	1.25	1.09	
		Average of Peak Amounts =				1.09	
						RPD = 7.27	
$ 12 DCB Decachlorobiphenyl							
1	10.615	10.617	-0.002	64461872	0.1000	0.0452	
2	11.531	11.534	-0.003	47654115	0.1000	0.0485	
						RPD = 7.16	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SGPCBISTD_00015 Amount Added: 5.00 Units: uL Run Reagent

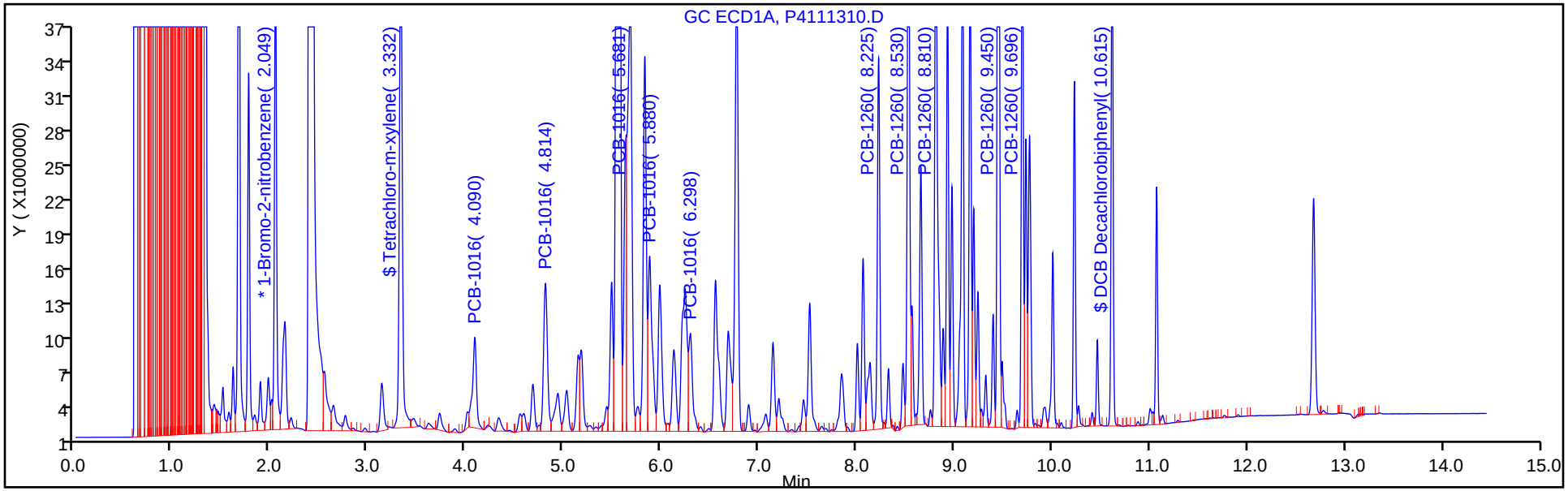
Report Date: 14-Nov-2018 06:27:41 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

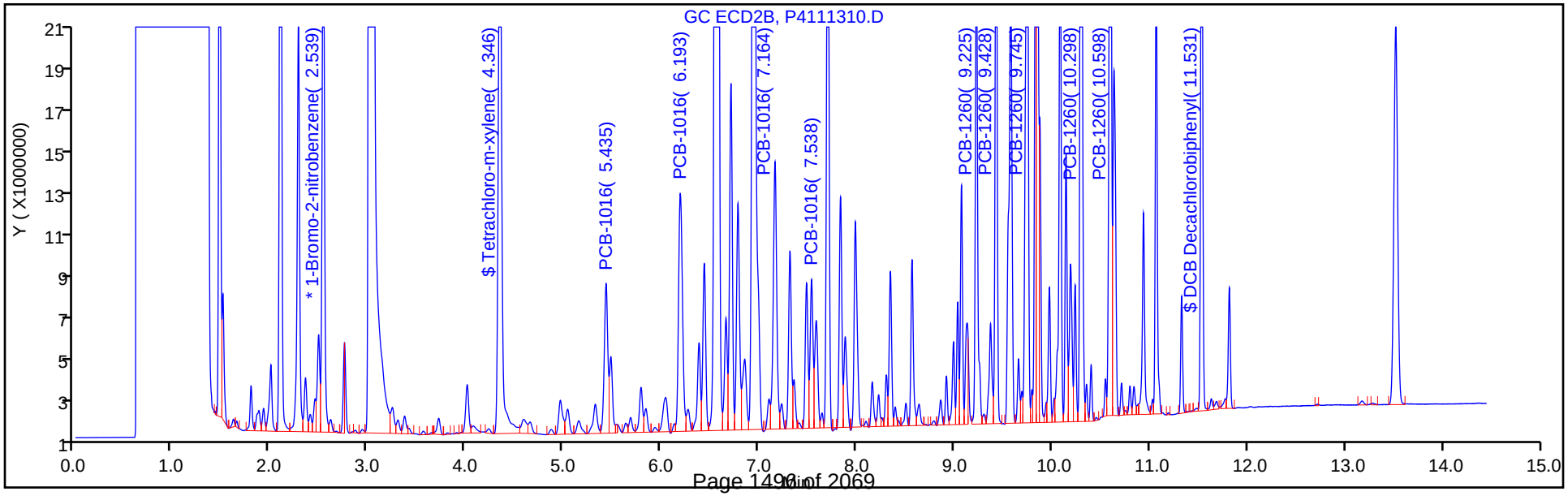
Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111310.D

Injection Date:	13-Nov-2018 08:14:32	Instrument ID:	A2HP4	Operator ID:	
Lims ID:	LCS 240-354524/17-A			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	PCB4 is	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111310.D
Lims ID: LCS 240-354524/17-A
Client ID:
Sample Type: LCS
Inject. Date: 13-Nov-2018 08:14:32 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081870-010
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\PCB4 is.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 06:27:30 Calib Date: 06-Nov-2018 23:56:16
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20181106-81623.b\P4110633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0306

First Level Reviewer: coastc Date: 14-Nov-2018 06:09:12

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.1000	0.0576	57.57
$ 12 DCB Decachlorobiphenyl	0.1000	0.0452	45.17

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.1000	0.0737	73.70
$ 12 DCB Decachlorobiphenyl	0.1000	0.0485	48.53

Report Date: 14-Nov-2018 06:27:41 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111310.D

Injection Date: 13-Nov-2018 08:14:32 Instrument ID: A2HP4

Lims ID: LCS 240-354524/17-A

Client ID:

Operator ID: ALS Bottle#: 10 Worklist Smp#: 10

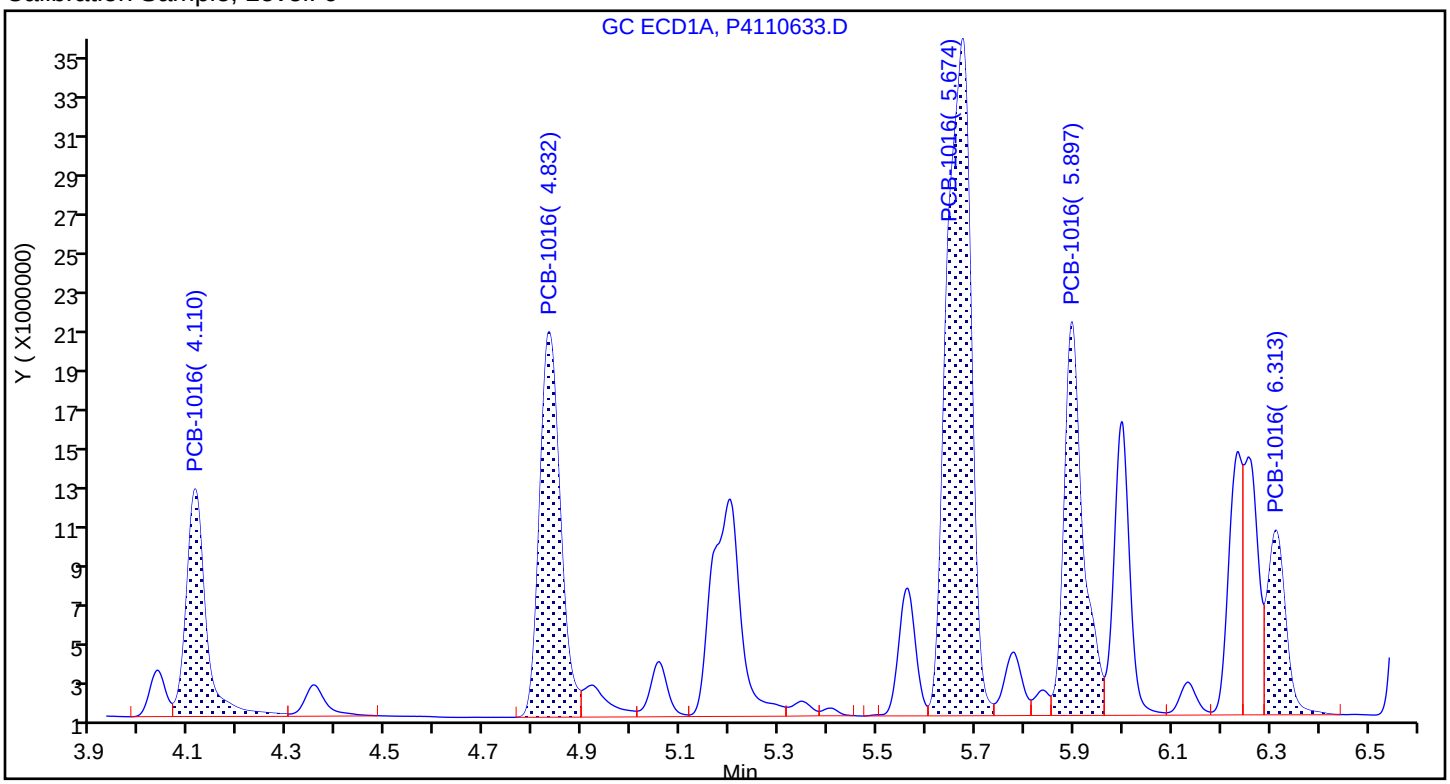
Injection Vol: 1.0 uL Dil. Factor: 1.0000

Method: PCB4 is Limit Group: GC 8082A IS

Column: Detector GC ECD1A

6 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 6



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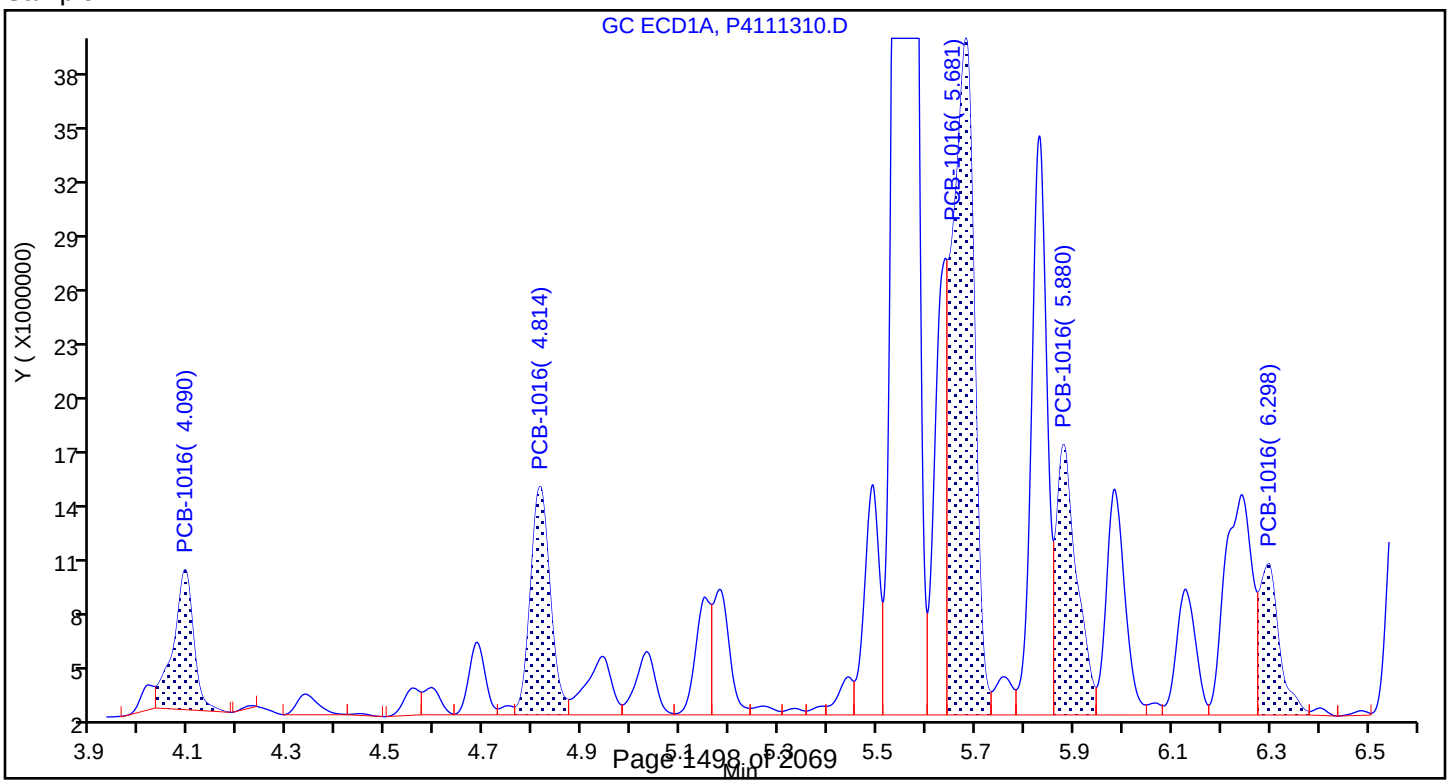


Report Date: 14-Nov-2018 06:27:41 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP4\20181113-81870.b\P4111310.D

Injection Date: 13-Nov-2018 08:14:32 Instrument ID: A2HP4

Lims ID: LCS 240-354524/17-A

Client ID:

Operator ID: ALS Bottle#: 10 Worklist Smp#: 10

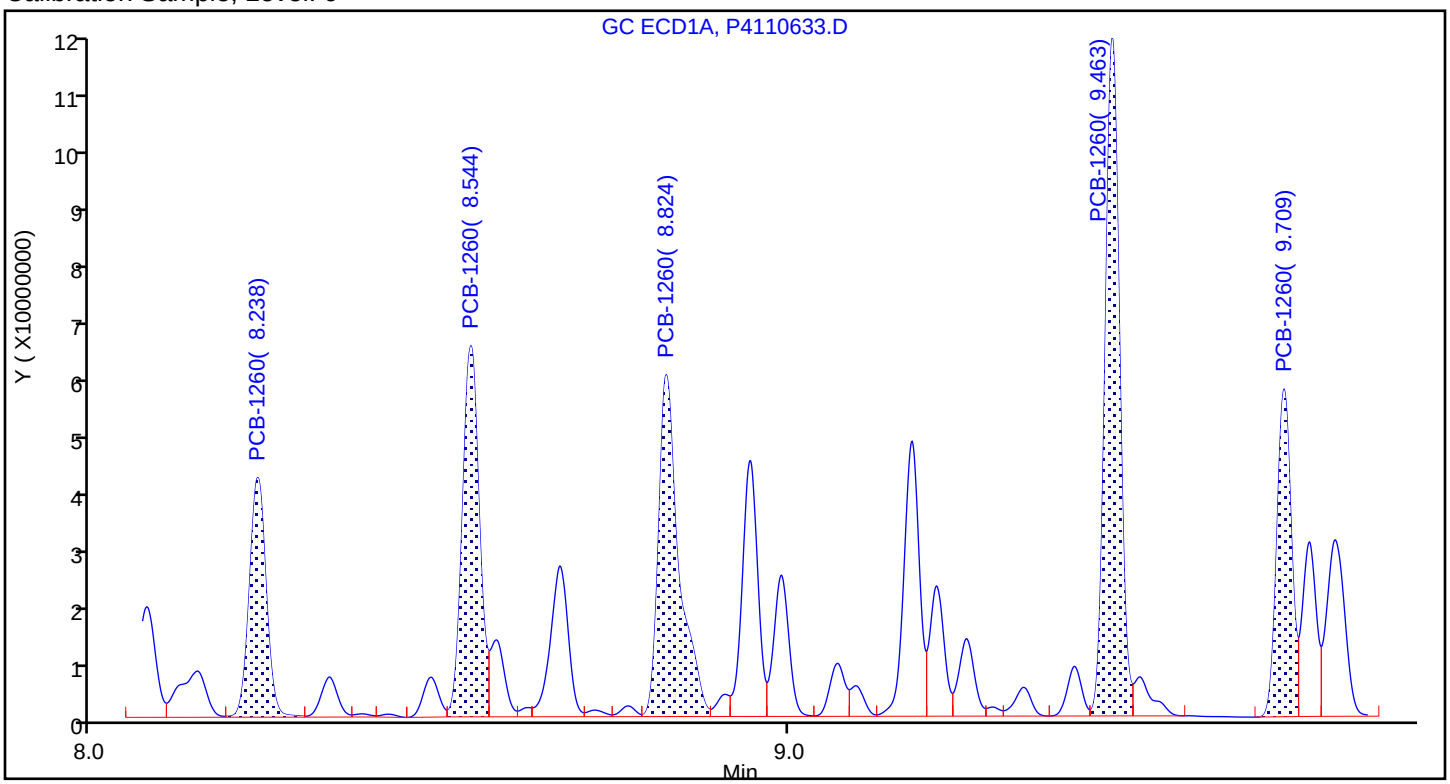
Injection Vol: 1.0 uL Dil. Factor: 1.0000

Method: PCB4 is Limit Group: GC 8082A IS

Column: Detector GC ECD1A

10 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 6



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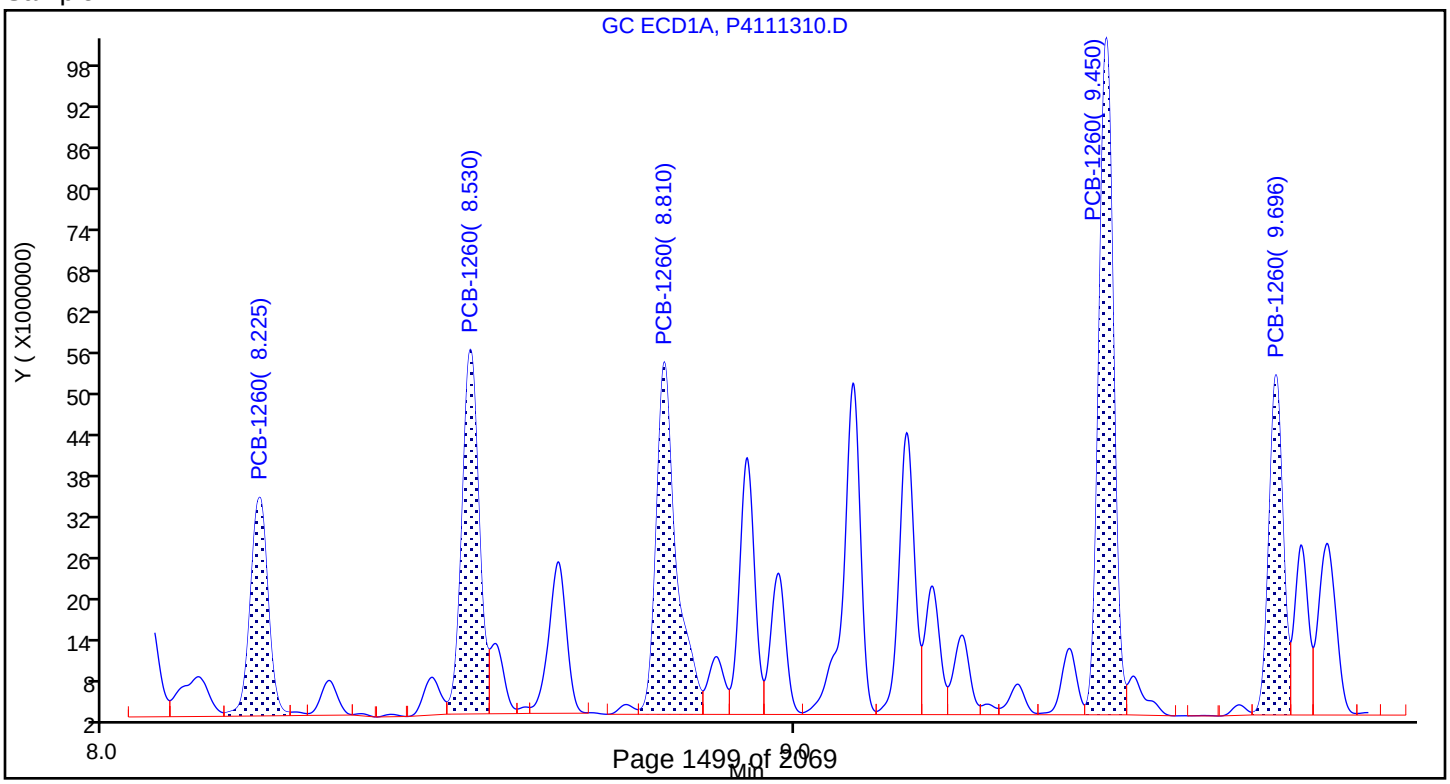


FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-354879/24-A

Matrix: Solid | Lab File ID: P12111352.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3540C | Date Extracted: 11/12/2018 08:27

Sample wt/vol: 10(g) | Date Analyzed: 11/13/2018 22:34

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-2 (0.53mm) ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 355209 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor-1016	678		50	22
11096-82-5	Aroclor-1260	758		50	22

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	73		14-128
2051-24-3	DCB Decachlorobiphenyl	78		10-132

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111352.D
Lims ID: LCS 240-354879/24-A
Client ID:
Sample Type: LCS
Inject. Date: 13-Nov-2018 22:34:20 ALS Bottle#: 52 Worklist Smp#: 15
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-015
Operator ID: Instrument ID: A2HP12

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:23:34 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 10:46:27

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	2.809	2.800	0.009	141142957	0.0500	0.0500	
2	3.315	3.312	0.004	106469718	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.124	4.122	0.002	38007973	0.0200	0.0149	
2	4.722	4.721	0.001	28749176	0.0200	0.0146	
						RPD = 2.48	
6 PCB-1016							
1	4.678	4.676	0.002	28529643	1.00	0.6799	
1	5.176	5.175	0.001	55319265	1.00	0.7153	
1	5.796	5.794	0.002	120128956	1.00	0.6502	
1	5.966	5.964	0.002	58917621	1.00	0.7602	
1	6.290	6.290	0.000	22607040	1.00	0.7000	
		Average of Peak Amounts =				0.7011	
2	5.474	5.474	0.000	23014006	1.00	0.6534	
2	6.047	6.047	0.000	44756241	1.00	0.6634	
2	6.653	6.654	-0.001	103735129	1.00	0.7140	
2	6.825	6.826	-0.001	43076725	1.00	0.7073	
2	7.149	7.150	-0.001	22713358	1.00	0.6512	
		Average of Peak Amounts =				0.6779	
						RPD = 3.37	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	7.993	7.993	0.000	81171973	1.00	0.7968	
1	8.324	8.325	-0.001	136675341	1.00	0.8183	
1	8.788	8.788	0.000	88260052	1.00	0.8100	
1	9.429	9.431	-0.002	244397345	1.00	0.8467	
1	9.747	9.747	0.000	111649554	1.00	0.7881	
		Average of Peak Amounts =				0.8120	
2	8.959	8.962	-0.003	53997407	1.00	0.6794	
2	9.220	9.221	-0.001	71661222	1.00	0.7520	
2	9.739	9.741	-0.002	62183433	1.00	0.7715	
2	10.372	10.372	0.000	166262133	1.00	0.7974	
2	10.749	10.752	-0.003	113234697	1.00	0.7905	
		Average of Peak Amounts =				0.7582	
						RPD = 6.86	
$ 12 DCB Decachlorobiphenyl							
1	10.948	10.948	0.000	48273632	0.0200	0.0154	
2	11.861	11.862	-0.001	30897643	0.0200	0.0157	
						RPD = 1.99	

Reagents:

SGPCBISTD_00015 Amount Added: 5.00 Units: uL Run Reagent

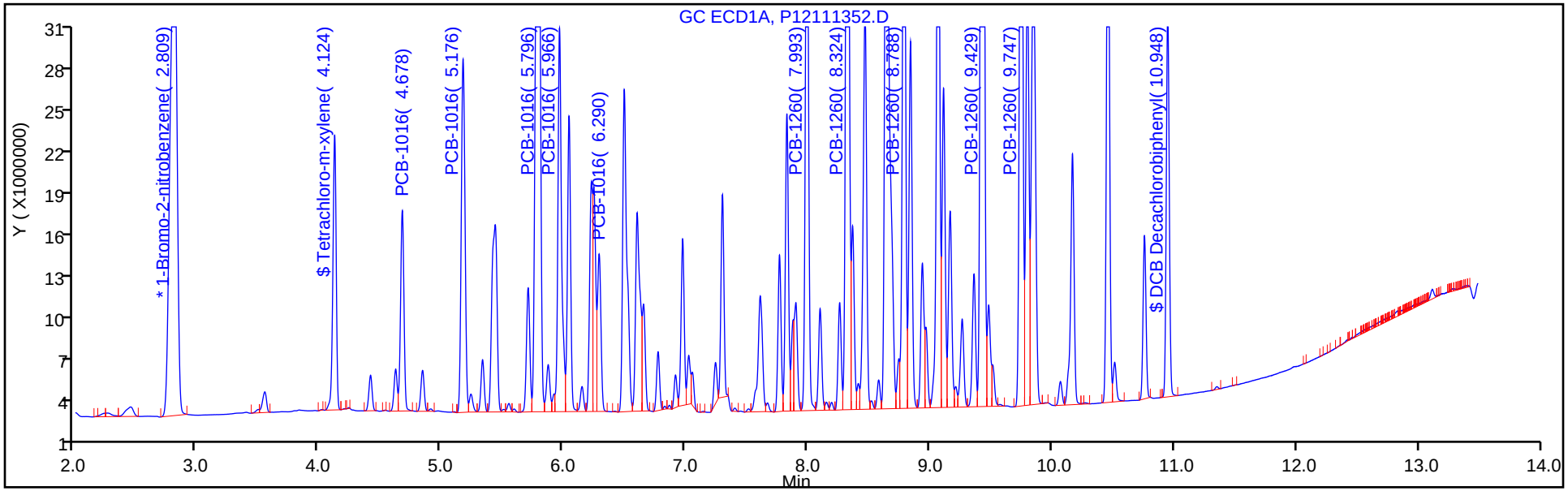
Report Date: 14-Nov-2018 11:25:31 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

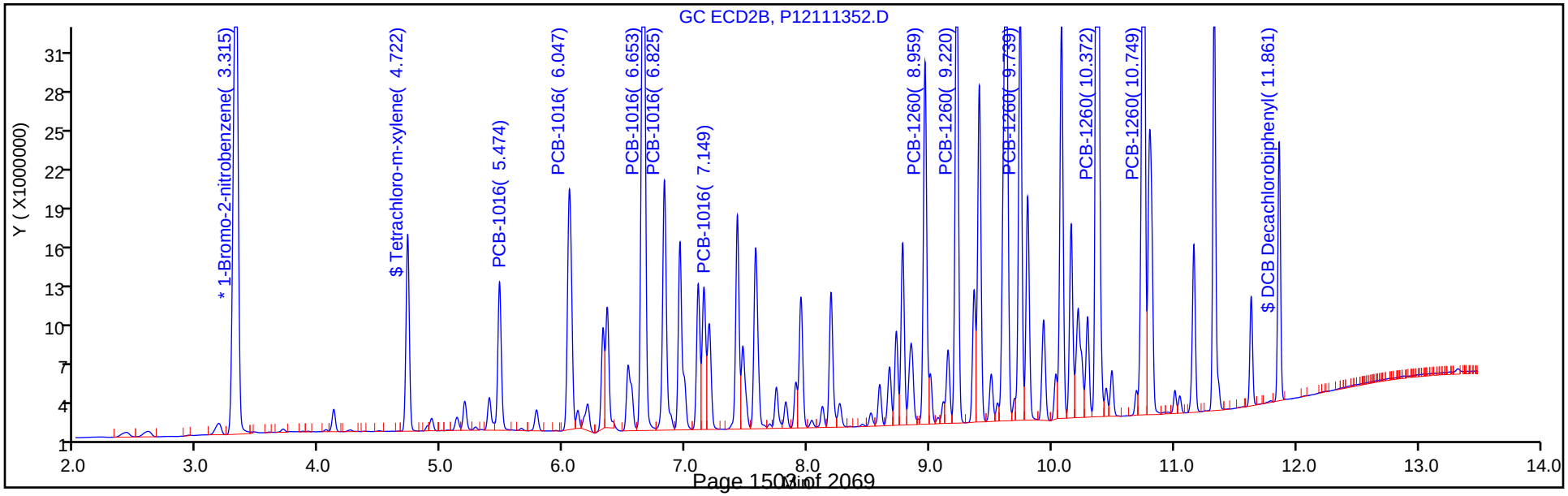
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111352.D

Injection Date:	13-Nov-2018 22:34:20	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	LCS 240-354879/24-A			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	52
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111352.D
Lims ID: LCS 240-354879/24-A
Client ID:
Sample Type: LCS
Inject. Date: 13-Nov-2018 22:34:20 ALS Bottle#: 52 Worklist Smp#: 15
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-015
Operator ID: Instrument ID: A2HP12

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:23:34 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 10:46:27

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0149	74.60
$ 12 DCB Decachlorobiphenyl	0.0200	0.0154	76.84

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0146	72.77
$ 12 DCB Decachlorobiphenyl	0.0200	0.0157	78.38

Report Date: 14-Nov-2018 11:25:32 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111352.D

Injection Date: 13-Nov-2018 22:34:20 Instrument ID: A2HP12

Lims ID: LCS 240-354879/24-A

Client ID:

Operator ID: ALS Bottle#: 52 Worklist Smp#: 15

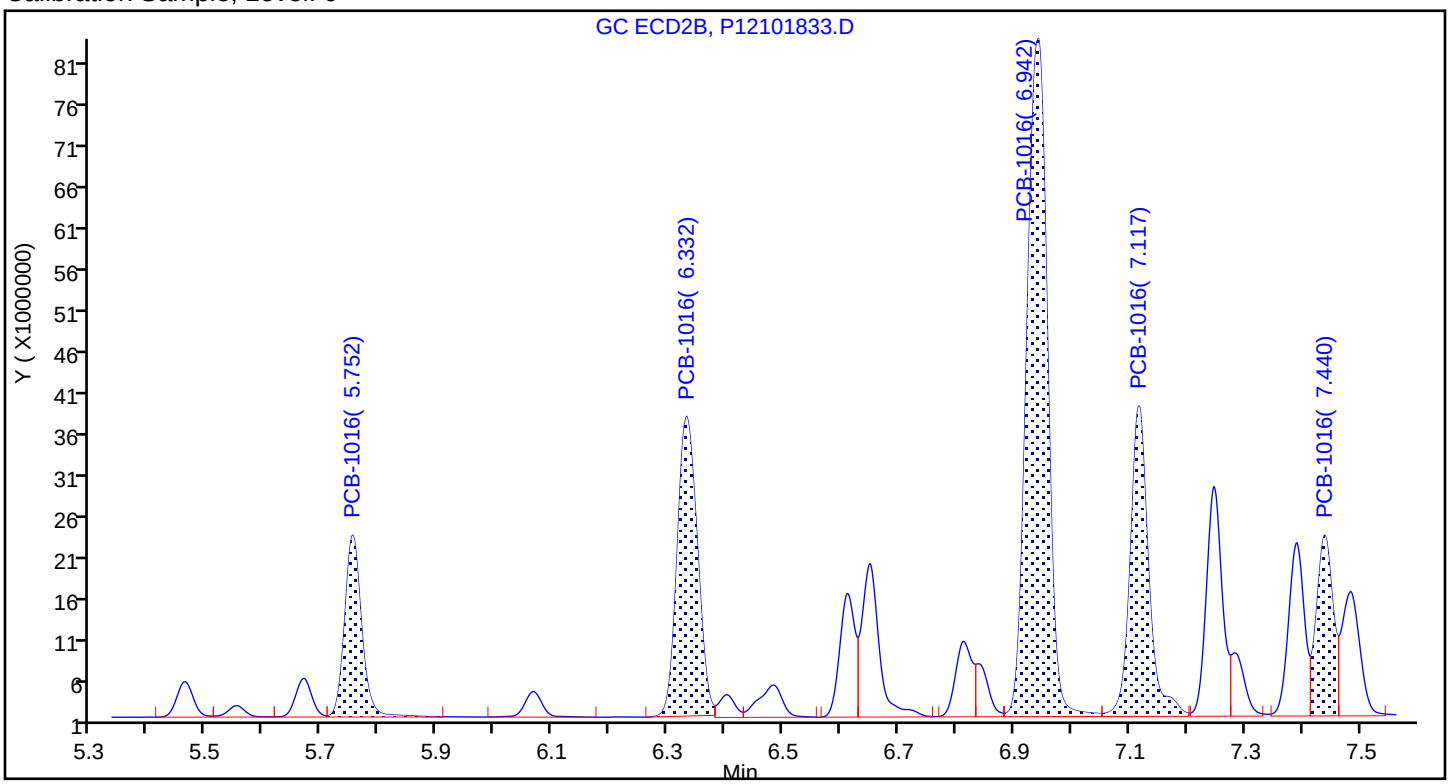
Injection Vol: 1.0 uL Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

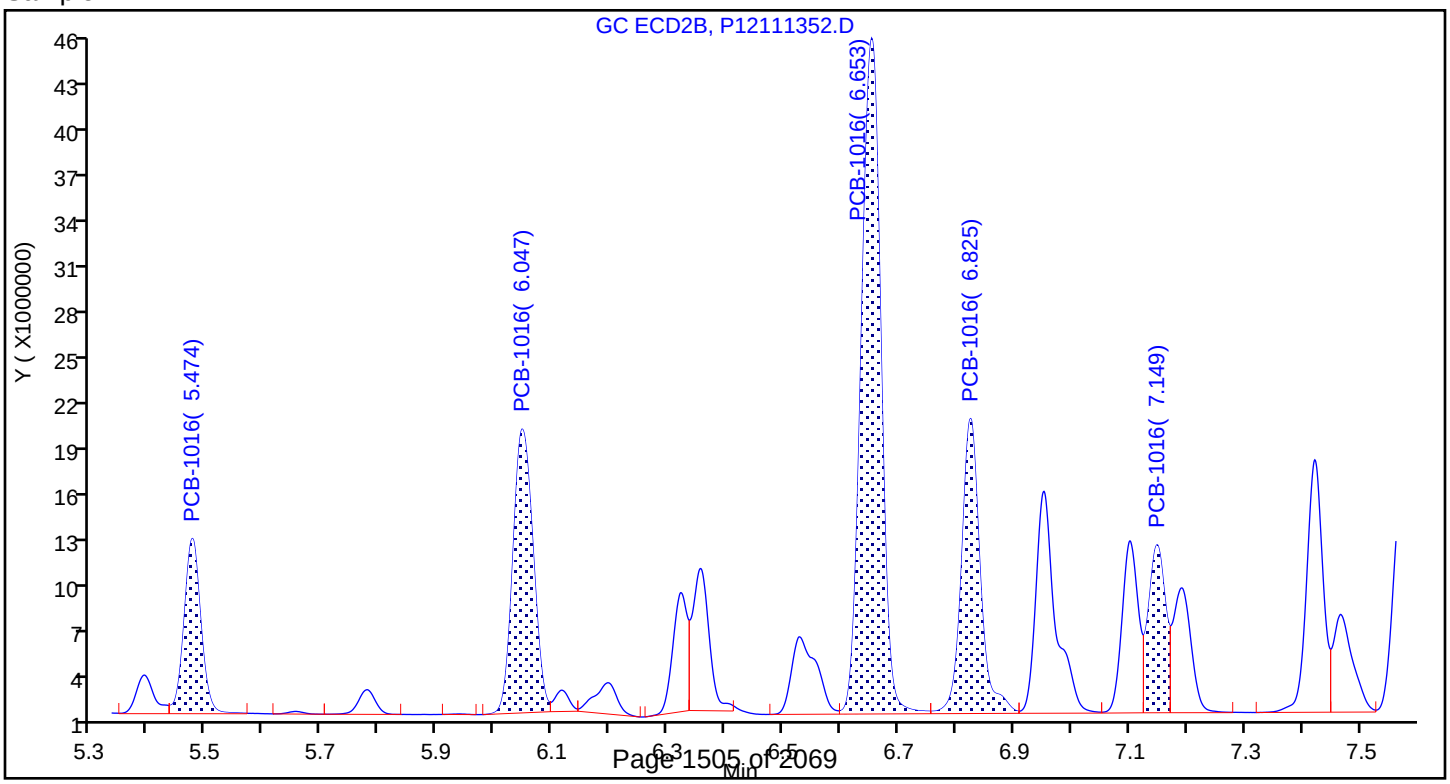
Column: Detector GC ecd2b

6 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 6



Sample



Report Date: 14-Nov-2018 11:25:32 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111352.D

Injection Date: 13-Nov-2018 22:34:20 Instrument ID: A2HP12

Lims ID: LCS 240-354879/24-A

Client ID:

Operator ID: ALS Bottle#: 52 Worklist Smp#: 15

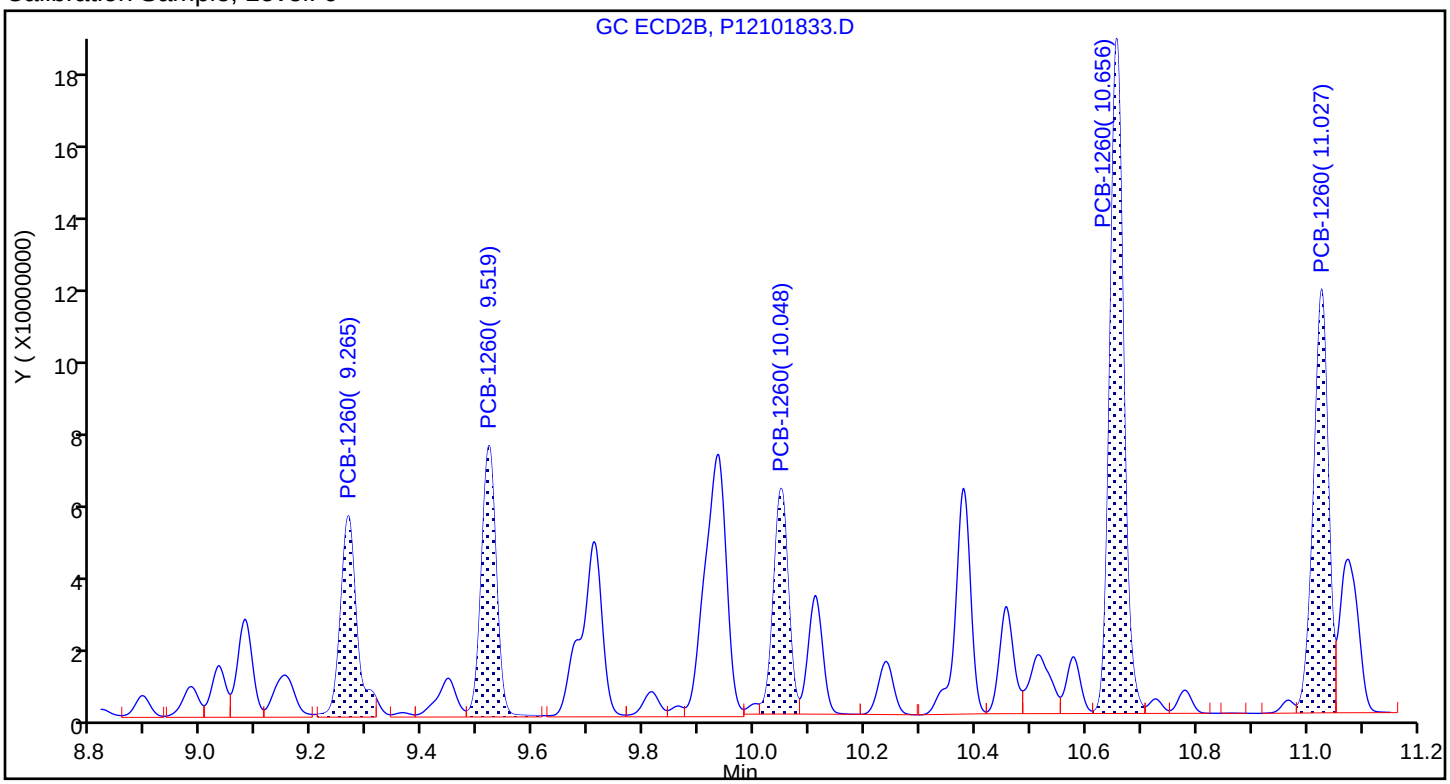
Injection Vol: 1.0 uL Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

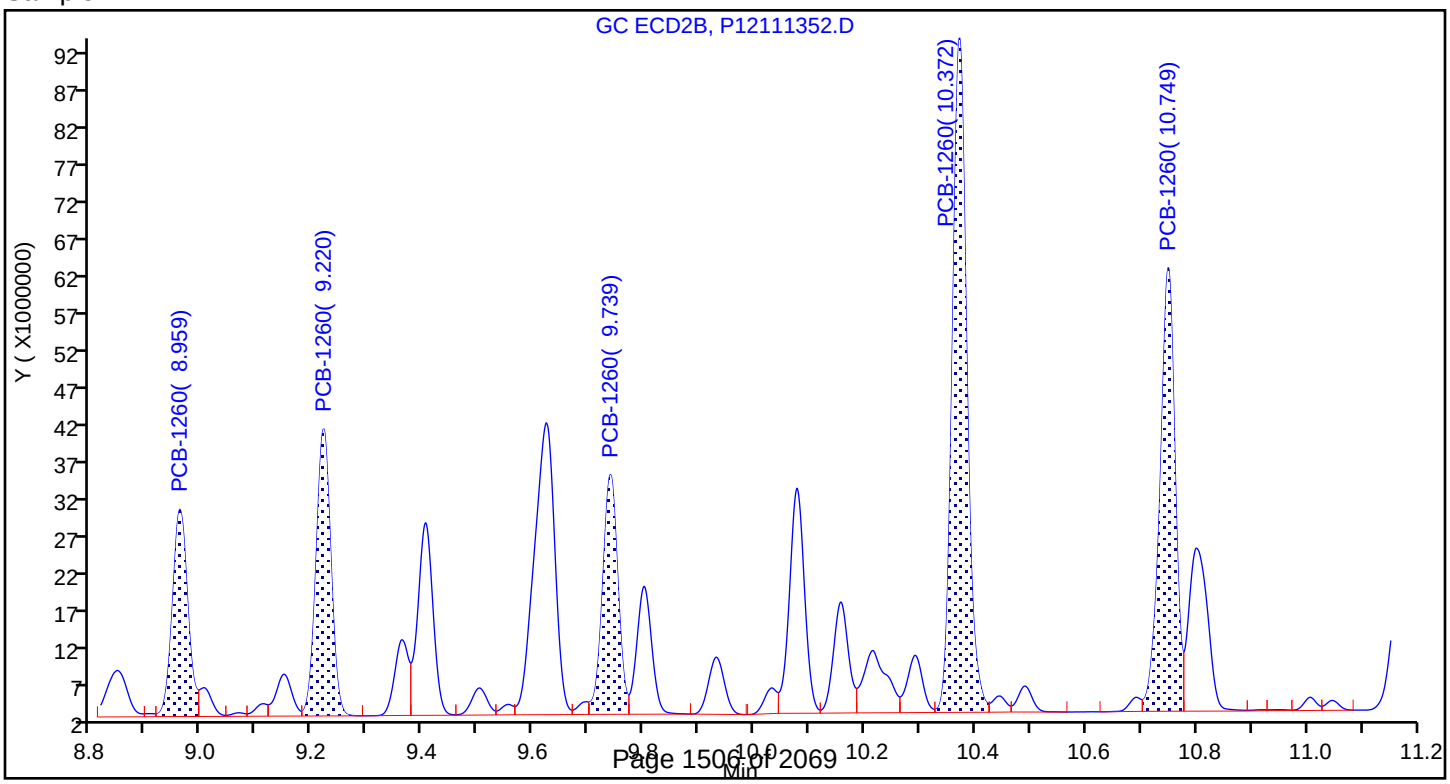
Column: Detector GC ecd2b

10 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 6



Sample



FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: 240-104227-B-2-B MS

Matrix: Solid | Lab File ID: P12111349.D

Analysis Method: 8082A | Date Collected: 11/07/2018 14:40

Extraction Method: 3540C | Date Extracted: 11/12/2018 08:27

Sample wt/vol: 10.48(g) | Date Analyzed: 11/13/2018 21:32

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-2 (0.53mm) ID: 0.53(mm)

% Moisture: 14.4 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 355209 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor-1016	805		56	25
11104-28-2	Aroclor-1221	27	U	56	27
11141-16-5	Aroclor-1232	26	U	56	26
53469-21-9	Aroclor-1242	21	U	56	21
12672-29-6	Aroclor-1248	27	U	56	27
11097-69-1	Aroclor-1254	26	U	56	26
11096-82-5	Aroclor-1260	852		56	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	79		14-128
2051-24-3	DCB Decachlorobiphenyl	78		10-132

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111349.D
Lims ID: 240-104227-B-2-B MS
Client ID:
Sample Type: MS
Inject. Date: 13-Nov-2018 21:32:43 ALS Bottle#: 49 Worklist Smp#: 12
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-012
Operator ID: Instrument ID: A2HP12

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:23:34 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 09:44:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
S 1 Polychlorinated biphenyls, Total							
1		1.000				ND	
* 14 1-Bromo-2-nitrobenzene							
1	2.795	2.800	-0.005	124150936	0.0500	0.0500	
2	3.307	3.312	-0.005	95895637	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.119	4.122	-0.003	36284654	0.0200	0.0162	
2	4.718	4.721	-0.003	28090321	0.0200	0.0158	
						RPD = 2.52	
3 PCB-1221							U
1		4.415				ND	
1		4.621					
1		4.676					
2		5.188					
2		5.391					
2		5.474					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
6 PCB-1016							
1	4.674	4.676	-0.002	26689562	1.00	0.7231	
1	5.172	5.175	-0.003	52508618	1.00	0.7718	
1	5.792	5.794	-0.002	128611479	1.00	0.7914	
1	5.963	5.964	-0.001	52889764	1.00	0.7758	
1	6.288	6.290	-0.002	20641644	1.00	0.7266	
		Average of Peak Amounts =				0.7577	
2	5.472	5.474	-0.002	22223850	1.00	0.7005	
2	6.045	6.047	-0.002	43861668	1.00	0.7219	
2	6.652	6.654	-0.002	99412623	1.00	0.7597	
2	6.823	6.826	-0.003	40904566	1.00	0.7457	
2	7.148	7.150	-0.002	21426541	1.00	0.6820	
		Average of Peak Amounts =				0.7220	
						RPD = 4.84	
5 PCB-1242							U
1		4.676				ND	
1		5.173					
1		5.793					
1		5.963					
1		6.494					
2		5.473					
2		6.047					
2		6.653					
2		6.824					
2		7.150					
4 PCB-1232							U
1		4.676				ND	
1		5.174					
1		5.795					
1		5.965					
1		6.290					
2		5.474					
2		6.048					
2		6.654					
2		6.825					
2		7.150					
7 PCB-1248							U
1		5.176				ND	
1		6.497					
1		7.054					
1		7.293					
1		7.768					
2		6.047					
2		6.653					
2		7.424					
2		7.951					
2		8.726					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
8 PCB-1254							U
1		7.299				ND	
1		7.767					
1		8.099					
1		8.323					
1		8.647					
2		7.944					
2		8.191					
2		8.725					
2		9.004					
2		9.626					
10 PCB-1260							
1	7.991	7.993	-0.002	70727934	1.00	0.7893	
1	8.322	8.325	-0.003	119452634	1.00	0.8131	
1	8.787	8.788	-0.001	76640853	1.00	0.7996	
1	9.429	9.431	-0.002	211374583	1.00	0.8325	
1	9.746	9.747	-0.001	101011526	1.00	0.8106	
		Average of Peak Amounts =				0.8090	
2	8.960	8.962	-0.002	49478123	1.00	0.6912	
2	9.220	9.221	-0.001	65471581	1.00	0.7628	
2	9.739	9.741	-0.002	56531457	1.00	0.7787	
2	10.371	10.372	-0.001	150100425	1.00	0.7993	
2	10.750	10.752	-0.002	102083641	1.00	0.7913	
		Average of Peak Amounts =				0.7646	
						RPD = 5.64	
9 PCB-1262							U
1		7.994				ND	
1		8.326					
1		9.069					
1		9.431					
1		9.799					
2		9.221					
2		9.740					
2		10.079					
2		10.372					
2		10.751					
11 PCB-1268							U
1		9.798				ND	
1		9.841					
1		10.069					
1		10.458					
1		10.758					
2		10.751					
2		10.798					
2		11.048					
2		11.330					
2		11.633					
$ 12 DCB Decachlorobiphenyl							
1	10.947	10.948	-0.001	42795950	0.0200	0.0155	
2	11.861	11.862	-0.001	27772464	0.0200	0.0156	
						RPD = 1.00	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
16 1260 Res 1							
1		9.747				ND	
2		10.605					
13 1260 Res 2							
1		9.799				ND	
2		10.668					
15 1260 Res 3							
1		9.846				ND	
2		2.881					

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

SGPCBISTD_00015 Amount Added: 5.00 Units: uL Run Reagent

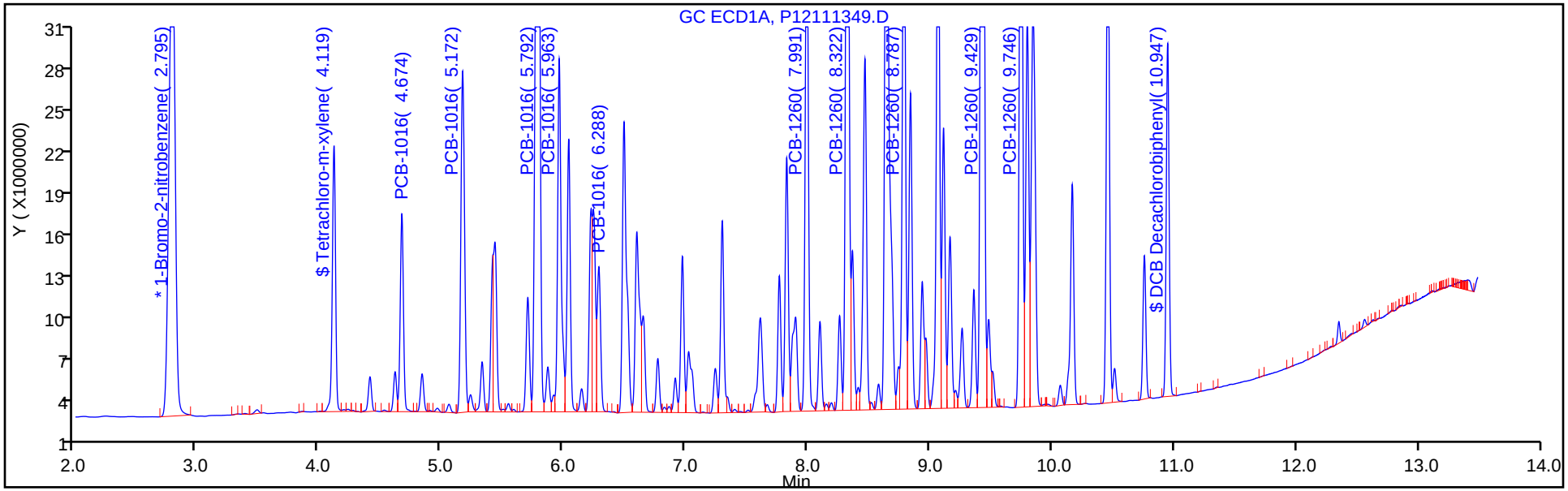
Report Date: 14-Nov-2018 11:25:25 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

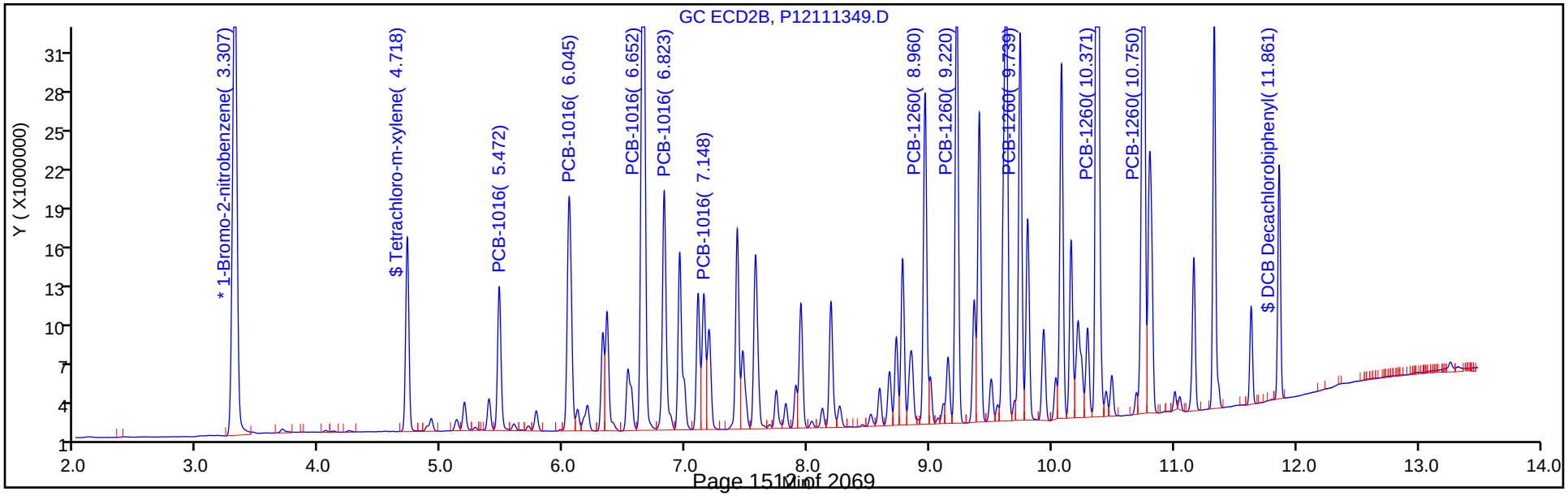
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111349.D

Injection Date:	13-Nov-2018 21:32:43	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	240-104227-B-2-B MS			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	49
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111349.D
Lims ID: 240-104227-B-2-B MS
Client ID:
Sample Type: MS
Inject. Date: 13-Nov-2018 21:32:43 ALS Bottle#: 49 Worklist Smp#: 12
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-012
Operator ID: Instrument ID: A2HP12

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:23:34 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 09:44:55

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0162	80.96
$ 12 DCB Decachlorobiphenyl	0.0200	0.0155	77.44

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0158	78.94
$ 12 DCB Decachlorobiphenyl	0.0200	0.0156	78.22

Report Date: 14-Nov-2018 11:25:25 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111349.D

Injection Date: 13-Nov-2018 21:32:43 Instrument ID: A2HP12

Lims ID: 240-104227-B-2-B MS

Client ID:

Operator ID: ALS Bottle#: 49 Worklist Smp#: 12

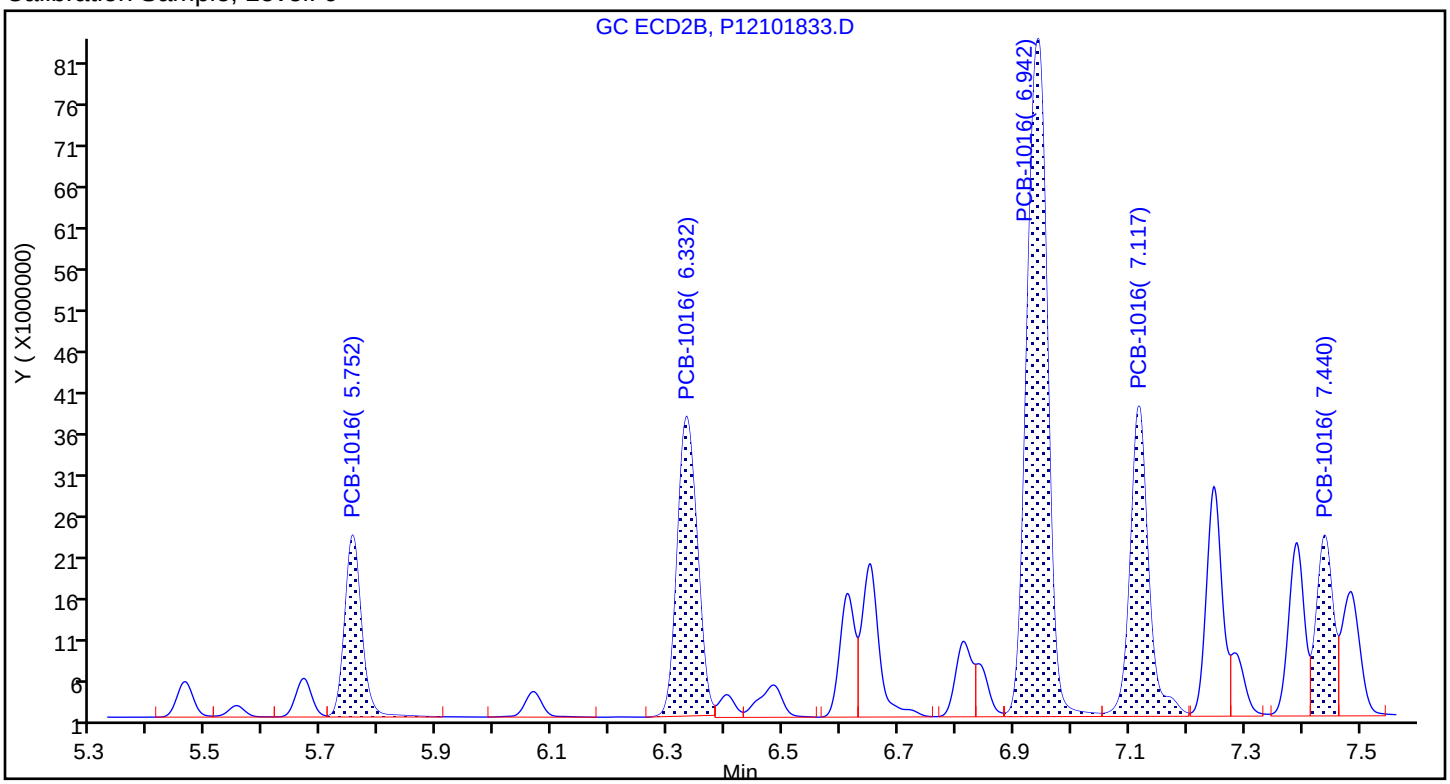
Injection Vol: 1.0 uL Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

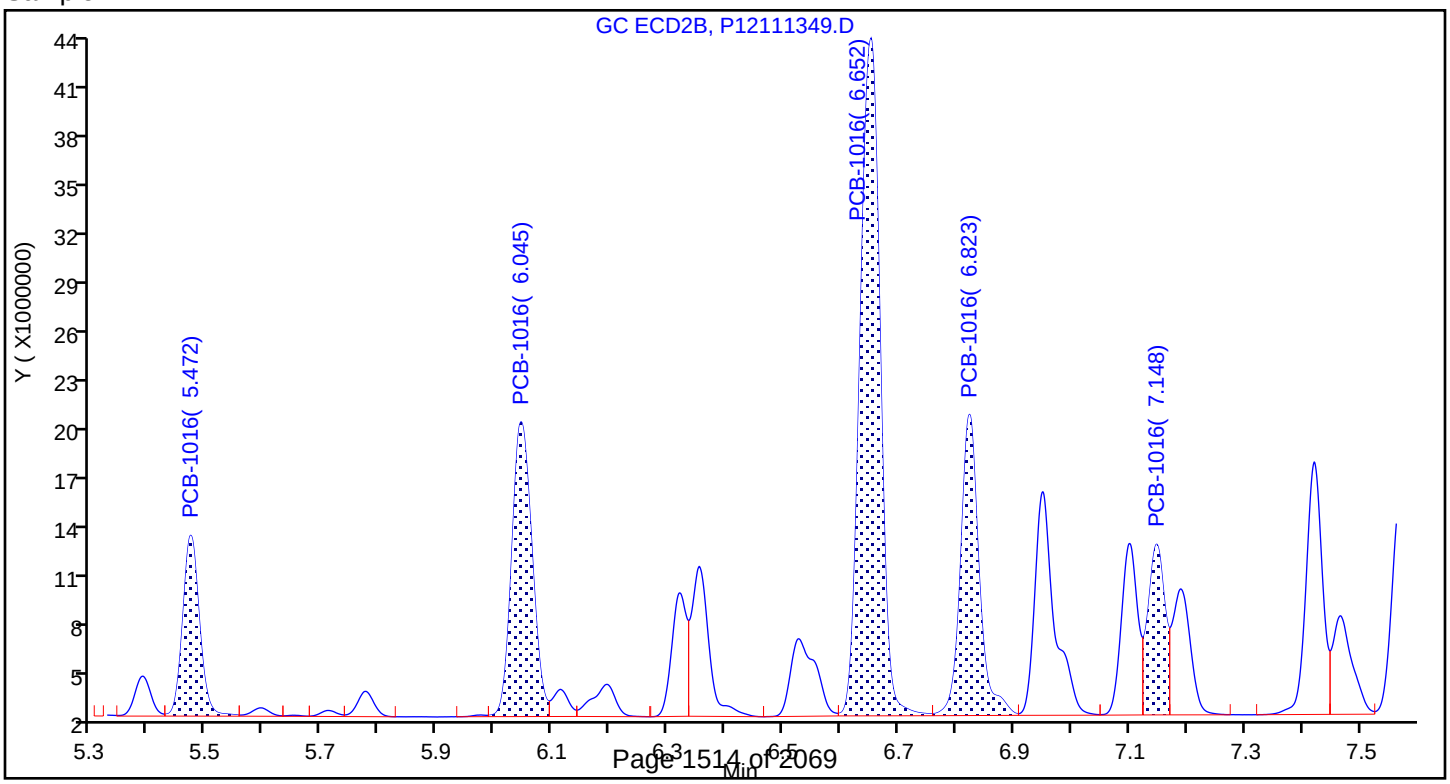
Column: Detector GC ecd2b

6 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 6



Sample



Report Date: 14-Nov-2018 11:25:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

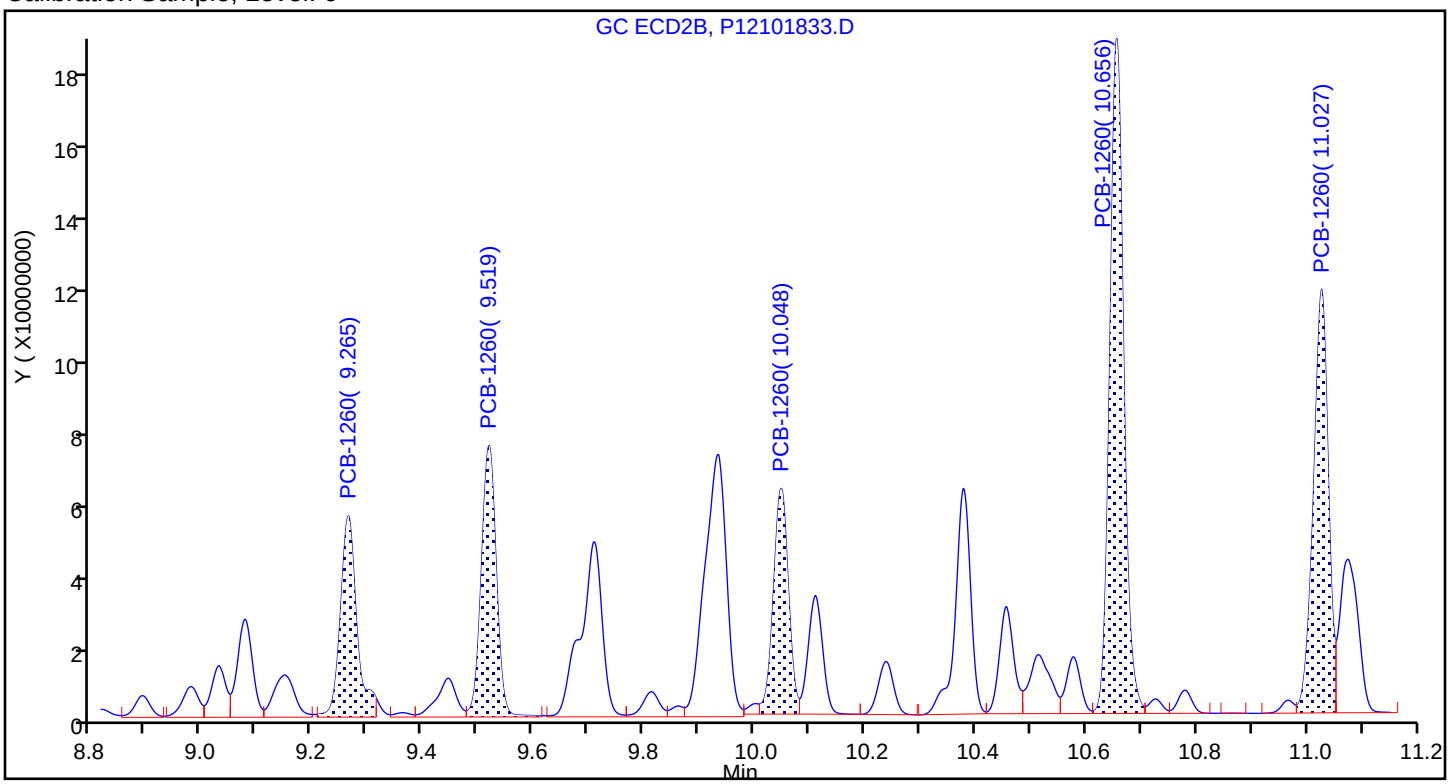
TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111349.D

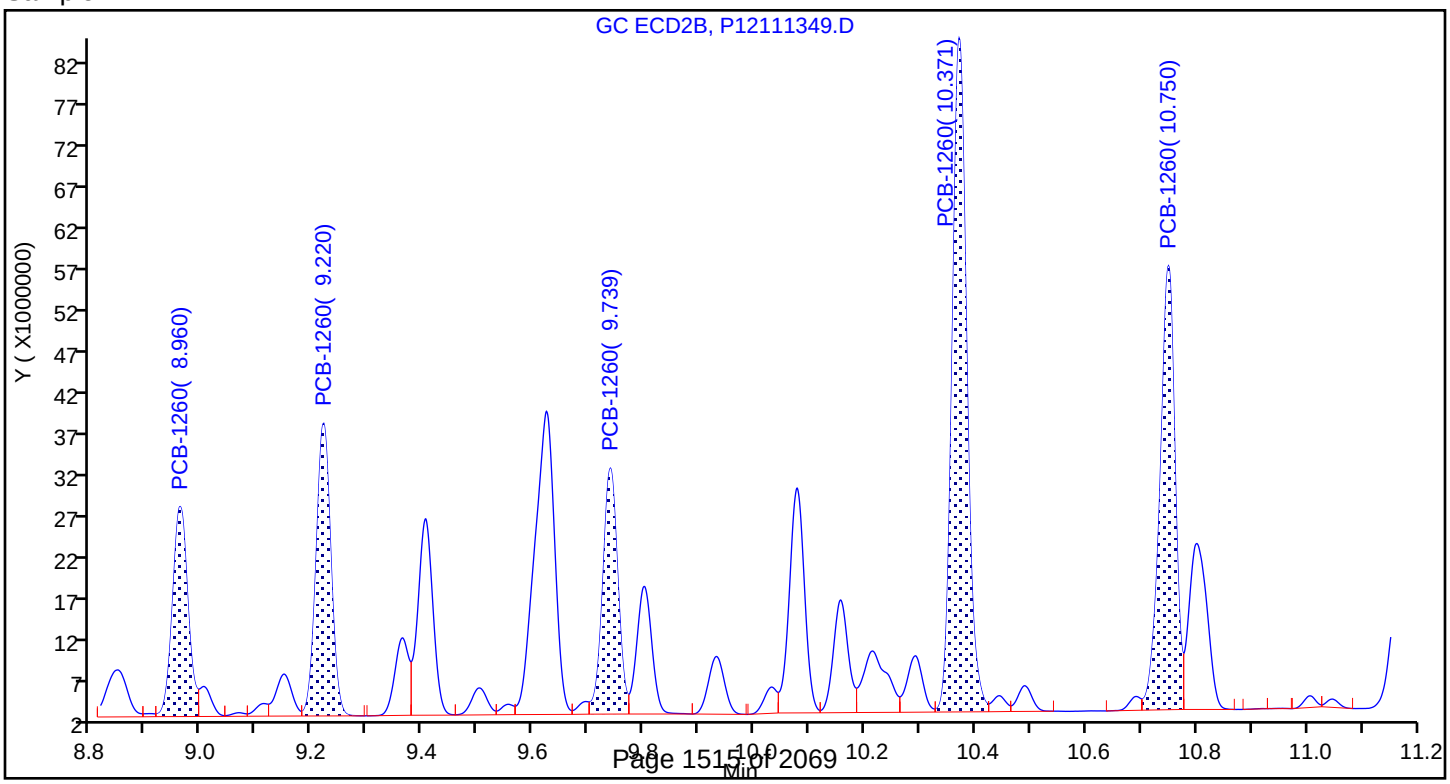
Injection Date:	13-Nov-2018 21:32:43	Instrument ID:	A2HP12		
Lims ID:	240-104227-B-2-B MS				
Client ID:					
Operator ID:		ALS Bottle#:	49	Worklist Smp#:	12
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	PCB12IS	Limit Group:	GC 8082A IS		
Column:		Detector	GC ecd2b		

10 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 6



Sample



FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Client Sample ID: | Lab Sample ID: 240-104227-B-2-C MSD

Matrix: Solid | Lab File ID: P12111350.D

Analysis Method: 8082A | Date Collected: 11/07/2018 14:40

Extraction Method: 3540C | Date Extracted: 11/12/2018 08:27

Sample wt/vol: 10.22(g) | Date Analyzed: 11/13/2018 21:53

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-2 (0.53mm) ID: 0.53(mm)

% Moisture: 14.4 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 355209 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor-1016	742		57	25
11104-28-2	Aroclor-1221	27	U	57	27
11141-16-5	Aroclor-1232	26	U	57	26
53469-21-9	Aroclor-1242	22	U	57	22
12672-29-6	Aroclor-1248	27	U	57	27
11097-69-1	Aroclor-1254	26	U	57	26
11096-82-5	Aroclor-1260	829		57	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	67		14-128
2051-24-3	DCB Decachlorobiphenyl	75		10-132

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111350.D
Lims ID: 240-104227-B-2-C MSD
Client ID:
Sample Type: MSD
Inject. Date: 13-Nov-2018 21:53:12 ALS Bottle#: 50 Worklist Smp#: 13
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-013
Operator ID: Instrument ID: A2HP12

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:23:34 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 10:45:36

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
S 1 Polychlorinated biphenyls, Total							
1		1.000				ND	
* 14 1-Bromo-2-nitrobenzene							
1	2.794	2.800	-0.006	147482360	0.0500	0.0500	
2	3.307	3.312	-0.004	111379634	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	4.119	4.122	-0.003	36513141	0.0200	0.0137	
2	4.719	4.721	-0.002	27876636	0.0200	0.0135	
						RPD = 1.66	
3 PCB-1221							U
1		4.415				ND	
1		4.621					
1		4.676					
2		5.188					
2		5.391					
2		5.474					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
6 PCB-1016							
1	4.675	4.676	-0.001	29690137	1.00	0.6772	
1	5.172	5.175	-0.003	53417169	1.00	0.6610	
1	5.793	5.794	-0.001	136677499	1.00	0.7080	
1	5.963	5.964	-0.001	54704158	1.00	0.6755	
1	6.288	6.290	-0.002	21757893	1.00	0.6447	
		Average of Peak Amounts =				0.6733	
2	5.472	5.474	-0.002	22360612	1.00	0.6069	
2	6.047	6.047	0.000	45243018	1.00	0.6411	
2	6.652	6.654	-0.002	104902393	1.00	0.6902	
2	6.824	6.826	-0.002	43087551	1.00	0.6763	
2	7.148	7.150	-0.002	23027565	1.00	0.6311	
		Average of Peak Amounts =				0.6491	
						RPD = 3.65	
5 PCB-1242							U
1		4.676				ND	
1		5.173					
1		5.793					
1		5.963					
1		6.494					
2		5.473					
2		6.047					
2		6.653					
2		6.824					
2		7.150					
4 PCB-1232							U
1		4.676				ND	
1		5.174					
1		5.795					
1		5.965					
1		6.290					
2		5.474					
2		6.048					
2		6.654					
2		6.825					
2		7.150					
7 PCB-1248							U
1		5.176				ND	
1		6.497					
1		7.054					
1		7.293					
1		7.768					
2		6.047					
2		6.653					
2		7.424					
2		7.951					
2		8.726					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
8 PCB-1254							U
1		7.299				ND	
1		7.767					
1		8.099					
1		8.323					
1		8.647					
2		7.944					
2		8.191					
2		8.725					
2		9.004					
2		9.626					
10 PCB-1260							
1	7.991	7.993	-0.002	77052187	1.00	0.7238	
1	8.323	8.325	-0.002	130755529	1.00	0.7492	
1	8.787	8.788	-0.001	83409042	1.00	0.7326	
1	9.430	9.431	-0.001	231229521	1.00	0.7667	
1	9.746	9.747	-0.001	110027964	1.00	0.7433	
		Average of Peak Amounts =				0.7431	
2	8.960	8.962	-0.002	54572328	1.00	0.6563	
2	9.220	9.221	-0.001	71854781	1.00	0.7208	
2	9.738	9.741	-0.003	62224246	1.00	0.7379	
2	10.370	10.372	-0.002	165590244	1.00	0.7592	
2	10.749	10.752	-0.003	112936134	1.00	0.7537	
		Average of Peak Amounts =				0.7256	
						RPD = 2.39	
9 PCB-1262							U
1		7.994				ND	
1		8.326					
1		9.069					
1		9.431					
1		9.799					
2		9.221					
2		9.740					
2		10.079					
2		10.372					
2		10.751					
11 PCB-1268							U
1		9.798				ND	
1		9.841					
1		10.069					
1		10.458					
1		10.758					
2		10.751					
2		10.798					
2		11.048					
2		11.330					
2		11.633					
$ 12 DCB Decachlorobiphenyl							
1	10.946	10.948	-0.002	46979241	0.0200	0.0143	
2	11.860	11.862	-0.002	30763348	0.0200	0.0149	
						RPD = 4.15	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
16 1260 Res 1							
1		9.747				ND	
2		10.605					
13 1260 Res 2							
1		9.799				ND	
2		10.668					
15 1260 Res 3							
1		9.846				ND	
2		2.881					

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

SGPCBISTD_00015 Amount Added: 5.00 Units: uL Run Reagent

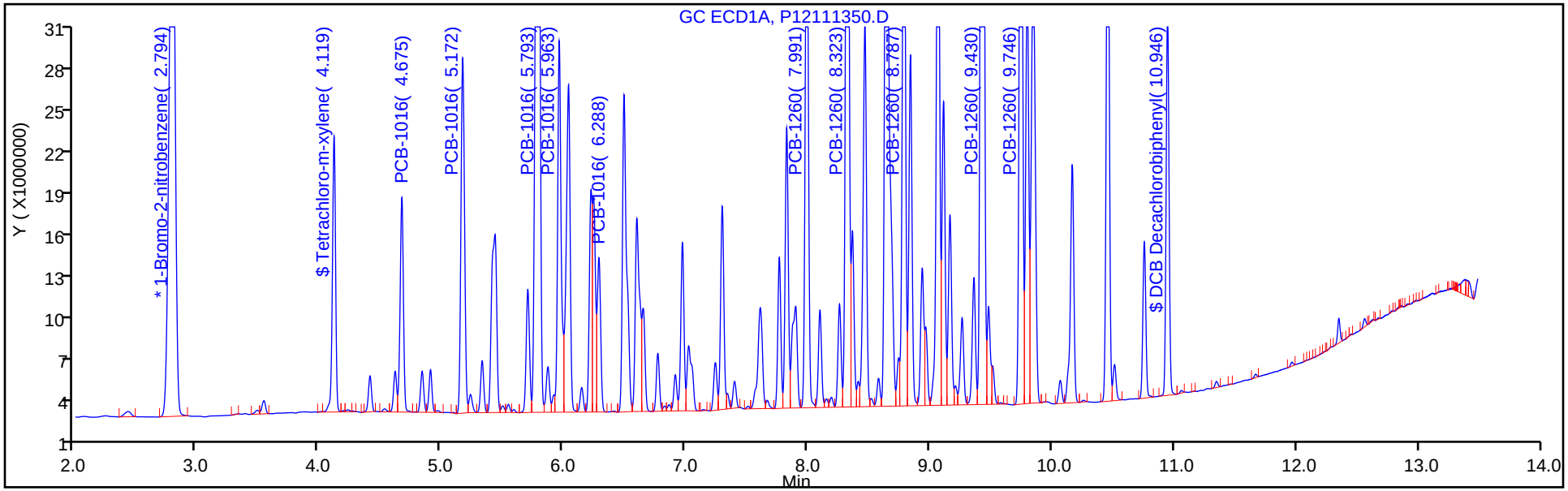
Report Date: 14-Nov-2018 11:25:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

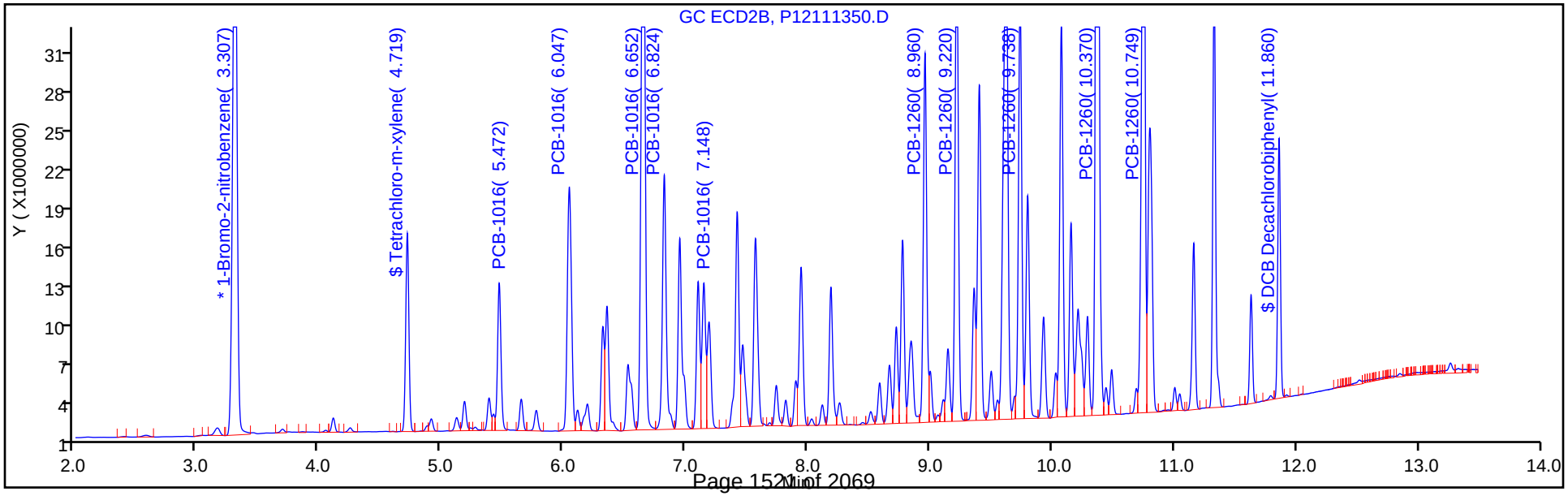
Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111350.D

Injection Date:	13-Nov-2018 21:53:12	Instrument ID:	A2HP12	Operator ID:	
Lims ID:	240-104227-B-2-C MSD			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	50
Method:	PCB12IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111350.D
Lims ID: 240-104227-B-2-C MSD
Client ID:
Sample Type: MSD
Inject. Date: 13-Nov-2018 21:53:12 ALS Bottle#: 50 Worklist Smp#: 13
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0081903-013
Operator ID: Instrument ID: A2HP12

Method: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\PCB12IS.m
Limit Group: GC 8082A IS
Last Update: 14-Nov-2018 11:23:34 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0325

First Level Reviewer: grantk Date: 14-Nov-2018 10:45:36

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0137	68.58
$ 12 DCB Decachlorobiphenyl	0.0200	0.0143	71.56

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0135	67.45
$ 12 DCB Decachlorobiphenyl	0.0200	0.0149	74.60

Report Date: 14-Nov-2018 11:25:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111350.D

Injection Date: 13-Nov-2018 21:53:12 Instrument ID: A2HP12

Lims ID: 240-104227-B-2-C MSD

Client ID:

Operator ID: ALS Bottle#: 50 Worklist Smp#: 13

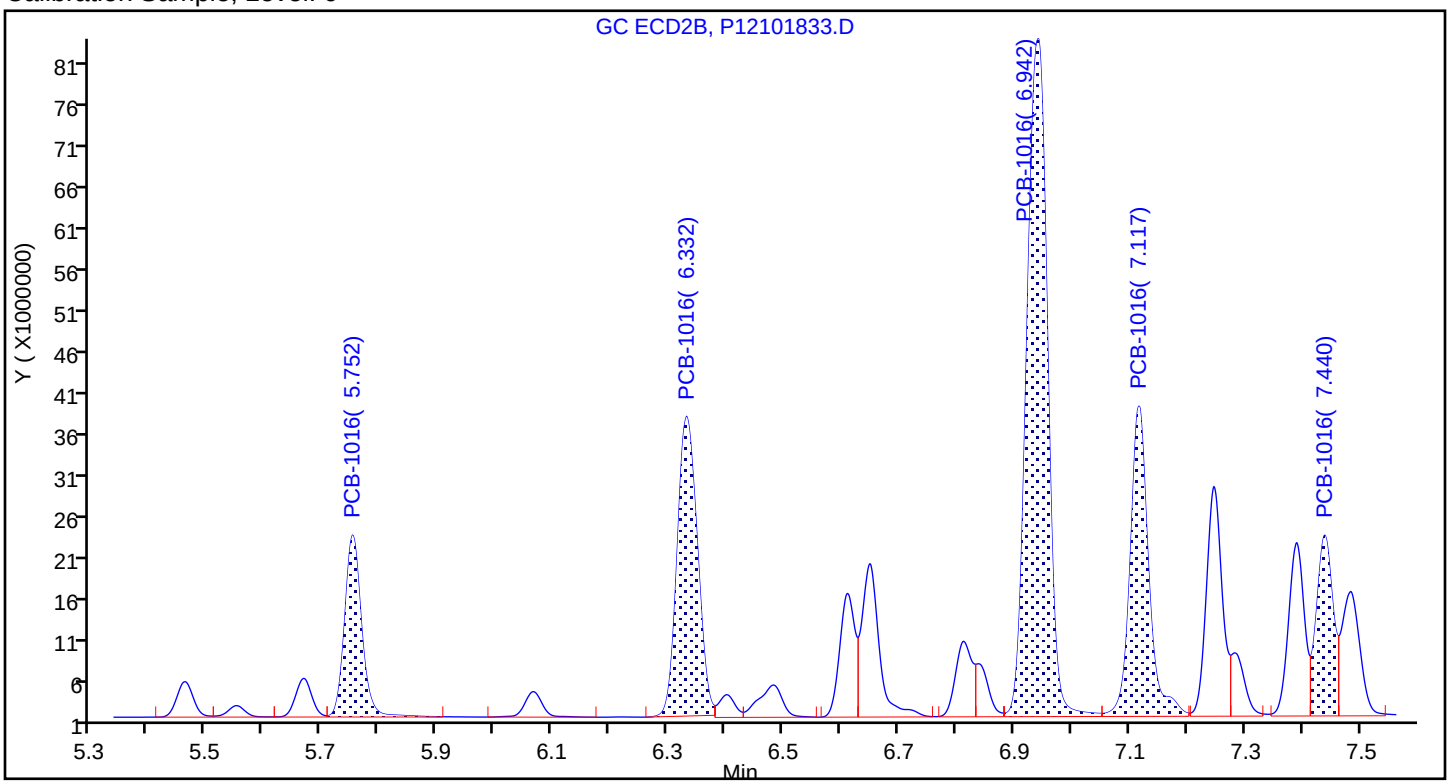
Injection Vol: 1.0 uL Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

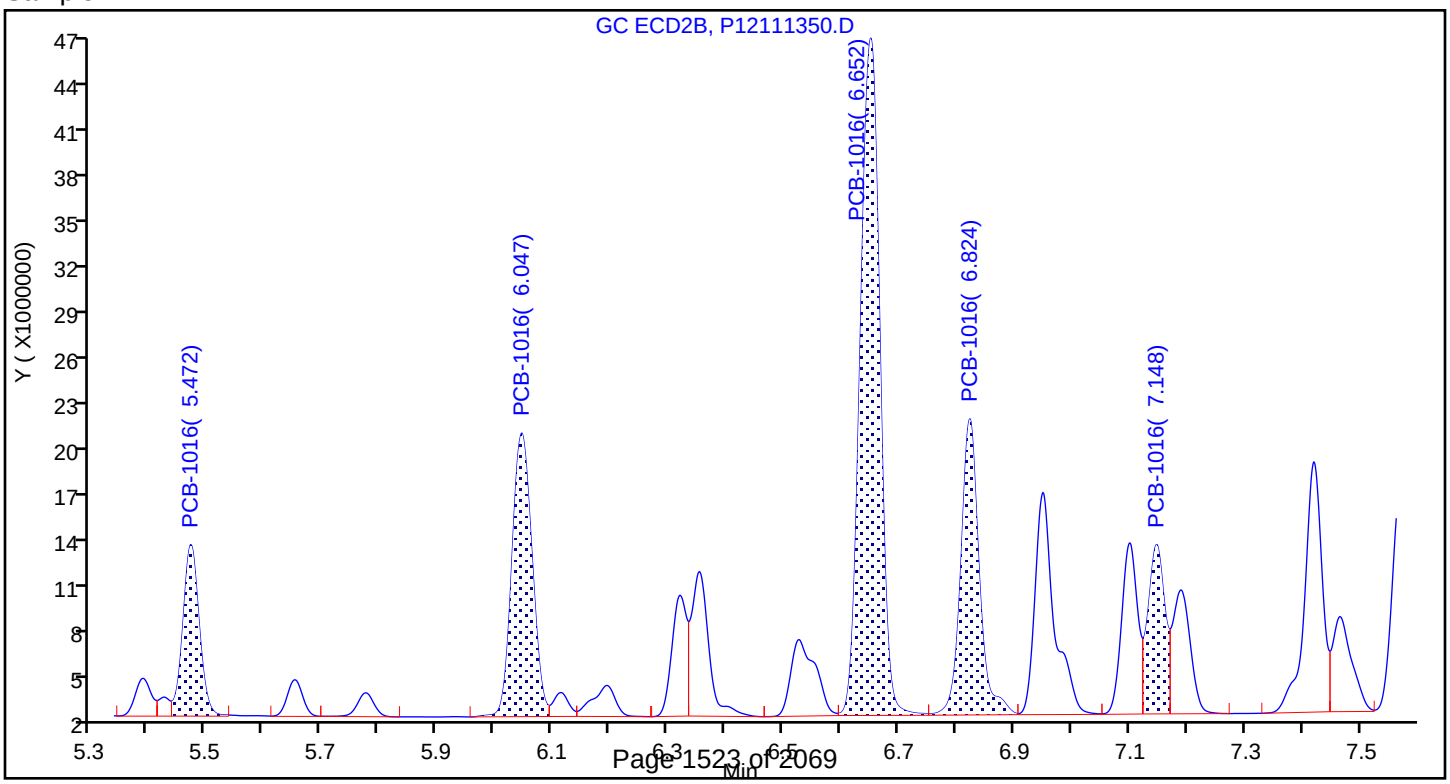
Column: Detector GC ecd2b

6 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 6



Sample



Report Date: 14-Nov-2018 11:25:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181113-81903.b\P12111350.D

Injection Date: 13-Nov-2018 21:53:12 Instrument ID: A2HP12

Lims ID: 240-104227-B-2-C MSD

Client ID:

Operator ID: ALS Bottle#: 50 Worklist Smp#: 13

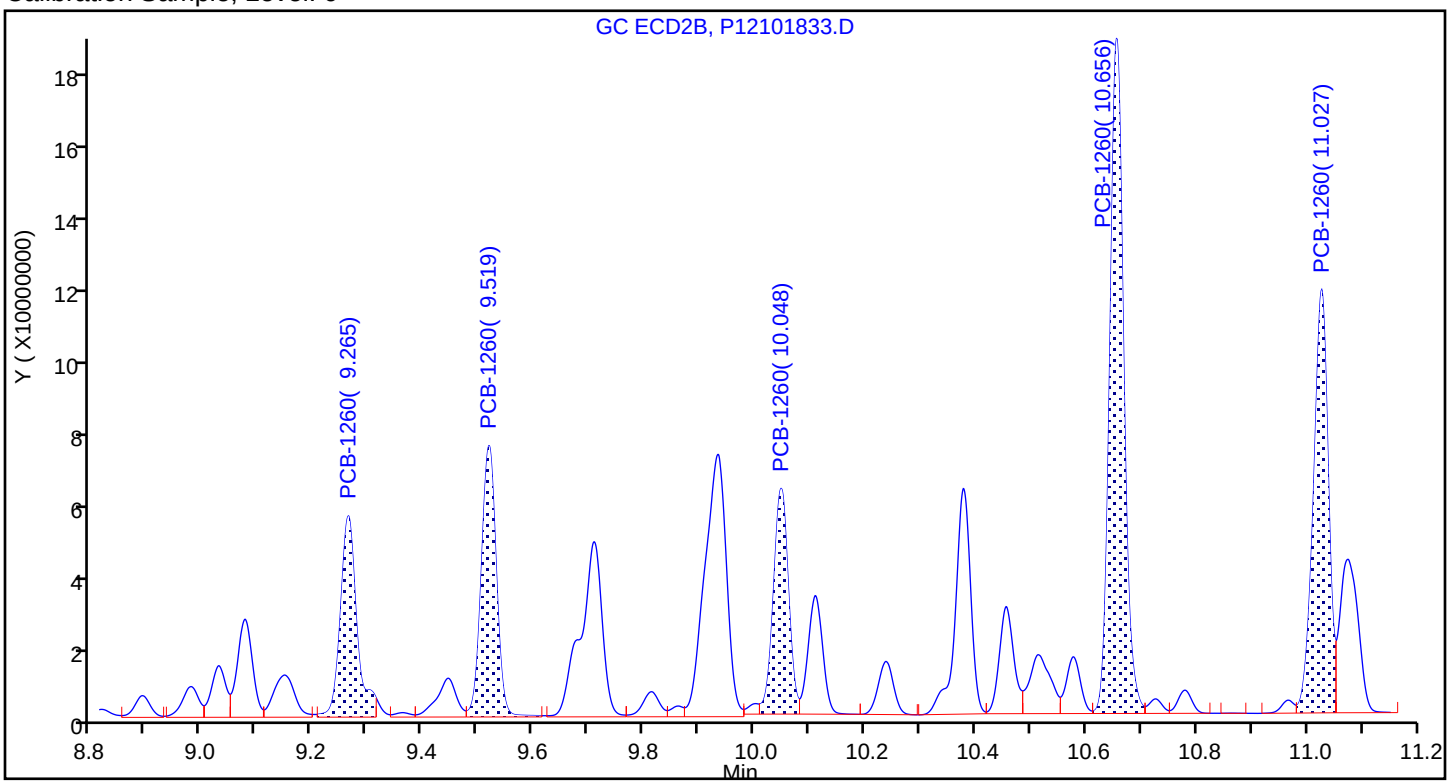
Injection Vol: 1.0 uL Dil. Factor: 1.0000

Method: PCB12IS Limit Group: GC 8082A IS

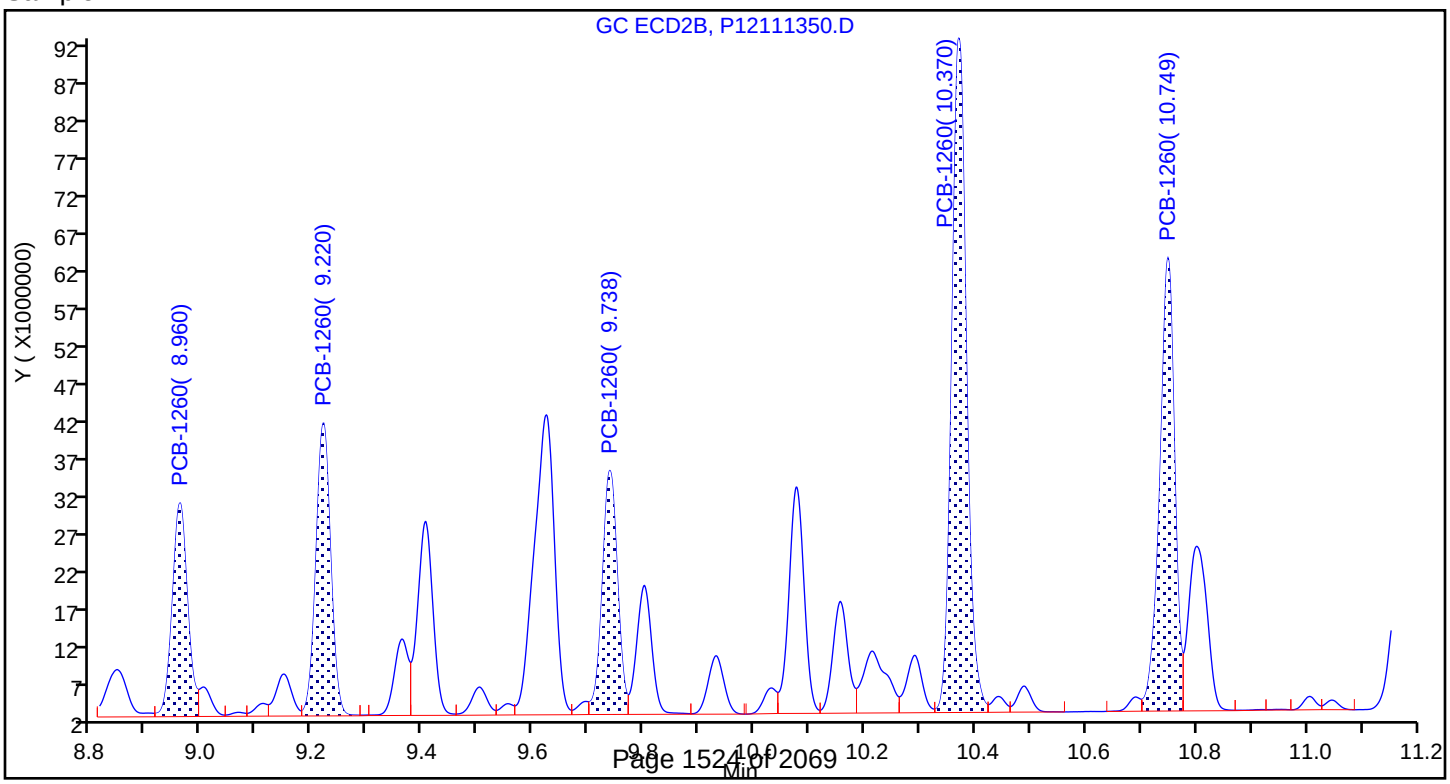
Column: Detector GC ecd2b

10 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 6



Sample



PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Start Date: 10/18/2018 15:16

Analysis Batch Number: 350710 End Date: 10/19/2018 09:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD005 240-350710/4 IC		10/18/2018 15:16	1	P12101804.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-350710/4 IC		10/18/2018 15:16	1	P12101804.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-350710/5 IC		10/18/2018 15:36	1	P12101805.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-350710/5 IC		10/18/2018 15:36	1	P12101805.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-350710/6 IC		10/18/2018 15:57	1	P12101806.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-350710/6 IC		10/18/2018 15:57	1	P12101806.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-350710/7 IC		10/18/2018 16:17	1	P12101807.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-350710/7 IC		10/18/2018 16:17	1	P12101807.D	CLP-2 (0.53mm) 0.53(mm)
STD1 240-350710/8 IC		10/18/2018 16:38	1	P12101808.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-350710/8 IC		10/18/2018 16:38	1	P12101808.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-350710/9 IC		10/18/2018 16:58	1	P12101809.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-350710/9 IC		10/18/2018 16:58	1	P12101809.D	CLP-2 (0.53mm) 0.53(mm)
STD005 240-350710/10 IC		10/18/2018 17:19	1	P12101810.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-350710/10 IC		10/18/2018 17:19	1	P12101810.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-350710/11 IC		10/18/2018 17:40	1	P12101811.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-350710/11 IC		10/18/2018 17:40	1	P12101811.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-350710/12 IC		10/18/2018 18:00	1	P12101812.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-350710/12 IC		10/18/2018 18:00	1	P12101812.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-350710/13 IC		10/18/2018 18:21	1	P12101813.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-350710/13 IC		10/18/2018 18:21	1	P12101813.D	CLP-2 (0.53mm) 0.53(mm)
STD1 240-350710/14 IC		10/18/2018 18:41	1	P12101814.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-350710/14 IC		10/18/2018 18:41	1	P12101814.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-350710/15 IC		10/18/2018 19:02	1	P12101815.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-350710/15 IC		10/18/2018 19:02	1	P12101815.D	CLP-2 (0.53mm) 0.53(mm)
STD005 240-350710/16 IC		10/18/2018 19:22	1	P12101816.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-350710/16 IC		10/18/2018 19:22	1	P12101816.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-350710/17 IC		10/18/2018 19:43	1	P12101817.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-350710/17 IC		10/18/2018 19:43	1	P12101817.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-350710/18 IC		10/18/2018 20:03	1	P12101818.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-350710/18 IC		10/18/2018 20:03	1	P12101818.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-350710/19 IC		10/18/2018 20:24	1	P12101819.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-350710/19 IC		10/18/2018 20:24	1	P12101819.D	CLP-2 (0.53mm) 0.53(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Start Date: 10/18/2018 15:16

Analysis Batch Number: 350710 End Date: 10/19/2018 09:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-350710/20 IC		10/18/2018 20:45	1	P12101820.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-350710/20 IC		10/18/2018 20:45	1	P12101820.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-350710/21 IC		10/18/2018 21:05	1	P12101821.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-350710/21 IC		10/18/2018 21:05	1	P12101821.D	CLP-2 (0.53mm) 0.53(mm)
STD005 240-350710/22 IC		10/18/2018 21:26	1	P12101822.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-350710/22 IC		10/18/2018 21:26	1	P12101822.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-350710/23 IC		10/18/2018 21:46	1	P12101823.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-350710/23 IC		10/18/2018 21:46	1	P12101823.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-350710/24 IC		10/18/2018 22:07	1	P12101824.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-350710/24 IC		10/18/2018 22:07	1	P12101824.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-350710/25 IC		10/18/2018 22:27	1	P12101825.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-350710/25 IC		10/18/2018 22:27	1	P12101825.D	CLP-2 (0.53mm) 0.53(mm)
STD1 240-350710/26 IC		10/18/2018 22:48	1	P12101826.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-350710/26 IC		10/18/2018 22:48	1	P12101826.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-350710/27 IC		10/18/2018 23:08	1	P12101827.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-350710/27 IC		10/18/2018 23:08	1	P12101827.D	CLP-2 (0.53mm) 0.53(mm)
STD005 240-350710/28 IC		10/18/2018 23:29	1	P12101828.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-350710/28 IC		10/18/2018 23:29	1	P12101828.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-350710/29 IC		10/18/2018 23:49	1	P12101829.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-350710/29 IC		10/18/2018 23:49	1	P12101829.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-350710/30 IC		10/19/2018 00:10	1	P12101830.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-350710/30 IC		10/19/2018 00:10	1	P12101830.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-350710/31 ICIS		10/19/2018 00:30	1	P12101831.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-350710/31 ICIS		10/19/2018 00:30	1	P12101831.D	CLP-2 (0.53mm) 0.53(mm)
STD1 240-350710/32 IC		10/19/2018 00:51	1	P12101832.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-350710/32 IC		10/19/2018 00:51	1	P12101832.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-350710/33 IC		10/19/2018 01:11	1	P12101833.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-350710/33 IC		10/19/2018 01:11	1	P12101833.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-350710/35		10/19/2018 01:52	1	P12101835.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-350710/35		10/19/2018 01:52	1	P12101835.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-350710/36		10/19/2018 02:13	1	P12101836.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-350710/36		10/19/2018 02:13	1	P12101836.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-350710/37		10/19/2018 02:33	1	P12101837.D	CLP-1 (0.53mm) 0.53(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Start Date: 10/18/2018 15:16

Analysis Batch Number: 350710 End Date: 10/19/2018 09:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ICV 240-350710/37		10/19/2018 02:33	1	P12101837.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-350710/40		10/19/2018 03:35	1	P12101840.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-350710/40		10/19/2018 03:35	1	P12101840.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-350710/41		10/19/2018 03:55	1	P12101841.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-350710/41		10/19/2018 03:55	1	P12101841.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-350710/42		10/19/2018 08:35	1	P12101842.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-350710/42		10/19/2018 08:35	1	P12101842.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-350710/43		10/19/2018 08:56	1	P12101843.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-350710/43		10/19/2018 08:56	1	P12101843.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-350710/44		10/19/2018 09:26	1	P12101844.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-350710/44		10/19/2018 09:26	1	P12101844.D	CLP-2 (0.53mm) 0.53(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP4 Start Date: 11/06/2018 13:25

Analysis Batch Number: 353863 End Date: 11/07/2018 07:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD005 240-353863/4 IC		11/06/2018 13:25	1	P4110604.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-353863/4 IC		11/06/2018 13:25	1	P4110604.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-353863/5 IC		11/06/2018 13:46	1	P4110605.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-353863/5 IC		11/06/2018 13:46	1	P4110605.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-353863/6 IC		11/06/2018 14:07	1	P4110606.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-353863/6 IC		11/06/2018 14:07	1	P4110606.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-353863/7 IC		11/06/2018 14:30	1	P4110607.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-353863/7 IC		11/06/2018 14:30	1	P4110607.D	CLP-2 (0.53mm) 0.53(mm)
STD1 240-353863/8 IC		11/06/2018 14:52	1	P4110608.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-353863/8 IC		11/06/2018 14:52	1	P4110608.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-353863/9 IC		11/06/2018 15:14	1	P4110609.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-353863/9 IC		11/06/2018 15:14	1	P4110609.D	CLP-2 (0.53mm) 0.53(mm)
STD005 240-353863/10 IC		11/06/2018 15:36	1	P4110610.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-353863/10 IC		11/06/2018 15:36	1	P4110610.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-353863/11 IC		11/06/2018 15:59	1	P4110611.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-353863/11 IC		11/06/2018 15:59	1	P4110611.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-353863/12 IC		11/06/2018 16:20	1	P4110612.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-353863/12 IC		11/06/2018 16:20	1	P4110612.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-353863/13 IC		11/06/2018 16:42	1	P4110613.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-353863/13 IC		11/06/2018 16:42	1	P4110613.D	CLP-2 (0.53mm) 0.53(mm)
STD1 240-353863/14 IC		11/06/2018 17:04	1	P4110614.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-353863/14 IC		11/06/2018 17:04	1	P4110614.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-353863/15 IC		11/06/2018 17:25	1	P4110615.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-353863/15 IC		11/06/2018 17:25	1	P4110615.D	CLP-2 (0.53mm) 0.53(mm)
STD005 240-353863/16 IC		11/06/2018 17:48	1	P4110616.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-353863/16 IC		11/06/2018 17:48	1	P4110616.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-353863/17 IC		11/06/2018 18:10	1	P4110617.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-353863/17 IC		11/06/2018 18:10	1	P4110617.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-353863/18 IC		11/06/2018 18:32	1	P4110618.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-353863/18 IC		11/06/2018 18:32	1	P4110618.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-353863/19 IC		11/06/2018 18:54	1	P4110619.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-353863/19 IC		11/06/2018 18:54	1	P4110619.D	CLP-2 (0.53mm) 0.53(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP4 Start Date: 11/06/2018 13:25

Analysis Batch Number: 353863 End Date: 11/07/2018 07:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-353863/20 IC		11/06/2018 19:15	1	P4110620.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-353863/20 IC		11/06/2018 19:15	1	P4110620.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-353863/21 IC		11/06/2018 19:37	1	P4110621.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-353863/21 IC		11/06/2018 19:37	1	P4110621.D	CLP-2 (0.53mm) 0.53(mm)
STD005 240-353863/22 IC		11/06/2018 19:58	1	P4110622.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-353863/22 IC		11/06/2018 19:58	1	P4110622.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-353863/23 IC		11/06/2018 20:20	1	P4110623.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-353863/23 IC		11/06/2018 20:20	1	P4110623.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-353863/24 IC		11/06/2018 20:42	1	P4110624.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-353863/24 IC		11/06/2018 20:42	1	P4110624.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-353863/25 IC		11/06/2018 21:04	1	P4110625.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-353863/25 IC		11/06/2018 21:04	1	P4110625.D	CLP-2 (0.53mm) 0.53(mm)
STD1 240-353863/26 IC		11/06/2018 21:27	1	P4110626.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-353863/26 IC		11/06/2018 21:27	1	P4110626.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-353863/27 IC		11/06/2018 21:49	1	P4110627.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-353863/27 IC		11/06/2018 21:49	1	P4110627.D	CLP-2 (0.53mm) 0.53(mm)
STD005 240-353863/28 IC		11/06/2018 22:10	1	P4110628.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-353863/28 IC		11/06/2018 22:10	1	P4110628.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-353863/29 IC		11/06/2018 22:32	1	P4110629.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-353863/29 IC		11/06/2018 22:32	1	P4110629.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-353863/30 IC		11/06/2018 22:53	1	P4110630.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-353863/30 IC		11/06/2018 22:53	1	P4110630.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-353863/31 ICIS		11/06/2018 23:14	1	P4110631.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-353863/31 ICIS		11/06/2018 23:14	1	P4110631.D	CLP-2 (0.53mm) 0.53(mm)
STD1 240-353863/32 IC		11/06/2018 23:35	1	P4110632.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-353863/32 IC		11/06/2018 23:35	1	P4110632.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-353863/33 IC		11/06/2018 23:56	1	P4110633.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-353863/33 IC		11/06/2018 23:56	1	P4110633.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-353863/34		11/07/2018 00:17	1	P4110634.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-353863/34		11/07/2018 00:17	1	P4110634.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-353863/35		11/07/2018 00:38	1	P4110635.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-353863/35		11/07/2018 00:38	1	P4110635.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-353863/36		11/07/2018 00:58	1	P4110636.D	CLP-1 (0.53mm) 0.53(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP4 Start Date: 11/06/2018 13:25

Analysis Batch Number: 353863 End Date: 11/07/2018 07:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ICV 240-353863/36		11/07/2018 00:58	1	P4110636.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-353863/37		11/07/2018 01:19	1	P4110637.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-353863/37		11/07/2018 01:19	1	P4110637.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-353863/39		11/07/2018 02:01	1	P4110639.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-353863/39		11/07/2018 02:01	1	P4110639.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-353863/40		11/07/2018 02:21	1	P4110640.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-353863/40		11/07/2018 02:21	1	P4110640.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-353863/41		11/07/2018 02:42	1	P4110641.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-353863/41		11/07/2018 02:42	1	P4110641.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-353863/43		11/07/2018 07:38	1	P4110643.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-353863/43		11/07/2018 07:38	1	P4110643.D	CLP-2 (0.53mm) 0.53(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP4 Start Date: 11/13/2018 05:48

Analysis Batch Number: 355036 End Date: 11/13/2018 13:42

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 240-355036/3 CCVIS		11/13/2018 05:48	1	P4111303.D	CLP-1 (0.53mm) 0.53(mm)
CCV 240-355036/3 CCVIS		11/13/2018 05:48	1		CLP-2 (0.53mm) 0.53(mm)
CCV 240-355036/4		11/13/2018 06:09	1	P4111304.D	CLP-1 (0.53mm) 0.53(mm)
CCV 240-355036/4		11/13/2018 06:09	1		CLP-2 (0.53mm) 0.53(mm)
CCV 240-355036/5		11/13/2018 06:30	1	P4111305.D	CLP-1 (0.53mm) 0.53(mm)
CCV 240-355036/5		11/13/2018 06:30	1		CLP-2 (0.53mm) 0.53(mm)
CCV 240-355036/6		11/13/2018 06:50	1	P4111306.D	CLP-1 (0.53mm) 0.53(mm)
CCV 240-355036/6		11/13/2018 06:50	1		CLP-2 (0.53mm) 0.53(mm)
CCV 240-355036/7		11/13/2018 07:11	1	P4111307.D	CLP-1 (0.53mm) 0.53(mm)
CCV 240-355036/7		11/13/2018 07:11	1		CLP-2 (0.53mm) 0.53(mm)
MB 240-354524/16-A		11/13/2018 07:53	1	P4111309.D	CLP-1 (0.53mm) 0.53(mm)
MB 240-354524/16-A		11/13/2018 07:53	1	P4111309.D	CLP-2 (0.53mm) 0.53(mm)
LCS 240-354524/17-A		11/13/2018 08:14	1	P4111310.D	CLP-1 (0.53mm) 0.53(mm)
LCS 240-354524/17-A		11/13/2018 08:14	1	P4111310.D	CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 08:35	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 08:35	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 08:56	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 08:56	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 09:17	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 09:17	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 09:38	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 09:38	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 10:00	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 10:00	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 10:22	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 10:22	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 10:44	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 10:44	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 11:05	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 11:05	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 11:27	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 11:27	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 11:49	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 11:49	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 12:11	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 12:11	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 12:33	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 12:33	1		CLP-2 (0.53mm) 0.53(mm)
240-104089-3		11/13/2018 12:56	1	P4111323.D	CLP-1 (0.53mm) 0.53(mm)
240-104089-3		11/13/2018 12:56	1	P4111323.D	CLP-2 (0.53mm) 0.53(mm)
240-104089-5		11/13/2018 13:19	1	P4111324.D	CLP-1 (0.53mm) 0.53(mm)
240-104089-5		11/13/2018 13:19	1	P4111324.D	CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 13:42	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 13:42	1		CLP-2 (0.53mm) 0.53(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Start Date: 11/13/2018 18:27

Analysis Batch Number: 355209 End Date: 11/14/2018 05:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 240-355209/3 CCVIS		11/13/2018 18:27	1		CLP-1 (0.53mm) 0.53(mm)
CCV 240-355209/3 CCVIS		11/13/2018 18:27	1	P12111340.D	CLP-2 (0.53mm) 0.53(mm)
CCV 240-355209/4		11/13/2018 18:48	1		CLP-1 (0.53mm) 0.53(mm)
CCV 240-355209/4		11/13/2018 18:48	1	P12111341.D	CLP-2 (0.53mm) 0.53(mm)
CCV 240-355209/5		11/13/2018 19:08	1		CLP-1 (0.53mm) 0.53(mm)
CCV 240-355209/5		11/13/2018 19:08	1	P12111342.D	CLP-2 (0.53mm) 0.53(mm)
CCV 240-355209/6		11/13/2018 19:29	1		CLP-1 (0.53mm) 0.53(mm)
CCV 240-355209/6		11/13/2018 19:29	1	P12111343.D	CLP-2 (0.53mm) 0.53(mm)
CCV 240-355209/7		11/13/2018 19:49	1		CLP-1 (0.53mm) 0.53(mm)
CCV 240-355209/7		11/13/2018 19:49	1	P12111344.D	CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 20:31	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 20:31	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 20:51	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 20:51	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 21:12	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 21:12	1		CLP-2 (0.53mm) 0.53(mm)
240-104227-B-2-B MS		11/13/2018 21:32	1	P12111349.D	CLP-1 (0.53mm) 0.53(mm)
240-104227-B-2-B MS		11/13/2018 21:32	1	P12111349.D	CLP-2 (0.53mm) 0.53(mm)
240-104227-B-2-C MSD		11/13/2018 21:53	1	P12111350.D	CLP-1 (0.53mm) 0.53(mm)
240-104227-B-2-C MSD		11/13/2018 21:53	1	P12111350.D	CLP-2 (0.53mm) 0.53(mm)
MB 240-354879/23-A		11/13/2018 22:13	1	P12111351.D	CLP-1 (0.53mm) 0.53(mm)
MB 240-354879/23-A		11/13/2018 22:13	1	P12111351.D	CLP-2 (0.53mm) 0.53(mm)
LCS 240-354879/24-A		11/13/2018 22:34	1	P12111352.D	CLP-1 (0.53mm) 0.53(mm)
LCS 240-354879/24-A		11/13/2018 22:34	1	P12111352.D	CLP-2 (0.53mm) 0.53(mm)
CCV 240-355209/16		11/13/2018 22:54	1		CLP-1 (0.53mm) 0.53(mm)
CCV 240-355209/16		11/13/2018 22:54	1	P12111353.D	CLP-2 (0.53mm) 0.53(mm)
CCVIS 240-355209/17		11/13/2018 23:15	1		CLP-1 (0.53mm) 0.53(mm)
CCVIS 240-355209/17		11/13/2018 23:15	1	P12111354.D	CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 23:35	10		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 23:35	10		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 23:56	100		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/13/2018 23:56	100		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 00:17	100		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 00:17	100		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 00:58	100		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 00:58	100		CLP-2 (0.53mm) 0.53(mm)
240-104089-2		11/14/2018 01:39	1	P12111361.D	CLP-1 (0.53mm) 0.53(mm)
240-104089-2		11/14/2018 01:39	1	P12111361.D	CLP-2 (0.53mm) 0.53(mm)
240-104089-4		11/14/2018 01:59	1	P12111362.D	CLP-1 (0.53mm) 0.53(mm)
240-104089-4		11/14/2018 01:59	1	P12111362.D	CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 02:20	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 02:20	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 02:40	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 02:40	1		CLP-2 (0.53mm) 0.53(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: A2HP12 Start Date: 11/13/2018 18:27

Analysis Batch Number: 355209 End Date: 11/14/2018 05:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		11/14/2018 03:01	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 03:01	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 04:03	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 04:03	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 04:23	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 04:23	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 04:44	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 04:44	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 05:04	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		11/14/2018 05:04	1		CLP-2 (0.53mm) 0.53(mm)

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 354524 Batch Start Date: 11/09/18 13:00 Batch Analyst: Earle, Steve

Batch Method: 3520C Batch End Date: 11/10/18 07:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	ex10PPMSPK 00043	ex2/.2SURRW 00115	
240-104089-E-3	WC-FTCB-DEVW	3520C, 8082A	T	990 mL	2 mL	7 SU		1 mL	
240-104089-E-5	WC-FTCB-DECON	3520C, 8082A	T	970 mL	2 mL	7 SU		1 mL	
MB 240-354524/16		3520C, 8082A		1000 mL	2 mL	7 SU		1 mL	
LCS 240-354524/17		3520C, 8082A		1000 mL	2 mL	7 SU	0.25 mL	1 mL	

Batch Notes	
Acid used for Clean Up ID	3690592
Analyst ID - Concentration	ELIZABETH.BORDER JESSICA.TRUSHEL
Exchange Solvent ID	3800638
Analyst ID - Extraction	STEVE.EARLE
Extraction 1 End Time	10/26/2018 04:25
Extraction 1 Start Time	10/25/2018 10:25
pH Indicator ID	3734946
Pipette/Syringe/Dispenser ID	9
Prep Solvent ID	3845928
Analyst ID - Spike Analyst	STEVE.EARLE

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 354879 Batch Start Date: 11/12/18 13:45 Batch Analyst: Fisher, Za'Chary M

Batch Method: 3540C Batch End Date: 11/13/18 05:45

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ex10PPMSPK 00043	ex2/.2SURRW 00115		
240-104089-C-2	WC-SEMW10D-SOIL	3540C, 8082A	T	10.32 g	10 mL		1 mL		
240-104089-C-4	WC-FTCB-SOIL	3540C, 8082A	T	10.39 g	10 mL		1 mL		
240-104227-B-2 MS		3540C, 8082A	T	10.48 g	10 mL	1 mL	1 mL		
240-104227-B-2 MSD		3540C, 8082A	T	10.22 g	10 mL	1 mL	1 mL		
MB 240-354879/23		3540C, 8082A		10 g	10 mL		1 mL		
LCS 240-354879/24		3540C, 8082A		10 g	10 mL	1 mL	1 mL		

Batch Notes	
Acid used for Clean Up ID	3690590
Balance ID	3874053
Blank Matrix ID	2548158
Analyst ID - Concentration	ELIZABETH.BORDER JESSICA.TRUSHEL
Analyst ID - Extraction	SAMUEL.DILLON ZACHARY.FISHER AHMED.THABET
Na2SO4 ID	2548158
Pipette/Syringe/Dispenser ID	4
Prep Solvent ID	3891240
Analyst ID - Spike Analyst	ZACHARY.FISHER

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG No.:

Project: MRC Block F TCB Waste Characterization

Client Sample ID	Lab Sample ID
WC-SEMW10D-SOIL	240-104089-2
WC-FTCB-DEVW	240-104089-3
WC-FTCB-SOIL	240-104089-4
WC-FTCB-DECON	240-104089-5

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TCLP

Client Sample ID: WC-SEMW10D-SOIL
Lab Sample ID: 240-104089-2
Lab Name: TestAmerica Canton
Job No.: 240-104089-1
SDG ID.:
Matrix: Solid
Date Sampled: 11/07/2018 09:30
Reporting Basis: WET
Date Received: 11/08/2018 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	0.0041	0.050	0.0041	mg/L	U		1	6010B
7440-39-3	Barium	0.033	0.50	0.0013	mg/L	J	B	1	6010B
7440-43-9	Cadmium	0.00020	0.050	0.00020	mg/L	U		1	6010B
7440-47-3	Chromium	0.0043	0.050	0.00063	mg/L	J	B	1	6010B
7439-92-1	Lead	0.0028	0.050	0.0028	mg/L	U		1	6010B
7782-49-2	Selenium	0.0060	0.050	0.0060	mg/L	U		1	6010B
7440-22-4	Silver	0.00062	0.050	0.00062	mg/L	U		1	6010B
7439-97-6	Mercury	0.00013	0.0020	0.00013	mg/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TCLP

Client Sample ID: WC-FTCB-DEVW
Lab Sample ID: 240-104089-3
Lab Name: TestAmerica Canton
Job No.: 240-104089-1
SDG ID.:
Matrix: Water
Date Sampled: 11/07/2018 10:00
Reporting Basis: WET
Date Received: 11/08/2018 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	0.0041	0.050	0.0041	mg/L	U		1	6010B
7440-39-3	Barium	0.45	0.50	0.0013	mg/L	J	B	1	6010B
7440-43-9	Cadmium	0.00021	0.050	0.00020	mg/L	J		1	6010B
7440-47-3	Chromium	0.0022	0.050	0.00063	mg/L	J	B	1	6010B
7439-92-1	Lead	0.0028	0.050	0.0028	mg/L	U		1	6010B
7782-49-2	Selenium	0.0060	0.050	0.0060	mg/L	U		1	6010B
7440-22-4	Silver	0.00068	0.050	0.00062	mg/L	J		1	6010B
7439-97-6	Mercury	0.00013	0.0020	0.00013	mg/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TCLP

Client Sample ID: WC-FTCB-SOIL
Lab Sample ID: 240-104089-4
Lab Name: TestAmerica Canton
Job No.: 240-104089-1
SDG ID.:
Matrix: Solid
Date Sampled: 11/07/2018 10:15
Reporting Basis: WET
Date Received: 11/08/2018 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	0.0052	0.050	0.0041	mg/L	J		1	6010B
7440-39-3	Barium	0.18	0.50	0.0013	mg/L	J	B	1	6010B
7440-43-9	Cadmium	0.0015	0.050	0.00020	mg/L	J		1	6010B
7440-47-3	Chromium	0.0040	0.050	0.00063	mg/L	J	B	1	6010B
7439-92-1	Lead	0.019	0.050	0.0028	mg/L	J		1	6010B
7782-49-2	Selenium	0.0060	0.050	0.0060	mg/L	U		1	6010B
7440-22-4	Silver	0.00062	0.050	0.00062	mg/L	U		1	6010B
7439-97-6	Mercury	0.00013	0.0020	0.00013	mg/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TCLP

Client Sample ID: WC-FTCB-DECON
Lab Sample ID: 240-104089-5
Lab Name: TestAmerica Canton
Job No.: 240-104089-1
SDG ID.:
Matrix: Water
Date Sampled: 11/07/2018 10:30
Reporting Basis: WET
Date Received: 11/08/2018 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	0.0041	0.050	0.0041	mg/L	U		1	6010B
7440-39-3	Barium	0.018	0.50	0.0013	mg/L	J	B	1	6010B
7440-43-9	Cadmium	0.00020	0.050	0.00020	mg/L	U		1	6010B
7440-47-3	Chromium	0.0018	0.050	0.00063	mg/L	J	B	1	6010B
7439-92-1	Lead	0.0028	0.050	0.0028	mg/L	U		1	6010B
7782-49-2	Selenium	0.0060	0.050	0.0060	mg/L	U		1	6010B
7440-22-4	Silver	0.00062	0.050	0.00062	mg/L	U		1	6010B
7439-97-6	Mercury	0.00013	0.0020	0.00013	mg/L	U		1	7470A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

ICV Source: MT6500ICV_00050 Concentration Units: ug/L

CCV Source: MTICPCCV_00142

Analyte	ICV 240-356115/4 11/19/2018 08:31				CCV 240-356115/18 11/19/2018 09:32				CCV 240-356115/30 11/19/2018 10:27			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	387		375	103	520		500	104	502		500	100
Barium	1490		1500	99	2040		2000	102	1980		2000	99
Cadmium	381		375	102	512		500	102	492		500	98
Chromium	1470		1500	98	1920		2000	96	1850		2000	92
Lead	376		375	100	502		500	100	484		500	97
Selenium	386		375	103	522		500	104	502		500	100
Silver	739		750	99	959		1000	96	917		1000	92

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

ICV Source: MT6500ICV_00050 Concentration Units: ug/L

CCV Source: MTICPCCV_00142

Analyte	CCV 240-356115/39 11/19/2018 11:08				CCV 240-356115/51 11/19/2018 12:19							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	513		500	103	518		500	104				
Barium	1990		2000	99	2010		2000	100				
Cadmium	504		500	101	509		500	102				
Chromium	1930		2000	96	1930		2000	97				
Lead	482		500	96	483		500	97				
Selenium	517		500	103	524		500	105				
Silver	971		1000	97	988		1000	99				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

ICV Source: MTTRCRIC_00065 Concentration Units: ug/L

CCV Source: MTICPCCV_00142

Analyte	ICVL 240-356115/6 11/19/2018 08:40				CCV 240-356115/18 11/19/2018 09:32				CCV 240-356115/30 11/19/2018 10:27			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	15.3		15.0	102	520		500	104	502		500	100
Barium	192	J	200	96	2040		2000	102	1980		2000	99
Cadmium	4.94		5.00	99	512		500	102	492		500	98
Chromium	9.76		10.0	98	1920		2000	96	1850		2000	92
Lead	10.7		10.0	107	502		500	100	484		500	97
Selenium	16.8		20.0	84	522		500	104	502		500	100
Silver	9.56		10.0	96	959		1000	96	917		1000	92

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

ICV Source: MTTRCRIC_00065 Concentration Units: ug/L

CCV Source: MTICPCCV_00142

Analyte	CCV 240-356115/39 11/19/2018 11:08				CCV 240-356115/51 11/19/2018 12:19							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	513		500	103	518		500	104				
Barium	1990		2000	99	2010		2000	100				
Cadmium	504		500	101	509		500	102				
Chromium	1930		2000	96	1930		2000	97				
Lead	482		500	96	483		500	97				
Selenium	517		500	103	524		500	105				
Silver	971		1000	97	988		1000	99				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

ICV Source: MTHgICV_00001_00427 Concentration Units: ug/L

CCV Source: MTHGCALW_01971

Analyte	ICV 240-356141/7-A 11/19/2018 13:05				CCV 240-356141/10-A 11/19/2018 13:52				CCV 240-356141/10-A 11/19/2018 14:16			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.87		5.00	97	4.87		5.00	97	4.90		5.00	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

ICV Source: MTHgICV_00001_00427 Concentration Units: ug/L

CCV Source: MTHGCALW_01971

Analyte	CCV 240-356141/10-A 11/19/2018 14:42											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.79		5.00	96								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Method: 7470A Instrument ID: H3

Lab Sample ID: CRA 240-356141/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_01971

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.216	J	108	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-356115/5 11/19/2018 08:35		CCB 240-356115/19 11/19/2018 09:36		CCB 240-356115/31 11/19/2018 10:31		CCB 240-356115/40 11/19/2018 11:12	
		Found	C	Found	C	Found	C	Found	C
Arsenic	10	4.1	U	4.1	U	4.1	U	4.1	U
Barium	200	1.3	U	1.3	U	1.3	U	1.3	U
Cadmium	2.0	0.20	U	0.20	U	0.20	U	0.20	U
Chromium	5.0	0.63	U	0.63	U	0.63	U	0.63	U
Lead	5.0	2.8	U	2.8	U	2.8	U	2.8	U
Selenium	15	6.0	U	6.0	U	6.0	U	6.0	U
Silver	5.0	0.62	U	0.62	U	0.62	U	0.62	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-356115/52 11/19/2018 12:23							
		Found	C	Found	C	Found	C	Found	C
Arsenic	10	4.1	U						
Barium	200	1.3	U						
Cadmium	2.0	0.20	U						
Chromium	5.0	0.63	U						
Lead	5.0	2.8	U						
Selenium	15	6.0	U						
Silver	5.0	0.62	U						

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-356141/8-A 11/19/2018 13:07		CCB 240-356141/11-A 11/19/2018 13:54		CCB 240-356141/11-A 11/19/2018 14:19		CCB 240-356141/11-A 11/19/2018 14:45	
		Found	C	Found	C	Found	C	Found	C
Mercury	2.0	0.13	U	0.13	U	0.13	U	0.13	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: MB 240-355862/2-A

Instrument Code: I9 Batch No.: 356115

CAS No.	Analyte	Concentration	C	Q	Method
7440-38-2	Arsenic	0.0041	U		6010B
7440-39-3	Barium	0.0013	U		6010B
7440-43-9	Cadmium	0.00020	U		6010B
7440-47-3	Chromium	0.00063	U		6010B
7439-92-1	Lead	0.0028	U		6010B
7782-49-2	Selenium	0.0060	U		6010B
7440-22-4	Silver	0.00062	U		6010B

3-IN
METHOD BLANK
METALS - TCLP

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: LB 240-355683/1-B

Instrument Code: I9 Batch No.: 356115

CAS No.	Analyte	Concentration	C	Q	Method
7440-38-2	Arsenic	0.0041	U		6010B
7440-39-3	Barium	0.00312	J		6010B
7440-43-9	Cadmium	0.00020	U		6010B
7440-47-3	Chromium	0.00174	J		6010B
7439-92-1	Lead	0.0028	U		6010B
7782-49-2	Selenium	0.0060	U		6010B
7440-22-4	Silver	0.00062	U		6010B

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: MB 240-355863/2-A

Instrument Code: H3 Batch No.: 356258

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.00013	U		7470A

FORM III-IN

3-IN
METHOD BLANK
METALS - TCLP

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: LB 240-355683/1-C

Instrument Code: H3 Batch No.: 356258

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.00013	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICSA 240-356115/8 Instrument ID: I9

Lab File ID: I9111918A.asc ICS Source: MTTRICSAW_00043

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Arsenic		**-2.52**	
Barium		**-0.159**	
Cadmium		**0.656**	
Chromium		**3.83**	
Lead		**0.635**	
Selenium		**-0.942**	
Silver		**0.277**	
Aluminum	*500000*	*507940*	*102*
Antimony		*1.87*	
Beryllium		*0.165*	
Boron		*-1.37*	
Calcium	*500000*	*464770*	*93*
Cobalt		*-0.448*	
Copper		*1.70*	
Iron	*200000*	*188860*	*94*
Lithium		*15.2*	
Magnesium	*500000*	*495690*	*99*
Manganese		*0.757*	
Molybdenum		*-1.01*	
Nickel		*3.49*	
Potassium		*-45.3*	
Silicon		*-26.6*	
Sodium		*6.24*	
Strontium		*10.4*	
Thallium		*0.860*	
Tin		*-0.383*	
Titanium		*-0.885*	
Vanadium		*-5.67*	
Zinc		*-1.69*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Lab Sample ID: ICSAB 240-356115/9 Instrument ID: I9

Lab File ID: I9111918A.asc ICS Source: MTICPICSABW_00019

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Arsenic	**1000**	**1023**	**102**
Barium	**500**	**491**	**98**
Cadmium	**1000**	**1024**	**102**
Chromium	**500**	**467**	**93**
Lead	**1000**	**905**	**90**
Selenium	**1000**	**1014**	**101**
Silver	**1000**	**1029**	**103**
Aluminum	*500000*	*503570*	*101*
Antimony	*1000*	*1020*	*102*
Beryllium	*500*	*485*	*97*
Boron	*500*	*520*	*104*
Calcium	*500000*	*464830*	*93*
Cobalt	*500*	*499*	*100*
Copper	*500*	*510*	*102*
Iron	*200000*	*188680*	*94*
Lithium	*500*	*563*	*113*
Magnesium	*500000*	*493700*	*99*
Manganese	*500*	*480*	*96*
Molybdenum	*1000*	*976*	*98*
Nickel	*1000*	*977*	*98*
Potassium	*10000*	*10561*	*106*
Silicon	*10000*	*9522*	*95*
Sodium	*10000*	*10502*	*105*
Strontium	*1500*	*1454*	*97*
Thallium	*1000*	*962*	*96*
Tin	*500*	*507*	*101*
Titanium	*500*	*507*	*101*
Vanadium	*500*	*498*	*100*
Zinc	*1000*	*994*	*99*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TCLP

Client ID: WC-FTCB-SOIL MS
Lab ID: 240-104089-4 MS
Lab Name: TestAmerica Canton
Job No.: 240-104089-1
SDG No.:
Matrix: Solid
Concentration Units: mg/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Arsenic	5.43		0.0052	J	5.00	109	75-125		6010B
Barium	50.4		0.18	J	50.0	100	75-125		6010B
Cadmium	1.05		0.0015	J	1.00	105	75-125		6010B
Chromium	4.65		0.0040	J	5.00	93	75-125		6010B
Lead	5.08		0.019	J	5.00	101	75-125		6010B
Selenium	1.11		0.0060	U	1.00	111	75-125		6010B
Silver	0.939		0.00062	U	1.00	94	75-125		6010B
Mercury	0.00510		0.00013	U	0.00500	102	80-120		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TCLP

Client ID: WC-FTCB-SOIL MSD | Lab ID: 240-104089-4 MSD

Lab Name: TestAmerica Canton | Job No.: 240-104089-1

SDG No.:

Matrix: Solid | Concentration Units: mg/L

% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Arsenic	5.17		5.00	103	75-125	5	20		6010B
Barium	48.5		50.0	97	75-125	4	20		6010B
Cadmium	1.00		1.00	100	75-125	4	20		6010B
Chromium	4.58		5.00	91	75-125	2	20		6010B
Lead	4.87		5.00	97	75-125	4	20		6010B
Selenium	1.05		1.00	105	75-125	5	20		6010B
Silver	0.919		1.00	92	75-125	2	20		6010B
Mercury	0.00491		0.00500	98	80-120	4	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-355862/3-A

Lab Name: TestAmerica Canton Job No.: 240-104089-1

Sample Matrix: Water LCS Source: MTICP1_00079

Analyte	Water(mg/L)							
	True	Found	C	%R	Limits		Q	Method
Arsenic	2.00	2.22		111	50	150		6010B
Barium	2.00	1.96		98	50	150		6010B
Cadmium	0.0500	0.0528		106	50	150		6010B
Chromium	0.200	0.194		97	50	150		6010B
Lead	0.500	0.481		96	50	150		6010B
Selenium	2.00	2.28		114	50	150		6010B
Silver	0.0500	0.0505		101	50	150		6010B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-355863/3-A

Lab Name: TestAmerica Canton Job No.: 240-104089-1

Sample Matrix: Water LCS Source: MTHGCALW_01969

Analyte	Water(mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.00500	0.00506		101	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TCLP

Lab ID: 240-104089-4

SDG No:

Lab Name: TestAmerica Canton Job No: 240-104089-1

Matrix: Solid Concentration Units: mg/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Arsenic	0.0052	J	0.020	U	NC		6010B
Barium	0.18	J	0.191	J	7.9		6010B
Cadmium	0.0015	J	0.00133	J	NC		6010B
Chromium	0.0040	J	0.00472	J	NC		6010B
Lead	0.019	J	0.0209	J	NC		6010B
Selenium	0.0060	U	0.030	U	NC		6010B
Silver	0.00062	U	0.0031	U	NC		6010B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG Number:

Matrix: Solid Instrument ID: I9

Method: 6010B MDL Date: 12/15/2017 12:45

Prep Method: 3010A

Leach Method: 1311

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Arsenic	189.042	0.05	0.004051
Barium	493.409	0.5	0.001328
Cadmium	226.502	0.05	0.000203
Chromium	267.716	0.05	0.000625
Lead	220.353	0.05	0.002765
Selenium	196.026	0.05	0.00596
Silver	328.068	0.05	0.000623

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG Number:

Matrix: Solid Instrument ID: I9

Method: 6010B XMDL Date: 12/15/2017 12:45

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (mg/L)
Arsenic	189.042	10	0.004051
Barium	493.409	200	0.001328
Cadmium	226.502	2	0.000203
Chromium	267.716	5	0.000625
Lead	220.353	5	0.002765
Selenium	196.026	15	0.00596
Silver	328.068	5	0.000623

9-IN
DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010B MDL Date: 12/15/2017 12:45

Prep Method: 3010A

Leach Method: 1311

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Arsenic	189.042	0.05	0.004051
Barium	493.409	0.5	0.001328
Cadmium	226.502	0.05	0.000203
Chromium	267.716	0.05	0.000625
Lead	220.353	0.05	0.002765
Selenium	196.026	0.05	0.00596
Silver	328.068	0.05	0.000623

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010B XMDL Date: 12/15/2017 12:45

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (mg/L)
Arsenic	189.042	10	0.004051
Barium	493.409	200	0.001328
Cadmium	226.502	2	0.000203
Chromium	267.716	5	0.000625
Lead	220.353	5	0.002765
Selenium	196.026	15	0.00596
Silver	328.068	5	0.000623

9-IN
DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG Number:

Matrix: Solid Instrument ID: H3

Method: 7470A MDL Date: 02/22/2017 15:32

Prep Method: 7470A

Leach Method: 1311

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury	253.7	0.002	0.00013

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG Number:

Matrix: Solid Instrument ID: H3

Method: 7470A XMDL Date: 02/22/2017 15:32

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (mg/L)
Mercury	253.7	2	0.00013

9-IN
DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG Number:

Matrix: Water Instrument ID: H3

Method: 7470A MDL Date: 02/22/2017 15:32

Prep Method: 7470A

Leach Method: 1311

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury	253.7	0.002	0.00013

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG Number:

Matrix: Water Instrument ID: H3

Method: 7470A XMDL Date: 02/22/2017 15:32

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (mg/L)
Mercury	253.7	2	0.00013

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG No.:

ICP-AES Instrument ID: I9 Date: 07/25/2018

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	Tl	V
Aluminum										0.021446					0.026101
Antimony		-0.000056			-0.000451			-0.000015							0.002940
Arsenic		0.000005			-0.000198	0.000538			-0.000355	0.001291					
Barium															
Beryllium															0.000086
Boron															
Cadmium			0.008775					-0.00001							
Calcium															
Chromium															
Cobalt													0.001923		
Copper				0.000018	0.000453			-0.000018					-0.000463		
Iron															
Lead		-0.000129					0.000183	0.000043			0.000260	0.0001			
Lithium															
Magnesium															
Manganese															
Molybdenum															
Nickel					0.000799			0.000054							
Potassium															
Selenium		-0.000049							0.000231						
Silver															
Sodium															
Strontium															
Thallium		-0.000010			0.003994			0.000007	0.001101				-0.000498		-0.000210
Tin															
Titanium															
Vanadium								0.000027							
Zinc						-0.000286									

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-104089-1

SDG No.:

Instrument ID: I9 Date: 07/26/2018 09:39

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Arsenic		5000	6010B
Barium		20000	6010B
Cadmium		4000	6010B
Chromium		20000	6010B
Lead		15000	6010B
Selenium		10000	6010B
Silver		2000	6010B

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Prep Method: 3010A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
LB 240-355683/1-B	11/16/2018 14:00	355862		50	50
MB 240-355862/2-A	11/16/2018 14:00	355862		50	50
LCS 240-355862/3-A	11/16/2018 14:00	355862		50	50
240-104089-4	11/16/2018 14:00	355862		50	50
240-104089-4 MS	11/16/2018 14:00	355862		50	50
240-104089-4 MSD	11/16/2018 14:00	355862		50	50
240-104089-2	11/16/2018 14:00	355862		50	50
240-104089-3	11/16/2018 14:00	355862		50	50
240-104089-5	11/16/2018 14:00	355862		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
LB 240-355683/1-C	11/16/2018 12:00	355863		50	50
MB 240-355863/2-A	11/16/2018 12:00	355863		50	50
LCS 240-355863/3-A	11/16/2018 12:00	355863		50	50
240-104089-4	11/16/2018 12:00	355863		50	50
240-104089-4 MS	11/16/2018 12:00	355863		50	50
240-104089-4 MSD	11/16/2018 12:00	355863		50	50
240-104089-2	11/16/2018 12:00	355863		50	50
240-104089-3	11/16/2018 12:00	355863		50	50
240-104089-5	11/16/2018 12:00	355863		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010B

Start Date: 11/19/2018 08:18 End Date: 11/20/2018 01:03

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	As	Ba	Cd	Cr	Pb	Se																				
ICIS 240-356115/1	1		08:18	X	X	X	X	X	X	X																				
CALSTD 240-356115/2 IC			08:22	X	X	X	X	X	X	X																				
CALSTD 240-356115/3 IC			08:27	X	X	X	X	X	X	X																				
ICV 240-356115/4	1		08:31	X	X	X	X	X	X	X																				
ICB 240-356115/5	1		08:35	X	X	X	X	X	X	X																				
ICVL 240-356115/6	1		08:40	X	X	X	X	X	X	X																				
ZZZZZZ			08:44																											
ICSA 240-356115/8	1		08:48	X	X	X	X	X	X	X																				
ICSAB 240-356115/9	1		08:53	X	X	X	X	X	X	X																				
CCV 240-356115/10			08:57																											
CCB 240-356115/11			09:01																											
ZZZZZZ			09:05																											
ZZZZZZ			09:10																											
ZZZZZZ			09:14																											
ZZZZZZ			09:19																											
ZZZZZZ			09:23																											
ZZZZZZ			09:28																											
CCV 240-356115/18	1		09:32	X	X	X	X	X	X	X																				
CCB 240-356115/19	1		09:36	X	X	X	X	X	X	X																				
LB 240-355683/1-B	1	P	09:43	X	X	X	X	X	X	X																				
MB 240-355862/2-A	1	T	09:47	X	X	X	X	X	X	X																				
LCS 240-355862/3-A	1	T	09:52	X	X	X	X	X	X	X																				
240-104089-4	1	P	09:56	X	X	X	X	X	X	X																				
240-104089-4 SD	5	P	10:00	X	X	X	X	X	X	X																				
ZZZZZZ			10:05																											
240-104089-4 MS	5	P	10:09	X	X	X	X	X	X	X																				
240-104089-4 MSD	5	P	10:13	X	X	X	X	X	X	X																				
ZZZZZZ			10:18																											
ZZZZZZ			10:22																											
CCV 240-356115/30	1		10:27	X	X	X	X	X	X	X																				
CCB 240-356115/31	1		10:31	X	X	X	X	X	X	X																				
ZZZZZZ			10:37																											
ZZZZZZ			10:42																											
ZZZZZZ			10:46																											
ZZZZZZ			10:50																											
ZZZZZZ			10:55																											
ZZZZZZ			10:59																											
CCVL 240-356115/38	1		11:04																											
CCV 240-356115/39	1		11:08	X	X	X	X	X	X	X																				
CCB 240-356115/40	1		11:12	X	X	X	X	X	X	X																				
240-104089-2	1	P	11:34	X	X	X	X	X	X	X																				
240-104089-3	1	P	11:38	X	X	X	X	X	X	X																				

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010B

Start Date: 11/19/2018 08:18 End Date: 11/20/2018 01:03

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Cd	Cr	Pb	Se																		
240-104089-5	1	P	11:43	X	X	X	X	X	X	X																		
ZZZZZZ			11:47																									
ZZZZZZ			11:52																									
ZZZZZZ			11:56																									
ZZZZZZ			12:01																									
ZZZZZZ			12:05																									
ZZZZZZ			12:10																									
ZZZZZZ			12:14																									
CCV 240-356115/51	1		12:19	X	X	X	X	X	X	X																		
CCB 240-356115/52	1		12:23	X	X	X	X	X	X	X																		
ICSAB 240-356115/53			12:28																									
CCVL 240-356115/54	1		12:32																									
ICSA 240-356115/55			12:36																									
ZZZZZZ			12:40																									
ZZZZZZ			12:45																									
ZZZZZZ			12:50																									
ZZZZZZ			12:54																									
ZZZZZZ			12:59																									
ZZZZZZ			13:11																									
ZZZZZZ			13:16																									
CCV 240-356115/63			13:20																									
CCB 240-356115/64			13:24																									
ZZZZZZ			13:29																									
ZZZZZZ			13:33																									
ZZZZZZ			13:38																									
ZZZZZZ			13:42																									
ZZZZZZ			13:46																									
ZZZZZZ			13:51																									
ZZZZZZ			13:56																									
ZZZZZZ			14:00																									
ZZZZZZ			14:05																									
ZZZZZZ			14:09																									
CCV 240-356115/75			14:13																									
CCB 240-356115/76			14:17																									
ZZZZZZ			14:22																									
ZZZZZZ			14:26																									
ZZZZZZ			14:31																									
ZZZZZZ			14:36																									
ZZZZZZ			14:40																									
ZZZZZZ			14:45																									
ZZZZZZ			14:49																									
ZZZZZZ			14:54																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010B

Start Date: 11/19/2018 08:18 End Date: 11/20/2018 01:03

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Cd	Cr	Pb	Se																		
ZZZZZZ			14:58																									
ZZZZZZ			15:02																									
CCV 240-356115/87			15:07																									
CCB 240-356115/88			15:11																									
ZZZZZZ			15:15																									
ZZZZZZ			15:20																									
ZZZZZZ			15:24																									
ZZZZZZ			15:28																									
ZZZZZZ			15:32																									
ZZZZZZ			15:37																									
ZZZZZZ			15:41																									
ZZZZZZ			15:46																									
ZZZZZZ			15:50																									
ZZZZZZ			15:54																									
CCV 240-356115/99			15:59																									
CCB 240-356115/100			16:03																									
ZZZZZZ			16:07																									
ZZZZZZ			16:11																									
ZZZZZZ			16:16																									
ZZZZZZ			16:20																									
ZZZZZZ			16:25																									
ZZZZZZ			16:29																									
ZZZZZZ			16:34																									
ZZZZZZ			16:38																									
ZZZZZZ			16:43																									
ZZZZZZ			16:47																									
CCV 240-356115/111			16:51																									
CCB 240-356115/112			16:55																									
ZZZZZZ			17:00																									
ZZZZZZ			17:04																									
ZZZZZZ			17:09																									
ZZZZZZ			17:13																									
ZZZZZZ			17:17																									
ZZZZZZ			17:21																									
ZZZZZZ			17:26																									
ZZZZZZ			17:30																									
ZZZZZZ			17:35																									
ZZZZZZ			17:39																									
CCV 240-356115/123			17:44																									
CCB 240-356115/124			17:48																									
ZZZZZZ			17:52																									
ZZZZZZ			17:56																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010B

Start Date: 11/19/2018 08:18 End Date: 11/20/2018 01:03

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Cd	Cr	Pb	Se																		
ZZZZZZ			18:01																									
ZZZZZZ			18:05																									
ZZZZZZ			18:10																									
ZZZZZZ			18:14																									
ZZZZZZ			18:18																									
ZZZZZZ			18:23																									
ZZZZZZ			18:28																									
ZZZZZZ			18:32																									
CCV 240-356115/135			18:37																									
CCB 240-356115/136			18:41																									
CCVL 240-356115/137			18:46																									
ZZZZZZ			18:50																									
ZZZZZZ			18:54																									
ZZZZZZ			18:59																									
ZZZZZZ			19:03																									
ZZZZZZ			19:08																									
ZZZZZZ			19:12																									
ZZZZZZ			19:16																									
ZZZZZZ			19:20																									
ZZZZZZ			19:24																									
CCV 240-356115/147			19:28																									
CCB 240-356115/148			19:33																									
ZZZZZZ			19:37																									
ZZZZZZ			19:41																									
ZZZZZZ			19:46																									
ZZZZZZ			19:50																									
ZZZZZZ			19:55																									
ZZZZZZ			19:59																									
ZZZZZZ			20:03																									
ZZZZZZ			20:08																									
ZZZZZZ			20:12																									
ZZZZZZ			20:17																									
CCV 240-356115/159			20:21																									
CCB 240-356115/160			20:25																									
ZZZZZZ			20:30																									
ZZZZZZ			20:34																									
ZZZZZZ			20:38																									
ZZZZZZ			20:43																									
ZZZZZZ			20:47																									
ZZZZZZ			20:52																									
ZZZZZZ			20:56																									
ZZZZZZ			21:00																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010B

Start Date: 11/19/2018 08:18 End Date: 11/20/2018 01:03

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Cd	Cr	Pb	Se																		
ZZZZZZ			21:05																									
ZZZZZZ			21:09																									
CCV 240-356115/171			21:14																									
CCB 240-356115/172			21:18																									
ZZZZZZ			21:22																									
ZZZZZZ			21:26																									
ZZZZZZ			21:31																									
ZZZZZZ			21:36																									
ZZZZZZ			21:40																									
ZZZZZZ			21:44																									
ZZZZZZ			21:49																									
ZZZZZZ			21:53																									
ZZZZZZ			21:57																									
ZZZZZZ			22:02																									
CCV 240-356115/183			22:06																									
CCB 240-356115/184			22:10																									
ZZZZZZ			22:15																									
ZZZZZZ			22:19																									
ZZZZZZ			22:24																									
ZZZZZZ			22:28																									
ZZZZZZ			22:32																									
ZZZZZZ			22:37																									
ZZZZZZ			22:41																									
ZZZZZZ			22:45																									
ZZZZZZ			22:50																									
ZZZZZZ			22:54																									
CCV 240-356115/195			22:58																									
CCB 240-356115/196			23:02																									
ZZZZZZ			23:07																									
ZZZZZZ			23:11																									
ZZZZZZ			23:15																									
ZZZZZZ			23:19																									
ZZZZZZ			23:23																									
ZZZZZZ			23:28																									
ZZZZZZ			23:32																									
ZZZZZZ			23:36																									
ZZZZZZ			23:41																									
ZZZZZZ			23:45																									
CCV 240-356115/207			23:49																									
CCB 240-356115/208			23:54																									
ZZZZZZ			23:58																									
ZZZZZZ			00:02																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010B

Start Date: 11/19/2018 08:18 End Date: 11/20/2018 01:03

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Cd	Cr	Pb	Se																		
ZZZZZZ			00:07																									
ZZZZZZ			00:11																									
ZZZZZZ			00:15																									
ZZZZZZ			00:20																									
ZZZZZZ			00:24																									
ZZZZZZ			00:28																									
ZZZZZZ			00:33																									
ZZZZZZ			00:37																									
CCV 240-356115/219			00:42																									
CCB 240-356115/220			00:46																									
ZZZZZZ			00:50																									
ZZZZZZ			00:55																									
CCV 240-356115/223			00:59																									
CCB 240-356115/224			01:03																									

Prep Types:
P = TCLP
T = Total/NA

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: H3 Analysis Method: 7470A

Start Date: 11/19/2018 12:12 End Date: 11/19/2018 16:34

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 240-356141/1-A			12:12	X
IC 240-356141/2-A			12:14	X
IC 240-356141/3-A			12:16	X
IC 240-356141/4-A			12:18	X
IC 240-356141/5-A			12:20	X
IC 240-356141/6-A			12:22	X
ICV 240-356141/7-A	1		13:05	X
ICB 240-356141/8-A	1		13:07	X
CRA 240-356141/9-A	1		13:10	X
CCV 240-356141/10-A			13:12	
CCB 240-356141/11-A			13:14	
CCV 240-356141/10-A			13:16	
CCB 240-356141/11-A			13:18	
ZZZZZZ			13:30	
ZZZZZZ			13:31	
ZZZZZZ			13:33	
ZZZZZZ			13:35	
ZZZZZZ			13:37	
ZZZZZZ			13:39	
ZZZZZZ			13:41	
ZZZZZZ			13:44	
ZZZZZZ			13:46	
ZZZZZZ			13:48	
ZZZZZZ			13:50	
CCV 240-356141/10-A	1		13:52	X
CCB 240-356141/11-A	1		13:54	X
ZZZZZZ			13:56	
ZZZZZZ			13:58	
ZZZZZZ			14:00	
ZZZZZZ			14:02	
ZZZZZZ			14:04	
ZZZZZZ			14:06	
ZZZZZZ			14:08	
ZZZZZZ			14:10	
LB 240-355683/1-C	1	P	14:12	X
MB 240-355863/2-A	1	T	14:14	X
CCV 240-356141/10-A	1		14:16	X
CCB 240-356141/11-A	1		14:19	X
LCS 240-355863/3-A	1	T	14:21	X
240-104089-4	1	P	14:23	X
240-104089-4 MS	1	P	14:25	X
240-104089-4 MSD	1	P	14:27	X

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: H3 Analysis Method: 7470A

Start Date: 11/19/2018 12:12 End Date: 11/19/2018 16:34

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
240-104089-2	1	P	14:30	X																								
240-104089-3	1	P	14:32	X																								
240-104089-5	1	P	14:34	X																								
ZZZZZZ			14:36																									
ZZZZZZ			14:38																									
ZZZZZZ			14:40																									
CCV 240-356141/10-A	1		14:42	X																								
CCB 240-356141/11-A	1		14:45	X																								
ZZZZZZ			14:47																									
ZZZZZZ			14:49																									
ZZZZZZ			14:51																									
ZZZZZZ			14:53																									
ZZZZZZ			14:56																									
ZZZZZZ			14:58																									
ZZZZZZ			15:00																									
ZZZZZZ			15:02																									
ZZZZZZ			15:04																									
ZZZZZZ			15:06																									
CCV 240-356141/10-A			15:08																									
CCB 240-356141/11-A			15:10																									
ZZZZZZ			15:13																									
ZZZZZZ			15:15																									
ZZZZZZ			15:17																									
ZZZZZZ			15:19																									
ZZZZZZ			15:21																									
ZZZZZZ			15:23																									
ZZZZZZ			15:25																									
ZZZZZZ			15:27																									
ZZZZZZ			15:29																									
ZZZZZZ			15:31																									
CCV 240-356141/10-A			15:33																									
CCB 240-356141/11-A			15:35																									
ZZZZZZ			15:37																									
ZZZZZZ			15:39																									
ZZZZZZ			15:41																									
ZZZZZZ			15:43																									
ZZZZZZ			15:45																									
ZZZZZZ			15:47																									
ZZZZZZ			15:50																									
ZZZZZZ			15:52																									
ZZZZZZ			15:54																									
ZZZZZZ			15:56																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: H3 Analysis Method: 7470A

Start Date: 11/19/2018 12:12 End Date: 11/19/2018 16:34

Lab Sample Id	D/F	Type	Time	Analytes																									
				Hg																									
CCV 240-356141/10-A			15:58																										
CCB 240-356141/11-A			16:00																										
ZZZZZZ			16:03																										
ZZZZZZ			16:05																										
ZZZZZZ			16:07																										
ZZZZZZ			16:09																										
ZZZZZZ			16:11																										
ZZZZZZ			16:13																										
ZZZZZZ			16:15																										
ZZZZZZ			16:17																										
ZZZZZZ			16:19																										
ZZZZZZ			16:21																										
CCV 240-356141/10-A			16:23																										
CCB 240-356141/11-A			16:25																										
ZZZZZZ			16:28																										
CRA 240-356141/9-A			16:30																										
CCV 240-356141/10-A			16:32																										
CCB 240-356141/11-A			16:34																										

Prep Types:
P = TCLP
T = Total/NA

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

ICP Instrument ID: I9 Start Date: 11/19/2018 End Date: 11/19/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-356115/1	08:18										
ICV 240-356115/4	08:31	92		98		98		101			
ICB 240-356115/5	08:35	100		100		101		100			
ICVL 240-356115/6	08:40	98		99		100		101			
ICSA 240-356115/8	08:48	78		88		89		97			
ICSAB 240-356115/9	08:53	77		88		88		97			
CCV 240-356115/18	09:32	86		94		96		99			
CCB 240-356115/19	09:36	99		98		101		98			
LB 240-355683/1-B	09:43	79		89		89		97			
MB 240-355862/2-A	09:47	100		100		103		99			
LCS 240-355862/3-A	09:52	76		87		88		96			
240-104089-4	09:56	77		89		91		99			
240-104089-4 SD	10:00	88		95		97		99			
240-104089-4 MS	10:09	86		94		100		105			
240-104089-4 MSD	10:13	87		96		99		102			
CCV 240-356115/30	10:27	91		99		102		103			
CCB 240-356115/31	10:31	106		105		110		110			
CCVL 240-356115/38	11:04	103		104		107		109			
CCV 240-356115/39	11:08	91		99		101		107			
CCB 240-356115/40	11:12	104		104		106		110			
240-104089-2	11:34	81		94		95		111			
240-104089-3	11:38	90		96		98		106			
240-104089-5	11:43	97		100		103		109			
CCV 240-356115/51	12:19	91		98		100		110			
CCB 240-356115/52	12:23	105		104		107		111			
CCVL 240-356115/54	12:32	101		102		104		110			

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 355683 Batch Start Date: 11/15/18 16:25 Batch Analyst: Jones, Diane

Batch Method: 1311 Batch End Date: 11/16/18 08:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	EXpH(0-14) 00027	EXTCLPBUFF1 01688	EXTCLPFILTERS 00041	EXTCLPHCLW 00062	AnalysisComment	
LB 240-355683/1		1311, 3010A, 6010B		1 No Unit	1 mL	1	1 mL	Buffer 1 - DOW in batch	
240-104089-C-2	WC-SEMW10D-SOIL	1311, 3010A, 6010B	P	1 No Unit	1 mL	1	1 mL		
240-104089-G-3	WC-FTCB-DEVW	1311, 3010A, 6010B	P	1 No Unit	1 mL	1	1 mL		
240-104089-C-4	WC-FTCB-SOIL	1311, 3010A, 6010B	P	1 No Unit	1 mL	1	1 mL		
240-104089-H-5	WC-FTCB-DECON	1311, 3010A, 6010B	P	1 No Unit	1 mL	1	1 mL		

Batch Notes	
Tumbler Rotations per Minute	A, C, E = 31rpm

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 355862 Batch Start Date: 11/16/18 14:00 Batch Analyst: Butke, Michael

Batch Method: 3010A Batch End Date: 11/16/18 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MT1to1HCL 00086	MTAGSPIKEW 00087	MTICP1 00079	MTICP2A 00088
LB 240-355683/1-A		3010A, 6010B		50 mL	50 mL	5 mL			
MB 240-355862/2		3010A, 6010B		50 mL	50 mL	5 mL			
LCS 240-355862/3		3010A, 6010B		50 mL	50 mL	5 mL	1 mL	1 mL	1 mL
240-104089-C-4-B	WC-FTCB-SOIL	3010A, 6010B	P	50 mL	50 mL	5 mL			
240-104089-C-4-B MS	WC-FTCB-SOIL	3010A, 6010B	P	50 mL	50 mL	5 mL			1 mL
240-104089-C-4-B MSD	WC-FTCB-SOIL	3010A, 6010B	P	50 mL	50 mL	5 mL			1 mL
240-104089-C-2-B	WC-SEMW10D-SOIL	3010A, 6010B	P	50 mL	50 mL	5 mL			
240-104089-G-3-A	WC-FTCB-DEVW	3010A, 6010B	P	50 mL	50 mL	5 mL			
240-104089-H-5-A	WC-FTCB-DECON	3010A, 6010B	P	50 mL	50 mL	5 mL			

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTNONRCRA+ODD 00011	MTRCRA 00014	MTTMHNO3 00173			
LB 240-355683/1-A		3010A, 6010B				3 mL			
MB 240-355862/2		3010A, 6010B				3 mL			
LCS 240-355862/3		3010A, 6010B				3 mL			
240-104089-C-4-B	WC-FTCB-SOIL	3010A, 6010B	P			3 mL			
240-104089-C-4-B MS	WC-FTCB-SOIL	3010A, 6010B	P	1 mL	0.5 mL	3 mL			
240-104089-C-4-B MSD	WC-FTCB-SOIL	3010A, 6010B	P	1 mL	0.5 mL	3 mL			
240-104089-C-2-B	WC-SEMW10D-SOIL	3010A, 6010B	P			3 mL			
240-104089-G-3-A	WC-FTCB-DEVW	3010A, 6010B	P			3 mL			
240-104089-H-5-A	WC-FTCB-DECON	3010A, 6010B	P			3 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 355862 Batch Start Date: 11/16/18 14:00 Batch Analyst: Butke, Michael

Batch Method: 3010A Batch End Date: 11/16/18 22:00

Batch Notes	
Batch Comment	filter paper: 70602101
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	c4
Pipette/Syringe/Dispenser ID	mp1, mp3, mp5
Thermometer ID	temp log
Digestion Tube/Cup ID	1807160
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 355683 Batch Start Date: 11/15/18 16:25 Batch Analyst: Jones, Diane

Batch Method: 1311 Batch End Date: 11/16/18 08:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	EXpH(0-14) 00027	EXTCLPBUFF1 01688	EXTCLPFILTERS 00041	EXTCLPHCLW 00062	AnalysisComment	
LB 240-355683/1		1311, 7470A, 7470A		1 No Unit	1 mL	1	1 mL	Buffer 1 - DOW in batch	
240-104089-C-2	WC-SEMW10D-SOIL	1311, 7470A, 7470A	P	1 No Unit	1 mL	1	1 mL		
240-104089-G-3	WC-FTCB-DEVW	1311, 7470A, 7470A	P	1 No Unit	1 mL	1	1 mL		
240-104089-C-4	WC-FTCB-SOIL	1311, 7470A, 7470A	P	1 No Unit	1 mL	1	1 mL		
240-104089-H-5	WC-FTCB-DECON	1311, 7470A, 7470A	P	1 No Unit	1 mL	1	1 mL		

Batch Notes	
Tumbler Rotations per Minute	A, C, E = 31rpm

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 355863 Batch Start Date: 11/16/18 12:00 Batch Analyst: Butke, Michael

Batch Method: 7470A Batch End Date: 11/16/18 14:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	K2S2O8 00091	MTH2S04 00066	MTHGCALW 01969	MTKMN04W 00178
LB 240-355683/1-A		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		7.5 mL
MB 240-355863/2		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		7.5 mL
LCS 240-355863/3		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL	2.5 mL	7.5 mL
240-104089-C-4-B	WC-FTCB-SOIL	7470A, 7470A	P	50 mL	50 mL	4 mL	2.5 mL		7.5 mL
240-104089-C-4-B MS	WC-FTCB-SOIL	7470A, 7470A	P	50 mL	50 mL	4 mL	2.5 mL	2.5 mL	7.5 mL
240-104089-C-4-B MSD	WC-FTCB-SOIL	7470A, 7470A	P	50 mL	50 mL	4 mL	2.5 mL	2.5 mL	7.5 mL
240-104089-C-2-B	WC-SEMW10D-SOIL	7470A, 7470A	P	50 mL	50 mL	4 mL	2.5 mL		7.5 mL
240-104089-G-3-A	WC-FTCB-DEVW	7470A, 7470A	P	50 mL	50 mL	4 mL	2.5 mL		7.5 mL
240-104089-H-5-A	WC-FTCB-DECON	7470A, 7470A	P	50 mL	50 mL	4 mL	2.5 mL		7.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00173					
LB 240-355683/1-A		7470A, 7470A		1.25 mL					
MB 240-355863/2		7470A, 7470A		1.25 mL					
LCS 240-355863/3		7470A, 7470A		1.25 mL					
240-104089-C-4-B	WC-FTCB-SOIL	7470A, 7470A	P	1.25 mL					
240-104089-C-4-B MS	WC-FTCB-SOIL	7470A, 7470A	P	1.25 mL					
240-104089-C-4-B MSD	WC-FTCB-SOIL	7470A, 7470A	P	1.25 mL					
240-104089-C-2-B	WC-SEMW10D-SOIL	7470A, 7470A	P	1.25 mL					
240-104089-G-3-A	WC-FTCB-DEVW	7470A, 7470A	P	1.25 mL					
240-104089-H-5-A	WC-FTCB-DECON	7470A, 7470A	P	1.25 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 355863 Batch Start Date: 11/16/18 12:00 Batch Analyst: Butke, Michael

Batch Method: 7470A Batch End Date: 11/16/18 14:00

Batch Notes	
Batch Comment	take out temps in range
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	c2
Pipette/Syringe/Dispenser ID	mp2
Thermometer ID	temp log
Digestion Tube/Cup ID	1804377
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 356141 Batch Start Date: 11/19/18 09:30 Batch Analyst: Colosi, Alexander J

Batch Method: 7470A Batch End Date: 11/19/18 11:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	K2S2O8 00091	MTH2S04 00066	MTHGCALW 01971	MTHgICV_00001 00427
ICV 240-356141/7		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		2.5 mL
ICB 240-356141/8		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		
CRA 240-356141/9		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL	0.1 mL	
CCV 240-356141/10		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL	2.5 mL	
CCB 240-356141/11		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTKMN04W 00178	MTTMHNO3 00173				
ICV 240-356141/7		7470A, 7470A		7.5 mL	1.25 mL				
ICB 240-356141/8		7470A, 7470A		7.5 mL	1.25 mL				
CRA 240-356141/9		7470A, 7470A		7.5 mL	1.25 mL				
CCV 240-356141/10		7470A, 7470A		7.5 mL	1.25 mL				
CCB 240-356141/11		7470A, 7470A		7.5 mL	1.25 mL				

Batch Notes	
Batch Comment	take out temp in range
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	B1
Pipette/Syringe/Dispenser ID	MP1, MP2, A8
Thermometer ID	temp log
Digestion Tube/Cup ID	1804377
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 356141 Batch Start Date: 11/19/18 09:30 Batch Analyst: Colosi, Alexander J

Batch Method: 7470A Batch End Date: 11/19/18 11:30

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

MT6500BLKH20 305

Test America Canton ICP Data Review Checklist

Analysis Date: 11-19-18 **Analyst:** WKD **Instrument:** I 9

Review Items

A. Calibration/Instrument Run QC
1. Instrument calibrated per method.
2. ICV/CCV analyzed at appropriate frequency and within acceptance criteria. ***(ICV (2nd source):*****200.7=95 – 105%, 6010B 90-110%)** ***(CCV: 90 – 110%)***
3. ICB/CCB analyzed at appropriate frequency and within acceptance criteria.
4. CRI analyzed at SOP or project-specific frequency and within acceptance criteria. (project specific limits may vary)
5. ICSA/ICSAB analyzed at required frequency and within acceptance criteria.
B. Sample Results
1. Samples with concentrations > the linear range for any parameter diluted and reanalyzed.
2. Internal standard(s) within acceptance criteria.
3. Sample analyses done within holding time.
C. Preparation/Matrix QC
1. LCS performed per prep batch and within acceptance criteria.
2. Method blank performed per prep batch and within acceptance criteria.
3. MS performed at required frequency and evaluated.
4. MSD or DU performed at required frequency and evaluated.
5. Serial dilution performed per prep batch.
6. Post digest spike performed at required frequency and evaluated.
D. Other
1. Are all nonconformances documented appropriately in lims system.
2. Calculations checked for error.
3. All client/project specific requirements met.
4. Date/time of analysis verified as correct.

Level I Analyst: [signature] **Date:** 11-19-18 **Time:** 8:18 – 11:12

Level I Analyst: [signature] **Date:** 11-20-18 **Time:** 8:18 – 1:03

Level I Analyst: _____ **Date:** _____ **Time:** _____

Level II Reviewer: Roger K. Tooth **Date:** 11-19-18 **Time:** 08:18 – 11:12

Level II Reviewer: [signature] **Date:** 11/20/18 **Time:** jobs 104152, 104504, 104150, 104152

Level II Reviewer: Nesjarin Narinkhin **Date:** 11/21/18 **Time:** 08:18 – 01:03

Comments: _____

L:\QAQC\QA Department\QA TARDIS\Document Control\Work Instructions

WI-NC-0167

Sample Name: Blank Acquired: 11/19/2018 8:18:02 Type: Cal
Method: ICP I9 6010 200.7 Methods(v559) Mode: IR Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00120	.00292	-.00010	.00002	.02563	.00234	.00785
Stddev	.00009	.00007	.00009	.00019	.00191	.00046	.00029
%RSD	7.7272	2.3195	84.717	825.99	7.4388	19.660	3.7077

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0009	.00084	.00036	.00041	.00038	.00527	-.00187
Stddev	.0001	.00008	.00004	.00005	.00026	.00152	.00139
%RSD	15.44	9.3624	10.287	11.800	68.358	28.888	74.618

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00002	.00189	.00237	.01499	.00088	-.00081	.0000
Stddev	.00030	.00013	.00020	.00152	.00002	.00017	.0002
%RSD	1518.9	6.6392	8.2625	10.120	2.7901	20.487	2273.

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00073	.00015	.00228	-.00042	.00021	.00131	.00368
Stddev	.00002	.00012	.00005	.00006	.00010	.00015	.00040
%RSD	2.7948	83.278	2.4025	14.993	46.149	11.549	10.812

Elem	Sr3464
IS Ref	(Y_3710)
Units	Cts/S
Avg	-.00340
Stddev	.00028
%RSD	8.3248

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6778.5	4344.2	48659.	5668.7
Stddev	8.3	5.1	57.	2.6
%RSD	.12190	.11854	.11621	.04621

Sample Name: SCAL1-3776412 Acquired: 11/19/2018 8:22:40 Type: Cal
Method: ICP I9 6010 200.7 Methods(v559) Mode: IR Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	As1890	B_1826	Ba4554	Be3130	Cd2288	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.70979	.11081	5.3073	35.154	15.573	2.605	3.7860	1.1715
Stddev	.00214	.00037	.0104	.032	.020	.009	.0153	.0021
%RSD	.30101	.33703	.19560	.09049	.12966	.3639	.40388	.18273

Elem	Cu3273	Li6707	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960
IS Ref	(Y_3600)	(Y_3710)	(Y_3600)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.88651	16.729	8.0766	4.5944	2.0012	.37059	.1710	.10682
Stddev	.00195	.038	.0117	.0255	.0088	.00153	.0008	.00036
%RSD	.22016	.22609	.14520	.55465	.44175	.41168	.4896	.33576

Elem	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Sr3464
IS Ref	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.6094	9.2649	.27934	.53513	4.6088	1.6915
Stddev	.0112	.0525	.00153	.00172	.0175	.0053
%RSD	.43070	.56649	.54622	.32076	.37997	.31425

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6390.5	4295.9	48368.	5757.3
Stddev	4.6	3.2	160.	25.3
%RSD	.07147	.07340	.33035	.43943

Sample Name: SCAL2-3853805 Acquired: 11/19/2018 8:27:07 Type: Cal
Method: ICP I9 6010 200.7 Methods(v559) Mode: IR Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Al3082	Ca3179	Fe2599	K_7664	Mg2790	Na5895	Si2516
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.90784	15.680	7.2923	6.6619	1.6793	28.357	.45679
Stddev	.00124	.030	.0204	.0273	.0075	.088	.00078
%RSD	.13625	.18944	.28035	.40977	.44921	.30886	.17070

Int. Std.	Y_3710
Units	Cts/S
Avg	5575.2
Stddev	4.7
%RSD	.08390

Sample Name: ICV-3837437 Acquired: 11/19/2018 8:31:31 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	739.31	12634.	386.68	1564.5	1486.2	1481.2	25205.	381.0
Stddev	1.93	19.	2.88	2.7	2.4	6.3	48.	.9
%RSD	.26083	.14730	.74540	.17345	.16137	.42321	.18860	.2490
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1479.7	1468.5	1473.9	12726.	24616.	1013.1	25336.	1506.5
Stddev	3.6	5.7	3.3	34.	53.	4.8	118.	2.4
%RSD	.24474	.39109	.22558	.26675	.21698	.47732	.46626	.15713
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1508.6	24935.	1489.0	376.05	383.5	385.87	1516.6	1522.1
Stddev	4.0	62.	3.9	2.98	2.1	3.17	4.5	2.5
%RSD	.26724	.24939	.25962	.79275	.5416	.82116	.29910	.16526
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICV-3837437 Acquired: 11/19/2018 8:31:31 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	760.33	1517.3	1511.9	5105.2	4548.4
Stddev	1.47	7.6	3.4	22.8	15.9
%RSD	.19351	.50013	.22763	.44748	.34966
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6223.3	4236.4	47561.	5703.9
Stddev	5.7	6.8	104.	5.9
%RSD	.09208	.16138	.21796	.10363

Sample Name: ICB Acquired: 11/19/2018 8:35:34 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.43598	-.60393	-1.2039	8.7632	.07371	.15655	14.560	.0311
Stddev	.23256	13.156	.7858	.5950	.11089	.04807	2.040	.1544
%RSD	53.342	2178.5	65.271	6.7898	150.43	30.704	14.008	495.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.06555	.46580	-.32372	4.0747	44.683	3.5387	14.507	.27391
Stddev	.17200	.11642	.69467	.7522	42.941	.3504	13.628	.02896
%RSD	262.39	24.994	214.59	18.461	96.101	9.9021	93.946	10.572
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.5726	-12.472	.54636	.60811	-.9279	-.93486	-.01011	.63928
Stddev	.3768	4.969	.25731	1.1788	.6675	.95092	.41892	.07783
%RSD	10.546	39.844	47.096	193.85	71.94	101.72	4142.3	12.175
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: ICB Acquired: 11/19/2018 8:35:34 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.0044	-1.2653	1.8701	-27.824	6.4640
Stddev	.3378	.7955	.1334	6.614	3.7563
%RSD	33.636	62.867	7.1347	23.772	58.111
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6798.0	4351.4	49378.	5695.9
Stddev	7.9	4.6	78.	5.4
%RSD	.11555	.10508	.15748	.09430

Sample Name: ICVL-3907292 Acquired: 11/19/2018 8:40:02 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.5612	213.46	15.332	103.78	192.29	4.7378	4894.4	4.939
Stddev	.4413	14.80	.589	.92	.35	.0836	5.5	.039
%RSD	4.6154	6.9344	3.8395	.88584	.18311	1.7645	.11167	.7938
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.4141	9.7559	23.650	201.12	4813.9	53.361	5059.7	14.456
Stddev	.0869	.1907	.075	3.33	9.5	1.966	19.7	.135
%RSD	.92356	1.9548	.31728	1.6536	.19635	3.6837	.38901	.93100
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	39.290	4817.6	38.087	10.654	17.91	16.760	94.817	49.571
Stddev	.248	10.1	.429	.888	.77	1.044	1.416	.300
%RSD	.63222	.21041	1.1274	8.3324	4.291	6.2277	1.4933	.60534
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICVL-3907292 Acquired: 11/19/2018 8:40:02 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	19.171	47.198	46.461	469.07	50.460
Stddev	.604	1.447	.243	10.90	3.052
%RSD	3.1487	3.0653	.52299	2.3232	6.0482
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6633.6	4302.9	48699.	5707.9
Stddev	6.1	2.7	122.	21.9
%RSD	.09253	.06195	.25001	.38402

Sample Name: CRILL-3789527 Acquired: 11/19/2018 8:44:25 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5.3154	196.05	9.9096	212.39	201.34	5.1476	5155.3	2.157
Stddev	.1354	12.36	.1555	1.24	.55	.1143	6.9	.097
%RSD	2.5472	6.3052	1.5696	.58311	.27405	2.2208	.13332	4.481
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6.8937	5.4480	25.092	106.22	5022.1	55.650	5268.9	15.386
Stddev	.1859	.3058	1.301	1.62	25.3	.771	35.6	.084
%RSD	2.6971	5.6138	5.1832	1.5269	.50453	1.3852	.67609	.54556
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.7252	5048.7	40.133	3.1745	8.123	3.8549	102.24	51.347
Stddev	.0478	18.6	.629	.9130	2.032	3.3224	1.15	.315
%RSD	.49138	.36816	1.5675	28.760	25.01	86.186	1.1249	.61356
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CRILL-3789527 Acquired: 11/19/2018 8:44:25 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	10.495	7.1332	20.237	471.51	55.172
Stddev	.818	1.8348	.118	9.97	3.812
%RSD	7.7933	25.722	.58408	2.1155	6.9097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6625.8	4295.8	48712.	5687.1
Stddev	14.7	6.8	34.	9.8
%RSD	.22249	.15888	.06886	.17164

Sample Name: ICSA-3853807 Acquired: 11/19/2018 8:48:46 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.27718	507940.	-2.5221	-1.3650	-.15876	.16480	464770.
Stddev	.10565	1586.	5.1661	.1778	.10228	.11846	2391.
%RSD	38.117	.31217	204.83	13.029	64.424	71.879	.51454
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.6563	-.44803	3.8334	1.7024	188860.	-45.344	15.154
Stddev	.1214	.18412	.2928	.6482	629.	31.338	2.036
%RSD	18.49	41.096	7.6368	38.075	.33302	69.113	13.437
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	495690.	.75660	-1.0070	6.2387	3.4888	.63451	1.867
Stddev	1709.	.05955	.9236	11.379	.3136	1.1160	2.665
%RSD	.34486	7.8706	91.719	182.40	8.9873	175.88	142.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICSA-3853807 Acquired: 11/19/2018 8:48:46 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.94193	-.38329	-.88474	.85994	-5.6739	-1.6858	-26.610
Stddev	3.5168	.91414	.25068	.39220	1.9911	.1291	8.911
%RSD	373.36	238.49	28.334	45.609	35.091	7.6603	33.488
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	10.397
Stddev	1.605
%RSD	15.442
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5288.1	3830.1	43295.	5508.3
Stddev	9.9	5.3	65.	20.2
%RSD	.18728	.13916	.15063	.36584

Sample Name: ICSAB-3812995 Acquired: 11/19/2018 8:53:05 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1028.5	503570.	1022.5	520.30	490.88	484.55	464830.
Stddev	2.7	1769.	3.4	.52	.94	.54	1486.
%RSD	.26729	.35133	.33622	.10084	.19088	.11106	.31960
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1024.	498.77	467.42	510.12	188680.	10561.	563.46
Stddev	1.	1.33	.62	1.57	614.	57.	2.76
%RSD	.1123	.26670	.13328	.30776	.32539	.53839	.48907
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	493700.	480.49	975.97	10502.	976.58	904.64	1020.
Stddev	1528.	.90	4.38	46.	1.92	1.02	7.
%RSD	.30950	.18757	.44829	.43365	.19690	.11228	.6624
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICSAB-3812995 Acquired: 11/19/2018 8:53:05 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1014.3	506.68	506.66	961.94	497.69	993.59	9521.6
Stddev	5.7	1.57	.27	3.45	4.32	2.64	43.6
%RSD	.56060	.31013	.05326	.35888	.86764	.26548	.45774
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1453.7
Stddev	12.3
%RSD	.84531
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5210.3	3806.7	43028.	5525.9
Stddev	1.5	5.0	97.	14.2
%RSD	.02939	.13254	.22651	.25717

Sample Name: CCV-3914190 Acquired: 11/19/2018 8:57:14 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	970.36	25618.	519.14	5175.3	2020.7	2033.6	50473.	507.4
Stddev	3.06	129.	2.99	8.9	5.5	3.7	166.	1.7
%RSD	.31486	.50223	.57614	.17149	.27293	.18181	.32905	.3367
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2020.6	1932.2	1948.2	25800.	51342.	5272.1	51411.	1971.8
Stddev	4.1	6.6	6.2	120.	169.	19.7	226.	.8
%RSD	.20358	.34287	.31922	.46662	.32949	.37432	.43983	.04095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2063.2	51620.	2020.9	494.27	519.3	519.08	5113.4	5092.6
Stddev	8.6	154.	3.9	5.11	8.8	4.72	11.7	4.9
%RSD	.41634	.29905	.19536	1.0331	1.692	.90947	.22903	.09582
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 8:57:14 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1018.4	2115.0	2047.0	5280.6	5164.1
Stddev	7.3	9.1	2.9	34.0	33.0
%RSD	.71629	.42948	.14175	.64428	.63849
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5978.7	4154.3	47252.	5606.3
Stddev	3.4	4.6	99.	28.9
%RSD	.05688	.11160	.20848	.51623

Sample Name: CCB Acquired: 11/19/2018 9:01:22 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.02299	8.9789	.06401	10.460	-.08363	-.02309	22.885	.0425
Stddev	.39591	21.199	1.4108	1.065	.30669	.09508	2.760	.0789
%RSD	1722.4	236.09	2204.2	10.183	366.72	411.79	12.059	185.5
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.05402	.40166	-.57041	9.2078	45.227	3.4307	25.221	-.06054
Stddev	.20197	.26351	.29826	.8189	16.532	.9427	17.556	.02224
%RSD	373.87	65.606	52.289	8.8938	36.553	27.477	69.606	36.734
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.1153	-12.311	.05658	.86993	-.2219	-.04253	.53824	1.6179
Stddev	.1873	3.085	.07802	.62331	1.003	.57519	.25162	.2436
%RSD	4.5514	25.062	137.90	71.651	451.9	1352.4	46.748	15.055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 9:01:22 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.72566	-.91239	.22267	-20.274	8.3893
Stddev	.86910	2.4879	.06501	8.528	3.1537
%RSD	119.77	272.67	29.198	42.063	37.592
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6821.1	4349.2	49875.	5714.1
Stddev	10.5	5.3	40.	19.0
%RSD	.15346	.12164	.08042	.33176

Sample Name: IEC Check As Acquired: 11/19/2018 9:05:50 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.19346	-5.2971	5148.3	4.9204	-.19165	.05505	-2.0100	.0208
Stddev	.34069	22.425	15.4	.2677	.14391	.07375	2.3763	.0509
%RSD	176.11	423.33	.29816	5.4415	75.088	133.97	118.22	244.6
Check ?	None	None	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.02120	.21827	-.09986	3.5501	30.338	3.0046	15.594	-.36154
Stddev	.06308	.16899	.37390	1.8125	16.019	1.7624	13.330	.03093
%RSD	297.53	77.421	374.44	51.054	52.802	58.656	85.485	8.5549
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.34395	-43.025	-.10222	.55874	-.3658	-.03164	-.59059	-.29605
Stddev	.21712	5.156	.52583	1.5941	1.764	2.2190	.32795	.16522
%RSD	63.124	11.983	514.40	285.31	482.4	7012.3	55.528	55.807
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: IEC Check As Acquired: 11/19/2018 9:05:50 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.42112	-1.5928	-.81518	-41.930	2.2138
Stddev	.45434	2.1324	.12391	2.428	.7428
%RSD	107.89	133.87	15.201	5.7916	33.551
Check ?	None	None	None	None	None
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7064.9	4431.2	50777.	5885.2
Stddev	7.7	5.9	264.	10.9
%RSD	.10915	.13404	.52055	.18496

Sample Name: IEC Check Ti Acquired: 11/19/2018 9:10:14 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.41357	-.51028	5.7179	5.9527	-.10793	-.16398	.73185	1.344
Stddev	.05963	14.137	.5563	.2019	.11490	.12593	1.5763	.234
%RSD	14.418	2770.4	9.7281	3.3923	106.46	76.801	215.39	17.42
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.93827	.77460	-1.2370	8.4022	7.7468	1.9059	14.434	-.34697
Stddev	.79309	.12516	.5344	.2168	26.679	1.1510	16.132	.06298
%RSD	84.526	16.158	43.201	2.5803	344.38	60.389	111.76	18.151
Check ?	Chk Pass	None	Chk Pass	None	None	None	None	None
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.37746	-44.733	-1.1221	.11996	-1.537	-.87306	1.4530	29500.
Stddev	.22054	6.536	.1352	1.8334	3.074	.91476	.4974	248.
%RSD	58.428	14.610	12.049	1528.3	200.1	104.78	34.232	.84183
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: IEC Check Ti Acquired: 11/19/2018 9:10:14 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-2.7302	-3.1474	-1.1144	3907.7	5.1758
Stddev	2.1429	1.4168	.1043	500.3	2.3557
%RSD	78.488	45.013	9.3615	12.802	45.514
Check ?	Chk Pass	None	None	None	None
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6965.3	4410.3	50258.	5731.5
Stddev	11.9	5.4	114.	17.4
%RSD	.17021	.12158	.22615	.30362

Sample Name: IEC Check Co Acquired: 11/19/2018 9:14:48 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.11676	-10.418	-1.1463	1.5529	-.32436	.01265	-6.4394	.4084
Stddev	.44880	14.324	1.2568	.3927	.04379	.05436	2.5354	.0868
%RSD	384.36	137.50	109.64	25.289	13.500	429.73	39.374	21.25
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9749.5	.28740	-1.3883	3.6171	19.357	3.0189	-7.7069	-.46926
Stddev	13.8	.23035	.2226	1.3559	4.971	1.7421	2.9983	.02120
%RSD	.14116	80.150	16.038	37.486	25.683	57.707	38.904	4.5174
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.2959	-53.751	-2.6173	3.0971	-2.032	.03622	-.41399	10.889
Stddev	.1952	5.129	.3245	1.9248	1.397	.41826	.45774	.684
%RSD	15.063	9.5429	12.398	62.150	68.74	1154.9	110.57	6.2848
Check ?	None	None	Chk Pass	None	Chk Pass	None	None	None
Value								
Range								

Sample Name: IEC Check Co Acquired: 11/19/2018 9:14:48 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	5.4294	3.9724	-1.0765	-29.230	4.0701
Stddev	.2661	1.6843	.0723	1.203	1.0076
%RSD	4.9011	42.399	6.7210	4.1149	24.756
Check ?	Chk Pass	None	None	None	None
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6920.8	4378.1	50239.	5794.7
Stddev	4.5	5.3	88.	18.7
%RSD	.06501	.12074	.17537	.32302

Sample Name: IEC Check Al Acquired: 11/19/2018 9:19:13 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.29731	514780.	-.18536	-.44923	-.22724	.04909	11.050
Stddev	.18179	1119.	2.8460	.27953	.15374	.07163	1.128
%RSD	61.143	.21729	1535.4	62.223	67.654	145.91	10.209
Check ?	None	None	Chk Pass	None	None	None	None
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1511	-.04779	.10727	.49843	3.5641	-2.0065	3.1219
Stddev	.1161	.35725	.13151	.33386	2.3545	59.773	1.0305
%RSD	76.82	747.58	122.59	66.983	66.062	2979.0	33.010
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	11.583	.60537	-.78872	-25.813	.41896	-2.3501	.0006
Stddev	4.587	.02310	.10903	5.774	.54517	1.3297	3.834
%RSD	39.596	3.8163	13.824	22.370	130.12	56.580	612800.
Check ?	None	None	None	None	None	Chk Pass	Chk Pass
Value							
Range							

Sample Name: IEC Check Al Acquired: 11/19/2018 9:19:13 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.3331	-1.9070	3.0523	1.9958	-.19597	-.65182	-41.436
Stddev	4.1611	.5517	.3788	1.2695	4.5227	.10939	1.621
%RSD	312.13	28.928	12.411	63.611	2307.9	16.782	3.9131
Check ?	Chk Pass	None	None	Chk Pass	None	None	None
Value							
Range							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	3.2994
Stddev	5.0054
%RSD	151.71
Check ?	None
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6154.0	4270.7	46725.	5856.5
Stddev	23.2	19.1	50.	15.1
%RSD	.37770	.44774	.10632	.25781

Sample Name: IEC Check Fe Acquired: 11/19/2018 9:23:33 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.06444	-2.7502	-.69267	.11647	.06824	.03077	12.836
Stddev	.15930	19.866	1.8376	.02064	.17218	.08237	1.343
%RSD	247.20	722.34	265.30	17.721	252.31	267.72	10.465
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.2965	.24408	.84522	-.87805	513510.	-76.079	3.7607
Stddev	.2038	.23545	.49598	1.1598	1762.	3.118	.5650
%RSD	68.73	96.466	58.680	132.09	.34311	4.0987	15.024
Check ?	Chk Pass	None	None	Chk Pass	None	None	None
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-85.813	5.8521	-2.2361	-51.533	-3.1542	.94532	.0110
Stddev	14.060	.0403	.3235	6.769	.3460	2.4022	.3781
%RSD	16.385	.68867	14.465	13.135	10.969	254.11	3425.
Check ?	None	None	None	None	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: IEC Check Fe Acquired: 11/19/2018 9:23:33 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-6.0753	2.1467	2.3524	-.32338	-3.7298	-.29080	-48.144
Stddev	1.1200	.5149	.2640	1.1098	5.6967	.15673	4.251
%RSD	18.435	23.986	11.221	343.19	152.74	53.896	8.8298
Check ?	None	None	None	Chk Pass	Chk Pass	None	None
Value							
Range							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	18.619
Stddev	3.104
%RSD	16.670
Check ?	None
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6513.9	4170.3	47864.	5600.2
Stddev	11.3	7.8	87.	4.1
%RSD	.17286	.18636	.18144	.07275

Sample Name: IEC Check V Acquired: 11/19/2018 9:28:00 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.62655	38.874	-.19275	.62991	.01350	-.20113	-8.8650	.3160
Stddev	.07192	18.366	.65698	.29721	.04607	.05294	.4398	.0291
%RSD	11.478	47.244	340.85	47.184	341.25	26.324	4.9611	9.223
Check ?	None	Chk Pass	None	None	None	Chk Pass	None	None
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.04386	-.16828	-.57839	25.393	-19.751	3.0294	2.0256	-.49279
Stddev	.19895	.20633	.73852	1.670	14.786	1.5212	7.1674	.04314
%RSD	453.57	122.61	127.69	6.5768	74.858	50.213	353.83	8.7544
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-3.4583	-61.874	.28976	.77865	-4.258	-.98530	-.53376	.54129
Stddev	.1084	3.817	.28562	1.8626	.607	.99684	.57158	.14458
%RSD	3.1347	6.1690	98.571	239.21	14.24	101.17	107.08	26.710
Check ?	None	None	None	None	Chk Pass	None	None	None
Value								
Range								

Sample Name: IEC Check V Acquired: 11/19/2018 9:28:00 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.8903	5486.9	-1.0074	-43.233	2.4457
Stddev	.7191	72.3	.0370	4.287	4.0693
%RSD	38.043	1.3173	3.6740	9.9154	166.39
Check ?	Chk Pass	None	None	None	None
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6860.5	4348.4	49830.	5712.6
Stddev	14.5	9.0	138.	20.5
%RSD	.21093	.20754	.27754	.35906

Sample Name: CCV-3914190 Acquired: 11/19/2018 9:32:27 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	958.73	25830.	520.21	5243.5	2040.3	2033.9	50375.	512.3
Stddev	2.90	108.	3.41	2.5	1.3	4.6	62.	.6
%RSD	.30272	.41934	.65530	.04692	.06434	.22684	.12362	.1130
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2048.2	1915.7	1933.4	26120.	52099.	5382.0	51809.	1954.2
Stddev	2.8	6.3	2.5	24.	63.	4.1	69.	5.4
%RSD	.13576	.32849	.12960	.09320	.12110	.07672	.13333	.27721
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2104.9	52169.	2044.5	501.54	517.2	522.29	5168.1	5120.8
Stddev	2.3	89.	3.9	2.96	2.0	.95	11.5	6.6
%RSD	.10843	.17026	.18915	.58957	.3814	.18124	.22176	.12888
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 9:32:27 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1027.6	2175.4	2071.8	5148.2	5246.9
Stddev	5.3	7.1	.9	25.1	10.8
%RSD	.51958	.32793	.04252	.48665	.20503
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5863.0	4068.7	46870.	5596.1
Stddev	13.7	11.7	151.	15.5
%RSD	.23314	.28652	.32319	.27707

Sample Name: CCB Acquired: 11/19/2018 9:36:34 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.37792	-15.343	-.08761	10.676	-.13347	.02539	2.2495	.0954
Stddev	.28327	7.953	.63025	1.110	.10861	.15294	1.2057	.0760
%RSD	74.957	51.835	719.39	10.400	81.374	602.42	53.597	79.64
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.27999	-.04559	-.10549	10.773	21.779	4.9095	21.588	-.08315
Stddev	.07501	.34006	.15561	2.456	25.982	.9078	8.625	.05967
%RSD	26.789	745.92	147.51	22.797	119.30	18.490	39.953	71.762
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.9649	-31.264	.30960	.21991	-1.130	.29301	.61898	2.7370
Stddev	.1323	4.357	.08564	.62481	2.283	1.6273	.29842	.2214
%RSD	3.3355	13.937	27.662	284.11	202.0	555.37	48.211	8.0894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 9:36:34 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-.06157	-2.2520	.17298	-7.1197	1.5344
Stddev	.34389	3.2843	.10020	13.761	1.4440
%RSD	558.54	145.84	57.925	193.28	94.106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6699.9	4260.3	49232.	5558.5
Stddev	7.4	6.4	251.	6.1
%RSD	.11024	.14941	.50943	.10933

Sample Name: lb 240-355683/1-b Acquired: 11/19/2018 9:43:12 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.22178	-14.364	3.6349	F 307.05	3.1157	-.01290
Stddev	.42730	24.044	2.3532	1.46	.3055	.26590
%RSD	192.67	167.39	64.738	.47576	9.8038	2061.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit				100.00		
Low Limit				-1000.0		

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1420.1	-.0434	.16947	1.7356	.41421	3.2483
Stddev	15.4	.1462	.25324	.2268	.13280	2.0171
%RSD	1.0835	337.2	149.43	13.066	32.062	62.097
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	746.04	23.167	453.30	-.13280	-.21857	1355900.
Stddev	25.05	1.505	22.13	.01627	.09226	20236.
%RSD	3.3572	6.4977	4.8814	12.250	42.211	1.4924
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None
High Limit						
Low Limit						

Sample Name: lb 240-355683/1-b Acquired: 11/19/2018 9:43:12 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.7236	-.43490	-1.459	2.1385	1.2660	.77514
Stddev	.4853	.35140	2.461	1.1348	.1275	.10082
%RSD	13.034	80.801	168.7	53.063	10.071	13.007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-5.1757	1.3306	3.7106	291.04	3.2646
Stddev	.8387	3.5765	.0968	11.75	3.3032
%RSD	16.205	268.80	2.6078	4.0370	101.18
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5346.8	3878.2	43541.	5475.6
Stddev	30.1	21.5	46.	63.1
%RSD	.56236	.55481	.10652	1.1524

Sample Name: mb 240-355862/2-a Acquired: 11/19/2018 9:47:45 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.33649	-9.8430	-1.2287	3.9257	-.31176	-.12972	-6.2581	.0652
Stddev	.22048	17.809	1.1776	.1736	.22509	.22121	1.2494	.1543
%RSD	65.524	180.93	95.843	4.4230	72.199	170.52	19.965	236.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.18752	.34169	-.13854	-.29782	32.533	5.5617	-3.5998	-.05701
Stddev	.09104	.15115	.71474	1.6484	33.840	.5550	27.409	.03731
%RSD	48.549	44.236	515.92	553.50	104.02	9.9797	761.40	65.449
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.1150	399.41	.34873	-.57756	-1.857	-.91930	-.13801	-.24595
Stddev	.3245	24.00	.26762	1.1648	.410	1.7172	.23835	.16891
%RSD	29.105	6.0089	76.741	201.68	22.10	186.80	172.70	68.679
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: mb 240-355862/2-a Acquired: 11/19/2018 9:47:45 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.26872	-.09401	-.23852	-34.642	-.39818
Stddev	.13166	2.9271	.06929	5.786	4.1560
%RSD	48.994	3113.5	29.050	16.702	1043.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6772.5	4343.7	50157.	5604.8
Stddev	10.0	5.6	118.	39.3
%RSD	.14757	.12985	.23520	.70173

Sample Name: lcs 240-355862/3-a Acquired: 11/19/2018 9:52:12 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50.467	2022.0	2223.7	F 1337.5	1959.3	48.884
Stddev	.302	13.0	14.5	9.6	2.2	.214
%RSD	.59866	.64144	.65064	.71867	.11190	.43744
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value				1000.0		
Range				20.500%		

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	49194.	52.83	526.88	194.24	244.78	1019.2
Stddev	47.	.49	4.08	1.15	1.38	10.0
%RSD	.09494	.9317	.77372	.59212	.56508	.98031
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	55544.	1113.0	49801.	490.39	1042.2	1350300.
Stddev	189.	4.0	370.	1.74	7.8	25774.
%RSD	.34107	.35528	.74234	.35552	.75038	1.9087
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None
Value						
Range						

Sample Name: lcs 240-355862/3-a Acquired: 11/19/2018 9:52:12 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	531.02	481.45	525.8	2275.4	2124.6	1026.1
Stddev	4.33	4.52	1.8	12.9	19.8	5.3
%RSD	.81551	.93916	.3403	.56910	.93369	.51451
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1982.7	540.12	571.61	F 1434.6	1014.5
Stddev	13.9	.99	5.67	32.2	10.6
%RSD	.70316	.18398	.99106	2.2461	1.0433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value				1000.0	
Range				20.500%	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5165.2	3800.9	42978.	5456.9
Stddev	49.0	36.4	278.	45.1
%RSD	.94829	.95691	.64643	.82639

Sample Name: 240-104089-c-4-c Acquired: 11/19/2018 9:56:21 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.30721	408.55	5.1771	507.94	177.01	5.3970
Stddev	.15888	38.74	1.6418	.74	1.11	.0891
%RSD	51.718	9.4820	31.713	.14648	.62447	1.6505
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	44365.	1.472	11.028	3.9580	3.0762	5.1462
Stddev	251.	.047	.127	.3188	.5700	.6647
%RSD	.56681	3.161	1.1553	8.0556	18.528	12.916
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2865.8	27.449	4377.7	196.69	1.9245	F 1215900.
Stddev	52.8	1.652	24.4	1.64	.3276	18328.
%RSD	1.8421	6.0195	.55731	.83328	17.023	1.5073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104089-c-4-c Acquired: 11/19/2018 9:56:21 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	33.309	18.762	-1.357	5.2797	1.5694	1.5672
Stddev	.542	.453	1.007	2.3308	.6523	.0851
%RSD	1.6274	2.4154	74.22	44.148	41.566	5.4276
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-4.0824	-2.0799	92.134	3826.9	81.033
Stddev	.9730	2.1113	.329	35.0	2.910
%RSD	23.835	101.51	.35685	.91448	3.5911
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5244.9	3874.7	44194.	5584.5
Stddev	30.3	29.4	474.	28.9
%RSD	.57818	.75848	1.0724	.51783
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	77.375%	89.193%	90.825%	98.515%
Range				

Sample Name: SD 240-104089-c-4c@5 Acquired: 11/19/2018 10:00:51 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.05395	77.225	.64748	108.16	38.202	1.2575	9417.5
Stddev	.17451	31.866	1.7837	1.13	.129	.1951	6.0
%RSD	323.45	41.263	275.49	1.0406	.33805	15.520	.06405
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.2659	2.3307	.94470	.51956	1.3255	558.93	10.689
Stddev	.2093	.1381	.18889	.30774	2.9607	7.43	1.274
%RSD	78.70	5.9267	19.995	59.232	223.36	1.3287	11.917
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	956.33	41.764	-.78341	304860.	6.8865	4.1803	-1.228
Stddev	27.50	.393	.01167	2934.	.4343	.8205	1.210
%RSD	2.8760	.94134	1.4902	.96233	6.3062	19.627	98.55
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: SD 240-104089-c-4c@5 Acquired: 11/19/2018 10:00:51 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.54000	-.90687	.07275	-.47783	1.7994	17.097	799.14
Stddev	1.2763	.39334	.18692	1.5681	3.4990	.157	13.14
%RSD	236.35	43.374	256.94	328.18	194.45	.92105	1.6441
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	19.604
Stddev	1.818
%RSD	9.2734
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5952.5	4145.5	47432.	5589.1
Stddev	40.9	28.9	78.	49.3
%RSD	.68673	.69637	.16426	.88207
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	87.814%	95.426%	97.479%	98.597%
Range				

Sample Name: PDS 240-104089-c-4-c Acquired: 11/19/2018 10:05:25 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	39.636	2487.0	2261.0	1565.0	2238.5	56.657
Stddev	.627	50.6	8.7	2.1	22.0	.358
%RSD	1.5829	2.0342	.38439	.13388	.98197	.63129
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	93977.	55.85	555.87	198.65	251.92	1057.1
Stddev	920.	.19	3.82	.39	.72	6.6
%RSD	.97879	.3390	.68779	.19763	.28702	.62667
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	60274.	1185.9	55247.	684.59	1081.8	F 1215400.
Stddev	514.	9.5	574.	2.27	8.4	49817.
%RSD	.85356	.80517	1.0398	.33195	.78091	4.0987
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: PDS 240-104089-c-4-c Acquired: 11/19/2018 10:05:25 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	578.78	508.26	536.2	2354.3	2213.8	1057.8
Stddev	5.07	3.82	3.5	3.1	15.5	3.7
%RSD	.87596	.75218	.6503	.13128	.69802	.34893
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	2066.7	559.64	666.52	4931.1	1127.2
Stddev	7.7	1.86	7.86	8.9	2.7
%RSD	.37406	.33219	1.1794	.18082	.23867
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5164.0	3855.1	43665.	5685.4
Stddev	53.3	37.3	204.	40.0
%RSD	1.0316	.96736	.46610	.70322
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	76.182%	88.741%	89.737%	100.30%
Range				

Sample Name: 240-104089-c-4d ms@5 Acquired: 11/19/2018 10:09:33 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	W 187.72	490.58	1086.6	326.84	10071.	11.067	18845.
Stddev	.67	20.28	1.7	1.06	32.	.181	53.
%RSD	.35591	4.1333	.15485	.32448	.32119	1.6354	.28337
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	100.00						
Low Limit	-500000.						

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	209.5	108.60	929.55	48.321	211.27	11376.	228.08
Stddev	.9	.37	3.67	.727	.81	24.	1.47
%RSD	.4348	.34149	.39522	1.5054	.38115	.20931	.64282
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	11013.	136.22	216.87	303620.	111.88	1016.0	107.2
Stddev	49.	.17	.67	2248.	.51	3.4	1.7
%RSD	.44759	.12583	.30678	.74052	.45716	.33714	1.592
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104089-c-4d ms@5 Acquired: 11/19/2018 10:09:33 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	221.62	421.51	205.61	408.75	112.63	125.53	1045.4
Stddev	1.62	2.54	.67	2.82	2.19	.54	13.2
%RSD	.73006	.60356	.32706	.68933	1.9460	.43051	1.2585
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	233.06
Stddev	3.14
%RSD	1.3492
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5855.3	4095.6	48690.	5970.5
Stddev	51.1	29.9	257.	25.4
%RSD	.87235	.73083	.52802	.42563
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	86.381%	94.278%	100.06%	105.32%
Range				

Sample Name: 240-104089-c4e msd@5 Acquired: 11/19/2018 10:13:56 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	W 183.88	474.02	1034.9	311.59	9708.5	11.196	18470.
Stddev	.61	23.57	9.0	2.54	61.9	.210	77.
%RSD	.33419	4.9729	.86797	.81596	.63795	1.8786	.41590
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	100.00						
Low Limit	-500000.						

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	200.3	105.01	915.54	47.272	208.21	10985.	219.11
Stddev	1.4	1.01	1.61	.135	.93	43.	3.64
%RSD	.7090	.96550	.17532	.28585	.44785	.39242	1.6632
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	10887.	134.26	205.81	299480.	108.25	973.90	99.68
Stddev	44.	.48	2.02	1051.	1.01	8.76	.33
%RSD	.40664	.35929	.98295	.35082	.93668	.89987	.3355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104089-c4e msd@5 Acquired: 11/19/2018 10:13:56 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	210.75	409.48	200.50	399.04	110.13	122.77	1020.3
Stddev	2.62	2.41	.48	3.46	3.49	1.04	2.1
%RSD	1.2415	.58819	.23979	.86589	3.1677	.84777	.20788
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	226.53
Stddev	1.68
%RSD	.74006
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5925.5	4153.9	48013.	5781.1
Stddev	48.5	26.4	291.	54.1
%RSD	.81807	.63644	.60638	.93666
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	87.417%	95.620%	98.673%	101.98%
Range				

Sample Name: 240-104388-a-1-b@10 Acquired: 11/19/2018 10:18:20 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.43759	-32.381	.90687	40.306	3.8718	.00614	636.86
Stddev	.38555	23.246	.77673	.217	.1599	.09641	5.49
%RSD	88.106	71.788	85.649	.53867	4.1299	1569.3	.86157
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.0209	7.9915	7.4974	-.36193	84343.	155.71	6.4650
Stddev	.1094	.0875	.5351	.60512	259.	21.49	1.8987
%RSD	522.9	1.0952	7.1375	167.19	.30657	13.798	29.369
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	138.57	452.04	.33741	148230.	58.304	.20359	-1.656
Stddev	18.35	1.29	.18279	180.	.469	1.3326	2.533
%RSD	13.240	.28557	54.175	.12135	.80446	654.53	153.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104388-a-1-b@10 Acquired: 11/19/2018 10:18:20 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.69808	-.15729	-.18836	1.1427	-.90545	-.20999	4.6866
Stddev	1.5464	.38186	.17041	.5275	3.0910	.08442	8.8914
%RSD	221.53	242.77	90.469	46.167	341.38	40.200	189.72
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	11.272
Stddev	1.185
%RSD	10.511
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6275.7	4265.5	49205.	5760.6
Stddev	18.5	12.2	173.	53.7
%RSD	.29506	.28567	.35195	.93219
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	92.583%	98.189%	101.12%	101.62%
Range				

Sample Name: CCVL-3907292 Acquired: 11/19/2018 10:22:41 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.2249	168.31	14.711	98.340	188.83	4.6396	4707.1	4.692
Stddev	.1603	31.34	.219	.612	.23	.1216	9.0	.005
%RSD	1.7374	18.621	1.4860	.62224	.11947	2.6213	.19151	.1079
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.0404	8.9724	22.599	203.63	4884.1	55.083	4998.3	13.487
Stddev	.1821	.2719	.880	.50	42.8	1.753	26.0	.116
%RSD	2.0140	3.0302	3.8924	.24698	.87593	3.1819	.51927	.85876
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	38.842	5069.6	37.208	10.971	17.45	17.678	92.744	47.583
Stddev	.266	9.3	.185	.956	.59	1.010	.187	.299
%RSD	.68387	.18356	.49599	8.7152	3.378	5.7143	.20214	.62916
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCVL-3907292 Acquired: 11/19/2018 10:22:41 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	18.369	50.980	45.703	444.88	51.048
Stddev	.842	4.232	.175	14.07	1.874
%RSD	4.5858	8.3008	.38304	3.1625	3.6709
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6883.3	4452.1	51816.	5874.6
Stddev	13.6	12.0	118.	13.5
%RSD	.19768	.26908	.22797	.22982

Sample Name: CCV-3914190 Acquired: 11/19/2018 10:27:06 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	916.85	25090.	501.64	5076.3	1981.1	1966.7	48899.	492.1
Stddev	1.56	117.	2.21	2.3	3.3	5.0	49.	.4
%RSD	.17064	.46827	.44002	.04628	.16724	.25630	.10110	.0836
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1978.4	1845.8	1847.5	25308.	50939.	5247.3	50345.	1881.4
Stddev	1.4	3.2	.8	55.	45.	15.2	82.	4.0
%RSD	.06843	.17203	.04181	.21789	.08914	.29035	.16316	.21473
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2041.9	50582.	1971.8	483.86	502.0	502.43	4982.8	4939.3
Stddev	3.0	93.	2.6	.66	2.2	4.16	2.4	31.3
%RSD	.14639	.18322	.13234	.13585	.4322	.82699	.04798	.63368
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 10:27:06 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	993.44	2128.7	1994.3	4978.8	5116.4
Stddev	2.89	9.5	2.1	32.4	8.5
%RSD	.29098	.44778	.10317	.64983	.16632
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6181.6	4291.7	49487.	5835.3
Stddev	6.2	4.2	226.	4.5
%RSD	.10029	.09839	.45627	.07648

Sample Name: CCB Acquired: 11/19/2018 10:31:13 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.61209	-15.396	-.51201	9.3726	-.52715	.02967	.92666	.1036
Stddev	.57155	13.991	.85225	.6391	.21891	.13341	1.6420	.2368
%RSD	93.377	90.877	166.45	6.8184	41.526	449.73	177.19	228.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.16188	.02505	.18756	2.5720	46.318	5.5753	7.6098	-.14340
Stddev	.10807	.03193	.32331	.5337	13.162	1.4989	15.399	.04521
%RSD	66.763	127.45	172.38	20.752	28.417	26.885	202.36	31.529
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.9011	142.52	-.62691	.17046	-.2007	-.45016	.65278	1.8699
Stddev	.4850	6.64	.25526	.59297	1.560	1.1308	.46767	.1870
%RSD	12.433	4.6560	40.716	347.86	777.1	251.19	71.643	10.001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 10:31:13 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.83583	.27239	.12788	-27.747	5.9100
Stddev	.70527	2.4751	.07369	4.020	2.4493
%RSD	84.380	908.63	57.624	14.488	41.444
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7168.8	4558.0	53585.	6208.2
Stddev	48.7	30.4	54.	25.7
%RSD	.67968	.66789	.10108	.41442

Sample Name: 240-104168c157c ms@5 Acquired: 11/19/2018 10:37:52 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.4130	40833.	395.07	166.68	575.04	10.698	13675.	9.729
Stddev	.1124	248.	1.75	1.30	1.11	.022	50.	.078
%RSD	1.1935	.60635	.44221	.78082	.19378	.20797	.36517	.8058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	115.50	70.688	64.672	45689.	11581.	238.84	16758.	3177.1
Stddev	1.36	.211	.965	197.	13.	2.00	200.	6.9
%RSD	1.1796	.29865	1.4917	.43148	.11472	.83946	1.1917	.21571
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	185.74	9919.9	124.52	139.29	36.35	374.75	334.37	465.22
Stddev	1.39	17.2	.94	.84	.22	3.93	2.91	.24
%RSD	.74862	.17364	.75349	.60041	.6068	1.0482	.87047	.05111
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-104168c157c ms@5 Acquired: 11/19/2018 10:37:52 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	371.60	170.63	225.35	495.10	230.91
Stddev	4.04	2.58	2.10	6.01	2.70
%RSD	1.0873	1.5108	.93281	1.2134	1.1708
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6694.2	4568.7	52999.	6288.0
Stddev	2.9	5.6	46.	3.5
%RSD	.04281	.12321	.08762	.05590
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	98.757%	105.17%	108.92%	110.92%
Range				

Sample Name: 240-104168-b-149-a@2 Acquired: 11/19/2018 10:42:08 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.50170	74548.	135.29	11.109	358.07	3.0527	6292.9
Stddev	.22075	709.	1.92	.218	4.00	.0814	48.0
%RSD	44.001	.95170	1.4215	1.9668	1.1183	2.6678	.76246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.124	53.340	79.779	53.626	125680.	3650.7	88.389
Stddev	.056	.602	.455	.174	1352.	38.0	2.359
%RSD	4.949	1.1277	.56995	.32439	1.0759	1.0395	2.6685
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	15616.	5336.5	3.6222	275.31	73.246	249.12	.9044
Stddev	230.	19.1	.3023	9.50	1.151	4.52	.2648
%RSD	1.4740	.35769	8.3442	3.4522	1.5711	1.8147	29.28
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104168-b-149-a@2 Acquired: 11/19/2018 10:42:08 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.5366	16.144	653.49	1.7191	163.90	275.45	662.11
Stddev	1.7790	.611	.74	1.6465	3.05	3.78	8.68
%RSD	39.213	3.7868	.11337	95.778	1.8608	1.3706	1.3110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	45.311
Stddev	3.193
%RSD	7.0476
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6670.7	4648.0	53815.	6410.1
Stddev	2.4	2.9	65.	66.8
%RSD	.03618	.06161	.12055	1.0416
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	98.410%	106.99%	110.60%	113.08%
Range				

Sample Name: 240-104168-b-158-a@5 Acquired: 11/19/2018 10:46:30 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.55466	51666.	10.048	6.0683	245.60	1.8310	4648.5	.2623
Stddev	.15176	112.	1.921	.3921	.43	.0754	1.8	.1964
%RSD	27.361	.21687	19.119	6.4617	.17378	4.1161	.03869	74.88
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	22.695	45.646	19.784	62142.	2377.5	49.134	8588.3	3339.4
Stddev	.636	.282	.572	132.	31.3	1.861	60.6	.9
%RSD	2.8017	.61858	2.8897	.21188	1.3162	3.7875	.70597	.02740
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.97633	176.59	36.095	24.603	-1.251	1.1455	5.3528	230.47
Stddev	.15743	10.84	.571	.972	1.906	1.5384	.2080	.20
%RSD	16.124	6.1359	1.5827	3.9517	152.5	134.31	3.8864	.08483
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-104168-b-158-a@5 Acquired: 11/19/2018 10:46:30 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.28993	85.133	132.90	278.45	35.889
Stddev	.33559	.756	1.94	9.69	2.248
%RSD	115.75	.88835	1.4598	3.4805	6.2631
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6791.9	4575.1	52864.	6239.3
Stddev	6.6	6.7	32.	42.9
%RSD	.09714	.14625	.06122	.68808
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	100.20%	105.31%	108.64%	110.07%
Range				

Sample Name: ZZZZZ Acquired: 11/19/2018 10:50:56 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2.0681	-27.954	1.1649	8.2090	15.196	.05536	419.12	.2704
Stddev	.2626	22.944	.5212	1.6485	.145	.06358	1.41	.0817
%RSD	12.697	82.077	44.739	20.082	.95166	114.85	.33672	30.22
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.35513	.17316	1.7245	25.708	402.56	5.8779	471.94	.34769
Stddev	.21915	.24508	.9673	1.665	6.76	.6884	12.87	.52797
%RSD	61.711	141.53	56.091	6.4763	1.6803	11.711	2.7275	151.85
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.3915	422.12	2.4938	2.3745	.3451	3.3149	7.3898	1.9096
Stddev	.6770	7.85	.7478	1.1180	.2609	1.1812	1.5130	1.7148
%RSD	48.648	1.8601	29.985	47.081	75.60	35.633	20.475	89.795
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: ZZZZZ Acquired: 11/19/2018 10:50:56 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	3.6333	2.7671	2.9346	151.72	13.778
Stddev	.2192	.2239	1.0486	25.12	1.632
%RSD	6.0338	8.0924	35.731	16.554	11.848
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	W 15069.	W 9467.8	W 107930.	W 9834.0
Stddev	323.	170.8	2120.	178.1
%RSD	2.1457	1.8043	1.9645	1.8109
Check ?	Chk Warn	Chk Warn	Chk Warn	Chk Warn
Value	222.30%	217.94%	221.81%	173.48%
Range	50.500%	50.500%	50.500%	50.500%

Sample Name: ZZZZZ Acquired: 11/19/2018 10:55:20 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.4228	-90.732	.46923	.52368	-.89210	-.29935	-2.2998	-.1515
Stddev	.0593	4.793	.49053	.12514	.14916	.07221	.6575	.0683
%RSD	4.1674	5.2826	104.54	23.896	16.721	24.122	28.587	45.11
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.30511	-.55354	.44564	5.7351	-46.315	.44942	14.623	-.46286
Stddev	.14004	.06327	.34410	.9592	25.943	.39141	8.532	.02178
%RSD	45.896	11.430	77.215	16.725	56.015	87.091	58.352	4.7056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.3311	2.7910	-.77852	1.4222	-1.117	2.1042	-.54164	-.84312
Stddev	.0951	7.2853	.10622	.4196	.608	.8870	.10047	.14029
%RSD	7.1418	261.03	13.644	29.500	54.46	42.153	18.548	16.639
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: ZZZZZ Acquired: 11/19/2018 10:55:20 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.7867	-1.0159	-1.2117	25.815	11.430
Stddev	.2311	2.9670	.0402	26.034	.548
%RSD	12.935	292.06	3.3159	100.85	4.7934
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	W 15559.	W 9706.7	W 107870.	W 9769.0
Stddev	73.	56.4	180.	79.2
%RSD	.46639	.58058	.16661	.81113
Check ?	Chk Warn	Chk Warn	Chk Warn	Chk Warn
Value	229.53%	223.44%	221.69%	172.33%
Range	50.500%	50.500%	50.500%	50.500%

Sample Name: ZZZZZ Acquired: 11/19/2018 10:59:44 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.4852	-87.287	.45628	.26713	-.87017	-.30673	-4.0301	-.1853
Stddev	.2112	4.677	1.0078	.12117	.01555	.05891	.7674	.0686
%RSD	14.223	5.3585	220.86	45.360	1.7870	19.207	19.041	37.02
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.38335	-.41035	.44268	5.5603	-52.576	.33977	4.4283	-.47278
Stddev	.12370	.19315	.04738	.8974	23.508	.64668	13.192	.05487
%RSD	32.268	47.069	10.702	16.140	44.713	190.33	297.91	11.606
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.5508	-.67898	-.74029	1.0405	-1.116	2.0194	-.39663	-.88147
Stddev	.0818	.78516	.06959	.5683	1.136	.8029	.22650	.09697
%RSD	5.2724	115.64	9.3999	54.619	101.8	39.761	57.107	11.001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: ZZZZZ Acquired: 11/19/2018 10:59:44 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.6168	-1.6589	-1.2311	-2.9847	9.7405
Stddev	.4093	.9736	.0541	12.364	2.6188
%RSD	25.312	58.690	4.3925	414.26	26.885
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	W 15578.	W 9728.1	W 107210.	W 9850.8
Stddev	114.	78.9	1650.	63.3
%RSD	.73203	.81090	1.5386	.64256
Check ?	Chk Warn	Chk Warn	Chk Warn	Chk Warn
Value	229.81%	223.94%	220.34%	173.78%
Range	50.500%	50.500%	50.500%	50.500%

Sample Name: CCVL-3907292 Acquired: 11/19/2018 11:04:07 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.3858	159.22	13.528	97.814	187.74	4.6535	4701.0	4.769
Stddev	.2630	24.79	1.395	.013	.43	.0692	16.3	.129
%RSD	2.8026	15.567	10.315	.01314	.22725	1.4862	.34568	2.694
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.1611	9.4519	23.864	195.60	4635.6	50.780	4842.1	13.823
Stddev	.0692	.4256	1.019	1.69	39.3	.611	27.4	.076
%RSD	.75484	4.5029	4.2694	.86181	.84834	1.2026	.56587	.55053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	37.738	4733.5	36.934	8.7985	17.15	17.205	92.233	47.873
Stddev	.238	13.0	.196	.8514	2.15	1.471	.381	.356
%RSD	.63026	.27556	.53162	9.6764	12.51	8.5490	.41314	.74440
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCVL-3907292 Acquired: 11/19/2018 11:04:07 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	18.573	48.795	44.788	448.00	54.305
Stddev	.409	2.301	.195	3.67	2.200
%RSD	2.2027	4.7154	.43459	.81841	4.0504
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6995.3	4516.4	51865.	6186.4
Stddev	1.6	6.0	65.	23.5
%RSD	.02235	.13232	.12501	.37966

Sample Name: CCV-3914190 Acquired: 11/19/2018 11:08:48 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	971.32	25051.	512.98	5139.5	1985.4	1951.2	49203.	504.2
Stddev	2.10	163.	3.13	11.4	3.4	3.4	117.	1.5
%RSD	.21595	.64949	.61028	.22166	.17044	.17531	.23876	.2894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1994.6	1929.8	1942.9	24984.	49235.	5086.3	48942.	1944.8
Stddev	1.7	2.5	3.3	60.	46.	14.9	23.	2.8
%RSD	.08673	.12931	.16738	.23994	.09402	.29329	.04674	.14388
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2056.0	49529.	1992.1	481.71	513.1	517.42	5045.5	5006.6
Stddev	7.6	64.	2.2	1.33	1.0	6.87	7.4	12.6
%RSD	.36875	.12939	.11134	.27507	.1895	1.3277	.14591	.25256
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 11:08:48 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	997.84	2022.0	2003.3	5059.8	4946.6
Stddev	1.32	12.3	2.0	48.8	11.1
%RSD	.13220	.60642	.09881	.96442	.22491
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6192.8	4296.6	49093.	6068.0
Stddev	8.2	6.6	37.	12.0
%RSD	.13258	.15337	.07488	.19852

Sample Name: CCB Acquired: 11/19/2018 11:12:55 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.51907	12.712	-.11384	9.4181	-.55168	.03048	12.389	.0739
Stddev	.22713	7.812	1.6861	.9159	.19545	.10948	1.026	.2148
%RSD	43.757	61.451	1481.1	9.7252	35.429	359.16	8.2844	290.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.10507	-.06340	.20257	4.7638	12.531	2.2855	9.8322	1.3443
Stddev	.11133	.14097	.41160	1.0902	9.106	.7572	23.500	.0457
%RSD	105.96	222.33	203.19	22.885	72.667	33.132	239.01	3.3978
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.7635	48.984	-.08219	1.1998	-.5475	.80373	.66870	2.0468
Stddev	.0088	4.143	.36060	.8011	1.120	2.6561	.35351	.1950
%RSD	.23332	8.4581	438.72	66.767	204.6	330.48	52.866	9.5270
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 11:12:55 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.5648	-.29550	2.0767	-27.795	4.9054
Stddev	.6310	4.8224	.0545	4.444	3.4625
%RSD	40.323	1632.0	2.6235	15.988	70.586
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7061.3	4501.1	51463.	6216.7
Stddev	7.3	4.5	46.	55.7
%RSD	.10362	.10025	.08921	.89638

Sample Name: 240-104089-c-2-c Acquired: 11/19/2018 11:34:10 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.11215	312.35	1.3988	642.22	32.588	1.5476
Stddev	.31510	12.14	.8116	2.63	.372	.0182
%RSD	280.97	3.8855	58.018	.40946	1.1404	1.1789
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4478.4	.0727	15.038	4.3193	6.3655	8.9707
Stddev	12.3	.1207	.297	.1215	.4651	.9250
%RSD	.27361	166.0	1.9734	2.8133	7.3059	10.311
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1806.3	20.047	1740.4	76.322	-.39669	F 1154500.
Stddev	91.9	2.060	12.0	.247	.09678	30135.
%RSD	5.0880	10.276	.68760	.32334	24.398	2.6102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104089-c-2-c Acquired: 11/19/2018 11:34:10 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	23.787	1.0445	-3.881	2.4374	.61490	1.3822
Stddev	.262	1.8168	.699	.9034	.42732	.1814
%RSD	1.1010	173.94	18.01	37.065	69.493	13.127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-4.1619	-.79296	74.470	985.22	17.874
Stddev	.7803	2.0255	.594	3.83	3.934
%RSD	18.749	255.44	.79802	.38858	22.008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5470.8	4104.3	46462.	6319.4
Stddev	13.6	10.0	340.	66.8
%RSD	.24893	.24295	.73161	1.0569
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	80.708%	94.479%	95.485%	111.48%
Range				

Sample Name: 240-104089-g-3-b Acquired: 11/19/2018 11:38:41 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.68340	-11.605	1.5882	216.68	449.75	-.06918	60395.
Stddev	.27033	13.986	1.0904	1.39	.56	.06243	83.
%RSD	39.557	120.51	68.658	.63935	.12555	90.252	.13786
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.2095	10.369	2.2472	.03154	5.9283	4682.3	10.529
Stddev	.0871	.228	.1442	.49742	1.1410	17.2	1.581
%RSD	41.60	2.2035	6.4151	1577.2	19.246	.36653	15.019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	13397.	385.77	.33415	183520.	11.437	-.30027	-.4597
Stddev	23.	.48	.05616	845.	.535	1.4204	1.032
%RSD	.16998	.12475	16.808	.46018	4.6745	473.02	224.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104089-g-3-b Acquired: 11/19/2018 11:38:41 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.5756	.06794	-.56380	1.0874	.73182	.18674	3413.5
Stddev	2.1627	.47955	.18771	.7497	2.8710	.05815	9.8
%RSD	137.26	705.80	33.293	68.946	392.30	31.137	.28723
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	421.08
Stddev	3.58
%RSD	.84963
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6133.4	4186.8	47855.	6034.6
Stddev	15.8	7.9	43.	27.1
%RSD	.25807	.18760	.08924	.44899
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	90.484%	96.377%	98.349%	106.45%
Range				

Sample Name: 240-104089-h-5-b Acquired: 11/19/2018 11:43:12 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.26767	-15.003	.16953	115.94	17.500	-.11569	31450.	.0914
Stddev	.38031	43.914	1.1450	.20	.154	.04582	70.	.0739
%RSD	142.08	292.71	675.39	.17433	.87742	39.603	.22351	80.77
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.06108	1.8409	.72890	5.7728	4495.6	10.269	7586.4	86.126
Stddev	.09574	.0856	.12156	2.7350	31.7	1.357	29.8	.425
%RSD	156.76	4.6501	16.677	47.377	.70592	13.215	.39249	.49393
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.6987	50293.	3.1188	1.2285	-1.146	-.87212	.05124	-.61130
Stddev	.1413	115.	.2218	2.0203	3.077	1.6798	.49363	.10630
%RSD	3.8209	.22864	7.1122	164.46	268.6	192.61	963.44	17.390
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-104089-h-5-b Acquired: 11/19/2018 11:43:12 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.02210	-.58215	.70669	2488.5	130.81
Stddev	.50043	.91696	.10057	6.9	3.33
%RSD	2264.0	157.51	14.232	.27713	2.5478
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6542.4	4333.7	49945.	6207.2
Stddev	10.3	7.6	83.	23.5
%RSD	.15706	.17455	.16706	.37937
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	96.517%	99.759%	102.64%	109.50%
Range				

Sample Name: 240-104145-a-1-c Acquired: 11/19/2018 11:47:37 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.24832	37.104	4.1320	309.00	227.62	.02260
Stddev	.26764	7.437	2.3032	2.24	.76	.03214
%RSD	107.78	20.045	55.741	.72527	.33206	142.21
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	597700.	44.62	13.824	8.6931	38.026	27.780
Stddev	5803.	.32	.368	.1032	.524	1.041
%RSD	.97092	.7205	2.6585	1.1877	1.3778	3.7464
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4763.2	42.227	6605.3	137.77	6.9631	F 1169900.
Stddev	152.0	.083	31.6	.03	.2608	37098.
%RSD	3.1913	.19537	.47822	.02252	3.7452	3.1711
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104145-a-1-c Acquired: 11/19/2018 11:47:37 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	84.824	2619.5	31.41	3.2605	1.1788	-.90248
Stddev	.517	21.6	.73	.6395	.4571	.10784
%RSD	.60951	.82390	2.328	19.613	38.775	11.950
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-1.8735	-1.0243	4855.6	1034.8	352.93
Stddev	.1896	2.9257	60.0	14.3	4.21
%RSD	10.120	285.63	1.2360	1.3795	1.1931
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5169.7	3767.8	42871.	5903.8
Stddev	1.9	3.7	187.	6.5
%RSD	.03647	.09776	.43643	.11050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	76.266%	86.732%	88.105%	104.15%
Range				

Sample Name: 240-104232-b-1-c Acquired: 11/19/2018 11:52:11 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.09579	328.83	2.1380	69.385	262.79	-.04790
Stddev	.17705	11.67	1.6138	.879	1.02	.12643
%RSD	184.84	3.5478	75.480	1.2674	.38663	263.93
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	661950.	.1250	.59754	22.022	10.362	-.18143
Stddev	5029.	.0663	.03443	.498	.671	1.9329
%RSD	.75973	53.06	5.7619	2.2595	6.4749	1065.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	37060.	46.978	250.56	-.44048	52.048	F 1080700.
Stddev	56.	.551	15.17	.00582	1.072	32117.
%RSD	.15165	1.1732	6.0534	1.3224	2.0595	2.9720
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104232-b-1-c Acquired: 11/19/2018 11:52:11 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.4668	.63257	-.1162	2.0236	1.0111	-1.7905
Stddev	.4556	.98465	1.672	3.1437	.7112	.2034
%RSD	10.200	155.66	1439.	155.36	70.338	11.360
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-2.6719	1.5598	.16680	10279.	1670.2
Stddev	1.7150	3.0777	.17416	142.	8.2
%RSD	64.186	197.31	104.41	1.3817	.48823
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5089.0	3718.3	42956.	6121.9
Stddev	16.5	5.9	72.	11.6
%RSD	.32471	.15783	.16765	.18966
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	75.076%	85.593%	88.280%	107.99%
Range				

Sample Name: lb 240-355467/1-b Acquired: 11/19/2018 11:56:52 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.28642	-31.872	2.8915	12.563	.00472	-.17557
Stddev	.05070	2.012	1.2976	.232	.14266	.04690
%RSD	17.702	6.3140	44.877	1.8472	3025.4	26.712
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	128.46	-.0346	.19644	.92130	-.84701	2.5779
Stddev	3.44	.0725	.26395	.30434	.68439	.5816
%RSD	2.6765	209.4	134.37	33.034	80.801	22.559
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1277.5	19.304	16.713	-.13867	-.99646	1034200.
Stddev	34.5	2.541	6.938	.01282	.21551	38447.
%RSD	2.7038	13.161	41.513	9.2448	21.628	3.7177
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None
High Limit						
Low Limit						

Sample Name: lb 240-355467/1-b Acquired: 11/19/2018 11:56:52 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2.1751	1.0959	-4.309	3.2241	1.2290	-.59336
Stddev	.3101	.2807	1.275	2.4566	.7198	.06464
%RSD	14.259	25.612	29.58	76.196	58.567	10.894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-4.7439	3.0634	2.6714	130.48	10.538
Stddev	.7183	.5525	.1015	19.59	1.702
%RSD	15.142	18.034	3.7975	15.015	16.150
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5444.6	3918.5	44719.	6271.1
Stddev	14.7	7.1	280.	40.6
%RSD	.26964	.18115	.62697	.64728

Sample Name: mb 240-355630/2-a Acquired: 11/19/2018 12:01:29 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.21043	-16.081	-.78724	.99547	-.35897	-.25695	166.28
Stddev	.22035	21.340	1.6119	.16046	.17396	.08808	1.98
%RSD	104.71	132.71	204.76	16.119	48.461	34.280	1.1892
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.0113	-.18719	.08892	-.24223	5.3661	65.099	3.1712
Stddev	.0195	.15608	.16404	.36417	.6542	18.151	1.2451
%RSD	172.0	83.378	184.47	150.34	12.192	27.881	39.265
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.4509	.21763	-1.5189	F 1292.2	.17984	.77211	-.9103
Stddev	6.0487	.02389	.1591	82.9	.35331	1.0718	2.382
%RSD	135.90	10.977	10.475	6.4179	196.46	138.81	261.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				1000.0			
Low Limit				-1000.0			

Sample Name: mb 240-355630/2-a Acquired: 11/19/2018 12:01:29 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.39110	.22283	-1.0261	-.05930	.94022	1.7601	-16.602
Stddev	1.4215	.35788	.0880	.88065	3.1879	.0412	7.877
%RSD	363.45	160.61	8.5791	1485.0	339.06	2.3402	47.447
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	7.9029
Stddev	1.1314
%RSD	14.316
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7044.7	4484.2	51821.	6298.6
Stddev	5.6	4.3	61.	14.7
%RSD	.07928	.09492	.11847	.23277

Sample Name: lcs 240-355630/3-a Acquired: 11/19/2018 12:05:56 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	49.254	1859.9	2122.0	986.35	1858.0	46.113
Stddev	.786	45.5	4.6	2.84	3.9	.224
%RSD	1.5960	2.4489	.21871	.28772	.20946	.48557
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	44893.	49.72	487.99	184.80	238.84	944.89
Stddev	77.	.33	1.33	1.16	1.51	4.40
%RSD	.17155	.6665	.27235	.62546	.63017	.46566
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50646.	1011.5	44414.	466.61	964.77	1103600.
Stddev	87.	3.4	304.	1.18	4.03	27475.
%RSD	.17118	.33774	.68390	.25249	.41758	2.4896
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None
Value						
Range						

Sample Name: lcs 240-355630/3-a Acquired: 11/19/2018 12:05:56 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	491.22	442.13	505.6	2195.0	1964.8	957.48
Stddev	1.19	3.04	2.5	12.5	8.5	1.81
%RSD	.24292	.68759	.5017	.57047	.43298	.18949
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1819.7	481.19	517.86	1149.6	910.54
Stddev	6.6	7.96	2.40	30.3	8.38
%RSD	.36158	1.6542	.46429	2.6341	.92042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5280.9	3845.2	43628.	5972.3
Stddev	8.1	3.7	59.	4.2
%RSD	.15382	.09544	.13539	.06979

Sample Name: 240-104057-c-1-c Acquired: 11/19/2018 12:10:06 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.05356	71.011	4.8683	29.461	311.83	.02133
Stddev	.12593	19.041	.3395	.711	1.03	.11873
%RSD	235.14	26.814	6.9729	2.4141	.33153	556.54
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	229100.	7.865	4.5245	1.9124	3.9655	31.289
Stddev	797.	.116	.1250	.1922	.5172	1.207
%RSD	.34798	1.472	2.7615	10.052	13.043	3.8576
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3055.6	22.257	6276.2	433.21	1.7808	F 956800.
Stddev	37.7	.997	35.7	.60	.4018	25854.
%RSD	1.2343	4.4785	.56840	.13842	22.565	2.7021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104057-c-1-c Acquired: 11/19/2018 12:10:06 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	8.6422	2.8819	-1.318	2.7401	.95316	.73527
Stddev	.7960	.6066	1.678	2.0358	.33505	.16508
%RSD	9.2104	21.048	127.4	74.295	35.151	22.452
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-1.8111	-2.4393	213.79	1096.6	183.84
Stddev	.9259	3.3695	2.92	15.2	1.73
%RSD	51.121	138.14	1.3644	1.3864	.93985
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5318.1	3870.4	43255.	5961.9
Stddev	12.5	9.8	110.	16.4
%RSD	.23449	.25419	.25357	.27538
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	78.456%	89.095%	88.895%	105.17%
Range				

Sample Name: 240-104112-j-1-d Acquired: 11/19/2018 12:14:46 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.12289	-7.0169	5.3212	51.578	282.24	-.01889
Stddev	.37976	30.763	2.0715	1.131	2.18	.08940
%RSD	309.02	438.41	38.929	2.1921	.77190	473.21
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	479810.	2.143	.20660	1.7167	3.5324	15.230
Stddev	7095.	.214	.03108	.1249	.1042	.909
%RSD	1.4788	9.981	15.046	7.2770	2.9510	5.9695
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2698.6	26.756	31370.	327.68	-.42398	F 927530.
Stddev	89.9	.581	286.	1.48	.06690	17534.
%RSD	3.3296	2.1699	.91210	.45268	15.779	1.8904
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104112-j-1-d Acquired: 11/19/2018 12:14:46 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6.3874	.37797	-1.695	2.2108	.82580	-.72630
Stddev	.3390	.44204	1.891	1.5297	.33312	.14046
%RSD	5.3074	116.95	111.6	69.192	40.339	19.340
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-2.0411	-1.8255	115.65	1266.4	343.53
Stddev	1.6504	1.7363	1.84	13.4	8.24
%RSD	80.859	95.118	1.5872	1.0550	2.3979
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5152.9	3732.3	43157.	5982.4
Stddev	10.4	9.0	45.	10.0
%RSD	.20178	.23993	.10333	.16696
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	76.019%	85.914%	88.693%	105.53%
Range				

Sample Name: CCV-3914190 Acquired: 11/19/2018 12:19:28 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	987.93	24967.	518.46	5197.2	2005.6	1968.8	48986.	509.2
Stddev	5.32	62.	.36	9.1	3.2	2.3	48.	1.5
%RSD	.53808	.24675	.06906	.17604	.15744	.11904	.09809	.2982
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1990.8	1934.3	1976.4	24875.	49035.	5094.2	48360.	1962.1
Stddev	7.5	9.6	6.8	38.	25.	6.4	88.	5.1
%RSD	.37708	.49458	.34543	.15114	.05124	.12635	.18099	.25856
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2061.3	48508.	1989.5	483.21	527.1	524.04	5025.7	5052.6
Stddev	10.5	50.	6.5	3.29	4.6	3.85	21.6	27.6
%RSD	.51172	.10235	.32505	.68011	.8798	.73377	.42937	.54716
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 12:19:28 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	997.32	2004.1	1983.3	5075.8	4915.2
Stddev	3.67	5.1	8.5	22.9	12.9
%RSD	.36771	.25557	.43100	.45140	.26333
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6141.6	4241.5	48693.	6221.5
Stddev	5.2	.5	160.	18.8
%RSD	.08459	.01104	.32853	.30266

Sample Name: CCB Acquired: 11/19/2018 12:23:37 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.28502	-28.934	-.21535	8.8734	-.55804	-.07338	20.969	.1299
Stddev	.68043	15.513	2.2283	.6872	.09187	.05970	3.767	.0261
%RSD	238.73	53.616	1034.8	7.7448	16.464	81.351	17.963	20.10
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.18070	-.01391	-.36309	2.8502	53.346	4.0237	2.3331	-.06826
Stddev	.01776	.06071	.05798	.4976	20.540	2.3084	11.031	.04613
%RSD	9.8274	436.38	15.968	17.458	38.503	57.370	472.78	67.585
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.7919	537.87	-.09266	.66463	-1.318	-.25320	.55632	1.9137
Stddev	.1300	11.19	.22515	1.2397	1.366	1.8543	.17156	.2125
%RSD	3.4282	2.0798	242.98	186.53	103.7	732.36	30.838	11.103
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 12:23:37 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.80325	1.5459	.24810	-22.859	8.6064
Stddev	.44654	1.5530	.09056	5.868	4.2541
%RSD	55.591	100.46	36.503	25.672	49.429
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7094.1	4502.4	51837.	6303.4
Stddev	8.4	4.3	43.	16.3
%RSD	.11781	.09552	.08386	.25877

Sample Name: ICSAB-3812995 Acquired: 11/19/2018 12:28:05 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1051.9	492450.	1036.5	527.50	487.30	466.25	450520.
Stddev	2.9	1224.	1.6	.87	.38	1.30	2439.
%RSD	.27268	.24855	.15141	.16434	.07697	.27867	.54127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1036.	490.85	468.25	519.56	181430.	10198.	544.61
Stddev	.	.53	1.44	1.52	196.	27.	3.29
%RSD	.0358	.10774	.30798	.29299	.10804	.26860	.60394
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	464220.	478.03	981.91	11000.	960.27	885.75	1040.
Stddev	1031.	.98	1.78	35.	1.97	2.21	1.
%RSD	.22218	.20475	.18081	.31682	.20513	.24944	.1421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICSAB-3812995 Acquired: 11/19/2018 12:28:05 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1033.9	499.46	501.49	937.37	472.42	962.44	9414.5
Stddev	6.7	1.24	.41	5.55	5.21	1.52	37.7
%RSD	.64325	.24744	.08159	.59229	1.1022	.15770	.40001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1397.0
Stddev	8.3
%RSD	.59406
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5356.5	3876.3	44483.	6066.0
Stddev	6.4	1.5	143.	13.1
%RSD	.11865	.03846	.32066	.21629

Sample Name: CCVL-3907292 Acquired: 11/19/2018 12:32:14 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	10.152	206.20	16.542	103.22	190.66	4.6452	4781.4	5.019
Stddev	.557	18.77	1.200	.89	.47	.1061	10.1	.132
%RSD	5.4897	9.1022	7.2518	.86334	.24585	2.2830	.21164	2.626
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.2830	9.7157	23.696	210.83	4602.9	49.697	4814.6	14.350
Stddev	.1989	.1989	.555	1.47	17.3	.997	60.0	.119
%RSD	2.1427	2.0470	2.3442	.69745	.37585	2.0061	1.2458	.82718
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	42.388	4993.0	37.929	10.859	21.49	18.938	94.533	49.239
Stddev	.259	8.9	.394	1.012	1.82	1.031	.749	.092
%RSD	.61000	.17789	1.0381	9.3208	8.461	5.4429	.79222	.18749
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCVL-3907292 Acquired: 11/19/2018 12:32:14 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	20.307	51.912	45.516	468.50	55.192
Stddev	1.019	4.547	.414	6.31	3.577
%RSD	5.0193	8.7582	.90967	1.3465	6.4805
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6852.2	4416.5	50404.	6255.5
Stddev	11.2	7.0	49.	14.1
%RSD	.16274	.15874	.09689	.22527

Sample Name: ICSA-3853807 Acquired: 11/19/2018 12:36:37 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.30657	501060.	-.59616	-1.9178	-.46746	.12789	456310.
Stddev	.66838	694.	2.3633	.7913	.04581	.10737	2397.
%RSD	218.02	.13855	396.42	41.261	9.8006	83.953	.52535
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.6366	-.43970	3.6561	1.4291	183390.	12.081	13.044
Stddev	.1157	.32864	.0666	.7641	89.	14.944	.482
%RSD	18.17	74.742	1.8220	53.468	.04856	123.70	3.6952
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	470550.	.99013	-.16610	755.00	3.6819	1.1932	4.259
Stddev	810.	.07398	.30463	23.16	.8592	2.8010	2.344
%RSD	.17222	7.4715	183.40	3.0680	23.336	234.75	55.03
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: ICSA-3853807 Acquired: 11/19/2018 12:36:37 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.34063	-1.0713	-.98297	2.0066	-3.6459	-.60031	-30.032
Stddev	.85315	.4938	.11714	1.1269	2.0764	.18777	8.982
%RSD	250.46	46.096	11.917	56.158	56.952	31.279	29.910
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	14.747
Stddev	1.318
%RSD	8.9370
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5403.0	3891.8	44140.	5940.7
Stddev	17.3	12.0	50.	16.7
%RSD	.32074	.30843	.11286	.28065

Sample Name: 240-104249-j-2-a@20 Acquired: 11/19/2018 12:40:57 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.04957	23.785	2.1964	41.179	-.18438	-.10314
Stddev	.32819	11.045	2.0588	1.057	.21815	.02439
%RSD	662.10	46.436	93.738	2.5680	118.32	23.653
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4472.4	-.0103	.09295	.37588	.08046	19.180
Stddev	21.3	.1711	.24332	.21663	.29298	2.566
%RSD	.47675	1662.	261.77	57.634	364.14	13.377
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2603.1	9.1917	1140.4	9.8213	-.96767	F 526190.
Stddev	16.1	.7153	16.1	.0196	.16641	4327.
%RSD	.61809	7.7819	1.4136	.19965	17.197	.82230
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104249-j-2-a@20 Acquired: 11/19/2018 12:40:57 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.7921	.61053	-1.878	-1.1894	-.57701	-.49142
Stddev	.2616	.85874	1.494	1.6699	.77786	.16589
%RSD	2.6716	140.66	79.55	140.39	134.81	33.757
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.26358	2.0622	.03252	70.821	428.11
Stddev	1.4164	1.2518	.05260	6.107	5.33
%RSD	537.37	60.700	161.77	8.6237	1.2453
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5906.7	4145.5	46586.	6197.7
Stddev	10.9	2.5	170.	34.1
%RSD	.18521	.06015	.36409	.54974
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	87.139%	95.426%	95.740%	109.33%
Range				

Sample Name: 240-104249-j-5-a@10 Acquired: 11/19/2018 12:45:31 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.58613	-15.668	-.07880	29.588	-.30544	-.11247	12635.
Stddev	.10764	28.841	1.1397	.478	.15821	.09200	13.
%RSD	18.364	184.08	1446.3	1.6165	51.798	81.799	.10666
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0591	.23095	.33956	-.97876	7.3254	1954.9	9.2742
Stddev	.0485	.11840	.26801	.59437	.1119	34.8	1.7229
%RSD	82.03	51.267	78.928	60.727	1.5277	1.7799	18.577
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4953.6	6.0722	-1.2296	281740.	4.0167	.30843	-2.040
Stddev	52.1	.0336	.1650	1071.	.2541	.39080	2.408
%RSD	1.0517	.55249	13.421	.38012	6.3274	126.71	118.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104249-j-5-a@10 Acquired: 11/19/2018 12:45:31 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-2.8795	-.49274	-.51796	.55192	3.6014	-1.0784	266.52
Stddev	2.1958	.27937	.09435	1.1664	.9471	.0416	7.79
%RSD	76.259	56.697	18.216	211.34	26.297	3.8556	2.9243
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	975.15
Stddev	7.17
%RSD	.73476
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6113.3	4214.5	47806.	6198.0
Stddev	14.2	7.3	99.	20.3
%RSD	.23286	.17320	.20777	.32735
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	90.187%	97.015%	98.247%	109.34%
Range				

Sample Name: lb 240-355682/1-b Acquired: 11/19/2018 12:50:06 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.06071	8.8111	1.5891	18.419	.28863	-.01291
Stddev	.62621	23.016	.3654	.257	.09683	.15549
%RSD	1031.5	261.22	22.991	1.3938	33.549	1204.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	147.91	.1035	-.03487	1.5422	.35566	4.5428
Stddev	2.65	.0268	.20022	.5191	.73740	1.7602
%RSD	1.7925	25.89	574.18	33.656	207.33	38.747
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	709.51	9.3187	21.690	-.08751	-1.1708	1062000.
Stddev	39.20	1.9705	9.590	.02690	.1728	12698.
%RSD	5.5255	21.146	44.212	30.737	14.758	1.1956
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None
High Limit						
Low Limit						

Sample Name: lb 240-355682/1-b Acquired: 11/19/2018 12:50:06 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.7256	.87973	-2.800	-.60494	.18407	-.13843
Stddev	.3770	1.1510	.936	2.2804	.31335	.12152
%RSD	10.119	130.84	33.42	376.97	170.24	87.784
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-2.5891	.92181	3.8125	93.001	2.4960
Stddev	.5577	2.5171	.1047	3.764	.3920
%RSD	21.539	273.06	2.7472	4.0474	15.707
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5349.1	3852.2	42305.	5815.6
Stddev	17.8	19.3	187.	125.8
%RSD	.33344	.50203	.44147	2.1632

Sample Name: mb 240-355856/2-a Acquired: 11/19/2018 12:54:43 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.26051	-32.870	-.13939	.81226	-.56463	-.03337	25.622	.1299
Stddev	.34293	9.865	1.3183	.25388	.21258	.06846	1.136	.1071
%RSD	131.64	30.012	945.75	31.256	37.649	205.14	4.4322	82.50
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.00762	.22441	-.38760	2.0407	44.185	2.1183	15.697	-.40056
Stddev	.19386	.22308	.50965	.4051	9.456	.3297	2.670	.02219
%RSD	2545.4	99.409	131.49	19.849	21.400	15.565	17.010	5.5401
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.3161	827.04	-.05128	-.10035	-.6255	-.43915	-.01560	-.81195
Stddev	.2798	61.78	.34139	1.7448	.8959	1.6535	.15597	.25445
%RSD	21.260	7.4694	665.79	1738.7	143.2	376.53	1000.00	31.338
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: mb 240-355856/2-a Acquired: 11/19/2018 12:54:43 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.73070	.72326	.02566	-27.145	4.5863
Stddev	.93765	1.7887	.07238	5.618	2.1050
%RSD	128.32	247.31	282.01	20.695	45.897
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6888.5	4391.8	50415.	6070.8
Stddev	8.3	2.2	93.	10.6
%RSD	.11991	.05084	.18394	.17417

Sample Name: lcs 240-355856/3-a Acquired: 11/19/2018 12:59:11 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50.652	1677.9	1998.6	961.37	1713.4	42.579
Stddev	.494	8.3	11.0	4.43	4.9	.280
%RSD	.97498	.49715	.54937	.46093	.28358	.65668
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	41724.	47.58	447.30	170.01	224.73	849.65
Stddev	49.	.22	3.07	.98	.39	7.04
%RSD	.11679	.4617	.68685	.57711	.17310	.82898
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	47946.	934.44	41060.	438.38	900.91	1048800.
Stddev	45.	2.73	109.	.95	7.49	37037.
%RSD	.09302	.29170	.26487	.21582	.83191	3.5313
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None
Value						
Range						

Sample Name: lcs 240-355856/3-a Acquired: 11/19/2018 12:59:11 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	451.92	423.33	472.1	2063.6	1839.2	886.02
Stddev	2.07	4.08	3.5	14.2	12.8	1.59
%RSD	.45841	.96488	.7364	.68739	.69500	.17943
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1801.6	435.84	483.87	1068.1	836.68
Stddev	11.2	1.91	3.75	18.4	5.67
%RSD	.61952	.43877	.77601	1.7226	.67771
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5252.1	3815.8	43002.	5752.9
Stddev	19.0	16.6	138.	55.3
%RSD	.36190	.43431	.32149	.96083

Sample Name: 240-104249-j-2-a@100 Acquired: 11/19/2018 13:11:47 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.09418	-28.617	1.5001	7.5789	-.41474	-.14668	906.55
Stddev	.11973	41.618	1.7743	.4099	.35637	.15933	10.24
%RSD	127.12	145.43	118.28	5.4089	85.925	108.62	1.1299
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0265	-.16510	.22810	-.58480	-1.1394	512.04	1.3736
Stddev	.2726	.21635	.19973	.63222	.6964	21.77	1.7354
%RSD	1027.	131.04	87.561	108.11	61.120	4.2507	126.34
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	233.95	1.5643	-.17756	115280.	1.9187	.32759	-1.378
Stddev	2.11	.0343	.36781	208.	.4688	.77339	.621
%RSD	.90228	2.1931	207.15	.18076	24.433	236.09	45.05
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104249-j-2-a@100 Acquired: 11/19/2018 13:11:47 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.56239	-.55410	-.45299	.39764	-2.3270	-1.0109	-12.744
Stddev	.59549	.74277	.12541	.05691	1.5586	.0589	3.043
%RSD	105.89	134.05	27.685	14.312	66.980	5.8229	23.882
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	89.784
Stddev	2.719
%RSD	3.0279
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6381.8	4265.5	48854.	6136.7
Stddev	14.2	5.5	127.	27.3
%RSD	.22222	.12940	.26043	.44518
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	94.148%	98.189%	100.40%	108.26%
Range				

Sample Name: 240-104265-a-5-e Acquired: 11/19/2018 13:16:15 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.13378	-4.5776	13.912	667.25	33.005	-.04356
Stddev	.16159	24.034	.367	8.15	.092	.12315
%RSD	120.78	525.03	2.6375	1.2215	.27822	282.73
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	25882.	.2718	.94348	5.0861	37.986	101.78
Stddev	10.	.0782	.06653	.2737	.595	1.37
%RSD	.03999	28.77	7.0516	5.3824	1.5675	1.3472
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	11586.	10.103	9034.3	48.273	.51348	F 1063200.
Stddev	107.	1.314	23.5	.493	.18315	33475.
%RSD	.91934	13.006	.26020	1.0216	35.668	3.1487
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104265-a-5-e Acquired: 11/19/2018 13:16:15 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	23.683	1.9704	30.30	1.8838	.48400	-.26638
Stddev	.356	1.1720	.82	1.7465	.41286	.11965
%RSD	1.5052	59.482	2.692	92.711	85.301	44.917
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-2.3859	4.5884	557.60	1866.9	227.89
Stddev	1.0377	2.8512	10.20	12.5	4.11
%RSD	43.492	62.138	1.8290	.66821	1.8033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5317.8	3819.7	42847.	5839.1
Stddev	36.4	22.2	117.	32.5
%RSD	.68489	.58078	.27408	.55703
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	78.452%	87.926%	88.055%	103.01%
Range				

Sample Name: CCV-3914190 Acquired: 11/19/2018 13:20:48 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	993.35	24694.	513.97	5168.3	1981.7	1962.7	48764.	510.1
Stddev	2.09	64.	2.30	3.7	5.9	7.0	106.	.7
%RSD	.21021	.25728	.44737	.07239	.29952	.35625	.21763	.1399
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1984.6	1937.7	1977.2	24548.	48355.	4982.4	48091.	1981.3
Stddev	7.9	4.8	3.7	79.	157.	13.4	182.	2.6
%RSD	.39647	.24929	.18649	.32266	.32565	.26821	.37900	.13314
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2043.4	48409.	1983.0	476.99	519.7	517.95	5027.8	5037.6
Stddev	7.1	161.	6.5	3.72	5.7	5.63	25.2	21.0
%RSD	.34724	.33172	.32535	.77990	1.087	1.0867	.50065	.41699
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 13:20:48 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	990.82	1961.2	1991.0	5081.0	4855.3
Stddev	10.38	14.1	7.1	28.1	19.1
%RSD	1.0479	.71672	.35674	.55398	.39275
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6087.9	4203.9	48201.	6111.2
Stddev	20.0	7.3	144.	15.2
%RSD	.32896	.17311	.29868	.24833

Sample Name: CCB Acquired: 11/19/2018 13:24:56 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.48640	-.15587	.46957	9.3260	-.40323	.06466	3.5265	.1096
Stddev	.23393	3.4339	.43861	1.0454	.21312	.10326	2.2284	.1537
%RSD	48.095	2203.1	93.406	11.210	52.855	159.71	63.191	140.2
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.06562	.04447	-.04171	1.8775	20.430	2.8518	11.466	-.01684
Stddev	.11947	.52166	.20485	1.5850	40.606	1.4179	3.594	.01290
%RSD	182.06	1173.1	491.09	84.420	198.76	49.721	31.343	76.590
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.4188	382.29	-.06059	.50903	-.6420	.32069	.54002	1.8584
Stddev	.1084	4.49	.13369	.79832	1.629	.65020	.17286	.2486
%RSD	3.1715	1.1747	220.66	156.83	253.7	202.75	32.011	13.378
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 13:24:56 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.0042	1.9360	.17058	-25.930	5.4884
Stddev	.4657	1.7383	.09233	4.455	3.2304
%RSD	46.374	89.789	54.129	17.180	58.859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6949.5	4414.3	50407.	6152.0
Stddev	11.3	6.2	61.	30.8
%RSD	.16286	.14077	.12135	.50074

Sample Name: SD 240-104265-a-5e@5 Acquired: 11/19/2018 13:29:25 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.53318	-21.360	4.2899	134.90	5.9205	-.18506	5055.4
Stddev	.24526	12.118	.6402	1.01	.1121	.01269	12.2
%RSD	46.000	56.734	14.924	.74741	1.8929	6.8591	.24146
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1321	.33990	.79638	6.5708	18.645	2055.6	2.9473
Stddev	.1429	.19078	.22135	.4539	.339	33.1	1.3642
%RSD	108.2	56.127	27.794	6.9082	1.8192	1.6105	46.288
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1764.7	9.0651	-.05069	259260.	4.3857	2.4239	3.160
Stddev	6.6	.0619	.18736	3535.	.2468	.6585	1.606
%RSD	.37521	.68233	369.64	1.3634	5.6267	27.169	50.83
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: SD 240-104265-a-5e@5 Acquired: 11/19/2018 13:29:25 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.0989	.10983	-.15814	-.84007	2.5334	102.69	336.69
Stddev	.9363	.23256	.27462	.88996	1.5262	.63	8.19
%RSD	85.199	211.75	173.66	105.94	60.244	.61586	2.4335
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	49.275
Stddev	7.277
%RSD	14.768
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6157.9	4210.5	48318.	6213.3
Stddev	37.5	27.1	86.	51.0
%RSD	.60919	.64347	.17714	.82018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	90.845%	96.923%	99.300%	109.61%
Range				

Sample Name: PDS 240-104265-a-5-e Acquired: 11/19/2018 13:33:59 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	42.818	2052.1	2298.6	1722.4	2095.1	51.590
Stddev	.289	24.5	5.1	1.9	3.1	.409
%RSD	.67577	1.1951	.22091	.10942	.14984	.79338
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	74360.	54.69	536.49	207.95	302.78	1120.6
Stddev	129.	.34	1.41	.45	1.00	8.2
%RSD	.17337	.6194	.26343	.21845	.32871	.72759
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	64905.	1108.4	57265.	559.18	1061.4	F 1039100.
Stddev	155.	.7	203.	1.55	3.5	17482.
%RSD	.23812	.06156	.35395	.27720	.32652	1.6825
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: PDS 240-104265-a-5-e Acquired: 11/19/2018 13:33:59 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	558.25	481.31	582.7	2340.4	2158.9	1054.6
Stddev	1.05	1.87	2.2	6.4	10.1	2.3
%RSD	.18846	.38885	.3809	.27440	.46708	.21858
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1995.1	522.81	1085.3	2875.2	1213.2
Stddev	3.9	5.15	3.7	24.6	15.7
%RSD	.19378	.98539	.34038	.85705	1.2940
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5300.0	3869.9	43915.	6110.1
Stddev	2.6	4.2	147.	51.7
%RSD	.04977	.10820	.33472	.84624
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	78.188%	89.083%	90.252%	107.79%
Range				

Sample Name: 240-104265-a-5f ms@5 Acquired: 11/19/2018 13:38:09 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	W 191.55	401.49	1102.9	361.25	10360.	10.526	15670.
Stddev	.79	23.61	10.4	1.79	49.	.215	42.
%RSD	.41219	5.8797	.93951	.49439	.47544	2.0460	.26673
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	100.00						
Low Limit	-500000.						

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	213.1	107.89	1019.8	59.382	243.28	12650.	215.73
Stddev	1.8	.97	2.1	.080	1.04	40.	.42
%RSD	.8236	.89792	.20856	.13471	.42613	.31986	.19382
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	12262.	115.81	215.72	284850.	110.65	988.89	116.4
Stddev	112.	.06	2.10	619.	.88	3.93	1.5
%RSD	.91702	.05014	.97179	.21740	.79706	.39749	1.294
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104265-a-5f ms@5 Acquired: 11/19/2018 13:38:09 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	224.03	399.22	209.78	397.69	108.64	220.26	626.56
Stddev	4.17	5.27	.02	4.61	.67	2.77	2.89
%RSD	1.8598	1.3189	.00833	1.1597	.62128	1.2561	.46054
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	264.95
Stddev	3.19
%RSD	1.2035
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6035.0	4177.9	47962.	6179.1
Stddev	10.4	3.9	94.	18.7
%RSD	.17282	.09311	.19703	.30223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	89.031%	96.173%	98.568%	109.00%
Range				

Sample Name: 240-104265-a5g msd@5 Acquired: 11/19/2018 13:42:33 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	W 189.11	404.49	1089.5	351.17	10083.	10.526	15094.
Stddev	.24	28.70	8.0	2.85	92.	.206	31.
%RSD	.12931	7.0960	.73552	.81092	.91116	1.9601	.20604
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	100.00						
Low Limit	-500000.						

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	210.8	104.86	1009.6	58.763	227.49	12241.	210.13
Stddev	1.8	.57	1.0	.299	3.74	30.	1.89
%RSD	.8459	.54697	.09576	.50862	1.6425	.24464	.90169
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	11820.	113.29	209.57	274550.	108.02	972.99	112.7
Stddev	172.	.19	1.95	2800.	.72	5.23	2.3
%RSD	1.4516	.16403	.93034	1.0197	.66817	.53747	2.012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104265-a5g msd@5 Acquired: 11/19/2018 13:42:33 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	218.65	390.49	206.21	392.36	103.36	212.42	611.20
Stddev	3.16	1.60	.25	2.13	.83	.71	5.98
%RSD	1.4448	.40895	.12336	.54409	.79969	.33630	.97804
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	256.69
Stddev	6.30
%RSD	2.4557
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6088.1	4208.2	47894.	6195.8
Stddev	7.8	7.9	56.	6.8
%RSD	.12814	.18658	.11717	.11054
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	89.816%	96.869%	98.427%	109.30%
Range				

Sample Name: 240-104050-a-1-e Acquired: 11/19/2018 13:46:56 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.26408	3356.4	4.6911	239.58	3718.3	-.08810
Stddev	.30951	10.5	.2889	3.44	6.1	.07723
%RSD	117.21	.31139	6.1590	1.4373	.16321	87.666
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9080.9	.0042	1.6174	3.2745	-.44935	26614.
Stddev	14.9	.0894	.1961	.3444	.65498	53.
%RSD	.16356	2146.	12.124	10.519	145.76	.19878
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9550.1	202.40	3513.4	68.109	.06192	F 1034000.
Stddev	85.1	2.01	49.6	.061	.09344	12717.
%RSD	.89109	.99082	1.4121	.08961	150.91	1.2300
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104050-a-1-e Acquired: 11/19/2018 13:46:56 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	10.360	.18376	.3171	5.6427	5.0003	-.20603
Stddev	.262	1.5316	1.701	1.8108	.4995	.07585
%RSD	2.5324	833.46	536.3	32.091	9.9905	36.814
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-2.9902	3.9607	107.08	551.02	106.92
Stddev	.6598	1.1143	1.11	10.02	4.87
%RSD	22.065	28.135	1.0371	1.8192	4.5586
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5486.8	3968.3	44623.	6184.2
Stddev	3.3	3.1	117.	26.2
%RSD	.05934	.07830	.26242	.42420
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	80.944%	91.347%	91.705%	109.09%
Range				

Sample Name: 240-104152-a-1-q Acquired: 11/19/2018 13:51:27 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.52699	35.230	5.6717	158.68	169.75	-.23456
Stddev	.14908	19.141	1.9635	1.82	.14	.04949
%RSD	28.289	54.330	34.619	1.1449	.08355	21.101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	898.68	.1860	7.0501	3.5923	1.7542	199.65
Stddev	6.91	.1718	.2299	.2795	.1188	1.39
%RSD	.76908	92.35	3.2611	7.7792	6.7741	.69436
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	15445.	13.985	530.04	5.5106	-.53360	F 1048300.
Stddev	109.	.501	8.27	.0285	.28482	20493.
%RSD	.70884	3.5812	1.5612	.51633	53.377	1.9548
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104152-a-1-q Acquired: 11/19/2018 13:51:27 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	11.651	.89824	-2.267	5.7967	64.502	.70441
Stddev	.511	.37262	1.472	.8821	.643	.23020
%RSD	4.3831	41.484	64.95	15.218	.99743	32.679
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-6.3749	.84352	1585.3	256.69	11.435
Stddev	.6248	3.0928	17.1	1.19	3.001
%RSD	9.8015	366.65	1.0765	.46461	26.246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5467.8	3915.6	43915.	5985.3
Stddev	16.7	15.1	5.	46.8
%RSD	.30594	.38461	.01180	.78125
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	80.664%	90.135%	90.251%	105.58%
Range				

Sample Name: 240-104152-a-2-c Acquired: 11/19/2018 13:56:00 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.10046	1285.1	4.3192	319.20	749.94	-.12430
Stddev	.07955	43.1	.3240	2.65	2.90	.02865
%RSD	79.191	3.3533	7.5018	.82961	.38663	23.047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	30478.	19.04	6.3504	6.8663	398.08	769.56
Stddev	142.	.27	.1472	.2076	1.06	2.67
%RSD	.46669	1.405	2.3177	3.0232	.26681	.34723
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4121.2	45.160	3370.1	456.98	-.54891	F 1025400.
Stddev	44.2	1.171	34.2	.96	.22568	22239.
%RSD	1.0718	2.5938	1.0140	.21085	41.114	2.1688
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104152-a-2-c Acquired: 11/19/2018 13:56:00 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	24.557	4.2998	-.5218	1.6853	5.1620	.62971
Stddev	.322	.7250	.8413	2.9103	.1661	.06869
%RSD	1.3093	16.861	161.2	172.69	3.2184	10.907
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-2.7199	.92132	7372.8	599.57	118.92
Stddev	.9476	1.5664	80.4	10.72	3.42
%RSD	34.842	170.02	1.0912	1.7878	2.8770
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5384.5	3909.0	43660.	5969.2
Stddev	14.0	13.1	40.	22.9
%RSD	.25969	.33516	.09230	.38396
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	79.435%	89.983%	89.726%	105.30%
Range				

Sample Name: 190-18062-a-1-c Acquired: 11/19/2018 14:00:29 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.0500	1.1087	2.2031	5717.6	83.560	-.20369
Stddev	.5931	13.486	2.3509	81.3	.405	.10772
%RSD	56.479	1216.3	106.71	1.4211	.48446	52.885
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	237060.	.2307	354.12	7.1507	3.1944	257.52
Stddev	1706.	.1678	6.25	.1242	.5103	2.72
%RSD	.71954	72.76	1.7661	1.7370	15.975	1.0569
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	26814.	19.260	56933.	F 11986.	-1.2902	F 1034200.
Stddev	19.	.137	30.	119.	.1780	26080.
%RSD	.07097	.70877	.05220	.99622	13.797	2.5216
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
High Limit				10000.		500000.
Low Limit				-500000.		-500000.

Sample Name: 190-18062-a-1-c Acquired: 11/19/2018 14:00:29 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	629.00	2.1684	-.4139	3.3256	.84744	-.71129
Stddev	10.69	2.0731	1.324	.7054	.34560	.07185
%RSD	1.6997	95.604	319.9	21.211	40.782	10.102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	7.5803	1.6539	7835.4	2766.3	980.30
Stddev	1.4775	.9223	118.0	32.6	4.00
%RSD	19.492	55.763	1.5055	1.1773	.40804
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5159.6	3766.6	43281.	5920.7
Stddev	4.0	4.1	197.	13.0
%RSD	.07753	.10868	.45494	.21977
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	76.117%	86.705%	88.947%	104.45%
Range				

Sample Name: 190-18063-a-1-c@100 Acquired: 11/19/2018 14:05:10 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.23833	-8.0335	.73908	14.513	-.08831	-.07817	274.33	.0496
Stddev	.34885	16.088	.82129	1.007	.05841	.07525	1.66	.0470
%RSD	146.38	200.26	111.12	6.9399	66.141	96.261	.60556	94.70
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.82638	2.0725	.74794	118.00	63.685	3.9515	126.69	1.5717
Stddev	.11790	.1022	.20185	3.13	23.389	.8020	4.82	.0918
%RSD	14.267	4.9324	26.987	2.6505	36.726	20.296	3.8062	5.8426
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.1311	57896.	7765.3	1.5394	-.6287	-2.6995	31.699	-.73518
Stddev	.2109	403.	33.3	.8129	3.274	.9720	1.166	.14515
%RSD	18.649	.69563	.42907	52.805	520.8	36.008	3.6796	19.743
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 190-18063-a-1-c@100 Acquired: 11/19/2018 14:05:10 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.64964	1.7230	1.2060	47.942	15.271
Stddev	.86322	1.0265	.1190	6.342	.595
%RSD	132.88	59.576	9.8679	13.229	3.8982
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6511.0	4322.0	49543.	6053.9
Stddev	7.6	8.5	482.	19.6
%RSD	.11672	.19614	.97365	.32361
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	96.055%	99.490%	101.82%	106.80%
Range				

Sample Name: 190-18063-a-2-c@100 Acquired: 11/19/2018 14:09:33 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.50174	-25.703	-1.7071	7.1899	.00442	-.14223	179.60
Stddev	.44125	11.896	1.7438	.4476	.29439	.04262	1.59
%RSD	87.943	46.283	102.15	6.2256	6661.7	29.968	.88251
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.3613	4409.5	4968.4	.08713	1698.5	11.453	2.5331
Stddev	.1867	18.1	14.8	.03370	8.1	25.837	.4159
%RSD	51.66	.41119	.29818	38.683	.47412	225.59	16.420
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50.733	12.001	-1.1950	5049.7	2129.8	-.38186	-1.453
Stddev	15.526	.052	.2360	9.4	7.9	.77669	.993
%RSD	30.603	.43400	19.751	.18526	.37006	203.40	68.32
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 190-18063-a-2-c@100 Acquired: 11/19/2018 14:09:33 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.91269	-.56073	-.80633	4.1835	-1.7411	F 19936.	-12.089
Stddev	2.2563	.53992	.02764	.9708	1.5227	89.	2.939
%RSD	247.22	96.289	3.4281	23.206	87.456	.44638	24.315
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						10000.	
Low Limit						-500000.	

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	12.392
Stddev	5.874
%RSD	47.405
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6833.1	4400.1	50203.	6093.6
Stddev	5.5	4.2	99.	9.0
%RSD	.08050	.09504	.19814	.14737
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	100.81%	101.29%	103.17%	107.49%
Range				

Sample Name: CCV-3914190 Acquired: 11/19/2018 14:13:52 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1002.3	24972.	514.84	5204.9	1999.2	1978.5	49309.	513.2
Stddev	2.4	54.	1.63	7.7	3.1	5.5	133.	.7
%RSD	.24270	.21607	.31632	.14710	.15636	.28024	.26908	.1447
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2005.2	1966.9	1996.8	24876.	48713.	5041.8	48651.	1996.5
Stddev	5.0	3.3	3.3	36.	141.	6.8	207.	2.4
%RSD	.24797	.16956	.16437	.14370	.28970	.13457	.42510	.11883
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2064.5	49018.	2002.4	482.17	522.4	518.23	5071.1	5098.7
Stddev	4.3	156.	6.0	1.08	1.6	3.98	20.8	5.4
%RSD	.20988	.31895	.30010	.22385	.2970	.76722	.40987	.10678
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 14:13:52 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	996.25	1983.9	2008.7	5116.3	4919.6
Stddev	5.21	11.0	5.8	22.6	10.0
%RSD	.52312	.55390	.29000	.44257	.20297
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6054.5	4185.7	47727.	6043.5
Stddev	4.9	8.0	46.	14.7
%RSD	.08021	.19192	.09593	.24401

Sample Name: CCB Acquired: 11/19/2018 14:17:59 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.18948	4.4966	-.70455	12.344	-.49146	-.06943	6.8837	.0758
Stddev	.23702	42.172	1.3471	1.281	.06124	.07358	1.9888	.1327
%RSD	125.09	937.87	191.20	10.374	12.461	105.99	28.891	175.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.00862	.24952	-.21678	1.7646	15.795	1.1785	11.216	.04162
Stddev	.05744	.29276	.85160	.3703	20.444	1.2987	9.207	.06184
%RSD	666.38	117.33	392.85	20.985	129.43	110.20	82.087	148.60
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.0428	301.06	.01685	.73997	-1.684	.87551	.72523	2.0557
Stddev	.0863	9.34	.20734	1.5267	1.773	.35875	.12992	.1608
%RSD	2.1337	3.1028	1230.2	206.32	105.3	40.976	17.914	7.8243
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 14:17:59 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.64251	.78624	.80961	-24.362	6.4438
Stddev	.63181	1.1923	.03489	8.205	5.3348
%RSD	98.335	151.65	4.3098	33.679	82.789
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6912.7	4393.5	50281.	6100.0
Stddev	2.3	4.2	85.	25.1
%RSD	.03337	.09587	.16909	.41143

Sample Name: 190-18063-a-3-c@100 Acquired: 11/19/2018 14:22:26 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.48880	-25.534	-.24446	9.5621	-.39677	-.01048	173.24
Stddev	.40758	9.501	.97125	.4090	.08169	.11034	4.31
%RSD	83.385	37.211	397.31	4.2774	20.589	1052.9	2.4861
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1227	9.4202	.00738	-.01901	7.5453	58960.	2.2968
Stddev	.0622	.1778	.20824	.36782	.7699	36.	1.4670
%RSD	50.69	1.8879	2820.8	1934.8	10.204	.06117	63.873
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	91.146	22.552	-.47974	10102.	18833.	1.2291	.0583
Stddev	7.703	.189	.20202	8.	42.	.3353	.3906
%RSD	8.4516	.83643	42.110	.08355	.22312	27.280	669.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 190-18063-a-3-c@100 Acquired: 11/19/2018 14:22:26 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.9580	-.82507	-.38457	.84530	.10131	F 27544.	-20.934
Stddev	2.4173	.53566	.14497	.46956	.94159	56.	8.141
%RSD	123.45	64.923	37.697	55.549	929.41	.20293	38.887
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						10000.	
Low Limit						-500000.	

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	11.052
Stddev	2.437
%RSD	22.046
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6484.9	4288.3	49083.	5989.5
Stddev	13.8	7.3	270.	10.8
%RSD	.21241	.16955	.55057	.18104
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	95.669%	98.713%	100.87%	105.66%
Range				

Sample Name: 190-18062-a-1-c@2 Acquired: 11/19/2018 14:26:49 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.80565	-23.853	.12953	3096.2	44.782	-.08488
Stddev	.38785	10.742	.32772	13.4	.209	.13172
%RSD	48.141	45.034	253.00	.43394	.46695	155.19
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	130290.	.1320	196.10	3.9340	1.6755	140.76
Stddev	45.	.0629	1.33	.2062	.7076	2.89
%RSD	.03424	47.67	.67718	5.2406	42.233	2.0524
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	13603.	11.288	31519.	6798.6	-.63227	F 698790.
Stddev	47.	.449	47.	35.3	.10460	6510.
%RSD	.34891	3.9800	.15005	.51878	16.544	.93166
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 190-18062-a-1-c@2 Acquired: 11/19/2018 14:26:49 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	349.74	1.0449	-2.353	.17890	.29573	-.23421
Stddev	3.23	.9629	1.298	1.3010	.08360	.07559
%RSD	.92440	92.156	55.17	727.21	28.269	32.274
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	3.2270	-1.3339	4278.7	1478.1	528.32
Stddev	.3291	1.7359	37.2	12.7	4.50
%RSD	10.197	130.14	.86927	.86219	.85264
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5496.9	3935.3	45053.	6042.6
Stddev	8.6	10.9	76.	14.2
%RSD	.15571	.27730	.16865	.23452
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	81.093%	90.589%	92.589%	106.60%
Range				

Sample Name: 240-104182-e-2-h Acquired: 11/19/2018 14:31:23 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.42256	-11.505	2.5147	100.73	2558.2	-.09186
Stddev	.87565	22.167	3.2965	1.65	9.9	.15950
%RSD	207.22	192.67	131.09	1.6412	.38805	173.64
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	274670.	.3974	.50341	1.3707	3.5618	6.9784
Stddev	1937.	.2140	.27148	.1778	.1009	1.0500
%RSD	.70521	53.86	53.927	12.970	2.8341	15.047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1634.8	18.309	21862.	93.979	-.96496	F 1068700.
Stddev	11.3	.549	250.	.312	.13778	25183.
%RSD	.69202	2.9963	1.1430	.33170	14.278	2.3564
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104182-e-2-h Acquired: 11/19/2018 14:31:23 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5.2420	3.3924	-3.044	-.33438	.02334	-.74598
Stddev	.2445	1.1182	1.185	.48756	.49800	.12049
%RSD	4.6653	32.962	38.92	145.81	2133.3	16.151
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-.79391	.97039	11.235	14112.	3390.2
Stddev	1.1391	3.3012	.334	484.	35.4
%RSD	143.48	340.19	2.9685	3.4274	1.0449
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5168.8	3772.9	42796.	5912.6
Stddev	22.5	15.7	140.	41.9
%RSD	.43470	.41610	.32677	.70807
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	76.253%	86.850%	87.952%	104.30%
Range				

Sample Name: 240-104241-i-1-g Acquired: 11/19/2018 14:36:03 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.28602	9.9538	3.5917	216.88	255.65	.13496
Stddev	.45805	18.851	.4622	1.68	.24	.13775
%RSD	160.15	189.39	12.868	.77427	.09472	102.06
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	676750.	5.729	10.423	2.6837	10.027	27.584
Stddev	2881.	.166	.262	.5723	.723	.960
%RSD	.42567	2.905	2.5154	21.327	7.2128	3.4806
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	7037.0	38.205	19677.	629.23	39.386	F 1043100.
Stddev	50.1	.486	192.	.33	.809	27773.
%RSD	.71254	1.2714	.97619	.05213	2.0528	2.6625
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104241-i-1-g Acquired: 11/19/2018 14:36:03 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	29.708	.33460	1.478	.79990	.28530	-.32865
Stddev	1.204	1.1699	.877	1.5354	.12507	.11997
%RSD	4.0517	349.66	59.34	191.94	43.837	36.504
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-1.5670	1.7664	570.25	17881.	762.67
Stddev	.3260	2.1471	8.47	238.	6.73
%RSD	20.802	121.56	1.4848	1.3293	.88257
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5065.6	3716.2	42443.	5807.4
Stddev	8.7	11.2	149.	43.7
%RSD	.17215	.30173	.35066	.75198
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	74.730%	85.543%	87.227%	102.45%
Range				

Sample Name: 240-104242-j-1-e Acquired: 11/19/2018 14:40:40 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.15207	-5.2129	3.0019	138.78	175.48	.08910
Stddev	.54207	14.779	.4535	1.48	.79	.05331
%RSD	356.46	283.52	15.106	1.0676	.44982	59.825
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	712220.	.7394	3.6726	2.0590	5.9201	6.9971
Stddev	4701.	.1462	.2177	.1779	.2603	.8608
%RSD	.66006	19.77	5.9271	8.6396	4.3973	12.301
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2762.0	30.703	12665.	749.61	.43247	F 1028100.
Stddev	33.1	1.464	59.	3.41	.20418	19760.
%RSD	1.1967	4.7684	.46799	.45513	47.211	1.9219
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104242-j-1-e Acquired: 11/19/2018 14:40:40 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	11.738	1.5319	1.927	2.7685	.45555	-1.1243
Stddev	.135	1.4007	1.541	3.6886	.88300	.0794
%RSD	1.1460	91.434	79.98	133.24	193.83	7.0588
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-.84638	.96433	53.003	1816.5	612.69
Stddev	.68758	2.2319	.416	17.8	4.59
%RSD	81.237	231.44	.78507	.97848	.74863
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5054.5	3690.0	42427.	5877.5
Stddev	9.8	9.4	125.	37.7
%RSD	.19344	.25545	.29421	.64102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	74.566%	84.942%	87.192%	103.68%
Range				

Sample Name: 240-104261-a-1-d Acquired: 11/19/2018 14:45:18 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.14085	-18.874	5.0693	50.496	13.963	-.22603
Stddev	.37735	15.418	2.2681	.492	.091	.08535
%RSD	267.92	81.690	44.742	.97420	.65449	37.760
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4876.0	.1284	4.7992	6.6462	43.118	18.960
Stddev	20.1	.0866	.4306	.1358	.332	1.537
%RSD	.41284	67.41	8.9720	2.0431	.76941	8.1057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1096.4	17.695	764.30	4.8269	-1.2125	F 1020400.
Stddev	42.6	1.532	28.40	.0437	.1530	38751.
%RSD	3.8879	8.6580	3.7156	.90567	12.617	3.7976
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104261-a-1-d Acquired: 11/19/2018 14:45:18 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	11.065	8.8370	4.158	13.328	261.69	-.08070
Stddev	.388	.3966	.613	2.477	3.28	.18228
%RSD	3.5103	4.4878	14.74	18.583	1.2521	225.89
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-10.407	-.05028	50.655	185.01	22.438
Stddev	.479	2.5877	.746	22.19	5.571
%RSD	4.6020	5146.8	1.4737	11.994	24.827
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5439.5	3915.9	44555.	6152.9
Stddev	15.2	9.1	125.	25.1
%RSD	.27998	.23329	.28118	.40859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	80.247%	90.142%	91.565%	108.54%
Range				

Sample Name: 240-104265-a-4-e Acquired: 11/19/2018 14:49:49 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.17293	14.820	1.7831	38.413	384.16	-.12134
Stddev	.29069	16.081	.9550	.215	1.36	.12717
%RSD	168.10	108.51	53.560	.56042	.35280	104.81
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2414.9	.5399	.43190	2.1782	23.096	59.754
Stddev	8.5	.0825	.11957	.1823	1.175	1.540
%RSD	.35305	15.28	27.685	8.3713	5.0868	2.5768
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1189.1	10.842	253.67	9.4968	-.85527	F 1006700.
Stddev	8.7	.686	10.94	.1655	.04589	26243.
%RSD	.72894	6.3231	4.3124	1.7422	5.3657	2.6067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104265-a-4-e Acquired: 11/19/2018 14:49:49 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	7.5105	6.2503	-.0565	.53167	2.1858	-.47899
Stddev	.4783	1.2339	1.211	1.0968	.1671	.14603
%RSD	6.3687	19.742	2141.	206.30	7.6460	30.486
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-2.0724	2.0603	379.69	380.17	19.038
Stddev	.5535	3.0405	3.99	5.70	1.089
%RSD	26.707	147.57	1.0507	1.4997	5.7203
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5395.1	3873.1	44478.	6165.3
Stddev	11.2	12.3	163.	27.5
%RSD	.20668	.31770	.36675	.44560
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	79.591%	89.157%	91.409%	108.76%
Range				

Sample Name: mb 240-355791/1-a Acquired: 11/19/2018 14:54:21 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.49892	-11.286	1.2672	1.6814	-.51422	-.08312	86.026
Stddev	.41386	20.404	1.2029	.2140	.07166	.05688	1.036
%RSD	82.950	180.79	94.930	12.726	13.935	68.422	1.2039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1340	-.02998	.27655	-.10187	18.257	44.204	1.4316
Stddev	.0213	.14442	.28179	.35683	1.750	23.970	2.4605
%RSD	15.90	481.66	101.90	350.29	9.5870	54.226	171.88
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6.2820	.16707	-1.3356	F 1333.9	.61327	.05719	-1.190
Stddev	17.877	.05154	.0659	96.5	.19626	.36654	.849
%RSD	284.58	30.849	4.9310	7.2335	32.002	640.93	71.31
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				1000.0			
Low Limit				-1000.0			

Sample Name: mb 240-355791/1-a Acquired: 11/19/2018 14:54:21 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.04649	23.900	-.63566	.02594	F 4.0000	.82430	-18.609
Stddev	.41910	.343	.09603	.84406	.5166	.09010	6.085
%RSD	901.44	1.4346	15.108	3254.0	12.914	10.931	32.700
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					4.0000		
Low Limit					-1000.0		

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	3.3994
Stddev	4.1440
%RSD	121.90
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6925.6	4405.4	50541.	6089.0
Stddev	37.0	22.2	210.	40.7
%RSD	.53438	.50408	.41629	.66891

Sample Name: lcs 240-355791/2-a Acquired: 11/19/2018 14:58:47 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	45.120	1740.1	1851.9	914.76	1738.9	43.133	42697.	45.89
Stddev	.275	14.6	11.8	3.90	4.5	.056	59.	.44
%RSD	.60864	.83941	.63730	.42688	.26010	.12927	.13745	.9570
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	438.00	173.05	222.05	954.78	42925.	883.97	42786.	566.82
Stddev	3.14	.12	1.31	3.75	129.	3.10	117.	1.23
%RSD	.71755	.06844	.58931	.39225	.29944	.35119	.27371	.21748
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	926.98	42870.	439.93	440.18	460.4	1859.3	1797.2	899.51
Stddev	5.10	135.	2.31	2.71	4.6	7.1	13.1	.90
%RSD	.55059	.31538	.52405	.61455	.9903	.38281	.72900	.10053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: lcs 240-355791/2-a Acquired: 11/19/2018 14:58:47 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1797.3	445.56	444.72	945.73	864.37
Stddev	13.0	5.32	3.69	15.68	2.53
%RSD	.72429	1.1940	.82976	1.6580	.29271
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6152.9	4156.9	47918.	5948.0
Stddev	42.9	25.6	173.	9.4
%RSD	.69757	.61559	.36042	.15750

Sample Name: 240-104412-b-1-a Acquired: 11/19/2018 15:02:47 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.77071	125010.	15.794	6.5242	18.849	-.03914	84033.
Stddev	.80783	310.	1.218	.1972	.144	.06007	98.
%RSD	104.82	.24794	7.7107	3.0226	.76394	153.47	.11640
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.9227	294.58	2542.0	10943.	239300.	308.13	12.541
Stddev	.0614	1.49	2.1	10.	1369.	19.32	.692
%RSD	6.657	.50438	.08288	.08899	.57205	6.2688	5.5205
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	31679.	4477.8	59.826	778.83	1503.9	35.635	-1.448
Stddev	60.	36.0	.118	23.95	16.8	1.773	1.987
%RSD	.19022	.80500	.19654	3.0747	1.1185	4.9765	137.2
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104412-b-1-a Acquired: 11/19/2018 15:02:47 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5.5267	187.18	2296.9	1.2940	209.81	F 15578.	12540.
Stddev	.5248	1.33	1.4	.5532	4.53	179.	182.
%RSD	9.4948	.71097	.05954	42.753	2.1579	1.1480	1.4534
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						10000.	
Low Limit						-500000.	

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	50.129
Stddev	1.041
%RSD	2.0774
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6194.8	4765.9	54748.	6815.7
Stddev	16.2	5.6	97.	16.0
%RSD	.26218	.11650	.17646	.23435
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	91.389%	109.71%	112.51%	120.23%
Range				

Sample Name: CCV-3914190 Acquired: 11/19/2018 15:07:13 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	953.81	24380.	497.11	4965.9	1921.8	1883.2	47582.	490.5
Stddev	.64	104.	2.95	4.2	7.8	9.6	141.	.8
%RSD	.06667	.42594	.59434	.08503	.40417	.51031	.29554	.1623
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1927.6	1892.0	1894.2	24291.	47217.	4900.0	47424.	1906.9
Stddev	1.7	5.8	2.7	78.	207.	14.0	94.	2.3
%RSD	.08886	.30506	.14300	.32304	.43835	.28591	.19892	.11886
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1994.0	47307.	1926.1	469.36	501.7	503.46	4884.4	4922.0
Stddev	6.0	162.	1.5	1.41	4.6	2.20	6.3	11.1
%RSD	.29929	.34138	.07596	.30011	.9181	.43708	.12856	.22544
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 15:07:13 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	968.89	1940.2	1942.2	4964.4	4767.6
Stddev	7.19	5.0	2.1	63.7	19.5
%RSD	.74256	.25566	.10609	1.2822	.40999
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6057.0	4184.8	47519.	5930.4
Stddev	17.5	8.4	77.	8.8
%RSD	.28827	.19980	.16249	.14877

Sample Name: CCB Acquired: 11/19/2018 15:11:20 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.32914	-26.270	1.5237	9.5133	-.59238	.08088	-6.1195	-.0222
Stddev	.27687	19.026	1.2718	1.0574	.15087	.06758	3.2515	.1448
%RSD	84.120	72.427	83.470	11.115	25.469	83.556	53.133	653.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.10449	.16798	.15992	7.6434	-16.017	1.6848	5.0178	-.20507
Stddev	.11620	.33695	.89525	.8815	49.662	1.1946	9.7342	.05128
%RSD	111.21	200.59	559.82	11.533	310.05	70.907	193.99	25.006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.9136	223.68	-.05385	.31660	-1.308	.06329	.46969	1.8630
Stddev	.0891	9.25	.11353	.35641	2.804	1.0118	.19367	.1123
%RSD	2.2780	4.1376	210.82	112.57	214.3	1598.6	41.234	6.0267
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 15:11:20 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.63734	-.69566	-.97099	-21.066	5.7997
Stddev	1.0288	1.6713	.06422	7.232	.2209
%RSD	161.42	240.24	6.6141	34.332	3.8092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6901.6	4382.7	49887.	5997.5
Stddev	11.2	10.7	153.	29.3
%RSD	.16258	.24457	.30705	.48911

Sample Name: SD 240-104412-b-1a@5 Acquired: 11/19/2018 15:15:47 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.43895	30857.	3.7132	6.0897	4.3312	.07634	20838.	.2526
Stddev	.09887	13.	2.0252	.4575	.1244	.06325	19.	.0750
%RSD	22.524	.04183	54.542	7.5121	2.8722	82.855	.08974	29.67
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	64.879	626.14	2628.4	61473.	62.076	4.5489	8059.7	1145.2
Stddev	.774	1.69	7.1	102.	26.833	1.1039	39.6	2.1
%RSD	1.1925	.27036	.26951	.16618	43.226	24.268	.49098	.18422
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	13.975	287.45	338.96	10.206	-1.628	.47827	40.864	561.99
Stddev	.145	4.33	4.07	.616	.415	.78902	.526	.25
%RSD	1.0358	1.5071	1.2001	6.0345	25.51	164.97	1.2868	.04406
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: SD 240-104412-b-1a@5 Acquired: 11/19/2018 15:15:47 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.77733	51.125	3508.3	3003.3	18.069
Stddev	.90453	1.819	23.2	7.3	1.081
%RSD	116.36	3.5570	.65996	.24169	5.9850
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6667.4	4496.0	51090.	6174.2
Stddev	11.0	5.9	47.	8.4
%RSD	.16541	.13151	.09164	.13667
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	98.361%	103.50%	105.00%	108.92%
Range				

Sample Name: PDS 240-104412-b-1-a Acquired: 11/19/2018 15:20:02 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	35.293	128760.	1857.5	920.31	1812.7	43.749	129630.
Stddev	.273	221.	11.2	2.88	2.5	.334	113.
%RSD	.77321	.17165	.60456	.31336	.14064	.76347	.08678
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	46.85	814.85	2769.3	11426.	242740.	44713.	932.57
Stddev	.34	5.07	5.7	10.	1007.	75.	1.12
%RSD	.7196	.62257	.20620	.08781	.41480	.16807	.12060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	75367.	5020.6	976.80	45029.	2092.7	455.29	460.6
Stddev	87.	8.5	7.85	65.	12.5	3.95	2.1
%RSD	.11509	.16920	.80387	.14394	.59923	.86776	.4572
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: PDS 240-104412-b-1-a Acquired: 11/19/2018 15:20:02 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1850.8	2268.4	3277.4	1972.8	647.18	F 16947.	13605.
Stddev	9.7	15.3	2.6	14.1	6.11	110.	173.
%RSD	.52447	.67344	.07937	.71701	.94462	.64753	1.2703
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						10000.	
Low Limit						-500000.	

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	918.65
Stddev	2.04
%RSD	.22195
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5816.3	4656.3	53417.	6785.8
Stddev	13.4	2.4	40.	13.7
%RSD	.23066	.05085	.07503	.20172
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	85.805%	107.19%	109.78%	119.71%
Range				

Sample Name: 240-104412-b-1-b ms Acquired: 11/19/2018 15:24:18 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	40.170	126580.	1605.5	778.22	1551.4	38.135	110940.
Stddev	.414	217.	5.0	2.96	4.2	.158	265.
%RSD	1.0318	.17110	.31336	.38031	.26796	.41505	.23891
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	39.95	695.97	2302.3	7329.3	235330.	38329.	787.21
Stddev	.35	4.49	6.1	20.3	1377.	139.	3.38
%RSD	.8857	.64491	.26662	.27732	.58501	.36162	.42965
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	70734.	5066.4	816.11	38720.	1741.7	398.70	175.8
Stddev	222.	21.2	6.35	110.	9.6	1.57	2.2
%RSD	.31410	.41748	.77764	.28307	.55172	.39264	1.277
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104412-b-1-b ms Acquired: 11/19/2018 15:24:18 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1561.0	1801.1	2591.8	1697.8	577.77	F 12491.	18638.
Stddev	5.8	10.5	4.4	13.8	2.67	69.	205.
%RSD	.36957	.58379	.16897	.81263	.46260	.55488	1.0992
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						10000.	
Low Limit						-500000.	

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	780.46
Stddev	6.46
%RSD	.82830
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5868.0	4686.2	53626.	6760.6
Stddev	4.5	2.7	153.	14.9
%RSD	.07622	.05672	.28569	.22100
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	86.568%	107.87%	110.21%	119.26%
Range				

Sample Name: 240-104412-b-1-c msd Acquired: 11/19/2018 15:28:33 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	39.313	117110.	1529.7	749.19	1461.9	36.086	104560.
Stddev	.153	504.	2.6	.35	3.3	.332	168.
%RSD	.39008	.43039	.16814	.04733	.22674	.91986	.16019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	38.03	647.99	2124.2	6884.9	222820.	36142.	744.17
Stddev	.09	2.33	6.4	22.5	457.	150.	2.88
%RSD	.2419	.36004	.30038	.32682	.20520	.41370	.38634
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	66127.	4729.5	776.67	36599.	1608.8	390.18	181.9
Stddev	274.	9.4	3.99	131.	4.4	.54	2.3
%RSD	.41474	.19870	.51355	.35844	.27080	.13925	1.290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104412-b-1-c msd Acquired: 11/19/2018 15:28:33 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1502.3	1708.9	2490.8	1647.2	543.43	F 11763.	16885.
Stddev	3.3	8.0	4.4	8.2	11.74	45.	210.
%RSD	.22208	.46718	.17602	.49936	2.1603	.38594	1.2450
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						10000.	
Low Limit						-500000.	

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	731.73
Stddev	4.11
%RSD	.56102
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5862.4	4631.2	52967.	6646.8
Stddev	3.3	9.2	60.	22.7
%RSD	.05607	.19813	.11273	.34195
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	86.485%	106.61%	108.85%	117.25%
Range				

Sample Name: 400-161297-a-7-b Acquired: 11/19/2018 15:32:39 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	7.1855	146530.	136.44	472.63	855.96	1.4833
Stddev	.2240	375.	1.59	5.71	1.45	.0395
%RSD	3.1168	.25563	1.1686	1.2079	.16952	2.6634
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 1361200.	26.36	153.33	1848.5	17233.	F 631630.
Stddev	8271.	.25	2.62	2.6	8.	2799.
%RSD	.60761	.9625	1.7062	.14002	.04672	.44310
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit	800000.					500000.
Low Limit	-500000.					-500000.

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4720.3	82.566	62320.	4952.2	1047.8	20747.
Stddev	8.6	1.306	137.	7.1	17.1	33.
%RSD	.18317	1.5817	.21975	.14362	1.6336	.15872
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 400-161297-a-7-b Acquired: 11/19/2018 15:32:39 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2332.2	7085.4	51.58	24.519	560.63	1190.3
Stddev	35.8	90.3	2.84	2.705	9.35	.9
%RSD	1.5351	1.2752	5.507	11.033	1.6673	.07241
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	3.8070	F 6602.7	F 21086.	6632.4	22414.
Stddev	1.6882	20.7	295.	175.7	27.
%RSD	44.345	.31307	1.3999	2.6496	.12032
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		5000.0	10000.		
Low Limit		-500000.	-500000.		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5212.5	3720.7	43526.	5736.9
Stddev	10.5	6.0	111.	9.2
%RSD	.20177	.16231	.25480	.16076
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	76.897%	85.648%	89.452%	101.20%
Range				

Sample Name: 400-161297-a-8-b Acquired: 11/19/2018 15:37:10 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.8147	52252.	85.750	252.55	610.53	2.9716
Stddev	.2624	27.	1.335	2.49	.65	.1276
%RSD	5.4492	.05120	1.5563	.98687	.10726	4.2947
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 1132900.	20.07	200.78	4157.5	4394.4	F 732970.
Stddev	3128.	.18	2.26	3.2	9.1	956.
%RSD	.27608	.9127	1.1274	.07786	.20804	.13048
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit	800000.					500000.
Low Limit	-500000.					-500000.

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4762.1	66.655	43565.	4818.0	1021.7	10918.
Stddev	10.2	.869	269.	13.8	15.2	33.
%RSD	.21431	1.3041	.61833	.28659	1.4903	.29926
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Sample Name: 400-161297-a-8-b Acquired: 11/19/2018 15:37:10 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2277.3	1975.0	24.86	5.6176	136.72	1228.8
Stddev	26.9	23.8	6.27	2.3366	.55	.7
%RSD	1.1825	1.2073	25.23	41.595	.40326	.05934
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	2.7361	W 4737.3	F 25445.	10544.	17406.
Stddev	1.4207	32.1	293.	152.	62.
%RSD	51.925	.67797	1.1495	1.4384	.35788
Check ?	Chk Pass	Chk Warn	Chk Fail	Chk Pass	Chk Pass
High Limit		4500.0	10000.		
Low Limit		-500000.	-500000.		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5338.6	3771.8	44320.	5737.4
Stddev	12.2	8.2	63.	26.7
%RSD	.22899	.21782	.14162	.46460
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	78.758%	86.825%	91.084%	101.21%
Range				

Sample Name: 400-161297-a-9-b Acquired: 11/19/2018 15:41:40 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6.8998	99749.	117.58	381.52	973.38	1.9929
Stddev	.4038	109.	4.99	2.62	.95	.1130
%RSD	5.8518	.10961	4.2405	.68600	.09740	5.6707
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 1378400.	11.93	359.21	1246.9	14737.	F 1166600.
Stddev	8544.	.21	4.74	1.7	23.	4666.
%RSD	.61983	1.758	1.3201	.14000	.15753	.39997
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit	800000.					500000.
Low Limit	-500000.					-500000.

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	7833.8	94.986	54586.	W 9165.1	1591.8	14219.
Stddev	22.3	.338	44.	77.5	25.2	29.
%RSD	.28494	.35632	.08071	.84555	1.5842	.20476
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit				9000.0		
Low Limit				-500000.		

Sample Name: 400-161297-a-9-b Acquired: 11/19/2018 15:41:40 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2294.4	2603.9	38.77	24.355	546.63	1607.7
Stddev	25.3	36.6	2.52	3.712	6.57	1.9
%RSD	1.1017	1.4045	6.498	15.239	1.2016	.11609
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	3.0124	F 7196.3	F 12686.	5602.5	23038.
Stddev	2.2492	26.2	114.	78.5	32.
%RSD	74.667	.36339	.90164	1.4004	.13807
Check ?	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
High Limit		5000.0	10000.		
Low Limit		-500000.	-500000.		

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5208.1	3613.9	43454.	5764.0
Stddev	1.0	10.5	124.	2.1
%RSD	.01857	.29026	.28554	.03568
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	76.833%	83.190%	89.304%	101.68%
Range				

Sample Name: 240-104504-b-1-a Acquired: 11/19/2018 15:46:10 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.8347	82191.	21.928	17.552	946.35	5.2760	35520.
Stddev	.3106	33.	1.106	.460	.91	.0323	6.
%RSD	16.929	.04025	5.0443	2.6215	.09665	.61222	.01723
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.6937	43.152	89.227	88.822	151190.	14590.	51.617
Stddev	.1947	.069	.397	.991	88.	16.	1.390
%RSD	28.07	.16083	.44526	1.1155	.05840	.11043	2.6936
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	22135.	1743.6	3.1914	1622.5	55.547	71.228	.2435
Stddev	200.	4.2	.0720	6.8	.544	.465	.7433
%RSD	.90521	.24091	2.2550	.41747	.97924	.65242	305.2
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104504-b-1-a Acquired: 11/19/2018 15:46:10 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.32660	30.778	2581.5	-3.5182	345.87	386.18	2272.7
Stddev	1.8895	.769	.8	1.3840	4.54	1.38	27.7
%RSD	578.55	2.4993	.03091	39.337	1.3122	.35784	1.2194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	630.82
Stddev	1.97
%RSD	.31285
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6272.2	4892.1	55603.	6748.6
Stddev	13.8	11.3	237.	24.3
%RSD	.21990	.23021	.42635	.36052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	92.531%	112.61%	114.27%	119.05%
Range				

Sample Name: lb 240-355685/1-b Acquired: 11/19/2018 15:50:20 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.30439	7.3471	.56664	F 374.54	1.8720	-.07766	1637.6
Stddev	.31845	27.164	1.4772	2.88	.0599	.02177	9.5
%RSD	104.62	369.72	260.70	.76908	3.1980	28.038	.57771
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	None
High Limit				100.00			
Low Limit				-1000.0			

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0035	-.15396	1.2144	.66230	63.714	279.57	2.2977
Stddev	.0602	.03538	.2092	.20654	.860	4.40	.6236
%RSD	1723.	22.979	17.227	31.185	1.3502	1.5752	27.138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	459.57	.22283	-.35381	13365.	.02000	1.0191	-.6846
Stddev	4.94	.04490	.13065	19.	.27143	.7195	.7977
%RSD	1.0747	20.150	36.926	.13860	1356.9	70.600	116.5
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: lb 240-355685/1-b Acquired: 11/19/2018 15:50:20 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.3541	.18731	1.2590	-.89068	.18000	2.3154	279.89
Stddev	1.2198	.43319	.2702	1.0486	2.6695	.1140	12.70
%RSD	90.079	231.27	21.457	117.73	1483.1	4.9239	4.5372
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	4.1526
Stddev	3.0752
%RSD	74.055
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6852.2	4394.0	50424.	6001.6
Stddev	18.4	7.5	183.	24.0
%RSD	.26848	.17021	.36347	.39912

Sample Name: mb 240-355854/2-a Acquired: 11/19/2018 15:54:45 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.42106	-9.2883	.53195	2.2041	-.48004	-.07068	12.796	.1191
Stddev	.15006	15.014	.43721	.1840	.17166	.08135	1.534	.1419
%RSD	35.638	161.64	82.191	8.3503	35.759	115.09	11.991	119.2
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.10391	.20191	.04705	22.356	-7.8674	2.6772	2.8140	-.30776
Stddev	.16311	.41091	.23611	1.363	23.542	.9847	12.468	.00900
%RSD	156.98	203.51	501.83	6.0982	299.24	36.781	443.07	2.9248
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.84559	69.286	-.01937	.66007	-4.319	-1.9942	-.17162	-.33198
Stddev	.23768	8.075	.15424	1.2259	.796	.4500	.30538	.14247
%RSD	28.108	11.655	796.34	185.73	18.42	22.564	177.94	42.915
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: mb 240-355854/2-a Acquired: 11/19/2018 15:54:45 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.08762	2.7957	-.33636	-31.073	3.6107
Stddev	.88051	2.3430	.13001	1.285	2.3164
%RSD	1004.9	83.805	38.653	4.1355	64.152
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6930.3	4421.4	50748.	5960.9
Stddev	20.3	13.3	15.	12.1
%RSD	.29346	.30058	.03010	.20360

Sample Name: CCV-3914190 Acquired: 11/19/2018 15:59:11 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	956.69	24168.	492.09	4944.8	1919.6	1911.2	47694.	491.0
Stddev	5.39	104.	1.80	6.6	4.7	11.3	87.	.6
%RSD	.56375	.43029	.36487	.13445	.24265	.58905	.18146	.1207
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1924.7	1885.9	1896.2	24097.	47057.	4825.0	47593.	1921.5
Stddev	.5	6.2	7.8	33.	174.	15.6	144.	4.2
%RSD	.02487	.32656	.41353	.13606	.36959	.32264	.30316	.21984
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1982.6	47609.	1923.0	463.53	494.0	495.21	4880.8	4875.3
Stddev	3.3	164.	3.1	2.43	2.5	2.51	4.1	40.0
%RSD	.16869	.34357	.16250	.52455	.5161	.50774	.08481	.82002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 15:59:11 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	957.70	1935.6	1942.7	5002.7	4762.4
Stddev	4.16	2.3	1.5	25.1	17.1
%RSD	.43422	.11981	.07733	.50162	.35803
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6044.6	4178.2	47484.	5793.5
Stddev	7.7	4.1	73.	20.4
%RSD	.12686	.09928	.15362	.35150

Sample Name: CCB Acquired: 11/19/2018 16:03:17 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.46911	-36.590	-.51749	9.0384	-.39282	-.10498	-1.8479	.0128
Stddev	.39790	20.109	1.0217	.7910	.10230	.15344	1.8719	.0735
%RSD	84.820	54.958	197.44	8.7519	26.043	146.16	101.30	575.2
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.01566	.11026	-.34200	9.4984	41.173	3.4114	10.235	-.31183
Stddev	.08750	.20234	.97018	.6079	12.807	.7655	14.944	.04085
%RSD	558.94	183.50	283.68	6.4001	31.107	22.439	146.01	13.100
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.7305	80.466	-.11227	1.6703	-.3648	-.25035	.49746	1.7686
Stddev	.0796	3.505	.27373	1.1672	2.685	.58802	.01197	.2062
%RSD	2.1338	4.3564	243.82	69.880	736.1	234.88	2.4072	11.659
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 16:03:17 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.91002	1.5585	-1.0669	-23.627	5.7456
Stddev	.38660	1.8490	.0635	3.030	3.2351
%RSD	42.483	118.64	5.9516	12.825	56.306
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6943.8	4408.6	50278.	5924.7
Stddev	3.6	4.8	38.	22.2
%RSD	.05211	.10873	.07561	.37413

Sample Name: lcs 240-355854/3-a Acquired: 11/19/2018 16:07:44 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	48.840	2000.7	2054.5	F 1384.3	1955.7	49.483	49392.
Stddev	.211	1.6	11.3	3.3	2.6	.095	72.
%RSD	.43186	.07816	.55213	.23609	.13176	.19155	.14649
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	None
Value				1000.0			
Range				20.500%			

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	49.95	487.50	193.99	244.68	1003.6	48196.	977.31
Stddev	.08	1.34	.29	.78	3.4	90.	2.10
%RSD	.1564	.27474	.14968	.31850	.34276	.18752	.21476
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	48057.	495.09	1026.6	61596.	491.49	480.53	510.6
Stddev	63.	.69	5.0	147.	2.13	1.88	2.2
%RSD	.13087	.14021	.48505	.23800	.43246	.39133	.4384
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: lcs 240-355854/3-a Acquired: 11/19/2018 16:07:44 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2085.6	1964.6	1009.5	1933.7	502.38	493.35	F 1437.4
Stddev	8.1	4.2	.9	7.4	4.52	1.05	24.8
%RSD	.38612	.21141	.08943	.38053	.89877	.21288	1.7218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1000.0
Range							20.500%

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	984.13
Stddev	5.42
%RSD	.55072
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6190.4	4202.6	48058.	5917.2
Stddev	7.9	2.1	40.	21.9
%RSD	.12799	.04892	.08360	.37072

Sample Name: 240-104218-a-1-b Acquired: 11/19/2018 16:11:44 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.54358	28.915	2.9734	12.888	629.45	.50492
Stddev	.68580	9.652	3.1219	.225	1.75	.08465
%RSD	126.16	33.382	104.99	1.7485	.27814	16.766
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 1771300.	-.0254	.58054	24.431	241.77	20.220
Stddev	5787.	.1703	.13050	.506	1.03	2.607
%RSD	.32670	670.3	22.478	2.0697	.42453	12.893
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	800000.					
Low Limit	-500000.					

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	W 457400.	291.62	68.993	17.193	26.435	F 1143500.
Stddev	1546.	7.76	10.511	.024	.154	25944.
%RSD	.33793	2.6596	15.234	.14010	.58256	2.2688
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit	450000.					500000.
Low Limit	-500000.					-500000.

Sample Name: 240-104218-a-1-b Acquired: 11/19/2018 16:11:44 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	10.132	1732.9	2.879	5.3804	1.2611	-2.8698
Stddev	.407	35.2	1.187	2.1438	.3650	.3360
%RSD	4.0189	2.0299	41.24	39.844	28.941	11.708
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	3.7491	-4.4235	5576.1	145.11	6479.9
Stddev	.9103	4.4455	84.3	31.79	27.3
%RSD	24.279	100.50	1.5117	21.907	.42155
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4695.4	3494.9	40124.	5438.2
Stddev	5.7	3.1	45.	35.1
%RSD	.12127	.08975	.11279	.64557
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	69.269%	80.451%	82.460%	95.934%
Range				

Sample Name: SD 240-104218-a-1b@5 Acquired: 11/19/2018 16:16:20 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.30266	27.797	3.4868	4.5390	123.89	.03266	390460.
Stddev	.76333	20.669	1.0362	.4817	.45	.08533	1243.
%RSD	252.21	74.359	29.718	10.612	.36666	261.30	.31823
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1657	.12939	5.9125	47.799	5.0031	90775.	57.891
Stddev	.2431	.06837	.2556	.262	1.7450	117.	1.341
%RSD	146.7	52.839	4.3222	.54842	34.878	.12932	2.3173
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	10.636	3.1123	4.5216	254340.	2.9162	366.99	-1.169
Stddev	4.894	.0679	.2942	1234.	.3566	9.37	.903
%RSD	46.011	2.1826	6.5057	.48523	12.229	2.5532	77.26
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: SD 240-104218-a-1b@5 Acquired: 11/19/2018 16:16:20 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.9216	-.32637	-.74195	1.4005	-.43075	1111.0	7.9490
Stddev	1.2080	.33040	.10504	.9453	4.7563	12.0	5.3700
%RSD	62.866	101.24	14.158	67.495	1104.2	1.0815	67.555
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1383.7
Stddev	7.5
%RSD	.54411
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5618.5	3965.0	45228.	5721.3
Stddev	4.9	2.5	36.	3.5
%RSD	.08741	.06274	.07851	.06112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	82.887%	91.273%	92.948%	100.93%
Range				

Sample Name: PDS 240-104218-a-1-b Acquired: 11/19/2018 16:20:59 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	46.529	2187.9	2334.0	1106.4	2694.0	48.801
Stddev	.716	15.5	22.5	8.3	6.7	.287
%RSD	1.5392	.70726	.96482	.74665	.24976	.58914
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 1775300.	57.31	529.58	217.12	505.58	1020.6
Stddev	10087.	.54	3.41	.92	1.46	5.6
%RSD	.56820	.9351	.64408	.42288	.28950	.55279
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	800000.					
Low Limit	-500000.					

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	W 485250.	1430.1	47423.	512.07	1052.8	F 1088300.
Stddev	2518.	3.9	316.	1.13	11.0	24823.
%RSD	.51895	.27451	.66558	.22142	1.0461	2.2809
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit	450000.					500000.
Low Limit	-500000.					-500000.

Sample Name: PDS 240-104218-a-1-b Acquired: 11/19/2018 16:20:59 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	536.28	2129.4	578.0	2381.2	2114.4	1042.1
Stddev	3.77	12.5	6.8	24.5	17.0	1.5
%RSD	.70367	.58907	1.178	1.0277	.80563	.14467
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1956.8	510.58	5950.5	1271.7	7232.5
Stddev	18.0	2.31	32.9	52.3	16.2
%RSD	.92109	.45192	.55219	4.1128	.22363
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4637.5	3478.0	40034.	5438.5
Stddev	2.1	2.0	134.	20.9
%RSD	.04602	.05704	.33493	.38418
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	68.414%	80.061%	82.275%	95.940%
Range				

Sample Name: 240-104218-a-1c ms@5 Acquired: 11/19/2018 16:25:15 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	W 198.49	376.36	1037.9	210.43	9608.5	9.2495	397170.
Stddev	.65	20.02	5.7	.56	4.3	.0649	1779.
%RSD	.32894	5.3193	.55268	.26510	.04451	.70202	.44794
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	100.00						
Low Limit	-500000.						

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	203.7	99.448	928.26	100.45	193.47	100120.	253.42
Stddev	1.6	.825	3.39	.55	2.55	71.	1.23
%RSD	.8010	.82955	.36465	.54491	1.3193	.07074	.48528
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9058.9	98.521	204.98	262080.	99.722	1283.4	103.2
Stddev	30.2	.160	1.56	1443.	.442	4.5	1.6
%RSD	.33376	.16279	.76189	.55039	.44325	.35066	1.587
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104218-a-1c ms@5 Acquired: 11/19/2018 16:25:15 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	210.16	394.97	197.37	377.40	94.154	1208.9	222.60
Stddev	2.60	1.08	.10	1.79	1.234	8.7	10.99
%RSD	1.2387	.27367	.05288	.47373	1.3101	.71652	4.9361
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1531.5
Stddev	3.0
%RSD	.19416
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5616.7	3971.9	45499.	5791.1
Stddev	6.3	1.5	146.	14.2
%RSD	.11268	.03870	.31986	.24472
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	82.861%	91.430%	93.505%	102.16%
Range				

Sample Name: 240-104218-a1d msd@5 Acquired: 11/19/2018 16:29:46 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	W 195.90	386.33	1027.0	208.12	9598.1	9.0284	397620.
Stddev	.33	45.20	8.5	1.88	60.2	.0915	4016.
%RSD	.16847	11.700	.82529	.90332	.62692	1.0140	1.0099
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	100.00						
Low Limit	-500000.						

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	201.6	99.033	916.20	94.085	193.08	100840.	252.25
Stddev	1.4	.875	1.06	.512	2.23	58.	1.12
%RSD	.6708	.88343	.11542	.54431	1.1534	.05713	.44576
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9048.2	98.145	200.65	265720.	99.428	1272.3	101.4
Stddev	6.0	.118	1.58	1246.	1.439	5.4	1.4
%RSD	.06638	.11976	.78961	.46876	1.4471	.42479	1.389
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104218-a1d msd@5 Acquired: 11/19/2018 16:29:46 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	204.70	390.59	195.55	374.06	95.295	1206.6	222.91
Stddev	1.13	3.95	.38	5.12	3.838	7.9	11.42
%RSD	.55009	1.0108	.19617	1.3685	4.0270	.65139	5.1246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1541.9
Stddev	4.1
%RSD	.26447
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5619.9	3981.7	45639.	5843.4
Stddev	6.8	9.4	81.	16.6
%RSD	.12046	.23587	.17642	.28386
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	82.908%	91.656%	93.795%	103.08%
Range				

Sample Name: 190-18062-a-2-b Acquired: 11/19/2018 16:34:16 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.02393	-16.845	7.0968	187.21	1.5875	-.17433
Stddev	.37230	39.464	.4513	2.20	.1836	.01880
%RSD	1555.6	234.28	6.3595	1.1767	11.568	10.786
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	877.22	.0860	-.64181	3725.5	6.9622	5.8823
Stddev	4.63	.0538	.23896	3.2	.4190	2.0751
%RSD	.52814	62.53	37.232	.08475	6.0190	35.278
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 568100.	54.238	-7.7144	57.194	124.78	F 961020.
Stddev	12627.	1.004	14.171	.048	2.35	27750.
%RSD	2.2227	1.8518	183.69	.08478	1.8823	2.8875
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit	500000.					500000.
Low Limit	-500000.					-500000.

Sample Name: 190-18062-a-2-b Acquired: 11/19/2018 16:34:16 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.67965	-1.0082	-2.534	.42119	.98243	-.18385
Stddev	.83199	.9221	.226	1.4724	.36246	.12926
%RSD	122.41	91.456	8.922	349.59	36.895	70.310
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-.15737	16.026	94.343	1245.6	28.349
Stddev	1.4748	2.242	1.424	7.1	1.095
%RSD	937.16	13.989	1.5098	.57025	3.8610
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5313.5	3853.5	42603.	5710.2
Stddev	44.7	30.9	116.	55.0
%RSD	.84091	.80250	.27201	.96400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	78.387%	88.705%	87.555%	100.73%
Range				

Sample Name: mb 240-355802/1-a Acquired: 11/19/2018 16:38:54 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.18897	-29.604	.08370	1.9719	-.35025	-.21889	40.722
Stddev	.09991	23.068	1.7313	.1373	.05350	.08947	.561
%RSD	52.872	77.922	2068.5	6.9639	15.275	40.876	1.3772
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.0194	-.02980	.23845	.64188	5.3522	958.75	4.8571
Stddev	.0726	.22755	.23432	.16769	1.9616	45.00	1.8120
%RSD	375.0	763.62	98.270	26.125	36.650	4.6937	37.307
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	11.834	-.43697	-.65995	F 1025.9	-.10885	.25747	-1.135
Stddev	11.279	.01839	.24192	49.1	.07090	.44605	1.359
%RSD	95.308	4.2086	36.658	4.7838	65.135	173.24	119.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				1000.0			
Low Limit				-1000.0			

Sample Name: mb 240-355802/1-a Acquired: 11/19/2018 16:38:54 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.62235	-.16087	-.87749	.83063	.90596	2.1153	-36.870
Stddev	1.8432	.22729	.14994	.95682	3.0124	.0408	7.959
%RSD	296.17	141.29	17.088	115.19	332.51	1.9286	21.586
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	6.6846
Stddev	2.3605
%RSD	35.313
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7137.9	4543.1	51752.	6191.4
Stddev	9.1	6.1	143.	16.2
%RSD	.12707	.13339	.27632	.26129

Sample Name: lcs 240-355802/2-a Acquired: 11/19/2018 16:43:19 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50.797	1980.6	2101.7	1056.6	1977.5	49.730	48504.	51.32
Stddev	.177	22.8	4.1	1.7	4.0	.103	72.	.19
%RSD	.34780	1.1531	.19684	.15686	.20244	.20686	.14813	.3774
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	497.80	194.12	248.08	1018.8	48941.	997.39	48498.	501.23
Stddev	1.44	.15	1.25	2.7	174.	4.65	159.	.51
%RSD	.28871	.07673	.50366	.26937	.35640	.46627	.32756	.10177
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1021.5	48396.	501.84	489.36	527.4	2138.6	2003.5	1014.2
Stddev	5.8	128.	1.25	1.49	1.1	4.9	8.8	1.2
%RSD	.56476	.26454	.24859	.30525	.2140	.23096	.43757	.11779
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: lcs 240-355802/2-a Acquired: 11/19/2018 16:43:19 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1992.1	503.27	503.32	1030.1	982.47
Stddev	13.4	3.10	1.82	8.4	8.93
%RSD	.67215	.61531	.36226	.81058	.90924
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6313.1	4302.7	49329.	6111.4
Stddev	7.0	2.1	27.	29.6
%RSD	.11158	.04879	.05424	.48398

Sample Name: 400-161945-i-5-a Acquired: 11/19/2018 16:47:18 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.09058	3966.9	41.886	94.021	581.16	.22797	184170.
Stddev	.34697	36.9	.647	1.583	2.52	.07525	337.
%RSD	383.04	.93139	1.5443	1.6832	.43439	33.009	.18305
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.3927	4.0549	6.4097	7.1983	19388.	2233.0	16.092
Stddev	.0801	.1132	.1440	.2851	47.	17.5	.300
%RSD	20.40	2.7913	2.2471	3.9601	.23989	.78524	1.8637
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	37400.	1952.0	7.9978	217940.	7.6525	5.7373	.5502
Stddev	658.	4.6	.1651	1605.	.3966	1.0559	2.217
%RSD	1.7605	.23617	2.0648	.73663	5.1823	18.404	402.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 400-161945-i-5-a Acquired: 11/19/2018 16:47:18 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.7317	1.4966	59.888	2.5993	10.787	12.224	14543.
Stddev	.5845	.5019	.340	.8495	2.263	.212	124.
%RSD	15.664	33.533	.56745	32.682	20.982	1.7353	.85284
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	2769.7
Stddev	50.7
%RSD	1.8290
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5947.7	4187.1	47817.	6156.2
Stddev	10.8	4.5	45.	49.2
%RSD	.18185	.10648	.09465	.79959
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	87.744%	96.383%	98.270%	108.60%
Range				

Sample Name: CCV-3914190 Acquired: 11/19/2018 16:51:49 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	947.20	23934.	490.56	4923.0	1903.6	1894.0	47079.	486.6
Stddev	3.44	52.	1.66	1.7	5.9	13.0	176.	.7
%RSD	.36279	.21863	.33854	.03393	.30872	.68412	.37300	.1492
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1902.5	1859.4	1879.4	23825.	46630.	4790.6	46969.	1896.3
Stddev	7.9	8.4	9.5	67.	254.	12.2	241.	4.6
%RSD	.41665	.45014	.50566	.28200	.54393	.25416	.51346	.24472
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1963.7	46592.	1900.5	459.56	495.8	493.58	4808.6	4817.1
Stddev	8.0	269.	7.0	1.02	3.1	2.70	21.5	11.5
%RSD	.40965	.57839	.36731	.22169	.6274	.54642	.44655	.23874
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 16:51:49 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	945.76	1912.6	1909.4	5009.7	4726.7
Stddev	1.92	4.3	8.5	46.0	15.1
%RSD	.20255	.22307	.44555	.91758	.31847
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6146.3	4242.4	48257.	5947.1
Stddev	8.6	1.9	57.	52.2
%RSD	.13967	.04577	.11895	.87852

Sample Name: CCB Acquired: 11/19/2018 16:55:57 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.38284	-20.343	.44852	8.2813	-.41581	-.03088	-.26683	-.0073
Stddev	.41221	22.713	1.2968	.7296	.12421	.06476	.46725	.1254
%RSD	107.67	111.65	289.12	8.8101	29.873	209.67	175.11	1715.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.05928	-.02064	-.03441	1.3762	220.89	4.2189	-3.6565	-.30948
Stddev	.25478	.16527	.87056	.0890	20.81	1.4489	24.993	.03611
%RSD	429.81	800.55	2530.0	6.4649	9.4187	34.342	683.52	11.669
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.8203	340.98	-.02659	.88120	.1264	-.36369	.39427	1.6263
Stddev	.2787	.64	.08998	1.2101	1.698	2.2105	.40599	.2132
%RSD	7.2954	.18628	338.39	137.33	1344.	607.80	102.97	13.107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 16:55:57 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.78590	.51205	-1.1650	-1.3199	5.5802
Stddev	.67375	2.9696	.0431	3.1173	5.6799
%RSD	85.730	579.94	3.6979	236.18	101.79
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7048.4	4469.8	51079.	6047.4
Stddev	14.6	3.7	35.	25.0
%RSD	.20686	.08289	.06874	.41396

Sample Name: SD 400-161945-i-5a@5 Acquired: 11/19/2018 17:00:25 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.45268	804.88	7.5378	22.574	117.79	-.06220	38021.	.1697
Stddev	.44714	55.97	.5631	.206	.46	.09622	71.	.1548
%RSD	98.777	6.9542	7.4697	.91066	.38879	154.70	.18549	91.22
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.76296	1.6852	.86594	4100.3	516.13	5.5587	7847.3	404.43
Stddev	.05823	.0445	.62956	26.4	24.78	1.5879	85.0	.74
%RSD	7.6319	2.6430	72.702	.64294	4.8010	28.565	1.0830	.18246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.64950	46165.	1.4860	1.2885	-1.319	-1.2301	.03893	12.406
Stddev	.21356	105.	.1038	.3737	.810	1.0208	.13120	.275
%RSD	32.881	.22753	6.9826	29.001	61.37	82.985	337.06	2.2196
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: SD 400-161945-i-5a@5 Acquired: 11/19/2018 17:00:25 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.54760	2.8571	1.7269	2971.9	583.34
Stddev	.32740	1.7474	.1016	35.7	3.46
%RSD	59.789	61.159	5.8856	1.2012	.59245
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6524.1	4351.7	49603.	6099.8
Stddev	10.1	6.9	54.	32.7
%RSD	.15489	.15813	.10939	.53646
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	96.248%	100.17%	101.94%	107.61%
Range				

Sample Name: PDS 400-161945-i-5-a Acquired: 11/19/2018 17:04:47 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	43.263	5986.3	2226.7	1205.4	2636.6	52.153	228180.
Stddev	.474	26.6	10.2	3.1	2.8	.160	477.
%RSD	1.0960	.44481	.45883	.25598	.10567	.30757	.20909
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	54.22	530.52	204.50	267.95	19880.	53769.	1082.7
Stddev	.32	2.33	.80	.74	34.	115.	2.0
%RSD	.5814	.43892	.39249	.27580	.17166	.21448	.18828
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	85845.	2402.6	1051.1	266150.	535.55	493.96	548.2
Stddev	227.	2.4	6.1	776.	1.96	3.17	5.9
%RSD	.26488	.10058	.58063	.29153	.36604	.64131	1.082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: PDS 400-161945-i-5-a Acquired: 11/19/2018 17:04:47 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2232.7	2100.8	1099.9	2024.0	523.99	541.03	15733.
Stddev	7.1	10.0	.7	14.5	3.57	1.76	219.
%RSD	.31583	.47716	.06596	.71793	.68173	.32619	1.3944
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	3672.1
Stddev	23.2
%RSD	.63172
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5710.7	4083.4	47107.	6116.0
Stddev	13.4	9.8	63.	44.3
%RSD	.23497	.24107	.13325	.72398
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	84.248%	93.997%	96.811%	107.89%
Range				

Sample Name: 400-161945-i-5-b ms Acquired: 11/19/2018 17:09:02 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	49.879	7030.2	2098.0	1128.1	2475.4	47.936	221920.
Stddev	.784	36.2	2.3	1.9	1.7	.098	1783.
%RSD	1.5719	.51519	.10998	.17029	.06947	.20496	.80321
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	49.94	491.73	189.15	254.53	19775.	50089.	995.31
Stddev	.31	1.01	.52	.15	36.	104.	1.80
%RSD	.6113	.20637	.27711	.05969	.18125	.20805	.18088
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	81704.	2351.4	977.22	259340.	496.40	456.43	511.0
Stddev	122.	1.9	4.93	2653.	1.66	1.15	.9
%RSD	.14876	.08210	.50419	1.0231	.33386	.25213	.1749
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 400-161945-i-5-b ms Acquired: 11/19/2018 17:09:02 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2072.7	1966.7	1030.7	1871.3	491.60	503.33	19549.
Stddev	5.1	6.8	1.5	10.7	1.07	1.93	33.
%RSD	.24595	.34331	.14621	.56946	.21789	.38403	.16666
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	3603.1
Stddev	3.8
%RSD	.10594
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5710.3	4082.0	47072.	6043.9
Stddev	4.2	4.7	98.	13.9
%RSD	.07330	.11393	.20917	.22933
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	84.241%	93.965%	96.738%	106.62%
Range				

Sample Name: 400-161945-i-5-c msd Acquired: 11/19/2018 17:13:18 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50.597	7269.7	2130.3	1143.9	2500.7	49.136	223580.
Stddev	.101	24.5	9.9	3.5	3.5	.293	939.
%RSD	.20059	.33698	.46455	.30262	.13978	.59580	.41984
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50.50	498.21	193.07	253.40	19821.	50770.	1007.1
Stddev	.40	3.34	.24	.96	60.	55.	1.5
%RSD	.7850	.66970	.12629	.38048	.30343	.10756	.14696
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	82245.	2362.7	989.93	257820.	503.30	460.50	518.3
Stddev	110.	.6	7.03	3152.	2.51	4.62	2.0
%RSD	.13396	.02524	.71063	1.2226	.49928	1.0032	.3840
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 400-161945-i-5-c msd Acquired: 11/19/2018 17:13:18 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2105.6	1992.1	1047.2	1894.2	499.84	509.73	20174.
Stddev	9.5	12.0	.2	17.2	2.53	3.21	25.
%RSD	.45098	.60455	.01561	.91020	.50621	.62996	.12418
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	3612.3
Stddev	15.2
%RSD	.42062
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5717.4	4091.1	47303.	6098.3
Stddev	14.6	11.2	120.	9.4
%RSD	.25540	.27442	.25393	.15478
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	84.347%	94.173%	97.214%	107.58%
Range				

Sample Name: 400-161945-i-2-a Acquired: 11/19/2018 17:17:37 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.32693	157.48	7.0759	147.95	150.78	-.03693	123450.
Stddev	.12407	25.76	.1967	.86	.28	.10425	164.
%RSD	37.950	16.360	2.7803	.57822	.18481	282.32	.13310
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1094	.44944	1.0609	1.0477	2202.4	1872.3	21.881
Stddev	.0635	.09040	.2972	.1978	36.1	8.9	.663
%RSD	58.06	20.115	28.016	18.880	1.6412	.47415	3.0289
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	34959.	219.85	8.2943	49004.	2.0840	14.951	1.186
Stddev	488.	.40	.2256	69.	.0840	.641	1.233
%RSD	1.3968	.18104	2.7202	.14074	4.0288	4.2889	104.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 400-161945-i-2-a Acquired: 11/19/2018 17:17:37 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.9043	.40234	2.2197	2.3760	-.25115	4.2716	6969.8
Stddev	2.1233	.76197	.0983	.3519	3.0970	.0410	118.0
%RSD	111.50	189.39	4.4292	14.809	1233.1	.95882	1.6925
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	2496.1
Stddev	40.1
%RSD	1.6058
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6302.3	4270.8	49125.	6142.6
Stddev	14.9	5.3	33.	9.7
%RSD	.23562	.12385	.06780	.15833
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	92.975%	98.311%	100.96%	108.36%
Range				

Sample Name: 400-161945-i-3-a Acquired: 11/19/2018 17:21:59 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.54019	1314.9	11.579	56.570	297.83	.13396	99037.	.2047
Stddev	.05279	16.8	2.052	.530	.60	.10637	148.	.1063
%RSD	9.7731	1.2801	17.725	.93638	.20250	79.405	.14894	51.93
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.2913	2.7390	25.498	9857.8	1999.8	11.372	27976.	2509.6
Stddev	.1450	.3038	.431	9.4	26.3	1.149	90.	4.9
%RSD	11.229	11.092	1.6892	.09501	1.3159	10.101	.32339	.19403
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.78201	68386.	2.9339	1.4732	-.7402	-.83631	1.0705	21.929
Stddev	.18532	120.	.1885	1.5567	.8729	1.5763	.1369	.120
%RSD	23.698	.17534	6.4239	105.67	117.9	188.49	12.784	.54779
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 400-161945-i-3-a Acquired: 11/19/2018 17:21:59 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.79674	-.97392	6.2678	10618.	1638.1
Stddev	1.3611	2.4620	.0302	52.	10.1
%RSD	170.84	252.79	.48144	.49409	.61536
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6286.3	4299.0	49301.	6214.6
Stddev	7.4	9.5	163.	12.9
%RSD	.11835	.22122	.33080	.20697
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	92.739%	98.960%	101.32%	109.63%
Range				

Sample Name: 400-161945-i-4-a Acquired: 11/19/2018 17:26:29 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.24086	1595.1	8.8496	35.378	293.41	-.04961	161070.
Stddev	.10699	22.9	2.5378	.332	.47	.08121	24.
%RSD	44.418	1.4335	28.677	.93935	.15920	163.68	.01468
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0909	.30343	1.8546	1.7402	4866.2	1557.5	14.552
Stddev	.0330	.07470	.0954	.5754	74.5	6.6	.669
%RSD	36.27	24.617	5.1440	33.063	1.5310	.42448	4.5947
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	24131.	579.12	-.23776	82112.	2.0916	1.4475	-.2343
Stddev	387.	3.01	.04157	63.	.1463	.6201	1.023
%RSD	1.6028	.51969	17.485	.07708	6.9927	42.843	436.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 400-161945-i-4-a Acquired: 11/19/2018 17:26:29 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.3327	.58354	16.852	2.0557	1.6422	12.375	11062.
Stddev	2.6997	.15211	.092	.9432	2.6528	.034	152.
%RSD	202.58	26.066	.54308	45.883	161.54	.27310	1.3710
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	2682.3
Stddev	34.5
%RSD	1.2858
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6212.3	4232.5	48707.	6125.6
Stddev	12.2	9.9	167.	8.3
%RSD	.19695	.23317	.34190	.13489
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	91.647%	97.429%	100.10%	108.06%
Range				

Sample Name: 400-161945-i-6-a Acquired: 11/19/2018 17:30:51 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.0239	3484.8	22.891	719.55	728.38	.21706	108270.
Stddev	.4774	27.0	.746	5.30	.86	.06649	54.
%RSD	46.625	.77359	3.2596	.73606	.11790	30.630	.05030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.8041	3.2680	3.7847	8.0075	35600.	2010.9	12.226
Stddev	.0841	.0632	.0773	.4387	37.	11.1	.551
%RSD	10.46	1.9328	2.0413	5.4785	.10453	.55359	4.5096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	28142.	7176.6	1.0993	64608.	4.7808	5.3806	-2.318
Stddev	72.	16.4	.1882	91.	.1870	.0893	.358
%RSD	.25692	.22837	17.124	.14074	3.9122	1.6595	15.44
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 400-161945-i-6-a Acquired: 11/19/2018 17:30:51 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2.7482	-.05242	49.961	1.5564	6.4433	10.445	17174.
Stddev	2.7979	.57573	.216	1.2355	1.6250	.044	116.
%RSD	101.81	1098.4	.43229	79.383	25.220	.42350	.67602
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	5573.6
Stddev	2.5
%RSD	.04549
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6220.6	4290.3	49180.	6257.0
Stddev	23.4	14.6	185.	17.8
%RSD	.37571	.34082	.37566	.28381
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	91.770%	98.759%	101.07%	110.38%
Range				

Sample Name: 400-161945-i-7-a Acquired: 11/19/2018 17:35:20 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.12782	10872.	14.218	1333.7	287.21	.41638	161560.
Stddev	.09885	16.	.784	1.5	.58	.06163	309.
%RSD	77.336	.14359	5.5176	.10988	.20162	14.801	.19116
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.065	2.6774	10.713	15.386	11981.	3303.4	21.457
Stddev	.030	.2225	.040	.689	16.	7.5	.982
%RSD	2.783	8.3100	.37236	4.4758	.13410	.22694	4.5782
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	46778.	822.90	4.6307	78052.	8.5315	5.2959	-1.108
Stddev	18.	.72	.1291	77.	.1609	1.3679	1.253
%RSD	.03818	.08805	2.7878	.09877	1.8859	25.829	113.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 400-161945-i-7-a Acquired: 11/19/2018 17:35:20 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.79637	.59335	113.23	.96891	12.606	24.057	28086.
Stddev	1.6091	.11501	.23	.79503	4.110	.132	113.
%RSD	202.06	19.382	.20245	82.054	32.605	.54749	.40213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1185.6
Stddev	5.5
%RSD	.45972
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5962.5	4169.0	47435.	5945.0
Stddev	6.0	2.2	68.	12.8
%RSD	.10077	.05302	.14336	.21451
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	87.962%	95.968%	97.485%	104.87%
Range				

Sample Name: 400-161945-i-8-a Acquired: 11/19/2018 17:39:39 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.31855	548.33	27.530	64.357	560.15	-.12493	153460.
Stddev	.57062	15.09	.953	.518	1.33	.09052	159.
%RSD	179.13	2.7518	3.4630	.80539	.23769	72.453	.10384
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1861	2.2072	1.8731	21.425	19299.	935.61	11.910
Stddev	.0706	.1243	.2748	.804	47.	36.69	.764
%RSD	37.95	5.6310	14.673	3.7547	.24612	3.9211	6.4155
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	27775.	1583.8	.04290	139410.	5.3957	.96266	-2.106
Stddev	300.	2.1	.24363	73.	.0606	.29923	1.712
%RSD	1.0817	.13281	567.97	.05262	1.1223	31.083	81.30
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 400-161945-i-8-a Acquired: 11/19/2018 17:39:39 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.02436	.53436	5.5309	1.4196	1.1616	7.6940	10980.
Stddev	.59365	.84626	.1062	.4839	1.8544	.1004	79.
%RSD	2437.1	158.37	1.9197	34.087	159.64	1.3048	.72277
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	2845.9
Stddev	33.4
%RSD	1.1753
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5933.0	4109.8	46821.	5874.8
Stddev	7.8	2.4	65.	27.7
%RSD	.13092	.05920	.13888	.47114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	87.527%	94.605%	96.222%	103.64%
Range				

Sample Name: CCV-3914190 Acquired: 11/19/2018 17:44:03 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	966.05	24274.	493.72	4970.3	1933.6	1929.1	47966.	492.1
Stddev	3.76	88.	5.43	3.8	3.6	5.2	78.	.7
%RSD	.38881	.36322	1.1003	.07714	.18763	.27004	.16284	.1498
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1927.9	1894.5	1912.8	24231.	47212.	4843.0	47768.	1930.7
Stddev	7.3	9.5	8.6	40.	163.	16.2	93.	3.6
%RSD	.38089	.50406	.45030	.16410	.34482	.33473	.19530	.18518
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1979.8	47559.	1926.4	464.11	499.9	495.72	4879.8	4909.8
Stddev	8.5	77.	7.4	1.69	3.6	8.00	15.0	19.1
%RSD	.43102	.16116	.38286	.36446	.7122	1.6129	.30825	.38905
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 17:44:03 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	958.93	1940.7	1939.6	5154.2	4791.9
Stddev	7.87	8.9	6.9	50.9	12.4
%RSD	.82027	.45644	.35445	.98669	.25799
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6031.0	4171.5	47230.	5766.7
Stddev	14.7	8.0	91.	13.0
%RSD	.24392	.19219	.19258	.22544

Sample Name: CCB Acquired: 11/19/2018 17:48:10 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.40569	-35.506	1.2021	9.4039	-.35225	.03024	-5.3644	-.0639
Stddev	.47747	9.394	.4375	1.0768	.20444	.02395	1.5647	.1144
%RSD	117.70	26.459	36.392	11.450	58.040	79.203	29.168	178.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.03224	-.01450	-.20619	1.0478	68.137	3.6765	9.6315	-.28963
Stddev	.06240	.30344	.13715	1.6622	25.543	.5325	23.064	.03855
%RSD	193.54	2092.9	66.518	158.64	37.488	14.483	239.46	13.308
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.8918	192.34	.12490	.70138	-2.748	-.08513	.24141	1.6978
Stddev	.1901	4.80	.20876	.47978	.441	1.8772	.33025	.1755
%RSD	4.8845	2.4931	167.15	68.405	16.06	2205.1	136.80	10.339
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 17:48:10 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.0473	.08702	-1.2306	-3.8687	6.1625
Stddev	.9802	.76282	.1128	4.3657	1.9411
%RSD	93.596	876.61	9.1670	112.85	31.499
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6958.6	4411.8	49984.	5889.6
Stddev	2.4	2.6	47.	15.1
%RSD	.03469	.05989	.09391	.25584

Sample Name: 400-161945-i-9-a Acquired: 11/19/2018 17:52:37 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.03466	8361.9	10.633	96.920	315.56	.39569	101400.
Stddev	.44954	19.0	1.515	.543	.27	.06773	41.
%RSD	1297.1	.22696	14.254	.56043	.08430	17.117	.04036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.5925	1.0408	7.8412	9.2531	9169.3	2617.2	18.012
Stddev	.0250	.2042	.4891	1.2204	4.1	26.0	1.834
%RSD	4.213	19.619	6.2371	13.189	.04479	.99204	10.184
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	8431.9	188.67	.40031	100220.	4.5210	5.3441	-1.117
Stddev	83.6	.20	.06266	141.	.0800	.9403	2.253
%RSD	.99186	.10623	15.652	.14113	1.7692	17.594	201.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 400-161945-i-9-a Acquired: 11/19/2018 17:52:37 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.5299	.50483	95.090	1.7565	14.445	17.309	18919.
Stddev	.6414	.10488	.104	.3645	4.696	.086	3.
%RSD	41.926	20.775	.10984	20.748	32.513	.49782	.01397
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	394.16
Stddev	2.99
%RSD	.75913
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6185.6	4250.1	48087.	5967.8
Stddev	9.9	6.8	37.	16.2
%RSD	.15998	.15966	.07669	.27122
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	91.253%	97.836%	98.826%	105.28%
Range				

Sample Name: 240-104453-a-1-a Acquired: 11/19/2018 17:56:59 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.34875	-44.109	.11539	4.5587	-.77653	-.05409	11.269	-.0204
Stddev	.25323	23.045	.37352	.2340	.02720	.04357	1.963	.0363
%RSD	72.611	52.246	323.71	5.1340	3.5022	80.550	17.417	177.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.10205	-.10121	-.77786	8.3837	56.909	2.6086	.91718	.78936
Stddev	.26609	.13549	.28740	3.2524	16.575	.3109	18.907	.03357
%RSD	260.75	133.88	36.947	38.795	29.125	11.917	2061.5	4.2527
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.97905	171.01	-.13795	.00701	-2.693	-1.5771	-.50317	-.42981
Stddev	.05281	8.55	.55336	.71117	1.049	.7256	.51311	.09375
%RSD	5.3940	5.0019	401.13	10138.	38.95	46.006	101.98	21.812
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-104453-a-1-a Acquired: 11/19/2018 17:56:59 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.72701	3.0866	.49159	-28.037	5.0753
Stddev	.30036	5.0113	.07996	5.671	7.0910
%RSD	41.314	162.36	16.265	20.227	139.72
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6973.6	4448.1	50589.	6066.8
Stddev	7.4	6.4	21.	23.1
%RSD	.10601	.14500	.04150	.38044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	102.88%	102.39%	103.97%	107.02%
Range				

Sample Name: 240-104407-q-1-a Acquired: 11/19/2018 18:01:27 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.28694	694.28	1.0067	21.221	38.563	-.09898	22070.	.0863
Stddev	.27663	13.78	.6484	.425	.144	.08826	41.	.0488
%RSD	96.407	1.9851	64.414	2.0045	.37390	89.169	.18725	56.51
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.49822	1.0496	1.1193	702.57	8184.5	5.4510	6177.6	58.250
Stddev	.10336	.1061	.6480	4.80	16.9	.6991	25.9	.195
%RSD	20.746	10.109	57.898	.68344	.20696	12.825	.41858	.33502
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.77073	2538.3	.97030	1.3349	-.6748	-1.3438	-.20958	8.4820
Stddev	.00948	17.0	.20630	.0917	.7971	.5103	.10886	.1297
%RSD	1.2298	.66919	21.262	6.8661	118.1	37.976	51.944	1.5289
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-104407-q-1-a Acquired: 11/19/2018 18:01:27 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.78004	1.6048	1.2768	2507.9	94.105
Stddev	1.3542	1.7630	.0492	40.8	3.035
%RSD	173.61	109.86	3.8559	1.6273	3.2251
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6635.0	4320.5	50015.	6003.5
Stddev	50.9	33.1	121.	26.1
%RSD	.76735	.76500	.24210	.43481
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	97.883%	99.455%	102.79%	105.91%
Range				

Sample Name: 240-104407-r-1-a Acquired: 11/19/2018 18:05:50 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.02766	498.08	1.9897	20.572	37.540	-.14595	22514.	.0213
Stddev	.47909	34.73	.3574	.499	.224	.07988	61.	.0508
%RSD	1732.2	6.9731	17.962	2.4265	.59575	54.730	.26980	238.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.00762	1.0636	8.2568	490.24	8286.3	3.5119	6270.7	33.990
Stddev	.13298	.0333	.1010	2.37	16.4	1.0065	52.4	.087
%RSD	1745.9	3.1347	1.2228	.48345	.19765	28.658	.83554	.25725
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.85068	2556.6	1.4785	1.5916	-.1734	-.65428	-.03060	6.3174
Stddev	.19540	17.6	.2969	.7233	1.019	.64033	.33840	.0453
%RSD	22.969	.68927	20.079	45.443	588.0	97.868	1105.8	.71768
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-104407-r-1-a Acquired: 11/19/2018 18:05:50 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.58641	2.9460	4.9849	2321.0	99.334
Stddev	.19499	3.1860	.0696	13.0	1.696
%RSD	33.251	108.15	1.3970	.55916	1.7071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6616.0	4307.6	48747.	5860.8
Stddev	5.2	7.5	94.	9.1
%RSD	.07804	.17352	.19205	.15588
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	97.603%	99.157%	100.18%	103.39%
Range				

Sample Name: 240-104409-q-1-a Acquired: 11/19/2018 18:10:14 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.32399	12.387	1.9557	176.35	154.13	-.13126	55775.	-.0320
Stddev	.26236	11.279	.6573	.19	.47	.07399	6.	.0239
%RSD	80.977	91.057	33.611	.10974	.30501	56.370	.01019	74.93
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.05659	.62725	34.976	25.082	1360.7	16.183	20864.	20.806
Stddev	.04914	.26882	.411	1.103	27.6	.894	135.	.093
%RSD	86.832	42.857	1.1740	4.3956	2.0298	5.5264	.64696	.44721
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.2276	33827.	.62275	1.8532	-1.128	-.93941	-.22780	-.75962
Stddev	.1247	61.	.91695	1.0009	1.464	.76168	.26875	.13772
%RSD	10.156	.18010	147.24	54.009	129.7	81.081	117.98	18.130
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-104409-q-1-a Acquired: 11/19/2018 18:10:14 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.94525	-1.1329	20.181	8588.2	3398.5
Stddev	1.1184	.0938	.009	107.0	35.2
%RSD	118.32	8.2813	.04412	1.2456	1.0368
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6317.7	4215.9	47801.	5805.3
Stddev	8.7	3.0	80.	10.5
%RSD	.13814	.07114	.16734	.18108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	93.203%	97.048%	98.236%	102.41%
Range				

Sample Name: 240-104409-r-1-a Acquired: 11/19/2018 18:14:36 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.15339	-24.917	2.5005	175.80	153.16	-.11007	55427.	.0286
Stddev	.42506	29.072	1.5405	.87	.65	.13503	53.	.0459
%RSD	277.11	116.67	61.607	.49265	.42489	122.68	.09495	160.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.08841	.62930	15.213	12.459	1327.9	17.237	20938.	20.828
Stddev	.14128	.20631	.649	1.667	13.2	1.111	114.	.028
%RSD	159.81	32.784	4.2662	13.381	.99326	6.4439	.54279	.13399
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.2877	33720.	.37824	-.22749	-2.295	.15355	-.22203	-.90268
Stddev	.1369	40.	.44659	1.1273	1.080	2.5019	.21806	.25088
%RSD	10.635	.11891	118.07	495.56	47.05	1629.4	98.215	27.793
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-104409-r-1-a Acquired: 11/19/2018 18:14:36 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.6989	1.9665	16.301	8557.9	3414.9
Stddev	.2467	2.3617	.007	48.3	13.9
%RSD	14.522	120.10	.04271	.56426	.40734
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6310.9	4205.7	47805.	5821.5
Stddev	12.1	5.2	104.	3.7
%RSD	.19178	.12425	.21684	.06351
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	93.102%	96.812%	98.245%	102.70%
Range				

Sample Name: 240-104413-c-1-a Acquired: 11/19/2018 18:18:57 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.50357	5056.5	1.3378	118.34	36.101	-.13089
Stddev	.38020	27.4	.1563	.48	.282	.08943
%RSD	75.501	.54211	11.684	.40455	.78039	68.324
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	26407.	.0865	1.3567	4.0407	122.13	61.061
Stddev	204.	.0616	.2246	.2189	.96	.558
%RSD	.77255	71.22	16.555	5.4179	.78354	.91316
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5003.5	31.266	15993.	26.814	1.3248	F 716490.
Stddev	53.8	1.433	255.	.249	.1257	8626.
%RSD	1.0755	4.5827	1.5913	.92940	9.4845	1.2039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104413-c-1-a Acquired: 11/19/2018 18:18:57 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	38.432	4.6475	-4.279	-.57427	1238.8	.89985
Stddev	.274	.7136	1.648	1.3693	13.5	.20980
%RSD	.71348	15.354	38.52	238.44	1.0934	23.315
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.35184	.41422	1339.7	2953.1	477.48
Stddev	.54550	1.7984	14.6	49.4	8.76
%RSD	155.04	434.16	1.0888	1.6718	1.8351
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5608.0	4021.1	44839.	5728.3
Stddev	21.2	14.2	92.	59.0
%RSD	.37875	.35254	.20413	1.0306
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	82.733%	92.563%	92.151%	101.05%
Range				

Sample Name: 240-104419-e-1-a Acquired: 11/19/2018 18:23:25 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.20423	113.84	446.25	7365.0	88.866	.40390
Stddev	.62454	14.92	7.06	72.6	.792	.11402
%RSD	305.80	13.104	1.5821	.98625	.89077	28.230
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 1274900.	-.0839	.51874	1.6754	5.5053	313.81
Stddev	16616.	.1485	.20265	.1132	1.4238	4.32
%RSD	1.3034	177.0	39.065	6.7586	25.863	1.3764
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	800000.					
Low Limit	-500000.					

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 603290.	4128.5	6354.8	216.78	11.931	F 952820.
Stddev	4153.	22.1	69.6	.41	.284	16509.
%RSD	.68847	.53514	1.0953	.18757	2.3829	1.7327
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit	500000.					500000.
Low Limit	-500000.					-500000.

Sample Name: 240-104419-e-1-a Acquired: 11/19/2018 18:23:25 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	8.8146	.57311	11.03	8.8253	.14304	-2.7489
Stddev	.1386	1.8760	1.61	2.6788	.30520	.1683
%RSD	1.5722	327.34	14.63	30.353	213.36	6.1212
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	2.7380	-2.1931	1.0865	4089.6	7479.5
Stddev	.6601	.5434	.1298	26.1	30.2
%RSD	24.108	24.777	11.942	.63842	.40339
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4803.6	3539.0	39984.	5427.1
Stddev	31.4	21.1	200.	23.2
%RSD	.65387	.59727	.49938	.42668
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	70.866%	81.465%	82.171%	95.738%
Range				

Sample Name: 240-104419-e-2-a Acquired: 11/19/2018 18:28:12 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.45904	12.559	102.27	7482.5	90.070	.20519
Stddev	.69059	3.775	1.39	110.1	.715	.14230
%RSD	150.44	30.060	1.3548	1.4712	.79437	69.349
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 1289500.	-.0453	.54337	3.3226	4.4009	3501.2
Stddev	17614.	.1815	.10962	.3574	.8500	25.6
%RSD	1.3659	400.4	20.174	10.755	19.315	.73183
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	800000.					
Low Limit	-500000.					

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 585190.	4197.2	6315.5	164.19	2.3830	F 945470.
Stddev	8774.	35.8	84.1	.38	.3166	16456.
%RSD	1.4993	.85318	1.3312	.22883	13.287	1.7405
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit	500000.					500000.
Low Limit	-500000.					-500000.

Sample Name: 240-104419-e-2-a Acquired: 11/19/2018 18:28:12 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	10.367	-.23633	2.646	2.5701	-.04409	-3.2160
Stddev	.586	.51038	2.515	1.8576	.55225	.0845
%RSD	5.6553	215.96	95.04	72.280	1252.5	2.6272
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.8901	-5.3140	-.17076	3551.6	7498.1
Stddev	.9311	3.5273	.14906	43.4	65.1
%RSD	49.261	66.378	87.293	1.2221	.86781
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4809.6	3536.0	40693.	5605.7
Stddev	5.0	10.4	203.	66.8
%RSD	.10412	.29277	.49781	1.1915
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	70.954%	81.397%	83.630%	98.889%
Range				

Sample Name: 240-104431-a-1-a Acquired: 11/19/2018 18:32:57 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.52138	46127.	40.296	94.165	3.6936	11.222	196880.
Stddev	.27062	32.	.564	1.422	.0643	.275	1075.
%RSD	51.904	.06952	1.3996	1.5100	1.7403	2.4473	.54617
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2.870	351.91	25.692	274.47	159450.	4452.9	210.69
Stddev	.049	3.12	.392	.42	422.	59.0	2.35
%RSD	1.721	.88674	1.5274	.15451	.26481	1.3242	1.1134
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	45585.	2126.0	-.62858	5695.5	561.02	3.5171	-2.189
Stddev	48.	9.0	.23242	41.6	4.12	.3600	2.817
%RSD	.10473	.42279	36.975	.72955	.73380	10.237	128.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104431-a-1-a Acquired: 11/19/2018 18:32:57 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.5413	1.1986	5.3380	2.6571	12.379	562.99	24332.
Stddev	1.8125	.6938	.0379	.5851	1.658	2.91	889.
%RSD	51.181	57.888	.71019	22.020	13.390	.51720	3.6522
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	592.48
Stddev	6.43
%RSD	1.0849
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6095.0	5019.3	57685.	7133.8
Stddev	7.6	15.2	176.	15.2
%RSD	.12532	.30220	.30491	.21330
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	89.916%	115.54%	118.55%	125.84%
Range				

Sample Name: CCV-3914190 Acquired: 11/19/2018 18:37:25 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	953.55	24211.	494.65	4978.1	1924.0	1919.6	47771.	491.0
Stddev	2.14	47.	5.33	13.1	4.0	2.2	107.	1.0
%RSD	.22406	.19247	1.0770	.26328	.20797	.11486	.22395	.2062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1927.0	1884.3	1894.9	24217.	47215.	4842.0	47907.	1918.9
Stddev	7.2	2.6	6.8	39.	71.	9.8	148.	5.0
%RSD	.37179	.14008	.35691	.16044	.15046	.20233	.30990	.26258
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1981.0	47117.	1926.8	466.91	500.1	496.02	4877.4	4889.9
Stddev	10.3	33.	6.5	5.66	3.3	3.88	21.3	46.6
%RSD	.52082	.06987	.33813	1.2121	.6622	.78265	.43658	.95292
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 18:37:25 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	958.08	1949.2	1943.4	5157.7	4800.3
Stddev	5.37	7.9	7.5	66.1	6.3
%RSD	.56017	.40468	.38619	1.2808	.13118
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6026.9	4164.5	47352.	5759.5
Stddev	5.5	3.1	78.	11.1
%RSD	.09103	.07339	.16535	.19285

Sample Name: CCB Acquired: 11/19/2018 18:41:34 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.32506	-9.1834	-.08722	15.998	-.49031	-.00985	18.482	.0354
Stddev	.25636	17.072	.69863	.970	.18236	.06540	1.604	.0887
%RSD	78.865	185.90	801.00	6.0615	37.193	664.07	8.6778	250.5
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.06529	.16740	-.26592	5.3707	319.80	3.7626	2.0272	-.37362
Stddev	.07486	.14153	.28645	2.5606	27.57	1.6808	6.1948	.04839
%RSD	114.66	84.549	107.72	47.677	8.6212	44.672	305.58	12.951
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.4451	393.74	-.16751	.50241	-1.090	-1.5270	.05455	1.9171
Stddev	.2988	12.12	.45754	1.0382	.013	.3078	.12682	.3798
%RSD	8.6727	3.0771	273.14	206.65	1.207	20.155	232.47	19.811
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 18:41:34 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.6454	-.66159	-1.3289	14.131	2.0116
Stddev	.4316	1.8317	.0852	8.802	1.3992
%RSD	26.233	276.87	6.4135	62.291	69.558
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6872.9	4373.1	49593.	5823.8
Stddev	9.6	9.4	115.	6.3
%RSD	.14005	.21429	.23134	.10831

Sample Name: CCVL-3907292 Acquired: 11/19/2018 18:46:03 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.2804	165.57	14.726	106.41	188.44	4.8583	4806.6	4.834
Stddev	.2436	5.14	1.964	.17	.44	.1140	10.4	.088
%RSD	2.6253	3.1058	13.335	.15636	.23104	2.3461	.21548	1.827
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.0656	9.8668	24.252	204.20	4764.9	50.963	4924.6	14.352
Stddev	.0504	.1724	.527	4.14	18.2	1.619	33.9	.092
%RSD	.55589	1.7478	2.1718	2.0252	.38282	3.1760	.68755	.64265
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	38.601	4929.9	36.556	10.900	16.80	19.426	91.726	48.763
Stddev	.212	26.8	.468	1.166	1.19	1.483	.457	.312
%RSD	.55016	.54322	1.2795	10.696	7.066	7.6342	.49837	.64050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCVL-3907292 Acquired: 11/19/2018 18:46:03 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	19.707	44.574	44.737	491.36	50.209
Stddev	.259	2.533	.193	6.38	1.145
%RSD	1.3140	5.6821	.43067	1.2993	2.2811
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6810.6	4390.0	49350.	5810.1
Stddev	8.6	4.6	17.	12.1
%RSD	.12562	.10553	.03428	.20804

Sample Name: 240-104433-a-1-a Acquired: 11/19/2018 18:50:26 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.37072	8.4085	.93286	247.04	67.896	-.05564	142290.
Stddev	.14578	7.1203	.91871	1.51	.134	.02289	226.
%RSD	39.323	84.680	98.483	.61052	.19701	41.142	.15906
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0614	.66731	1.1096	.78334	199.35	6151.3	18.536
Stddev	.0586	.19188	.1677	.82034	3.06	39.2	.358
%RSD	95.35	28.755	15.113	104.72	1.5342	.63703	1.9288
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	41314.	323.95	1.4142	169510.	2.8605	-.03804	-1.314
Stddev	277.	.86	.1263	1649.	.2630	.38284	1.424
%RSD	.67032	.26538	8.9317	.97269	9.1923	1006.3	108.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104433-a-1-a Acquired: 11/19/2018 18:50:26 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.3979	.05504	-.40648	1.0183	-.03269	37.325	6264.3
Stddev	2.4483	.28654	.25208	1.0818	2.5789	.239	106.9
%RSD	175.15	520.65	62.014	106.24	7890.0	.64091	1.7065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	700.63
Stddev	4.63
%RSD	.66038
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5995.1	4117.1	46573.	5745.9
Stddev	17.8	8.8	52.	9.7
%RSD	.29652	.21368	.11230	.16964
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	88.444%	94.772%	95.713%	101.36%
Range				

Sample Name: 240-104446-b-1-a Acquired: 11/19/2018 18:54:55 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.15629	-27.526	2.5626	2361.6	53.027	-.12794	118590.
Stddev	.50856	15.985	1.4162	10.9	.465	.07421	179.
%RSD	325.40	58.073	55.264	.46193	.87658	58.002	.15064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1390	.31598	1212.1	.41462	448.00	7321.6	9.4152
Stddev	.0656	.12413	4.1	.54521	3.55	9.7	.2785
%RSD	47.19	39.282	.33773	131.50	.79170	.13313	2.9583
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	15261.	399.02	3.2819	133320.	773.61	.40159	.2450
Stddev	116.	.28	.1514	88.	5.81	1.2776	.9891
%RSD	.75952	.07000	4.6136	.06614	.75113	318.14	403.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104446-b-1-a Acquired: 11/19/2018 18:54:55 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.3061	-.10773	-.58023	1.4088	-.41864	.86633	7370.2
Stddev	2.7016	.84955	.12507	1.6026	1.9191	.12578	73.2
%RSD	206.85	788.58	21.556	113.76	458.41	14.519	.99293
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	373.75
Stddev	9.26
%RSD	2.4765
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6145.3	4180.2	47264.	5920.4
Stddev	11.1	7.0	115.	23.7
%RSD	.18132	.16749	.24313	.40002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	90.660%	96.226%	97.134%	104.44%
Range				

Sample Name: 240-104408-r-1-a Acquired: 11/19/2018 18:59:15 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.16019	4.4480	1.2814	58.824	48.617	-.10435	43588.
Stddev	.09688	30.798	2.8984	.313	.608	.12107	49.
%RSD	60.479	692.41	226.18	.53219	1.2507	116.02	.11231
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0124	-.01878	.65949	21.960	44.536	988.17	15.777
Stddev	.0421	.20723	.31300	.757	1.706	1.96	.791
%RSD	339.2	1103.2	47.460	3.4459	3.8294	.19850	5.0108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9192.0	14.372	-.80682	116780.	3.6756	.32167	-3.248
Stddev	132.1	.040	.15218	166.	.4446	1.0172	1.160
%RSD	1.4367	.27809	18.862	.14192	12.096	316.22	35.72
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104408-r-1-a Acquired: 11/19/2018 18:59:15 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-4.2230	-.37445	-.49318	.89601	-1.0640	86.061	6182.3
Stddev	.5845	.38366	.12510	1.0909	1.3813	.327	82.4
%RSD	13.841	102.46	25.367	121.75	129.82	.37976	1.3325
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	300.20
Stddev	1.71
%RSD	.56829
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6329.2	4270.7	48256.	5965.7
Stddev	9.3	8.3	63.	8.8
%RSD	.14685	.19550	.12976	.14752
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	93.372%	98.309%	99.172%	105.24%
Range				

Sample Name: mb 240-355797/1-a Acquired: 11/19/2018 19:03:38 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.04688	-14.658	1.1991	9.4902	-.53338	-.09894	33.416	-.0279
Stddev	.58945	29.233	1.4340	.0341	.13312	.06306	2.515	.0344
%RSD	1257.3	199.43	119.59	.35966	24.958	63.733	7.5255	123.5
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.05054	.17346	-.18338	3.7870	108.07	1.8382	17.255	-.00994
Stddev	.14588	.08667	.32415	1.3388	28.62	1.4029	8.931	.05680
%RSD	288.64	49.966	176.76	35.353	26.485	76.319	51.757	571.19
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.4709	950.00	.05859	-.29437	-2.411	-1.2656	-.54136	-.90568
Stddev	.0571	12.76	.07006	.74434	.876	2.4209	.25077	.05717
%RSD	3.8812	1.3433	119.58	252.86	36.34	191.30	46.323	6.3125
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: mb 240-355797/1-a Acquired: 11/19/2018 19:03:38 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.90958	1.3655	-.37383	-15.185	5.7791
Stddev	.96924	3.0691	.04611	1.845	1.5984
%RSD	106.56	224.76	12.335	12.149	27.658
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6962.3	4444.8	50422.	5999.0
Stddev	3.9	5.8	136.	9.9
%RSD	.05656	.13097	.26899	.16468

Sample Name: lcs 240-355797/2-a Acquired: 11/19/2018 19:08:05 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	53.075	2074.7	2185.8	1103.6	2049.6	51.897	50394.	53.21
Stddev	.430	2.7	3.3	.7	3.2	.580	141.	.21
%RSD	.81080	.13117	.14921	.05997	.15407	1.1173	.27882	.3946
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	518.86	202.57	257.35	1046.4	50705.	1026.0	50385.	523.56
Stddev	.76	1.03	.15	1.4	189.	3.3	185.	.68
%RSD	.14570	.51076	.05885	.13502	.37365	.32046	.36756	.12902
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1060.9	50757.	523.76	510.61	545.2	2216.1	2095.6	1053.9
Stddev	2.2	148.	.38	2.87	3.2	6.9	2.7	.4
%RSD	.20422	.29187	.07297	.56276	.5908	.31226	.12778	.03426
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: lcs 240-355797/2-a Acquired: 11/19/2018 19:08:05 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	2090.9	521.22	529.24	1152.6	1029.4
Stddev	3.4	8.15	.76	9.1	13.2
%RSD	.16220	1.5628	.14408	.79010	1.2780
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6144.0	4206.0	47805.	5904.5
Stddev	2.5	2.1	21.	55.7
%RSD	.04053	.04958	.04488	.94346

Sample Name: 240-104416-f-1-a Acquired: 11/19/2018 19:12:05 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.26382	39.589	3.4362	154.14	62.025	-.22974	125080.
Stddev	.17387	18.945	.5199	1.70	.245	.02370	185.
%RSD	65.906	47.854	15.129	1.1014	.39481	10.314	.14828
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1447	1.0862	.95203	.42418	56.783	6446.0	12.830
Stddev	.0879	.0360	.24474	.18254	1.488	20.3	2.057
%RSD	60.73	3.3182	25.708	43.034	2.6201	.31556	16.029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	34314.	248.48	4.6910	17395.	12.789	-.62400	-.6750
Stddev	370.	.40	.2162	18.	.552	.38446	.9029
%RSD	1.0787	.16297	4.6089	.10182	4.3132	61.612	133.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104416-f-1-a Acquired: 11/19/2018 19:12:05 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2.2475	.10734	.49470	2.0652	3.8116	.81712	6498.1
Stddev	1.7370	.36428	.17206	.5057	2.6948	.07090	208.0
%RSD	77.287	339.38	34.781	24.486	70.700	8.6770	3.2007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	914.45
Stddev	10.34
%RSD	1.1305
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6292.8	4234.2	48059.	5900.8
Stddev	13.6	6.9	35.	17.4
%RSD	.21687	.16216	.07377	.29514
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	92.835%	97.467%	98.767%	104.09%
Range				

Sample Name: SD 240-104416-f-1a@5 Acquired: 11/19/2018 19:16:28 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.13479	-9.5338	1.9407	34.259	12.564	-.04978	25986.	-.0154
Stddev	.30036	17.667	2.1186	.266	.095	.09844	75.	.0126
%RSD	222.84	185.30	109.17	.77586	.75669	197.75	.29025	81.59
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.03942	.69266	17.221	10.765	1403.9	5.8231	7179.0	52.286
Stddev	.24373	.18102	.794	.761	1.6	1.8020	32.2	.050
%RSD	618.20	26.134	4.6119	7.0700	.11154	30.945	.44828	.09647
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.03974	3749.8	2.8823	2.4523	-.5642	-.25600	.41022	-.29440
Stddev	.27315	8.7	.1685	.4557	1.701	.80939	.59023	.01737
%RSD	687.38	.23320	5.8470	18.583	301.6	316.17	143.88	5.9006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: SD 240-104416-f-1a@5 Acquired: 11/19/2018 19:16:28 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.73696	.15344	.22242	1347.6	193.12
Stddev	1.1282	2.4288	.04022	15.5	4.82
%RSD	153.08	1582.9	18.084	1.1533	2.4943
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6748.7	4369.7	49604.	5980.3
Stddev	19.9	19.0	65.	34.7
%RSD	.29535	.43406	.13142	.58080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	99.561%	100.59%	101.94%	105.50%
Range				

Sample Name: 240-104416-f-1-b ms Acquired: 11/19/2018 19:20:54 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50.445	2029.3	2100.3	1220.2	2021.5	48.792	188950.
Stddev	.336	11.4	2.9	1.5	2.8	.379	291.
%RSD	.66538	.56161	.13891	.12019	.13770	.77740	.15412
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50.88	493.65	191.04	248.04	1047.0	55725.	990.64
Stddev	.26	1.25	.29	1.63	4.6	128.	2.29
%RSD	.5176	.25313	.14966	.65755	.43890	.23050	.23160
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	85441.	776.91	1003.9	68105.	510.02	472.27	525.2
Stddev	324.	.28	3.1	71.	1.26	2.51	2.5
%RSD	.37924	.03594	.31212	.10467	.24711	.53153	.4741
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104416-f-1-b ms Acquired: 11/19/2018 19:20:54 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2109.3	2011.4	1002.0	1953.8	483.61	501.12	8001.8
Stddev	3.1	7.2	1.9	9.3	4.62	1.50	50.2
%RSD	.14547	.35853	.18791	.47524	.95596	.29914	.62693
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1958.7
Stddev	2.3
%RSD	.11713
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5877.5	4104.3	46852.	5881.4
Stddev	1.4	5.1	33.	6.0
%RSD	.02316	.12506	.07077	.10273
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	86.709%	94.479%	96.286%	103.75%
Range				

Sample Name: 240-104416-f-1-c msd Acquired: 11/19/2018 19:24:54 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50.794	2077.4	2127.2	1235.2	2047.4	49.454	193820.
Stddev	.643	17.4	1.8	3.6	2.7	.419	1351.
%RSD	1.2658	.83777	.08466	.29036	.13031	.84733	.69692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	51.39	500.69	193.32	249.54	1066.0	56799.	1007.1
Stddev	.08	1.62	.76	1.15	3.8	158.	1.6
%RSD	.1594	.32379	.39412	.46113	.35307	.27735	.15813
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	87647.	789.82	1022.5	69451.	517.04	476.38	531.8
Stddev	169.	2.14	3.7	213.	2.29	2.00	1.6
%RSD	.19279	.27046	.35824	.30673	.44212	.42068	.2933
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104416-f-1-c msd Acquired: 11/19/2018 19:24:54 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2136.5	2036.4	1012.8	1976.4	499.41	506.37	8432.2
Stddev	7.2	6.2	1.4	10.2	1.41	.76	123.8
%RSD	.33715	.30233	.13808	.51826	.28231	.15101	1.4685
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	2039.8
Stddev	4.9
%RSD	.23914
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5859.9	4099.9	46740.	5841.1
Stddev	.7	1.6	83.	19.8
%RSD	.01248	.04003	.17728	.33841
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	86.449%	94.376%	96.057%	103.04%
Range				

Sample Name: CCV-3914190 Acquired: 11/19/2018 19:28:57 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	957.37	24023.	495.27	4941.0	1913.2	1902.6	47473.	488.2
Stddev	3.00	82.	3.93	10.3	4.1	4.9	69.	.4
%RSD	.31349	.33992	.79275	.20803	.21216	.25662	.14555	.0759
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1916.0	1884.0	1892.1	23961.	46585.	4778.3	47172.	1916.0
Stddev	5.5	5.0	4.0	29.	111.	4.6	62.	1.4
%RSD	.28739	.26355	.21015	.11944	.23835	.09678	.13146	.07481
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1978.1	46990.	1916.6	462.60	499.5	497.80	4851.8	4875.7
Stddev	6.9	109.	6.5	4.61	4.5	6.16	16.1	12.5
%RSD	.34640	.23236	.34047	.99631	.9081	1.2383	.33154	.25563
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 19:28:57 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	958.14	1910.0	1930.9	5036.9	4731.9
Stddev	10.50	3.2	7.5	44.9	5.3
%RSD	1.0960	.16904	.38838	.89187	.11259
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6079.5	4204.6	47387.	5858.8
Stddev	20.7	9.3	73.	38.1
%RSD	.34093	.22218	.15411	.65061

Sample Name: CCB Acquired: 11/19/2018 19:33:05 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.09036	-26.590	1.7344	10.363	-.56124	-.11415	-3.6366	.0641
Stddev	.20096	27.138	2.4161	.872	.16679	.18855	1.7519	.1183
%RSD	222.40	102.06	139.31	8.4195	29.719	165.18	48.175	184.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.03407	-.09103	-.58719	-.21890	79.953	3.0138	17.009	-.45661
Stddev	.13034	.13984	.11354	.27360	8.773	1.0642	13.745	.05036
%RSD	382.56	153.62	19.337	124.99	10.973	35.310	80.808	11.030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.9102	154.82	-.17414	1.4568	.2027	.45548	.37785	1.9126
Stddev	.3447	8.90	.12347	.6682	2.601	1.8981	.48341	.4166
%RSD	7.0204	5.7519	70.903	45.868	1284.	416.72	127.94	21.782
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 19:33:05 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.65492	-.82718	-1.2354	-9.4485	2.5848
Stddev	.64453	2.6414	.0914	8.5433	2.4137
%RSD	98.413	319.33	7.3964	90.420	93.379
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7016.4	4452.9	50458.	5967.2
Stddev	17.5	7.3	71.	41.5
%RSD	.24994	.16485	.14054	.69505

Sample Name: 240-104416-f-2-a Acquired: 11/19/2018 19:37:33 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.03165	85.355	.65505	298.67	49.156	-.05427	143700.
Stddev	.34789	18.533	.40606	2.05	.087	.05353	179.
%RSD	1099.2	21.713	61.990	.68767	.17769	98.639	.12465
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1946	.60501	1.3219	.97269	155.69	4941.7	9.8297
Stddev	.0699	.08078	.0859	.39347	1.87	28.1	3.1610
%RSD	35.93	13.351	6.4966	40.452	1.1998	.56821	32.158
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	33897.	117.56	1.2598	25962.	2.7441	.89562	.0210
Stddev	163.	.27	.2215	44.	.3275	.86340	2.163
%RSD	.47952	.22807	17.580	.16970	11.935	96.402	10290.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104416-f-2-a Acquired: 11/19/2018 19:37:33 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5.5102	-.13935	1.0732	1.8947	-2.2232	.96874	5990.1
Stddev	1.8989	.12113	.1573	1.2682	3.2486	.12212	189.8
%RSD	34.462	86.926	14.654	66.935	146.12	12.606	3.1685
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	495.46
Stddev	2.53
%RSD	.51128
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6231.2	4216.9	48234.	5960.3
Stddev	5.0	5.5	66.	20.5
%RSD	.08001	.13156	.13586	.34415
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	91.926%	97.071%	99.126%	105.14%
Range				

Sample Name: 240-104416-f-3-a Acquired: 11/19/2018 19:41:55 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.54544	362.41	1.2886	132.32	62.754	-.08832	180300.
Stddev	.19946	25.57	.2454	.76	.239	.01390	556.
%RSD	36.569	7.0548	19.041	.57757	.38095	15.743	.30856
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.2235	.40830	1.3948	1.2304	748.91	6703.7	18.015
Stddev	.1451	.21574	.1008	.2822	1.24	28.5	.896
%RSD	64.93	52.839	7.2279	22.938	.16502	.42564	4.9762
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	32970.	13.198	-.30024	36637.	7.3180	.89654	-.6652
Stddev	122.	.106	.29017	204.	.4361	1.4735	1.376
%RSD	.37133	.80103	96.645	.55694	5.9598	164.35	206.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104416-f-3-a Acquired: 11/19/2018 19:41:55 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.56460	-.28845	5.6723	.49350	.95728	391.24	5115.9
Stddev	1.4254	.15546	.3515	.49650	1.8872	1.12	183.9
%RSD	252.45	53.893	6.1976	100.61	197.14	.28531	3.5946
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	440.93
Stddev	1.52
%RSD	.34567
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6177.6	4184.2	48011.	5926.8
Stddev	10.2	9.7	23.	13.9
%RSD	.16464	.23134	.04845	.23452
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	91.135%	96.318%	98.668%	104.55%
Range				

Sample Name: 240-104416-f-5-a Acquired: 11/19/2018 19:46:16 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.04791	373.94	720.43	343.93	382.89	-.13055	184060.
Stddev	.14783	24.75	4.51	.45	.59	.14320	151.
%RSD	308.54	6.6193	.62607	.13012	.15288	109.69	.08221
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.1773	1.1455	1.5467	2.5426	7884.4	3569.1	20.602
Stddev	.1523	.1660	.2371	.6185	8.4	6.7	.667
%RSD	85.89	14.494	15.331	24.324	.10617	.18798	3.2366
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	56725.	214.78	141.54	75207.	3.4195	.90536	-1.297
Stddev	72.	.25	1.89	31.	.2111	1.1951	1.992
%RSD	.12657	.11569	1.3327	.04088	6.1729	132.01	153.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104416-f-5-a Acquired: 11/19/2018 19:46:16 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.2439	-.40724	4.7904	.74890	.70978	12.004	5773.4
Stddev	1.3896	.24462	.1285	.18314	2.3938	.246	65.6
%RSD	111.71	60.066	2.6826	24.455	337.25	2.0508	1.1368
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	2156.9
Stddev	9.7
%RSD	.45113
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6012.8	4138.9	47234.	5884.1
Stddev	2.7	5.0	51.	1.8
%RSD	.04424	.12023	.10863	.03053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	88.704%	95.275%	97.072%	103.80%
Range				

Sample Name: 240-104416-f-7-a Acquired: 11/19/2018 19:50:32 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.11320	29.993	51.940	178.03	13.952	-.06900	481960.
Stddev	.28470	1.689	.444	.83	.213	.11683	2396.
%RSD	251.50	5.6323	.85565	.46886	1.5287	169.33	.49709
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1787	1.5921	1.2379	2.0657	9732.8	6494.1	23.495
Stddev	.0611	.2926	.2888	.4361	40.9	23.5	1.114
%RSD	34.17	18.379	23.330	21.112	.42073	.36264	4.7419
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	29445.	261.89	19.961	43024.	7.4262	.59877	-1.876
Stddev	225.	.76	.120	87.	.4065	.32955	1.477
%RSD	.76369	.28955	.59939	.20281	5.4736	55.038	78.74
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104416-f-7-a Acquired: 11/19/2018 19:50:32 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.43062	-.55472	-1.0495	1.1505	-3.2816	101.17	7286.7
Stddev	2.1394	.60253	.0752	.2300	2.2610	.47	52.5
%RSD	496.82	108.62	7.1680	19.991	68.897	.46554	.72071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	641.29
Stddev	4.18
%RSD	.65113
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5864.5	4030.1	46476.	5870.2
Stddev	27.9	19.4	71.	5.3
%RSD	.47534	.48241	.15377	.09027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	86.516%	92.770%	95.515%	103.55%
Range				

Sample Name: 190-18109-d-1-a Acquired: 11/19/2018 19:55:00 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.37306	20.873	1.6517	326.53	11.198	-.17022
Stddev	.12510	18.090	2.1229	1.96	.058	.06741
%RSD	33.535	86.669	128.53	.60174	.51787	39.601
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	122650.	-.0637	.94218	1.4834	4.9354	150.38
Stddev	355.	.1428	.11890	.3758	.3132	2.13
%RSD	.28912	224.1	12.619	25.331	6.3455	1.4193
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	66802.	137.10	8572.7	134.14	-.19249	F 1517700.
Stddev	43.	.90	84.7	.54	.21561	28956.
%RSD	.06435	.65982	.98786	.40060	112.01	1.9079
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 190-18109-d-1-a Acquired: 11/19/2018 19:55:00 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.7331	.20288	-.3901	-1.5962	-.78653	-.48604
Stddev	.5614	1.0663	2.277	1.2603	.45761	.20489
%RSD	32.391	525.58	583.8	78.955	58.180	42.156
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.8319	-1.8098	50.976	256.06	3709.7
Stddev	.7701	.2442	.316	8.67	22.1
%RSD	42.040	13.495	.61924	3.3842	.59471
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4887.0	3619.7	40504.	5638.5
Stddev	36.1	33.1	485.	10.0
%RSD	.73876	.91445	1.1972	.17740
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	72.096%	83.324%	83.241%	99.468%
Range				

Sample Name: 190-18115-a-1-a Acquired: 11/19/2018 19:59:28 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.00568	45.508	-.54965	19.714	13.277	-.04875	27055.	.0665
Stddev	.22429	18.600	1.1880	.101	.212	.01595	57.	.0338
%RSD	3948.8	40.872	216.15	.51019	1.5936	32.721	.21181	50.90
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.25487	6.0840	.90452	28.760	1828.4	6.8415	7651.8	2.0397
Stddev	.11501	.2304	.52843	.428	57.1	.5459	52.2	.0147
%RSD	45.127	3.7877	58.422	1.4867	3.1212	7.9796	.68232	.71940
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.94181	6172.8	20.923	1.4527	-1.875	-2.8347	-.24500	-.46890
Stddev	.13639	73.0	.397	.9263	.369	1.3482	.23721	.12717
%RSD	14.482	1.1831	1.8983	63.765	19.66	47.559	96.819	27.120
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 190-18115-a-1-a Acquired: 11/19/2018 19:59:28 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.6728	.56126	67.796	1036.0	100.99
Stddev	.4800	1.4380	.629	13.9	3.01
%RSD	28.695	256.20	.92707	1.3419	2.9793
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6484.2	4231.7	47465.	5518.0
Stddev	5.9	8.8	21.	15.7
%RSD	.09063	.20872	.04477	.28519
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	95.658%	97.411%	97.546%	97.341%
Range				

Sample Name: 190-18118-c-1-a Acquired: 11/19/2018 20:03:52 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.30215	83.201	2.8673	169.81	16.650	-.03926	16045.	.0004
Stddev	.30382	17.819	1.5573	.39	.092	.12784	40.	.2317
%RSD	100.55	21.416	54.313	.22872	.55308	325.61	.25205	57850.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.04059	12.908	20.720	341.26	8557.3	7.0056	6514.4	12.962
Stddev	.21138	.155	.185	2.52	37.2	2.6437	54.9	.017
%RSD	520.78	1.2008	.89455	.73852	.43435	37.737	.84345	.13068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.9121	91996.	1.9263	.35472	-.6363	-3.5218	1.2104	.13103
Stddev	.1287	412.	.1331	.83317	1.691	1.7479	.7191	.20057
%RSD	6.7289	.44813	6.9071	234.88	265.8	49.629	59.413	153.07
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 190-18118-c-1-a Acquired: 11/19/2018 20:03:52 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.68674	2.0153	39.003	2428.2	69.850
Stddev	.79396	2.0438	.078	21.0	3.680
%RSD	115.61	101.41	.20110	.86400	5.2691
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6116.3	4125.0	46080.	5472.4
Stddev	8.0	2.8	44.	19.7
%RSD	.13056	.06836	.09621	.35986
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	90.231%	94.954%	94.700%	96.537%
Range				

Sample Name: 190-18122-c-1-a Acquired: 11/19/2018 20:08:14 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.68600	69.705	3.0401	8037.5	26.435	-.03969
Stddev	.07308	29.085	2.8304	47.1	.265	.07618
%RSD	10.652	41.726	93.103	.58635	1.0012	191.94
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	22122.	-.0629	.30311	15.415	5.4155	4.4650
Stddev	78.	.1440	.10950	.204	.2746	2.3583
%RSD	.35317	228.9	36.126	1.3214	5.0707	52.817
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4095.9	59.045	18639.	11.981	3.1895	F 1268800.
Stddev	73.0	2.094	95.	.062	.0862	33308.
%RSD	1.7831	3.5470	.51077	.52066	2.7012	2.6251
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 190-18122-c-1-a Acquired: 11/19/2018 20:08:14 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	17.014	-.79822	5.408	-1.0963	-.43295	-.23275
Stddev	.449	.92351	1.243	.9494	.43241	.20962
%RSD	2.6379	115.70	22.98	86.602	99.876	90.062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.1291	3.4209	17.673	3141.4	437.71
Stddev	.8300	1.4296	.227	26.8	.68
%RSD	73.512	41.791	1.2872	.85466	.15602
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5102.4	3755.7	40952.	5214.7
Stddev	15.8	4.1	71.	56.2
%RSD	.30943	.11036	.17328	1.0769
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	75.274%	86.454%	84.161%	91.990%
Range				

Sample Name: 190-18123-c-1-a Acquired: 11/19/2018 20:12:44 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.17766	-3.1266	2.5962	9492.7	26.081	-.07490
Stddev	.42221	5.3203	.8875	51.0	.249	.10390
%RSD	237.66	170.16	34.184	.53696	.95563	138.71
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6088.3	.0155	-.11594	57.231	42.785	15.798
Stddev	12.0	.1622	.51277	.289	.471	1.204
%RSD	.19724	1048.	442.27	.50493	1.1007	7.6240
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1957.8	30.824	79417.	.58798	2.0869	F 1109100.
Stddev	38.7	2.734	320.	.00916	.2395	19610.
%RSD	1.9744	8.8705	.40231	1.5574	11.476	1.7681
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 190-18123-c-1-a Acquired: 11/19/2018 20:12:44 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	31.378	-.22744	5.228	-1.4941	1.8419	-.45618
Stddev	.279	.96592	1.194	.3459	.0827	.19214
%RSD	.88912	424.69	22.85	23.149	4.4908	42.119
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-.95364	-1.8341	13.529	2893.3	107.33
Stddev	.97375	1.7282	.247	69.5	5.43
%RSD	102.11	94.226	1.8271	2.4025	5.0632
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5168.0	3761.6	41624.	5199.7
Stddev	31.8	21.5	97.	17.8
%RSD	.61477	.57247	.23286	.34313
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	76.241%	86.590%	85.543%	91.727%
Range				

Sample Name: 240-104424-j-1-a Acquired: 11/19/2018 20:17:16 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.08288	52.051	2.1719	277.62	615.83	-.03850	142510.
Stddev	.62254	20.214	.9787	2.23	2.09	.16392	285.
%RSD	751.17	38.835	45.060	.80243	.33989	425.73	.20015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1426	.23134	1.2617	.73237	1879.2	23491.	57.138
Stddev	.0282	.18465	.1817	.51323	9.1	88.	.996
%RSD	19.77	79.820	14.403	70.078	.48662	.37458	1.7426
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	45023.	617.06	-.12509	66306.	5.4733	.23683	-1.684
Stddev	365.	.74	.15331	83.	.2048	2.1722	1.455
%RSD	.81102	.12017	122.56	.12475	3.7414	917.17	86.37
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104424-j-1-a Acquired: 11/19/2018 20:17:16 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-2.2422	-.28435	2.1740	1.0530	.97749	15.532	21163.
Stddev	.9334	.46662	.0773	1.4587	5.3502	.167	648.
%RSD	41.627	164.10	3.5540	138.53	547.35	1.0735	3.0600
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1517.9
Stddev	2.8
%RSD	.18481
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5863.2	4050.4	45365.	5476.2
Stddev	6.5	5.4	8.	27.1
%RSD	.11011	.13289	.01782	.49533
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	86.498%	93.239%	93.231%	96.604%
Range				

Sample Name: CCV-3914190 Acquired: 11/19/2018 20:21:38 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	956.54	24146.	489.22	4887.0	1900.9	1900.7	48045.	486.1
Stddev	.99	28.	3.11	7.1	1.2	1.4	42.	.8
%RSD	.10325	.11448	.63512	.14544	.06150	.07600	.08776	.1563
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1918.6	1908.2	1879.1	24181.	46899.	4779.8	48280.	1932.4
Stddev	3.1	3.4	.3	49.	111.	5.7	77.	2.2
%RSD	.16371	.17696	.01802	.20412	.23639	.11976	.16003	.11244
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1962.3	46731.	1918.8	464.24	490.0	488.61	4875.3	4843.4
Stddev	6.0	54.	4.0	2.07	1.3	.07	11.5	16.9
%RSD	.30737	.11659	.20691	.44521	.2600	.01427	.23649	.34841
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 20:21:38 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	960.00	1917.0	1960.6	5160.3	4786.2
Stddev	1.97	8.8	3.9	87.7	8.4
%RSD	.20493	.45659	.20069	1.6999	.17534
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5877.6	4073.2	45356.	5345.4
Stddev	4.4	6.3	209.	6.7
%RSD	.07417	.15376	.46005	.12597

Sample Name: CCB Acquired: 11/19/2018 20:25:47 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.27857	-34.959	1.1846	18.535	-.27980	-.10904	-10.195	.1135
Stddev	.37095	32.255	.7349	1.230	.13615	.08153	2.777	.1293
%RSD	133.16	92.267	62.038	6.6386	48.659	74.772	27.234	113.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.12375	-.12766	.31259	-1.0717	77.465	2.9130	-6.5753	-.40327
Stddev	.26314	.24433	.28028	.0493	13.010	2.2517	8.6135	.01853
%RSD	212.64	191.40	89.664	4.6025	16.795	77.298	131.00	4.5953
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.6764	449.75	.13274	2.1271	-.2932	.71768	-.02953	2.2642
Stddev	.3262	1.84	.26271	.6031	2.940	2.6501	.19254	.4158
%RSD	8.8717	.40970	197.91	28.354	1003.	369.26	652.03	18.365
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 20:25:47 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.64329	.95377	-1.3953	2.7199	6.4411
Stddev	.77160	2.1952	.0979	12.664	2.9146
%RSD	119.95	230.17	7.0163	465.59	45.251
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6749.0	4295.4	48199.	5544.0
Stddev	5.6	8.1	111.	12.7
%RSD	.08296	.18829	.23106	.22968

Sample Name: 240-104424-j-2-a Acquired: 11/19/2018 20:30:15 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.50155	6171.9	42.607	596.44	155.27	.34270	105580.
Stddev	.24471	43.5	2.484	1.14	.26	.05104	199.
%RSD	48.789	.70399	5.8306	.19146	.16526	14.893	.18874
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.867	1.8411	8.1745	9.7090	12133.	19404.	75.001
Stddev	.124	.1917	.4011	.8635	7.	32.	1.277
%RSD	6.653	10.410	4.9061	8.8932	.05429	.16404	1.7021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	33458.	305.27	16.314	97938.	8.2901	4.0682	-.9883
Stddev	87.	.44	.160	344.	.5787	.4033	1.276
%RSD	.26035	.14437	.98198	.35111	6.9805	9.9144	129.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104424-j-2-a Acquired: 11/19/2018 20:30:15 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.59474	.06801	135.01	1.4638	24.714	29.503	15888.
Stddev	.17117	.66617	.32	.2584	2.138	.298	494.
%RSD	28.780	979.52	.23924	17.651	8.6508	1.0093	3.1117
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1020.1
Stddev	1.6
%RSD	.15951
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5905.0	4100.6	46188.	5614.4
Stddev	10.9	6.2	287.	17.6
%RSD	.18496	.15229	.62049	.31428
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	87.114%	94.394%	94.922%	99.042%
Range				

Sample Name: 240-104424-j-3-a Acquired: 11/19/2018 20:34:34 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.00302	247.85	35.024	260.92	87.113	.09039	205700.
Stddev	.20770	56.44	.294	2.65	.334	.15128	316.
%RSD	6869.7	22.772	.83902	1.0157	.38369	167.36	.15386
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0695	.24715	1.7367	2.4721	518.77	39033.	83.306
Stddev	.0625	.15625	.2698	.2788	6.91	19.	1.666
%RSD	89.84	63.222	15.534	11.277	1.3311	.04815	1.9997
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	70802.	52.306	8.5004	137340.	4.2222	-.71979	-1.671
Stddev	137.	.209	.1633	307.	.2983	.81794	2.252
%RSD	.19389	.39974	1.9207	.22348	7.0641	113.64	134.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104424-j-3-a Acquired: 11/19/2018 20:34:34 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.5485	-.99653	6.9709	.85903	16.958	12.108	22855.
Stddev	1.6648	.37058	.1628	.38351	2.056	.187	655.
%RSD	107.51	37.187	2.3360	44.644	12.123	1.5406	2.8678
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	2619.0
Stddev	39.1
%RSD	1.4936
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5695.1	3945.7	44205.	5440.7
Stddev	5.3	9.3	28.	10.3
%RSD	.09360	.23680	.06295	.18894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	84.017%	90.828%	90.846%	95.979%
Range				

Sample Name: 240-104424-j-4-a Acquired: 11/19/2018 20:38:57 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.01161	478.93	6.9978	345.89	498.76	-.06309	118670.
Stddev	.32760	45.80	1.9991	1.74	.85	.03772	319.
%RSD	2820.6	9.5630	28.568	.50234	.17026	59.784	.26845
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0895	.49999	2.5082	1.1390	6840.7	22926.	60.391
Stddev	.1194	.12633	.4733	.4109	18.8	14.	.606
%RSD	133.4	25.268	18.872	36.075	.27515	.05949	1.0038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	36632.	318.62	-.40352	64296.	2.0526	.37308	-1.397
Stddev	318.	.28	.28235	93.	.1709	.69665	2.110
%RSD	.86686	.08806	69.971	.14399	8.3258	186.73	151.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104424-j-4-a Acquired: 11/19/2018 20:38:57 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-2.0443	-.38712	12.131	1.7755	.10720	7.1694	24237.
Stddev	1.0371	.23505	.112	.5957	3.1870	.1621	575.
%RSD	50.729	60.719	.92654	33.550	2973.0	2.2605	2.3706
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1175.6
Stddev	8.5
%RSD	.71935
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5915.3	4081.0	45557.	5483.5
Stddev	6.8	3.5	73.	28.6
%RSD	.11543	.08580	.16084	.52089
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	87.266%	93.942%	93.626%	96.733%
Range				

Sample Name: 240-104424-j-5-a Acquired: 11/19/2018 20:43:19 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.73237	1238.2	15.813	267.19	118.50	.06872	170580.
Stddev	.55307	7.1	1.864	2.34	.21	.07664	362.
%RSD	75.519	.57074	11.788	.87629	.17593	111.52	.21243
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.2312	.10536	3.2826	1.8805	1362.4	32664.	89.388
Stddev	.1089	.06983	.2144	.1023	10.5	69.	.946
%RSD	47.09	66.277	6.5300	5.4377	.76792	.21270	1.0583
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	47241.	75.269	2.5743	93899.	4.3229	1.0460	.3958
Stddev	636.	.232	.3114	156.	.2276	1.2055	2.430
%RSD	1.3453	.30757	12.096	.16586	5.2649	115.24	614.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104424-j-5-a Acquired: 11/19/2018 20:43:19 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.3091	.14261	32.011	.98046	15.033	4.4105	30264.
Stddev	1.6180	.17452	.092	.82264	1.153	.0700	93.
%RSD	48.894	122.38	.28887	83.903	7.6664	1.5868	.30791
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1287.5
Stddev	13.1
%RSD	1.0191
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5816.0	4017.4	45327.	5500.5
Stddev	7.1	2.8	79.	22.2
%RSD	.12167	.06874	.17496	.40379
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	85.800%	92.477%	93.152%	97.034%
Range				

Sample Name: 240-104424-j-6-a Acquired: 11/19/2018 20:47:40 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.17635	71.196	10.555	309.89	547.63	-.04173	111650.
Stddev	.47454	23.254	1.021	.66	.32	.03631	61.
%RSD	269.09	32.662	9.6762	.21221	.05828	87.003	.05489
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.2171	.20770	2.3801	.31386	4867.2	17953.	46.461
Stddev	.0745	.10257	.2860	.57183	59.1	55.	.937
%RSD	34.32	49.384	12.015	182.19	1.2149	.30551	2.0169
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	39402.	975.04	-1.0289	64887.	1.1432	-.30432	-.9571
Stddev	514.	.66	.0683	170.	.1656	1.1908	1.775
%RSD	1.3045	.06795	6.6422	.26205	14.486	391.29	185.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104424-j-6-a Acquired: 11/19/2018 20:47:40 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.90991	-.41298	2.0993	.30376	-1.0999	4.2378	31484.
Stddev	.68846	.46055	.2650	.35630	1.9162	.1029	32.
%RSD	75.663	111.52	12.622	117.30	174.22	2.4278	.10285
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1288.9
Stddev	22.9
%RSD	1.7756
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5919.6	4060.5	45669.	5471.4
Stddev	7.9	5.3	54.	26.6
%RSD	.13420	.13155	.11849	.48586
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	87.329%	93.469%	93.855%	96.520%
Range				

Sample Name: 240-104424-j-7-a Acquired: 11/19/2018 20:52:02 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.65637	2256.3	34.740	422.43	95.975	.06009	123260.
Stddev	.08578	13.7	.471	.77	.086	.06528	53.
%RSD	13.069	.60685	1.3566	.18191	.08958	108.62	.04316
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.3177	.37648	4.4885	3.0609	1954.8	28404.	75.861
Stddev	.1424	.25116	.1194	.4055	15.0	92.	1.569
%RSD	44.84	66.713	2.6600	13.247	.76986	.32308	2.0686
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	37019.	40.425	6.4426	81569.	2.6038	1.9035	-.8946
Stddev	335.	.197	.1266	71.	.0793	.1823	1.742
%RSD	.90447	.48783	1.9653	.08730	3.0452	9.5785	194.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104424-j-7-a Acquired: 11/19/2018 20:52:02 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6.1474	.20159	53.277	1.0776	27.914	9.2203	31938.
Stddev	3.4358	.24073	.346	1.0913	.613	.1811	76.
%RSD	55.890	119.42	.64888	101.27	2.1955	1.9638	.23666
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	943.43
Stddev	5.04
%RSD	.53442
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5903.2	4053.7	45455.	5458.5
Stddev	1.1	3.0	105.	11.2
%RSD	.01826	.07496	.22998	.20572
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	87.087%	93.313%	93.416%	96.292%
Range				

Sample Name: 240-104424-j-8-a Acquired: 11/19/2018 20:56:24 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.24371	19.185	29.478	214.44	192.01	-.05207	123010.
Stddev	.25597	19.306	1.341	.74	.47	.05077	206.
%RSD	105.03	100.63	4.5491	.34717	.24494	97.503	.16778
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1795	.25110	3.4361	4.4718	2581.0	27037.	65.397
Stddev	.0474	.32137	.3277	.7949	23.8	32.	.574
%RSD	26.43	127.99	9.5385	17.775	.92308	.11654	.87751
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	35000.	141.91	21.972	56084.	2.0677	1.0613	1.274
Stddev	232.	.35	.182	56.	.4763	.3745	1.845
%RSD	.66364	.24718	.82767	.09897	23.035	35.290	144.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104424-j-8-a Acquired: 11/19/2018 20:56:24 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	40.908	.24716	-.28949	1.5886	10.126	4.1093	16114.
Stddev	.357	.29709	.07669	.6142	2.758	.1460	46.
%RSD	.87190	120.20	26.490	38.664	27.239	3.5536	.28668
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1494.9
Stddev	14.5
%RSD	.97166
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5885.3	4042.8	45287.	5434.4
Stddev	4.8	2.6	83.	12.0
%RSD	.08107	.06310	.18260	.22161
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	86.824%	93.062%	93.071%	95.867%
Range				

Sample Name: 240-104424-j-9-a Acquired: 11/19/2018 21:00:45 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.25886	74.799	96.877	195.27	283.18	-.13429	219990.
Stddev	.37498	15.146	1.429	.95	.54	.07425	1109.
%RSD	144.86	20.249	1.4746	.48437	.18917	55.289	.50400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.873	14.325	3.8385	34.694	13272.	21013.	72.666
Stddev	.091	.234	.1913	.520	4.	59.	2.572
%RSD	1.863	1.6339	4.9832	1.4975	.03239	.27904	3.5391
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	58731.	2036.5	7.3571	63993.	31.840	8.4813	-.4701
Stddev	112.	2.2	.2776	94.	.334	.6982	1.777
%RSD	.19114	.10563	3.7728	.14685	1.0503	8.2324	377.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104424-j-9-a Acquired: 11/19/2018 21:00:45 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	27.473	.27338	1.6662	1.1128	31.353	127.52	21730.
Stddev	.742	.28533	.2195	1.3156	3.343	.66	145.
%RSD	2.7000	104.37	13.171	118.23	10.664	.52051	.66894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	2285.7
Stddev	28.3
%RSD	1.2390
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5696.0	3943.5	44650.	5310.5
Stddev	1.4	1.8	59.	19.4
%RSD	.02475	.04565	.13235	.36522
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	84.031%	90.777%	91.762%	93.681%
Range				

Sample Name: 240-104424-j-10-a Acquired: 11/19/2018 21:05:12 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.69719	-21.391	6.3324	257.41	33.864	-.19317	220630.
Stddev	.22626	26.802	.9014	1.69	.100	.05188	2093.
%RSD	32.453	125.29	14.234	.65841	.29556	26.859	.94870
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0779	.04998	1.5064	3.0716	407.92	22964.	84.777
Stddev	.0476	.27493	.2562	.3489	1.12	40.	3.069
%RSD	61.14	550.11	17.007	11.360	.27539	.17267	3.6197
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	73713.	1.6400	.01826	88528.	2.9619	.36033	-1.741
Stddev	95.	.0414	.10347	195.	.3056	.40557	1.970
%RSD	.12914	2.5234	566.69	.22047	10.316	112.55	113.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104424-j-10-a Acquired: 11/19/2018 21:05:12 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	28.298	-.18147	-.83436	.74775	15.365	10.516	28325.
Stddev	.880	.20147	.04047	.34867	3.978	.028	47.
%RSD	3.1087	111.02	4.8509	46.629	25.891	.27087	.16614
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	2753.4
Stddev	24.0
%RSD	.87197
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5657.8	3915.0	44163.	5324.5
Stddev	3.6	4.0	69.	30.4
%RSD	.06431	.10234	.15596	.57152
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	83.468%	90.120%	90.760%	93.927%
Range				

Sample Name: mb 240-355809/1-a Acquired: 11/19/2018 21:09:43 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.38391	-7.8935	-.93465	3.7785	-.36376	-.08960	47.386	-.0508
Stddev	.20770	23.811	.24220	.5928	.14995	.13029	1.574	.1511
%RSD	54.103	301.66	25.913	15.688	41.223	145.41	3.3221	297.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.11262	.18516	-.11009	3.0692	58.554	1.7629	25.607	.40822
Stddev	.29696	.21096	.68775	1.7329	36.378	.2147	3.317	.06102
%RSD	263.68	113.94	624.73	56.459	62.128	12.176	12.955	14.947
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.5467	234.39	.23498	-.02629	-2.335	-2.2658	-.41893	-.33214
Stddev	.1161	9.50	.49387	.76764	1.249	1.5791	.24911	.16124
%RSD	7.5032	4.0513	210.18	2920.2	53.48	69.692	59.464	48.547
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: mb 240-355809/1-a Acquired: 11/19/2018 21:09:43 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.22003	.42379	1.0999	51.928	.34761
Stddev	.96661	2.7627	.0536	15.615	3.5366
%RSD	439.31	651.92	4.8694	30.071	1017.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6690.0	4273.5	47726.	5515.9
Stddev	2.9	6.9	57.	26.6
%RSD	.04267	.16104	.11843	.48287

Sample Name: CCV-3914190 Acquired: 11/19/2018 21:14:12 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	956.53	24538.	490.09	4901.0	1920.2	1900.8	48447.	488.5
Stddev	2.08	106.	3.42	6.1	3.2	2.8	79.	1.2
%RSD	.21770	.43061	.69858	.12429	.16863	.14818	.16402	.2473
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1937.7	1922.3	1882.5	24541.	47341.	4845.9	48801.	1930.9
Stddev	6.0	4.3	5.6	6.	101.	10.5	114.	4.9
%RSD	.31168	.22438	.29779	.02464	.21330	.21642	.23412	.25328
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1991.0	47664.	1938.6	470.36	490.6	491.35	4923.0	4910.8
Stddev	7.0	41.	5.5	3.47	5.6	4.51	18.3	15.8
%RSD	.35103	.08646	.28401	.73851	1.148	.91762	.37121	.32257
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 21:14:12 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	972.02	1953.7	1980.7	5298.9	4835.0
Stddev	10.14	9.0	6.6	71.8	6.1
%RSD	1.0435	.46119	.33197	1.3557	.12542
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5804.0	4019.8	44913.	5297.4
Stddev	5.0	4.0	111.	8.1
%RSD	.08574	.09835	.24623	.15303

Sample Name: CCB Acquired: 11/19/2018 21:18:20 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.18515	-6.7627	1.1082	9.8426	-.17453	.04688	-5.8119	.0672
Stddev	.48388	25.325	.4340	1.1665	.36829	.04302	1.7453	.1290
%RSD	261.35	374.48	39.159	11.852	211.02	91.780	30.029	192.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.10473	.15287	-.30857	-.62028	40.188	1.8206	10.834	-.36371
Stddev	.14518	.25025	.48042	.82062	49.629	3.1753	9.467	.07961
%RSD	138.62	163.70	155.69	132.30	123.49	174.41	87.382	21.888
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.8484	138.97	.00351	1.1183	-2.242	-2.3129	.48073	2.5027
Stddev	.2189	8.18	.36181	.9066	.769	2.1685	.29104	.2428
%RSD	5.6888	5.8850	10320.	81.065	34.33	93.757	60.540	9.7004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 21:18:20 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.96889	-.22978	-1.4638	16.368	1.9357
Stddev	.64226	3.8720	.1470	2.505	4.7748
%RSD	66.288	1685.1	10.045	15.301	246.67
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6662.0	4237.1	47616.	5420.3
Stddev	3.6	8.5	20.	19.7
%RSD	.05462	.20064	.04262	.36387

Sample Name: lcs 240-355809/2-a Acquired: 11/19/2018 21:22:48 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	51.128	2047.6	2111.1	1061.5	1995.9	50.423	50040.
Stddev	.121	34.0	2.5	.7	2.4	.383	73.
%RSD	.23747	1.6609	.11812	.06453	.11896	.76001	.14559
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	52.11	509.01	203.22	251.55	1039.8	49671.	1006.2
Stddev	.33	1.23	1.08	1.37	11.0	54.	.8
%RSD	.6300	.24242	.53075	.54496	1.0620	.10805	.08337
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50581.	516.34	1039.7	49911.	513.66	501.31	517.8
Stddev	73.	.51	2.8	82.	.25	.73	1.9
%RSD	.14478	.09844	.26770	.16511	.04863	.14563	.3734
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: lcs 240-355809/2-a Acquired: 11/19/2018 21:22:48 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2128.9	2058.5	1038.1	2041.2	517.64	525.05	F 1156.0
Stddev	4.7	3.6	1.2	5.3	4.05	.94	34.9
%RSD	.22027	.17453	.11832	.26123	.78294	.17927	3.0153
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							1000.0
Range							15.500%

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1015.0
Stddev	15.4
%RSD	1.5181
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5927.1	4053.1	45411.	5410.4
Stddev	4.3	6.2	55.	10.6
%RSD	.07306	.15322	.12009	.19513

Sample Name: 240-104418-g-1-a Acquired: 11/19/2018 21:26:49 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.89131	179.23	5.3685	449.59	1711.1	-.02882
Stddev	.89516	44.83	.9392	5.79	9.2	.11808
%RSD	100.43	25.015	17.495	1.2872	.53882	409.66
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	242050.	.0688	1.4935	2.5652	-.70117	212.72
Stddev	3129.	.0639	.1022	.1878	.13241	2.77
%RSD	1.2925	92.90	6.8423	7.3192	18.885	1.3043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	16176.	266.32	74192.	162.62	7.3083	F 2186000.
Stddev	248.	6.17	492.	1.56	.3093	55622.
%RSD	1.5352	2.3178	.66335	.95966	4.2327	2.5445
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104418-g-1-a Acquired: 11/19/2018 21:26:49 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	7.4422	-.43547	-.0970	1.7545	.54711	1.5345
Stddev	.9879	.85575	2.252	3.3143	1.0826	.2780
%RSD	13.274	196.51	2321.	188.91	197.88	18.120
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.60281	1.1641	13.508	2848.6	19626.
Stddev	2.5419	1.9411	.573	50.0	102.
%RSD	421.67	166.76	4.2397	1.7570	.51868
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4259.8	3270.4	34537.	4809.9
Stddev	93.5	68.0	230.	51.8
%RSD	2.1954	2.0790	.66642	1.0777
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	62.843%	75.283%	70.978%	84.850%
Range				

Sample Name: SD 240-104418-g-1a@5 Acquired: 11/19/2018 21:31:28 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.29473	1.3790	1.2980	86.604	321.81	-.06701
Stddev	.16279	30.330	.5687	.795	.58	.06809
%RSD	55.233	2199.5	43.810	.91793	.17966	101.61
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	47618.	-.0074	.02911	1.0933	.07965	38.817
Stddev	86.	.1163	.09586	.2061	.68799	2.507
%RSD	.17984	1581.	329.28	18.854	863.82	6.4593
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2712.2	44.116	14401.	30.928	.33393	F 755990.
Stddev	14.4	1.519	247.	.220	.11744	6246.
%RSD	.53068	3.4429	1.7118	.71288	35.169	.82621
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: SD 240-104418-g-1a@5 Acquired: 11/19/2018 21:31:28 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.6619	.56916	-1.043	-2.0569	-.64604	-.06005
Stddev	.1688	1.0564	2.742	3.2044	.31819	.10151
%RSD	10.159	185.61	263.0	155.79	49.251	169.04
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-.68646	-1.2360	1.5704	528.31	3860.8
Stddev	.59313	3.2547	.0926	11.16	48.4
%RSD	86.404	263.32	5.8942	2.1125	1.2525
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5474.3	3963.5	43832.	5666.5
Stddev	49.1	29.2	434.	89.7
%RSD	.89619	.73719	.98988	1.5828
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	80.760%	91.237%	90.079%	99.962%
Range				

Sample Name: 240-104418-g-1-b ms Acquired: 11/19/2018 21:36:02 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	54.355	2203.6	2216.8	1445.5	3556.3	46.541
Stddev	1.255	5.9	16.4	16.8	17.1	.370
%RSD	2.3082	.26661	.73867	1.1613	.48017	.79462
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	283670.	53.96	510.62	188.06	249.05	1177.9
Stddev	4959.	.58	2.41	2.21	1.42	7.0
%RSD	1.7482	1.080	.47158	1.1734	.57157	.59475
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	68834.	1306.1	117470.	629.30	958.76	F 1797400.
Stddev	560.	8.6	602.	6.73	4.69	51840.
%RSD	.81391	.65704	.51212	1.0694	.48894	2.8841
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104418-g-1-b ms Acquired: 11/19/2018 21:36:02 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	517.12	440.22	529.2	2191.0	2073.5	972.26
Stddev	3.76	3.08	4.9	20.5	16.0	10.17
%RSD	.72768	.69952	.9167	.93533	.77089	1.0465
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1867.8	486.65	567.14	4040.6	19787.
Stddev	11.6	6.69	3.66	60.9	111.
%RSD	.61929	1.3747	.64604	1.5062	.56187
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4276.9	3310.8	36393.	4925.2
Stddev	19.4	12.0	404.	93.5
%RSD	.45332	.36221	1.1098	1.8987
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	63.096%	76.212%	74.792%	86.885%
Range				

Sample Name: 240-104418-g-1-c msd Acquired: 11/19/2018 21:40:20 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	56.277	2232.5	2286.5	1488.6	3641.3	46.749
Stddev	.364	30.8	15.3	10.8	11.5	.360
%RSD	.64606	1.3781	.66845	.72676	.31521	.76962
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	283150.	55.41	521.39	189.52	260.64	1186.7
Stddev	2987.	.18	3.11	.42	.67	8.6
%RSD	1.0548	.3317	.59707	.22263	.25809	.72453
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	70187.	1333.5	117380.	641.24	989.63	F 1603500.
Stddev	257.	5.8	358.	.74	2.21	9341.
%RSD	.36658	.43521	.30528	.11569	.22323	.58254
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-104418-g-1-c msd Acquired: 11/19/2018 21:40:20 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	525.70	449.77	549.3	2263.3	2119.7	1001.5
Stddev	3.43	3.25	.5	12.3	9.2	2.8
%RSD	.65223	.72224	.0950	.54204	.43601	.27889
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1912.3	497.95	581.73	4106.7	20046.
Stddev	5.8	1.79	4.19	86.4	37.
%RSD	.30169	.36020	.71953	2.1040	.18555
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4296.4	3326.0	37338.	5277.6
Stddev	35.2	26.5	223.	39.5
%RSD	.81892	.79605	.59711	.74840
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	63.384%	76.562%	76.734%	93.101%
Range				

Sample Name: 190-18116-c-1-a Acquired: 11/19/2018 21:44:37 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.11409	-6.7320	3.1522	27.920	.77282	-.10751	524.73	-.0184
Stddev	.30110	22.621	1.4251	.395	.15697	.30790	2.42	.0465
%RSD	263.93	336.03	45.208	1.4165	20.312	286.38	.46192	253.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.05957	.74552	16.159	35.295	329.34	5.1679	616.19	1.1863
Stddev	.10890	.49927	.642	1.154	29.04	.7452	31.52	.0591
%RSD	182.80	66.969	3.9747	3.2696	8.8191	14.420	5.1160	4.9787
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.5078	68598.	.83002	1.6026	1.374	.83806	1.1812	.63338
Stddev	.0903	248.	.18035	.2279	.806	1.7932	.7718	.05345
%RSD	2.0036	.36156	21.728	14.219	58.66	213.97	65.341	8.4391
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 190-18116-c-1-a Acquired: 11/19/2018 21:44:37 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	2.2589	.66717	8.6005	1003.3	8.0168
Stddev	.2867	1.4750	.1757	8.1	3.7705
%RSD	12.691	221.09	2.0435	.80606	47.033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6352.0	4221.3	47394.	5612.0
Stddev	4.6	4.5	19.	15.0
%RSD	.07176	.10686	.03978	.26745
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	93.709%	97.171%	97.401%	99.000%
Range				

Sample Name: 240-104412-a-3-a Acquired: 11/19/2018 21:49:04 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.5193	81614.	26.552	F 327060.	466.04	-.04804
Stddev	.3985	200.	1.436	1644.	1.17	.09464
%RSD	26.232	.24489	5.4065	.50270	.25093	196.97
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit				20000.		
Low Limit				-500000.		

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	176080.	-.7164	26.415	3261.0	1962.7	7371.1
Stddev	210.	.0714	.648	6.7	1.4	7.1
%RSD	.11928	9.964	2.4531	.20606	.07016	.09578
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 510020.	63.991	88769.	310.89	1029.5	358750.
Stddev	4842.	1.373	218.	.26	14.7	2750.
%RSD	.94931	2.1459	.24525	.08341	1.4308	.76659
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500000.					
Low Limit	-500000.					

Sample Name: 240-104412-a-3-a Acquired: 11/19/2018 21:49:04 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	11333.	103.86	175.2	27.152	1794.7	2729.7
Stddev	103.	1.50	1.8	1.966	13.0	1.8
%RSD	.91222	1.4410	.9984	7.2393	.72259	.06615
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-18.661	167.81	904.32	4990.2	1868.9
Stddev	1.065	1.65	6.61	14.3	10.8
%RSD	5.7068	.98074	.73121	.28632	.57571
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5213.3	3763.6	43001.	5495.2
Stddev	5.8	10.6	72.	5.5
%RSD	.11052	.28068	.16712	.10087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	76.909%	86.635%	88.373%	96.940%
Range				

Sample Name: 240-104418-g-2-a Acquired: 11/19/2018 21:53:31 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.03852	-1.1773	1.2922	908.45	83.017	-.12804	66585.	.0505
Stddev	.49996	8.0271	1.7666	91.07	.192	.15567	112.	.1331
%RSD	1297.8	681.80	136.72	10.024	.23087	121.57	.16826	263.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	7.6372	1.6866	.68381	79.577	2128.0	12.521	17718.	21.516
Stddev	.1816	.2509	.58127	2.557	59.0	.876	65.	.031
%RSD	2.3779	14.873	85.005	3.2131	2.7730	6.9983	.36772	.14424
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	8.4501	95456.	2.2503	1.8011	-2.164	-1.3585	1.8643	1.8601
Stddev	.1941	91.	.3912	.7757	.418	2.4562	.5301	.0911
%RSD	2.2975	.09564	17.386	43.066	19.32	180.80	28.436	4.8964
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-104418-g-2-a Acquired: 11/19/2018 21:53:31 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.80030	3.4567	1.4243	6127.1	651.99
Stddev	.55180	2.8018	.1185	44.8	10.38
%RSD	68.949	81.052	8.3204	.73037	1.5917
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6216.1	4211.2	47516.	5678.5
Stddev	13.6	11.1	43.	10.4
%RSD	.21928	.26281	.09048	.18352
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	91.703%	96.938%	97.652%	100.17%
Range				

Sample Name: 240-104418-g-3-a Acquired: 11/19/2018 21:57:52 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.14271	-15.924	1.8072	488.11	70.091	-.07122	67919.	-.1461
Stddev	.33536	8.105	.9599	28.90	.270	.04677	120.	.1471
%RSD	235.00	50.899	53.117	5.9205	.38482	65.671	.17661	100.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.2603	1.0551	.23006	34.873	1732.5	13.531	18165.	8.7628
Stddev	.0607	.2163	.92890	2.107	28.0	.550	210.	.0686
%RSD	4.8155	20.502	403.76	6.0429	1.6149	4.0638	1.1561	.78235
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	7.0428	97389.	1.0309	.19721	-1.468	-.95580	.24289	-.03323
Stddev	.2008	219.	.0725	.56649	1.458	.51101	.58015	.01223
%RSD	2.8507	.22527	7.0284	287.26	99.37	53.464	238.85	36.814
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-104418-g-3-a Acquired: 11/19/2018 21:57:52 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.66630	1.0930	.64908	6390.6	651.84
Stddev	.87517	3.7341	.05402	84.2	5.69
%RSD	131.35	341.65	8.3227	1.3169	.87332
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6141.5	4160.3	46744.	5664.6
Stddev	8.4	7.7	211.	23.9
%RSD	.13675	.18389	.45038	.42170
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	90.603%	95.768%	96.064%	99.928%
Range				

Sample Name: 240-104418-g-4-a Acquired: 11/19/2018 22:02:16 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.23171	26.529	2.2415	288.59	486.28	-.13242	116620.
Stddev	.34498	37.142	1.2368	11.97	2.29	.07534	403.
%RSD	148.88	140.00	55.175	4.1484	.47039	56.895	.34552
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1040	.21772	.89481	.22821	5437.2	1357.1	10.895
Stddev	.1781	.12405	.29461	.45882	24.9	18.7	1.453
%RSD	171.2	56.978	32.924	201.05	.45810	1.3768	13.337
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	32597.	490.44	.52896	59129.	1.1951	.08994	-1.778
Stddev	205.	.28	.23699	260.	.0493	1.1557	2.294
%RSD	.63001	.05740	44.802	.43888	4.1255	1285.0	129.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104418-g-4-a Acquired: 11/19/2018 22:02:16 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.2659	-.06571	-.18153	.24194	.47085	46.871	8188.9
Stddev	1.6575	.05202	.03501	.66032	.63574	.197	67.9
%RSD	130.94	79.166	19.289	272.93	135.02	.42130	.82919
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	374.87
Stddev	1.33
%RSD	.35589
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6053.7	4100.5	46286.	5579.2
Stddev	7.4	4.8	9.	28.8
%RSD	.12183	.11607	.02044	.51668
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	89.307%	94.390%	95.124%	98.421%
Range				

Sample Name: CCV-3914190 Acquired: 11/19/2018 22:06:37 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	966.25	24553.	493.91	5138.0	1922.6	1906.5	48304.	492.4
Stddev	2.12	132.	1.75	18.2	.8	5.8	60.	1.6
%RSD	.21901	.53685	.35499	.35390	.04266	.30610	.12489	.3305
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1945.7	1924.9	1902.3	24494.	47174.	4843.6	48536.	1938.2
Stddev	7.4	4.8	3.4	30.	31.	2.1	62.	6.0
%RSD	.37833	.25042	.17853	.12155	.06542	.04247	.12775	.30772
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2000.3	47015.	1945.8	471.17	495.3	492.25	4932.4	4927.8
Stddev	12.1	25.	5.9	2.65	3.8	4.07	22.9	27.4
%RSD	.60431	.05239	.30238	.56184	.7587	.82764	.46452	.55613
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 22:06:37 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	970.02	1952.6	1976.7	5113.8	4821.3
Stddev	2.92	2.6	6.2	75.8	22.3
%RSD	.30111	.13239	.31570	1.4832	.46252
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5889.3	4078.6	45915.	5481.7
Stddev	4.2	7.5	86.	3.2
%RSD	.07210	.18437	.18776	.05822

Sample Name: CCB Acquired: 11/19/2018 22:10:46 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.06921	-25.310	.27342	F 142.02	-.15348	-.08345	-9.4606
Stddev	.16298	27.839	1.3495	5.37	.07825	.15127	.4697
%RSD	235.50	109.99	493.54	3.7838	50.981	181.27	4.9643
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit				100.00			
Low Limit				-100.00			

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0005	.15672	.05967	.16457	.70774	116.31	4.6884
Stddev	.1101	.04495	.28042	.58247	1.6441	26.52	1.2337
%RSD	21540.	28.678	469.92	353.93	232.31	22.804	26.314
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	10.463	-.37834	4.3335	365.52	.24802	-.28829	-2.197
Stddev	9.156	.06373	.4326	16.64	.15643	.71849	1.693
%RSD	87.511	16.845	9.9825	4.5536	63.072	249.23	77.05
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: CCB Acquired: 11/19/2018 22:10:46 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.07255	.69989	2.2920	1.2560	-.57267	-1.3906	-21.105
Stddev	.78111	.60853	.1225	.7691	2.0392	.1011	6.650
%RSD	1076.6	86.946	5.3425	61.235	356.09	7.2691	31.506
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	3.8301
Stddev	.9853
%RSD	25.726
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6736.6	4287.3	48704.	5612.2
Stddev	4.9	3.9	278.	9.2
%RSD	.07220	.09133	.57067	.16470

Sample Name: lb 240-355686/1-b Acquired: 11/19/2018 22:15:14 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.29171	-47.230	-.67192	F 114.27	-.24193	-.06239	27.707
Stddev	.68113	1.494	1.4020	2.84	.16148	.02234	.863
%RSD	233.50	3.1636	208.65	2.4878	66.747	35.808	3.1145
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	None
High Limit				100.00			
Low Limit				-1000.0			

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1978	-.10880	.36555	.15231	3.6843	87.117	3.4643
Stddev	.1278	.21757	.40151	.30217	.7255	36.118	.3488
%RSD	64.58	199.97	109.84	198.39	19.690	41.459	10.070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5.4261	-.32901	.23322	13113.	.27960	.43202	-1.899
Stddev	12.982	.04585	.06892	25.	.35125	.29098	.318
%RSD	239.26	13.935	29.551	.19012	125.63	67.353	16.77
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: lb 240-355686/1-b Acquired: 11/19/2018 22:15:14 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.37861	25.284	.38172	1.0679	.59199	.03609	-16.889
Stddev	1.4950	.371	.14873	.8926	2.4703	.15432	5.881
%RSD	394.87	1.4670	38.964	83.586	417.29	427.64	34.825
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	3.5651
Stddev	1.9726
%RSD	55.331
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6602.6	4259.7	48356.	5631.5
Stddev	21.9	17.9	59.	19.6
%RSD	.33168	.41975	.12255	.34742

Sample Name: mb 240-355787/2-a Acquired: 11/19/2018 22:19:42 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.16543	-25.694	.37253	90.919	-.24529	-.11468	22.295	.0433
Stddev	.13052	21.953	1.5924	2.553	.07291	.03973	3.023	.0968
%RSD	78.897	85.438	427.45	2.8083	29.722	34.645	13.561	223.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.10919	.52266	-.12754	4.8220	79.215	4.7574	18.198	-.32059
Stddev	.14217	.27554	.45967	1.5655	33.141	.8405	17.506	.02854
%RSD	130.21	52.719	360.43	32.465	41.837	17.667	96.200	8.9014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.67702	344.63	.13025	.13592	-2.386	-1.1536	24.524	-.21399
Stddev	.16336	11.22	.04664	.28173	.573	.5602	.627	.44548
%RSD	24.129	3.2545	35.806	207.28	24.02	48.563	2.5587	208.18
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: mb 240-355787/2-a Acquired: 11/19/2018 22:19:42 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.06751	.66819	-.07076	-20.018	4.7511
Stddev	.89344	.80132	.06312	9.202	2.0935
%RSD	1323.4	119.92	89.205	45.969	44.065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6784.4	4340.9	49183.	5675.9
Stddev	17.5	10.3	51.	16.0
%RSD	.25793	.23698	.10313	.28218

Sample Name: lcs 240-355787/3-a Acquired: 11/19/2018 22:24:10 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	44.319	1704.4	1704.3	929.88	1700.6	42.231	32.203	43.52
Stddev	.410	14.2	3.5	1.84	2.3	.149	1.000	.11
%RSD	.92523	.83293	.20468	.19782	.13676	.35359	3.1064	.2514
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	415.44	168.72	211.39	883.77	88.917	849.17	-6.9056	433.93
Stddev	1.25	.82	.86	1.47	29.289	.88	16.301	.22
%RSD	.30157	.48529	.40871	.16651	32.940	.10363	236.06	.05155
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	872.95	12690.	418.27	438.38	422.9	1703.1	1690.8	857.75
Stddev	2.15	25.	2.36	.98	.6	5.2	5.5	.50
%RSD	.24643	.19423	.56452	.22447	.1456	.30429	.32513	.05876
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: lcs 240-355787/3-a Acquired: 11/19/2018 22:24:10 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1744.3	431.03	421.87	906.21	867.73
Stddev	6.6	4.63	1.05	7.78	4.50
%RSD	.38011	1.0739	.24989	.85857	.51891
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6550.2	4279.1	48200.	5601.5
Stddev	11.4	8.2	76.	9.0
%RSD	.17453	.19150	.15860	.16038

Sample Name: 240-104152-a-1-h Acquired: 11/19/2018 22:28:13 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.26561	135.54	1.6986	66.820	80.177	-.10909	285.99	.1297
Stddev	.17460	24.00	1.7809	1.363	.544	.11182	1.54	.0436
%RSD	65.735	17.704	104.85	2.0394	.67862	102.51	.53786	33.61
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6.8621	1.1828	7.3468	93.386	684.13	3.3241	111.62	.88688
Stddev	.2166	.2499	.5185	2.101	26.44	1.3560	17.84	.03019
%RSD	3.1561	21.128	7.0576	2.2501	3.8652	40.792	15.981	3.4035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.4811	1978.0	.56266	.75441	-1.181	4.1143	1022.8	9.7646
Stddev	.2634	6.8	.22138	.16616	1.179	1.7361	11.4	.0467
%RSD	17.786	.34537	39.345	22.025	99.84	42.197	1.1160	.47838
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-104152-a-1-h Acquired: 11/19/2018 22:28:13 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.23056	-.35082	299.73	170.69	5.7129
Stddev	.80440	4.7833	2.75	7.25	1.6897
%RSD	348.89	1363.5	.91883	4.2462	29.578
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6861.5	4363.7	49643.	5837.8
Stddev	6.1	4.2	79.	3.5
%RSD	.08905	.09552	.15998	.06001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	101.22%	100.45%	102.02%	102.98%
Range				

Sample Name: SD 240-104152-a-1h@5 Acquired: 11/19/2018 22:32:37 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.47743	25.074	-.41451	57.633	16.556	-.17702	53.987	.0215
Stddev	.30157	37.661	3.5347	.225	.222	.07320	1.008	.0298
%RSD	63.166	150.20	852.75	.38970	1.3422	41.349	1.8677	138.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.5767	.36209	.87048	18.848	166.92	3.1022	20.387	.05036
Stddev	.1365	.05343	.89051	1.926	15.10	1.0294	17.339	.06507
%RSD	8.6569	14.757	102.30	10.219	9.0484	33.185	85.053	129.20
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.95250	577.54	.22445	.43039	-.4508	.22588	213.84	1.4023
Stddev	.14224	1.74	.42306	.57904	.6256	1.4517	1.49	.2108
%RSD	14.933	.30150	188.49	134.54	138.8	642.68	.69713	15.032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: SD 240-104152-a-1h@5 Acquired: 11/19/2018 22:32:37 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-.59087	2.5752	62.921	12.055	3.9872
Stddev	.60490	2.5396	.274	6.278	4.9710
%RSD	102.37	98.619	.43536	52.081	124.67
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6859.5	4357.7	49631.	5716.9
Stddev	25.8	12.5	91.	15.5
%RSD	.37541	.28734	.18379	.27066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	101.20%	100.31%	102.00%	100.85%
Range				

Sample Name: 240-104152-a-1i ms@5 Acquired: 11/19/2018 22:37:01 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	W 173.95	377.92	903.19	232.71	8936.6	8.6288	45.022
Stddev	.69	7.93	5.82	.99	51.7	.0924	2.532
%RSD	.39391	2.0994	.64399	.42394	.57811	1.0712	5.6231
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	100.00						
Low Limit	-500000.						

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	187.0	89.451	894.40	46.374	199.75	307.63	181.29
Stddev	.8	.585	1.29	.677	2.57	44.96	1.35
%RSD	.4326	.65411	.14455	1.4590	1.2873	14.616	.74239
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	25.296	92.097	180.17	996.65	87.469	942.74	82.00
Stddev	8.794	.149	1.27	16.64	.372	4.29	2.26
%RSD	34.765	.16182	.70474	1.6696	.42514	.45514	2.760
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104152-a-1i ms@5 Acquired: 11/19/2018 22:37:01 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	181.41	532.93	181.24	363.37	90.681	138.39	198.43
Stddev	1.80	2.27	.38	2.50	4.871	1.12	3.78
%RSD	.99023	.42504	.20694	.68806	5.3720	.81198	1.9072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	186.53
Stddev	4.65
%RSD	2.4938
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6760.0	4320.4	49213.	5712.5
Stddev	5.2	4.8	53.	16.1
%RSD	.07635	.11074	.10860	.28256
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	99.727%	99.454%	101.14%	100.77%
Range				

Sample Name: 240-104152-a1j msd@5 Acquired: 11/19/2018 22:41:18 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	W 174.77	354.59	913.07	224.40	9048.8	8.7639	51.045
Stddev	.86	39.74	6.21	1.40	74.9	.1267	2.983
%RSD	.49155	11.208	.68058	.62268	.82740	1.4457	5.8438
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	100.00						
Low Limit	-500000.						

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	188.8	90.665	909.40	47.450	199.63	227.38	184.62
Stddev	1.3	.662	1.69	1.309	1.56	52.39	.69
%RSD	.6631	.73006	.18554	2.7581	.78071	23.041	.37506
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	12.308	93.865	182.22	731.13	88.403	950.51	79.64
Stddev	4.208	.286	1.08	9.94	.415	3.40	1.39
%RSD	34.186	.30500	.59528	1.3597	.46972	.35793	1.744
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104152-a1j msd@5 Acquired: 11/19/2018 22:41:18 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	182.10	557.44	183.76	367.44	89.065	145.46	191.25
Stddev	2.10	5.24	.13	1.94	2.039	1.34	7.11
%RSD	1.1555	.94018	.07116	.52834	2.2891	.92199	3.7183
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	186.72
Stddev	5.39
%RSD	2.8852
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6774.9	4334.4	49175.	5723.8
Stddev	21.3	14.5	143.	8.2
%RSD	.31389	.33347	.29098	.14388
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	99.948%	99.774%	101.06%	100.97%
Range				

Sample Name: mb 240-355604/1-a Acquired: 11/19/2018 22:45:36 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.12483	-23.327	2.3736	33.711	.08583	-.10758	35.444	.0366
Stddev	.14287	6.619	.8867	.439	.40579	.06757	1.728	.1745
%RSD	114.46	28.376	37.358	1.3033	472.78	62.810	4.8758	476.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.00703	.30641	-.32264	3.5194	53.712	2.6431	8.1728	-.42166
Stddev	.12173	.18728	.60314	.4209	25.516	1.0901	10.032	.05173
%RSD	1731.3	61.122	186.94	11.958	47.505	41.244	122.75	12.268
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.39894	207.65	.00352	.13200	-1.404	-.57818	-.45835	-.57132
Stddev	.23836	3.05	.24095	.14438	1.355	1.3523	.16631	.08576
%RSD	59.749	1.4676	6854.4	109.38	96.54	233.88	36.284	15.011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: mb 240-355604/1-a Acquired: 11/19/2018 22:45:36 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.12446	-1.2971	-.26618	-31.232	8.8264
Stddev	.85926	2.4871	.05513	8.136	1.7863
%RSD	690.37	191.75	20.712	26.049	20.238
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6830.5	4362.1	49319.	5729.8
Stddev	23.7	12.6	40.	11.8
%RSD	.34668	.28798	.08016	.20654

Sample Name: lcs 240-355604/2-a Acquired: 11/19/2018 22:50:03 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	49.198	1984.6	2050.9	1058.6	1937.5	49.580	48260.	50.37
Stddev	.280	25.7	9.1	3.5	2.8	.096	125.	.27
%RSD	.56953	1.2967	.44365	.32944	.14367	.19262	.25900	.5405
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	492.80	194.05	242.95	1011.9	48159.	974.69	48740.	496.13
Stddev	1.02	.18	.79	4.2	147.	2.54	234.	.78
%RSD	.20666	.09334	.32387	.41656	.30614	.26083	.48095	.15656
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1003.0	48301.	496.97	486.28	506.3	2070.8	1988.6	1001.9
Stddev	4.5	124.	1.15	.61	1.6	11.2	4.3	1.0
%RSD	.44544	.25646	.23232	.12625	.3131	.54098	.21390	.09532
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: lcs 240-355604/2-a Acquired: 11/19/2018 22:50:03 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1975.7	507.27	506.88	1069.8	989.65
Stddev	9.0	4.13	.49	12.1	4.03
%RSD	.45335	.81425	.09683	1.1288	.40727
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6011.2	4104.1	46559.	5625.2
Stddev	5.0	7.8	16.	49.5
%RSD	.08376	.18992	.03498	.87924

Sample Name: 240-104355-e-1-a Acquired: 11/19/2018 22:54:05 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.50251	504.48	5.5347	53.158	67.850	-.07115	107480.
Stddev	.26731	33.73	1.9421	.444	.453	.08711	273.
%RSD	53.194	6.6861	35.089	.83579	.66710	122.44	.25446
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1904	.25800	1.7914	1.5365	1916.8	1293.8	12.744
Stddev	.0543	.10254	.1561	.4752	22.3	39.1	.574
%RSD	28.53	39.743	8.7139	30.925	1.1633	3.0221	4.5041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	31560.	149.88	18.352	4185.3	1.5435	1.7171	1.074
Stddev	285.	.12	.111	14.3	.8193	1.6787	2.421
%RSD	.90240	.07861	.60540	.34080	53.079	97.764	225.5
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-e-1-a Acquired: 11/19/2018 22:54:05 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.0840	.88495	7.8035	2.0178	3.7587	3.5531	5580.6
Stddev	1.7388	.57205	.2112	.1461	2.3516	.0230	36.4
%RSD	160.41	64.642	2.7060	7.2425	62.566	.64631	.65165
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	284.32
Stddev	9.91
%RSD	3.4860
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6230.2	4151.3	47093.	5672.5
Stddev	15.7	14.9	127.	24.6
%RSD	.25134	.35809	.26930	.43371
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	91.912%	95.560%	96.782%	100.07%
Range				

Sample Name: CCV-3914190 Acquired: 11/19/2018 22:58:30 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	964.38	24495.	494.59	4975.4	1931.5	1928.1	48552.	492.4
Stddev	.97	35.	3.13	4.8	2.3	4.1	112.	.6
%RSD	.10065	.14256	.63267	.09670	.12152	.21319	.23052	.1148
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1939.9	1917.8	1902.2	24504.	47356.	4845.1	48632.	1942.8
Stddev	3.8	6.4	2.7	41.	66.	11.4	190.	1.7
%RSD	.19626	.33169	.14254	.16628	.13947	.23582	.39017	.08751
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1990.0	47719.	1941.4	467.47	495.9	494.95	4921.8	4926.7
Stddev	9.1	85.	5.1	1.72	2.8	2.16	13.8	23.5
%RSD	.45861	.17712	.26417	.36808	.5578	.43739	.28067	.47670
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 22:58:30 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	963.19	1951.3	1968.9	5113.7	4842.9
Stddev	2.55	10.1	6.8	66.4	10.3
%RSD	.26493	.51570	.34539	1.2993	.21244
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5934.4	4110.8	46046.	5508.0
Stddev	7.3	7.4	140.	25.4
%RSD	.12336	.17986	.30308	.46156

Sample Name: CCB Acquired: 11/19/2018 23:02:38 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.03248	-28.061	.81603	28.764	-.20815	-.06549	-12.540	.0374
Stddev	.43831	31.031	2.1217	1.124	.14603	.18813	4.016	.0550
%RSD	1349.3	110.58	260.01	3.9064	70.155	287.29	32.027	147.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.16596	.21038	-.45817	-.78760	15.592	3.0839	2.2832	-.41694
Stddev	.18672	.15897	.45278	1.1298	10.835	2.7251	17.056	.01823
%RSD	112.51	75.566	98.822	143.45	69.492	88.365	747.01	4.3716
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.1011	138.55	.47926	.36362	-.2990	.64078	.58872	2.0837
Stddev	.2581	4.49	.06104	.35313	.7079	2.2139	.45892	.2961
%RSD	6.2940	3.2418	12.736	97.116	236.8	345.51	77.953	14.209
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 23:02:38 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.0276	3.5833	-1.3563	-23.093	5.5265
Stddev	.4690	3.4603	.0921	5.063	2.1589
%RSD	45.642	96.566	6.7877	21.926	39.064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6791.2	4319.4	48628.	5627.1
Stddev	6.0	2.1	143.	14.1
%RSD	.08797	.04862	.29359	.25016

Sample Name: SD 240-104355-e-1a@5 Acquired: 11/19/2018 23:07:07 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.06570	64.376	2.5146	28.621	13.429	-.05193	21579.	.1114
Stddev	.16795	22.578	1.1691	.871	.219	.16632	86.	.0629
%RSD	255.64	35.072	46.492	3.0436	1.6271	320.29	.39830	56.44
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.22137	.64891	-.15784	388.24	265.05	4.0766	6435.7	31.105
Stddev	.07839	.19022	1.2979	6.86	8.82	.8059	119.5	.108
%RSD	35.414	29.314	822.30	1.7659	3.3261	19.770	1.8563	.34756
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.0615	911.79	-.06094	-.17323	-2.466	-.12825	.39839	1.4899
Stddev	.2151	6.53	.17619	1.5619	.775	.68794	.56602	.2173
%RSD	7.0261	.71629	289.11	901.59	31.43	536.40	142.08	14.582
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: SD 240-104355-e-1a@5 Acquired: 11/19/2018 23:07:07 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.3970	1.4727	.40523	1083.8	63.708
Stddev	.5457	2.1328	.05612	27.2	3.608
%RSD	39.063	144.82	13.849	2.5059	5.6628
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6636.6	4278.4	48616.	5694.3
Stddev	12.0	5.1	20.	11.0
%RSD	.18145	.11980	.04211	.19356
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	97.906%	98.487%	99.911%	100.45%
Range				

Sample Name: 240-104355-e-1-b ms Acquired: 11/19/2018 23:11:32 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	49.698	2574.5	2034.6	1059.1	1981.3	48.173	159010.
Stddev	.597	13.9	8.3	3.0	1.9	.334	199.
%RSD	1.2013	.54022	.40775	.28281	.09423	.69235	.12487
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	49.28	483.07	190.32	242.04	2946.4	48614.	967.17
Stddev	.11	1.42	.18	.82	9.8	124.	2.61
%RSD	.2293	.29370	.09321	.34018	.33168	.25423	.26939
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	79036.	645.19	984.22	51775.	486.82	465.09	502.9
Stddev	209.	.09	4.44	111.	.90	.52	4.1
%RSD	.26388	.01450	.45126	.21530	.18403	.11192	.8083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-e-1-b ms Acquired: 11/19/2018 23:11:32 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2028.7	1972.8	988.83	1912.4	486.15	496.24	7128.3
Stddev	5.3	4.9	1.14	8.2	3.29	1.60	46.9
%RSD	.26004	.24912	.11576	.42767	.67570	.32150	.65837
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1241.7
Stddev	7.6
%RSD	.60887
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5817.6	4058.6	45984.	5686.8
Stddev	4.9	4.5	186.	11.6
%RSD	.08445	.11048	.40478	.20455
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	85.824%	93.426%	94.504%	100.32%
Range				

Sample Name: 240-104355-e-1-c msd Acquired: 11/19/2018 23:15:32 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50.076	2596.8	2082.7	1080.1	2000.9	49.047	159740.
Stddev	.407	23.2	2.3	.6	3.7	.381	310.
%RSD	.81325	.89156	.11238	.05200	.18596	.77673	.19400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50.31	491.69	194.00	245.89	2954.4	49167.	981.55
Stddev	.33	1.25	1.20	1.13	7.6	29.	1.34
%RSD	.6641	.25414	.61704	.45861	.25699	.05962	.13655
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	79722.	653.59	1012.6	52327.	496.04	470.85	512.6
Stddev	124.	.93	3.6	49.	.78	.84	3.4
%RSD	.15567	.14279	.35328	.09389	.15628	.17746	.6671
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-e-1-c msd Acquired: 11/19/2018 23:15:32 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2071.7	2013.1	1005.5	1944.3	491.08	505.53	7116.5
Stddev	2.9	5.5	.9	9.6	3.70	1.43	25.9
%RSD	.14124	.27271	.08677	.49457	.75419	.28217	.36447
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1255.5
Stddev	6.2
%RSD	.49298
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5781.9	4029.0	45528.	5593.8
Stddev	8.1	1.9	116.	24.1
%RSD	.14039	.04759	.25515	.43045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	85.298%	92.744%	93.567%	98.678%
Range				

Sample Name: 240-104355-e-2-a Acquired: 11/19/2018 23:19:31 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.08134	13007.	37.493	84.716	92.570	.55020	139310.
Stddev	.41984	23.	1.982	.873	.054	.07288	66.
%RSD	516.18	.17457	5.2872	1.0300	.05831	13.247	.04709
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.8195	9.4281	22.981	23.296	27421.	6206.4	59.945
Stddev	.1801	.2056	.234	.290	32.	38.7	1.347
%RSD	21.97	2.1806	1.0169	1.2431	.11535	.62307	2.2468
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	47140.	429.08	29.574	8811.7	27.256	13.507	1.614
Stddev	83.	.58	.224	12.2	.514	1.078	.877
%RSD	.17585	.13475	.75847	.13892	1.8856	7.9795	54.33
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-e-2-a Acquired: 11/19/2018 23:19:31 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.3399	3.4673	131.96	2.8877	35.097	82.537	18054.
Stddev	1.0736	.3819	.20	1.2664	1.761	.134	570.
%RSD	32.144	11.015	.14936	43.856	5.0171	.16214	3.1551
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	989.42
Stddev	17.88
%RSD	1.8069
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6056.2	4170.2	47045.	5749.4
Stddev	14.1	12.7	69.	42.5
%RSD	.23211	.30529	.14604	.73860
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	89.344%	95.995%	96.683%	101.42%
Range				

Sample Name: 240-104355-e-3-a Acquired: 11/19/2018 23:23:49 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.75325	34059.	33.934	82.566	207.02	1.8228	129050.
Stddev	.03231	66.	.581	.113	.39	.0366	176.
%RSD	4.2898	.19366	1.7116	.13703	.18931	2.0071	.13627
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.4855	25.732	51.244	46.415	65840.	10383.	107.31
Stddev	.0811	.236	.092	.176	129.	23.	1.29
%RSD	16.71	.91887	.17989	.37916	.19637	.21862	1.2009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	44732.	796.19	42.454	6028.6	62.849	22.988	1.346
Stddev	561.	2.08	.256	21.9	.897	.786	.114
%RSD	1.2545	.26153	.60238	.36249	1.4265	3.4212	8.435
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-e-3-a Acquired: 11/19/2018 23:23:49 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.34550	5.0162	248.21	1.0858	87.327	174.38	30071.
Stddev	.53974	.4412	.59	.6364	2.527	1.36	860.
%RSD	156.22	8.7949	.23943	58.613	2.8943	.77782	2.8601
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1439.9
Stddev	13.5
%RSD	.93631
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6050.0	4222.3	47506.	5757.7
Stddev	12.5	9.2	116.	13.2
%RSD	.20724	.21864	.24487	.22850
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	89.253%	97.194%	97.631%	101.57%
Range				

Sample Name: 240-104355-e-4-a Acquired: 11/19/2018 23:28:00 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.38069	1215.8	2.7788	48.674	127.73	-.03740	140880.
Stddev	.80964	3.5	1.1089	.373	1.36	.14285	1217.
%RSD	212.68	.28775	39.904	.76591	1.0627	382.01	.86353
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.0755	.44540	3.5365	1.7864	9637.7	2547.4	31.015
Stddev	.0688	.23431	.1499	.3039	77.6	40.6	1.508
%RSD	91.07	52.608	4.2385	17.012	.80541	1.5929	4.8607
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	47056.	300.80	9.6164	15730.	1.9825	-.90971	-.9155
Stddev	70.	.62	.0962	172.	.2748	1.2332	1.196
%RSD	.14901	.20685	1.0002	1.0940	13.863	135.56	130.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-e-4-a Acquired: 11/19/2018 23:28:00 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.05684	.36964	7.2055	1.1053	1.9564	3.5043	10017.
Stddev	1.9175	.68045	.1877	.1721	2.9302	.1085	210.
%RSD	3373.7	184.08	2.6052	15.568	149.77	3.0975	2.1007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	614.94
Stddev	11.44
%RSD	1.8604
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6098.4	4154.1	46927.	5710.7
Stddev	10.4	1.6	46.	41.3
%RSD	.17046	.03941	.09749	.72345
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	89.967%	95.625%	96.442%	100.74%
Range				

Sample Name: 240-104355-h-5-a Acquired: 11/19/2018 23:32:22 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.00631	-3.0375	16.157	73.993	48.780	-.15441	153290.
Stddev	.72509	24.646	1.124	1.173	.247	.08618	144.
%RSD	11491.	811.39	6.9570	1.5851	.50575	55.814	.09420
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0088	.27861	1.0352	.57757	3592.3	1935.5	27.287
Stddev	.0377	.18343	.4363	.49289	46.8	24.7	1.494
%RSD	426.8	65.837	42.146	85.340	1.3015	1.2779	5.4743
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	47369.	78.263	6.4667	12741.	2.6325	.64784	-.5870
Stddev	91.	.066	.0750	34.	.3386	.68750	.3204
%RSD	.19225	.08442	1.1601	.26448	12.863	106.12	54.58
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-h-5-a Acquired: 11/19/2018 23:32:22 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.65057	-.67399	.09181	1.6724	2.5664	2.9814	8622.5
Stddev	3.1269	.67333	.19559	1.1912	1.6987	.1006	102.1
%RSD	480.65	99.903	213.03	71.225	66.191	3.3726	1.1840
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	906.87
Stddev	7.64
%RSD	.84228
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6134.0	4140.1	46897.	5732.5
Stddev	13.5	6.4	60.	13.2
%RSD	.22052	.15467	.12767	.23075
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	90.492%	95.302%	96.379%	101.13%
Range				

Sample Name: 240-104355-e-6-a Acquired: 11/19/2018 23:36:43 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.34352	448.91	56.832	271.04	777.00	-.01519	164360.
Stddev	.20143	14.70	1.465	1.76	3.21	.06768	754.
%RSD	58.635	3.2746	2.5773	.64997	.41256	445.44	.45885
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.2146	.68189	1.5230	1.7486	20238.	3178.5	37.695
Stddev	.0338	.35930	.1054	.4652	84.	25.7	.432
%RSD	15.77	52.692	6.9233	26.604	.41587	.80986	1.1467
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	48605.	58.021	12.033	40788.	12.834	1.3777	-.8321
Stddev	352.	1.065	.125	198.	.381	1.3518	.9271
%RSD	.72430	1.8354	1.0370	.48563	2.9661	98.119	111.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-e-6-a Acquired: 11/19/2018 23:36:43 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.97471	.05238	5.9184	1.6326	1.3971	5.2371	9583.7
Stddev	1.2670	.44767	.1157	.8279	3.4608	.1466	398.5
%RSD	129.99	854.59	1.9544	50.710	247.71	2.7982	4.1585
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	641.83
Stddev	7.73
%RSD	1.2046
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6058.0	4153.9	47612.	5743.5
Stddev	34.3	30.3	689.	31.4
%RSD	.56600	.72889	1.4479	.54638
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	89.371%	95.620%	97.849%	101.32%
Range				

Sample Name: 240-104355-h-7-a Acquired: 11/19/2018 23:41:04 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.52969	30.221	.59834	131.86	47.966	-.05639	149720.
Stddev	.20652	21.307	2.2148	1.22	.224	.05435	308.
%RSD	38.990	70.506	370.15	.92242	.46760	96.378	.20557
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1375	.05887	1.3362	.18698	61.721	2296.2	26.973
Stddev	.0777	.06653	.0862	.44387	1.755	38.7	1.196
%RSD	56.53	113.01	6.4539	237.39	2.8428	1.6871	4.4348
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	44820.	.88285	4.1386	21560.	2.8039	.35939	-.5383
Stddev	248.	.04562	.1765	78.	.5823	1.6420	2.182
%RSD	.55325	5.1671	4.2653	.36204	20.769	456.89	405.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-h-7-a Acquired: 11/19/2018 23:41:04 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.3325	-.52730	.10477	.43254	-3.2315	-.02572	7227.9
Stddev	3.1030	.49650	.07356	.78592	3.7276	.05312	63.5
%RSD	232.87	94.159	70.211	181.70	115.35	206.52	.87860
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	239.34
Stddev	4.13
%RSD	1.7262
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6038.3	4103.0	46533.	5712.4
Stddev	3.4	6.5	192.	27.3
%RSD	.05673	.15850	.41309	.47852
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	89.081%	94.447%	95.630%	100.77%
Range				

Sample Name: 240-104355-h-8-a Acquired: 11/19/2018 23:45:27 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.14056	1.7098	131.55	2726.5	223.64	-.23591	179980.
Stddev	.23990	25.322	1.43	14.5	.50	.06290	175.
%RSD	170.68	1481.0	1.0835	.53029	.22375	26.662	.09746
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0640	17.803	1.6358	.70800	29983.	3303.0	203.85
Stddev	.1412	.382	.3395	.74573	59.	21.6	1.35
%RSD	220.5	2.1441	20.756	105.33	.19611	.65374	.66203
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	122790.	2004.3	9.2596	389300.	34.473	.66853	-.5400
Stddev	118.	4.7	.3363	1887.	.760	.56922	1.143
%RSD	.09602	.23572	3.6316	.48468	2.2047	85.144	211.7
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-h-8-a Acquired: 11/19/2018 23:45:27 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-2.4416	4.7469	-.49719	1.6599	1.7380	.92648	6612.8
Stddev	2.3687	.4214	.23036	.4869	3.7062	.04418	34.4
%RSD	97.015	8.8766	46.333	29.333	213.24	4.7681	.52040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1188.5
Stddev	10.1
%RSD	.84585
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5479.1	3916.4	44429.	5669.0
Stddev	10.1	7.0	156.	13.8
%RSD	.18484	.17784	.35104	.24296
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	80.831%	90.153%	91.308%	100.00%
Range				

Sample Name: CCV-3914190 Acquired: 11/19/2018 23:49:54 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	972.82	24406.	496.45	4976.9	1931.0	1927.7	48351.	493.8
Stddev	4.57	100.	3.93	2.1	1.6	1.9	50.	.3
%RSD	.46926	.41042	.79127	.04307	.08522	.10066	.10259	.0568
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1946.3	1923.5	1919.0	24331.	47067.	4815.9	48275.	1946.4
Stddev	3.2	6.1	6.1	22.	188.	13.9	114.	4.7
%RSD	.16698	.31538	.31911	.08880	.40041	.28851	.23533	.24113
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1989.2	47360.	1949.3	466.83	496.0	492.01	4937.6	4941.8
Stddev	4.8	128.	3.0	2.72	3.1	6.04	11.7	12.3
%RSD	.24312	.27022	.15230	.58355	.6173	1.2271	.23746	.24924
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/19/2018 23:49:54 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	967.11	1934.7	1974.7	5258.2	4807.7
Stddev	7.46	2.0	4.4	89.9	20.4
%RSD	.77178	.10208	.22410	1.7099	.42400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5922.4	4106.7	46214.	5618.5
Stddev	5.8	4.3	208.	12.7
%RSD	.09833	.10439	.44975	.22552

Sample Name: CCB Acquired: 11/19/2018 23:54:02 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.22527	-2.4585	.84855	16.887	-.43430	.04593	15.315	.0344
Stddev	.57044	24.491	1.4232	1.118	.10203	.21336	36.923	.0116
%RSD	253.23	996.17	167.72	6.6223	23.493	464.57	241.09	33.63
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.24957	.28295	-.39612	2.5530	36.344	3.0755	10.664	-.34720
Stddev	.34105	.47253	1.2272	2.1214	26.494	2.6168	2.876	.01935
%RSD	136.66	167.00	309.81	83.093	72.899	85.086	26.971	5.5743
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.2124	162.83	-.04076	-.04619	-1.919	-2.8837	.62742	2.1535
Stddev	.2822	6.30	.12979	.87727	.794	2.3720	.34587	.2455
%RSD	6.6989	3.8706	318.43	1899.2	41.37	82.254	55.126	11.400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/19/2018 23:54:02 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.77567	.46184	-1.3739	6.7019	4.0027
Stddev	.96075	2.6716	.0417	3.3976	2.0838
%RSD	123.86	578.48	3.0381	50.696	52.060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6809.7	4335.6	48773.	5666.7
Stddev	3.4	5.7	95.	47.5
%RSD	.04957	.13097	.19536	.83861

Sample Name: 240-104355-h-9-a Acquired: 11/19/2018 23:58:29 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.32593	-8.2865	-.03936	44.306	68.857	-.00010	75258.	.1725
Stddev	.37882	18.834	1.4216	.809	.241	.01183	64.	.0815
%RSD	116.23	227.28	3611.9	1.8265	.34940	11766.	.08471	47.25
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.19568	.69448	-.37102	9.0647	1803.4	14.225	30358.	-.13566
Stddev	.09589	.22449	.56782	1.9056	22.5	.276	373.	.03990
%RSD	49.003	32.325	153.04	21.022	1.2495	1.9370	1.2274	29.412
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.7846	51570.	1.1146	1.1129	-1.469	-.98077	.10237	.04756
Stddev	.2724	150.	.4529	.8791	1.531	2.0735	.22481	.05235
%RSD	15.262	.29061	40.631	78.991	104.2	211.42	219.61	110.08
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-104355-h-9-a Acquired: 11/19/2018 23:58:29 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.80995	-2.1346	.53094	4348.6	147.67
Stddev	.10591	1.4228	.10343	24.5	2.73
%RSD	13.076	66.653	19.480	.56426	1.8503
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6164.6	4166.5	46911.	5658.7
Stddev	6.6	5.2	65.	16.5
%RSD	.10731	.12503	.13902	.29081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	90.944%	95.911%	96.409%	99.824%
Range				

Sample Name: 240-104355-e-11-a Acquired: 11/20/2018 0:02:52 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.37227	3274.7	3.6223	668.70	3253.1	.10604	127880.
Stddev	.03590	29.9	1.1960	1.99	4.7	.07471	300.
%RSD	9.6440	.91181	33.017	.29704	.14526	70.449	.23455
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.3621	2.3459	5.2335	8.1179	10682.	5119.6	81.602
Stddev	.1353	.1612	.0660	.6211	21.	23.6	2.739
%RSD	37.37	6.8712	1.2603	7.6508	.19382	.46143	3.3562
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	61198.	133.75	5.4663	42626.	9.5107	3.0294	-1.436
Stddev	113.	.36	.1729	69.	.1119	.3279	1.091
%RSD	.18543	.26737	3.1630	.16142	1.1771	10.823	75.98
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-e-11-a Acquired: 11/20/2018 0:02:52 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.51548	1.3797	45.977	1.1485	8.2024	24.078	12753.
Stddev	.89677	.7845	.332	.6626	5.7501	.168	24.
%RSD	173.97	56.860	.72198	57.691	70.103	.69716	.19056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1715.6
Stddev	1.7
%RSD	.09783
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6021.0	4159.0	46970.	5694.9
Stddev	8.0	3.9	51.	21.1
%RSD	.13309	.09458	.10914	.37094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	88.825%	95.737%	96.530%	100.46%
Range				

Sample Name: 240-104355-e-12-a Acquired: 11/20/2018 0:07:12 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.51929	3844.1	6.9689	254.41	685.90	.07967	157560.
Stddev	.50155	32.3	2.2566	1.12	.51	.10217	78.
%RSD	96.583	.84050	32.380	.44196	.07441	128.25	.04932
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0135	2.1540	5.8576	5.7893	17285.	4295.2	45.400
Stddev	.1259	.2572	.3381	.7638	23.	8.0	1.141
%RSD	929.7	11.939	5.7712	13.194	.13523	.18715	2.5141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50942.	109.91	11.584	20645.	10.746	3.4320	-2.181
Stddev	69.	.10	.186	19.	.489	.4529	.478
%RSD	.13486	.09336	1.6071	.08964	4.5479	13.196	21.90
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-e-12-a Acquired: 11/20/2018 0:07:12 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.3911	.11805	42.741	1.8855	12.091	16.160	14091.
Stddev	.8811	.24490	.393	1.6038	2.631	.063	40.
%RSD	63.338	207.45	.91904	85.062	21.756	.39181	.28265
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	624.97
Stddev	4.73
%RSD	.75685
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6063.1	4165.0	47046.	5710.5
Stddev	6.0	2.9	40.	10.3
%RSD	.09842	.06887	.08518	.18065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	89.447%	95.877%	96.686%	100.74%
Range				

Sample Name: 240-104355-e-13-a Acquired: 11/20/2018 0:11:32 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.01905	2286.2	7.9418	252.46	743.30	.12853	160910.
Stddev	.13853	34.7	.8544	3.28	1.25	.10544	323.
%RSD	727.03	1.5186	10.758	1.3010	.16876	82.036	.20084
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.2238	2.3372	4.2003	5.6139	18212.	3690.6	45.205
Stddev	.0896	.2220	.5579	.6561	35.	42.2	1.696
%RSD	40.03	9.4994	13.283	11.688	.19041	1.1439	3.7522
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	51989.	111.91	10.015	21263.	10.443	2.7195	.3765
Stddev	105.	.15	.370	32.	.168	.9562	.4725
%RSD	.20221	.13583	3.6990	.14962	1.6040	35.159	125.5
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-e-13-a Acquired: 11/20/2018 0:11:32 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-4.0435	.26755	28.815	1.9223	3.7546	17.781	11811.
Stddev	1.8147	.53062	.704	.5320	2.2296	.127	79.
%RSD	44.879	198.32	2.4436	27.676	59.383	.71211	.66540
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	646.74
Stddev	10.48
%RSD	1.6200
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6135.4	4169.8	47062.	5701.1
Stddev	29.8	19.1	40.	11.5
%RSD	.48624	.45835	.08500	.20181
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	90.513%	95.987%	96.719%	100.57%
Range				

Sample Name: 240-104355-h-14-a Acquired: 11/20/2018 0:15:53 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.24201	-15.905	6.8170	196.57	37.569	-.16542	130580.
Stddev	.46503	23.285	3.1321	.74	.023	.14153	309.
%RSD	192.16	146.40	45.946	.37651	.06027	85.556	.23641
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.0460	.77382	2.4908	.26405	392.63	4191.9	56.924
Stddev	.1602	.18510	.0528	.29593	6.42	12.2	1.187
%RSD	348.3	23.920	2.1186	112.07	1.6344	.29054	2.0844
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	48189.	439.70	2.5088	17113.	2.3059	.48457	.8245
Stddev	306.	.60	.1316	60.	.3095	.99194	1.606
%RSD	.63534	.13650	5.2461	.35144	13.423	204.71	194.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-h-14-a Acquired: 11/20/2018 0:15:53 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-2.5472	-.39828	-1.7621	1.2350	3.1708	1.0348	8084.4
Stddev	1.2104	.44195	.1297	.3171	1.7009	.0308	72.6
%RSD	47.521	110.96	7.3601	25.676	53.644	2.9801	.89828
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	16303.
Stddev	65.
%RSD	.40146
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6228.9	4156.7	47404.	5741.9
Stddev	6.7	4.1	121.	13.3
%RSD	.10816	.09862	.25538	.23092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	91.892%	95.685%	97.422%	101.29%
Range				

Sample Name: 240-104355-h-15-a Acquired: 11/20/2018 0:20:14 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.44107	8.6355	1.7626	235.49	29.018	-.02633	120160.
Stddev	.31160	29.966	.3762	.22	.058	.02821	179.
%RSD	70.647	347.01	21.347	.09339	.19892	107.12	.14899
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0173	.54768	1.8158	-.58605	76.374	4200.6	55.366
Stddev	.0361	.03082	.0319	.81217	.908	25.4	.937
%RSD	208.1	5.6273	1.7578	138.58	1.1882	.60349	1.6924
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	40989.	492.30	4.3980	18645.	1.7488	.04900	-.7432
Stddev	470.	.80	.1850	7.	.0847	1.4228	.6513
%RSD	1.1470	.16255	4.2070	.03587	4.8422	2903.7	87.63
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-h-15-a Acquired: 11/20/2018 0:20:14 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-2.1751	-.45755	-1.7192	.46439	2.1349	.49051	7640.0
Stddev	.4140	.40048	.1102	1.4700	2.7875	.06415	59.7
%RSD	19.034	87.527	6.4117	316.55	130.57	13.077	.78078
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	13915.
Stddev	16.
%RSD	.11409
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6233.6	4150.7	47472.	5807.7
Stddev	11.4	3.3	448.	20.9
%RSD	.18264	.08015	.94332	.35917
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	91.962%	95.547%	97.560%	102.45%
Range				

Sample Name: 240-104355-h-16-a Acquired: 11/20/2018 0:24:35 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.16676	-10.843	19.369	118.83	67.807	-.00594	159700.
Stddev	.30647	18.424	1.026	1.47	.285	.02387	574.
%RSD	183.78	169.92	5.2977	1.2334	.42025	401.48	.35957
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.2303	.45575	1.2738	1.1949	4334.2	2795.4	40.488
Stddev	.0816	.08313	.3264	.3970	60.2	38.9	.339
%RSD	35.40	18.240	25.626	33.229	1.3879	1.3901	.83720
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	51227.	205.88	2.0328	16000.	1.7578	.47148	-2.155
Stddev	276.	.11	.1361	16.	.2997	.47619	.822
%RSD	.53791	.05383	6.6973	.09977	17.048	101.00	38.12
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-h-16-a Acquired: 11/20/2018 0:24:35 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.3807	.33359	-.95261	1.0485	.18215	1.0940	7157.8
Stddev	1.0901	.68737	.10909	1.0468	.95511	.0916	211.6
%RSD	78.954	206.06	11.452	99.831	524.36	8.3710	2.9562
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	4248.8
Stddev	62.4
%RSD	1.4684
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6156.3	4118.2	46702.	5652.9
Stddev	5.1	12.2	41.	74.8
%RSD	.08290	.29551	.08737	1.3238
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	90.821%	94.798%	95.979%	99.722%
Range				

Sample Name: 240-104355-h-17-a Acquired: 11/20/2018 0:28:57 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.00497	-3.7865	19.994	121.63	69.287	-.15654	163700.
Stddev	.12197	21.716	1.369	.80	.099	.09208	60.
%RSD	2451.8	573.53	6.8492	.65409	.14260	58.820	.03680
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0886	.31373	2.3240	.33897	4480.2	2891.2	43.124
Stddev	.1908	.08356	.2822	.79967	33.4	27.3	2.837
%RSD	215.4	26.634	12.144	235.91	.74580	.94596	6.5788
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	52693.	210.51	2.0183	16575.	1.7891	.43791	.6475
Stddev	60.	.30	.0724	18.	.2960	1.0815	2.118
%RSD	.11415	.14029	3.5851	.10937	16.544	246.98	327.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104355-h-17-a Acquired: 11/20/2018 0:28:57 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.59900	-.54363	-1.0421	1.0753	-2.0142	.68536	9398.7
Stddev	2.9912	.18476	.1037	.3983	1.1112	.05993	69.1
%RSD	499.37	33.986	9.9466	37.041	55.169	8.7443	.73527
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	4400.0
Stddev	25.8
%RSD	.58547
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6175.4	4132.5	46815.	5651.2
Stddev	13.8	16.0	107.	10.0
%RSD	.22415	.38652	.22800	.17770
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	91.103%	95.127%	96.211%	99.691%
Range				

Sample Name: 240-104363-h-1-a Acquired: 11/20/2018 0:33:16 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.4459	709.50	1.3981	125.18	18.978	.39179	310480.
Stddev	.3769	14.47	1.5103	.56	.264	.18248	1879.
%RSD	10.937	2.0400	108.03	.45025	1.3922	46.576	.60533
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2.199	200.28	4.0078	4.7380	4723.0	7108.2	68.763
Stddev	.086	.99	.2559	.9346	47.2	11.8	.746
%RSD	3.932	.49432	6.3861	19.726	.99881	.16654	1.0847
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	67946.	F 27841.	-1.3833	9408.1	230.52	4.2882	-1.218
Stddev	153.	197.	.3305	36.3	.36	1.4149	1.166
%RSD	.22582	.70765	23.893	.38591	.15692	32.994	95.75
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		10000.					
Low Limit		-500000.					

Sample Name: 240-104363-h-1-a Acquired: 11/20/2018 0:33:16 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	8.2794	-.36199	20.699	12.265	2.9265	121.92	12098.
Stddev	.5400	.44280	.362	.715	1.9038	.63	72.
%RSD	6.5226	122.32	1.7503	5.8322	65.055	.51667	.59297
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	515.28
Stddev	10.93
%RSD	2.1210
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6028.5	4143.9	47426.	5837.5
Stddev	23.4	16.2	377.	19.2
%RSD	.38824	.39082	.79592	.32878
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	88.936%	95.389%	97.467%	102.98%
Range				

Sample Name: 240-104363-h-2-a Acquired: 11/20/2018 0:37:47 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.90040	172.08	22.244	162.87	18.632	.03807	175020.
Stddev	.13445	23.57	2.657	.25	.159	.08310	780.
%RSD	14.933	13.696	11.947	.15045	.85265	218.30	.44588
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.1208	30.934	1.8356	1.2123	67947.	14444.	98.596
Stddev	.2276	.358	.0875	.4638	315.	26.	2.313
%RSD	188.4	1.1558	4.7647	38.255	.46367	.17736	2.3462
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	40383.	W 9386.9	-1.0310	27764.	34.977	.86435	-2.114
Stddev	415.	46.8	.0866	90.	.215	.53213	1.375
%RSD	1.0285	.49853	8.4028	.32385	.61428	61.565	65.04
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		9000.0					
Low Limit		-500000.					

Sample Name: 240-104363-h-2-a Acquired: 11/20/2018 0:37:47 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2.2769	-.56956	1.0500	2.6139	-1.8170	23.468	14645.
Stddev	.9726	.33788	.0846	.4193	3.1938	.342	56.
%RSD	42.714	59.323	8.0602	16.041	175.78	1.4579	.38074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1318.1
Stddev	15.9
%RSD	1.2041
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6138.8	4122.0	46852.	5694.3
Stddev	8.4	.6	127.	23.9
%RSD	.13745	.01468	.27128	.41900
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	90.563%	94.885%	96.287%	100.45%
Range				

Sample Name: CCV-3914190 Acquired: 11/20/2018 0:42:10 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	973.18	24371.	492.88	4980.2	1941.7	1971.1	48577.	494.7
Stddev	2.50	107.	1.99	6.0	2.7	.4	98.	.8
%RSD	.25642	.43854	.40417	.11980	.13997	.01802	.20149	.1606
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1939.0	1908.8	1917.5	24355.	47470.	4821.0	48584.	1957.4
Stddev	4.4	2.8	5.8	46.	51.	5.3	82.	1.5
%RSD	.22751	.14499	.30262	.18698	.10651	.11056	.16866	.07886
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1982.0	48120.	1940.9	466.20	498.5	491.25	4906.1	4929.9
Stddev	9.0	71.	5.2	1.74	3.6	3.07	17.4	52.6
%RSD	.45596	.14843	.26783	.37422	.7153	.62417	.35413	1.0676
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/20/2018 0:42:10 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	955.97	1947.0	1964.4	5264.0	4833.6
Stddev	5.25	4.0	6.6	72.2	5.8
%RSD	.54920	.20690	.33377	1.3719	.11975
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5978.5	4134.7	46471.	5636.1
Stddev	14.6	11.0	27.	5.0
%RSD	.24375	.26638	.05855	.08864

Sample Name: CCB Acquired: 11/20/2018 0:46:17 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.23603	-41.734	.54922	11.394	-.38199	-.16872	-5.1056	.1553
Stddev	.18982	13.594	.79440	.820	.11429	.16371	2.1347	.1052
%RSD	80.422	32.573	144.64	7.2006	29.921	97.033	41.811	67.78
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.09073	.11467	-.35242	.28344	8.6705	2.3303	7.3540	-.05925
Stddev	.08922	.11799	.37690	1.2998	13.543	1.0360	4.5701	.01622
%RSD	98.337	102.90	106.95	458.59	156.20	44.459	62.144	27.381
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.3871	76.440	-.24992	.51548	-2.225	.13301	.27974	2.1809
Stddev	.2572	9.244	.34526	.86406	1.868	2.4922	.13170	.2871
%RSD	5.8630	12.093	138.15	167.62	83.92	1873.7	47.077	13.164
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/20/2018 0:46:17 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.51736	-.01221	-1.4251	-5.3196	3.3039
Stddev	1.1397	2.0331	.1062	5.5961	3.3454
%RSD	220.30	16654.	7.4494	105.20	101.26
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6860.2	4348.8	49135.	5732.9
Stddev	2.1	4.6	61.	25.9
%RSD	.03086	.10615	.12348	.45106

Sample Name: 240-104363-h-3-a Acquired: 11/20/2018 0:50:42 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.08762	415.76	-.18831	106.73	19.258	.72356	66986.	.5119
Stddev	.24479	11.89	1.3037	1.89	.073	.03840	251.	.1747
%RSD	279.39	2.8587	692.35	1.7735	.37782	5.3074	.37413	34.13
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	12.856	1.5741	3.1598	1031.8	8228.2	30.527	12400.	1722.1
Stddev	.313	.1191	.0688	17.7	23.7	.532	214.	2.5
%RSD	2.4313	7.5665	2.1783	1.7192	.28745	1.7421	1.7223	.14573
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.31674	11179.	26.501	.88071	-.4108	.13192	-.61729	.49429
Stddev	.10768	42.	.417	.85109	1.020	1.0376	.22975	.11471
%RSD	33.997	.37708	1.5752	96.637	248.3	786.49	37.219	23.207
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-104363-h-3-a Acquired: 11/20/2018 0:50:42 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	.70306	1.7731	30.498	9849.7	131.38
Stddev	.46812	4.7484	.591	107.5	4.75
%RSD	66.584	267.80	1.9393	1.0910	3.6127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6584.5	4303.7	48834.	5823.4
Stddev	7.1	8.6	195.	48.0
%RSD	.10738	.20092	.39918	.82363
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	97.139%	99.067%	100.36%	102.73%
Range				

Sample Name: 240-104363-d-4-a Acquired: 11/20/2018 0:55:02 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.00359	-3.2562	1.3557	205.06	9.0785	-.04397	126750.
Stddev	.01214	42.001	1.5714	1.68	.2199	.15009	222.
%RSD	338.37	1289.9	115.91	.82143	2.4218	341.34	.17478
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.2134	.36540	.69859	-.10782	39.404	22433.	37.165
Stddev	.0850	.35850	.19310	.53613	1.343	34.	1.225
%RSD	39.81	98.111	27.641	497.23	3.4080	.15089	3.2972
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	40172.	325.56	-.90505	22327.	7.1730	.33373	-1.619
Stddev	292.	.53	.09939	15.	.1664	1.4228	2.211
%RSD	.72591	.16251	10.981	.06865	2.3191	426.31	136.6
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-104363-d-4-a Acquired: 11/20/2018 0:55:02 Type: Unk
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.85926	-.14134	-.47233	1.2548	-1.0820	3.2637	5723.1
Stddev	1.1546	.21734	.05938	.5358	2.9951	.0789	167.0
%RSD	134.37	153.77	12.572	42.698	276.82	2.4183	2.9174
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	463.34
Stddev	.27
%RSD	.05782
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6344.9	4217.2	47966.	5763.6
Stddev	13.2	7.1	129.	15.0
%RSD	.20872	.16819	.26876	.25984
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	93.604%	97.077%	98.577%	101.67%
Range				

Sample Name: CCV-3914190 Acquired: 11/20/2018 0:59:24 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	965.80	24085.	487.51	4933.2	1923.2	1949.8	48242.	490.1
Stddev	3.42	35.	4.04	7.0	3.6	2.1	96.	.9
%RSD	.35373	.14384	.82948	.14244	.18917	.10826	.19901	.1902
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1923.2	1891.7	1899.6	24152.	47054.	4774.9	48355.	1946.0
Stddev	5.7	5.4	3.5	76.	126.	13.2	85.	3.6
%RSD	.29613	.28735	.18622	.31290	.26823	.27551	.17558	.18581
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1961.7	47773.	1927.0	460.99	492.0	483.29	4873.4	4885.8
Stddev	5.2	81.	6.1	.72	1.3	1.34	14.1	21.0
%RSD	.26434	.16916	.31539	.15592	.2590	.27803	.28897	.42973
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3914190 Acquired: 11/20/2018 0:59:24 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	948.35	1922.8	1951.1	5215.7	4796.4
Stddev	3.99	14.2	5.9	64.2	7.4
%RSD	.42121	.73657	.30013	1.2306	.15424
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5994.0	4149.7	46698.	5608.6
Stddev	10.1	6.1	33.	7.9
%RSD	.16838	.14808	.06985	.14101

Sample Name: CCB Acquired: 11/20/2018 1:03:31 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.04619	-18.148	1.2349	12.201	-.36522	.06688	-8.3724	-.0886
Stddev	.13486	22.461	1.7986	.961	.18887	.19937	2.6322	.0842
%RSD	292.00	123.77	145.64	7.8779	51.715	298.08	31.439	95.03
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.11503	.20409	-.25211	.16648	38.361	1.8631	8.1089	-.36289
Stddev	.13099	.22335	.65263	1.2753	24.137	1.2630	7.7655	.05137
%RSD	113.87	109.44	258.86	766.03	62.919	67.793	95.765	14.155
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.3432	61.993	-.20182	.53077	-2.197	-.70829	.58693	2.5406
Stddev	.1629	2.094	.38479	1.3031	1.892	1.1435	.41486	.2055
%RSD	3.7516	3.3781	190.66	245.51	86.10	161.45	70.683	8.0880
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 11/20/2018 1:03:31 Type: QC
Method: ICP I9 6010 200.7 Methods(v559) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.8958	-.46665	-1.4820	-7.0498	.27824
Stddev	.5019	1.0873	.0409	2.1483	5.1885
%RSD	26.471	233.01	2.7615	30.473	1864.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

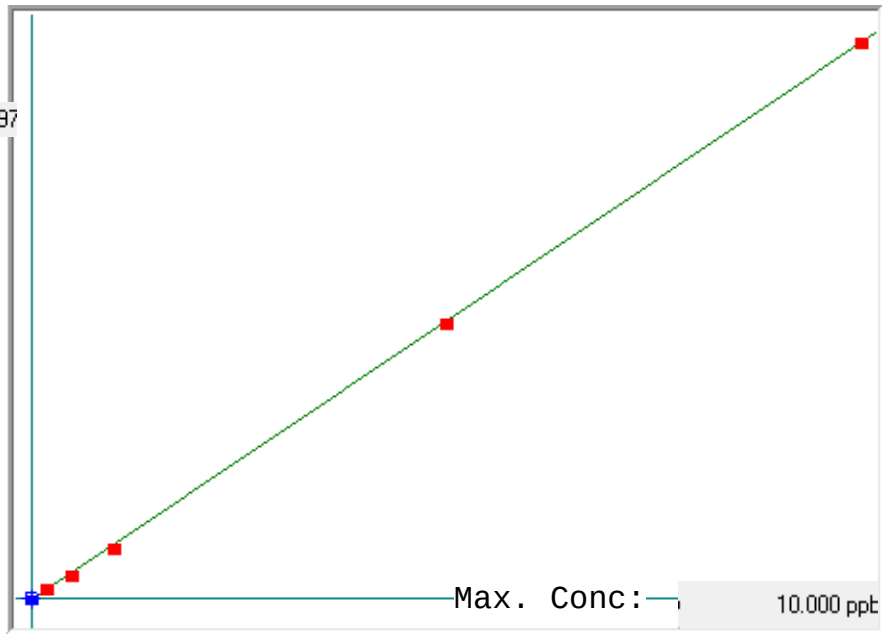
Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6864.3	4361.0	49297.	5692.1
Stddev	5.8	4.2	91.	11.3
%RSD	.08463	.09714	.18520	.19905

Initial Method

Linear

μ Abs.:

52397



A= 0.0000e+000

B= 1.9035e-004

C= 3.4489e-002

Rho= 0.9999697

Accept= Accepted

Accepted Date=

11/19/18 13:05

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0.0 ppb	0.000	0.041	0.041	34	0.000	34		0		0
0.2 ppb	0.200	0.224	0.024	993	0.0 %	993				
0.5 ppb	0.500	0.480	-0.020	2341	0.0 %	2341				
1.0 ppb	1.000	0.954	-0.046	4832	0.0 %	4832				
5.0 ppb	5.000	4.993	-0.007	26051	0.0 %	26051				
10.0 ppb	10.000	10.008	0.008	52397	0.0 %	52397				

Method: Initial Method Operator: Admin Date of Analysis: 19 Nov 2018 11:46:34

Sample ID	Conc.	µ Abs.	Units	Seq ID	Date
0.0 ppb - 1	-	34	ppb	1241	19 Nov 2018 12:12:15
0.2 ppb - 1	-	993	ppb	1242	19 Nov 2018 12:14:16
0.5 ppb - 1	-	2341	ppb	1243	19 Nov 2018 12:16:18
1.0 ppb - 1	-	4832	ppb	1244	19 Nov 2018 12:18:21
5.0 ppb - 1	-	26051	ppb	1245	19 Nov 2018 12:20:25
10.0 ppb - 1	-	52397	ppb	1246	19 Nov 2018 12:22:31
ICV - 1	97.4% 4.8723	25416	ppb	1247	19 Nov 2018 13:05:44
ICB - 1	-0.0190	-281	ppb	1248	19 Nov 2018 13:07:44
CRA - 1	108.0% 0.2161	954	ppb	1249	19 Nov 2018 13:10:07
CCV - 1	97.4% 4.8698	25403	ppb	1250	19 Nov 2018 13:12:06
CCB - 1	-0.0148	-259	ppb	1251	19 Nov 2018 13:14:09
CCV - 1	97.3% 4.8628	25366	ppb	1252	19 Nov 2018 13:16:34
CCB - 1	-0.0201	-287	ppb	1253	19 Nov 2018 13:18:35
~~lb 240-355682/1-c - 1~~ ZZZ No reading taken 11/20/18 AC	0.0345	0	ppb	1254	19 Nov 2018 13:30:46
lb 240-355682/1-c - 1	0.0649	160	ppb	1255	19 Nov 2018 13:31:17
mb 240-355857/2-a - 1	0.0343	-1	ppb	1256	19 Nov 2018 13:33:16
lcs 240-355857/3-a - 1	5.1988	27131	ppb	1257	19 Nov 2018 13:35:16
240-104265-a-5-h - 1	-0.0308	-343	ppb	1258	19 Nov 2018 13:37:16
240-104265-a-5-i ms - 1	5.0033	26104	ppb	1259	19 Nov 2018 13:39:38
240-104265-a-5-j msd - 1	5.2265	27277	ppb	1260	19 Nov 2018 13:41:37
240-104050-a-1-f - 1	-0.0158	-264	ppb	1261	19 Nov 2018 13:44:00
240-104152-a-1-r - 1	0.0636	153	ppb	1262	19 Nov 2018 13:46:24
240-104152-a-2-d - 1	0.0703	188	ppb	1263	19 Nov 2018 13:48:24
190-18062-a-1-d - 1	0.0299	-24	ppb	1264	19 Nov 2018 13:50:25
CCV - 1	97.5% 4.8738	25424	ppb	1265	19 Nov 2018 13:52:28
CCB - 1	-0.0321	-350	ppb	1266	19 Nov 2018 13:54:30
190-18063-a-1-d - 1	0.0333	-6	ppb	1267	19 Nov 2018 13:56:55
190-18063-a-2-d - 1	0.0467	64	ppb	1268	19 Nov 2018 13:58:56
190-18063-a-3-d - 1	0.0509	86	ppb	1269	19 Nov 2018 14:00:58
240-104182-e-2-i - 1	0.0550	108	ppb	1270	19 Nov 2018 14:02:58
240-104241-i-1-h - 1	0.0581	124	ppb	1271	19 Nov 2018 14:04:58
240-104242-j-1-f - 1	0.0476	69	ppb	1272	19 Nov 2018 14:06:58
240-104261-a-1-e - 1	0.0368	12	ppb	1273	19 Nov 2018 14:08:58
240-104265-a-4-f - 1	0.0619	144	ppb	1274	19 Nov 2018 14:10:58
lb 240-355683/1-c - 1	0.0421	40	ppb	1275	19 Nov 2018 14:12:58
mb 240-355863/2-a - 1	0.0472	67	ppb	1276	19 Nov 2018 14:14:58
CCV - 1	98.1% 4.9043	25584	ppb	1277	19 Nov 2018 14:16:59
CCB - 1	-0.0289	-333	ppb	1278	19 Nov 2018 14:19:00
lcs 240-355863/3-a - 1	5.0596	26400	ppb	1279	19 Nov 2018 14:21:23
240-104089-c-4-f - 1	-0.0260	-318	ppb	1280	19 Nov 2018 14:23:24
240-104089-c-4-g ms - 1	5.0965	26594	ppb	1281	19 Nov 2018 14:25:46
240-104089-c-4-h msd - 1	4.9132	25631	ppb	1282	19 Nov 2018 14:27:48
240-104089-c-2-d - 1	-0.0059	-212	ppb	1283	19 Nov 2018 14:30:13
240-104089-g-3-c - 1	0.0484	73	ppb	1284	19 Nov 2018 14:32:37
240-104089-h-5-c - 1	0.0514	89	ppb	1285	19 Nov 2018 14:34:37
lb 240-355685/1-c - 1	0.0413	36	ppb	1286	19 Nov 2018 14:36:37
mb 240-355861/2-a - 1	0.0387	22	ppb	1287	19 Nov 2018 14:38:37
lcs 240-355861/3-a - 1	5.0469	26333	ppb	1288	19 Nov 2018 14:40:37
CCV - 1	95.9% 4.7947	25008	ppb	1289	19 Nov 2018 14:42:38
CCB - 1	-0.0475	-431	ppb	1290	19 Nov 2018 14:45:04
240-104218-a-1-e - 1	0.0491	77	ppb	1291	19 Nov 2018 14:47:25
240-104218-a-1-f ms - 1	5.2245	27266	ppb	1292	19 Nov 2018 14:49:26
240-104218-a-1-g msd - 1	5.0284	26236	ppb	1293	19 Nov 2018 14:51:26
190-18062-a-2-c - 1	-0.0523	-456	ppb	1294	19 Nov 2018 14:53:50
mb 240-355827/1-a - 1	0.0360	8	ppb	1295	19 Nov 2018 14:56:10
lcs 240-355827/2-a - 1	4.9951	26061	ppb	1296	19 Nov 2018 14:58:12
240-104441-d-6-d - 1	-0.0268	-322	ppb	1297	19 Nov 2018 15:00:14
240-104441-d-6-e ms - 1	0.9190	4647	ppb	1298	19 Nov 2018 15:02:37
240-104441-d-6-f msd - 1	0.8747	4414	ppb	1299	19 Nov 2018 15:04:38
240-104441-b-1-b - 1	-0.0525	-457	ppb	1300	19 Nov 2018 15:06:47
CCV - 1	95.1% 4.7560	24805	ppb	1301	19 Nov 2018 15:08:54
CCB - 1	-0.0291	-334	ppb	1302	19 Nov 2018 15:10:55
240-104441-f-2-b - 1	0.0400	29	ppb	1303	19 Nov 2018 15:13:19
240-104441-b-3-b - 1	0.0421	40	ppb	1304	19 Nov 2018 15:15:20
240-104441-b-4-b - 1	0.0406	32	ppb	1305	19 Nov 2018 15:17:20
240-104441-b-5-b - 1	0.0318	-14	ppb	1306	19 Nov 2018 15:19:21
240-104441-f-7-b - 1	0.0269	-40	ppb	1307	19 Nov 2018 15:21:22
240-104441-f-8-b - 1	0.0391	24	ppb	1308	19 Nov 2018 15:23:23
240-104441-f-9-b - 1	0.0446	53	ppb	1309	19 Nov 2018 15:25:25

Method: Initial Method Operator: Admin Date of Analysis: 19 Nov 2018 11:46:34

Sample ID	Conc.	µ Abs.	Units	Seq ID	Date
190-18116-c-1-b - 1	0.0394	26	ppb	1310	19 Nov 2018 15:27:26
240-104412-a-3-b - 1	0.1917	826	ppb	1311	19 Nov 2018 15:29:29
240-104418-g-1-d - 1	0.0274	-37	ppb	1312	19 Nov 2018 15:31:29
CCV - 1	97.7% 4.8872	25494	ppb	1313	19 Nov 2018 15:33:32
CCB - 1	-0.0523	-456	ppb	1314	19 Nov 2018 15:35:33
240-104418-g-2-b - 1	0.0471	66	ppb	1315	19 Nov 2018 15:37:53
240-104418-g-3-b - 1	0.0349	2	ppb	1316	19 Nov 2018 15:39:54
240-104418-g-4-b - 1	0.0482	72	ppb	1317	19 Nov 2018 15:41:54
mb 240-355842/1-a - 1	0.0332	-7	ppb	1318	19 Nov 2018 15:43:55
lcs 240-355842/2-a - 1	5.0434	26315	ppb	1319	19 Nov 2018 15:45:55
240-104442-f-1-d - 1	-0.0205	-289	ppb	1320	19 Nov 2018 15:47:55
240-104442-f-1-e ms - 1	1.1568	5896	ppb	1321	19 Nov 2018 15:50:20
240-104442-f-1-f msd - 1	1.0951	5572	ppb	1322	19 Nov 2018 15:52:21
240-104442-f-2-b - 1	-0.0264	-320	ppb	1323	19 Nov 2018 15:54:27
240-104442-e-4-b - 1	0.0629	149	ppb	1324	19 Nov 2018 15:56:32
CCV - 1	94.4% 4.7187	24609	ppb	1325	19 Nov 2018 15:58:37
CCB - 1	-0.0323	-351	ppb	1326	19 Nov 2018 16:00:38
240-104442-f-4-b - 1	0.0583	125	ppb	1327	19 Nov 2018 16:03:04
240-104442-f-5-b - 1	0.0440	50	ppb	1328	19 Nov 2018 16:05:04
240-104442-c-6-b - 1	0.0438	49	ppb	1329	19 Nov 2018 16:07:05
240-104442-c-7-b - 1	0.0828	254	ppb	1330	19 Nov 2018 16:09:06
240-104437-g-2-b - 1	0.0252	-49	ppb	1331	19 Nov 2018 16:11:06
240-104448-h-4-b - 1	0.0354	5	ppb	1332	19 Nov 2018 16:13:07
lb 240-355467/1-c - 1	0.0590	129	ppb	1333	19 Nov 2018 16:15:07
mb 240-355631/2-a - 1	0.0501	82	ppb	1334	19 Nov 2018 16:17:08
lcs 240-355631/3-a - 1	4.8915	25517	ppb	1335	19 Nov 2018 16:19:09
240-104057-c-1-d - 1	0.0004	-179	ppb	1336	19 Nov 2018 16:21:10
CCV - 1	92.5% 4.6241	24112	ppb	1337	19 Nov 2018 16:23:39
CCB - 1	-0.0238	-306	ppb	1338	19 Nov 2018 16:25:40
240-104112-j-1-e - 1	0.0583	125	ppb	1339	19 Nov 2018 16:28:06
CRA - 1	101.9% 0.2037	889	ppb	1340	19 Nov 2018 16:30:08
CCV - 1	91.6% 4.5780	23870	ppb	1341	19 Nov 2018 16:32:07
CCB - 1	-0.0717	-558	ppb	1342	19 Nov 2018 16:34:10

Test America Canton Hg Data Review Checklist

Curve Prep Batch: 356141

Circle Methods used: (7470A / 245.1) 7471 Analytical Batch: 356258

Analysis Date: 11/19/18 Analyst: AC Instrument: H3

Review Items
A. Calibration/Instrument Run QC
1. Instrument calibrated per manufacturer's instructions and at SOP specified levels.
2. ICV/CCV analyzed at appropriate frequency and within acceptance criteria.
3. ICV/ICB analyzed at appropriate frequency and within acceptance criteria.
4. CRA analyzed at SOP or project specific frequency and within acceptance criteria. (project specific limits may vary)
B. Sample Results
1. Samples with concentrations > high calibration standard diluted and reanalyzed.
2. Sample analyses done within holding time.
C. Preparation/ Matrix QC
1. LCS performed per prep batch and within acceptance criteria.
2. Method blank performed per prep batch and within acceptance criteria.
3. MS performed at required frequency and evaluated.
4. MSD or DU performed at required frequency and evaluated.
D. Other
1. All nonconformances documented appropriately in lims system.
2. All client/project specific requirements met.
3. Date of analysis verified as correct.

Level I

Analyst: Alex Cole Date/Time: 11/20/18 Reviewed from 12:12 to 16:34

Analyst: _____ Date/Time: _____ Reviewed from _____ to _____

Comments: _____

Level II

Reviewer: Roger K. Toth Date/Time: 11-20-18 Reviewed from 12:12 to 16:34

Reviewer: _____ Date/Time: _____ Reviewed from _____ to _____

Comments _____

Curve Date 11/19/18 Curve Time 9:30. 11:30 DILUTION H20 N/A

Revised 01/19/2016

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG No.:

Project: MRC Block F TCB Waste Characterization

Client Sample ID	Lab Sample ID
WC-SEMW10D-SOIL	240-104089-2
WC-FTCB-DEVW	240-104089-3
WC-FTCB-SOIL	240-104089-4
WC-FTCB-DECON	240-104089-5

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: WC-SEMW10D-SOIL
Lab Sample ID: 240-104089-2
Lab Name: TestAmerica Canton
Job No.: 240-104089-1
SDG ID.:
Matrix: Solid
Date Sampled: 11/07/2018 09:30
Reporting Basis: WET
Date Received: 11/08/2018 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Flashpoint	>200	1.00	1.00	Degrees F			1	1010A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: WC-FTCB-DEVW
Lab Sample ID: 240-104089-3
Lab Name: TestAmerica Canton
Job No.: 240-104089-1
SDG ID.:
Matrix: Water
Date Sampled: 11/07/2018 10:00
Reporting Basis: WET
Date Received: 11/08/2018 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Flashpoint	>200	1.00	1.00	Degrees F			1	1010A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: WC-FTCB-SOIL
Lab Sample ID: 240-104089-4
Lab Name: TestAmerica Canton
Job No.: 240-104089-1
SDG ID.:
Matrix: Solid
Date Sampled: 11/07/2018 10:15
Reporting Basis: WET
Date Received: 11/08/2018 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Flashpoint	>200	1.00	1.00	Degrees F			1	1010A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: WC-FTCB-DECON
Lab Sample ID: 240-104089-5
Lab Name: TestAmerica Canton
Job No.: 240-104089-1
SDG ID.:
Matrix: Water
Date Sampled: 11/07/2018 10:30
Reporting Basis: WET
Date Received: 11/08/2018 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Flashpoint	>200	1.00	1.00	Degrees F			1	1010A

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Solid

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 356267 Date: 11/20/2018 09:40								
1010A	WC-SEMW10D-SOIL	240-104089-2	Flashpoint	>200	Degrees F			
1010A	WC-SEMW10D-SOIL	240-104089-2 DU	Flashpoint	>200	Degrees F	NC	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 354853 Date: 11/12/2018 05:33								
1010A	WC-FTCB-DECON	240-104089-5	Flashpoint	>200	Degrees F			
1010A	WC-FTCB-DECON	240-104089-5 DU	Flashpoint	>200	Degrees F	NC	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Solid

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 356267	Date: 11/20/2018 07:41										
						LCS Source: WCP-XYLENE_00023					
1010A	LCS 240-356267/1	Flashpoint	79.00		Degrees F	81.0	98	97-103			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 354853 Date: 11/12/2018 05:00											
						LCS Source: WCP-XYLENE_00023					
1010A	LCS 240-354853/1	Flashpoint	81.00		Degrees F	81.0	100	97-103			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG Number:

Matrix: Solid Instrument ID: WHITEY

Method: 1010A RL Date: 01/28/2010 09:55

Analyte	Wavelength/ Mass	RL (Degrees F)	
Flashpoint		1	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG Number:

Matrix: Solid Instrument ID: WHITEY

Method: 1010A XRL Date: 01/28/2010 09:55

Analyte	Wavelength/ Mass	XRL (Degrees F)	
Flashpoint		1	

FORM IX - IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG Number:

Matrix: Water Instrument ID: WHITEY

Method: 1010A RL Date: 01/28/2010 09:55

Analyte	Wavelength/ Mass	RL (Degrees F)	
Flashpoint		1	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG Number:

Matrix: Water Instrument ID: WHITEY

Method: 1010A XRL Date: 01/28/2010 09:55

Analyte	Wavelength/ Mass	XRL (Degrees F)	
Flashpoint		1	

FORM IX - IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: Moisture RL Date: 01/28/2010 09:24

Analyte	Wavelength/ Mass	RL (%)	
Percent Moisture		0.1	
Percent Solids		0.1	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-104089-1

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: Moisture XRL Date: 01/28/2010 09:24

Analyte	Wavelength/ Mass	XRL (mg/L)	
Percent Moisture		10	
Percent Solids		10	

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: WHITEY Analysis Method: 1010A

Start Date: 11/12/2018 05:00 End Date: 11/12/2018 11:36

Lab Sample Id	D/F	Type	Time	Analytes																									
				FP																									
LCS 240-354853/1	1	T	05:00	X																									
240-104089-5 DU	1	T	05:33	X																									
240-104089-5	1	T	06:06	X																									
240-104089-3	1	T	06:39	X																									
ZZZZZZ			07:12																										
ZZZZZZ			07:45																										
ZZZZZZ			08:18																										
ZZZZZZ			08:51																										
ZZZZZZ			09:24																										
ZZZZZZ			09:57																										
ZZZZZZ			10:30																										
ZZZZZZ			11:03																										
ZZZZZZ			11:36																										

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: WHITEY Analysis Method: 1010A

Start Date: 11/20/2018 07:41 End Date: 11/20/2018 12:40

Lab Sample Id	D/F	Type	Time	Analytes																								
				FP																								
LCS 240-356267/1	1	T	07:41	X																								
ZZZZZZ			08:10																									
ZZZZZZ			08:40																									
ZZZZZZ			09:10																									
240-104089-2 DU	1	T	09:40	X																								
240-104089-2	1	T	10:10	X																								
240-104089-4	1	T	10:40	X																								
ZZZZZZ			11:10																									
ZZZZZZ			11:40																									
ZZZZZZ			12:10																									
ZZZZZZ			12:40																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: Moisture

Start Date: 11/09/2018 08:36 End Date: 11/09/2018 12:31

Lab Sample Id	D/F	Type	Time	Analytes																									
				% Sol	Moist																								
ZZZZZZ			08:36																										
ZZZZZZ			08:36																										
ZZZZZZ			08:36																										
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ZZZZZZ			08:36																										
240-104106-A-1 DU	1	T	08:36	X	X																								
ZZZZZZ			08:36																										
ZZZZZZ			08:36																										
240-104089-2	1	T	08:36	X	X																								
240-104089-4	1	T	08:36	X	X																								
ZZZZZZ			08:36																										
ZZZZZZ			08:36																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: Moisture

Start Date: 11/09/2018 08:36 End Date: 11/09/2018 12:31

Lab Sample Id	D/F	Type	Time	Analytes																										
				% Sol	Moist																									
ZZZZZZ			08:36																											
ZZZZZZ			12:31

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: Moisture

Start Date: 11/09/2018 08:36 End Date: 11/09/2018 12:31

Lab Sample Id	D/F	Type	Time	Analytes																									
				% Sol	Moist																								
ZZZZZZ			12:31																										
ZZZZZZ			12:31																										
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ZZZZZZ			12:31																										

Prep Types:
T = Total/NA

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 354853 Batch Start Date: 11/12/18 05:00 Batch Analyst: Harshman, Tom

Batch Method: 1010A Batch End Date: 11/12/18 12:10

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	InitialTemp	WCP-XYLENE 00023			
LCS 240-354853/1		1010A		70 mL	52 Degrees F	70 mL			
240-104089-H-5 DU	WC-FTCB-DECON	1010A	T	70 mL	53 Degrees F				
240-104089-H-5	WC-FTCB-DECON	1010A	T	70 mL	53 Degrees F				
240-104089-G-3	WC-FTCB-DEVW	1010A	T	70 mL	55 Degrees F				

Batch Notes	
Equipment ID	whitey
Thermometer ID	x

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 356267 Batch Start Date: 11/20/18 07:41 Batch Analyst: Harshman, Tom

Batch Method: 1010A Batch End Date: 11/20/18 13:10

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	InitialTemp	WCP-XYLENE 00023			
LCS 240-356267/1		1010A		70 mL	52 Degrees F	70 mL			
240-104089-C-2 DU	WC-SEMW10D-SOIL	1010A	T	70 g	55 Degrees F				
240-104089-C-2	WC-SEMW10D-SOIL	1010A	T	70 g	56 Degrees F				
240-104089-C-4	WC-FTCB-SOIL	1010A	T	70 g	59 Degrees F				

Batch Notes	
Equipment ID	whitey
Thermometer ID	x

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-104089-1

SDG No.:

Batch Number: 354538 Batch Start Date: 11/09/18 08:36 Batch Analyst: Skrypka, Meghan

Batch Method: Moisture Batch End Date: 11/12/18 07:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	DishWeight	SampleMassWet	SampleMassDry			
240-104106-A-1 DU		Moisture	T	4.3251 g	11.5254 g	8.6407 g			
240-104089-A-2	WC-SEMW10D-SOIL	Moisture	T	4.3251 g	23.4270 g	19.9569 g			
240-104089-A-4	WC-FTCB-SOIL	Moisture	T	4.3251 g	22.8027 g	19.7345 g			

Batch Notes	
Balance ID	B047
Date samples were placed in the oven	11/09/2018
Oven Temp In	104.1 Degrees C
Time samples were place in the oven	16:51
Date samples were removed from oven	11/12/2018
Oven Temp Out	103.9 Degrees C
Time Samples were removed from oven	03:30
Oven ID	O02
Thermometer ID	TEMPGUARD BOX C #6

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

TA CANTON

180325 Chain of Custody Record 273363

1.4/2.3

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

BALTIMORE

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Appanvage	Site Contact: Nullis	Date: 11/7/18	COC No:
Company Name: TETRA TECH INC	Tel/Fax: 301-528-3021	Lab Contact: McFadden	Carrier: Fed Ex.	1 of 1 COCs
Address: 20251 Century Blvd. Ste. 200	Analysis Turnaround Time			Sampler:
City/State/Zip: Germantown MD, 20874	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 301-528-3021	TAT if different from Below _____			Walk-in Client:
Fax:	☐ 2 weeks STANDARD			Lab Sampling:
Project Name: Block F TCB Waste Char.	☐ 1 week			
Site: MRC Block F	☐ 2 days			Job / SDG No.:
PO# 112IG08667	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs	PCBs	TCLP Metals	Ignitability	Sample Specific Notes:
TB-110718	11/7/18	0000	G	AQ	2			X				
WC-SEMIVOD-SOIL		0930		SOIL	3			X	X	X	X	
WC-FTCB-DEVW		1000		AQ	8			X	X	X	X	
WC-FTCB-SOIL		1015		SOIL	3			X	X	X	X	
WC-FTCB-DECON		1030		AQ	8			X	X	X	X	

240-104089 Chain of Custody

11/7/18

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: ★ WASTE CHARACTERIZATION SAMPLES FROM BLOCK F DRILLING ★

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

	Company	Date/Time		Company	Date/Time
Relinquished by:	Tetra Tech Inc	11/7/18 1545	Received by:	TA	11/8/18 1545
Relinquished by:	TA	11/7/18 1700	Received by:	TA	11/8/18 945
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 104089
Canton Facility

Client Tetra Tech Site Name _____ Cooler unpacked by:

Cooler Received on 11/8/18 Opened on 11/8/18

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off / TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # 1A Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam (Plastic Bag) None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **+0.9** °C) Observed Cooler Temp. 1.4 °C Corrected Cooler Temp. 2.3 °C
   IR GUN #36 (CF **+0.6**°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes (No)
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No (NA) pH Strip Lot# **HC850248**
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # NA (Yes) No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

ANALYTICAL REPORT

Job Number: 240-107194-1

Job Description: MRC Block E/F Mass DIscharge Waste

For:
Tetra Tech, Inc.
20251 Century Blvd
Suite 200
Germantown, MD 20874

Attention: Mike Martin



Approved for release.
John McFadden
Project Manager I
1/28/2019 3:07 PM

John McFadden, Project Manager I
4101 Shuffel Street NW, North Canton, OH, 44720
(330)497-9396
john.mcfadden@testamericainc.com
01/28/2019

cc: Tony Apanavage
Samantha Brenner
Kelly Carper

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass DIscharge Waste

Report Number: 240-107194-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT
The samples were received on 1/19/2019 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.6º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)
Sample WC-EFSOIL-011819 (240-107194-2) was analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared and analyzed on 01/23/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)
Sample TB-011819 (240-107194-1) was analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 01/24/2019.

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following sample was received preserved with hydrochloric acid: TB-011819 (240-107194-1)

The laboratory control sample (LCS) for analytical batch 240-365336 recovered outside control limits for multiple analytes: 1,1-Dichloroethane, Methylene Chloride and trans-1,2-Dichloroethene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. TB-011819 (240-107194-1) and (LCS 240-365336/6)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)
Sample WC-EFSOIL-011819 (240-107194-2) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082A. The samples were prepared on 01/23/2019 and analyzed on 01/25/2019.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP METALS (ICP)
Sample WC-EFSOIL-011819 (240-107194-2) was analyzed for TCLP metals (ICP) in accordance with EPA SW-846 Methods 1311/6010C. The samples were leached on 01/22/2019, prepared on 01/23/2019 and analyzed on 01/24/2019.

Arsenic, Chromium and Silver were detected in method blank LB 240-365049/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP MERCURY
Sample WC-EFSOIL-011819 (240-107194-2) was analyzed for TCLP mercury in accordance with EPA SW-846 Methods 1311/7470A. The samples were leached on 01/22/2019, prepared on 01/23/2019 and analyzed on 01/24/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

FLASHPOINT
Sample WC-EFSOIL-011819 (240-107194-2) was analyzed for flashpoint in accordance with EPA SW-846 Method 1010. The samples were analyzed on 01/23/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS
Sample WC-EFSOIL-011819 (240-107194-2) was analyzed for percent solids in accordance with ASTM Method D2216-80. The samples were analyzed on 01/21/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass DIscharge Waste

TestAmerica Job ID: 240-107194-1

Client Sample ID: TB-011819

Lab Sample ID: 240-107194-1

No Detections.

Client Sample ID: WC-EFSOIL-011819

Lab Sample ID: 240-107194-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.0	J	5.5	0.69	ug/Kg	1	☼	8260B	Total/NA
Arsenic	0.0064	J B	0.050	0.0041	mg/L	1		6010C	TCLP
Barium	0.048	J	0.50	0.0013	mg/L	1		6010C	TCLP
Chromium	0.0025	J B	0.050	0.00063	mg/L	1		6010C	TCLP
Flashpoint	>200		1.00	1.00	Degrees F	1		1010A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: TB-011819 **Lab Sample ID: 240-107194-1**
Date Collected: 01/18/19 00:00 **Matrix: Water**
Date Received: 01/19/19 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.4	U	10	5.4	ug/L			01/24/19 15:25	1
1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14	ug/L			01/24/19 15:25	1
Benzene	0.13	U	1.0	0.13	ug/L			01/24/19 15:25	1
Bromodichloromethane	0.17	U	1.0	0.17	ug/L			01/24/19 15:25	1
Bromoform	0.76	U	1.0	0.76	ug/L			01/24/19 15:25	1
Bromomethane	0.42	U	1.0	0.42	ug/L			01/24/19 15:25	1
2-Butanone (MEK)	1.2	U	10	1.2	ug/L			01/24/19 15:25	1
Carbon disulfide	0.28	U	1.0	0.28	ug/L			01/24/19 15:25	1
Carbon tetrachloride	0.26	U	1.0	0.26	ug/L			01/24/19 15:25	1
Chlorobenzene	0.14	U	1.0	0.14	ug/L			01/24/19 15:25	1
Chloroethane	0.83	U	1.0	0.83	ug/L			01/24/19 15:25	1
Chloroform	0.13	U	1.0	0.13	ug/L			01/24/19 15:25	1
1,1-Dichloropropene	0.14	U	1.0	0.14	ug/L			01/24/19 15:25	1
Chloromethane	0.20	U	1.0	0.20	ug/L			01/24/19 15:25	1
1,1-Dichloroethane	0.17	U *	1.0	0.17	ug/L			01/24/19 15:25	1
1,2,3-Trichlorobenzene	0.54	U	1.0	0.54	ug/L			01/24/19 15:25	1
1,2,3-Trichloropropane	0.24	U	1.0	0.24	ug/L			01/24/19 15:25	1
1,2-Dichloroethane	0.21	U	1.0	0.21	ug/L			01/24/19 15:25	1
1,1-Dichloroethene	0.19	U	1.0	0.19	ug/L			01/24/19 15:25	1
1,2,3-Trimethylbenzene	0.14	U	5.0	0.14	ug/L			01/24/19 15:25	1
1,2-Dichloropropane	0.15	U	1.0	0.15	ug/L			01/24/19 15:25	1
1,2,4-Trimethylbenzene	0.070	U	1.0	0.070	ug/L			01/24/19 15:25	1
cis-1,3-Dichloropropene	0.61	U	1.0	0.61	ug/L			01/24/19 15:25	1
trans-1,3-Dichloropropene	0.67	U	1.0	0.67	ug/L			01/24/19 15:25	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			01/24/19 15:25	1
2-Hexanone	0.54	U	10	0.54	ug/L			01/24/19 15:25	1
Methylene Chloride	2.6	U *	5.0	2.6	ug/L			01/24/19 15:25	1
4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42	ug/L			01/24/19 15:25	1
Styrene	0.10	U	1.0	0.10	ug/L			01/24/19 15:25	1
1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13	ug/L			01/24/19 15:25	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			01/24/19 15:25	1
Toluene	0.14	U	1.0	0.14	ug/L			01/24/19 15:25	1
Trichloroethene	0.10	U	1.0	0.10	ug/L			01/24/19 15:25	1
Vinyl chloride	0.20	U	1.0	0.20	ug/L			01/24/19 15:25	1
Xylenes, Total	0.15	U	2.0	0.15	ug/L			01/24/19 15:25	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/24/19 15:25	1
1,3-Dichloropropane	0.21	U	1.0	0.21	ug/L			01/24/19 15:25	1
1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91	ug/L			01/24/19 15:25	1
1,2-Dibromoethane	0.12	U	1.0	0.12	ug/L			01/24/19 15:25	1
Dichlorodifluoromethane	0.35	U	1.0	0.35	ug/L			01/24/19 15:25	1
cis-1,2-Dichloroethene	0.16	U	1.0	0.16	ug/L			01/24/19 15:25	1
trans-1,2-Dichloroethene	0.19	U *	1.0	0.19	ug/L			01/24/19 15:25	1
Isopropylbenzene	0.090	U	1.0	0.090	ug/L			01/24/19 15:25	1
Methyl tert-butyl ether	0.070	U	1.0	0.070	ug/L			01/24/19 15:25	1
1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41	ug/L			01/24/19 15:25	1
1,2,4-Trichlorobenzene	0.26	U	1.0	0.26	ug/L			01/24/19 15:25	1
2,2-Dichloropropane	0.31	U	1.0	0.31	ug/L			01/24/19 15:25	1
1,2-Dichlorobenzene	0.15	U	1.0	0.15	ug/L			01/24/19 15:25	1
1,3-Dichlorobenzene	0.15	U	1.0	0.15	ug/L			01/24/19 15:25	1

Client Sample ID: TB-011819 — Lab Sample ID: 240-107194-1

Date Collected: 01/18/19 00:00 — **Matrix: Water**
Date Received: 01/19/19 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.16	U	1.0	0.16	ug/L			01/24/19 15:25	1
2-Chloroethyl vinyl ether	0.26	U	10	0.26	ug/L			01/24/19 15:25	1
Trichlorofluoromethane	0.45	U	1.0	0.45	ug/L			01/24/19 15:25	1
2-Chlorotoluene	0.15	U	1.0	0.15	ug/L			01/24/19 15:25	1
Chlorodibromomethane	0.39	U	1.0	0.39	ug/L			01/24/19 15:25	1
Bromobenzene	0.12	U	1.0	0.12	ug/L			01/24/19 15:25	1
Bromochloromethane	0.14	U	1.0	0.14	ug/L			01/24/19 15:25	1
4-Chlorotoluene	0.090	U	1.0	0.090	ug/L			01/24/19 15:25	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			01/24/19 15:25	1
Hexachlorobutadiene	0.83	U	1.0	0.83	ug/L			01/24/19 15:25	1
Dibromomethane	0.090	U	1.0	0.090	ug/L			01/24/19 15:25	1
Diisopropyl ether	0.17	U	10	0.17	ug/L			01/24/19 15:25	1
Naphthalene	0.32	U	1.0	0.32	ug/L			01/24/19 15:25	1
n-Butylbenzene	0.14	U	1.0	0.14	ug/L			01/24/19 15:25	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			01/24/19 15:25	1
sec-Butylbenzene	0.13	U	1.0	0.13	ug/L			01/24/19 15:25	1
Tert-amyl methyl ether	0.11	U	5.0	0.11	ug/L			01/24/19 15:25	1
Ethyl tert-butyl ether	0.15	U	5.0	0.15	ug/L			01/24/19 15:25	1
tert-Butylbenzene	0.14	U	1.0	0.14	ug/L			01/24/19 15:25	1
Vinyl acetate	0.19	U	2.0	0.19	ug/L			01/24/19 15:25	1
tert-Butyl alcohol	1.7	U	50	1.7	ug/L			01/24/19 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*74*		*70 - 121*		*01/24/19 15:25*	*1*
4-Bromofluorobenzene (Surr)	*94*		*59 - 120*		*01/24/19 15:25*	*1*
Toluene-d8 (Surr)	*93*		*70 - 123*		*01/24/19 15:25*	*1*
Dibromofluoromethane (Surr)	*87*		*75 - 128*		*01/24/19 15:25*	*1*

Client Sample ID: WC-EFSOIL-011819 — Lab Sample ID: 240-107194-2

Date Collected: 01/18/19 09:30 — **Matrix: Solid**
Date Received: 01/19/19 09:45 — **Percent Solids: 85.3**

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	3.3	U	5.5	3.3	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,1,1-Trichloroethane	0.90	U	5.5	0.90	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,1,2,2-Tetrachloroethane	1.6	U	5.5	1.6	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.4	U	5.5	1.4	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,1-Dichloroethane	0.76	U	5.5	0.76	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,1-Dichloroethene	0.99	U	5.5	0.99	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,1-Dichloropropene	1.1	U	5.5	1.1	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,2,3-Trichlorobenzene	0.63	U	5.5	0.63	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,2,3-Trichloropropane	1.7	U	5.5	1.7	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,2,3-Trimethylbenzene	2.0	U	5.5	2.0	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,2,4-Trichlorobenzene	0.63	U	5.5	0.63	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,2,4-Trimethylbenzene	1.1	U	5.5	1.1	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,2-Dibromo-3-Chloropropane	4.0	U	11	4.0	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,2-Dichlorobenzene	1.2	U	5.5	1.2	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,2-Dichloroethane	0.85	U	5.5	0.85	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,2-Dichloropropane	0.93	U	5.5	0.93	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1

Client Sample ID: WC-EFSOIL-011819 **Lab Sample ID: 240-107194-2**
Date Collected: 01/18/19 09:30 **Matrix: Solid**
Date Received: 01/19/19 09:45 **Percent Solids: 85.3**

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	0.89	U	5.5	0.89	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,3-Dichloropropane	1.1	U	5.5	1.1	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,4-Dichlorobenzene	0.97	U	5.5	0.97	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
2,2-Dichloropropane	1.3	U	5.5	1.3	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
2-Chloroethyl vinyl ether	9.8	U	55	9.8	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
2-Chlorotoluene	1.0	U	5.5	1.0	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
2-Hexanone	4.5	U	22	4.5	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Bromobenzene	1.3	U	5.5	1.3	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Bromochloromethane	0.65	U	5.5	0.65	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
4-Chlorotoluene	0.94	U	5.5	0.94	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
p-Isopropyltoluene	3.2	U	5.5	3.2	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Acetone	23	U	27	23	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Benzene	0.76	U	5.5	0.76	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Bromoform	2.6	U	5.5	2.6	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Bromomethane	1.1	U	5.5	1.1	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Carbon disulfide	1.3	U	5.5	1.3	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Carbon tetrachloride	3.6	U	5.5	3.6	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Chlorobenzene	1.0	U	5.5	1.0	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Chloroethane	1.3	U	5.5	1.3	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Chloroform	0.86	U	5.5	0.86	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Chloromethane	1.1	U	5.5	1.1	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
cis-1,2-Dichloroethene	0.71	U	5.5	0.71	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
cis-1,3-Dichloropropene	1.6	U	5.5	1.6	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Hexachlorobutadiene	4.1	U	5.5	4.1	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Dibromomethane	0.73	U	5.5	0.73	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Bromodichloromethane	0.74	U	5.5	0.74	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Dichlorodifluoromethane	1.0	U	5.5	1.0	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Ethylbenzene	1.1	U	5.5	1.1	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
1,2-Dibromoethane	0.84	U	5.5	0.84	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Diisopropyl ether	0.83	U	11	0.83	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Naphthalene	3.0	U	5.5	3.0	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
m-Xylene & p-Xylene	0.86	U	11	0.86	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
n-Butylbenzene	3.8	U	5.5	3.8	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Isopropylbenzene	0.91	U	5.5	0.91	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
N-Propylbenzene	0.80	U	5.5	0.80	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
2-Butanone (MEK)	3.9	U	22	3.9	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
4-Methyl-2-pentanone (MIBK)	4.1	U	22	4.1	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
sec-Butylbenzene	0.95	U	5.5	0.95	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Methyl tert-butyl ether	0.90	U	5.5	0.90	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Tert-amyl methyl ether	2.5	U	5.5	2.5	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Methylene Chloride	13	U	27	13	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
o-Xylene	0.94	U	5.5	0.94	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Styrene	1.3	U	5.5	1.3	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Ethyl tert-butyl ether	2.5	U	5.5	2.5	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
tert-Butylbenzene	0.99	U	5.5	0.99	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Tetrachloroethene	0.80	U	5.5	0.80	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Toluene	0.85	U	5.5	0.85	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
trans-1,2-Dichloroethene	0.51	U	5.5	0.51	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
trans-1,3-Dichloropropene	1.1	U	5.5	1.1	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1

Client Sample ID: WC-EFSOIL-011819 **Lab Sample ID: 240-107194-2**
Date Collected: 01/18/19 09:30 **Matrix: Solid**
Date Received: 01/19/19 09:45 **Percent Solids: 85.3**

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	**1.0**	**J**	5.5	0.69	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Trichlorofluoromethane	1.2	U	5.5	1.2	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Vinyl acetate	2.3	U	11	2.3	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Vinyl chloride	0.92	U	5.5	0.92	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
tert-Butyl alcohol	18	U	220	18	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Xylenes, Total	1.7	U	11	1.7	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1
Dibromochloromethane	3.0	U	5.5	3.0	ug/Kg	☼	01/23/19 04:28	01/23/19 12:42	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*21*	*T J*	*ug/Kg*	☼	*4.24*		*01/23/19 04:28*	*01/23/19 12:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*48 - 123*	*01/23/19 04:28*	*01/23/19 12:42*	*1*
4-Bromofluorobenzene (Surr)	*96*		*49 - 141*	*01/23/19 04:28*	*01/23/19 12:42*	*1*
Toluene-d8 (Surr)	*97*		*62 - 135*	*01/23/19 04:28*	*01/23/19 12:42*	*1*
Dibromofluoromethane (Surr)	*100*		*49 - 132*	*01/23/19 04:28*	*01/23/19 12:42*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26	U	58	26	ug/Kg	☼	01/23/19 06:41	01/25/19 00:18	1
Aroclor-1221	28	U	58	28	ug/Kg	☼	01/23/19 06:41	01/25/19 00:18	1
Aroclor-1232	27	U	58	27	ug/Kg	☼	01/23/19 06:41	01/25/19 00:18	1
Aroclor-1242	22	U	58	22	ug/Kg	☼	01/23/19 06:41	01/25/19 00:18	1
Aroclor-1248	28	U	58	28	ug/Kg	☼	01/23/19 06:41	01/25/19 00:18	1
Aroclor-1254	27	U	58	27	ug/Kg	☼	01/23/19 06:41	01/25/19 00:18	1
Aroclor-1260	26	U	58	26	ug/Kg	☼	01/23/19 06:41	01/25/19 00:18	1
Aroclor-1262	36	U	58	36	ug/Kg	☼	01/23/19 06:41	01/25/19 00:18	1
Aroclor-1268	27	U	58	27	ug/Kg	☼	01/23/19 06:41	01/25/19 00:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*70*		*14 - 128*	*01/23/19 06:41*	*01/25/19 00:18*	*1*
DCB Decachlorobiphenyl	*99*		*10 - 132*	*01/23/19 06:41*	*01/25/19 00:18*	*1*

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0064**	**J B**	0.050	0.0041	mg/L		01/23/19 14:00	01/24/19 14:30	1
Barium	**0.048**	**J**	0.50	0.0013	mg/L		01/23/19 14:00	01/24/19 14:30	1
Cadmium	0.00020	U	0.050	0.00020	mg/L		01/23/19 14:00	01/24/19 14:30	1
Chromium	**0.0025**	**J B**	0.050	0.00063	mg/L		01/23/19 14:00	01/24/19 14:30	1
Lead	0.0028	U	0.050	0.0028	mg/L		01/23/19 14:00	01/24/19 14:30	1
Selenium	0.0060	U	0.050	0.0060	mg/L		01/23/19 14:00	01/24/19 14:30	1
Silver	0.00062	U	0.050	0.00062	mg/L		01/23/19 14:00	01/24/19 14:30	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	U	0.0020	0.00013	mg/L		01/23/19 12:00	01/24/19 09:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	**>200**		1.00	1.00	Degrees F			01/23/19 12:33	1
Percent Solids	**85.3**		0.1	0.1	%			01/21/19 13:02	1

Client Sample ID: WC-EFSOIL-011819 **Lab Sample ID: 240-107194-2**
Date Collected: 01/18/19 09:30 **Matrix: Solid**
Date Received: 01/19/19 09:45

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	14.7		0.1	0.1	%			01/21/19 13:02	1

Default Detection Limits

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-107194-1
Project/Site: MRC Block E/F Mass DIscharge Waste

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1,2-Tetrachloroethane	1.0	0.14	ug/L	8260B
1,1,1-Trichloroethane	1.0	0.24	ug/L	8260B
1,1,2,2-Tetrachloroethane	1.0	0.13	ug/L	8260B
1,1,2-Trichlorotrifluoroethane	1.0	0.41	ug/L	8260B
1,1-Dichloroethane	1.0	0.17	ug/L	8260B
1,1-Dichloroethene	1.0	0.19	ug/L	8260B
1,1-Dichloropropene	1.0	0.14	ug/L	8260B
1,2,3-Trichlorobenzene	1.0	0.54	ug/L	8260B
1,2,3-Trichloropropane	1.0	0.24	ug/L	8260B
1,2,3-Trimethylbenzene	5.0	0.14	ug/L	8260B
1,2,4-Trichlorobenzene	1.0	0.26	ug/L	8260B
1,2,4-Trimethylbenzene	1.0	0.070	ug/L	8260B
1,2-Dibromo-3-Chloropropane	2.0	0.91	ug/L	8260B
1,2-Dibromoethane	1.0	0.12	ug/L	8260B
1,2-Dichlorobenzene	1.0	0.15	ug/L	8260B
1,2-Dichloroethane	1.0	0.21	ug/L	8260B
1,2-Dichloropropane	1.0	0.15	ug/L	8260B
1,3-Dichlorobenzene	1.0	0.15	ug/L	8260B
1,3-Dichloropropane	1.0	0.21	ug/L	8260B
1,4-Dichlorobenzene	1.0	0.16	ug/L	8260B
2,2-Dichloropropane	1.0	0.31	ug/L	8260B
2-Butanone (MEK)	10	1.2	ug/L	8260B
2-Chloroethyl vinyl ether	10	0.26	ug/L	8260B
2-Chlorotoluene	1.0	0.15	ug/L	8260B
2-Hexanone	10	0.54	ug/L	8260B
4-Chlorotoluene	1.0	0.090	ug/L	8260B
4-Isopropyltoluene	1.0	0.13	ug/L	8260B
4-Methyl-2-pentanone (MIBK)	10	0.42	ug/L	8260B
Acetone	10	5.4	ug/L	8260B
Benzene	1.0	0.13	ug/L	8260B
Bromobenzene	1.0	0.12	ug/L	8260B
Bromochloromethane	1.0	0.14	ug/L	8260B
Bromodichloromethane	1.0	0.17	ug/L	8260B
Bromoform	1.0	0.76	ug/L	8260B
Bromomethane	1.0	0.42	ug/L	8260B
Carbon disulfide	1.0	0.28	ug/L	8260B
Carbon tetrachloride	1.0	0.26	ug/L	8260B
Chlorobenzene	1.0	0.14	ug/L	8260B
Chlorodibromomethane	1.0	0.39	ug/L	8260B
Chloroethane	1.0	0.83	ug/L	8260B
Chloroform	1.0	0.13	ug/L	8260B
Chloromethane	1.0	0.20	ug/L	8260B
cis-1,2-Dichloroethene	1.0	0.16	ug/L	8260B
cis-1,3-Dichloropropene	1.0	0.61	ug/L	8260B
Dibromomethane	1.0	0.090	ug/L	8260B
Dichlorodifluoromethane	1.0	0.35	ug/L	8260B
Diisopropyl ether	10	0.17	ug/L	8260B
Ethyl tert-butyl ether	5.0	0.15	ug/L	8260B
Ethylbenzene	1.0	0.11	ug/L	8260B
Hexachlorobutadiene	1.0	0.83	ug/L	8260B
Isopropylbenzene	1.0	0.090	ug/L	8260B
Methyl tert-butyl ether	1.0	0.070	ug/L	8260B

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	RL	MDL	Units	Method
Methylene Chloride	5.0	2.6	ug/L	8260B
Naphthalene	1.0	0.32	ug/L	8260B
n-Butylbenzene	1.0	0.14	ug/L	8260B
N-Propylbenzene	1.0	0.15	ug/L	8260B
sec-Butylbenzene	1.0	0.13	ug/L	8260B
Styrene	1.0	0.10	ug/L	8260B
Tert-amyl methyl ether	5.0	0.11	ug/L	8260B
tert-Butyl alcohol	50	1.7	ug/L	8260B
tert-Butylbenzene	1.0	0.14	ug/L	8260B
Tetrachloroethene	1.0	0.15	ug/L	8260B
Toluene	1.0	0.14	ug/L	8260B
trans-1,2-Dichloroethene	1.0	0.19	ug/L	8260B
trans-1,3-Dichloropropene	1.0	0.67	ug/L	8260B
Trichloroethene	1.0	0.10	ug/L	8260B
Trichlorofluoromethane	1.0	0.45	ug/L	8260B
Vinyl acetate	2.0	0.19	ug/L	8260B
Vinyl chloride	1.0	0.20	ug/L	8260B
Xylenes, Total	2.0	0.15	ug/L	8260B

Method: 8260B - Volatile Organic Compounds (GC/MS)

Prep: 5030A

Analyte	RL	MDL	Units	Method
1,1,1,2-Tetrachloroethane	5.0	3.0	ug/Kg	8260B
1,1,1-Trichloroethane	5.0	0.82	ug/Kg	8260B
1,1,2,2-Tetrachloroethane	5.0	1.4	ug/Kg	8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	1.3	ug/Kg	8260B
1,1-Dichloroethane	5.0	0.69	ug/Kg	8260B
1,1-Dichloroethene	5.0	0.90	ug/Kg	8260B
1,1-Dichloropropene	5.0	0.99	ug/Kg	8260B
1,2,3-Trichlorobenzene	5.0	0.57	ug/Kg	8260B
1,2,3-Trichloropropane	5.0	1.6	ug/Kg	8260B
1,2,3-Trimethylbenzene	5.0	1.8	ug/Kg	8260B
1,2,4-Trichlorobenzene	5.0	0.57	ug/Kg	8260B
1,2,4-Trimethylbenzene	5.0	1.0	ug/Kg	8260B
1,2-Dibromo-3-Chloropropane	10	3.6	ug/Kg	8260B
1,2-Dibromoethane	5.0	0.77	ug/Kg	8260B
1,2-Dichlorobenzene	5.0	1.1	ug/Kg	8260B
1,2-Dichloroethane	5.0	0.77	ug/Kg	8260B
1,2-Dichloropropane	5.0	0.85	ug/Kg	8260B
1,3-Dichlorobenzene	5.0	0.82	ug/Kg	8260B
1,3-Dichloropropane	5.0	0.99	ug/Kg	8260B
1,4-Dichlorobenzene	5.0	0.88	ug/Kg	8260B
2,2-Dichloropropane	5.0	1.2	ug/Kg	8260B
2-Butanone (MEK)	20	3.6	ug/Kg	8260B
2-Chloroethyl vinyl ether	50	8.9	ug/Kg	8260B
2-Chlorotoluene	5.0	0.95	ug/Kg	8260B
2-Hexanone	20	4.1	ug/Kg	8260B
4-Chlorotoluene	5.0	0.86	ug/Kg	8260B
4-Methyl-2-pentanone (MIBK)	20	3.7	ug/Kg	8260B
Acetone	25	21	ug/Kg	8260B
Benzene	5.0	0.70	ug/Kg	8260B

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Prep: 5030A

Analyte	RL	MDL	Units	Method
Bromobenzene	5.0	1.2	ug/Kg	8260B
Bromochloromethane	5.0	0.59	ug/Kg	8260B
Bromodichloromethane	5.0	0.68	ug/Kg	8260B
Bromoform	5.0	2.4	ug/Kg	8260B
Bromomethane	5.0	0.99	ug/Kg	8260B
Carbon disulfide	5.0	1.2	ug/Kg	8260B
Carbon tetrachloride	5.0	3.3	ug/Kg	8260B
Chlorobenzene	5.0	0.92	ug/Kg	8260B
Chloroethane	5.0	1.2	ug/Kg	8260B
Chloroform	5.0	0.79	ug/Kg	8260B
Chloromethane	5.0	1.0	ug/Kg	8260B
cis-1,2-Dichloroethene	5.0	0.65	ug/Kg	8260B
cis-1,3-Dichloropropene	5.0	1.4	ug/Kg	8260B
Dibromochloromethane	5.0	2.8	ug/Kg	8260B
Dibromomethane	5.0	0.67	ug/Kg	8260B
Dichlorodifluoromethane	5.0	0.94	ug/Kg	8260B
Diisopropyl ether	10	0.76	ug/Kg	8260B
Ethyl tert-butyl ether	5.0	2.3	ug/Kg	8260B
Ethylbenzene	5.0	1.0	ug/Kg	8260B
Hexachlorobutadiene	5.0	3.7	ug/Kg	8260B
Isopropylbenzene	5.0	0.83	ug/Kg	8260B
Methyl tert-butyl ether	5.0	0.82	ug/Kg	8260B
Methylene Chloride	25	12	ug/Kg	8260B
m-Xylene & p-Xylene	10	0.78	ug/Kg	8260B
Naphthalene	5.0	2.7	ug/Kg	8260B
n-Butylbenzene	5.0	3.5	ug/Kg	8260B
N-Propylbenzene	5.0	0.73	ug/Kg	8260B
o-Xylene	5.0	0.86	ug/Kg	8260B
p-Isopropyltoluene	5.0	2.9	ug/Kg	8260B
sec-Butylbenzene	5.0	0.86	ug/Kg	8260B
Styrene	5.0	1.2	ug/Kg	8260B
Tert-amyl methyl ether	5.0	2.2	ug/Kg	8260B
tert-Butyl alcohol	200	17	ug/Kg	8260B
tert-Butylbenzene	5.0	0.91	ug/Kg	8260B
Tetrachloroethene	5.0	0.73	ug/Kg	8260B
Toluene	5.0	0.77	ug/Kg	8260B
trans-1,2-Dichloroethene	5.0	0.47	ug/Kg	8260B
trans-1,3-Dichloropropene	5.0	1.0	ug/Kg	8260B
Trichloroethene	5.0	0.63	ug/Kg	8260B
Trichlorofluoromethane	5.0	1.1	ug/Kg	8260B
Vinyl acetate	10	2.1	ug/Kg	8260B
Vinyl chloride	5.0	0.84	ug/Kg	8260B
Xylenes, Total	10	1.6	ug/Kg	8260B

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Prep: 3540C

Analyte	RL	MDL	Units	Method
Aroclor-1016	50	22	ug/Kg	8082A
Aroclor-1221	50	24	ug/Kg	8082A
Aroclor-1232	50	23	ug/Kg	8082A

Default Detection Limits

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass DIscharge Waste

TestAmerica Job ID: 240-107194-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Prep: 3540C

Analyte	RL	MDL	Units	Method
Aroclor-1242	50	19	ug/Kg	8082A
Aroclor-1248	50	24	ug/Kg	8082A
Aroclor-1254	50	23	ug/Kg	8082A
Aroclor-1260	50	22	ug/Kg	8082A
Aroclor-1262	50	31	ug/Kg	8082A
Aroclor-1268	50	23	ug/Kg	8082A

Method: 6010C - Metals (ICP) - TCLP

Prep: 3010A

Leach: 1311

Analyte	RL	MDL	Units	Method
Arsenic	0.050	0.0041	mg/L	6010C
Barium	0.50	0.0013	mg/L	6010C
Cadmium	0.050	0.00020	mg/L	6010C
Chromium	0.050	0.00063	mg/L	6010C
Lead	0.050	0.0028	mg/L	6010C
Selenium	0.050	0.0060	mg/L	6010C
Silver	0.050	0.00062	mg/L	6010C

Method: 7470A - Mercury (CVAA) - TCLP

Prep: 7470A

Leach: 1311

Analyte	RL	MDL	Units	Method
Mercury	0.0020	0.00013	mg/L	7470A

General Chemistry

Analyte	RL	MDL	Units	Method
Flashpoint	1.00	1.00	Degrees F	1010A
Percent Moisture	0.1	0.1	%	Moisture
Percent Solids	0.1	0.1	%	Moisture

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass DIscharge Waste

TestAmerica Job ID: 240-107194-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(48-123)	(49-141)	(62-135)	(49-132)
240-107194-2	WC-EFSOIL-011819	105	96	97	100
240-107194-2 MS	WC-EFSOIL-011819	98	104	102	94
240-107194-2 MSD	WC-EFSOIL-011819	103	107	104	101
LCS 240-365072/6	Lab Control Sample	92	96	93	89
MB 240-365072/7	Method Blank	100	89	91	92

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(70-121)	(59-120)	(70-123)	(75-128)
240-107188-B-1 MS	Matrix Spike	82	108	98	90
240-107188-C-1 MSD	Matrix Spike Duplicate	68 X	95	96	82
240-107194-1	TB-011819	74	94	93	87
LCS 240-365336/6	Lab Control Sample	93	106	96	92
MB 240-365336/8	Method Blank	92	101	95	96

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(14-128)	(10-132)
240-107194-2	WC-EFSOIL-011819	70	99
LCS 240-365105/24-A	Lab Control Sample	72	94
MB 240-365105/23-A	Method Blank	68	87

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-365072/7
Matrix: Solid
Analysis Batch: 365072

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	3.0	U	5.0	3.0	ug/Kg			01/23/19 04:50	1
1,1-Dichloropropene	0.99	U	5.0	0.99	ug/Kg			01/23/19 04:50	1
1,1-Dichloroethane	0.69	U	5.0	0.69	ug/Kg			01/23/19 04:50	1
1,2,3-Trichlorobenzene	0.57	U	5.0	0.57	ug/Kg			01/23/19 04:50	1
1,2,3-Trichloropropane	1.6	U	5.0	1.6	ug/Kg			01/23/19 04:50	1
1,2-Dichloroethane	0.77	U	5.0	0.77	ug/Kg			01/23/19 04:50	1
1,1-Dichloroethene	0.90	U	5.0	0.90	ug/Kg			01/23/19 04:50	1
1,2,3-Trimethylbenzene	1.8	U	5.0	1.8	ug/Kg			01/23/19 04:50	1
1,2-Dichloropropane	0.85	U	5.0	0.85	ug/Kg			01/23/19 04:50	1
1,2,4-Trimethylbenzene	1.0	U	5.0	1.0	ug/Kg			01/23/19 04:50	1
2-Hexanone	4.1	U	20	4.1	ug/Kg			01/23/19 04:50	1
1,1,2,2-Tetrachloroethane	1.4	U	5.0	1.4	ug/Kg			01/23/19 04:50	1
Acetone	21	U	25	21	ug/Kg			01/23/19 04:50	1
Benzene	0.70	U	5.0	0.70	ug/Kg			01/23/19 04:50	1
Bromoform	2.4	U	5.0	2.4	ug/Kg			01/23/19 04:50	1
Bromomethane	0.99	U	5.0	0.99	ug/Kg			01/23/19 04:50	1
Carbon disulfide	1.2	U	5.0	1.2	ug/Kg			01/23/19 04:50	1
Carbon tetrachloride	3.3	U	5.0	3.3	ug/Kg			01/23/19 04:50	1
1,1,1-Trichloroethane	0.82	U	5.0	0.82	ug/Kg			01/23/19 04:50	1
Chlorobenzene	0.92	U	5.0	0.92	ug/Kg			01/23/19 04:50	1
1,3-Dichloropropane	0.99	U	5.0	0.99	ug/Kg			01/23/19 04:50	1
Chloroethane	1.2	U	5.0	1.2	ug/Kg			01/23/19 04:50	1
1,2-Dibromo-3-Chloropropane	3.6	U	10	3.6	ug/Kg			01/23/19 04:50	1
Chloroform	0.79	U	5.0	0.79	ug/Kg			01/23/19 04:50	1
Chloromethane	1.0	U	5.0	1.0	ug/Kg			01/23/19 04:50	1
cis-1,2-Dichloroethene	0.65	U	5.0	0.65	ug/Kg			01/23/19 04:50	1
cis-1,3-Dichloropropene	1.4	U	5.0	1.4	ug/Kg			01/23/19 04:50	1
Bromodichloromethane	0.68	U	5.0	0.68	ug/Kg			01/23/19 04:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.3	U	5.0	1.3	ug/Kg			01/23/19 04:50	1
Dichlorodifluoromethane	0.94	U	5.0	0.94	ug/Kg			01/23/19 04:50	1
1,2,4-Trichlorobenzene	0.57	U	5.0	0.57	ug/Kg			01/23/19 04:50	1
Ethylbenzene	1.0	U	5.0	1.0	ug/Kg			01/23/19 04:50	1
1,2-Dibromoethane	0.77	U	5.0	0.77	ug/Kg			01/23/19 04:50	1
2,2-Dichloropropane	1.2	U	5.0	1.2	ug/Kg			01/23/19 04:50	1
1,2-Dichlorobenzene	1.1	U	5.0	1.1	ug/Kg			01/23/19 04:50	1
1,3-Dichlorobenzene	0.82	U	5.0	0.82	ug/Kg			01/23/19 04:50	1
1,4-Dichlorobenzene	0.88	U	5.0	0.88	ug/Kg			01/23/19 04:50	1
2-Chloroethyl vinyl ether	8.9	U	50	8.9	ug/Kg			01/23/19 04:50	1
Isopropylbenzene	0.83	U	5.0	0.83	ug/Kg			01/23/19 04:50	1
2-Chlorotoluene	0.95	U	5.0	0.95	ug/Kg			01/23/19 04:50	1
2-Butanone (MEK)	3.6	U	20	3.6	ug/Kg			01/23/19 04:50	1
4-Methyl-2-pentanone (MIBK)	3.7	U	20	3.7	ug/Kg			01/23/19 04:50	1
Bromobenzene	1.2	U	5.0	1.2	ug/Kg			01/23/19 04:50	1
Methyl tert-butyl ether	0.82	U	5.0	0.82	ug/Kg			01/23/19 04:50	1
Bromochloromethane	0.59	U	5.0	0.59	ug/Kg			01/23/19 04:50	1
Methylene Chloride	12	U	25	12	ug/Kg			01/23/19 04:50	1
4-Chlorotoluene	0.86	U	5.0	0.86	ug/Kg			01/23/19 04:50	1
p-Isopropyltoluene	2.9	U	5.0	2.9	ug/Kg			01/23/19 04:50	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-365072/7 **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 365072

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	1.2	U	5.0	1.2	ug/Kg			01/23/19 04:50	1
m-Xylene & p-Xylene	0.78	U	10	0.78	ug/Kg			01/23/19 04:50	1
o-Xylene	0.86	U	5.0	0.86	ug/Kg			01/23/19 04:50	1
Hexachlorobutadiene	3.7	U	5.0	3.7	ug/Kg			01/23/19 04:50	1
Tetrachloroethene	0.73	U	5.0	0.73	ug/Kg			01/23/19 04:50	1
Dibromomethane	0.67	U	5.0	0.67	ug/Kg			01/23/19 04:50	1
Toluene	0.77	U	5.0	0.77	ug/Kg			01/23/19 04:50	1
Diisopropyl ether	0.76	U	10	0.76	ug/Kg			01/23/19 04:50	1
Naphthalene	2.7	U	5.0	2.7	ug/Kg			01/23/19 04:50	1
trans-1,2-Dichloroethene	0.47	U	5.0	0.47	ug/Kg			01/23/19 04:50	1
n-Butylbenzene	3.5	U	5.0	3.5	ug/Kg			01/23/19 04:50	1
trans-1,3-Dichloropropene	1.0	U	5.0	1.0	ug/Kg			01/23/19 04:50	1
N-Propylbenzene	0.73	U	5.0	0.73	ug/Kg			01/23/19 04:50	1
Trichloroethene	0.63	U	5.0	0.63	ug/Kg			01/23/19 04:50	1
sec-Butylbenzene	0.86	U	5.0	0.86	ug/Kg			01/23/19 04:50	1
Trichlorofluoromethane	1.1	U	5.0	1.1	ug/Kg			01/23/19 04:50	1
Tert-amyl methyl ether	2.2	U	5.0	2.2	ug/Kg			01/23/19 04:50	1
Ethyl tert-butyl ether	2.3	U	5.0	2.3	ug/Kg			01/23/19 04:50	1
tert-Butylbenzene	0.91	U	5.0	0.91	ug/Kg			01/23/19 04:50	1
Vinyl chloride	0.84	U	5.0	0.84	ug/Kg			01/23/19 04:50	1
Vinyl acetate	2.1	U	10	2.1	ug/Kg			01/23/19 04:50	1
tert-Butyl alcohol	17	U	200	17	ug/Kg			01/23/19 04:50	1
Xylenes, Total	1.6	U	10	1.6	ug/Kg			01/23/19 04:50	1
Dibromochloromethane	2.8	U	5.0	2.8	ug/Kg			01/23/19 04:50	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Ethyl ether	*0.949*	*J*	*ug/Kg*		*2.75*	*60-29-7*		*01/23/19 04:50*	*1*
Tentatively Identified Compound	*None*		*ug/Kg*					*01/23/19 04:50*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*48 - 123*		*01/23/19 04:50*	*1*
4-Bromofluorobenzene (Surr)	*89*		*49 - 141*		*01/23/19 04:50*	*1*
Toluene-d8 (Surr)	*91*		*62 - 135*		*01/23/19 04:50*	*1*
Dibromofluoromethane (Surr)	*92*		*49 - 132*		*01/23/19 04:50*	*1*

Lab Sample ID: LCS 240-365072/6 **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 365072

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	23.9		ug/Kg		96	73 - 124
1,1-Dichloropropene	25.0	25.6		ug/Kg		103	72 - 127
1,1-Dichloroethane	25.0	24.5		ug/Kg		98	72 - 122
1,2,3-Trichlorobenzene	25.0	18.8		ug/Kg		75	59 - 120
1,2,3-Trichloropropane	25.0	21.4		ug/Kg		86	68 - 128
1,2-Dichloroethane	25.0	24.2		ug/Kg		97	64 - 126
1,1-Dichloroethene	25.0	26.1		ug/Kg		104	57 - 139

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-365072/6
Matrix: Solid
Analysis Batch: 365072

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	25.0	25.3		ug/Kg		101	78 - 122
1,2,4-Trimethylbenzene	25.0	21.6		ug/Kg		87	75 - 121
2-Hexanone	50.0	48.0		ug/Kg		96	52 - 145
1,1,2,2-Tetrachloroethane	25.0	19.8		ug/Kg		79	68 - 128
Acetone	50.0	53.6		ug/Kg		107	43 - 159
Benzene	25.0	24.9		ug/Kg		100	74 - 123
Bromoform	25.0	20.6		ug/Kg		83	46 - 137
Bromomethane	25.0	24.4		ug/Kg		97	10 - 152
Carbon disulfide	25.0	26.0		ug/Kg		104	29 - 153
Carbon tetrachloride	25.0	26.7		ug/Kg		107	56 - 139
1,1,1-Trichloroethane	25.0	26.5		ug/Kg		106	64 - 135
Chlorobenzene	25.0	22.1		ug/Kg		89	80 - 120
1,3-Dichloropropane	25.0	22.9		ug/Kg		92	76 - 120
Chloroethane	25.0	23.3		ug/Kg		93	15 - 155
1,2-Dibromo-3-Chloropropane	25.0	20.1		ug/Kg		80	38 - 135
Chloroform	25.0	24.4		ug/Kg		98	72 - 124
Chloromethane	25.0	22.7		ug/Kg		91	45 - 128
cis-1,2-Dichloroethene	25.0	24.9		ug/Kg		100	74 - 123
cis-1,3-Dichloropropene	25.0	24.1		ug/Kg		97	63 - 137
Bromodichloromethane	25.0	24.8		ug/Kg		99	63 - 132
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	25.9		ug/Kg		104	56 - 138
Dichlorodifluoromethane	25.0	22.6		ug/Kg		90	26 - 138
1,2,4-Trichlorobenzene	25.0	17.2		ug/Kg		69	54 - 120
Ethylbenzene	25.0	25.0		ug/Kg		100	76 - 120
1,2-Dibromoethane	25.0	23.8		ug/Kg		95	76 - 120
2,2-Dichloropropane	25.0	22.7		ug/Kg		91	42 - 143
1,2-Dichlorobenzene	25.0	21.1		ug/Kg		84	73 - 120
1,3-Dichlorobenzene	25.0	20.5		ug/Kg		82	70 - 120
1,4-Dichlorobenzene	25.0	20.3		ug/Kg		81	71 - 120
2-Chloroethyl vinyl ether	25.0	21.2	J	ug/Kg		85	58 - 154
Isopropylbenzene	25.0	25.0		ug/Kg		100	77 - 124
2-Chlorotoluene	25.0	21.0		ug/Kg		84	75 - 120
2-Butanone (MEK)	50.0	53.9		ug/Kg		108	45 - 148
4-Methyl-2-pentanone (MIBK)	50.0	49.3		ug/Kg		99	53 - 139
Bromobenzene	25.0	21.0		ug/Kg		84	75 - 120
Methyl tert-butyl ether	25.0	23.3		ug/Kg		93	66 - 127
Bromochloromethane	25.0	24.0		ug/Kg		96	72 - 124
Methylene Chloride	25.0	25.4		ug/Kg		102	62 - 137
4-Chlorotoluene	25.0	21.7		ug/Kg		87	74 - 121
p-Isopropyltoluene	25.0	22.5		ug/Kg		90	74 - 124
Styrene	25.0	23.2		ug/Kg		93	76 - 121
m-Xylene & p-Xylene	25.0	24.9		ug/Kg		99	77 - 120
o-Xylene	25.0	25.3		ug/Kg		101	79 - 120
Hexachlorobutadiene	25.0	21.0		ug/Kg		84	58 - 122
Tetrachloroethene	25.0	24.1		ug/Kg		96	76 - 120
Dibromomethane	25.0	25.0		ug/Kg		100	71 - 122
Toluene	25.0	24.6		ug/Kg		98	76 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-365072/6
Matrix: Solid
Analysis Batch: 365072

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	25.0	17.2		ug/Kg		69	51 - 120
trans-1,2-Dichloroethene	25.0	25.7		ug/Kg		103	71 - 133
n-Butylbenzene	25.0	22.0		ug/Kg		88	64 - 133
trans-1,3-Dichloropropene	25.0	20.9		ug/Kg		84	55 - 121
N-Propylbenzene	25.0	22.7		ug/Kg		91	73 - 129
Trichloroethene	25.0	25.9		ug/Kg		104	73 - 126
sec-Butylbenzene	25.0	22.4		ug/Kg		89	73 - 126
Trichlorofluoromethane	25.0	24.5		ug/Kg		98	47 - 146
tert-Butylbenzene	25.0	23.1		ug/Kg		92	73 - 122
Vinyl chloride	25.0	24.7		ug/Kg		99	52 - 130
Vinyl acetate	25.0	21.9		ug/Kg		87	43 - 144
tert-Butyl alcohol	250	190	J	ug/Kg		76	41 - 139
Xylenes, Total	50.0	50.2		ug/Kg		100	79 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*48 - 123*
4-Bromofluorobenzene (Surr)	*96*		*49 - 141*
Toluene-d8 (Surr)	*93*		*62 - 135*
Dibromofluoromethane (Surr)	*89*		*49 - 132*

Lab Sample ID: 240-107194-2 MS
Matrix: Solid
Analysis Batch: 365072

Client Sample ID: WC-EFSOIL-011819
Prep Type: Total/NA
Prep Batch: 365103

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	3.3	U	28.2	28.0		ug/Kg	☼	99	16 - 137
1,1-Dichloropropene	1.1	U	28.2	30.1		ug/Kg	☼	107	30 - 138
1,1-Dichloroethane	0.76	U	28.2	29.5		ug/Kg	☼	104	50 - 133
1,2,3-Trichlorobenzene	0.63	U	28.2	20.6		ug/Kg	☼	73	10 - 120
1,2,3-Trichloropropane	1.7	U	28.2	29.9		ug/Kg	☼	106	10 - 178
1,2-Dichloroethane	0.85	U	28.2	28.0		ug/Kg	☼	99	42 - 127
1,1-Dichloroethene	0.99	U	28.2	31.9		ug/Kg	☼	113	36 - 150
1,2-Dichloropropane	0.93	U	28.2	30.1		ug/Kg	☼	107	51 - 128
1,2,4-Trimethylbenzene	1.1	U	28.2	27.0		ug/Kg	☼	96	10 - 149
2-Hexanone	4.5	U	56.5	60.8		ug/Kg	☼	108	15 - 147
1,1,2,2-Tetrachloroethane	1.6	U	28.2	27.1		ug/Kg	☼	96	16 - 178
Acetone	23	U	56.5	76.0		ug/Kg	☼	135	10 - 160
Benzene	0.76	U	28.2	29.7		ug/Kg	☼	105	39 - 133
Bromoform	2.6	U	28.2	24.3		ug/Kg	☼	86	18 - 120
Bromomethane	1.1	U	28.2	28.9		ug/Kg	☼	102	10 - 159
Carbon disulfide	1.3	U	28.2	32.4		ug/Kg	☼	115	16 - 145
Carbon tetrachloride	3.6	U	28.2	30.2		ug/Kg	☼	107	22 - 142
1,1,1-Trichloroethane	0.90	U	28.2	31.5		ug/Kg	☼	112	38 - 143
Chlorobenzene	1.0	U	28.2	26.1		ug/Kg	☼	92	21 - 131
1,3-Dichloropropane	1.1	U	28.2	28.0		ug/Kg	☼	99	34 - 121
Chloroethane	1.3	U	28.2	29.2		ug/Kg	☼	103	17 - 162
1,2-Dibromo-3-Chloropropane	4.0	U	28.2	23.2		ug/Kg	☼	82	10 - 141
Chloroform	0.86	U	28.2	29.1		ug/Kg	☼	103	51 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-107194-2 MS **Client Sample ID: WC-EFSOIL-011819**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 365072 **Prep Batch: 365103**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	1.1	U	28.2	28.6		ug/Kg	☼	101	26 - 149
cis-1,2-Dichloroethene	0.71	U	28.2	29.3		ug/Kg	☼	104	50 - 128
cis-1,3-Dichloropropene	1.6	U	28.2	29.0		ug/Kg	☼	103	15 - 132
Bromodichloromethane	0.74	U	28.2	29.5		ug/Kg	☼	104	32 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	1.4	U	28.2	29.7		ug/Kg	☼	105	37 - 147
Dichlorodifluoromethane	1.0	U	28.2	27.0		ug/Kg	☼	95	15 - 150
1,2,4-Trichlorobenzene	0.63	U	28.2	19.1		ug/Kg	☼	68	10 - 120
Ethylbenzene	1.1	U	28.2	28.1		ug/Kg	☼	100	20 - 135
1,2-Dibromoethane	0.84	U	28.2	28.3		ug/Kg	☼	100	36 - 125
2,2-Dichloropropane	1.3	U	28.2	25.7		ug/Kg	☼	91	20 - 141
1,2-Dichlorobenzene	1.2	U	28.2	26.0		ug/Kg	☼	92	10 - 130
1,3-Dichlorobenzene	0.89	U	28.2	24.5		ug/Kg	☼	87	10 - 131
1,4-Dichlorobenzene	0.97	U	28.2	25.1		ug/Kg	☼	89	10 - 130
2-Chloroethyl vinyl ether	9.8	U	28.2	24.3	J	ug/Kg	☼	86	10 - 134
Isopropylbenzene	0.91	U	28.2	29.3		ug/Kg	☼	104	20 - 138
2-Chlorotoluene	1.0	U	28.2	27.3		ug/Kg	☼	97	10 - 179
2-Butanone (MEK)	3.9	U	56.5	63.1		ug/Kg	☼	112	20 - 148
4-Methyl-2-pentanone (MIBK)	4.1	U	56.5	61.8		ug/Kg	☼	109	29 - 143
Bromobenzene	1.3	U	28.2	27.2		ug/Kg	☼	96	10 - 164
Methyl tert-butyl ether	0.90	U	28.2	29.1		ug/Kg	☼	103	48 - 134
Bromochloromethane	0.65	U	28.2	27.5		ug/Kg	☼	98	36 - 147
Methylene Chloride	13	U	28.2	32.0		ug/Kg	☼	113	39 - 145
4-Chlorotoluene	0.94	U	28.2	27.2		ug/Kg	☼	96	10 - 158
p-Isopropyltoluene	3.2	U	28.2	27.3		ug/Kg	☼	97	10 - 142
Styrene	1.3	U	28.2	26.7		ug/Kg	☼	94	10 - 134
m-Xylene & p-Xylene	0.86	U	28.2	28.2		ug/Kg	☼	100	16 - 137
o-Xylene	0.94	U	28.2	29.4		ug/Kg	☼	104	21 - 138
Hexachlorobutadiene	4.1	U	28.2	22.4		ug/Kg	☼	79	10 - 120
Tetrachloroethene	0.80	U	28.2	26.8		ug/Kg	☼	95	20 - 151
Dibromomethane	0.73	U	28.2	29.1		ug/Kg	☼	103	37 - 138
Toluene	0.85	U	28.2	29.0		ug/Kg	☼	103	29 - 141
Naphthalene	3.0	U	28.2	22.4		ug/Kg	☼	79	10 - 120
trans-1,2-Dichloroethene	0.51	U	28.2	29.5		ug/Kg	☼	104	44 - 141
n-Butylbenzene	3.8	U	28.2	24.9		ug/Kg	☼	88	10 - 149
trans-1,3-Dichloropropene	1.1	U	28.2	24.7		ug/Kg	☼	87	15 - 120
N-Propylbenzene	0.80	U	28.2	29.1		ug/Kg	☼	103	10 - 162
Trichloroethene	1.0	J	28.2	30.1		ug/Kg	☼	103	25 - 148
sec-Butylbenzene	0.95	U	28.2	27.9		ug/Kg	☼	99	10 - 156
Trichlorofluoromethane	1.2	U	28.2	27.9		ug/Kg	☼	99	38 - 149
tert-Butylbenzene	0.99	U	28.2	29.5		ug/Kg	☼	104	10 - 148
Vinyl chloride	0.92	U	28.2	30.0		ug/Kg	☼	106	31 - 148
Vinyl acetate	2.3	U	28.2	23.4		ug/Kg	☼	83	10 - 120
tert-Butyl alcohol	18	U	282	263		ug/Kg	☼	93	59 - 128
Xylenes, Total	1.7	U	56.5	57.6		ug/Kg	☼	102	19 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*48 - 123*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-107194-2 MS **Client Sample ID: WC-EFSOIL-011819**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 365072 **Prep Batch: 365103**

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*49 - 141*
Toluene-d8 (Surr)	*102*		*62 - 135*
Dibromofluoromethane (Surr)	*94*		*49 - 132*

Lab Sample ID: 240-107194-2 MSD **Client Sample ID: WC-EFSOIL-011819**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 365072 **Prep Batch: 365103**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	3.3	U	28.7	29.4		ug/Kg	☼	103	16 - 137	5	40
1,1-Dichloropropene	1.1	U	28.7	31.3		ug/Kg	☼	109	30 - 138	4	36
1,1-Dichloroethane	0.76	U	28.7	31.7		ug/Kg	☼	111	50 - 133	7	40
1,2,3-Trichlorobenzene	0.63	U	28.7	21.3		ug/Kg	☼	74	10 - 120	3	40
1,2,3-Trichloropropane	1.7	U	28.7	28.4		ug/Kg	☼	99	10 - 178	5	40
1,2-Dichloroethane	0.85	U	28.7	29.0		ug/Kg	☼	101	42 - 127	3	34
1,1-Dichloroethene	0.99	U	28.7	34.7		ug/Kg	☼	121	36 - 150	8	40
1,2-Dichloropropane	0.93	U	28.7	30.6		ug/Kg	☼	107	51 - 128	2	36
1,2,4-Trimethylbenzene	1.1	U	28.7	27.7		ug/Kg	☼	97	10 - 149	3	40
2-Hexanone	4.5	U	57.3	58.3		ug/Kg	☼	102	15 - 147	4	40
1,1,2,2-Tetrachloroethane	1.6	U	28.7	26.5		ug/Kg	☼	92	16 - 178	2	40
Acetone	23	U	57.3	85.5		ug/Kg	☼	149	10 - 160	12	39
Benzene	0.76	U	28.7	30.7		ug/Kg	☼	107	39 - 133	3	40
Bromoform	2.6	U	28.7	25.7		ug/Kg	☼	89	18 - 120	6	40
Bromomethane	1.1	U	28.7	30.5		ug/Kg	☼	106	10 - 159	5	40
Carbon disulfide	1.3	U	28.7	35.6		ug/Kg	☼	124	16 - 145	10	40
Carbon tetrachloride	3.6	U	28.7	32.2		ug/Kg	☼	112	22 - 142	7	40
1,1,1-Trichloroethane	0.90	U	28.7	33.7		ug/Kg	☼	117	38 - 143	7	40
Chlorobenzene	1.0	U	28.7	26.3		ug/Kg	☼	92	21 - 131	1	40
1,3-Dichloropropane	1.1	U	28.7	27.4		ug/Kg	☼	96	34 - 121	2	40
Chloroethane	1.3	U	28.7	32.9		ug/Kg	☼	115	17 - 162	12	40
1,2-Dibromo-3-Chloropropane	4.0	U	28.7	26.5		ug/Kg	☼	93	10 - 141	13	40
Chloroform	0.86	U	28.7	31.5		ug/Kg	☼	110	51 - 130	8	32
Chloromethane	1.1	U	28.7	30.6		ug/Kg	☼	107	26 - 149	7	37
cis-1,2-Dichloroethene	0.71	U	28.7	31.5		ug/Kg	☼	110	50 - 128	7	40
cis-1,3-Dichloropropene	1.6	U	28.7	28.0		ug/Kg	☼	98	15 - 132	3	40
Bromodichloromethane	0.74	U	28.7	30.4		ug/Kg	☼	106	32 - 129	3	39
1,1,2-Trichloro-1,2,2-trifluoroethane	1.4	U	28.7	32.1		ug/Kg	☼	112	37 - 147	8	37
Dichlorodifluoromethane	1.0	U	28.7	30.2		ug/Kg	☼	105	15 - 150	11	31
1,2,4-Trichlorobenzene	0.63	U	28.7	20.5		ug/Kg	☼	71	10 - 120	7	40
Ethylbenzene	1.1	U	28.7	28.0		ug/Kg	☼	98	20 - 135	0	40
1,2-Dibromoethane	0.84	U	28.7	27.6		ug/Kg	☼	96	36 - 125	3	40
2,2-Dichloropropane	1.3	U	28.7	28.8		ug/Kg	☼	100	20 - 141	11	40
1,2-Dichlorobenzene	1.2	U	28.7	26.1		ug/Kg	☼	91	10 - 130	0	40
1,3-Dichlorobenzene	0.89	U	28.7	24.6		ug/Kg	☼	86	10 - 131	0	40
1,4-Dichlorobenzene	0.97	U	28.7	25.5		ug/Kg	☼	89	10 - 130	2	40
2-Chloroethyl vinyl ether	9.8	U	28.7	20.2	J	ug/Kg	☼	70	10 - 134	19	40
Isopropylbenzene	0.91	U	28.7	31.3		ug/Kg	☼	109	20 - 138	7	40

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-107194-2 MSD **Client Sample ID: WC-EFSOIL-011819**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 365072 **Prep Batch: 365103**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Chlorotoluene	1.0	U	28.7	27.8		ug/Kg	☼	97	10 - 179	2	40
2-Butanone (MEK)	3.9	U	57.3	62.7		ug/Kg	☼	109	20 - 148	1	36
4-Methyl-2-pentanone (MIBK)	4.1	U	57.3	59.9		ug/Kg	☼	104	29 - 143	3	40
Bromobenzene	1.3	U	28.7	26.3		ug/Kg	☼	92	10 - 164	3	40
Methyl tert-butyl ether	0.90	U	28.7	31.3		ug/Kg	☼	109	48 - 134	7	34
Bromochloromethane	0.65	U	28.7	30.9		ug/Kg	☼	108	36 - 147	12	40
Methylene Chloride	13	U	28.7	35.0		ug/Kg	☼	122	39 - 145	9	40
4-Chlorotoluene	0.94	U	28.7	26.9		ug/Kg	☼	94	10 - 158	1	40
p-Isopropyltoluene	3.2	U	28.7	28.6		ug/Kg	☼	100	10 - 142	5	40
Styrene	1.3	U	28.7	26.6		ug/Kg	☼	93	10 - 134	0	40
m-Xylene & p-Xylene	0.86	U	28.7	28.9		ug/Kg	☼	101	16 - 137	3	40
o-Xylene	0.94	U	28.7	30.9		ug/Kg	☼	108	21 - 138	5	40
Hexachlorobutadiene	4.1	U	28.7	24.4		ug/Kg	☼	85	10 - 120	8	40
Tetrachloroethene	0.80	U	28.7	28.6		ug/Kg	☼	100	20 - 151	7	40
Dibromomethane	0.73	U	28.7	28.8		ug/Kg	☼	101	37 - 138	1	30
Toluene	0.85	U	28.7	29.6		ug/Kg	☼	103	29 - 141	2	40
Naphthalene	3.0	U	28.7	23.0		ug/Kg	☼	80	10 - 120	3	40
trans-1,2-Dichloroethene	0.51	U	28.7	32.7		ug/Kg	☼	114	44 - 141	10	40
n-Butylbenzene	3.8	U	28.7	26.7		ug/Kg	☼	93	10 - 149	7	40
trans-1,3-Dichloropropene	1.1	U	28.7	24.4		ug/Kg	☼	85	15 - 120	1	40
N-Propylbenzene	0.80	U	28.7	28.8		ug/Kg	☼	101	10 - 162	1	40
Trichloroethene	1.0	J	28.7	30.1		ug/Kg	☼	101	25 - 148	0	40
sec-Butylbenzene	0.95	U	28.7	29.0		ug/Kg	☼	101	10 - 156	4	40
Trichlorofluoromethane	1.2	U	28.7	31.2		ug/Kg	☼	109	38 - 149	11	39
tert-Butylbenzene	0.99	U	28.7	30.4		ug/Kg	☼	106	10 - 148	3	40
Vinyl chloride	0.92	U	28.7	34.0		ug/Kg	☼	119	31 - 148	13	37
Vinyl acetate	2.3	U	28.7	22.1		ug/Kg	☼	77	10 - 120	6	40
tert-Butyl alcohol	18	U	287	271		ug/Kg	☼	95	59 - 128	3	39
Xylenes, Total	1.7	U	57.3	59.8		ug/Kg	☼	104	19 - 137	4	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*48 - 123*
4-Bromofluorobenzene (Surr)	*107*		*49 - 141*
Toluene-d8 (Surr)	*104*		*62 - 135*
Dibromofluoromethane (Surr)	*101*		*49 - 132*

Lab Sample ID: MB 240-365336/8 **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 365336

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14	ug/L			01/24/19 13:08	1
1,1-Dichloropropene	0.14	U	1.0	0.14	ug/L			01/24/19 13:08	1
1,1-Dichloroethane	0.17	U	1.0	0.17	ug/L			01/24/19 13:08	1
1,2,3-Trichlorobenzene	0.54	U	1.0	0.54	ug/L			01/24/19 13:08	1
1,2,3-Trichloropropane	0.24	U	1.0	0.24	ug/L			01/24/19 13:08	1
1,2-Dichloroethane	0.21	U	1.0	0.21	ug/L			01/24/19 13:08	1
1,1-Dichloroethene	0.19	U	1.0	0.19	ug/L			01/24/19 13:08	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-365336/8
Matrix: Water
Analysis Batch: 365336

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	0.14	U	5.0	0.14	ug/L			01/24/19 13:08	1
1,2-Dichloropropane	0.15	U	1.0	0.15	ug/L			01/24/19 13:08	1
1,2,4-Trimethylbenzene	0.070	U	1.0	0.070	ug/L			01/24/19 13:08	1
2-Hexanone	0.54	U	10	0.54	ug/L			01/24/19 13:08	1
1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13	ug/L			01/24/19 13:08	1
Acetone	5.4	U	10	5.4	ug/L			01/24/19 13:08	1
Benzene	0.13	U	1.0	0.13	ug/L			01/24/19 13:08	1
Bromoform	0.76	U	1.0	0.76	ug/L			01/24/19 13:08	1
Bromomethane	0.42	U	1.0	0.42	ug/L			01/24/19 13:08	1
Carbon disulfide	0.28	U	1.0	0.28	ug/L			01/24/19 13:08	1
Carbon tetrachloride	0.26	U	1.0	0.26	ug/L			01/24/19 13:08	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/24/19 13:08	1
Chlorobenzene	0.14	U	1.0	0.14	ug/L			01/24/19 13:08	1
1,3-Dichloropropane	0.21	U	1.0	0.21	ug/L			01/24/19 13:08	1
Chloroethane	0.83	U	1.0	0.83	ug/L			01/24/19 13:08	1
1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91	ug/L			01/24/19 13:08	1
Chloroform	0.13	U	1.0	0.13	ug/L			01/24/19 13:08	1
Chloromethane	0.20	U	1.0	0.20	ug/L			01/24/19 13:08	1
cis-1,2-Dichloroethene	0.16	U	1.0	0.16	ug/L			01/24/19 13:08	1
cis-1,3-Dichloropropene	0.61	U	1.0	0.61	ug/L			01/24/19 13:08	1
Bromodichloromethane	0.17	U	1.0	0.17	ug/L			01/24/19 13:08	1
1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41	ug/L			01/24/19 13:08	1
Dichlorodifluoromethane	0.35	U	1.0	0.35	ug/L			01/24/19 13:08	1
1,2,4-Trichlorobenzene	0.26	U	1.0	0.26	ug/L			01/24/19 13:08	1
Ethylbenzene	0.11	U	1.0	0.11	ug/L			01/24/19 13:08	1
1,2-Dibromoethane	0.12	U	1.0	0.12	ug/L			01/24/19 13:08	1
2,2-Dichloropropane	0.31	U	1.0	0.31	ug/L			01/24/19 13:08	1
1,2-Dichlorobenzene	0.15	U	1.0	0.15	ug/L			01/24/19 13:08	1
1,3-Dichlorobenzene	0.15	U	1.0	0.15	ug/L			01/24/19 13:08	1
1,4-Dichlorobenzene	0.16	U	1.0	0.16	ug/L			01/24/19 13:08	1
2-Chloroethyl vinyl ether	0.26	U	10	0.26	ug/L			01/24/19 13:08	1
Isopropylbenzene	0.090	U	1.0	0.090	ug/L			01/24/19 13:08	1
2-Chlorotoluene	0.15	U	1.0	0.15	ug/L			01/24/19 13:08	1
2-Butanone (MEK)	1.2	U	10	1.2	ug/L			01/24/19 13:08	1
4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42	ug/L			01/24/19 13:08	1
Bromobenzene	0.12	U	1.0	0.12	ug/L			01/24/19 13:08	1
Methyl tert-butyl ether	0.070	U	1.0	0.070	ug/L			01/24/19 13:08	1
Bromochloromethane	0.14	U	1.0	0.14	ug/L			01/24/19 13:08	1
Methylene Chloride	2.6	U	5.0	2.6	ug/L			01/24/19 13:08	1
4-Chlorotoluene	0.090	U	1.0	0.090	ug/L			01/24/19 13:08	1
4-Isopropyltoluene	0.13	U	1.0	0.13	ug/L			01/24/19 13:08	1
Styrene	0.10	U	1.0	0.10	ug/L			01/24/19 13:08	1
m-Xylene & p-Xylene	0.080	U	2.0	0.080	ug/L			01/24/19 13:08	1
o-Xylene	0.090	U	1.0	0.090	ug/L			01/24/19 13:08	1
Hexachlorobutadiene	0.83	U	1.0	0.83	ug/L			01/24/19 13:08	1
Tetrachloroethene	0.15	U	1.0	0.15	ug/L			01/24/19 13:08	1
Dibromomethane	0.090	U	1.0	0.090	ug/L			01/24/19 13:08	1
Toluene	0.14	U	1.0	0.14	ug/L			01/24/19 13:08	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-365336/8
Matrix: Water
Analysis Batch: 365336

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diisopropyl ether	0.17	U	10	0.17	ug/L			01/24/19 13:08	1
Naphthalene	0.32	U	1.0	0.32	ug/L			01/24/19 13:08	1
trans-1,2-Dichloroethene	0.19	U	1.0	0.19	ug/L			01/24/19 13:08	1
n-Butylbenzene	0.14	U	1.0	0.14	ug/L			01/24/19 13:08	1
trans-1,3-Dichloropropene	0.67	U	1.0	0.67	ug/L			01/24/19 13:08	1
N-Propylbenzene	0.15	U	1.0	0.15	ug/L			01/24/19 13:08	1
Trichloroethene	0.10	U	1.0	0.10	ug/L			01/24/19 13:08	1
sec-Butylbenzene	0.13	U	1.0	0.13	ug/L			01/24/19 13:08	1
Trichlorofluoromethane	0.45	U	1.0	0.45	ug/L			01/24/19 13:08	1
Tert-amyl methyl ether	0.11	U	5.0	0.11	ug/L			01/24/19 13:08	1
Ethyl tert-butyl ether	0.15	U	5.0	0.15	ug/L			01/24/19 13:08	1
tert-Butylbenzene	0.14	U	1.0	0.14	ug/L			01/24/19 13:08	1
Vinyl chloride	0.20	U	1.0	0.20	ug/L			01/24/19 13:08	1
Vinyl acetate	0.19	U	2.0	0.19	ug/L			01/24/19 13:08	1
tert-Butyl alcohol	1.7	U	50	1.7	ug/L			01/24/19 13:08	1
Xylenes, Total	0.15	U	2.0	0.15	ug/L			01/24/19 13:08	1
Chlorodibromomethane	0.39	U	1.0	0.39	ug/L			01/24/19 13:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 121*		*01/24/19 13:08*	*1*
4-Bromofluorobenzene (Surr)	*101*		*59 - 120*		*01/24/19 13:08*	*1*
Toluene-d8 (Surr)	*95*		*70 - 123*		*01/24/19 13:08*	*1*
Dibromofluoromethane (Surr)	*96*		*75 - 128*		*01/24/19 13:08*	*1*

Lab Sample ID: LCS 240-365336/6
Matrix: Water
Analysis Batch: 365336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	10.0	11.0		ug/L		110	80 - 124
1,1-Dichloropropene	10.0	11.3		ug/L		113	78 - 126
1,1-Dichloroethane	10.0	13.8	*	ug/L		138	75 - 133
1,2,3-Trichlorobenzene	10.0	7.75		ug/L		78	39 - 138
1,2,3-Trichloropropane	10.0	9.42		ug/L		94	66 - 139
1,2-Dichloroethane	10.0	10.3		ug/L		103	71 - 135
1,1-Dichloroethene	10.0	13.4		ug/L		134	65 - 139
1,2-Dichloropropane	10.0	11.5		ug/L		115	78 - 133
1,2,4-Trimethylbenzene	10.0	12.0		ug/L		120	74 - 120
2-Hexanone	20.0	24.3		ug/L		122	43 - 148
1,1,2,2-Tetrachloroethane	10.0	11.0		ug/L		110	65 - 139
Acetone	20.0	22.7		ug/L		114	21 - 162
Benzene	10.0	11.3		ug/L		113	80 - 123
Bromoform	10.0	8.01		ug/L		80	49 - 141
Bromomethane	10.0	12.0		ug/L		120	41 - 175
Carbon disulfide	10.0	13.5		ug/L		135	60 - 138
Carbon tetrachloride	10.0	11.7		ug/L		117	63 - 140
1,1,1-Trichloroethane	10.0	11.8		ug/L		118	69 - 134
Chlorobenzene	10.0	10.7		ug/L		107	80 - 121

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-365336/6
Matrix: Water
Analysis Batch: 365336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichloropropane	10.0	10.0		ug/L		100	72 - 134
Chloroethane	10.0	13.1		ug/L		131	33 - 173
1,2-Dibromo-3-Chloropropane	10.0	8.46		ug/L		85	46 - 132
Chloroform	10.0	12.0		ug/L		120	79 - 127
Chloromethane	10.0	13.4		ug/L		134	54 - 143
cis-1,2-Dichloroethene	10.0	12.1		ug/L		121	76 - 128
cis-1,3-Dichloropropene	10.0	9.70		ug/L		97	64 - 132
Bromodichloromethane	10.0	10.2		ug/L		102	77 - 125
1,1,2-Trichlorotrifluoroethane	10.0	11.9		ug/L		119	50 - 156
Dichlorodifluoromethane	10.0	10.7		ug/L		107	29 - 148
1,2,4-Trichlorobenzene	10.0	8.53		ug/L		85	42 - 133
Ethylbenzene	10.0	10.3		ug/L		103	80 - 120
1,2-Dibromoethane	10.0	9.71		ug/L		97	77 - 123
2,2-Dichloropropane	10.0	11.4		ug/L		114	42 - 150
1,2-Dichlorobenzene	10.0	10.4		ug/L		104	78 - 120
1,3-Dichlorobenzene	10.0	10.1		ug/L		101	78 - 120
1,4-Dichlorobenzene	10.0	10.4		ug/L		104	78 - 120
2-Chloroethyl vinyl ether	10.0	6.08	J	ug/L		61	55 - 137
Isopropylbenzene	10.0	11.3		ug/L		113	74 - 120
2-Chlorotoluene	10.0	10.8		ug/L		108	78 - 123
2-Butanone (MEK)	20.0	20.3		ug/L		101	39 - 163
4-Methyl-2-pentanone (MIBK)	20.0	21.7		ug/L		108	49 - 143
Bromobenzene	10.0	9.35		ug/L		94	74 - 129
Methyl tert-butyl ether	10.0	12.0		ug/L		120	51 - 133
Bromochloromethane	10.0	9.87		ug/L		99	74 - 130
Methylene Chloride	10.0	13.5	*	ug/L		135	70 - 134
4-Chlorotoluene	10.0	11.8		ug/L		118	77 - 125
4-Isopropyltoluene	10.0	11.4		ug/L		114	69 - 122
Styrene	10.0	10.2		ug/L		102	79 - 120
m-Xylene & p-Xylene	10.0	10.2		ug/L		102	80 - 120
o-Xylene	10.0	10.8		ug/L		108	80 - 120
Hexachlorobutadiene	10.0	7.27		ug/L		73	38 - 136
Tetrachloroethene	10.0	8.61		ug/L		86	74 - 130
Dibromomethane	10.0	9.55		ug/L		96	74 - 124
Toluene	10.0	11.2		ug/L		112	78 - 129
Naphthalene	10.0	8.61		ug/L		86	28 - 141
trans-1,2-Dichloroethene	10.0	13.5	*	ug/L		135	78 - 133
n-Butylbenzene	10.0	12.6		ug/L		126	57 - 126
trans-1,3-Dichloropropene	10.0	10.0		ug/L		100	55 - 128
N-Propylbenzene	10.0	10.8		ug/L		108	77 - 123
Trichloroethene	10.0	9.42		ug/L		94	76 - 125
sec-Butylbenzene	10.0	11.5		ug/L		115	68 - 123
Trichlorofluoromethane	10.0	11.6		ug/L		116	51 - 164
tert-Butylbenzene	10.0	10.8		ug/L		108	70 - 121
Vinyl chloride	10.0	14.1		ug/L		141	58 - 143
Vinyl acetate	10.0	9.54		ug/L		95	45 - 151
tert-Butyl alcohol	100	112		ug/L		112	10 - 161
Xylenes, Total	20.0	21.0		ug/L		105	80 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-365336/6 **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 365336

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 121*
4-Bromofluorobenzene (Surr)	*106*		*59 - 120*
Toluene-d8 (Surr)	*96*		*70 - 123*
Dibromofluoromethane (Surr)	*92*		*75 - 128*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-365105/23-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 365410 **Prep Batch: 365105**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	22	U	50	22	ug/Kg		01/23/19 06:41	01/24/19 17:53	1
Aroclor-1221	24	U	50	24	ug/Kg		01/23/19 06:41	01/24/19 17:53	1
Aroclor-1232	23	U	50	23	ug/Kg		01/23/19 06:41	01/24/19 17:53	1
Aroclor-1242	19	U	50	19	ug/Kg		01/23/19 06:41	01/24/19 17:53	1
Aroclor-1248	24	U	50	24	ug/Kg		01/23/19 06:41	01/24/19 17:53	1
Aroclor-1254	23	U	50	23	ug/Kg		01/23/19 06:41	01/24/19 17:53	1
Aroclor-1260	22	U	50	22	ug/Kg		01/23/19 06:41	01/24/19 17:53	1
Aroclor-1262	31	U	50	31	ug/Kg		01/23/19 06:41	01/24/19 17:53	1
Aroclor-1268	23	U	50	23	ug/Kg		01/23/19 06:41	01/24/19 17:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*68*		*14 - 128*	*01/23/19 06:41*	*01/24/19 17:53*	*1*
DCB Decachlorobiphenyl	*87*		*10 - 132*	*01/23/19 06:41*	*01/24/19 17:53*	*1*

Lab Sample ID: LCS 240-365105/24-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 365410 **Prep Batch: 365105**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor-1016			1000	620		ug/Kg		62	47 - 120		
Aroclor-1260			1000	785		ug/Kg		78	46 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*72*		*14 - 128*
DCB Decachlorobiphenyl	*94*		*10 - 132*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 240-365151/2-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 365404 **Prep Batch: 365151**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0041	U	0.050	0.0041	mg/L		01/23/19 14:00	01/24/19 11:15	1
Barium	0.0013	U	0.50	0.0013	mg/L		01/23/19 14:00	01/24/19 11:15	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 240-365151/2-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 365404 **Prep Batch: 365151**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.00020	U	0.050	0.00020	mg/L		01/23/19 14:00	01/24/19 11:15	1
Chromium	0.00063	U	0.050	0.00063	mg/L		01/23/19 14:00	01/24/19 11:15	1
Lead	0.0028	U	0.050	0.0028	mg/L		01/23/19 14:00	01/24/19 11:15	1
Selenium	0.0060	U	0.050	0.0060	mg/L		01/23/19 14:00	01/24/19 11:15	1
Silver	0.00062	U	0.050	0.00062	mg/L		01/23/19 14:00	01/24/19 11:15	1

Lab Sample ID: LCS 240-365151/3-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 365404 **Prep Batch: 365151**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.00	1.98		mg/L		99	50 - 150
Barium	2.00	1.94		mg/L		97	50 - 150
Cadmium	0.0500	0.0486	J	mg/L		97	50 - 150
Chromium	0.200	0.199		mg/L		99	50 - 150
Lead	0.500	0.491		mg/L		98	50 - 150
Selenium	2.00	1.99		mg/L		100	50 - 150
Silver	0.0500	0.0506		mg/L		101	50 - 150

Lab Sample ID: LB 240-365049/1-B **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: TCLP**
Analysis Batch: 365404 **Prep Batch: 365151**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00634	J	0.050	0.0041	mg/L		01/23/19 14:00	01/24/19 11:02	1
Barium	0.0013	U	0.50	0.0013	mg/L		01/23/19 14:00	01/24/19 11:02	1
Cadmium	0.00020	U	0.050	0.00020	mg/L		01/23/19 14:00	01/24/19 11:02	1
Chromium	0.00121	J	0.050	0.00063	mg/L		01/23/19 14:00	01/24/19 11:02	1
Lead	0.0028	U	0.050	0.0028	mg/L		01/23/19 14:00	01/24/19 11:02	1
Selenium	0.0060	U	0.050	0.0060	mg/L		01/23/19 14:00	01/24/19 11:02	1
Silver	0.000838	J	0.050	0.00062	mg/L		01/23/19 14:00	01/24/19 11:02	1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-365159/2-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 365352 **Prep Batch: 365159**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	U	0.0020	0.00013	mg/L		01/23/19 12:00	01/24/19 08:59	1

Lab Sample ID: LCS 240-365159/3-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 365352 **Prep Batch: 365159**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00527		mg/L		105	80 - 120

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LB 240-365049/1-C **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: TCLP**
Analysis Batch: 365352 **Prep Batch: 365159**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00013	U	0.0020	0.00013	mg/L		01/23/19 12:00	01/24/19 08:57	1

Method: 1010A - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 240-365145/1 **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 365145

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Flashpoint			81.0	83.00		Degrees F		102	97 - 103		

GC/MS VOA

Analysis Batch: 365072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107194-2	WC-EFSOIL-011819	Total/NA	Solid	8260B	365103
MB 240-365072/7	Method Blank	Total/NA	Solid	8260B	
LCS 240-365072/6	Lab Control Sample	Total/NA	Solid	8260B	
240-107194-2 MS	WC-EFSOIL-011819	Total/NA	Solid	8260B	365103
240-107194-2 MSD	WC-EFSOIL-011819	Total/NA	Solid	8260B	365103

Prep Batch: 365103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107194-2	WC-EFSOIL-011819	Total/NA	Solid	5030A	
240-107194-2 MS	WC-EFSOIL-011819	Total/NA	Solid	5030A	
240-107194-2 MSD	WC-EFSOIL-011819	Total/NA	Solid	5030A	

Analysis Batch: 365336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107194-1	TB-011819	Total/NA	Water	8260B	
MB 240-365336/8	Method Blank	Total/NA	Water	8260B	
LCS 240-365336/6	Lab Control Sample	Total/NA	Water	8260B	

GC Semi VOA

Prep Batch: 365105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107194-2	WC-EFSOIL-011819	Total/NA	Solid	3540C	
MB 240-365105/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-365105/24-A	Lab Control Sample	Total/NA	Solid	3540C	

Analysis Batch: 365410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107194-2	WC-EFSOIL-011819	Total/NA	Solid	8082A	365105
MB 240-365105/23-A	Method Blank	Total/NA	Solid	8082A	365105
LCS 240-365105/24-A	Lab Control Sample	Total/NA	Solid	8082A	365105

Metals

Leach Batch: 365049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107194-2	WC-EFSOIL-011819	TCLP	Solid	1311	
LB 240-365049/1-B	Method Blank	TCLP	Solid	1311	
LB 240-365049/1-C	Method Blank	TCLP	Solid	1311	

Prep Batch: 365151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107194-2	WC-EFSOIL-011819	TCLP	Solid	3010A	365049
LB 240-365049/1-B	Method Blank	TCLP	Solid	3010A	365049
MB 240-365151/2-A	Method Blank	Total/NA	Solid	3010A	
LCS 240-365151/3-A	Lab Control Sample	Total/NA	Solid	3010A	

Prep Batch: 365159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107194-2	WC-EFSOIL-011819	TCLP	Solid	7470A	365049

Metals (Continued)

Prep Batch: 365159 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 240-365049/1-C	Method Blank	TCLP	Solid	7470A	365049
MB 240-365159/2-A	Method Blank	Total/NA	Solid	7470A	
LCS 240-365159/3-A	Lab Control Sample	Total/NA	Solid	7470A	

Analysis Batch: 365352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107194-2	WC-EFSOIL-011819	TCLP	Solid	7470A	365159
LB 240-365049/1-C	Method Blank	TCLP	Solid	7470A	365159
MB 240-365159/2-A	Method Blank	Total/NA	Solid	7470A	365159
LCS 240-365159/3-A	Lab Control Sample	Total/NA	Solid	7470A	365159

Analysis Batch: 365404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107194-2	WC-EFSOIL-011819	TCLP	Solid	6010C	365151
LB 240-365049/1-B	Method Blank	TCLP	Solid	6010C	365151
MB 240-365151/2-A	Method Blank	Total/NA	Solid	6010C	365151
LCS 240-365151/3-A	Lab Control Sample	Total/NA	Solid	6010C	365151

General Chemistry

Analysis Batch: 364833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107194-2	WC-EFSOIL-011819	Total/NA	Solid	Moisture	

Analysis Batch: 365145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107194-2	WC-EFSOIL-011819	Total/NA	Solid	1010A	
LCS 240-365145/1	Lab Control Sample	Total/NA	Solid	1010A	

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass DIscharge Waste

TestAmerica Job ID: 240-107194-1

Client Sample ID: TB-011819
Date Collected: 01/18/19 00:00
Date Received: 01/19/19 09:45

Lab Sample ID: 240-107194-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	365336	01/24/19 15:25	LRW	TAL CAN

Client Sample ID: WC-EFSOIL-011819
Date Collected: 01/18/19 09:30
Date Received: 01/19/19 09:45

Lab Sample ID: 240-107194-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			365049	01/22/19 15:00	DRJ	TAL CAN
TCLP	Prep	3010A			365151	01/23/19 14:00	SLD	TAL CAN
TCLP	Analysis	6010C		1	365404	01/24/19 14:30	WKD	TAL CAN
TCLP	Leach	1311			365049	01/22/19 15:00	DRJ	TAL CAN
TCLP	Prep	7470A			365159	01/23/19 12:00	SLD	TAL CAN
TCLP	Analysis	7470A		1	365352	01/24/19 09:13	AJC	TAL CAN
Total/NA	Analysis	1010A		1	365145	01/23/19 12:33	TPH	TAL CAN
Total/NA	Analysis	Moisture		1	364833	01/21/19 13:02	MAC	TAL CAN

Client Sample ID: WC-EFSOIL-011819
Date Collected: 01/18/19 09:30
Date Received: 01/19/19 09:45

Lab Sample ID: 240-107194-2
Matrix: Solid
Percent Solids: 85.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030A			365103	01/23/19 04:28	TJL2	TAL CAN
Total/NA	Analysis	8260B		1	365072	01/23/19 12:42	TJL2	TAL CAN
Total/NA	Prep	3540C			365105	01/23/19 06:41	ZMF	TAL CAN
Total/NA	Analysis	8082A		1	365410	01/25/19 00:18	CSC	TAL CAN

Laboratory References:
TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-107194-1
Project/Site: MRC Block E/F Mass DIscharge Waste

Laboratory: TestAmerica Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-19 *
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-19
Illinois	NELAP	5	200004	07-31-19
Kansas	NELAP	7	E-10336	04-30-19
Kentucky (UST)	State Program	4	58	02-23-19 *
Kentucky (WW)	State Program	4	98016	12-31-19
Minnesota	NELAP	5	039-999-348	12-31-19 *
Minnesota (Petrofund)	State Program	1	3506	07-31-19
Nevada	State Program	9	OH00048	07-31-19
New Jersey	NELAP	2	OH001	06-30-19
New York	NELAP	2	10975	03-31-19 *
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-19 *
Pennsylvania	NELAP	3	68-00340	08-31-19 *
Texas	NELAP	6	T104704517-18-10	08-31-19
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-19
Washington	State Program	10	C971	01-12-20 *
West Virginia DEP	State Program	3	210	12-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-107194-1
Project/Site: MRC Block E/F Mass DIscharge Waste

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
6010C	Metals (ICP)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
1010A	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN
1311	TCLP Extraction	SW846	TAL CAN
3010A	Preparation, Total Metals	SW846	TAL CAN
3540C	Soxhlet Extraction	SW846	TAL CAN
5030A	Purge and Trap	SW846	TAL CAN
5030B	Purge and Trap	SW846	TAL CAN
7470A	Preparation, Mercury	SW846	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass DIscharge Waste

TestAmerica Job ID: 240-107194-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107194-1	TB-011819	Water	01/18/19 00:00	01/19/19 09:45
240-107194-2	WC-EFSOIL-011819	Solid	01/18/19 09:30	01/19/19 09:45

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A3UX10 Analysis Batch Number: 348190

Lab Sample ID: STD8260 240-348190/2 IC Client Sample ID:

Date Analyzed: 10/02/18 15:27 Lab File ID: UXX5939.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorobenzene-d5	8.25	Peak assignment corrected	williamsl a	10/02/18 16:16

Lab Sample ID: STD8260 240-348190/4 IC Client Sample ID:

Date Analyzed: 10/02/18 16:17 Lab File ID: UXX5941.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	1.84	Split Peak	bosworthh	10/03/18 11:27

Lab Sample ID: STD8260 240-348190/5 IC Client Sample ID:

Date Analyzed: 10/02/18 16:42 Lab File ID: UXX5942.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	1.83	Split Peak	bosworthh	10/03/18 11:28
1,4-Dioxane	6.19	Baseline	bosworthh	10/03/18 12:13

Lab Sample ID: STD8260 240-348190/8 IC Client Sample ID:

Date Analyzed: 10/02/18 17:56 Lab File ID: UXX5945.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	1.86	Split Peak	bosworthh	10/03/18 11:29

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A3UX10 Analysis Batch Number: 365336

Lab Sample ID: CCV 240-365336/3 Client Sample ID:

Date Analyzed: 01/24/19 10:39 Lab File ID: UXX9245.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethyl tert-butyl ether	4.44	Peak assignment corrected	williamsla	01/24/19 11:31

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A3UX8 Analysis Batch Number: 357692

Lab Sample ID: STDA9 240-357692/18 IC Client Sample ID:

Date Analyzed: 11/30/18 09:30 Lab File ID: UX81328.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Cyclohexanone	8.71	Peak assignment corrected	latat	11/30/18 23:52

Lab Sample ID: STDA9 240-357692/19 IC Client Sample ID:

Date Analyzed: 11/30/18 09:52 Lab File ID: UX81329.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1-Chloro-1-fluoroethane TIC	2.21	Peak assignment corrected	latat	11/30/18 23:53
n-Butyl acetate	7.12	Peak assignment corrected	latat	11/30/18 23:52
Cyclohexanone	8.70	Peak assignment corrected	latat	11/30/18 23:52
Benzyl chloride		Invalid Compound ID	latat	11/30/18 23:53

Lab Sample ID: STDA9 240-357692/20 IC Client Sample ID:

Date Analyzed: 11/30/18 10:15 Lab File ID: UX81330.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1-Chloro-1-fluoroethane TIC	2.21	Peak assignment corrected	latat	11/30/18 23:54
Methyl methacrylate	5.69	Peak assignment corrected	latat	11/30/18 23:53
2-Nitropropane	6.01	Peak assignment corrected	latat	11/30/18 23:53
n-Butyl acetate	7.12	Peak assignment corrected	latat	11/30/18 23:54
1-Chlorohexane	7.68	Peak assignment corrected	latat	11/30/18 23:54
Ethyl acetate		Invalid Compound ID	latat	11/30/18 23:53

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A3UX8 Analysis Batch Number: 364686

Lab Sample ID: STD8260 240-364686/10 I Client Sample ID:

Date Analyzed: 01/19/19 07:49 Lab File ID: UX82255.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetrahydrofuran	4.51	Peak assignment corrected	latat	01/23/19 01:54
1,2-Dibromoethane	7.29	Peak assignment corrected	latat	01/23/19 01:54
Bromoform	8.47	Peak assignment corrected	latat	01/23/19 01:55

Lab Sample ID: STD8260 240-364686/11 I Client Sample ID:

Date Analyzed: 01/19/19 08:12 Lab File ID: UX82256.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroethane	2.28	Peak assignment corrected	latat	01/23/19 01:55
Acrolein	2.84	Peak assignment corrected	latat	01/23/19 01:55
2,2-Dichloropropane	4.28	Peak assignment corrected	latat	01/23/19 01:57
Tetrahydrofuran	4.50	Peak assignment corrected	latat	01/23/19 01:57
1,2-Dichloroethane-d4 (Surr)	4.90	Peak assignment corrected	latat	01/23/19 01:55
2-Chloroethyl vinyl ether	6.06	Peak assignment corrected	latat	01/23/19 01:57
cis-1,3-Dichloropropene	6.20	Peak assignment corrected	latat	01/23/19 01:56
trans-1,3-Dichloropropene	6.65	Peak assignment corrected	latat	01/23/19 01:56
1,2-Dibromoethane	7.29	Peak assignment corrected	latat	01/23/19 01:56
Bromoform		Invalid Compound ID	latat	01/23/19 01:57
n-Heptane		Invalid Compound ID	latat	01/23/19 01:56

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A3UX8 Analysis Batch Number: 365072

Lab Sample ID: MB 240-365072/7 Client Sample ID:

Date Analyzed: 01/23/19 04:50 Lab File ID: UX82266.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene		Invalid Compound ID	latat	01/23/19 05:31

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A2HP13 Analysis Batch Number: 356910

Lab Sample ID: STD005 240-356910/4 IC Client Sample ID:

Date Analyzed: 11/26/18 14:45 Lab File ID: P13112604.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 3	4.75	Split Peak	hassl	11/27/18 06:23

Lab Sample ID: STD01 240-356910/5 IC Client Sample ID:

Date Analyzed: 11/26/18 15:03 Lab File ID: P13112605.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 3	4.75	Split Peak	hassl	11/27/18 06:24

Lab Sample ID: STD02 240-356910/6 IC Client Sample ID:

Date Analyzed: 11/26/18 15:21 Lab File ID: P13112606.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 3	4.75	Baseline Smoothing	hassl	11/27/18 06:25
PCB-1232 Peak 4	4.93	Baseline Smoothing	hassl	11/27/18 06:25

Lab Sample ID: STD05 240-356910/7 IC Client Sample ID:

Date Analyzed: 11/26/18 15:40 Lab File ID: P13112607.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 3	4.75	Split Peak	hassl	11/27/18 06:26

Lab Sample ID: STD1 240-356910/8 IC Client Sample ID:

Date Analyzed: 11/26/18 15:58 Lab File ID: P13112608.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 3	4.75	Baseline Smoothing	hassl	11/27/18 06:26
PCB-1232 Peak 4	4.93	Baseline Smoothing	hassl	11/27/18 06:26

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A2HP13 Analysis Batch Number: 356910

Lab Sample ID: STD15 240-356910/9 IC Client Sample ID:

Date Analyzed: 11/26/18 16:16 Lab File ID: P13112609.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 3	4.75	Baseline Smoothing	hassl	11/27/18 06:28
PCB-1232 Peak 4	4.92	Baseline Smoothing	hassl	11/27/18 06:28

Lab Sample ID: STD005 240-356910/10 IC Client Sample ID:

Date Analyzed: 11/26/18 16:35 Lab File ID: P13112610.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242 Peak 3	4.75	Split Peak	hassl	11/27/18 06:31

Lab Sample ID: STD01 240-356910/11 IC Client Sample ID:

Date Analyzed: 11/26/18 16:53 Lab File ID: P13112611.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242 Peak 3	4.75	Split Peak	hassl	11/27/18 06:31

Lab Sample ID: STD02 240-356910/12 IC Client Sample ID:

Date Analyzed: 11/26/18 17:12 Lab File ID: P13112612.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242 Peak 3	4.75	Split Peak	hassl	11/27/18 06:32

Lab Sample ID: STD05 240-356910/13 IC Client Sample ID:

Date Analyzed: 11/26/18 17:30 Lab File ID: P13112613.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242 Peak 3	4.75	Split Peak	hassl	11/27/18 06:32

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A2HP13 Analysis Batch Number: 356910

Lab Sample ID: STD1 240-356910/14 IC Client Sample ID:

Date Analyzed: 11/26/18 17:48 Lab File ID: P13112614.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242 Peak 3	4.75	Split Peak	hassl	11/27/18 06:33

Lab Sample ID: STD15 240-356910/15 IC Client Sample ID:

Date Analyzed: 11/26/18 18:07 Lab File ID: P13112615.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242 Peak 3	4.75	Baseline Smoothing	hassl	11/27/18 06:33
PCB-1242 Peak 4	4.93	Baseline Smoothing	hassl	11/27/18 06:33

Lab Sample ID: STD005 240-356910/16 IC Client Sample ID:

Date Analyzed: 11/26/18 18:25 Lab File ID: P13112616.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 1	5.24	Peak assignment corrected	hassl	11/27/18 06:34
PCB-1248 Peak 2	6.34	Peak assignment corrected	hassl	11/27/18 06:34
PCB-1248 Peak 3	6.69	Peak assignment corrected	hassl	11/27/18 06:34
PCB-1248 Peak 4	7.23	Peak assignment corrected	hassl	11/27/18 06:34
PCB-1248 Peak 5	8.03	Peak assignment corrected	hassl	11/27/18 06:34

Lab Sample ID: STD01 240-356910/17 IC Client Sample ID:

Date Analyzed: 11/26/18 18:44 Lab File ID: P13112617.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 3	6.69	Baseline Smoothing	hassl	11/27/18 06:35
PCB-1248 Peak 4	7.23	Baseline Smoothing	hassl	11/27/18 06:35

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A2HP13 Analysis Batch Number: 356910

Lab Sample ID: STD005 240-356910/22 IC Client Sample ID:

Date Analyzed: 11/26/18 20:15 Lab File ID: P13112622.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1221 Peak 1	4.33	Peak assignment corrected	hassl	11/27/18 06:37
PCB-1221 Peak 2	4.55	Peak assignment corrected	hassl	11/27/18 06:37
PCB-1221 Peak 3	4.64	Peak assignment corrected	hassl	11/27/18 06:37
PCB-1254 Peak 1	7.22	Peak assignment corrected	hassl	11/27/18 06:37
PCB-1254 Peak 3	8.03	Peak assignment corrected	hassl	11/27/18 06:37

Lab Sample ID: STD01 240-356910/23 IC Client Sample ID:

Date Analyzed: 11/26/18 20:34 Lab File ID: P13112623.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1	7.22	Baseline Smoothing	hassl	11/27/18 06:38
PCB-1254 Peak 2	7.47	Baseline Smoothing	hassl	11/27/18 06:38

Lab Sample ID: STD005 240-356910/28 IC Client Sample ID:

Date Analyzed: 11/26/18 22:05 Lab File ID: P13112628.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 3	4.75	Split Peak	hassl	11/27/18 06:40
PCB-1260 Peak 3	7.70	Split Peak	hassl	11/27/18 06:41

Lab Sample ID: STD01 240-356910/29 IC Client Sample ID:

Date Analyzed: 11/26/18 22:24 Lab File ID: P13112629.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 3	4.75	Baseline Smoothing	hassl	11/27/18 06:42
PCB-1016 Peak 4	4.92	Baseline Smoothing	hassl	11/27/18 06:42

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A2HP13 Analysis Batch Number: 356910

Lab Sample ID: STD02 240-356910/30 IC Client Sample ID:

Date Analyzed: 11/26/18 22:42 Lab File ID: P13112630.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 3	4.75	Split Peak	hassl	11/27/18 06:42

Lab Sample ID: STD05 240-356910/31 ICI Client Sample ID:

Date Analyzed: 11/26/18 23:01 Lab File ID: P13112631.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 3	4.74	Split Peak	hassl	11/27/18 06:43

Lab Sample ID: STD1 240-356910/32 IC Client Sample ID:

Date Analyzed: 11/26/18 23:19 Lab File ID: P13112632.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 3	4.75	Baseline Smoothing	hassl	11/27/18 06:44
PCB-1016 Peak 4	4.92	Baseline Smoothing	hassl	11/27/18 06:44

Lab Sample ID: STD15 240-356910/33 IC Client Sample ID:

Date Analyzed: 11/26/18 23:37 Lab File ID: P13112633.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 3	4.74	Baseline Smoothing	hassl	11/27/18 06:45
PCB-1016 Peak 4	4.92	Baseline Smoothing	hassl	11/27/18 06:45
PCB-1260 Peak 3	7.69	Peak assignment corrected	hassl	11/27/18 06:59

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A2HP13 Analysis Batch Number: 356910

Lab Sample ID: STD15 240-356910/33 IC Client Sample ID:

Date Analyzed: 11/26/18 23:37 Lab File ID: P13112633.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1260 Peak 1	8.27	Baseline Smoothing	hassl	11/27/18 06:44
PCB-1260 Peak 2	8.53	Baseline Smoothing	hassl	11/27/18 06:44
PCB-1260 Peak 3	9.36	Baseline Smoothing	hassl	11/27/18 06:44
PCB-1260 Peak 4	9.63	Baseline Smoothing	hassl	11/27/18 06:44
PCB-1260 Peak 5	9.99	Baseline Smoothing	hassl	11/27/18 06:44

Lab Sample ID: ICV 240-356910/37 Client Sample ID:

Date Analyzed: 11/27/18 00:51 Lab File ID: P13112637.D GC Column: CLP-2 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 3	6.68	Baseline Smoothing	hassl	11/27/18 06:48
PCB-1248 Peak 4	7.23	Baseline Smoothing	hassl	11/27/18 06:48

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A2HP13 Analysis Batch Number: 365410

Lab Sample ID: CCV 240-365410/3 CCVIS Client Sample ID:

Date Analyzed: 01/24/19 16:03 Lab File ID: P13012437.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 3	4.69	Incomplete Integration	grantk	01/25/19 08:46
PCB-1016 Peak 4	4.87	Incomplete Integration	grantk	01/25/19 08:46

Lab Sample ID: CCV 240-365410/5 Client Sample ID:

Date Analyzed: 01/24/19 16:39 Lab File ID: P13012439.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242 Peak 3	4.69	Incomplete Integration	grantk	01/25/19 08:49
PCB-1242 Peak 4	4.87	Incomplete Integration	grantk	01/25/19 08:49

Lab Sample ID: CCVIS 240-365410/28 Client Sample ID:

Date Analyzed: 01/24/19 23:42 Lab File ID: P13012462.D GC Column: CLP-1 (0.53mm ID: 0.53(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 3	4.69	Incomplete Integration	coastc	01/25/19 09:57

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
ex10PPMSPK_00045	06/13/19	12/13/18	MEOH, Lot 0000196628	1000 mL	ex1016/1260st_00014	10 mL	Aroclor-1016	10 ug/mL
							Aroclor-1260	10 ug/mL
.ex1016/1260st_00014	10/31/24		Restek, Lot A0139779		(Purchased Reagent)		Aroclor-1016	1000 ug/mL
							Aroclor-1260	1000 ug/mL
ex2/.2SURRW_00119	07/11/19	01/11/19	MEOH, Lot 0000196628	2000 mL	exPESTSURRstd_00012	2 mL	DCB Decachlorobiphenyl	0.2 ug/mL
							Tetrachloro-m-xylene	0.2 ug/mL
.exPESTSURRstd_00012	11/30/24		Restek, Lot A0141110		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
EXpH(0-14)_00027	10/09/21		Merck, Lot HC850248		(Purchased Reagent)		pH at time of analysis	1 No Unit
EXTCLPBUFF1_01762	01/22/19	01/21/19	DIWATER, Lot 01212019	48 L	EXTCLP5MNAOH_00042	751.49 g	Sodium Hydroxide	0.313121 %
					EXTCLPACETIC_00028	273.6 mL	Acetic acid	0.57 %
.EXTCLP5MNAOH_00042	02/19/20	10/29/18	DIWATER, Lot 10292018	3 L	EXTCLPNAOH_00035	600 g	Sodium Hydroxide	200 mol/L
..EXTCLPNAOH_00035	02/19/20		Macron, Lot 0000206395		(Purchased Reagent)		Sodium Hydroxide	1 g/g
.EXTCLPACETIC_00028	06/21/22		Macron, Lot 00000180067		(Purchased Reagent)		Acetic acid	1 g/g
EXTCLPFILTERS_00044	01/16/24		Whatman, Lot 16898719		(Purchased Reagent)		Prep Analyte	100 Filter
EXTCLPHCLW_00064	12/26/20	01/07/19	DIWATER, Lot 010719	2000 mL	MTTMHCL_00231	166 mL	Hydrogen Chloride	83 mol/L
.MTTMHCL_00231	12/26/20		JT Baker(Avantor), Lot 0000212747		(Purchased Reagent)		Hydrogen Chloride	100 %
K2S2O8_00095	01/21/21	01/21/19	DIWATER, Lot DIWATER	2.5 L	MTK2S208_00052	125 g	Potassium persulfate	0.05 g/g
.MTK2S208_00052	12/13/23		Macron, Lot 0000194817		(Purchased Reagent)		Potassium persulfate	1 g/g
MT1to1HCL_00089	07/09/19	01/09/19	DIWATER, Lot DIWATER	2500 mL	MTTMHCL_00233	1250 mL	Hydrogen Chloride	0.5 mL/mL
.MTTMHCL_00233	01/09/21		JT Baker(Avantor), Lot 0000212747		(Purchased Reagent)		Hydrogen Chloride	100 %
MT6500ICV_00051	05/29/19	11/29/18	DIWATER, Lot DIWATER	1000 mL	MTTRICV3_00011	6 mL	Barium	1500 ug/L
							Chromium	1500 ug/L
					MTTRICV5_00015	1.5 mL	Arsenic	375 ug/L
							Cadmium	375 ug/L
							Lead	375 ug/L
							Selenium	375 ug/L
					MTTRICVAG_00010	7.5 mL	Silver	750 ug/L
.MTTRICV3_00011	11/30/19		CPI, Lot 10075909-3		(Purchased Reagent)		Barium	250 mg/L
							Chromium	250 mg/L
.MTTRICV5_00015	09/03/19		CPI, Lot 10075909-1		(Purchased Reagent)		Arsenic	250 ug/mL
							Cadmium	250 ug/mL
							Lead	250 ug/mL
							Selenium	250 ug/mL
.MTTRICVAG_00010	06/20/19		CPI, Lot 10072207-5		(Purchased Reagent)		Silver	100 mg/L
MTAGSPIKEW_00089	06/27/19	12/27/18	DIWATER, Lot DIWATER	1000 mL	MTAG_00008	2.5 mL	Silver	2500 ug/L
					MTTMHNO3_00177	50 mL	Nitric acid	50000000 ug/L
.MTAG_00008	02/28/20		HIGH PURITY STANDARDS, Lot 1817921		(Purchased Reagent)		Silver	1000 ug/mL
.MTTMHNO3_00177	12/21/20		Macron, Lot 0000200458		(Purchased Reagent)		Nitric acid	100 %
MTH2S04_00070	01/09/21		Macron, Lot 0000198960		(Purchased Reagent)		Sulfuric acid	100 %
MTHGCALW_02019	01/23/19	01/23/19	DIWATER, Lot DIWATER	200 mL	MTHGCAL_00034	2 mL	Mercury	100 ug/L
					MTTMHNO3_00179	0.25 mL	Nitric acid	1250000 ug/L
.MTHGCAL_00034	01/31/19		High Purity, Lot 1800827		(Purchased Reagent)		Mercury	10 ug/mL
.MTTMHNO3_00179	01/09/21		Macron, Lot 0000200458		(Purchased Reagent)		Nitric acid	100 %

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MTHgICV_00001_00461	01/23/19	01/23/19	DIWATER, Lot DIWATER	100 mL	LLHg-ICV_00009	1 mL	Mercury	0.1 ug/mL
					MTTMHNO3_00179	0.125 mL	Nitric acid	1250 ug/mL
.LLHg-ICV_00009	10/31/19	Elemental Scientific, Lot 1826001			(Purchased Reagent)		Mercury	10 ug/mL
.MTTMHNO3_00179	01/09/21	Macron, Lot 0000200458			(Purchased Reagent)		Nitric acid	100 %
MTICP1_00079	03/31/19	10/25/18	DIWATER, Lot DI WATER	1000 mL	MTICPSPIKE1A_00013	50 mL	Al	100000 ug/L
							Arsenic	100000 ug/L
							B	50000 ug/L
							Barium	100000 ug/L
							Be	2500 ug/L
							Cadmium	2500 ug/L
							Chromium	10000 ug/L
							Co	25000 ug/L
							Cu	12500 ug/L
							Fe	50000 ug/L
							Lead	25000 ug/L
							Mn	25000 ug/L
							Ni	25000 ug/L
							Selenium	100000 ug/L
							Tl	100000 ug/L
							V	25000 ug/L
							Zn	25000 ug/L
					MTICPSPIKEB_00012	50 mL	Mo	50000 ug/L
							Sb	25000 ug/L
							Sn	100000 ug/L
							Ti	50000 ug/L
					MTICPSpikeOdd_00009	50 mL	Li	50000 ug/L
							Si	50000 ug/L
							SiO2	107000 ug/L
							Sr	50000 ug/L
					MTTMHNO3_00170	50 mL	Nitric acid	50000000 ug/L
.MTICPSPIKE1A_00013	03/31/19	High Purity Standards, Lot 1807331			(Purchased Reagent)		Al	2000 ug/mL
							Arsenic	2000 ug/mL
							B	1000 ug/mL
							Barium	2000 ug/mL
							Be	50 ug/mL
							Cadmium	50 ug/mL
							Chromium	200 ug/mL
							Co	500 ug/mL
							Cu	250 ug/mL
							Fe	1000 ug/mL
							Lead	500 ug/mL
							Mn	500 ug/mL
							Ni	500 ug/mL
							Selenium	2000 ug/mL
							Tl	2000 ug/mL
							V	500 ug/mL
							Zn	500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MTICPSPIKEB_00012	03/31/19	High Purity Standards, Lot 1807336			(Purchased Reagent)		Mo	1000 ug/mL
							Sb	500 ug/mL
							Sn	2000 ug/mL
							Ti	1000 ug/mL
.MTICPSpikeOdd_00009	03/31/19	High Purity Standards, Lot 1807221			(Purchased Reagent)		Li	1000 ug/mL
							Si	1000 ug/mL
							SiO2	2140 ug/mL
							Sr	1000 ug/mL
.MTTMHNO3_00170	10/17/20	Macron, Lot 0000200458			(Purchased Reagent)		Nitric acid	100 %
MTICP2A_00090	07/10/19	01/10/19	DIWATER, Lot NONE	1000 mL	MTTMHNO3_00174	50 mL	Nitric acid	50000 mg/L
					MTTRCAL2_00021	250 mL	Ca	2500 mg/L
							K	2500 mg/L
							Mg	2500 mg/L
							Na	2500 mg/L
.MTTMHNO3_00174	11/23/20	Macron, Lot 0000200458			(Purchased Reagent)		Nitric acid	100 %
.MTTRCAL2_00021	10/31/19	HIGH PURITY STANDARDS, Lot 1812740			(Purchased Reagent)		Ca	10000 ug/mL
							K	10000 ug/mL
							Mg	10000 ug/mL
							Na	10000 ug/mL
MTICPCCV_00146	07/10/19	01/10/19	DIWATER, Lot DIWATER	2000 mL	MTICPCCV1_00028	200 mL	Arsenic	500 ug/L
							Barium	2000 ug/L
							Cadmium	500 ug/L
							Chromium	2000 ug/L
							Lead	500 ug/L
							Selenium	500 ug/L
					MTICPCCV2_00027	200 mL	Silver	1000 ug/L
.MTICPCCV1_00028	11/29/19	INORGANIC VENTURES, Lot N2-MEB665676			(Purchased Reagent)		Arsenic	5000 ug/L
							Barium	20000 ug/L
							Cadmium	5000 ug/L
							Chromium	20000 ug/L
							Lead	5000 ug/L
							Selenium	5000 ug/L
.MTICPCCV2_00027	11/29/19	INORGANIC VENTURES, Lot N2-MEB665677			(Purchased Reagent)		Silver	10000 ug/L
MTICPICSABW_00020	06/26/19	12/26/18	DIWATER, Lot DIWATER	1000 mL	MTICPICSAB1_00008	100 mL	Al	500000 ug/L
							Arsenic	1000 ug/L
							B	500 ug/L
							Barium	500 ug/L
							Be	500 ug/L
							Ca	500000 ug/L
							Cadmium	1000 ug/L
							Chromium	500 ug/L
							Co	500 ug/L
							Cu	500 ug/L
							Fe	200000 ug/L
							K	10000 ug/L
							Lead	1000 ug/L
							Li	500 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Mg	500000 ug/L
							Mn	500 ug/L
							Na	10000 ug/L
							Ni	1000 ug/L
							Selenium	1000 ug/L
							Sr	1500 ug/L
							Tl	1000 ug/L
							V	500 ug/L
							Zn	1000 ug/L
					MTICPICSAB2_00008	100 mL	Mo	1000 ug/L
							Sb	1000 ug/L
							Si	10000 ug/L
							Silver	1000 ug/L
							Sn	500 ug/L
							Ti	500 ug/L
.MTICPICSAB1_00008	08/28/19	INORGANIC VENTURES, Lot N2-MEB669101			(Purchased Reagent)		Al	5000000 ug/L
							Arsenic	10000 ug/L
							B	5000 ug/L
							Barium	5000 ug/L
							Be	5000 ug/L
							Ca	5000000 ug/L
							Cadmium	10000 ug/L
							Chromium	5000 ug/L
							Co	5000 ug/L
							Cu	5000 ug/L
							Fe	2000000 ug/L
							K	100000 ug/L
							Lead	10000 ug/L
							Li	5000 ug/L
							Mg	5000000 ug/L
							Mn	5000 ug/L
							Na	100000 ug/L
							Ni	10000 ug/L
							Selenium	10000 ug/L
							Sr	15000 ug/L
							Tl	10000 ug/L
							V	5000 ug/L
							Zn	10000 ug/L
.MTICPICSAB2_00008	08/28/19	INORGANIC VENTURES, Lot N2-MEB669102			(Purchased Reagent)		Mo	10000 ug/L
							Sb	10000 ug/L
							Si	100000 ug/L
							Silver	10000 ug/L
							Sn	5000 ug/L
							Ti	5000 ug/L
MTKMN04W_00183	01/09/21	01/09/19	DIWATER, Lot DIWATER	2.5 L	MTKMN04_00050	125 g	Potassium Permanganate	50000 mg/L
.MTKMN04_00050	12/11/23	Fisher, Lot 176389			(Purchased Reagent)		Potassium Permanganate	1 g/g
MTNONRCRA+ODD_00011	07/31/19	High-Purity Standards, Lot 1820210			(Purchased Reagent)		Al	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							B	50 ug/mL
							Be	2.5 ug/mL
							Co	25 ug/mL
							Cu	12.5 ug/mL
							Fe	50 ug/mL
							Li	50 ug/mL
							Mn	25 ug/mL
							Mo	50 ug/mL
							Ni	25 ug/mL
							Sb	25 ug/mL
							Si	50 ug/mL
							Sn	100 ug/mL
							Sr	50 ug/mL
							Ti	50 ug/mL
							Tl	100 ug/mL
							V	25 ug/mL
							Zn	25 ug/mL
MTRCRA_00014	02/28/19	High Purity Standards, Lot 1804648			(Purchased Reagent)		Arsenic	500 mg/L
							Barium	5000 mg/L
							Cadmium	100 mg/L
							Chromium	500 mg/L
							Lead	500 mg/L
							Selenium	100 mg/L
							Silver	100 mg/L
MTTMHNO3_00179	01/09/21	Macron, Lot 0000200458			(Purchased Reagent)		Nitric acid	100 %
MTTRCRIC_00067	07/17/19	01/17/19	DIWATER, Lot DIWATER	1000 mL	MTTRCRI6010C_00020	50 mL	Arsenic	15 ug/L
							Barium	200 ug/L
							Cadmium	5 ug/L
							Chromium	10 ug/L
							Lead	10 ug/L
							Selenium	20 ug/L
							Silver	10 ug/L
.MTTRCRI6010C_00020	11/12/19	Inorganic Ventures, Lot N2-MEB664971			(Purchased Reagent)		Arsenic	300 ug/L
							Barium	4000 ug/L
							Cadmium	100 ug/L
							Chromium	200 ug/L
							Lead	200 ug/L
							Selenium	400 ug/L
							Silver	200 ug/L
MTTRICSAW_00044	03/14/19	01/14/19	DIWATER, Lot DIWATER	1000 mL	MTTRICSA_00016	100 mL	Al	500000 ug/L
							Ca	500000 ug/L
							Fe	200000 ug/L
							Mg	500000 ug/L
.MTTRICSA_00016	03/14/19	INORGANIC VENTURES, Lot K2-MEB643109			(Purchased Reagent)		Al	5000 ug/mL
							Ca	5000 ug/mL
							Fe	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Mg	5000 ug/mL
SG1221ICV@1.0_00025	04/19/19	10/19/18	HEXANE, Lot 3678472	10 mL	SG1221ICV@100_00008	0.1 mL	Aroclor-1221	1 ug/mL
.SG1221ICV@100_00008	10/19/19	10/19/18	HEXANE, Lot 3678472	10 mL	SG 1221 ICV_00015	1 mL	Aroclor-1221	100 ug/mL
..SG 1221 ICV_00015	09/30/23		restek, Lot a0128546		(Purchased Reagent)		Aroclor-1221	1000 ug/mL
SG1232ICV@1.0_00023	01/03/19	07/03/18	HEXANE, Lot 3678472	10 mL	SG1232ICV@100_00007	0.1 mL	Aroclor-1232	1 ug/mL
.SG1232ICV@100_00007	01/31/19	07/03/18	HEXANE, Lot 3678472	10 mL	SG 1232 ICV_00010	1 mL	Aroclor-1232	100 ug/mL
..SG 1232 ICV_00010	01/31/19		ULTRA SCIENTIFIC, Lot CG-4471		(Purchased Reagent)		Aroclor-1232	1000 ug/mL
SG1242ICV@1.0_00024	01/03/19	07/03/18	HEXANE, Lot 3678472	10 mL	SG1242ICV@100_00008	0.1 mL	Aroclor-1242	1 ug/mL
.SG1242ICV@100_00008	07/03/19	07/03/18	HEXANE, Lot 3678472	10 mL	SG 1242 ICV_00010	1 mL	Aroclor-1242	100 ug/mL
..SG 1242 ICV_00010	07/31/22		ULTRA SCIENTIFIC, Lot CR-2838		(Purchased Reagent)		Aroclor-1242	1000 ug/mL
SG1248@.05ppm_00025	02/10/19	08/10/18	HEXANE, Lot 3678472	50 mL	SG1248@10ppm_00013	0.25 mL	PCB-1248 Peak 1	0.05 ug/mL
							PCB-1248 Peak 2	0.05 ug/mL
							PCB-1248 Peak 3	0.05 ug/mL
							PCB-1248 Peak 4	0.05 ug/mL
							PCB-1248 Peak 5	0.05 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG1248@10ppm_00013	08/10/19	08/10/18	Hexane, Lot 3678472	100 mL	SG1248_00012	1 mL	PCB-1248 Peak 1	10 ug/mL
							PCB-1248 Peak 2	10 ug/mL
							PCB-1248 Peak 3	10 ug/mL
							PCB-1248 Peak 4	10 ug/mL
							PCB-1248 Peak 5	10 ug/mL
..SG1248_00012	04/30/24		Restek, Lot A0134182		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1248@0.1PPM_00027	02/23/19	08/27/18	HEXANE, Lot 3678472	50 mL	SG1248@10ppm_00013	0.5 mL	PCB-1248 Peak 1	0.1 ug/mL
							PCB-1248 Peak 2	0.1 ug/mL
							PCB-1248 Peak 3	0.1 ug/mL
							PCB-1248 Peak 4	0.1 ug/mL
							PCB-1248 Peak 5	0.1 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG1248@10ppm_00013	08/10/19	08/10/18	Hexane, Lot 3678472	100 mL	SG1248_00012	1 mL	PCB-1248 Peak 1	10 ug/mL
							PCB-1248 Peak 2	10 ug/mL
							PCB-1248 Peak 3	10 ug/mL
							PCB-1248 Peak 4	10 ug/mL
							PCB-1248 Peak 5	10 ug/mL
..SG1248_00012	04/30/24		Restek, Lot A0134182		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
SG1248@0.2ppm_00024	02/10/19	08/27/18	HEXANE, Lot 3678472	50 mL	SG1248@10ppm_00013	1 mL	PCB-1248 Peak 1	0.2 ug/mL
							PCB-1248 Peak 2	0.2 ug/mL
							PCB-1248 Peak 3	0.2 ug/mL
							PCB-1248 Peak 4	0.2 ug/mL
							PCB-1248 Peak 5	0.2 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG1248@10ppm_00013	08/10/19	08/10/18	Hexane, Lot 3678472	100 mL	SG1248_00012	1 mL	PCB-1248 Peak 1	10 ug/mL
							PCB-1248 Peak 2	10 ug/mL
							PCB-1248 Peak 3	10 ug/mL
							PCB-1248 Peak 4	10 ug/mL
							PCB-1248 Peak 5	10 ug/mL
..SG1248_00012	04/30/24		Restek, Lot A0134182		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1248@0.5ppm_00036	02/10/19	08/10/18	HEXANE, Lot 3678472	100 mL	SG1248@10ppm_00013	5 mL	PCB-1248 Peak 1	0.5 ug/mL
							PCB-1248 Peak 2	0.5 ug/mL
							PCB-1248 Peak 3	0.5 ug/mL
							PCB-1248 Peak 4	0.5 ug/mL
							PCB-1248 Peak 5	0.5 ug/mL
					SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG1248@10ppm_00013	08/10/19	08/10/18	Hexane, Lot 3678472	100 mL	SG1248_00012	1 mL	PCB-1248 Peak 1	10 ug/mL
							PCB-1248 Peak 2	10 ug/mL
							PCB-1248 Peak 3	10 ug/mL
							PCB-1248 Peak 4	10 ug/mL
							PCB-1248 Peak 5	10 ug/mL
..SG1248_00012	04/30/24		Restek, Lot A0134182		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1248@0.5ppm_00037	02/23/19	10/17/18	HEXANE, Lot 3678472	100 mL	SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1248@0.5ppm_00037	02/23/19	10/17/18	HEXANE, Lot 3678472	100 mL	SG1248@10ppm_00013	5 mL	Aroclor-1248	0.5 ug/mL
							PCB-1248 Peak 1	0.5 ug/mL
							PCB-1248 Peak 2	0.5 ug/mL
							PCB-1248 Peak 3	0.5 ug/mL
							PCB-1248 Peak 4	0.5 ug/mL
							PCB-1248 Peak 5	0.5 ug/mL
.SG1248@10ppm_00013	08/10/19	08/10/18	Hexane, Lot 3678472	100 mL	SG1248_00012	1 mL	Aroclor-1248	10 ug/mL
							PCB-1248 Peak 1	10 ug/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1248 Peak 2	10 ug/mL
							PCB-1248 Peak 3	10 ug/mL
							PCB-1248 Peak 4	10 ug/mL
							PCB-1248 Peak 5	10 ug/mL
..SG1248_00012	04/30/24		Restek, Lot A0134182		(Purchased Reagent)		Aroclor-1248	1000 ug/mL
							PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
SG1248@1.0ppm_00027	02/10/19	08/10/18	HEXANE, Lot 3678472	50 mL	SG1248@10ppm_00013	5 mL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG1248@10ppm_00013	08/10/19	08/10/18	Hexane, Lot 3678472	100 mL	SG1248_00012	1 mL	PCB-1248 Peak 1	10 ug/mL
							PCB-1248 Peak 2	10 ug/mL
							PCB-1248 Peak 3	10 ug/mL
							PCB-1248 Peak 4	10 ug/mL
							PCB-1248 Peak 5	10 ug/mL
..SG1248_00012	04/30/24		Restek, Lot A0134182		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1248@1.5ppm_00004	02/10/19	08/10/18	HEXANE, Lot 3678472	50 mL	SG1248@10ppm_00013	7.5 mL	PCB-1248 Peak 1	1.5 ug/mL
							PCB-1248 Peak 2	1.5 ug/mL
							PCB-1248 Peak 3	1.5 ug/mL
							PCB-1248 Peak 4	1.5 ug/mL
							PCB-1248 Peak 5	1.5 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG1248@10ppm_00013	08/10/19	08/10/18	Hexane, Lot 3678472	100 mL	SG1248_00012	1 mL	PCB-1248 Peak 1	10 ug/mL
							PCB-1248 Peak 2	10 ug/mL
							PCB-1248 Peak 3	10 ug/mL
							PCB-1248 Peak 4	10 ug/mL
							PCB-1248 Peak 5	10 ug/mL
..SG1248_00012	04/30/24		Restek, Lot A0134182		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1248ICV@1.0_00027	03/17/19	09/17/18	HEXANE, Lot 3678472	10 mL	SG1248ICV@100_00010	0.1 mL	Aroclor-1248	1 ug/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.SG1248ICV@100_00010	09/17/19	09/17/18	HEXANE, Lot 3678472	10 mL	SG 1248 ICV_00011	1 mL	Aroclor-1248	100 ug/mL
..SG 1248 ICV_00011	04/30/23		restek, Lot a0124143		(Purchased Reagent)		Aroclor-1248	1000 ug/mL
SG1254ICV@1.0_00024	04/19/19	10/19/18	HEXANE, Lot 3678472	10 mL	SG1254ICV@100_00009	0.1 mL	Aroclor-1254	1 ug/mL
.SG1254ICV@100_00009	10/19/19	10/19/18	HEXANE, Lot 3678472	10 mL	SGPCB1254_00010	1 mL	Aroclor-1254	100 ug/mL
..SGPCB1254_00010	10/31/21		ULTRA SCIENTIFIC, Lot CK-3221		(Purchased Reagent)		Aroclor-1254	1000 ug/mL
SG1262ICV@1.0_00026	01/03/19	07/03/18	HEXANE, Lot 3678472	10 mL	SG1262ICV@100_00009	0.1 mL	Aroclor-1262	1 ug/mL
.SG1262ICV@100_00009	07/03/19	07/03/18	HEXANE, Lot 3678472	10 mL	SG 1262 ICV_00011	1 mL	Aroclor-1262	100 ug/mL
..SG 1262 ICV_00011	05/31/20		ULTRA SCIENTIFIC, Lot CL-0153		(Purchased Reagent)		Aroclor-1262	1000 ug/mL
SG1268ICV_00036	03/19/19	09/19/18	HEXANE, Lot 3678472	10 mL	SG1268ICV@100_00012	0.1 mL	Aroclor-1268	1 ug/mL
.SG1268ICV@100_00012	09/19/19	09/19/18	HEXANE, Lot 3678472	10 mL	SG 1268 ICV_00012	1 mL	Aroclor-1268	100 ug/mL
..SG 1268 ICV_00012	01/31/21		ULTRA SCIENTIFIC, Lot CP-6205		(Purchased Reagent)		Aroclor-1268	1000 ug/mL
SG1660@.05PPM_00024	02/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1016/1260_00025	0.5 mL	PCB-1016 Peak 1	0.05 ug/mL
							PCB-1016 Peak 2	0.05 ug/mL
							PCB-1016 Peak 3	0.05 ug/mL
							PCB-1016 Peak 4	0.05 ug/mL
							PCB-1016 Peak 5	0.05 ug/mL
							PCB-1260 Peak 1	0.05 ug/mL
							PCB-1260 Peak 2	0.05 ug/mL
							PCB-1260 Peak 3	0.05 ug/mL
							PCB-1260 Peak 4	0.05 ug/mL
							PCB-1260 Peak 5	0.05 ug/mL
					SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
					SGPCGSURRSTK_00010	0.125 mL	DCB Decachlorobiphenyl	0.0025 ug/mL
							Tetrachloro-m-xylene	0.0025 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	PCB-1016 Peak 1	10 ug/mL
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24		Restek, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23		Restek, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660@0.2ppm_00027	02/22/19	08/22/18	HEXANE, Lot 3678472	50 mL	SG1016/1260_00025	1 mL	PCB-1016 Peak 1	0.2 ug/mL
							PCB-1016 Peak 2	0.2 ug/mL
							PCB-1016 Peak 3	0.2 ug/mL
							PCB-1016 Peak 4	0.2 ug/mL
							PCB-1016 Peak 5	0.2 ug/mL
							PCB-1260 Peak 1	0.2 ug/mL
							PCB-1260 Peak 2	0.2 ug/mL
							PCB-1260 Peak 3	0.2 ug/mL
							PCB-1260 Peak 4	0.2 ug/mL
							PCB-1260 Peak 5	0.2 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
					SGPCGSURRSTK_00010	0.25 mL	DCB Decachlorobiphenyl	0.01 ug/mL
							Tetrachloro-m-xylene	0.01 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	PCB-1016 Peak 1	10 ug/mL
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24		Restek, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23		Restek, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660@0.5PPM_00083	02/20/19	08/20/18	HEXANE, Lot 3602072	100 mL	SG1016/1260_00025	5 mL	PCB-1016 Peak 1	0.5 ug/mL
							PCB-1016 Peak 2	0.5 ug/mL
							PCB-1016 Peak 3	0.5 ug/mL
							PCB-1016 Peak 4	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

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Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1016 Peak 5	0.5 ug/mL
							PCB-1260 Peak 1	0.5 ug/mL
							PCB-1260 Peak 2	0.5 ug/mL
							PCB-1260 Peak 3	0.5 ug/mL
							PCB-1260 Peak 4	0.5 ug/mL
							PCB-1260 Peak 5	0.5 ug/mL
					SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
					SGPCGSURRSTK_00010	1.25 mL	DCB Decachlorobiphenyl	0.025 ug/mL
							Tetrachloro-m-xylene	0.025 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	PCB-1016 Peak 1	10 ug/mL
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24		Restek, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23		Restek, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660@0.5PPM_00086	07/11/19	01/11/19	HEXANE, Lot 3863007	100 mL	SGPCBIS STOCk_00012	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SGPCBIS STOCk_00012	12/26/19	12/26/18	HEXANE, Lot 3863007	50 mL	ISTD_00005	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00005	02/28/21		Restek, Lot A0132763		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG1660@0.5PPM_00086	07/11/19	01/11/19	HEXANE, Lot 3863007	100 mL	SG1016/1260_00025	5 mL	Aroclor-1016	0.5 ug/mL
							Aroclor-1260	0.5 ug/mL
							PCB-1016 Peak 1	0.5 ug/mL
							PCB-1016 Peak 2	0.5 ug/mL
							PCB-1016 Peak 3	0.5 ug/mL
							PCB-1016 Peak 4	0.5 ug/mL
							PCB-1016 Peak 5	0.5 ug/mL
							PCB-1260 Peak 1	0.5 ug/mL
							PCB-1260 Peak 2	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260 Peak 3	0.5 ug/mL
							PCB-1260 Peak 4	0.5 ug/mL
							PCB-1260 Peak 5	0.5 ug/mL
					SGPCGSURRSTK_00010	1.25 mL	DCB Decachlorobiphenyl	0.025 ug/mL
							Tetrachloro-m-xylene	0.025 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	Aroclor-1016	10 ug/mL
							Aroclor-1260	10 ug/mL
							PCB-1016 Peak 1	10 ug/mL
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24		Restek, Lot A0134815		(Purchased Reagent)		Aroclor-1016	1000 ug/mL
							Aroclor-1260	1000 ug/mL
							PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23		Restek, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660@1.0PPM_00029	02/22/19	08/22/18	HEXANE, Lot 3678472	50 mL	SG1016/1260_00025	5 mL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
					SGPCGSURRSTK_00010	1.25 mL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	PCB-1016 Peak 1	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24		Restek, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23		Restek, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660@1.5PPM_00005	02/22/19	08/22/18	HEXANE, Lot 3678472	50 mL	SG1016/1260_00025	7.5 mL	PCB-1016 Peak 1	1.5 ug/mL
							PCB-1016 Peak 2	1.5 ug/mL
							PCB-1016 Peak 3	1.5 ug/mL
							PCB-1016 Peak 4	1.5 ug/mL
							PCB-1016 Peak 5	1.5 ug/mL
							PCB-1260 Peak 1	1.5 ug/mL
							PCB-1260 Peak 2	1.5 ug/mL
							PCB-1260 Peak 3	1.5 ug/mL
							PCB-1260 Peak 4	1.5 ug/mL
							PCB-1260 Peak 5	1.5 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
					SGPCGSURRSTK_00010	2.5 mL	DCB Decachlorobiphenyl	0.1 ug/mL
							Tetrachloro-m-xylene	0.1 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	PCB-1016 Peak 1	10 ug/mL
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24		Restek, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23		Restek, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660ICV@1.0_00037	04/19/19	10/19/18	HEXANE, Lot 3678472	10 mL	SG1660ICV@100_00016	0.1 mL	Aroclor-1016	1 ug/mL
							Aroclor-1260	1 ug/mL
					SGPCGSURRSTK_00010	0.25 mL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
.SG1660ICV@100_00016	10/18/19	10/18/18	HEXANE, Lot 3678472	10 mL	SG 1660 ICV_00017	1 mL	Aroclor-1016	100 ug/mL
							Aroclor-1260	100 ug/mL
..SG 1660 ICV_00017	03/31/24		restek, Lot a0133256		(Purchased Reagent)		Aroclor-1016	1000 ug/mL
							Aroclor-1260	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23		Restek, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG1660STD@0.1_00024	02/22/19	08/22/18	HEXANE, Lot 3678472	50 mL	SG1016/1260_00025	0.5 mL	PCB-1016 Peak 1	0.1 ug/mL
							PCB-1016 Peak 2	0.1 ug/mL
							PCB-1016 Peak 3	0.1 ug/mL
							PCB-1016 Peak 4	0.1 ug/mL
							PCB-1016 Peak 5	0.1 ug/mL
							PCB-1260 Peak 1	0.1 ug/mL
							PCB-1260 Peak 2	0.1 ug/mL
							PCB-1260 Peak 3	0.1 ug/mL
							PCB-1260 Peak 4	0.1 ug/mL
							PCB-1260 Peak 5	0.1 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
					SGPCGSURRSTK_00010	0.125 mL	DCB Decachlorobiphenyl	0.005 ug/mL
							Tetrachloro-m-xylene	0.005 ug/mL
.SG1016/1260_00025	08/20/19	08/20/18	HEXANE, Lot 3678472	100 mL	SG1016/1260MX_00013	1 mL	PCB-1016 Peak 1	10 ug/mL
							PCB-1016 Peak 2	10 ug/mL
							PCB-1016 Peak 3	10 ug/mL
							PCB-1016 Peak 4	10 ug/mL
							PCB-1016 Peak 5	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260 Peak 1	10 ug/mL
							PCB-1260 Peak 2	10 ug/mL
							PCB-1260 Peak 3	10 ug/mL
							PCB-1260 Peak 4	10 ug/mL
							PCB-1260 Peak 5	10 ug/mL
..SG1016/1260MX_00013	05/31/24		Restek, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
.SGPCGSURRSTK_00010	08/14/19	08/20/18	HEXANE, Lot 3678472	100 mL	SGPESTSURR_00011	1 mL	DCB Decachlorobiphenyl	2 ug/mL
							Tetrachloro-m-xylene	2 ug/mL
..SGPESTSURR_00011	11/30/23		Restek, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
SG2154@0.05PP_00020	02/23/19	08/24/18	HEXANE, Lot 3678472	50 mL	SG2154@10ppm_00014	0.25 mL	PCB-1221 Peak 1	0.05 ug/mL
							PCB-1221 Peak 2	0.05 ug/mL
							PCB-1221 Peak 3	0.05 ug/mL
							PCB-1254 Peak 1	0.05 ug/mL
							PCB-1254 Peak 2	0.05 ug/mL
							PCB-1254 Peak 3	0.05 ug/mL
							PCB-1254 Peak 4	0.05 ug/mL
							PCB-1254 Peak 5	0.05 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG2154@10ppm_00014	08/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1221/1254_00007	1 mL	PCB-1221 Peak 1	10 ug/mL
							PCB-1221 Peak 2	10 ug/mL
							PCB-1221 Peak 3	10 ug/mL
							PCB-1254 Peak 1	10 ug/mL
							PCB-1254 Peak 2	10 ug/mL
							PCB-1254 Peak 3	10 ug/mL
							PCB-1254 Peak 4	10 ug/mL
							PCB-1254 Peak 5	10 ug/mL
..SG1221/1254_00007	01/31/24		restek, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG2154@0.2PPM_00020	02/23/19	08/24/18	HEXANE, Lot 3678472	50 mL	SG2154@10ppm_00014	1 mL	PCB-1221 Peak 1	0.2 ug/mL
							PCB-1221 Peak 2	0.2 ug/mL
							PCB-1221 Peak 3	0.2 ug/mL
							PCB-1254 Peak 1	0.2 ug/mL
							PCB-1254 Peak 2	0.2 ug/mL
							PCB-1254 Peak 3	0.2 ug/mL
							PCB-1254 Peak 4	0.2 ug/mL
							PCB-1254 Peak 5	0.2 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG2154@10ppm_00014	08/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1221/1254_00007	1 mL	PCB-1221 Peak 1	10 ug/mL
							PCB-1221 Peak 2	10 ug/mL
							PCB-1221 Peak 3	10 ug/mL
							PCB-1254 Peak 1	10 ug/mL
							PCB-1254 Peak 2	10 ug/mL
							PCB-1254 Peak 3	10 ug/mL
							PCB-1254 Peak 4	10 ug/mL
							PCB-1254 Peak 5	10 ug/mL
..SG1221/1254_00007	01/31/24		restek, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG2154@0.5PPM_00040	02/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG2154@10ppm_00014	5 mL	PCB-1221 Peak 1	0.5 ug/mL
							PCB-1221 Peak 2	0.5 ug/mL
							PCB-1221 Peak 3	0.5 ug/mL
							PCB-1254 Peak 1	0.5 ug/mL
							PCB-1254 Peak 2	0.5 ug/mL
							PCB-1254 Peak 3	0.5 ug/mL
							PCB-1254 Peak 4	0.5 ug/mL
							PCB-1254 Peak 5	0.5 ug/mL
					SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG2154@10ppm_00014	08/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1221/1254_00007	1 mL	PCB-1221 Peak 1	10 ug/mL
							PCB-1221 Peak 2	10 ug/mL
							PCB-1221 Peak 3	10 ug/mL
							PCB-1254 Peak 1	10 ug/mL
							PCB-1254 Peak 2	10 ug/mL
							PCB-1254 Peak 3	10 ug/mL
							PCB-1254 Peak 4	10 ug/mL
							PCB-1254 Peak 5	10 ug/mL
..SG1221/1254_00007	01/31/24		restek, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG2154@0.5PPM_00042	06/26/19	12/26/18	HEXANE, Lot 3863007	100 mL	SGPCBIS STOCk_00012	0.5 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SGPCBIS STOCk_00012	12/26/19	12/26/18	HEXANE, Lot 3863007	50 mL	ISTD_00005	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00005	02/28/21		Restek, Lot A0132763		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG2154@0.5PPM_00042	06/26/19	12/26/18	HEXANE, Lot 3863007	100 mL	SG2154@10ppm_00014	5 mL	Aroclor-1221	0.5 ug/mL
							Aroclor-1254	0.5 ug/mL
							PCB-1221 Peak 1	0.5 ug/mL
							PCB-1221 Peak 2	0.5 ug/mL
							PCB-1221 Peak 3	0.5 ug/mL
							PCB-1254 Peak 1	0.5 ug/mL
							PCB-1254 Peak 2	0.5 ug/mL
							PCB-1254 Peak 3	0.5 ug/mL
							PCB-1254 Peak 4	0.5 ug/mL
							PCB-1254 Peak 5	0.5 ug/mL
.SG2154@10ppm_00014	08/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1221/1254_00007	1 mL	Aroclor-1221	10 ug/mL
							Aroclor-1254	10 ug/mL
							PCB-1221 Peak 1	10 ug/mL
							PCB-1221 Peak 2	10 ug/mL
							PCB-1221 Peak 3	10 ug/mL
							PCB-1254 Peak 1	10 ug/mL
							PCB-1254 Peak 2	10 ug/mL
							PCB-1254 Peak 3	10 ug/mL
							PCB-1254 Peak 4	10 ug/mL
							PCB-1254 Peak 5	10 ug/mL
..SG1221/1254_00007	01/31/24		restek, Lot A0131802		(Purchased Reagent)		Aroclor-1221	1000 ug/mL
							Aroclor-1254	1000 ug/mL
							PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
SG2154@1.0PPM_00028	02/23/19	08/24/18	HEXANE, Lot 3678472	50 mL	SG2154@10ppm_00014	5 mL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG2154@10ppm_00014	08/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1221/1254_00007	1 mL	PCB-1221 Peak 1	10 ug/mL
							PCB-1221 Peak 2	10 ug/mL
							PCB-1221 Peak 3	10 ug/mL
							PCB-1254 Peak 1	10 ug/mL
							PCB-1254 Peak 2	10 ug/mL
							PCB-1254 Peak 3	10 ug/mL
							PCB-1254 Peak 4	10 ug/mL
							PCB-1254 Peak 5	10 ug/mL
..SG1221/1254_00007	01/31/24		restek, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG2154@1.5PPM_00004	02/23/19	08/24/18	HEXANE, Lot 3678472	50 mL	SG2154@10ppm_00014	7.5 mL	PCB-1221 Peak 1	1.5 ug/mL
							PCB-1221 Peak 2	1.5 ug/mL
							PCB-1221 Peak 3	1.5 ug/mL
							PCB-1254 Peak 1	1.5 ug/mL
							PCB-1254 Peak 2	1.5 ug/mL
							PCB-1254 Peak 3	1.5 ug/mL
							PCB-1254 Peak 4	1.5 ug/mL
							PCB-1254 Peak 5	1.5 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG2154@10ppm_00014	08/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1221/1254_00007	1 mL	PCB-1221 Peak 1	10 ug/mL
							PCB-1221 Peak 2	10 ug/mL
							PCB-1221 Peak 3	10 ug/mL
							PCB-1254 Peak 1	10 ug/mL
							PCB-1254 Peak 2	10 ug/mL
							PCB-1254 Peak 3	10 ug/mL
							PCB-1254 Peak 4	10 ug/mL
							PCB-1254 Peak 5	10 ug/mL
..SG1221/1254_00007	01/31/24		restek, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG2154@O.1PPM_00021	02/23/19	08/24/18	HEXANE, Lot 3678472	50 mL	SG2154@10ppm_00014	0.5 mL	PCB-1221 Peak 1	0.1 ug/mL
							PCB-1221 Peak 2	0.1 ug/mL
							PCB-1221 Peak 3	0.1 ug/mL
							PCB-1254 Peak 1	0.1 ug/mL
							PCB-1254 Peak 2	0.1 ug/mL
							PCB-1254 Peak 3	0.1 ug/mL
							PCB-1254 Peak 4	0.1 ug/mL
							PCB-1254 Peak 5	0.1 ug/mL
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	0.05 ug/mL
.SG2154@10ppm_00014	08/22/19	08/22/18	HEXANE, Lot 3678472	100 mL	SG1221/1254_00007	1 mL	PCB-1221 Peak 1	10 ug/mL
							PCB-1221 Peak 2	10 ug/mL
							PCB-1221 Peak 3	10 ug/mL
							PCB-1254 Peak 1	10 ug/mL
							PCB-1254 Peak 2	10 ug/mL
							PCB-1254 Peak 3	10 ug/mL
							PCB-1254 Peak 4	10 ug/mL
							PCB-1254 Peak 5	10 ug/mL
..SG1221/1254_00007	01/31/24		restek, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG3262@.05PPM_00013	02/09/19	08/09/18	HEXANE, Lot 3678472	50 mL	SG32/6210PPM_00010	0.25 mL	PCB-1232 Peak 1	50 ug/L
							PCB-1232 Peak 2	50 ug/L
							PCB-1232 Peak 3	50 ug/L
							PCB-1232 Peak 4	50 ug/L
							PCB-1232 Peak 5	50 ug/L
							PCB-1262 Peak 1	50 ug/L
							PCB-1262 Peak 2	50 ug/L
							PCB-1262 Peak 3	50 ug/L
							PCB-1262 Peak 4	50 ug/L
							PCB-1262 Peak 5	50 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG32/6210PPM_00010	08/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/62 STK_00005	1 mL	PCB-1232 Peak 1	10 ug/mL
							PCB-1232 Peak 2	10 ug/mL
							PCB-1232 Peak 3	10 ug/mL
							PCB-1232 Peak 4	10 ug/mL
							PCB-1232 Peak 5	10 ug/mL
							PCB-1262 Peak 1	10 ug/mL
							PCB-1262 Peak 2	10 ug/mL
							PCB-1262 Peak 3	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1262 Peak 4	10 ug/mL
							PCB-1262 Peak 5	10 ug/mL
..SG32/62 STK_00005	01/31/24		Restelk, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG3262@.2PPM_00016	02/09/19	08/09/18	HEXANE, Lot 3678472	50 mL	SG32/6210PPM_00010	1 mL	PCB-1232 Peak 1	200 ug/L
							PCB-1232 Peak 2	200 ug/L
							PCB-1232 Peak 3	200 ug/L
							PCB-1232 Peak 4	200 ug/L
							PCB-1232 Peak 5	200 ug/L
							PCB-1262 Peak 1	200 ug/L
							PCB-1262 Peak 2	200 ug/L
							PCB-1262 Peak 3	200 ug/L
							PCB-1262 Peak 4	200 ug/L
							PCB-1262 Peak 5	200 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG32/6210PPM_00010	08/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/62 STK_00005	1 mL	PCB-1232 Peak 1	10 ug/mL
							PCB-1232 Peak 2	10 ug/mL
							PCB-1232 Peak 3	10 ug/mL
							PCB-1232 Peak 4	10 ug/mL
							PCB-1232 Peak 5	10 ug/mL
							PCB-1262 Peak 1	10 ug/mL
							PCB-1262 Peak 2	10 ug/mL
							PCB-1262 Peak 3	10 ug/mL
							PCB-1262 Peak 4	10 ug/mL
							PCB-1262 Peak 5	10 ug/mL
..SG32/62 STK_00005	01/31/24		Restelk, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
SG3262@0.1PPM_00014	02/09/19	08/09/18	HEXANE, Lot 3678472	50 mL	SG32/6210PPM_00010	0.5 mL	PCB-1232 Peak 1	100 ug/L
							PCB-1232 Peak 2	100 ug/L
							PCB-1232 Peak 3	100 ug/L
							PCB-1232 Peak 4	100 ug/L
							PCB-1232 Peak 5	100 ug/L
							PCB-1262 Peak 1	100 ug/L
							PCB-1262 Peak 2	100 ug/L
							PCB-1262 Peak 3	100 ug/L
							PCB-1262 Peak 4	100 ug/L
							PCB-1262 Peak 5	100 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG32/6210PPM_00010	08/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/62 STK_00005	1 mL	PCB-1232 Peak 1	10 ug/mL
							PCB-1232 Peak 2	10 ug/mL
							PCB-1232 Peak 3	10 ug/mL
							PCB-1232 Peak 4	10 ug/mL
							PCB-1232 Peak 5	10 ug/mL
							PCB-1262 Peak 1	10 ug/mL
							PCB-1262 Peak 2	10 ug/mL
							PCB-1262 Peak 3	10 ug/mL
							PCB-1262 Peak 4	10 ug/mL
							PCB-1262 Peak 5	10 ug/mL
..SG32/62 STK_00005	01/31/24	Restelk, Lot A0132023			(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20	Restek, Lot A0124315			(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG3262@0.5PPM_00030	02/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/6210PPM_00010	5 mL	PCB-1232 Peak 1	500 ug/L
							PCB-1232 Peak 2	500 ug/L
							PCB-1232 Peak 3	500 ug/L
							PCB-1232 Peak 4	500 ug/L
							PCB-1232 Peak 5	500 ug/L
							PCB-1262 Peak 1	500 ug/L
							PCB-1262 Peak 2	500 ug/L
							PCB-1262 Peak 3	500 ug/L
							PCB-1262 Peak 4	500 ug/L
							PCB-1262 Peak 5	500 ug/L
					SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG32/6210PPM_00010	08/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/62 STK_00005	1 mL	PCB-1232 Peak 1	10 ug/mL
							PCB-1232 Peak 2	10 ug/mL
							PCB-1232 Peak 3	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1232 Peak 4	10 ug/mL
							PCB-1232 Peak 5	10 ug/mL
							PCB-1262 Peak 1	10 ug/mL
							PCB-1262 Peak 2	10 ug/mL
							PCB-1262 Peak 3	10 ug/mL
							PCB-1262 Peak 4	10 ug/mL
							PCB-1262 Peak 5	10 ug/mL
..SG32/62 STK_00005	01/31/24		Restelk, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG3262@0.5PPM_00032	06/27/19	12/27/18	HEXANE, Lot 3863007	100 mL	SGPCBIS STOCk_00012	0.5 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SGPCBIS STOCk_00012	12/26/19	12/26/18	HEXANE, Lot 3863007	50 mL	ISTD_00005	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00005	02/28/21		Restek, Lot A0132763		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG3262@0.5PPM_00032	06/27/19	12/27/18	HEXANE, Lot 3863007	100 mL	SG32/6210PPM_00010	5 mL	Aroclor-1232	500 ug/L
							Aroclor-1262	500 ug/L
							PCB-1232 Peak 1	500 ug/L
							PCB-1232 Peak 2	500 ug/L
							PCB-1232 Peak 3	500 ug/L
							PCB-1232 Peak 4	500 ug/L
							PCB-1232 Peak 5	500 ug/L
							PCB-1262 Peak 1	500 ug/L
							PCB-1262 Peak 2	500 ug/L
							PCB-1262 Peak 3	500 ug/L
							PCB-1262 Peak 4	500 ug/L
							PCB-1262 Peak 5	500 ug/L
.SG32/6210PPM_00010	08/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/62 STK_00005	1 mL	Aroclor-1232	10 ug/mL
							Aroclor-1262	10 ug/mL
							PCB-1232 Peak 1	10 ug/mL
							PCB-1232 Peak 2	10 ug/mL
							PCB-1232 Peak 3	10 ug/mL
							PCB-1232 Peak 4	10 ug/mL
							PCB-1232 Peak 5	10 ug/mL
							PCB-1262 Peak 1	10 ug/mL
							PCB-1262 Peak 2	10 ug/mL
							PCB-1262 Peak 3	10 ug/mL
							PCB-1262 Peak 4	10 ug/mL
							PCB-1262 Peak 5	10 ug/mL
..SG32/62 STK_00005	01/31/24		Restelk, Lot A0132023		(Purchased Reagent)		Aroclor-1232	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Aroclor-1262	1000 ug/mL
							PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
SG3262@1.0PPM_00019	02/09/19	08/09/18	HEXANE, Lot 3678472	50 mL	SG32/6210PPM_00010	5 mL	PCB-1232 Peak 1	1000 ug/L
							PCB-1232 Peak 2	1000 ug/L
							PCB-1232 Peak 3	1000 ug/L
							PCB-1232 Peak 4	1000 ug/L
							PCB-1232 Peak 5	1000 ug/L
							PCB-1262 Peak 1	1000 ug/L
							PCB-1262 Peak 2	1000 ug/L
							PCB-1262 Peak 3	1000 ug/L
							PCB-1262 Peak 4	1000 ug/L
							PCB-1262 Peak 5	1000 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG32/6210PPM_00010	08/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/62 STK_00005	1 mL	PCB-1232 Peak 1	10 ug/mL
							PCB-1232 Peak 2	10 ug/mL
							PCB-1232 Peak 3	10 ug/mL
							PCB-1232 Peak 4	10 ug/mL
							PCB-1232 Peak 5	10 ug/mL
							PCB-1262 Peak 1	10 ug/mL
							PCB-1262 Peak 2	10 ug/mL
							PCB-1262 Peak 3	10 ug/mL
							PCB-1262 Peak 4	10 ug/mL
							PCB-1262 Peak 5	10 ug/mL
..SG32/62 STK_00005	01/31/24		Restelk, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG3262@1.5PPM_00004	02/09/19	08/09/18	HEXANE, Lot 3678472	50 mL	SG32/6210PPM_00010	7.5 mL	PCB-1232 Peak 1	1500 ug/L
							PCB-1232 Peak 2	1500 ug/L
							PCB-1232 Peak 3	1500 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1232 Peak 4	1500 ug/L
							PCB-1232 Peak 5	1500 ug/L
							PCB-1262 Peak 1	1500 ug/L
							PCB-1262 Peak 2	1500 ug/L
							PCB-1262 Peak 3	1500 ug/L
							PCB-1262 Peak 4	1500 ug/L
							PCB-1262 Peak 5	1500 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG32/6210PPM_00010	08/09/19	08/09/18	HEXANE, Lot 3678472	100 mL	SG32/62 STK_00005	1 mL	PCB-1232 Peak 1	10 ug/mL
							PCB-1232 Peak 2	10 ug/mL
							PCB-1232 Peak 3	10 ug/mL
							PCB-1232 Peak 4	10 ug/mL
							PCB-1232 Peak 5	10 ug/mL
							PCB-1262 Peak 1	10 ug/mL
							PCB-1262 Peak 2	10 ug/mL
							PCB-1262 Peak 3	10 ug/mL
							PCB-1262 Peak 4	10 ug/mL
							PCB-1262 Peak 5	10 ug/mL
..SG32/62 STK_00005	01/31/24		Restelk, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG42/68@1.0PP_00023	02/14/19	08/14/18	HEXANE, Lot 3678472	50 mL	SG42/6810PPM_00009	5 mL	PCB-1242 Peak 1	1000 ug/L
							PCB-1242 Peak 2	1000 ug/L
							PCB-1242 Peak 3	1000 ug/L
							PCB-1242 Peak 4	1000 ug/L
							PCB-1242 Peak 5	1000 ug/L
							PCB-1268 Peak 1	1000 ug/L
							PCB-1268 Peak 2	1000 ug/L
							PCB-1268 Peak 3	1000 ug/L
							PCB-1268 Peak 4	1000 ug/L
							PCB-1268 Peak 5	1000 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	PCB-1242 Peak 1	10000 ug/L
							PCB-1242 Peak 2	10000 ug/L
							PCB-1242 Peak 3	10000 ug/L
							PCB-1242 Peak 4	10000 ug/L
							PCB-1242 Peak 5	10000 ug/L
							PCB-1268 Peak 1	10000 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1268 Peak 2	10000 ug/L
							PCB-1268 Peak 3	10000 ug/L
							PCB-1268 Peak 4	10000 ug/L
							PCB-1268 Peak 5	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG4268@.05PPM_00014	02/14/19	08/14/18	HEXANE, Lot 3678472	50 mL	SG42/6810PPM_00009	0.25 mL	PCB-1242 Peak 1	50 ug/L
							PCB-1242 Peak 2	50 ug/L
							PCB-1242 Peak 3	50 ug/L
							PCB-1242 Peak 4	50 ug/L
							PCB-1242 Peak 5	50 ug/L
							PCB-1268 Peak 1	50 ug/L
							PCB-1268 Peak 2	50 ug/L
							PCB-1268 Peak 3	50 ug/L
							PCB-1268 Peak 4	50 ug/L
							PCB-1268 Peak 5	50 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	PCB-1242 Peak 1	10000 ug/L
							PCB-1242 Peak 2	10000 ug/L
							PCB-1242 Peak 3	10000 ug/L
							PCB-1242 Peak 4	10000 ug/L
							PCB-1242 Peak 5	10000 ug/L
							PCB-1268 Peak 1	10000 ug/L
							PCB-1268 Peak 2	10000 ug/L
							PCB-1268 Peak 3	10000 ug/L
							PCB-1268 Peak 4	10000 ug/L
							PCB-1268 Peak 5	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG4268@.1PPM_00014	02/14/19	08/14/18	HEXANE, Lot 3678472	50 mL	SG42/6810PPM_00009	0.5 mL	PCB-1242 Peak 1	100 ug/L
							PCB-1242 Peak 2	100 ug/L
							PCB-1242 Peak 3	100 ug/L
							PCB-1242 Peak 4	100 ug/L
							PCB-1242 Peak 5	100 ug/L
							PCB-1268 Peak 1	100 ug/L
							PCB-1268 Peak 2	100 ug/L
							PCB-1268 Peak 3	100 ug/L
							PCB-1268 Peak 4	100 ug/L
							PCB-1268 Peak 5	100 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	PCB-1242 Peak 1	10000 ug/L
							PCB-1242 Peak 2	10000 ug/L
							PCB-1242 Peak 3	10000 ug/L
							PCB-1242 Peak 4	10000 ug/L
							PCB-1242 Peak 5	10000 ug/L
							PCB-1268 Peak 1	10000 ug/L
							PCB-1268 Peak 2	10000 ug/L
							PCB-1268 Peak 3	10000 ug/L
							PCB-1268 Peak 4	10000 ug/L
							PCB-1268 Peak 5	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG4268@.2PPM_00014	02/14/19	08/14/18	HEXANE, Lot 3678472	50 mL	SG42/6810PPM_00009	1 mL	PCB-1242 Peak 1	200 ug/L
							PCB-1242 Peak 2	200 ug/L
							PCB-1242 Peak 3	200 ug/L
							PCB-1242 Peak 4	200 ug/L
							PCB-1242 Peak 5	200 ug/L
							PCB-1268 Peak 1	200 ug/L
							PCB-1268 Peak 2	200 ug/L
							PCB-1268 Peak 3	200 ug/L
							PCB-1268 Peak 4	200 ug/L
							PCB-1268 Peak 5	200 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	PCB-1242 Peak 1	10000 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1242 Peak 2	10000 ug/L
							PCB-1242 Peak 3	10000 ug/L
							PCB-1242 Peak 4	10000 ug/L
							PCB-1242 Peak 5	10000 ug/L
							PCB-1268 Peak 1	10000 ug/L
							PCB-1268 Peak 2	10000 ug/L
							PCB-1268 Peak 3	10000 ug/L
							PCB-1268 Peak 4	10000 ug/L
							PCB-1268 Peak 5	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG4268@0.5PPM_00030	02/14/19	08/14/18	HEXANE, Lot 3678472	100 mL	SG42/6810PPM_00009	5 mL	PCB-1242 Peak 1	500 ug/L
							PCB-1242 Peak 2	500 ug/L
							PCB-1242 Peak 3	500 ug/L
							PCB-1242 Peak 4	500 ug/L
							PCB-1242 Peak 5	500 ug/L
							PCB-1268 Peak 1	500 ug/L
							PCB-1268 Peak 2	500 ug/L
							PCB-1268 Peak 3	500 ug/L
							PCB-1268 Peak 4	500 ug/L
							PCB-1268 Peak 5	500 ug/L
					SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	PCB-1242 Peak 1	10000 ug/L
							PCB-1242 Peak 2	10000 ug/L
							PCB-1242 Peak 3	10000 ug/L
							PCB-1242 Peak 4	10000 ug/L
							PCB-1242 Peak 5	10000 ug/L
							PCB-1268 Peak 1	10000 ug/L
							PCB-1268 Peak 2	10000 ug/L
							PCB-1268 Peak 3	10000 ug/L
							PCB-1268 Peak 4	10000 ug/L
							PCB-1268 Peak 5	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG4268@0.5PPM_00031	02/23/19	11/02/18	HEXANE, Lot 3863007	100 mL	SGPCBIS STOCk_00011	0.5 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SG4268@0.5PPM_00031	02/23/19	11/02/18	HEXANE, Lot 3863007	100 mL	SG42/6810PPM_00009	5 mL	Aroclor-1242	500 ug/L
							Aroclor-1268	500 ug/L
							PCB-1242 Peak 1	500 ug/L
							PCB-1242 Peak 2	500 ug/L
							PCB-1242 Peak 3	500 ug/L
							PCB-1242 Peak 4	500 ug/L
							PCB-1242 Peak 5	500 ug/L
							PCB-1268 Peak 1	500 ug/L
							PCB-1268 Peak 2	500 ug/L
							PCB-1268 Peak 3	500 ug/L
							PCB-1268 Peak 4	500 ug/L
							PCB-1268 Peak 5	500 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	Aroclor-1242	10000 ug/L
							Aroclor-1268	10000 ug/L
							PCB-1242 Peak 1	10000 ug/L
							PCB-1242 Peak 2	10000 ug/L
							PCB-1242 Peak 3	10000 ug/L
							PCB-1242 Peak 4	10000 ug/L
							PCB-1242 Peak 5	10000 ug/L
							PCB-1268 Peak 1	10000 ug/L
							PCB-1268 Peak 2	10000 ug/L
							PCB-1268 Peak 3	10000 ug/L
							PCB-1268 Peak 4	10000 ug/L
							PCB-1268 Peak 5	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		Aroclor-1242	1000 ug/mL
							Aroclor-1268	1000 ug/mL
							PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
SG4268@1.5PPM_00005	02/14/19	08/14/18	HEXANE, Lot 3678472	50 mL	SG42/6810PPM_00009	7.5 mL	PCB-1242 Peak 1	1500 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1242 Peak 2	1500 ug/L
							PCB-1242 Peak 3	1500 ug/L
							PCB-1242 Peak 4	1500 ug/L
							PCB-1242 Peak 5	1500 ug/L
							PCB-1268 Peak 1	1500 ug/L
							PCB-1268 Peak 2	1500 ug/L
							PCB-1268 Peak 3	1500 ug/L
							PCB-1268 Peak 4	1500 ug/L
							PCB-1268 Peak 5	1500 ug/L
					SGPCBIS STOCk_00011	0.25 mL	1-Bromo-2-nitrobenzene	50 ug/L
.SG42/6810PPM_00009	08/13/19	08/13/18	HEXANE, Lot 3678472	100 mL	SG 42/68 STK_00005	1 mL	PCB-1242 Peak 1	10000 ug/L
							PCB-1242 Peak 2	10000 ug/L
							PCB-1242 Peak 3	10000 ug/L
							PCB-1242 Peak 4	10000 ug/L
							PCB-1242 Peak 5	10000 ug/L
							PCB-1268 Peak 1	10000 ug/L
							PCB-1268 Peak 2	10000 ug/L
							PCB-1268 Peak 3	10000 ug/L
							PCB-1268 Peak 4	10000 ug/L
							PCB-1268 Peak 5	10000 ug/L
..SG 42/68 STK_00005	03/31/24		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SGPCBISTD_00016	02/23/19	08/23/18	HEXANE, Lot 3678472	100 mL	SGPCBIS STOCk_00011	10 mL	1-Bromo-2-nitrobenzene	1 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
SGPCBISTD_00017	02/23/19	11/16/18	HEXANE, Lot 3863007	100 mL	SGPCBIS STOCk_00011	10 mL	1-Bromo-2-nitrobenzene	1 ug/mL
.SGPCBIS STOCk_00011	02/23/19	02/23/18	HEXANE, Lot 3423485	50 mL	ISTD_00004	0.5 mL	1-Bromo-2-nitrobenzene	10 ug/mL
..ISTD_00004	04/30/20		Restek, Lot A0124315		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
VM50IS_00071	01/03/19	07/03/18	MEOH, Lot 177891	50 mL	VM568718_00011	10 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL
							Fluorobenzene	50 ug/mL
.VM568718_00011	01/31/22		restek, Lot A0124343		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
VM50IS_00074	06/14/19	12/14/18	MEOH, Lot 177891	50 mL	VM568718_00013	10 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluorobenzene	50 ug/mL
.VM568718_00013	12/31/22		restek, Lot A0133525		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
vm50ss_00337	10/05/18	09/28/18	MEOH, Lot na	4 mL	vm50ss_stk_00078	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.vm50ss_stk_00078	12/20/18	06/20/18	MEOH, Lot 178178	200 mL	VM567650_00029	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
..VM567650_00029	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
vm50ss_00351	01/26/19	01/19/19	MEOH, Lot na	4 mL	vm50ss_stk_00079	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.vm50ss_stk_00079	05/07/19	11/07/18	MEOH, Lot 178178	200 mL	VM567650_00029	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
..VM567650_00029	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
vm50ss_stk_00079	05/07/19	11/07/18	MEOH, Lot 178178	200 mL	VM567650_00029	4 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.VM567650_00029	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
VM568718_00012	05/31/22		restek, Lot A0127975		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
VM568718_00013	12/31/22		restek, Lot A0133525		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
VMAROLISTDW_00267	10/08/18	10/01/18	MEOH, Lot na	4 mL	VMACROLSTD_00064	4 mL	Acrolein	250 ug/mL
.VMACROLSTD_00064	10/31/18	10/01/18	MEOH, Lot 0000196626	20 mL	VM568720_00029	0.25 mL	Acrolein	250 ug/mL
..VM568720_00029	10/31/18		restek, Lot A0137497		(Purchased Reagent)		Acrolein	20000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
VMAROLISTDW_00281	01/25/19	01/18/19	MEOH, Lot na	4 mL	VMACROLSTD_00067	4 mL	Acrolein	250 ug/mL
.VMACROLSTD_00067	01/31/19	01/02/19	MEOH, Lot 0000196628	20 mL	VM568720_00030	0.25 mL	Acrolein	250 ug/mL
..VM568720_00030	01/31/19		restek, Lot A0139537		(Purchased Reagent)		Acrolein	20000 ug/mL
vmbfb_00020							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Total BTEX	
							Trihalomethanes, Total	
							Unknown	
							Xylenes, Total	
					vm30026_00002	1.25 mL	BFB	50 ug/mL
.vm30026_00002	07/31/21		restek, Lot A0120567		(Purchased Reagent)		BFB	2000 ug/mL
vmbfb_00021							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Total BTEX	
							Trihalomethanes, Total	
							Unknown	
							Xylenes, Total	
					vm30026_00002	1.25 mL	BFB	50 ug/mL
.vm30026_00002	07/31/21		restek, Lot A0120567		(Purchased Reagent)		BFB	2000 ug/mL
VMFASA9W_00203	10/08/18	10/01/18	MEOH, Lot NA	4 mL	VMFASA9_00014	4 mL	1,2,3-Trimethylbenzene	50 ug/mL
							Diisopropyl ether	50 ug/mL
							Ethyl tert-butyl ether	50 ug/mL
							Tert-amyl methyl ether	50 ug/mL
.VMFASA9_00014	10/31/18	10/01/18	MEOH, Lot 0000196628	50 mL	VM570808S_00005	1 mL	1,2,3-Trimethylbenzene	50 ug/mL
					VM571993S_00002	1 mL	Diisopropyl ether	50 ug/mL
							Ethyl tert-butyl ether	50 ug/mL
							Tert-amyl methyl ether	50 ug/mL
..VM570808S_00005	08/31/19		Restek, Lot A0135368		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
..VM571993S_00002	12/31/18		restek, Lot A0123771		(Purchased Reagent)		Diisopropyl ether	2500 ug/mL
							Ethyl tert-butyl ether	2500 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
VMFASAW_00264	01/23/19	01/16/19	MEOH, Lot NA	4 mL	VMFASA_00048	4 mL	Acrolein	250 ug/mL
.VMFASA_00048	01/31/19	01/02/19	MEOH, Lot 0000196628	50 mL	VM568720S_00028	0.625 mL	Acrolein	250 ug/mL
..VM568720S_00028	01/31/19		restek, Lot A0135992		(Purchased Reagent)		Acrolein	20000 ug/mL
VMFASGW_00276	10/05/18	09/28/18	MEOH, Lot NA	4 mL	VMFASG_00075	4 mL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.VMFASG_00075	10/14/18	09/14/18	MEOH, Lot 0000196626	100 mL	vm569722S_00005	2 mL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..vm569722S_00005	01/31/20		Restek, Lot A0124116		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
VMFASGW_00293	01/25/19	01/18/19	MEOH, Lot NA	4 mL	VMFASG_00079	4 mL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.VMFASG_00079	02/18/19	01/18/19	MEOH, Lot 0000196628	100 mL	vm569722S_00005	2 mL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
..vm569722S_00005	01/31/20		Restek, Lot A0124116		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
VMFASPW_00269	10/05/18	09/28/18	MEOH, Lot n/a	4 mL	VMRFASP_00050	4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	50 ug/mL
							Vinyl acetate	50 ug/mL
							1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
.VMRFASP_00050	10/31/18	08/30/18	MEOH, Lot 0000196626	100 mL	VM569721S_00003	0.8 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
					VM569723S_00005	1 mL	2-Chloroethyl vinyl ether	50 ug/mL
					VM569723S_00006	1 mL	2-Chloroethyl vinyl ether	50 ug/mL
					VM569724S_00019	1 mL	Vinyl acetate	50 ug/mL
					VM571992S_00001	2 mL	1,1,1,2-Tetrachloroethane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							tert-Butyl alcohol	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
..VM569721S_00003	03/31/19		Restek, Lot A0108013		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723S_00005	11/30/18		Restek, Lot A0115500		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569723S_00006	11/30/18		Restek, Lot A0115500		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724S_00019	10/31/18		Restek, Lot A0137486		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..VM571992S_00001	12/31/18		Restek, Lot A0123775		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butyl alcohol	25000 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
VMFASPW_00285	01/25/19	01/18/19	MEOH, Lot n/a	4 mL	VMRFASP_00053	4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	50 ug/mL
							Vinyl acetate	50 ug/mL
							1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							Total BTEX	250 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Trihalomethanes, Total	200 ug/mL
							Xylenes, Total	100 ug/mL
.VMRFASP_00053	02/28/19	12/31/18	MEOH, Lot 0000196628	100 mL	VM569721S_00003	0.8 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
					VM569723S_00007	2 mL	2-Chloroethyl vinyl ether	50 ug/mL
					VM569724S_00020	1 mL	Vinyl acetate	50 ug/mL
					VM571992S_00004	2 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							Total BTEX	250 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Trihalomethanes, Total	200 ug/mL
							Xylenes, Total	100 ug/mL
..VM569721S_00003	03/31/19		Restek, Lot A0108013		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723S_00007	01/31/20		Restek, Lot A0123884		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724S_00020	02/28/19		Restek, Lot A0140470		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..VM571992S_00004	06/30/19		Restek, Lot A0123775		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chlorotoluene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butyl alcohol	25000 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							Total BTEX	12500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Trihalomethanes, Total	10000 ug/mL
							Xylenes, Total	5000 ug/mL
VMRA9W_00267	10/03/18	09/26/18	MEOH, Lot NA	4 mL	VMRA9_00024	4 mL	1-Chloro-1-fluoroethane TIC	50 ug/mL
							Cyclohexanone	500 ug/mL
							Pentachloroethane	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							1,2,3-Trimethylbenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3,5-Trichlorobenzene	50 ug/mL
							1-Chlorohexane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Benzyl chloride	50 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
							Ethyl acetate	100 ug/mL
							Ethyl acrylate	50 ug/mL
							Methyl methacrylate	100 ug/mL
							n-Butyl acetate	50 ug/mL
							Acetonitrile	500 ug/mL
							Diisopropyl ether	50 ug/mL
							Ethyl tert-butyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
.VMRA9_00024	12/17/18	06/17/18	MEOH, Lot 173605TF	50 mL	Freon 151_00003	1 mL	1-Chloro-1-fluoroethane TIC	50 ug/mL
					VM569727_00002	1 mL	Cyclohexanone	500 ug/mL
					vm570806_00003	2 mL	Pentachloroethane	100 ug/mL
					vm570807_00003	2 mL	2-Methylnaphthalene	100 ug/mL
					VM570808_00004	1 mL	1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1-Chlorohexane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Benzyl chloride	50 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
					VM570809_00005	1 mL	Ethyl acetate	100 ug/mL
							Ethyl acrylate	50 ug/mL
							Methyl methacrylate	100 ug/mL
							n-Butyl acetate	50 ug/mL
					VM571993_00001	1 mL	Acetonitrile	500 ug/mL
							Diisopropyl ether	50 ug/mL
							Ethyl tert-butyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
..Freon 151_00003	12/17/18	06/17/18	MEOH, Lot 173605TF	20 mL	Freon 151_00001	0.5 mL	1-Chloro-1-fluoroethane TIC	2500 ug/mL
...Freon 151_00001	06/18/19	SynQuest Laboratories , Inc, Lot 270800			(Purchased Reagent)		1-Chloro-1-fluoroethane TIC	10 %
..VM569727_00002	03/31/19	RESTEK, Lot A0118487			(Purchased Reagent)		Cyclohexanone	25000 ug/mL
..vm570806_00003	04/30/22	Restek, Lot A0126447			(Purchased Reagent)		Pentachloroethane	2500 ug/mL
..vm570807_00003	02/28/22	Restek, Lot A0125050			(Purchased Reagent)		2-Methylnaphthalene	2500 ug/mL
..VM570808_00004	05/31/19	Restek, Lot A0132816			(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							1,3,5-Trichlorobenzene	2500 ug/mL
							1-Chlorohexane	2500 ug/mL
							2-Chloro-1,3-butadiene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Benzyl chloride	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
..VM570809_00005	04/30/19		Restek, Lot A0131668		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Ethyl acrylate	2500 ug/mL
							Methyl methacrylate	5000 ug/mL
							n-Butyl acetate	2500 ug/mL
..VM571993_00001	12/31/18		restek, Lot A0123796		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Diisopropyl ether	2500 ug/mL
							Ethyl tert-butyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
VMRA9W_00275	12/06/18	11/29/18	MEOH, Lot NA	4 mL	VMRA9_00024	4 mL	1-Chloro-1-fluoroethane TIC	50 ug/mL
							Cyclohexanone	500 ug/mL
							Pentachloroethane	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1-Chlorohexane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Benzyl chloride	50 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
							Ethyl acetate	100 ug/mL
							Ethyl acrylate	50 ug/mL
							Methyl methacrylate	100 ug/mL
							n-Butyl acetate	50 ug/mL
							Acetonitrile	500 ug/mL
							Diisopropyl ether	50 ug/mL
							Ethyl tert-butyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
.VMRA9_00024	12/17/18	06/17/18	MEOH, Lot 173605TF	50 mL	Freon 151_00003	1 mL	1-Chloro-1-fluoroethane TIC	50 ug/mL
					VM569727_00002	1 mL	Cyclohexanone	500 ug/mL
					vm570806_00003	2 mL	Pentachloroethane	100 ug/mL
					vm570807_00003	2 mL	2-Methylnaphthalene	100 ug/mL
					VM570808_00004	1 mL	1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1-Chlorohexane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Benzyl chloride	50 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
					VM570809_00005	1 mL	Ethyl acetate	100 ug/mL
							Ethyl acrylate	50 ug/mL
							Methyl methacrylate	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Butyl acetate	50 ug/mL
					VM571993_00001	1 mL	Acetonitrile	500 ug/mL
							Diisopropyl ether	50 ug/mL
							Ethyl tert-butyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
..Freon 151_00003	12/17/18	06/17/18	MEOH, Lot 173605TF	20 mL	Freon 151_00001	0.5 mL	1-Chloro-1-fluoroethane TIC	2500 ug/mL
...Freon 151_00001	06/18/19	SynQuest Laboratories , Inc, Lot 270800			(Purchased Reagent)		1-Chloro-1-fluoroethane TIC	10 %
..VM569727_00002	03/31/19	RESTEK, Lot A0118487			(Purchased Reagent)		Cyclohexanone	25000 ug/mL
..vm570806_00003	04/30/22	Restek, Lot A0126447			(Purchased Reagent)		Pentachloroethane	2500 ug/mL
..vm570807_00003	02/28/22	Restek, Lot A0125050			(Purchased Reagent)		2-Methylnaphthalene	2500 ug/mL
..VM570808_00004	05/31/19	Restek, Lot A0132816			(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							1,3,5-Trichlorobenzene	2500 ug/mL
							1-Chlorohexane	2500 ug/mL
							2-Chloro-1,3-butadiene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Benzyl chloride	2500 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
..VM570809_00005	04/30/19	Restek, Lot A0131668			(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Ethyl acrylate	2500 ug/mL
							Methyl methacrylate	5000 ug/mL
							n-Butyl acetate	2500 ug/mL
..VM571993_00001	12/31/18	restek, Lot A0123796			(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Diisopropyl ether	2500 ug/mL
							Ethyl tert-butyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
VMRA9W_00282	01/26/19	01/19/19	MEOH, Lot NA	4 mL	VMRA9_00025	4 mL	Cyclohexanone	500 ug/mL
							Pentachloroethane	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							1,2,3-Trimethylbenzene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
							Ethyl acetate	100 ug/mL
							Ethyl acrylate	50 ug/mL
							Methyl methacrylate	100 ug/mL
							n-Butyl acetate	50 ug/mL
							Acetonitrile	500 ug/mL
							Diisopropyl ether	50 ug/mL
							Ethyl tert-butyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
.VMRA9_00025	03/31/19	12/18/18	MEOH, Lot 0000196628	50 mL	VM569727_00002	1 mL	Cyclohexanone	500 ug/mL
					vm570806_00003	2 mL	Pentachloroethane	100 ug/mL
					vm570807_00003	2 mL	2-Methylnaphthalene	100 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					VM570808_00004	1 mL	1,2,3-Trimethylbenzene	50 ug/mL
							2-Nitropropane	100 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	1250 ug/mL
					VM570809_00005	1 mL	Ethyl acetate	100 ug/mL
							Ethyl acrylate	50 ug/mL
							Methyl methacrylate	100 ug/mL
							n-Butyl acetate	50 ug/mL
					VM571993_00003	1 mL	Acetonitrile	500 ug/mL
							Diisopropyl ether	50 ug/mL
							Ethyl tert-butyl ether	50 ug/mL
							Propionitrile	500 ug/mL
							Tert-amyl methyl ether	50 ug/mL
..VM569727_00002	03/31/19		RESTEK, Lot A0118487		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
..vm570806_00003	04/30/22		Restek, Lot A0126447		(Purchased Reagent)		Pentachloroethane	2500 ug/mL
..vm570807_00003	02/28/22		Restek, Lot A0125050		(Purchased Reagent)		2-Methylnaphthalene	2500 ug/mL
..VM570808_00004	05/31/19		Restek, Lot A0132816		(Purchased Reagent)		1,2,3-Trimethylbenzene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
..VM570809_00005	04/30/19		Restek, Lot A0131668		(Purchased Reagent)		Ethyl acetate	5000 ug/mL
							Ethyl acrylate	2500 ug/mL
							Methyl methacrylate	5000 ug/mL
							n-Butyl acetate	2500 ug/mL
..VM571993_00003	07/31/20		restek, Lot A0139911		(Purchased Reagent)		Acetonitrile	25000 ug/mL
							Diisopropyl ether	2500 ug/mL
							Ethyl tert-butyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
VMRGAS_00263	10/03/18	09/26/18	MEOH, Lot 0000196626	10 mL	vm569722_00011	0.2 mL	Bromomethane	50 ug/mL
							Butadiene	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.vm569722_00011	10/31/20		Restek, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
VMRGAS_00278	01/21/19	01/14/19	MEOH, Lot 0000196628	10 mL	vm569722_00011	0.2 mL	Bromomethane	50 ug/mL
							Butadiene	50 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.vm569722_00011	10/31/20		Restek, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
VMRGAS_00279	01/29/19	01/22/19	MEOH, Lot +200920000196628JJ	10 mL	vm569722_00011	0.2 mL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.vm569722_00011	10/31/20		Restek, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
VMRPRIMW_00303	10/08/18	10/01/18	MEOH, Lot NA	4 mL	VMRPRIM_00030	4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	100 ug/mL
							Vinyl acetate	50 ug/mL
							1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Styrene	50 ug/mL
							tert-Butyl alcohol	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
.VMRPRIM_00030	10/31/18	09/24/18	MEOH, Lot +200920000196626JH	50 mL	VM569721_00003	0.4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
					VM569723_00004	2 mL	2-Chloroethyl vinyl ether	100 ug/mL
					VM569724_00016	0.5 mL	Vinyl acetate	50 ug/mL
					VM571992_00002	1 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
..VM569721_00003	11/30/18		Restek, Lot A0115554		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723_00004	11/30/18		restek, Lot A0115628		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724_00016	10/31/18		Restek, Lot A0137562		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..VM571992_00002	06/30/19		Restek, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butyl alcohol	25000 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
VMRPRIMW_00318	01/25/19	01/18/19	MEOH, Lot NA	4 mL	VMRPRIM_00032	4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
							2-Chloroethyl vinyl ether	100 ug/mL
							Vinyl acetate	50 ug/mL
							1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
.VMRPRIM_00032	02/28/19	12/01/18	MEOH, Lot 0000196628	50 mL	VM569721_00005	0.4 mL	2-Butanone (MEK)	100 ug/mL
							2-Hexanone	100 ug/mL
							4-Methyl-2-pentanone (MIBK)	100 ug/mL
							Acetone	100 ug/mL
					VM569723_00006	2 mL	2-Chloroethyl vinyl ether	100 ug/mL
					VM569724_00017	0.5 mL	Vinyl acetate	50 ug/mL
					VM571992_00002	1 mL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butyl alcohol	500 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
..VM569721_00005	04/30/21		Restek, Lot A0137509		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
..VM569723_00006	12/31/20		restek, Lot A0133302		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
..VM569724_00017	02/28/19		Restek, Lot A0140258		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
..VM571992_00002	06/30/19		Restek, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chlorodibromomethane	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added	Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butyl alcohol	25000 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
VMRPRIMW_00318	01/25/19	01/18/19	MEOH, Lot NA	4 mL	VMRPRIM_00032	4 mL	Total BTEX	250 ug/mL
							Trihalomethanes, Total	200 ug/mL
							Xylenes, Total	100 ug/mL
.VMRPRIM_00032	02/28/19	12/01/18	MEOH, Lot 0000196628	50 mL	VM571992_00002	1 mL	Total BTEX	250 ug/mL
							Trihalomethanes, Total	200 ug/mL
							Xylenes, Total	100 ug/mL
..VM571992_00002	06/30/19	Restek, Lot A0123711			(Purchased Reagent)		Total BTEX	12500 ug/mL
							Trihalomethanes, Total	10000 ug/mL
							Xylenes, Total	5000 ug/mL
VMUX8SS_00030	05/29/19	11/29/18	MEOH, Lot 0000196628	100 mL	VM567650_00028	8.66 mL	1,2-Dichloroethane-d4 (Surr)	216.5 ug/mL
							4-Bromofluorobenzene (Surr)	216.5 ug/mL
							Dibromofluoromethane (Surr)	216.5 ug/mL
							Toluene-d8 (Surr)	216.5 ug/mL
.VM567650_00028	01/31/22	Restek, Lot A0124069			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
WCP-XYLENE_00023	04/05/20	JT Baker, Lot 187183			(Purchased Reagent)		Flashpoint	81 Degrees F

Reagent

ex1016/1260st_00014

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039 **Lot No.:** A0139779

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016		1,005.4 µg/mL	+/- 5.8590	µg/mL	Gravimetric
	CAS # 12674-11-2	(Lot 766071)		+/- 31.8575	µg/mL	Unstressed
	Purity ----%			+/- 41.6206	µg/mL	Stressed
2	Aroclor 1260		1,009.8 µg/mL	+/- 5.8846	µg/mL	Gravimetric
	CAS # 11096-82-5	(Lot 855895)		+/- 31.9969	µg/mL	Unstressed
	Purity ----%			+/- 41.8028	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

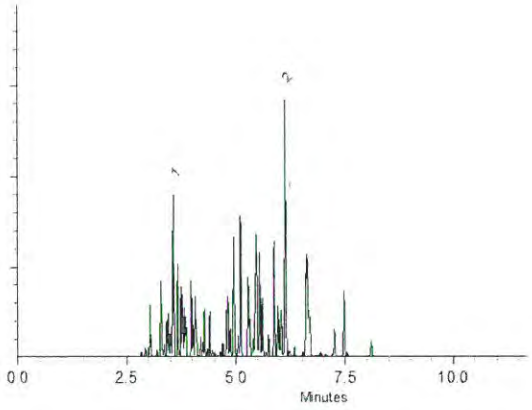
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Alice Brooks - Mix Technician

Date Mixed: 18-Jul-2018 **Balance:** B251644995

Justine Albertson - Operations Tech-ARM QC

Date Passed: 23-Jul-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

ex10PPMSPK_00045

LABORATORY STANDARDS DOCUMENTATION FORM
FOR TESTAMERICA LABORATORIES, INC.

3959296

Standard No. ____ ID: ex10PPMSPK_00045 Exp: 06/13/19 Prpd: BMB Crt: 12/13/18 Aroclor 1016/1260 Spike ____

Standard Name _____

Date Created 12/13

Extractionist Initials BB

Extractionist Comments Please confirm new spike.

♦ **Please return copy of chromatogram and recovery results** ♦

Date Analyzed 12/14/18

Passed? Yes ☑

No ☐

Returned copy of chromatogram and recovery page to Extractions? Yes ☑

No ☐

Analyst Initials _____

Analyst Comments _____

WI-NC-020A_101207

Preliminary Report

TestAmerica Canton

LCS, Lab Control Sample Report

Sample Path: \\chromna\Canton\ChromData\A2HP2\20181214-82837.b\P2121409.D

Lims ID: new spike Inj. Date: 14-Dec-2018 08:54:10

Worklist ID: 240-0082837-009 Instrument: A2HP2

Method: PCB2 IS

Detector 1: GC ECD1A

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3540C
5 PCB-1016	1.00	0.8746	87.5	47-120
5 PCB-1016-1	1.00	0.8201	82.0	47-120
5 PCB-1016-2	1.00	0.8657	86.6	47-120
5 PCB-1016-3	1.00	0.8336	83.4	47-120
5 PCB-1016-4	1.00	0.9194	91.9	47-120
5 PCB-1016-5	1.00	0.9342	93.4	47-120
10 PCB-1260	1.00	0.9150	91.5	46-120
10 PCB-1260-1	1.00	0.8682	86.8	46-120
10 PCB-1260-2	1.00	0.9146	91.5	46-120
10 PCB-1260-3	1.00	0.9276	92.8	46-120
10 PCB-1260-4	1.00	0.9423	94.2	46-120
10 PCB-1260-5	1.00	0.9223	92.2	46-120

Detector 2: GC ecd2b

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3540C
5 PCB-1016	1.00	0.8440	84.4	47-120
5 PCB-1016-1	1.00	0.8000	80.0	47-120
5 PCB-1016-2	1.00	0.8519	85.2	47-120
5 PCB-1016-3	1.00	0.8404	84.0	47-120
5 PCB-1016-4	1.00	0.8541	85.4	47-120
5 PCB-1016-5	1.00	0.8733	87.3	47-120
10 PCB-1260	1.00	0.8752	87.5	46-120
10 PCB-1260-1	1.00	0.8408	84.1	46-120
10 PCB-1260-2	1.00	0.8572	85.7	46-120
10 PCB-1260-3	1.00	0.8587	85.9	46-120
10 PCB-1260-4	1.00	0.9174	91.7	46-120
10 PCB-1260-5	1.00	0.9017	90.2	46-120

Samples for Limit Group: 1, Lims Prep Method: 3540C

240-105482-B-1-A

Reagent

ex2/.2SURRW_00119

Report Date: 17-Jan-2019 15:45:04 Chrom Revision: 2.3 13-Dec-2018 17:23:12

Preliminary Report

TestAmerica Canton

Recovery Report

Data File:	\\chromna\Canton\ChromData\A2HP15\20190117-83766.b\P15011707.D				
Lims ID:	Surr Test				
Client ID:					
Sample Type:	Client				
Inject. Date:	17-Jan-2019 15:16:07	ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	1.0 ul	Dil. Factor:	10.0000		
Sample Info:	240-0083766-007				
Operator ID:		Instrument ID:	A2HP15		
Method:	\\chromna\Canton\ChromData\A2HP15\20190117-83766.b\Pest15 IS.m				
Limit Group:	GC 8081B IS				
Last Update:	17-Jan-2019 15:44:54	Calib Date:	31-Dec-2018 16:52:07		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Canton\ChromData\A2HP15\20181231-83386.b\P151231012.D				
Column 1 :			Det: GC ECD1A		
Column 2 :			Det: GC ecd2b		
Process Host:	CTX0302				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 1 Tetrachloro-m-xylene	200.0	20.9	104.68
$ 30 DCB Decachlorobiphenyl	200.0	20.3	101.58

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 1 Tetrachloro-m-xylene	200.0	21.2	105.84
$ 30 DCB Decachlorobiphenyl	200.0	20.8	103.97

Report Date: 17-Jan-2019 15:47:59 Chrom Revision: 2.3 13-Dec-2018 17:23:12

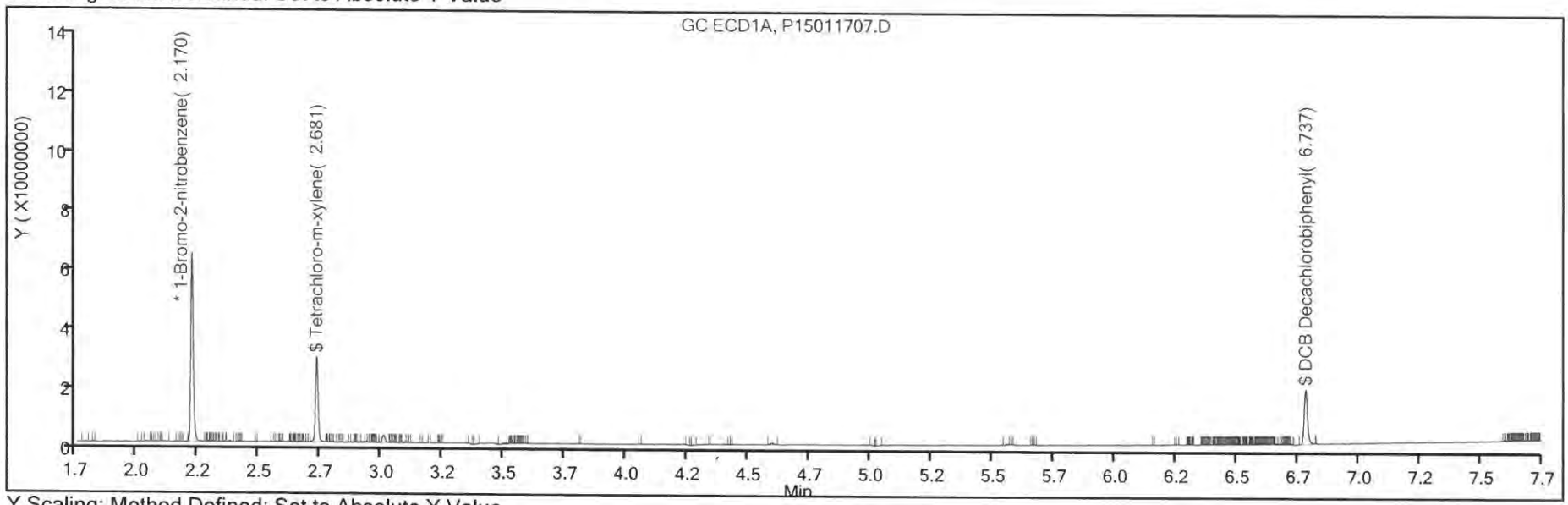
Preliminary Report

TestAmerica Canton

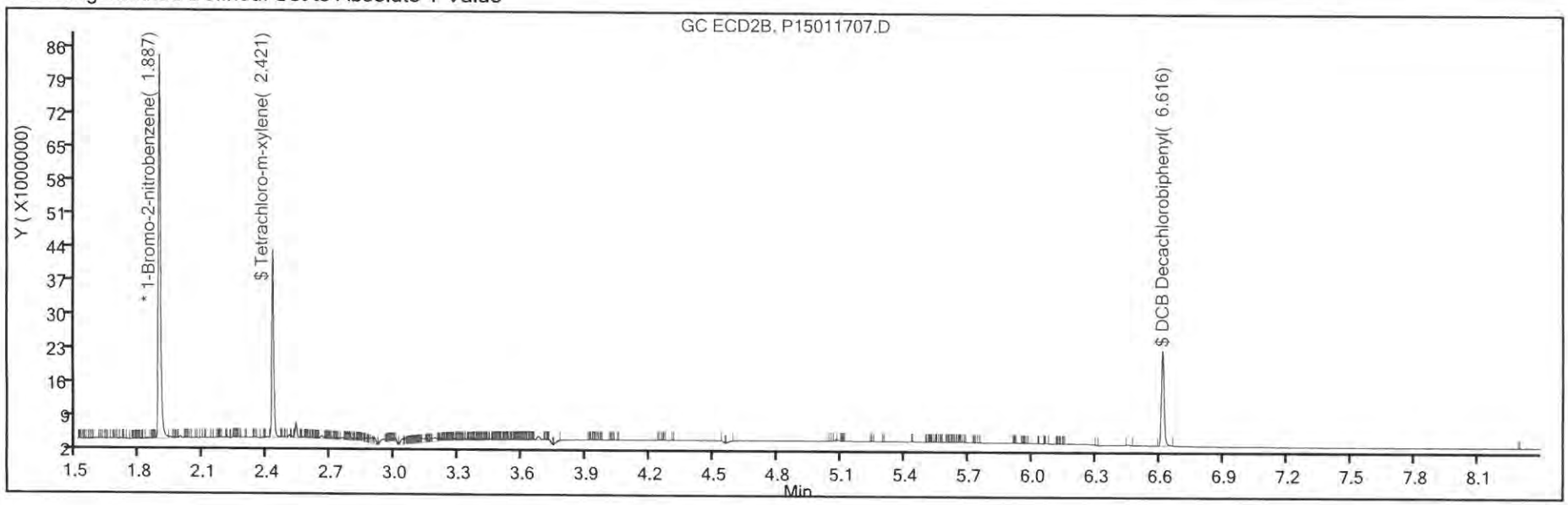
Data File: \\chromna\Canton\ChromData\A2HP15\20190117-83766.b\P15011707.D

Injection Date:	17-Jan-2019 15:16:07	Instrument ID:	A2HP15	Operator ID:	
Lims ID:	Surr Test	Lab Sample ID:	Client 240-364503/7-A	Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	10.0000	ALS Bottle#:	7
Method:	Pest15 IS	Limit Group:	GC 8081B IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Reagent

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exPESTSURRstd_00012

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0141110

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2024 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4,5,6-Tetrachloro-m-xylene	201.4 µg/mL	+/- 1.1736	µg/mL	Gravimetric
	CAS # 877-09-8 (Lot 0052481)		+/- 6.3813	µg/mL	Unstressed
	Purity 98%		+/- 8.3370	µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)	200.6 µg/mL	+/- 1.1690	µg/mL	Gravimetric
	CAS # 2051-24-3 (Lot ER071509-01)		+/- 6.3563	µg/mL	Unstressed
	Purity 99%		+/- 8.3043	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

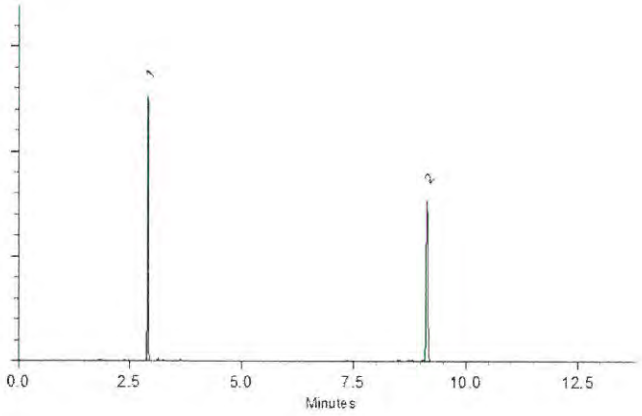
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 29-Aug-2018 **Balance:** B707717271

Justine Albertson - Operations Tech-ARM QC

Date Passed: 04-Sep-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

ISTD_00004

RCVD 3/8/17

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Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32279 **Lot No.:** A0124315

Description : 1-Bromo-2-nitrobenzene Standard

1-Bromo-2-nitrobenzene Standard 1000 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1-Bromo-2-nitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 577-19-5 (Lot 643872/1)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

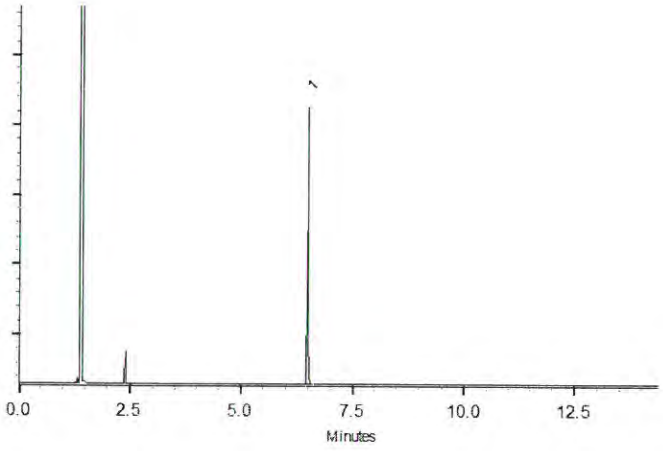
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician

Date Mixed: 18-Jan-2017 **Balance:** B251644995

Justine Albertson - Operations Tech-ARM QC

Date Passed: 20-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

ISTD_00005

RCVD
2/27/18 BPM

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32279 **Lot No.:** A0132763

Description : 1-Bromo-2-nitrobenzene Standard

1-Bromo-2-nitrobenzene Standard 1000 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1-Bromo-2-nitrobenzene	1,009.0 µg/mL	+/- 5.9932	µg/mL	Gravimetric
	CAS # 577-19-5 (Lot 643872/1)		+/- 56.5869	µg/mL	Unstressed
	Purity 99%		+/- 57.9104	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

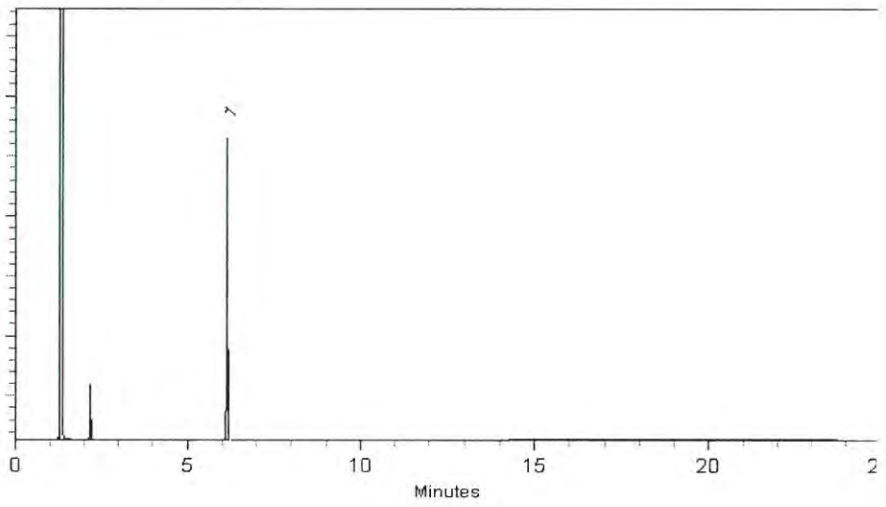
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 28-Nov-2017 **Balance:** 1128360905

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 29-Nov-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

LLHg-ICV_00009

Rec'd 10-9-18 KL

Certificate of Analysis

Certified Reference Material

Product Description:

Mercury

Product Number:	**S1-Hg-10xVol**
Lot Number:	**1826001**
Matrix:	5% (v/v) HNO_3

Certified Value:

Element	(µg/mL)	SRM ID	SRM Lot#
Mercury	10.0 ± 0.2	3133	061204

The Certified value is based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **October 2018**

Certificate Issue Date: **October 5, 2018**

Drew Peterson, Product Manager-Standard Solutions

7277 World Communications Dr. | Omaha, NE 68122 USA | Phone: +1.402.991.7800 | Fax: +1.402.991.7799
Email: esi@icpms.com | Web: www.icpms.com

Preparation Information:

This standard is prepared using **99.9998%** pure **mercury metal** which was purchased from a qualified vendor per ISO 9001:2008 guidelines and assayed by analytical methods for conformity prior to use. This standard was manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
   The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
   The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
   The calibrations of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**
   The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
   The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If an SRM is not availabe, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High-Purity Standards.

Reagent

MTAG_00008

Rec'd 8-7-18 KL

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Silver

Product Number: **100051-1**
Lot Number: **1817921**
Matrix: 2% (v/v) HNO_3

Certified Value:

Element	(µg/mL)	SRM ID	SRM Lot#
Ag	1000 ± 3	3151	160729

The Certified value is based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.
* Refer to Traceability Information, Section d

Density: 1.016 g/mL ± 0.002 g/mL @ 20.0°C ± 0.3°C

Uncertified Values:

Trace Metal Impurity Scan: The data reported are based upon a scan of this specific lot via ICP-OES/ICP-MS analysis. The values are reported in µg/L.

Ag		M	Cu	<	0.02	Li	<	0.5	Rb	<	0.02	Th	<	0.02
Al	<	0.05	Dy	<	0.02	Lu	<	0.02	Re	<	0.02	Ti	<	0.1
As	<	0.05	Er	<	0.02	Mg	<	0.5	Rh	<	0.02	Tl	<	0.02
Au	<	0.02	Eu	<	0.02	Mn	<	0.05	Ru	<	0.02	Tm	<	0.02
B	<	1	Fe	<	1	Mo	<	0.02	Sb	<	0.02	U	<	0.05
Ba	<	0.02	Ga	<	0.02	Na	<	3	Sc	<	0.02	V	<	0.05
Be	<	0.02	Gd	<	0.02	Nb	<	0.02	Se	<	0.1	W	<	0.02
Bi	<	0.02	Ge	<	0.02	Nd	<	0.02	Si		35	Y	<	0.02
Ca	<	1	Hf	<	0.02	Ni	<	0.02	Sm	<	0.02	Yb	<	0.02
Cd	<	0.02	Ho	<	0.02	Os	<	0.02	Sn	<	0.5	Zn	<	0.02
Ce	<	0.02	In	<	0.02	Pb	<	0.05	Sr	<	0.02	Zr	<	0.02
Co	<	0.05	Ir	<	0.2	Pd	<	0.02	Ta	<	0.02			
Cr	<	0.05	K	<	1	Pr	<	0.02	Tb	<	0.02			
Cs		5	La	<	0.02	Pt	<	0.02	Te	<	0.02			

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for **eighteen** months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **August 2018**

Certificate Issue Date: **July 10, 2018**

Moven Mutuvari

Moven Mutuvari, Ph. D, Laboratory Manager

Preparation Information:

This standard is prepared using **99.992%** pure **silver metal** which was purchased from a qualified vendor per ISO 9001:2008 guidelines and assayed by analytical methods for conformity prior to use. This standard was manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
   The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
   The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
   The calibration of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**
   The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
   The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If an SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High-Purity Standards.

Reagent

MTHGCAL_00034

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Rec'd 1-15-18 KW

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Mercury

Product Number: **10 33-1**
Lot Number: **1800827**
Matrix: 5% (v/v) HNO_3

Certified Value:

Element	(µg/mL)	SRM ID	SRM Lot#
Mercury	10.0 ± 0.2	3133	061204

The Certified value is based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: 1/11/2018
Expiration Date: January 2019
Certificate Issue Date: January 8, 2018

Moven Mututuvari

Moven Mututuvari, Ph. D, Laboratory Manager

Preparation Information:

This standard is prepared using **99.9998%** pure **mercury metal** which was purchased from a qualified vendor per ISO 9001:2008 guidelines and assayed by analytical methods for conformity prior to use. This standard was manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
   The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
   The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
   The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
   The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
   The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If an SRM is not availabe, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High-Purity Standards.

Reagent

MTICPCCV1_00028

Rec'd 10-31-18 KL

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-CCV1
Lot Number:	N2-MEB665676
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	500 000 µg/L ea:

Calcium,	Potassium,	Magnesium,
Sodium,		
250 000 µg/L ea:		
Aluminum,	Iron,	
50 000 µg/L ea:		
Strontium,	Boron,	Lithium,
20 000 µg/L ea:		
Manganese,	Nickel,	Barium,
Beryllium,	Cobalt,	Chromium,
Copper,	Vanadium,	Zinc,
10 000 µg/L ea:		
Thallium,		
5 000 µg/L ea:		
Cadmium,	Arsenic,	Lead,
Selenium		

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	250 000.00 ± 900.00 µg/L	Arsenic, As	5 000 ± 30 µg/L
Barium, Ba	20 000.0 ± 90.0 µg/L	Beryllium, Be	20 000.0 ± 90.0 µg/L
Boron, B	50 000.0 ± 310.0 µg/L	Cadmium, Cd	5 000 ± 30 µg/L
Calcium, Ca	500 000.00 ± 2 000.00 µg/L	Chromium, Cr	20 000.0 ± 90.0 µg/L
Cobalt, Co	20 000.0 ± 90.0 µg/L	Copper, Cu	20 000.0 ± 80.0 µg/L
Iron, Fe	250 000.00 ± 1 000.00 µg/L	Lead, Pb	5 000 ± 26 µg/L
Lithium, Li	49 990.0 ± 210.0 µg/L	Magnesium, Mg	500 000.00 ± 2 000.00 µg/L
Manganese, Mn	20 000.0 ± 80.0 µg/L	Nickel, Ni	20 000.0 ± 90.0 µg/L
Potassium, K	499 900.00 ± 1 900.00 µg/L	Selenium, Se	5 000 ± 26 µg/L
Sodium, Na	499 900.00 ± 1 900.00 µg/L	Strontium, Sr	50 020.0 ± 200.0 µg/L
Thallium, Tl	10 000.0 ± 50.0 µg/L	Vanadium, V	20 000.0 ± 80.0 µg/L
Zinc, Zn	20 000.0 ± 80.0 µg/L		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	EDTA	928	928
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	993012
Tl	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: 11-29-18 KL

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Reagent

MTICPCCV2_00027

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

Rec'd 10.31.18 kw

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-CCV2
Lot Number:	N2-MEB665677
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	50 000 µg/L ea: Silicon, Tin, Titanium, 20 000 µg/L ea: Molybdenum, 10 000 µg/L ea: Silver, 5 000 µg/L ea: Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**5 000 ± 34 µg/L**	**Molybdenum, Mo**	**20 000.0 ± 110.0 µg/L**
Silicon, Si	**50 000.0 ± 290.0 µg/L**	**Silver, Ag**	**10 000.0 ± 40.0 µg/L**
Tin, Sn	**50 000.0 ± 240.0 µg/L**	**Titanium, Ti**	**50 000.0 ± 270.0 µg/L**

Density: 1.024 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2
Si	ICP Assay	3150	130912
Si	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 20, 2021**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: 11-29-18 mc

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MTICPICSAB1_00008

INORGANIC VENTURES
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Christiansburg, VA 24073 USA
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CERTIFICATE OF ANALYSIS

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fax: 540.585.3012
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Recd 6.27.18 ku

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICSAB1
Lot Number:	N2-MEB669101
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 000 µg/L ea: Aluminum, Calcium, Magnesium, 2 000 000 µg/L ea: Iron, 100 000 µg/L ea: Potassium, Sodium, 15 000 µg/L ea: Strontium, 10 000 µg/L ea: Thallium, Zinc, Nickel, Lead, Selenium, Cadmium, Arsenic, 5 000 µg/L ea: Boron, Barium, Beryllium, Cobalt, Chromium, Copper, Lithium, Manganese, Vanadium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 000 000.000 ± 18 000.000 µg/L	Arsenic, As	10 000.0 ± 60.0 µg/L
Barium, Ba	5 000 ± 26 µg/L	Beryllium, Be	5 000 ± 29 µg/L
Boron, B	5 000 ± 30 µg/L	Cadmium, Cd	10 000.0 ± 60.0 µg/L
Calcium, Ca	5 000 000.000 ± 20 000.000 µg/L	Chromium, Cr	5 000 ± 26 µg/L
Cobalt, Co	5 000 ± 26 µg/L	Copper, Cu	5 001 ± 30 µg/L
Iron, Fe	2 000 000.000 ± 8 000.000 µg/L	Lead, Pb	10 000.0 ± 40.0 µg/L
Lithium, Li	5 000 ± 26 µg/L	Magnesium, Mg	5 000 000.000 ± 20 000.000 µg/L
Manganese, Mn	5 001 ± 26 µg/L	Nickel, Ni	10 000.0 ± 60.0 µg/L
Potassium, K	100 100.00 ± 400.00 µg/L	Selenium, Se	10 000.0 ± 50.0 µg/L
Sodium, Na	100 000.00 ± 400.00 µg/L	Strontium, Sr	15 000.0 ± 90.0 µg/L
Thallium, Tl	10 000.0 ± 60.0 µg/L	Vanadium, V	5 000 ± 30 µg/L
Zinc, Zn	10 000.0 ± 60.0 µg/L		

Density: 1.100 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	110830
B	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	993012
Tl	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 25, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 25, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: 8.28.18 KW

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MTICPICSAB2_00008

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

Recd 6.27.18 kw

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED - Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TA-ICSAB2
Lot Number:	N2-MEB669102
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	100 000 µg/L ea: Silicon, 10 000 µg/L ea: Silver, Molybdenum, Antimony, 5 000 µg/L ea: Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	10 000.0 ± 70.0 µg/L	Molybdenum, Mo	10 000.0 ± 70.0 µg/L
Silicon, Si	100 000.00 ± 600.00 µg/L	Silver, Ag	10 000.0 ± 70.0 µg/L
Tin, Sn	5 000 ± 38 µg/L	Titanium, Ti	5 000 ± 30 µg/L

Density: 1.024 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2
Si	ICP Assay	3150	130912
Si	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 25, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 25, 2022**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: 8-28-18 KW

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MTICPSPIKE1A_00013

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Recd 3-20-18 KW

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Name:	ICP Spike 1
Part Number:	**SM-606-101 Solution A**
Lot Number:	**1807331**
Matrix:	5% HNO_3
Purity:	99.99% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	2000 ± 20	3101a	140903	Fe	1000 ± 6	3126a	140812
As	2000 ± 20	3103a	100818	Pb	500 ± 5	3128	101026
Ba	2000 ± 12	3104a	140909	Mn	500 ± 8	3132	050429
Be	50.0 ± 0.5	3105a	090514	Ni	500 ± 3	3136	120619
B	1000 ± 10	3107	110830	Se	2000 ± 20	3149	100901
Cd	50.0 ± 0.3	3108	130116	Tl	2000 ± 10	*	
Cr	200 ± 1	3112a	030730	V	500 ± 3	3165	160906
Co	500 ± 3	3113	000630	Zn	500 ± 3	3168a	120629
Cu	250.0 ± 1.5	3114	121207				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **March 2018**

Certificate Issue Date: March 16, 2018

Moven Mututuvari

Moven Mututuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MTICPSPIKEB_00012

HIGH-PURITY STANDARDS
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Rec'd 3.2018 KW

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	ICP Spike 1
Part Number:	**SM-606-101** Solution B
Lot Number:	**1807336**
Matrix:	5% HNO_3 + 0.5% HF
Purity:	99.98% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Sb	500 ± 5	3102a	140911	Sn	2000 ± 20	3161a	140914
Mo	1000 ± 10	3134	130418	Ti	1000 ± 10	3162a	130925

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **March 2018**

Certificate Issue Date: March 16, 2018

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MTICPSpikeOdd_00009

HIGH-PURITY STANDARDS
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P.O. Box 41727
Charleston, SC 29423
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Fax (843) 767-7906

Rec'd 3-2018 KL

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Name:	ICP Spike Odds
Part Number:	**SM-606-121**
Lot Number:	**1807221**
Matrix:	2% HNO_3
Purity:	99.999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Li	1000 ± 6	3129a	100714	Sr	1000 ± 5	*	
Si	1000 ± 10	3150	130912				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **March 2018**

Certificate Issue Date: March 14, 2018

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
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The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

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Reagent

MTNONRCRA+ODD_00011

Rec'd 7-26-18 KL

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Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Part Number:	**SM-606-135**
Lot Number:	**1820210**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.98% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	100.0 ± 0.6	3101a	140903	Mo	50.0 ± 0.5	3134	130418
Sb	25.0 ± 0.3	3102a	140911	Ni	25.0 ± 0.2	3136	120619
Be	2.50 ± 0.03	3105a	090514	Si	50.0 ± 0.5	3150	130912
B	50.0 ± 0.5	3107	110830	Sr	50.0 ± 0.3	*	
Co	25.0 ± 0.2	3113	000630	Tl	100.0 ± 0.6	*	
Cu	12.5 ± 0.1	3114	121207	Sn	100 ± 1	3161a	140917
Fe	50.0 ± 0.3	3126a	140812	Ti	50.0 ± 0.5	3162a	130925
Li	50.0 ± 0.5	3129a	100714	V	25.0 ± 0.3	3165	160906
Mn	25.00 ± 0.15	3132	050429	Zn	25.0 ± 0.2	3168a	120629

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **July 2018**

Certificate Issue Date: **July 23, 2018**

Moven Mututuvari

Moven Mututuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**

The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.

The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**

The calibrations of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**

The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**

The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MTRCRA_00014

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Recd 2-20-18 KL

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Part Number: **SM-606-080**
Lot Number: **1804648**
Matrix: 2% HNO_3
Purity: 99.992% - 99.999%

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
As	500 ± 5	3103a	100818	Pb	500 ± 3	3128	101026
Ba	5000 ± 30	3104a	140909	Se	100 ± 1	3149	100901
Cd	100.0 ± 0.5	3108	130116	Ag	100.0 ± 0.5	3151	160729
Cr	500.0 ± 2.5	3112a	030730				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

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Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **February 2018**

Certificate Issue Date: February 16, 2018

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

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b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

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Reagent

MTTRCAL2_00021

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Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Rec'd 10-10-18 KL

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Name:	ICP Analytical Mixture 15
Part Number:	**ICP-AM-15**
Lot Number:	**1812740**
Matrix:	5% HNO_3
Purity:	99.98% - 99.999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Ca	10000 ± 60	3109a	130213	K	10000 ± 100	3141a	140813
Mg	10000 ± 60	3131a	140110	Na	10000 ± 60	3152a	120715

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Density: 1.126 g/mL ± 0.002 g/mL @ 20.0°C ± 0.3 °C

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **October 2018**

Certificate Issue Date: May 9, 2018

Moven Mututuvari

Moven Mututuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

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The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**

The calibrations of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**

The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**

The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

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Reagent

MTTRCRI6010C_00020

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 USA
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CERTIFICATE OF ANALYSIS

tel: 800.669.6799 • 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

Rec'd 9-3-19 ku

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CRIC-REV3
Lot Number:	N2-MEB670185
Matrix:	5% (v/v) HNO_3 tr. HF
Value / Analyte(s):	100 000 µg/L ea: Calcium, Potassium, Magnesium, Sodium, 10 000 µg/L ea: Silicon, 4 000 µg/L ea: Iron, Barium, Aluminum, 2 000 µg/L ea: Boron, Tin, 1 000 µg/L ea: Strontium, Titanium, Vanadium, Zinc, Lithium, 800 µg/L ea: Molybdenum, Nickel, 500 µg/L ea: Copper, 400 µg/L ea: Antimony, Selenium, Thallium, 300 µg/L ea: Manganese, Arsenic, 200 µg/L ea: Silver, Cobalt, Chromium, Lead, 100 µg/L ea: Beryllium, Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	4 002 ± 20 µg/L	Antimony, Sb	400.2 ± 2.7 µg/L
Arsenic, As	300.0 ± 2.3 µg/L	Barium, Ba	4 001 ± 20 µg/L
Beryllium, Be	100.0 ± 0.6 µg/L	Boron, B	2 000 ± 19 µg/L
Cadmium, Cd	100.0 ± 0.7 µg/L	Calcium, Ca	100 000.00 ± 500.00 µg/L
Chromium, Cr	200.0 ± 1.2 µg/L	Cobalt, Co	200.0 ± 1.4 µg/L
Copper, Cu	500.2 ± 2.2 µg/L	Iron, Fe	4 000 ± 20 µg/L
Lead, Pb	200.0 ± 1.4 µg/L	Lithium, Li	1 000 ± 6 µg/L
Magnesium, Mg	100 000.00 ± 500.00 µg/L	Manganese, Mn	300.3 ± 1.4 µg/L
Molybdenum, Mo	800 ± 5 µg/L	Nickel, Ni	801 ± 4 µg/L
Potassium, K	100 000.00 ± 500.00 µg/L	Selenium, Se	400.2 ± 3.0 µg/L
Silicon, Si	10 010.0 ± 70.0 µg/L	Silver, Ag	200.0 ± 1.7 µg/L
Sodium, Na	100 000.00 ± 500.00 µg/L	Strontium, Sr	1 001 ± 6 µg/L
Thallium, Tl	400.0 ± 3.2 µg/L	Tin, Sn	2 001 ± 11 µg/L
Titanium, Ti	1 000 ± 7 µg/L	Vanadium, V	1 000 ± 6 µg/L
Zinc, Zn	1 001 ± 6 µg/L		

Density: 1.027 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	000505
Li	Calculated		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Sb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Si	ICP Assay	3150	130912
Si	Calculated		See Sec. 4.2
Sn	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2
Tl	Calculated		See Sec. 4.2

V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030; Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 31, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 31, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity KD

- Sealed TCT Bag Open Date: 11-12-18

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MTTRICSA_00016

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

Rec'd 2-26-18 KW

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-ICS-A
Lot Number:	K2-MEB643109
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Aluminum, Calcium, Magnesium, 2 000 µg/mL ea: Iron

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 000 ± 22 µg/mL	Calcium, Ca	5 000 ± 20 µg/mL
Iron, Fe	2 000 ± 8 µg/mL	Magnesium, Mg	5 000 ± 20 µg/mL

Certified Density: 1.085 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000400	M	Eu	<	0.000100	O	Na		0.027559	M	Se	<	0.002091	M	Zn		0.008219
s	Al	<		s	Fe	<		M	Nb	<	0.000100	O	Si		0.217000	M	Zr	<	0.001002
M	As	<	0.005613	M	Ga	<	0.000100	M	Nd	<	0.000601	M	Sm	<	0.000100				
M	Au	<	0.000199	M	Gd	<	0.000100	M	Ni	<	0.005613	M	Sn	<	0.000200				
M	B	<	0.008420	M	Ge	<	0.000400	M	Os	<	0.000099	M	Sr		0.043302				
M	Ba	<	0.001603	M	Hf	<	0.000100	O	P	<	0.108500	M	Ta	<	0.000100				
O	Be	<	0.000217	M	Hg	<	0.000597	M	Pb		0.003408	M	Tb	<	0.000100				
M	Bi	<	0.000400	M	Ho	<	0.000100	M	Pd	<	0.000100	M	Te	<	0.003107				
s	Ca	<		M	In	<	0.000400	M	Pr	<	0.000200	M	Th	<	0.000100				
M	Cd	<	0.000100	M	Ir	<	0.000099	M	Pt	<	0.000100	M	Ti	<	0.000801				
M	Ce	<	0.002004	O	K		0.011718	M	Rb	<	0.000100	M	Tl	<	0.000100				
M	Co	<	0.003207	M	La	<	0.000801	M	Re	<	0.000100	M	Tm	<	0.000100				
M	Cr		0.024658	O	Li		0.005425	M	Rh	<	0.000100	M	U	<	0.000100				
M	Cs	<	0.000601	M	Lu	<	0.000100	M	Ru	<	0.000099	M	V	<	0.000400				
M	Cu	<	0.004610	s	Mg	<		O	S		0.422173	M	W	<	0.000100				
M	Dy	<	0.000100	M	Mn		0.002606	M	Sb	<	0.000200	M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000400	M	Sc	<	0.001403	M	Yb	<	0.000100				

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

11.1 Certification Issue Date

July 01, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 01, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: 3-14-18 KW

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

11.4 Revision Status

- Revision 1 - Wednesday, Apr 26, 2017. Added TMI data

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Joseph Burns
Technical Support Technician



Certificate Approved By:

Michael Booth
Supervisor, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Reagent

MTTRICV5_00015

CPI INTERNATIONAL

CERTIFICATE OF ANALYSIS

Rec'd 3-7-18 ku

Multi-Element Aqueous CRM

Product #: Z-G34-4400-080925JC05

Custom ICV 5 ISO Guide 34 Standard

Lot #: 10075909-1

Matrix: 2% HNO_3/tr. HF

Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty	Element	Certified Concentration & Uncertainty
As	250.0 ± 1.3 µg/mL	Pb	250.1 ± 1.3 µg/mL	Se	250.2 ± 1.3 µg/mL
Cd	250.5 ± 1.3 µg/mL	Sb	250.2 ± 1.3 µg/mL	Tl	500.4 ± 2.5 µg/mL

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO Guide 34**, and **ISO/IEC 17025**. This CRM was prepared to the certified concentrations shown above by gravimetric methods, using single-element concentrates that were certified using the "High Performance ICP-OES" protocol developed by NIST and are directly traceable to **NIST SRMs (see reverse side)**. The solution was stabilized using high purity nitric acid (HNO_3), trace hydrofluoric acid (HF) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentrations were determined based upon gravimetric procedures. Secondary verification of the certified concentrations was performed using ICP-OES that was calibrated and/or referenced against **NIST SRMs (see reverse side)**. The uncertainty associated with each certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

March 3, 2018

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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Europe
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1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
    - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

This CRM is traceable to the following NIST SRMs:

Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM		Analyte	Aq. SRM	MO SRM
Ag	3151	1077a		Hf	3122	—		S	3154	2770
Al	3101a	1075a		Hg	3133	3133		Sb	3102a	3102a
As	3103a	3103a		Ho	3123a	—		Sc	3148a	3148a
Au	3121	—		In	3124a	3124a		Se	3149	3149
B	3107	3107		K	3141a	3141a		Si	3150	1066a
Ba	3104a	1051b		La	3127a	3127a		Sm	3147a	—
Be	3105a	3105a		Li	3129a	3129a		Sn	3161a	1057b
Bi	3106	3106		Lu	3130a	—		SO_4^{-2}	3181	—
Br^-	3184	—		Mg	3131a	3131a		Sr	3153a	3153a
Ca	3109a	3109a		Mn	3132	3132		Ta	3155	—
Cd	3108	1053a		Mo	3134	3134		Tb	3157a	—
Ce	3110	3110		Na	3152a	3152a		Te	3156	—
Cl^-	3182	1818a		Nb	3137	—		Th	3159	—
Co	3113	3113		Nd	3135a	—		Ti	3162a	3162a
Cr	3112a	1078b		Ni	3136	1065b		Tl	3158	3158
Cs	3111a	—		NO_3^-	3185	—		Tm	3160a	—
Cu	3114	1080a		P	3139a	3139a		U	3164	—
Dy	3115a	—		Pb	3128	3128		V	3165	1052b
Er	3116a	—		Pd	3138	—		W	3163	3163
Eu	3117a	—		PO_4^{-3}	3186	—		Y	3167a	3167a
F^-	3183	—		Pr	3142a	—		Yb	3166a	—
Fe	3126a	1079b		Pt	3140	3140		Zn	3168a	3168a
Ga	3119a	—		Rb	3145a	—		Zr	3169	3169
Gd	3118a	—		Re	3143	—				
Ge	3120a	—		Rh	3144	3144				

Reagent

MTTRICVAG_00010

CERTIFICATE OF ANALYSIS

Rec'd 12-26-17 KW

Single-Element Aqueous CRM

Product #: Z-G34-060047-03-01

ISO Guide 34 - Silver (Ag) – 100 µg/mL

Lot #: 10072207-5

Matrix: 2% HNO_3

Element	Certified Concentration & Uncertainty
Ag	**100.0 ± 0.5 µg/mL**

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS), flame or furnace atomic absorption spectroscopy (AA or GFAA), and other techniques for elemental analysis.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO Guide 34**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 100.0 µg/mL by gravimetric methods using a single-element concentrate dissolved in high purity nitric acid (HNO_3) and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration and uncertainty were determined using the "High Performance ICP-OES" protocol developed by NIST, and both the certified concentration and uncertainty values are traceable to **NIST SRM 3151**. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the CRM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original CRM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

December 20, 2017

Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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F: 707.545.7901

Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
    - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

SG 1221 ICV_00015

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32007.SEC **Lot No.:** A0128546

Description : Aroclor® 1221 Standard

Aroclor® 1221 Standard 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2023 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1221	1,000.0 µg/mL	+/- 10.0737	µg/mL	Gravimetric
	CAS # 11104-28-2.SEC (Lot W-126-07)		+/- 32.7345	µg/mL	Unstressed
	Purity ----%		+/- 42.2047	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Rec'd 7/26/18
(K)

3718495
ID: SG 1221 ICV_00015
Exp: 09/30/23 Prpd: KMG
Aroclor 1221 ICV @1000ppm

Reagent

SG 1232 ICV_00010

Certificate of Analysis

Aroclor 1232 Solution

Product Number: EPA-1302 **Page:** 1 of 1

Lot Number: CG-4471 **Lot Issue Date:** 07-Jan-2011 **Expiration Date:** 31-Jan-2019

This Certified Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1232	011141-16-5	NT01019	1003 ± 5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (18-25° C)

Received
12/6/16
CGH

2830202
ID: SG 1232 ICV_00010
Exp: 01/31/19 Prpd: LSH
Aroclor 1232 ICV @ 1000pp

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

ACCREDITED
ISO 17025:2005 Accredited A2LA Cert. No. 0851-01

ISO 9001:2008 Registered TUV USA, Inc. Cert. No. 09-1009

250 Smith Street, North Kingstown, RI 02852 USA
401-294-9400 Fax: 295-2330
www.ultrasci.com

William J Leahy
Quality Assurance Manager

Reagent

SG 1242 ICV_00010

Certificate of Analysis

Aroclor 1242 Solution

Product Number EPA-1312 **Page:** 1 of 1

Lot Number: CR-2838 **Lot Issue Date:** 22-Jun-2017 **Expiration Date:** 31-Jul-2025

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1242	053469-21-9	NT01020	1001 ± 5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

3456287
ID: SG 1242 ICV_00010
Exp: 07/31/22 Prpd: LSH
Aroclor 1242 ICV @ 1000pp

RECEIVED 2/8/18 LSH

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

ISO 9001
Registered
TUV USA, Inc.

John Russo
President

Monica Bourgeois
Director of QA/RA

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Reagent

SG 1248 ICV_00011

Received 1/31/2018
SEM

3447163
ID: SG 1248 ICV_00011
Exp: 04/30/23 Prpd: SEM
Aroclor 1248 ICV @ 1000pp

RESTEK

Safety Data Sheet

Revision Date: 12/29/16

www.restek.com

1. IDENTIFICATION

Catalog Number / Product Name:	**32010.SEC / Aroclor® 1248 Standard**
Company:	Restek Corporation
Address:	110 Benner Circle Bellefonte, Pa. 16823
Phone#:	814-353-1300
Fax#:	814-353-1309
Emergency#:	800-424-9300 (CHEMTREC) 703-527-3887 (Outside the US)
Email:	www.restek.com
Revision Number:	3
Intended use:	For Laboratory use only

2. HAZARD(S)IDENTIFICATION

Emergency Overview:

GHS Hazard Symbols:





GHS Classification:	Aspiration Hazard Category 1 Flammable Liquid Category 2 Skin Corrosion/Irritation Category 2 Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure Category 2 Hazardous to the aquatic environment - Chronic Category 2 Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3
GHS Signal Word:	Danger
GHS Hazard:	Highly flammable liquid and vapour. May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.
GHS Precautions:	
Safety Precautions:	Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilation and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands and skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
First Aid Measures:	IF SWALLOWED: Immediately call a POISON CENTER/doctor/.... IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. Get medical advice/attention if you feel unwell. Specific treatment see section 4.

Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use extinguishing media in section 5 for extinction.
Collect spillage.

Storage: Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal: Dispose of contents/container according to section 13 of the SDS.

Single Exposure Target Organs: No data available.

Repeated Exposure Target Organs: No data available.

3. COMPOSITION / INFORMATION ON INGREDIENT

Chemical Name	CAS #	EINEC #	% Composition
hexane	110-54-3	203-777-6	99.900000
aroclor® 1248	12672-29-6		0.100000

4. FIRST-AID MEASURES

Inhalation: Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen.

Eyes: Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention.

Skin Contact: Wash with soap and water. Remove contaminated clothing and launder. Get medical attention if irritation develops or persists.

Ingestion: Do not induce vomiting and seek medical attention immediately. Drink two glasses of water or milk to dilute. Provide medical care provider with this SDS.

5. FIRE- FIGHTING MEASURES

Extinguishing Media: Use alcohol resistant foam, carbon dioxide, or dry chemical extinguishing agents. Water spray or fog may also be effective for extinguishing if swept across the base of the fire. Water can also be used to absorb heat and keep exposed material from being damaged by fire.

Fire and/or Explosion Hazards: Vapors may be ignited by heat, sparks, flames or other sources of ignition at or above the low flash point giving rise to a Class B fire. Vapors are heavier than air and may travel to a source of ignition and flash back

Fire Fighting Methods and Protection: Do not enter fire area without proper protection including self-contained toxic breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products. Flammable component(s) of this material may be lighter than water and burn while floating on the surface. Use water spray/fog for cooling.

Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Equipment: Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.

Methods for Clean-up: Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay.

Gather and store in a sealed container pending a waste disposal evaluation.

7. HANDLING AND STORAGE

Handling Technical Measures and Precautions: Harmful or irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. Use spark-proof tools and explosion-proof equipment

Storage Technical Measures and Conditions: Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed. Keep away from sources of ignition

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

United States:

Chemical Name	CAS No.	IDLH	ACGIH STEL	ACGIH TLV-TWA	OSHA Exposure Limit
hexane	110-54-3	1100 ppm IDLH (10% LEL)	1000 ppm	50 ppm TWA	500 ppm TWA; 1800 mg/m3 TWA
aroclor® 1248	12672-29-6	ND		No TLV	No data available.

Personal Protection:

Engineering Measures: Local exhaust ventilation is recommended when generating excessive levels of vapors from handling or thermal processing.

Respiratory Protection: Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms.

Eye Protection: Wear chemically resistant safety glasses with side shields when handling this product. Do not wear contact lenses.

Skin Protection: Wear protective gloves. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance, color:	No data available.
Odor:	Mild
Physical State:	No data available.
pH:	No data available.
Vapor Pressure:	No data available.
Vapor Density:	2.97 (air = 1)
Boiling Point:	No data available.
Melting Point:	-95 °C Melting Point
Flash Point:	-8
Flammability:	Highly Flammable
Upper Flammable/Explosive Limit, % in air:	No data available.
Lower Flammable/Explosive Limit, % in air:	No data available.
Autoignition Temperature:	No data available. deg C
Decomposition Temperature:	No data available.
Specific Gravity:	0.672 g/cm3 at 15 °C
Evaporation Rate:	No data available.
Odor Threshold:	No data available.
Solubility:	Negligible; 0-1%
Partition Coefficient: n-octanol in water:	No data available.
VOC % by weight:	0
Molecular Weight:	No data available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions.
Conditions to Avoid:	No data available.
Materials to Avoid / Chemical Incompatiability:	Strong oxidizing agents
Hazardous Decomposition Products:	No data available.

11. TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation Contact Absorption Ingestion

Target Organs Potentially Affected By Exposure: Eyes, Central nervous system stimulation, Respiratory Tract, Skin, Peripheral Nervous System

Chemical Interactions That Change Toxicity: None Known

Immediate (Acute) Health Effects by Route of Exposure:

Inhalation Irritation: Can cause severe respiratory irritation, dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.

Skin Contact: Can cause moderate skin irritation, defatting, and dermatitis. Not likely to cause permanent damage.

Skin Absorption: May cause irritation and minor systemic damage.Harmful if absorbed through the skin.

Eye Contact: Can cause moderate irritation, tearing and reddening, but not likely to permanently injure eye tissue.

Ingestion Irritation: Irritating to mouth, throat, and stomach. Can cause abdominal discomfort, nausea, vomiting and diarrhea.Harmful if swallowed.

Ingestion Toxicity: Toxic if swallowed. May cause target organ failure and/or death.

Long-Term (Chronic) Health Effects:

Carcinogenicity: No data.

Reproductive and Developmental Toxicity: No data available to indicate product or any components present at greater than 0.1% may cause birth defects.

Inhalation: Upon prolonged and/or repeated exposure, can cause severe respiratory irritation, dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.

Skin Contact: Upon prolonged or repeated contact, can cause moderate skin irritation, defatting, and dermatitis. Not likely to cause permanent damage.

Skin Absorption: Upon prolonged or repeated exposure, harmful if absorbed through the skin. May cause minor systemic damage.

Component Toxicological Data:

NIOSH:

Chemical Name	CAS No.	LD50/LC50
n-Hexane	110-54-3	Oral LD50 Rat 25 g/kg

Component Carcinogenic Data:

OSHA:

Chemical Name	CAS No.
No data available.	

ACGIH:

Chemical Name	CAS No.
No data available.	

NIOSH:

Chemical Name	CAS No.
No data available.	

NTP:

Chemical Name	CAS No.
No data available.	

IARC:

Chemical Name	CAS No.	Group No.
No data.		Group 1
No data.		Group 2A
No data.		Group 2B

12. ECOLOGICAL INFORMATION

Overview: Moderate ecological hazard. This product may be dangerous to plants and/or wildlife.

Mobility: No data

Persistence: No data

Bioaccumulation: No data

Degradability: No data

Ecological Toxicity Data: No data available.

13. DISPOSAL CONSIDERATIONS

Waste Description of Spent Product: Spent or discarded material is a hazardous waste.
Disposal Methods: Dispose of by incineration following Federal, State, Local, or Provincial regulations.
Waste Disposal of Packaging: Comply with all Local, State, Federal, and Provincial Environmental Regulations.

14. TRANSPORTATION INFORMATION

United States:
DOT Proper Shipping Name: Hexanes
UN Number: UN1208
Hazard Class: 3
Packing Group: II

International:
IATA Proper Shipping Name: Hexanes
UN Number: UN1208
Hazard Class: 3
Packing Group: II

Marine Pollutant: Yes

Chemical Name	CAS#	Marine Pollutant	Severe Marine Pollutant
hexane	110-54-3	Y	N

15. REGULATORY INFORMATION

United States:

Chemical Name	CAS#	CERCLA	SARA 313	SARA EHS 313	TSCA
hexane	110-54-3	X	X	-	X
aroclor® 1248	12672-29-6	X	-	-	-

The following chemicals are listed on CA Prop 65:

Chemical Name	CAS #	Regulation

State Right To Know Listing:

Chemical Name	CAS#	New Jersey	Massachusetts	Pennsylvania	California
hexane	110-54-3	X	X	X	-
aroclor® 1248	12672-29-6	-	X	X	X

16. OTHER INFORMATION

Prior Version Date: 11/04/14
Other Information: Any changes to the SDS compared to previous versions are marked by a vertical line in front of the concerned paragraph.
References: No data available.
Disclaimer: Restek Corporation provides the descriptions, data and information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. It is provided for your guidance only. Because many factors may affect processing or application/use, Restek Corporation recommends you perform an assessment to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either expressed or implied, including fitness for a particular purpose, are made regarding prodcuts described, data or information set forth. In no case shall the descriptions, information, or data provided be considered a part of our terms and conditions of sale. Further, the descriptions, data and information furnished hereunder are given gratis. No obligation or liability for the description, data and information given are assumed. All such being given and accepted at your risk.

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32010.SEC **Lot No.:** A0124143

Description : Aroclor® 1248 Standard

Aroclor® 1248 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2023 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1248	1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 12672-29-6.SEC (Lot 106-248)		+/- 31.9609	µg/mL	Unstressed
	Purity ----%		+/- 41.7443	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

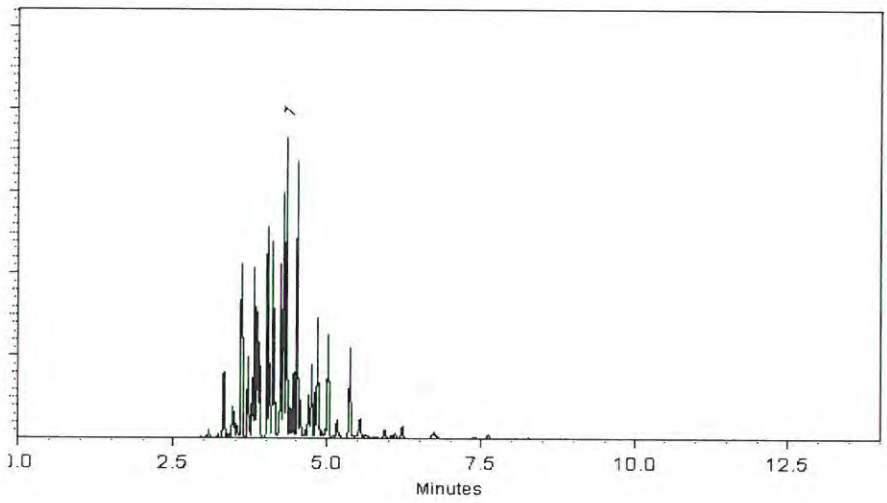
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician **Date Mixed:** 12-Jan-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 16-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SG 1262 ICV_00011

Certificate of Analysis

Aroclor 1262 Solution

Product Number EPA-1372 **Page:** 1 of 1

Lot Number: CL-0153A **Lot Issue Date:** 17-Apr-2017 **Expiration Date:** 31-May-2020

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1262	037324-23-5	NT01025	1001 ± 5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

Received 5/19/17 LSH

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

ISO 9001 Registered TUV USA, Inc.

John Russo
President

Monica Bourgeois
Director of QA/RA

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Reagent

SG 1268 ICV_00012

Certificate of Analysis

Aroclor 1268 Solution

Product Number: EPA-1382 **Page:** 1 of 1

Lot Number: CP-6205 **Lot Issue Date:** 28-Dec-2016 **Expiration Date:** 31-Jan-2021

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1268	011100-14-4	NT01026	1003 ± 5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

3250543
ID: SG 1268 ICV_00012
Exp: 01/31/21 Prpd: LSH
Aroclor 1268 ICV @ 1000pp

Recieved 9/21/17

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

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Reagent

SG 1660 ICV_00017

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Certificate of Analysis

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Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039.SEC **Lot No.:** A0133256

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016		1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 12674-11-2.SEC	(Lot NTO1016)		+/- 31.9609	µg/mL	Unstressed
	Purity ----%			+/- 41.7443	µg/mL	Stressed
2	Aroclor 1260		1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 11096-82-5.SEC	(Lot 021-020-1A)		+/- 31.8340	µg/mL	Unstressed
	Purity ----%			+/- 41.5787	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Received 6/14/17

Reagent

SG 42/68 STK_00005

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569747 **Lot No.:** A0133093

Description : PCB-1242/1268 Standard

PCB-1242/1268 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1242	1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 53469-21-9 (Lot 01141-A)		+/- 31.9609	µg/mL	Unstressed
	Purity ----%		+/- 41.7443	µg/mL	Stressed
2	Aroclor 1268	1,000.0 µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 11100-14-4 (Lot 2743900)		+/- 31.7072	µg/mL	Unstressed
	Purity ----%		+/- 41.4130	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

3745070
ID: SG 42/68 STK_00005
Exp. 03/31/24 Prpd: LSH
Aroclors 1242/1268 @ 1000

Received 8/10/18

Reagent

SG1016/1260MX_00013

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039 **Lot No.:** A0134815

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016 **CAS #** 12674-11-2 **Purity** ----%	(Lot 164887)	1,001.3 µg/mL	+/- 5.8348 µg/mL +/- 31.7260 µg/mL +/- 41.4488 µg/mL		Gravimetric Unstressed Stressed
2	Aroclor 1260 **CAS #** 11096-82-5 **Purity** ----%	(Lot 155463)	1,000.0 µg/mL	+/- 5.8275 µg/mL +/- 31.6864 µg/mL +/- 41.3971 µg/mL		Gravimetric Unstressed Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

3754227
ID: SG1016/1260MX_00013
Exp: 05/31/24 Prpd: LSH
Aroclor1016/1260 Stock Mi

Received 8/10/18

Reagent

SG1221/1254_00007

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569745 **Lot No.:** A0131802

Description : PCB-1221/1254 Standard

PCB-1221/1254 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1221		1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 11104-28-2	(Lot 2781200)		+/- 31.8975	µg/mL	Unstressed
	Purity ----%			+/- 41.6615	µg/mL	Stressed
2	Aroclor 1254		1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 11097-69-1	(Lot 124-191-B)		+/- 31.7706	µg/mL	Unstressed
	Purity ----%			+/- 41.4958	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

3745059
ID: SG1221/1254_00007
Exp. 01/31/24 Prpd: LSH
1221/1254 stock @ 1000ug/

RECIEVED 8/10/18
LSH

Reagent

SG1221ICV@1.0_00025

Report Date: 19-Oct-2018 10:24:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Canton
ICV, ICal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101844.D
Lims ID: ICV 1221
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 09:26:48 ALS Bottle#: 44 Worklist Smp#: 44
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-044
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082 IS
Last Update: 19-Oct-2018 07:53:25 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0322

Start Cal Date: 18-Oct-2018 15:16:26
End Cal Date: 19-Oct-2018 01:11:38

Detector 1: GC ECD1A

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 PCB-1221	0.5000	0.4615	8.0	20.0	92.3	
3 PCB-1221-1	0.5000	0.4825	-3.5	20.0	96.5	
3 PCB-1221-2	0.5000	0.4592	-8.2	20.0	91.8	
3 PCB-1221-3	0.5000	0.4428	-11.4	20.0	88.6	

Detector 2: GC ecd2b

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
3 PCB-1221	0.5000	0.4427	11.0	20.0	88.5	
3 PCB-1221-1	0.5000	0.4596	-8.1	20.0	91.9	
3 PCB-1221-2	0.5000	0.4382	-12.4	20.0	87.6	
3 PCB-1221-3	0.5000	0.4303	-13.9	20.0	86.1	

Reagent

SG1232ICV@1.0_00023

Preliminary Report

TestAmerica Canton
ICV, ICal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP11\20180702-77561.b\P11062942.D
Lims ID: icv 1232
Client ID:
Sample Type: ICV
Inject. Date: 03-Jul-2018 07:15:48 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0077561-042
Operator ID: Instrument ID: A2HP11
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP11\20180702-77561.b\PCB11 IS.m
Limit Group: GC 608 PCB IS
Last Update: 03-Jul-2018 07:34:29 Calib Date: 03-Jul-2018 02:04:18
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP11\20180702-77561.b\P11062933.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK019

Start Cal Date: 02-Jul-2018 14:47:38
End Cal Date: 03-Jul-2018 02:04:18

Detector 1: GC ECD1A

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
4 PCB-1232	0.5000	0.5280	6.0	20.0	105.6	
4 PCB-1232-1	0.5000	0.5628	12.6	20.0	112.6	
4 PCB-1232-2	0.5000	0.5836	16.7	20.0	116.7	
4 PCB-1232-3	0.5000	0.4992	-0.2	20.0	99.8	
4 PCB-1232-4	0.5000	0.5237	4.7	20.0	104.7	
4 PCB-1232-5	0.5000	0.4707	-5.9	20.0	94.1	

Detector 2: GC ecd2b

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
4 PCB-1232	0.5000	0.5783	16.0	20.0	115.7	
4 PCB-1232-1	0.5000	0.5846	16.9	20.0	116.9	
4 PCB-1232-2	0.5000	0.6117	* 22.3	20.0	122.3	
4 PCB-1232-3	0.5000	0.5506	10.1	20.0	110.1	
4 PCB-1232-4	0.5000	0.5520	10.4	20.0	110.4	
4 PCB-1232-5	0.5000	0.5926	18.5	20.0	118.5	

Reagent

SG1242ICV@1.0_00024

Preliminary Report

TestAmerica Canton
ICV, ICal Verification Report

Data File:	\\ChromNA\Canton\ChromData\A2HP11\20180702-77561.b\P11062946.D				
Lims ID:	icv 1242				
Client ID:					
Sample Type:	ICV				
Inject. Date:	03-Jul-2018 08:50:03	ALS Bottle#:	46	Worklist Smp#:	45
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:					
Operator ID:		Instrument ID:	A2HP11		
Sublist:					
Method:	\\ChromNA\Canton\ChromData\A2HP11\20180702-77561.b\PCB11 IS.m				
Limit Group:	GC 8082 IS				
Last Update:	03-Jul-2018 09:34:56	Calib Date:	03-Jul-2018 02:04:18		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Canton\ChromData\A2HP11\20180702-77561.b\P11062933.D				
Column 1 :			Det: GC ECD1A		
Column 2 :			Det: GC ecd2b		
Process Host:	XAWRK019				
Start Cal Date:	02-Jul-2018 14:47:38				
End Cal Date:	03-Jul-2018 02:04:18				

Detector 1: GC ECD1A

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
5 PCB-1242	0.5000	0.5437	9.0	20.0	108.7	
5 PCB-1242-1	0.5000	0.5589	11.8	20.0	111.8	
5 PCB-1242-2	0.5000	0.5287	5.7	20.0	105.7	
5 PCB-1242-3	0.5000	0.5198	4.0	20.0	104.0	
5 PCB-1242-4	0.5000	0.5469	9.4	20.0	109.4	
5 PCB-1242-5	0.5000	0.5645	12.9	20.0	112.9	

Detector 2: GC ecd2b

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
5 PCB-1242	0.5000	0.5534	11.0	20.0	110.7	
5 PCB-1242-1	0.5000	0.5578	11.6	20.0	111.6	
5 PCB-1242-2	0.5000	0.5504	10.1	20.0	110.1	
5 PCB-1242-3	0.5000	0.5629	12.6	20.0	112.6	
5 PCB-1242-4	0.5000	0.5596	11.9	20.0	111.9	
5 PCB-1242-5	0.5000	0.5365	7.3	20.0	107.3	

Reagent

SG1248@0.5ppm_00036

Preliminary Report

TestAmerica Canton
CCV, Cal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP10\20180813-78835.b\P10081309.D
Lims ID: 1248
Client ID:
Sample Type: CCV
Inject. Date: 13-Aug-2018 08:15:53 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0078835-009
Operator ID: Instrument ID: A2HP10
Sublist: chrom-PCB10 IS*sub3

Method: \\ChromNA\Canton\ChromData\A2HP10\20180813-78835.b\PCB10 IS.m
Limit Group: GC 8082 IS
Last Update: 13-Aug-2018 10:19:48 Calib Date: 01-Jun-2018 03:19:17
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP10\20180531-76471.b\P10053133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK019

Start Cal Date: 31-May-2018 18:06:49
End Cal Date: 01-Jun-2018 03:19:17

Detector 1: GC ECD1A

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
7 PCB-1248	0.5000		0.4974		-0.5	15	99
7 PCB-1248-1	0.013234	0.001		0.014064	6.3	15	106
7 PCB-1248-2	0.036714	0.003		0.034832	-5.1	15	95
7 PCB-1248-3	0.038326	0.001		0.037724	-1.6	15	98
7 PCB-1248-4	0.029296	0.0		0.028137	-4.0	15	96
7 PCB-1248-5	0.019151	0.0		0.019483	1.7	15	102

Start Cal Date: 31-May-2018 18:06:49
End Cal Date: 01-Jun-2018 03:19:17

Detector 2: GC ecd2b

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
7 PCB-1248	0.5000		0.4451		-11.0	15	89
7 PCB-1248-1	0.016716	0.001		0.014483	-13.4	15	87
7 PCB-1248-2	0.040804	0.002		0.036573	-10.4	15	90
7 PCB-1248-3	0.035307	0.001		0.032352	-8.4	15	92
7 PCB-1248-4	0.039610	0.0		0.037302	-5.8	15	94
7 PCB-1248-5	0.021551	0.0		0.017887	*-17.0	15	83

Reagent

SG1248@0.5ppm_00037

Report Date: 18-Oct-2018 07:54:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Canton

CCV, Cal Verification Report

Ccal Sample: \\ChromNA\Canton\ChromData\A2HP13\20181018-80952.b\P13101809.D

Lims ID: NEW 1248 0.5 Inj. Date: 18-Oct-2018 07:36:28

Worklist ID: 240-0080952-009 Sublist: chrom-PCB13 IS*sub3

Method: PCB13 IS Instrument: A2HP13

Detector 1: GC ECD1A

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D
7 PCB-1248-1	0.01435		-9.5	15.0	0.01435		-9.5		0.01435		-9.5		0.01435		-9.5	
7 PCB-1248-2	0.02309		-9.8	15.0	0.02309		-9.8		0.02309		-9.8		0.02309		-9.8	
7 PCB-1248-3	0.03196		-11.5	15.0	0.03196		-11.5		0.03196		-11.5		0.03196		-11.5	
7 PCB-1248-4	0.02765		-10.6	15.0	0.02765		-10.6		0.02765		-10.6		0.02765		-10.6	
7 PCB-1248-5	0.01808		-6.8	15.0	0.01808		-6.8		0.01808		-6.8		0.01808		-6.8	

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
Number of Failures	0	0	0	0
Number of Global Failures	0	0	0	0
Grand Mean/Limit	9.6	9.6	9.6	9.6

Detector 2: GC ecd2b

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D
7 PCB-1248-1	0.01465		-9.6	15.0	0.01465		-0.09		0.01465		-9.6		0.01465		-9.6	
7 PCB-1248-2	0.02071		-11.6	15.0	0.02071		-2.9		0.02071		-11.6		0.02071		-11.6	
7 PCB-1248-3	0.03239		-0.8	15.0	0.03239		-0.8		0.03239		-0.8		0.03239		-0.8	
7 PCB-1248-4	0.03588		-4.5	15.0	0.03588		-4.5		0.03588		-4.5		0.03588		-4.5	
7 PCB-1248-5	0.02019		0.9	15.0	0.02019		0.9		0.02019		0.9		0.02019		0.9	

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
Number of Failures	0	0	0	0
Number of Global Failures	0	0	0	0
Grand Mean/Limit	5.5	1.8	5.5	5.5

Reagent

SG1248_00012

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32010 **Lot No.:** A0134182

Description : Aroclor® 1248 Standard

Aroclor® 1248 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1248	1,001.5 µg/mL	+/- 5.8774	µg/mL	Gravimetric
	CAS # 12672-29-6 (Lot W-108-07)		+/- 31.7415	µg/mL	Unstressed
	Purity ----%		+/- 41.4650	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

RECEIVED 8/10/18 CR

3742806
ID: SG1248_00012
Exp: 04/30/24 Prpd: LSH
Restek 1248 stock 1000 ug

Reagent

SG1248ICV@1.0_00027

Report Date: 17-Sep-2018 08:37:24 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Canton
ICV, ICal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP10\20180914-79876.b\P10091644.D
Lims ID: icv 1248
Client ID:
Sample Type: ICV
Inject. Date: 17-Sep-2018 08:08:11 ALS Bottle#: 44 Worklist Smp#: 44
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A2HP10
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP10\20180914-79876.b\PCB10 IS.m
Limit Group: GC 608 PCB IS
Last Update: 17-Sep-2018 08:35:40 Calib Date: 17-Sep-2018 00:14:10
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP10\20180914-79876.b\P10091633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK011

Start Cal Date: 16-Sep-2018 15:03:34
End Cal Date: 17-Sep-2018 00:14:10

Detector 1: GC ECD1A

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
7 PCB-1248	0.5000	0.4429	11.0	20.0	88.6	
7 PCB-1248-1	0.5000	0.4597	-8.1	20.0	91.9	
7 PCB-1248-2	0.5000	0.3687	*-26.3	20.0	73.7	
7 PCB-1248-3	0.5000	0.4816	-3.7	20.0	96.3	
7 PCB-1248-4	0.5000	0.4710	-5.8	20.0	94.2	
7 PCB-1248-5	0.5000	0.4338	-13.2	20.0	86.8	

Detector 2: GC ecd2b

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
7 PCB-1248	0.5000	0.4751	5.0	20.0	95.0	
7 PCB-1248-1	0.5000	0.4821	-3.6	20.0	96.4	
7 PCB-1248-2	0.5000	0.5347	6.9	20.0	106.9	
7 PCB-1248-3	0.5000	0.4430	-11.4	20.0	88.6	
7 PCB-1248-4	0.5000	0.5233	4.7	20.0	104.7	
7 PCB-1248-5	0.5000	0.3926	*-21.5	20.0	78.5	

Reagent

SG1254ICV@1.0_00024

Report Date: 19-Oct-2018 09:05:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Canton
ICV, ICal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101842.D
Lims ID: icv 1254
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 08:35:33 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-042
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082 IS
Last Update: 19-Oct-2018 09:05:23 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0322

Start Cal Date: 18-Oct-2018 15:16:26
End Cal Date: 19-Oct-2018 01:11:38

Detector 1: GC ECD1A

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
8 PCB-1254	0.5000	0.4823	4.0	20.0	96.5	
8 PCB-1254-1	0.5000	0.4621	-7.6	20.0	92.4	
8 PCB-1254-2	0.5000	0.4666	-6.7	20.0	93.3	
8 PCB-1254-3	0.5000	0.4806	-3.9	20.0	96.1	
8 PCB-1254-4	0.5000	0.4974	-0.5	20.0	99.5	
8 PCB-1254-5	0.5000	0.5046	0.9	20.0	100.9	

Detector 2: GC ecd2b

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
8 PCB-1254	0.5000	0.4388	12.0	20.0	87.8	
8 PCB-1254-1	0.5000	0.4234	-15.3	20.0	84.7	
8 PCB-1254-2	0.5000	0.4423	-11.5	20.0	88.5	
8 PCB-1254-3	0.5000	0.4264	-14.7	20.0	85.3	
8 PCB-1254-4	0.5000	0.4329	-13.4	20.0	86.6	
8 PCB-1254-5	0.5000	0.4689	-6.2	20.0	93.8	

Reagent

SG1268ICV_00036

Report Date: 19-Sep-2018 08:10:00 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Canton
ICV, ICal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP11\20180918-79965.b\P11091844.D
Lims ID: icv 1268
Client ID:
Sample Type: ICV
Inject. Date: 19-Sep-2018 07:25:40 ALS Bottle#: 44 Worklist Smp#: 44
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info:
Operator ID: Instrument ID: A2HP11
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP11\20180918-79965.b\PCB11 IS.m
Limit Group: GC 8082A IS
Last Update: 19-Sep-2018 08:04:47 Calib Date: 19-Sep-2018 03:13:18
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP11\20180918-79965.b\P11091833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK003

Start Cal Date: 18-Sep-2018 16:32:33
End Cal Date: 19-Sep-2018 03:13:18

Detector 1: GC ECD1A

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
11 PCB-1268	0.5000	0.5090	2.0	20.0	101.8	
11 PCB-1268-1	0.5000	0.5167	3.3	20.0	103.3	
11 PCB-1268-2	0.5000	0.6034	* 20.7	20.0	120.7	
11 PCB-1268-3	0.5000	0.4655	-6.9	20.0	93.1	
11 PCB-1268-4	0.5000	0.5165	3.3	20.0	103.3	
11 PCB-1268-5	0.5000	0.4430	-11.4	20.0	88.6	

Detector 2: GC ecd2b

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
11 PCB-1268	0.5000	0.5017	0.0	20.0	100.3	
11 PCB-1268-1	0.5000	0.5188	3.8	20.0	103.8	
11 PCB-1268-2	0.5000	0.5833	16.7	20.0	116.7	
11 PCB-1268-3	0.5000	0.4578	-8.4	20.0	91.6	
11 PCB-1268-4	0.5000	0.5166	3.3	20.0	103.3	
11 PCB-1268-5	0.5000	0.4321	-13.6	20.0	86.4	

Reagent

SG1660@.05PPM_00024

Report Date: 22-Aug-2018 12:17:03 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Canton

CCV, Cal Verification Report

Ccal Sample: \\ChromNA\Canton\ChromData\A2HP4\20180822-79137.b\P4082214.D

Lims ID: ccv 1660 0.5 Inj. Date: 22-Aug-2018 11:58:44

Worklist ID: 240-0079137-014 Sublist: chrom-PCB4 is*sub5

Method: PCB4 is Instrument: A2HP4

Detector 1: GC ECD1A

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Ma %I
2 Tetrachloro-m-xylene	1.22464		-2.2	15.0	1.22464		-2.2		1.22464		-2.2		1.22464		-2.2	
5 PCB-1016-1	0.02431		6.2	15.0	0.02431		6.2		0.02431		6.2		0.02431		6.2	
5 PCB-1016-2	0.03979		2.0	15.0	0.03979		2.0		0.03979		2.0		0.03979		2.0	
5 PCB-1016-3	0.08565		1.1	15.0	0.08565		1.1		0.08565		1.1		0.08565		1.1	
5 PCB-1016-4	0.03867		2.8	15.0	0.03867		2.8		0.03867		2.8		0.03867		2.8	
5 PCB-1016-5	0.01611		4.2	15.0	0.01611		4.2		0.01611		4.2		0.01611		4.2	
0 PCB-1260-1	0.04271		-1.9	15.0	0.04271		-1.9		0.04271		-1.9		0.04271		-1.9	
0 PCB-1260-2	0.06871		0.5	15.0	0.06871		0.5		0.06871		0.5		0.06871		0.5	
0 PCB-1260-3	0.05212		*18.8	*15.0	0.05212		-4.2		0.05212		18.8		0.05212		18.8	
0 PCB-1260-4	0.09757		-5.2	15.0	0.09757		-5.2		0.09757		-5.2		0.09757		-5.2	
0 PCB-1260-5	0.05062		-0.2	15.0	0.05062		-0.2		0.05062		-0.2		0.05062		-0.2	
12 DCB Decachlorobipheny	1.04528		8.7	15.0	1.04528		8.7		1.04528		8.7		1.04528		8.7	
6 1260 Res 1	ND				ND				ND				ND			
3 1260 Res 2																
5 1260 Res 3	ND				ND				ND				ND			

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
mber of Failures	1	0	0	0
mber of Global Failures	0	0	0	0
and Mean/Limit	4.5	3.3	4.5	4.5

Detector 2: GC ecd2b

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min RF	%D	Max. %D	Ccal RF	Min RF	%D	Max. %D	Ccal RF	Min. RF	%D	Ma %I
2 Tetrachloro-m-xylene	1.31898		1.1	15.0	1.31898		1.1		1.31898		1.1		1.31898		1.1	
5 PCB-1016-1	0.02535		2.4	15.0	0.02535		2.4		0.02535		2.4		0.02535		2.4	
5 PCB-1016-2	0.05078		10.4	15.0	0.05078		10.4		0.05078		10.4		0.05078		10.4	
5 PCB-1016-3	0.09157		2.2	15.0	0.09157		2.2		0.09157		2.2		0.09157		2.2	
5 PCB-1016-4	0.03914		5.3	15.0	0.03914		5.3		0.03914		5.3		0.03914		5.3	
5 PCB-1016-5	0.01890		*16.7	*15.0	0.01890		16.7		0.01890		16.7		0.01890		16.7	
0 PCB-1260-1	0.05427		12.2	15.0	0.05427		12.2		0.05427		12.2		0.05427		12.2	
0 PCB-1260-2	0.05808		1.4	15.0	0.05808		1.4		0.05808		1.4		0.05808		1.4	
0 PCB-1260-3	0.05897		*25.1	*15.0	0.05897		25.1		0.05897		25.1		0.05897		25.1	
0 PCB-1260-4	0.11897		-1.1	15.0	0.11897		-1.1		0.11897		-1.1		0.11897		-1.1	
0 PCB-1260-5	0.08494		3.2	15.0	0.08494		3.2		0.08494		3.2		0.08494		3.2	
12 DCB Decachlorobipheny	1.42090		13.3	15.0	1.42090		-18.5		1.42090		13.3		1.42090		13.3	
6 1260 Res 1	ND				ND				ND				ND			
3 1260 Res 2																
5 1260 Res 3	ND				ND				ND				ND			

Preliminary Report

Method: \\ChromNA\Canton\ChromData\A2HP4\20180822-79137.b\PCB4 is.m

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
mber of Failures	2	0	0	0
mber of Global Failures	0	0	0	0
and Mean/Limit	7.9	8.3	7.9	7.9

Reagent

SG1660@0.5PPM_00083

Preliminary Report

TestAmerica Canton
CCV, Cal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20180821-79126.b\P13082109.D
Lims ID: NEW CCV 1660
Client ID:
Sample Type: CCV
Inject. Date: 21-Aug-2018 18:01:29 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0079126-009
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\ChromNA\Canton\ChromData\A2HP13\20180821-79126.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 22-Aug-2018 05:56:33 Calib Date: 24-Jul-2018 00:31:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP13\20180723-78236.b\P13072333.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK023

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 1: GC ECD1A

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
$ 2 Tetrachloro-m-xylene	1.023026	0.0		0.974198	-4.8	20	95
6 PCB-1016	0.5000		0.4660		-6.8	20	93
6 PCB-1016-1	0.018029	-0.002		0.016314	-9.5	20	90
6 PCB-1016-2	0.036356	0.0		0.033409	-8.1	20	92
6 PCB-1016-3	0.077581	0.0		0.072822	-6.1	20	94
6 PCB-1016-4	0.032675	0.0		0.030348	-7.1	20	93
6 PCB-1016-5	0.013849	-0.002		0.013411	-3.2	20	97
10 PCB-1260	0.5000		0.4699		-6.0	20	94
10 PCB-1260-1	0.045413	-0.001		0.041640	-8.3	20	92
10 PCB-1260-2	0.069771	-0.001		0.064974	-6.9	20	93
10 PCB-1260-3	0.074672	0.0		0.072496	-2.9	20	97
10 PCB-1260-4	0.106684	-0.001		0.101578	-4.8	20	95
10 PCB-1260-5	0.054316	0.0		0.050422	-7.2	20	93
$ 12 DCB Decachlorobiphenyl	1.018870	0.001		1.008625	-1.0	20	99
16 1260 Res 1	No Ccal Rslts	0.006		Reagent Dsble			
13 1260 Res 2	No Ccal Rslts	0.0		Reagent Dsble			
15 1260 Res 3	No Ccal Rslts	0.007		Reagent Dsble			

(I) Fails an Initial Calibration Test

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 2: GC ecd2b

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec

Report Date: 22-Aug-2018 05:56:36 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20180821-79126.b\P13082109.D

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
$ 2 Tetrachloro-m-xylene	1.003368	-0.002		0.923903	-7.9	20	92
6 PCB-1016	0.5000		0.4499		-10.0	20	90
6 PCB-1016-1	0.018503	-0.002		0.016076	-13.1	20	87
6 PCB-1016-2	0.036461	-0.002		0.033044	-9.4	20	91
6 PCB-1016-3	0.074630	-0.002		0.068079	-8.8	20	91
6 PCB-1016-4	0.027960	-0.003		0.024174	-13.5	20	86
6 PCB-1016-5	0.013643	-0.002		0.012918	-5.3	20	95
10 PCB-1260	0.5000		0.4526		-9.5	20	91
10 PCB-1260-1	0.042876	-0.002		0.037084	-13.5	20	86
10 PCB-1260-2	0.050167	-0.002		0.044616	-11.1	20	89
10 PCB-1260-3	0.038230	0.0		0.035618	-6.8	20	93
10 PCB-1260-4	0.093263	-0.002		0.084709	-9.2	20	91
10 PCB-1260-5	0.064821	-0.001		0.060422	-6.8	20	93
$ 12 DCB Decachlorobiphenyl	0.881600	-0.002		0.841184	-4.6	20	95
16 1260 Res 1	No Ccal Rslts	0.0		Reagent Dsble			
13 1260 Res 2	No Ccal Rslts	-0.001		Reagent Dsble			
15 1260 Res 3	No Ccal Rslts	0.0		Reagent Dsble			

(I) Fails an Initial Calibration Test

Reagent

SG1660@0.5PPM_00086

Report Date: 14-Jan-2019 10:32:57 Chrom Revision: 2.3 13-Dec-2018 17:23:12

Preliminary Report

TestAmerica Canton
CCV, Cal Verification Report

Data File: \\chromna\Canton\ChromData\A2HP13\20190112-83641.b\P13011209.D
Lims ID: NEW 1660
Client ID:
Sample Type: CCV
Inject. Date: 12-Jan-2019 10:44:09 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0083641-009
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromna\Canton\ChromData\A2HP13\20190112-83641.b\PCB13 IS.m
Limit Group: GC 8082 IS
Last Update: 14-Jan-2019 10:32:53 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0305

Start Cal Date: 26-Nov-2018 14:45:03
End Cal Date: 26-Nov-2018 23:37:52

Detector 1: GC ECD1A

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
$ 2 Tetrachloro-m-xylene	0.988760	-0.001		1.012525	2.4	15	102
6 PCB-1016	0.5000		0.5356		7.1	15	107
6 PCB-1016-1	0.017542	-0.001		0.018534	5.7	15	106
6 PCB-1016-2	0.035158	-0.001		0.034564	-1.7	15	98
6 PCB-1016-3	0.072454	-0.001		0.074757	3.2	15	103
6 PCB-1016-4	0.031125	0.0		0.031891	2.5	15	102
6 PCB-1016-5	0.013021	0.001		0.016406	*26.0	15	126
10 PCB-1260	0.5000		0.5332		6.6	15	107
10 PCB-1260-1	0.038226	0.0		0.042394	10.9	15	111
10 PCB-1260-2	0.058322	0.001		0.062223	6.7	15	107
10 PCB-1260-3	0.064635	-0.001		0.068334	5.7	15	106
10 PCB-1260-4	0.084240	-0.001		0.089496	6.2	15	106
10 PCB-1260-5	0.042681	0.0		0.044240	3.7	15	104
$ 12 DCB Decachlorobiphenyl	0.813076	0.0		0.833585	2.5	15	103
16 1260 Res 1	No Ccal Rslts	0.0		Reagent Dsble			
13 1260 Res 2	No Ccal Rslts	-0.001		Reagent Dsble			
15 1260 Res 3	No Ccal Rslts	-0.001		Reagent Dsble			

(I) Fails an Initial Calibration Test

Start Cal Date: 26-Nov-2018 14:45:03
End Cal Date: 26-Nov-2018 23:37:52

Detector 2: GC ecd2b

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec

Report Date: 14-Jan-2019 10:32:57 Chrom Revision: 2.3 13-Dec-2018 17:23:12

Preliminary Report

Data File: \\chromna\Canton\ChromData\A2HP13\20190112-83641.b\P13011209.D

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
$ 2 Tetrachloro-m-xylene	1.023397	-0.003		1.040564	1.7	15	102
6 PCB-1016	0.5000		0.4902		-2.0	15	98
6 PCB-1016-1	0.018739	-0.002		0.018668	-0.4	15	100
6 PCB-1016-2	0.037058	-0.002		0.037075	0.05	15	100
6 PCB-1016-3	0.075182	-0.001		0.074353	-1.1	15	99
6 PCB-1016-4	0.031030	-0.002		0.028181	-9.2	15	91
6 PCB-1016-5	0.018137	-0.002		0.018278	0.8	15	101
10 PCB-1260	0.5000		0.5023		0.5	15	100
10 PCB-1260-1	0.037343	-0.001		0.040690	9.0	15	109
10 PCB-1260-2	0.045252	-0.002		0.045227	-0.06	15	100
10 PCB-1260-3	0.037620	-0.002		0.037332	-0.8	15	99
10 PCB-1260-4	0.083015	-0.002		0.081349	-2.0	15	98
10 PCB-1260-5	0.059175	-0.002		0.056886	-3.9	15	96
$ 12 DCB Decachlorobiphenyl	0.809169	0.0		0.782390	-3.3	15	97
16 1260 Res 1	No Ccal Rslts	-0.001		Reagent Dsble			
13 1260 Res 2	No Ccal Rslts	-0.002		Reagent Dsble			
15 1260 Res 3	No Ccal Rslts	0.002		Reagent Dsble			

(I) Fails an Initial Calibration Test

Reagent

SG1660ICV@1.0_00037

Report Date: 19-Oct-2018 09:39:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Canton
ICV, ICal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101843.D
Lims ID: icv 1660
Client ID:
Sample Type: ICV
Inject. Date: 19-Oct-2018 08:56:00 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0080967-043
Operator ID: Instrument ID: A2HP12
Sublist:

Method: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\PCB12IS.m
Limit Group: GC 8082 IS
Last Update: 19-Oct-2018 09:39:12 Calib Date: 19-Oct-2018 01:11:38
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101833.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0322

Start Cal Date: 18-Oct-2018 15:16:26
End Cal Date: 19-Oct-2018 01:11:38

Detector 1: GC ECD1A

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
$ 2 Tetrachloro-m-xyle	0.0250	0.0239	-4.3	20.0	95.7	
6 PCB-1016	0.5000	0.4474	11.0	20.0	89.5	
6 PCB-1016-1	0.5000	0.5027	0.5	20.0	100.5	
6 PCB-1016-2	0.5000	0.4583	-8.3	20.0	91.7	
6 PCB-1016-3	0.5000	0.3471	*-30.6	20.0	69.4	
6 PCB-1016-4	0.5000	0.4797	-4.1	20.0	95.9	
6 PCB-1016-5	0.5000	0.4493	-10.1	20.0	89.9	
10 PCB-1260	0.5000	0.4802	4.0	20.0	96.0	
10 PCB-1260-1	0.5000	0.5169	3.4	20.0	103.4	
10 PCB-1260-2	0.5000	0.5296	5.9	20.0	105.9	
10 PCB-1260-3	0.5000	0.4265	-14.7	20.0	85.3	
10 PCB-1260-4	0.5000	0.4498	-10.0	20.0	90.0	
10 PCB-1260-5	0.5000	0.4780	-4.4	20.0	95.6	
$ 12 DCB Decachlorobiph	0.0250	0.0227	-9.3	20.0	90.7	

Report Date: 19-Oct-2018 09:39:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A2HP12\20181018-80967.b\P12101843.D

Detector 2: GC ecd2b

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits
$ 2 Tetrachloro-m-xyle	0.0250	0.0228	-8.9	20.0	91.1	
6 PCB-1016	0.5000	0.4404	12.0	20.0	88.1	
6 PCB-1016-1	0.5000	0.4751	-5.0	20.0	95.0	
6 PCB-1016-2	0.5000	0.4052	-19.0	20.0	81.0	
6 PCB-1016-3	0.5000	0.4422	-11.6	20.0	88.4	
6 PCB-1016-4	0.5000	0.4478	-10.4	20.0	89.6	
6 PCB-1016-5	0.5000	0.4315	-13.7	20.0	86.3	
10 PCB-1260	0.5000	0.4644	7.0	20.0	92.9	
10 PCB-1260-1	0.5000	0.5056	1.1	20.0	101.1	
10 PCB-1260-2	0.5000	0.5019	0.4	20.0	100.4	
10 PCB-1260-3	0.5000	0.4286	-14.3	20.0	85.7	
10 PCB-1260-4	0.5000	0.4445	-11.1	20.0	88.9	
10 PCB-1260-5	0.5000	0.4415	-11.7	20.0	88.3	
$ 12 DCB Decachlorobiph	0.0250	0.0231	-7.5	20.0	92.5	

Reagent

SG2154@0.5PPM_00042

Preliminary Report

TestAmerica Canton

CCV, Cal Verification Report

Cal Sample:	\\chromna\Canton\ChromData\A2HP4\20181226-83209.b\P4122609.D		
Lims ID:	2154 0.5ppm	Inj. Date:	26-Dec-2018 12:22:45
Worklist ID:	240-0083209-009	Sublist:	chrom-PCB4 is*sub4
Method:	PCB4 is	Instrument:	A2HP4

Detector 1: GC ECD1A

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Ma %I
3 PCB-1221-1	0.01434		-9.3	15.0	0.01434		3.8		0.01434		3.8		0.01434		-9.3	
3 PCB-1221-2	0.00896		-5.8	15.0	0.00896		5.7		0.00896		-5.8		0.00896		-5.8	
3 PCB-1221-3	0.03448		-3.8	15.0	0.03448		7.5		0.03448		-3.8		0.03448		-3.8	
3 PCB-1254-1	0.04706		-1.7	15.0	0.04706		8.7		0.04706		-1.7		0.04706		-1.7	
3 PCB-1254-2	0.06341		5.7	15.0	0.06341		5.7		0.06341		5.7		0.06341		5.7	
3 PCB-1254-3	0.04658		7.2	15.0	0.04658		7.2		0.04658		7.2		0.04658		7.2	
3 PCB-1254-4	0.04050		2.9	15.0	0.04050		13.5		0.04050		2.9		0.04050		2.9	
3 PCB-1254-5	0.05953		5.8	15.0	0.05953		5.8		0.05953		5.8		0.05953		5.8	

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
mber of Failures	0	0	0	0
mber of Global Failures	0	0	0	0
and Mean/Limit	5.3	7.2	4.6	5.3

Detector 2: GC ecd2b

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Ma %I
3 PCB-1221-1	0.01355		-4.6	15.0	0.01355		-4.6		0.01355		-4.6		0.01355		-4.6	
3 PCB-1221-2	0.00895		-5.2	15.0	0.00895		-5.2		0.00895		-5.2		0.00895		-5.2	
3 PCB-1221-3	0.03323		-5.2	15.0	0.03323		-5.2		0.03323		-5.2		0.03323		-5.2	
3 PCB-1254-1	0.03503		-0.2	15.0	0.03503		-0.2		0.03503		-0.2		0.03503		-0.2	
3 PCB-1254-2	0.04054		5.1	15.0	0.04054		14.8		0.04054		5.1		0.04054		5.1	
3 PCB-1254-3	0.05653		5.1	15.0	0.05653		5.1		0.05653		5.1		0.05653		5.1	
3 PCB-1254-4	0.03997		7.1	15.0	0.03997		7.1		0.03997		7.1		0.03997		7.1	
3 PCB-1254-5	0.05095		3.7	15.0	0.05095		3.7		0.05095		3.7		0.05095		3.7	

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
mber of Failures	0	0	0	0
mber of Global Failures	0	0	0	0
and Mean/Limit	4.5	5.7	4.5	4.5

Reagent

SG32/62 STK_00005

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569746 **Lot No.:** A0132023

Description : PCB-1232/1262 Standard

PCB-1232/1262 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1232	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 11141-16-5 (Lot W-107-05)		+/- 31.8340	µg/mL	Unstressed
	Purity ----%		+/- 41.5787	µg/mL	Stressed
2	Aroclor 1262	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 37324-23-5 (Lot 3067100)		+/- 31.7706	µg/mL	Unstressed
	Purity ----%		+/- 41.4958	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

3740481
ID: SG32/62 STK_00005
Exp: 01/31/24 Prpd: LSH
Aroclors 1232/1262 @1000

Reagent

SG32/6210PPM_00010

Preliminary Report

TestAmerica Canton
CCV, Cal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP10\20180809-78746.b\P10080920.D
Lims ID: new 32/62 stock
Client ID:
Sample Type: CCV
Inject. Date: 09-Aug-2018 11:09:11 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0078746-020
Operator ID: Instrument ID: A2HP10
Sublist: chrom-PCB10 IS*sub1

Method: \\ChromNA\Canton\ChromData\A2HP10\20180809-78746.b\PCB10 IS.m
Limit Group: GC 8082 IS
Last Update: 09-Aug-2018 11:25:34 Calib Date: 01-Jun-2018 03:19:17
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP10\20180531-76471.b\P10053133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK002

Start Cal Date: 31-May-2018 18:06:49
End Cal Date: 01-Jun-2018 03:19:17

Detector 1: GC ECD1A

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
4 PCB-1232	1.00		0.8896		-11.0	15	89
4 PCB-1232-1	0.019321	0.001		0.018931	-2.0	15	98
4 PCB-1232-2	0.014513	0.0		0.013610	-6.2	15	94
4 PCB-1232-3	0.032270	-0.001		0.018793	*-41.8	15	58
4 PCB-1232-4	0.013883	0.0		0.013846	-0.3	15	100
4 PCB-1232-5	0.012963	-0.001		0.012323	-4.9	15	95
9 PCB-1262	1.00		0.9478		-5.2	15	95
9 PCB-1262-1	0.051639	0.0		0.047166	-8.7	15	91
9 PCB-1262-2	0.064012	0.0		0.061506	-3.9	15	96
9 PCB-1262-3	0.053715	-0.001		0.052529	-2.2	15	98
9 PCB-1262-4	0.128905	-0.001		0.123490	-4.2	15	96
9 PCB-1262-5	0.050221	-0.001		0.046655	-7.1	15	93

Start Cal Date: 31-May-2018 18:06:49
End Cal Date: 01-Jun-2018 03:19:17

Detector 2: GC ecd2b

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
4 PCB-1232	1.00		0.8903		-11.0	15	89
4 PCB-1232-1	0.021416	0.001		0.019489	-9.0	15	91
4 PCB-1232-2	0.017429	0.0		0.015422	-11.5	15	88
4 PCB-1232-3	0.035751	0.0		0.032347	-9.5	15	90
4 PCB-1232-4	0.015711	-0.002		0.014398	-8.4	15	92
4 PCB-1232-5	0.011438	0.0		0.009559	*-16.4	15	84

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A2HP10\20180809-78746.b\P10080920.D

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
9 PCB-1262	1.00		0.9009		-9.9	15	90
9 PCB-1262-1	0.044004	0.0		0.039370	-10.5	15	89
9 PCB-1262-2	0.065484	-0.002		0.057721	-11.9	15	88
9 PCB-1262-3	0.059562	-0.002		0.054026	-9.3	15	91
9 PCB-1262-4	0.126581	-0.001		0.115618	-8.7	15	91
9 PCB-1262-5	0.091529	0.0		0.083110	-9.2	15	91

Reagent

SG3262@0.5PPM_00030

Report Date: 10-Aug-2018 08:13:48 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Canton

CCV, Cal Verification Report

Ccal Sample: \\ChromNA\Canton\ChromData\A2HP10\20180810-78783.b\P10081009.D

Lims ID: 32/62 0.5 Inj. Date: 10-Aug-2018 07:36:54

Worklist ID: 240-0078783-009 Sublist: chrom-PCB10 IS*sub1

Method: PCB10 IS Instrument: A2HP10

Detector 1: GC ECD1A

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Ma %I
PCB-1232-1	0.02045		5.8	15.0	0.02045		18.3		0.02045		5.8		0.02045		5.8	
PCB-1232-2	0.01544		6.4	15.0	0.01544		18.5		0.01544		6.4		0.01544		6.4	
PCB-1232-3	0.03310		2.6	15.0	0.03310		2.6		0.03310		2.6		0.03310		2.6	
PCB-1232-4	0.01586		14.2	15.0	0.01586		14.2		0.01586		14.2		0.01586		14.2	
PCB-1232-5	0.01357		4.7	15.0	0.01357		4.7		0.01357		4.7		0.01357		4.7	
PCB-1262-1	0.04932		-4.5	15.0	0.04932		4.1		0.04932		-4.5		0.04932		-4.5	
PCB-1262-2	0.06509		1.7	15.0	0.06509		1.7		0.06509		1.7		0.06509		1.7	
PCB-1262-3	0.05645		5.1	15.0	0.05645		5.1		0.05645		5.1		0.05645		5.1	
PCB-1262-4	0.13882		7.7	15.0	0.13882		7.7		0.13882		7.7		0.13882		7.7	
PCB-1262-5	0.05190		3.3	15.0	0.05190		3.3		0.05190		3.3		0.05190		3.3	

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
mber of Failures	0	0	0	0
mber of Global Failures	0	0	0	0
and Mean/Limit	5.6	8.0	5.6	5.6

Detector 2: GC ecd2b

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Ma %I
PCB-1232-1	0.02107		-1.6	15.0	0.02107		11.7		0.02107		-1.6		0.02107		-1.6	
PCB-1232-2	0.01738		-0.3	15.0	0.01738		11.6		0.01738		-0.3		0.01738		-0.3	
PCB-1232-3	0.03422		-4.3	15.0	0.03422		-4.3		0.03422		-4.3		0.03422		-4.3	
PCB-1232-4	0.01618		3.0	15.0	0.01618		13.0		0.01618		3.0		0.01618		3.0	
PCB-1232-5	0.01032		-9.8	15.0	0.01032		1.3		0.01032		-9.8		0.01032		-9.8	
PCB-1262-1	0.03982		-9.5	15.0	0.03982		-9.5		0.03982		-9.5		0.03982		-9.5	
PCB-1262-2	0.05809		-11.3	15.0	0.05809		-11.3		0.05809		-11.3		0.05809		-11.3	
PCB-1262-3	0.05544		-6.9	15.0	0.05544		-6.9		0.05544		-6.9		0.05544		-6.9	
PCB-1262-4	0.11696		-7.6	15.0	0.11696		-7.6		0.11696		-7.6		0.11696		-7.6	
PCB-1262-5	0.08721		-4.7	15.0	0.08721		-4.7		0.08721		-4.7		0.08721		-4.7	

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
mber of Failures	0	0	0	0
mber of Global Failures	0	0	0	0
and Mean/Limit	5.9	8.2	5.9	5.9

Reagent

SG3262@0.5PPM_00032

Report Date: 27-Dec-2018 09:12:49 Chrom Revision: 2.3 13-Dec-2018 17:23:12

Preliminary Report

TestAmerica Canton

CCV, Cal Verification Report

Ccal Sample: \\chromna\Canton\ChromData\A2HP13\20181227-83243.b\P13122713.D

Lims ID: new 32/62 .5 Inj. Date: 27-Dec-2018 08:40:50

Worklist ID: 240-0083243-013 Sublist: chrom-PCB13 IS*sub1

Method: PCB13 IS Instrument: A2HP13

Detector 1: GC ECD1A

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Ma %I
PCB-1232-1	0.01929		-6.6	15.0	0.01929		3.3	15.0	0.01929		-6.6		0.01929		-6.6	2(
PCB-1232-2	0.01525		-9.3	15.0	0.01525		1.6	15.0	0.01525		-9.3		0.01525		-9.3	2(
PCB-1232-3	0.03126		-7.2	15.0	0.03126		-7.2	15.0	0.03126		-7.2		0.03126		-7.2	2(
PCB-1232-4	0.01344		-8.0	15.0	0.01344		-0.3	15.0	0.01344		-8.0		0.01344		-8.0	2(
PCB-1232-5	0.00560		4.4	15.0	0.00560		4.4	15.0	0.00560		4.4		0.00560		4.4	2(
PCB-1262-1	0.04167		-8.7	15.0	0.04167		-8.7	15.0	0.04167		-8.7		0.04167		-8.7	2(
PCB-1262-2	0.05491		-11.6	15.0	0.05491		-11.6	15.0	0.05491		-11.6		0.05491		-11.6	2(
PCB-1262-3	0.04813		*-16.8	*15.0	0.04813		-6.0	15.0	0.04813		-6.0		0.04813		-16.8	2(
PCB-1262-4	0.09795		-9.3	15.0	0.09795		-9.3	15.0	0.09795		-9.3		0.09795		-9.3	2(
PCB-1262-5	0.04008		-9.7	15.0	0.04008		-9.7	15.0	0.04008		-9.7		0.04008		-9.7	2(

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
mber of Failures	1	0	0	0
mber of Global Failures	0	0	0	0
and Mean/Limit	9.2	6.2	8.1	9.2

Detector 2: GC ecd2b

	GC 8082 IS				GC 608 PCB IS				GC 608.3_PREC PCB IS ICAL				GC 8082A IS			
Compound	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Max. %D	Ccal RF	Min. RF	%D	Ma %I
PCB-1232-1	0.02160		-5.4	15.0	0.02160		7.7	15.0	0.02160		7.7		0.02160		-5.4	2(
PCB-1232-2	0.01808		-5.7	15.0	0.01808		7.2	15.0	0.01808		7.2		0.01808		-5.7	2(
PCB-1232-3	0.03433		-5.1	15.0	0.03433		5.8	15.0	0.03433		-5.1		0.03433		-5.1	2(
PCB-1232-4	0.01296		-12.4	15.0	0.01296		-4.8	15.0	0.01296		-12.4		0.01296		-12.4	2(
PCB-1232-5	0.00749		-4.0	15.0	0.00749		7.4	15.0	0.00749		-4.0		0.00749		-4.0	2(
PCB-1262-1	0.03552		-9.9	15.0	0.03552		0.6	15.0	0.03552		-9.9		0.03552		-9.9	2(
PCB-1262-2	0.04961		-13.5	15.0	0.04961		-1.6	15.0	0.04961		-1.6		0.04961		-13.5	2(
PCB-1262-3	0.04513		-11.7	15.0	0.04513		-2.2	15.0	0.04513		-11.7		0.04513		-11.7	2(
PCB-1262-4	0.09024		-11.9	15.0	0.09024		-11.9	15.0	0.09024		-11.9		0.09024		-11.9	2(
PCB-1262-5	0.06461		-12.9	15.0	0.06461		-6.0	15.0	0.06461		-12.9		0.06461		-12.9	2(

Global Testing	GC 8082 IS	GC 608 PCB IS	GC 608.3_PREC PCB IS ICAL	GC 8082A IS
mber of Failures	0	0	0	0
mber of Global Failures	0	0	0	0
and Mean/Limit	9.2	5.5	8.4	9.2

Reagent

SG42/6810PPM_00009

Report Date: 14-Aug-2018 07:34:50 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Canton
CCV, Cal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20180813-78874.b\P13081345.D
Lims ID: 42/68 stock
Client ID:
Sample Type: CCV
Inject. Date: 13-Aug-2018 18:29:11 ALS Bottle#: 45 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0078874-009
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP13\20180813-78874.b\PCB13 IS.m
Limit Group: GC 8082 IS
Last Update: 14-Aug-2018 07:34:49 Calib Date: 24-Jul-2018 00:31:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP13\20180723-78236.b\P13072333.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK026

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 1: GC ECD1A

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
5 PCB-1242	1.00		0.8711		-12.9	15	87
5 PCB-1242-1	0.015166	0.001		0.013111	-13.5	15	86
5 PCB-1242-2	0.030187	-0.001		0.026137	-13.4	15	87
5 PCB-1242-3	0.063740	0.002		0.049804	*-21.9	15	78
5 PCB-1242-4	0.026999	0.001		0.024639	-8.7	15	91
5 PCB-1242-5	0.011340	0.0		0.010557	-6.9	15	93
11 PCB-1268	1.00		0.9677		-3.2	15	97
11 PCB-1268-1	0.155993	-0.001		0.150924	-3.2	15	97
11 PCB-1268-2	0.151589	-0.001		0.145635	-3.9	15	96
11 PCB-1268-3	0.130147	-0.001		0.125242	-3.8	15	96
11 PCB-1268-4	0.054063	-0.002		0.052744	-2.4	15	98
11 PCB-1268-5	0.400174	-0.001		0.389115	-2.8	15	97

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 2: GC ecd2b

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
5 PCB-1242	1.00		0.8872		-11.3	15	89
5 PCB-1242-1	0.015661	0.0		0.013225	*-15.6	15	84
5 PCB-1242-2	0.030319	-0.002		0.024689	*-18.6	15	81
5 PCB-1242-3	0.060900	0.001		0.055856	-8.3	15	92
5 PCB-1242-4	0.023848	-0.001		0.022992	-3.6	15	96
5 PCB-1242-5	0.011227	-0.001		0.010061	-10.4	15	90

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20180813-78874.b\P13081345.D

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
11 PCB-1268	1.00		0.9407		-5.9	15	94
11 PCB-1268-1	0.125342	0.0		0.117975	-5.9	15	94
11 PCB-1268-2	0.123557	0.0		0.115862	-6.2	15	94
11 PCB-1268-3	0.105661	-0.001		0.098037	-7.2	15	93
11 PCB-1268-4	0.045940	0.0		0.041808	-9.0	15	91
11 PCB-1268-5	0.331774	0.001		0.327279	-1.4	15	99

Reagent

SG4268@0.5PPM_00030

Preliminary Report

TestAmerica Canton
CCV, Cal Verification Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20180817-79005.b\P13081709.D
Lims ID: 42/68 new
Client ID:
Sample Type: CCV
Inject. Date: 17-Aug-2018 08:05:37 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0079005-009
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\ChromNA\Canton\ChromData\A2HP13\20180817-79005.b\PCB13 IS.m
Limit Group: GC 8082 IS
Last Update: 17-Aug-2018 09:32:12 Calib Date: 24-Jul-2018 00:31:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP13\20180723-78236.b\P13072333.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK015

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 1: GC ECD1A

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
5 PCB-1242	0.5000		0.4740		-5.2	15	95
5 PCB-1242-1	0.015166	-0.001		0.014112	-6.9	15	93
5 PCB-1242-2	0.030187	-0.001		0.027922	-7.5	15	92
5 PCB-1242-3	0.063740	-0.001		0.060812	-4.6	15	95
5 PCB-1242-4	0.026999	0.001		0.025756	-4.6	15	95
5 PCB-1242-5	0.011340	-0.001		0.011077	-2.3	15	98
11 PCB-1268	0.5000		0.4885		-2.3	15	98
11 PCB-1268-1	0.155993	-0.001		0.152172	-2.4	15	98
11 PCB-1268-2	0.151589	0.0		0.147590	-2.6	15	97
11 PCB-1268-3	0.130147	0.0		0.126292	-3.0	15	97
11 PCB-1268-4	0.054063	-0.001		0.053344	-1.3	15	99
11 PCB-1268-5	0.400174	-0.002		0.391863	-2.1	15	98

Start Cal Date: 23-Jul-2018 16:05:33
End Cal Date: 24-Jul-2018 00:31:42

Detector 2: GC ecd2b

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
5 PCB-1242	0.5000		0.4559		-8.8	15	91
5 PCB-1242-1	0.015661	0.0		0.014102	-10	15	90
5 PCB-1242-2	0.030319	-0.001		0.027417	-9.6	15	90
5 PCB-1242-3	0.060900	-0.001		0.056229	-7.7	15	92
5 PCB-1242-4	0.023848	0.0		0.021362	-10.4	15	90
5 PCB-1242-5	0.011227	0.0		0.010502	-6.5	15	94

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A2HP13\20180817-79005.b\P13081709.D

Compound	Standard RRF/Amt	DLT RT	Ccal Amt	Ccal RF	%D	Max. %D	%Rec
11 PCB-1268	0.5000		0.4758		-4.8	15	95
11 PCB-1268-1	0.125342	-0.002		0.118347	-5.6	15	94
11 PCB-1268-2	0.123557	-0.001		0.116490	-5.7	15	94
11 PCB-1268-3	0.105661	-0.001		0.097847	-7.4	15	93
11 PCB-1268-4	0.045940	-0.002		0.045268	-1.5	15	99
11 PCB-1268-5	0.331774	0.0		0.318484	-4.0	15	96

Reagent

SGPCB1254_00010

Certificate of Analysis

Aroclor 1254 Solution

Product Number: EPA-1352 **Page:** 1 of 1

Lot Number: CK-3221 **Lot Issue Date:** 26-Sep-2013 **Expiration Date:** 31-Oct-2021

This certified Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1254	011097-69-1	RM00922	1002 ± 5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15-30°C)

Rec 9/20/16

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

ACCREDITED
ISO 17025:2005 Accredited A2LA Cert. No. 0851-01
ISO 9001:2008 Registered TUV USA, Inc. Cert. No. 09-1009

250 Smith Street, North Kingstown, RI 02852 USA
401-294-9400 Fax: 295-2330
wwww.ultrasci.com

William J. Leary
Quality Assurance Manager

Reagent

SGPCBIS STOCk_00011

Report Date: 26-Feb-2018 07:16:15 Chrom Revision: 2.2 08-Feb-2018 13:38:42

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022315.D
Lims ID: old IS
Client ID:
Sample Type: Client
Inject. Date: 23-Feb-2018 15:31:28 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0073532-015
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\PCB4 is.m
Limit Group: GC 8082 IS
Last Update: 23-Feb-2018 13:29:28 Calib Date: 31-Jan-2018 23:13:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20180131-72897.b\P4013133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK028

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022303.D
Sample Type: CCVIS Sublist: chrom-PCB4 is*sub5
Sample Info: 240-0073532-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	77268453	38634227	154536906	71373643	92.37

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	1.846	1.346	2.346	1.847	-0.001	0.069

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	150281311	75140656	300562622	140318743	93.37

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.148	1.648	2.648	2.155	-0.007	0.331

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Report Date: 26-Feb-2018 07:16:51 Chrom Revision: 2.2 08-Feb-2018 13:38:42

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022316.D
Lims ID: New IS #10
Client ID:
Sample Type: Client
Inject. Date: 23-Feb-2018 15:48:14 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0073532-016
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\PCB4 is.m
Limit Group: GC 8082 IS
Last Update: 23-Feb-2018 13:29:28 Calib Date: 31-Jan-2018 23:13:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20180131-72897.b\P4013133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK028

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022303.D
Sample Type: CCVIS Sublist: chrom-PCB4 is*sub5
Sample Info: 240-0073532-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	77268453	38634227	154536906	72640734	94.01

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	1.846	1.346	2.346	1.847	-0.001	0.035

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	150281311	75140656	300562622	143263259	95.33

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.148	1.648	2.648	2.154	-0.006	0.302

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Report Date: 26-Feb-2018 07:17:23 Chrom Revision: 2.2 08-Feb-2018 13:38:42

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022317.D
Lims ID: New IS # 11
Client ID:
Sample Type: Client
Inject. Date: 23-Feb-2018 16:05:04 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0073532-017
Operator ID: Instrument ID: A2HP4

Method: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\PCB4 is.m
Limit Group: GC 8082 IS
Last Update: 23-Feb-2018 13:29:28 Calib Date: 31-Jan-2018 23:13:49
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP4\20180131-72897.b\P4013133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK028

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP4\20180223-73532.b\P4022303.D
Sample Type: CCVIS Sublist: chrom-PCB4 is*sub5
Sample Info: 240-0073532-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	77268453	38634227	154536906	72955713	94.42

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	1.846	1.346	2.346	1.846	0.000	-0.005

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	150281311	75140656	300562622	141972130	94.47

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.148	1.648	2.648	2.153	-0.006	0.267

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Reagent

SGPCBIS STOCk_00012

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File:	\\chromna\Canton\ChromData\A2HP13\20181226-83202.b\P13122611.D				
Lims ID:	IS #12				
Client ID:					
Sample Type:	Client				
Inject. Date:	26-Dec-2018 08:13:06	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	240-0083202-011				
Operator ID:		Instrument ID:	A2HP13		
Method:	\\chromna\Canton\ChromData\A2HP13\20181226-83202.b\PCB13 IS.m				
Limit Group:	GC 8082 IS				
Last Update:	26-Dec-2018 05:33:27	Calib Date:	26-Nov-2018 23:37:52		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D				
Column 1 :			Det: GC ECD1A		
Column 2 :			Det: GC ecd2b		
Process Host:	CTX0303				
Istd Cal Sample:	\\chromna\Canton\ChromData\A2HP13\20181226-83202.b\P13122603.D				
Sample Type:	CCVIS	Sublist:	chrom-PCB13 IS*sub5		
Sample Info:	240-0083202-003				

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	53701758	26850879	107403516	48204430	89.76

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	1.942	1.442	2.442	1.940	0.002	-0.095

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	35391117	17695559	70782234	32204383	91.00

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.385	1.885	2.885	2.382	0.003	-0.113

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Reagent

SGPCBISTD_00016

Report Date: 24-Aug-2018 10:39:35 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP10\20180824-79213.b\P10082409.D
Lims ID: new IS
Client ID:
Sample Type: Client
Inject. Date: 24-Aug-2018 09:58:01 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0079213-009
Operator ID: Instrument ID: A2HP10

Method: \\ChromNA\Canton\ChromData\A2HP10\20180824-79213.b\PCB10 IS.m
Limit Group: GC 8082 IS
Last Update: 24-Aug-2018 08:31:24 Calib Date: 01-Jun-2018 03:19:17
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP10\20180531-76471.b\P10053133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK012

NEW

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP10\20180824-79213.b\P10082403.D
Sample Type: CCVIS Sublist: chrom-PCB10 IS*sub5
Sample Info: 240-0079213-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	158394186	79197093	316788372	140633670	88.79

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.642	2.142	3.142	2.640	0.002	-0.087

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	59140356	29570178	118280712	53490107	90.45

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	3.320	2.820	3.820	3.305	0.015	-0.446

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Report Date: 24-Aug-2018 10:40:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP10\20180824-79213.b\P10082410.D
Lims ID: MB 240-341633/19-A
Client ID:
Sample Type: MB
Inject. Date: 24-Aug-2018 10:17:02 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0079213-010
Operator ID: Instrument ID: A2HP10

Method: \\ChromNA\Canton\ChromData\A2HP10\20180824-79213.b\PCB10 IS.m
Limit Group: GC 8082 IS
Last Update: 24-Aug-2018 08:31:24 Calib Date: 01-Jun-2018 03:19:17
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP10\20180531-76471.b\P10053133.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: XAWRK012

OLD

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP10\20180824-79213.b\P10082403.D
Sample Type: CCVIS Sublist: chrom-PCB10 IS*sub5
Sample Info: 240-0079213-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	158394186	79197093	316788372	158748538	100.22

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	2.642	2.142	3.142	2.646	-0.003	0.128

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 14 1-Bromo-2-nitrobenzene	59140356	29570178	118280712	60962607	103.08

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 14 1-Bromo-2-nitrobenzene	3.320	2.820	3.820	3.317	0.002	-0.074

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Reagent

SGPCBISTD_00017

Report Date: 16-Nov-2018 09:25:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Canton
Internal Standard Recovery Report

Data File: \\ChromNA\Canton\ChromData\A2HP2\20181116-82001.b\P2111609.D
Lims ID: New IS
Client ID:
Sample Type: Client
Inject. Date: 16-Nov-2018 09:03:44 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0082001-009
Operator ID: Instrument ID: A2HP2

Method: \\ChromNA\Canton\ChromData\A2HP2\20181116-82001.b\PCB2 IS.m
Limit Group: GC 8082 IS
Last Update: 16-Nov-2018 06:37:26 Calib Date: 13-Nov-2018 22:27:42
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A2HP2\20181113-81908.b\P2111333.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0305

Istd Cal Sample: \\ChromNA\Canton\ChromData\A2HP2\20181116-82001.b\P2111603.D
Sample Type: CCVIS Sublist: chrom-PCB2 IS*sub5
Sample Info: 240-0082001-003

Area Recoveries, Detector: GC ECD1A

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 2 1-Bromo-2-nitrobenzene	77043891	38521946	154087782	75198679	97.60

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 2 1-Bromo-2-nitrobenzene	1.138	0.638	1.638	1.145	-0.007	0.612

Area Recoveries, Detector: GC ecd2b

Compound	Standard	Lower Limit	Upper Limit	Sample	% Rec
* 2 1-Bromo-2-nitrobenzene	47158145	23579073	94316290	43528470	92.30

RT Recoveries

Compound	Standard	Lower Limit	Upper Limit	Sample	DLT(min.)	% Diff
* 2 1-Bromo-2-nitrobenzene	1.223	0.723	1.723	1.223	0.000	0.025

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.500 minutes of internal standard RT.
RT LOWER LIMIT = - 0.500 minutes of internal standard RT.

Reagent

SGPESTSURR_00011

Report Date: 13-Oct-2017 09:44:48 Chrom Revision: 2.2 16-Aug-2017 16:24:46 Page: 1

TestAmerica Laboratories
Worklist Report

Worklist Name: 101317 Worklist Number: 69619
Instrument Name: A2HP12 Chrom Method: PCB12IS
Injection Volume: 1.000 Units: uL
Analysis Type: Semi VOA
Batch Directory: \\ChromNA\Canton\ChromData\A2HP12\20171013-69619.b
Upload Directory: \\CorpTALSAPP17\240-NC-RawData\Organics\GC\A2HP12
Run Reagent: SGPCBISTD_00012 Amount Added: 5.000, Units: uL

298860

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
240-0069619-001	# 1 RB HEX lot 0000175756		RB	sv	1.000	mL	1.000
240-0069619-002	# 2 PB		PB	sv	1.000	mL	1.000
240-0069619-003	# 3 CCV AR1660	SG 1260 res_00002 SG1660@0.5PPM_00075	CCVIS	sv	1.000	mL	1.000
240-0069619-004	# 4 CCV AR1232/1262	SG3262@0.5PPM_00021	CCV	sv	1.000	mL	1.000
240-0069619-005	# 5 CCV AR1242/1268	SG4268@0.5PPM_00025	CCV	sv	1.000	mL	1.000
240-0069619-006	# 6 CCV AR1248	SG1248@0.5ppm_00030	CCV	sv	1.000	mL	1.000
240-0069619-007	# 7 CCV AR1221/1254	SG2154@0.5PPM_00033	CCV	sv	1.000	mL	1.000
240-0069619-008	# 8 RTC DDD/DDT/DDE	PBCRTC_00018	RTC	sv	1.000	mL	1.000
240-0069619-009	# 9 320-32221-K-10-A		Client	sv	1.000	mL	1.000
240-0069619-010	#10 240-86269-A-1-A		Client	sv	1.000	mL	1.000
240-0069619-011	#11 Samp 23		Client	sv	1.000	mL	1.000
240-0069619-012	#12 Samp 24		Client	sv	1.000	mL	1.000
240-0069619-013	#13 Samp 25		Client	sv	1.000	mL	1.000

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 240-298457

Method Code: 240-3520C-240

Analyst: Scott, Caitlin

Batch Open: 10/10/2017 3:55:00PM

Batch End: 10/11/2017 3:54:41PM

Liquid-Liquid Extraction (Continuous)

	Input Sample Lab ID (Analytical Method)	SDG (Job #)	GrossWt TareWt	InitAmnt FinAmnt	PHs Rcvd	PHs Adj1	PHs Adj2	Due Date	Analytical TAT	Dlv Rank	Comments	Output Sample Lab ID
1	190-14615-B-1 (8082)	N/A (190-14615-1)		870 mL	7			10/12/17	4_Days	2	TBA STR	190-14615-B-1-B
				2 mL								
2	240-86102-B-1 (8082)	N/A (240-86102-1)		1000 mL	7			10/12/17	4_Day_RUSH	2	X10/X20/X50	240-86102-B-1-A
				2 mL								
3	240-86149-B-1 (8082)	N/A (240-86149-1)		1030 mL	5			10/19/17	8_Days	4	STR	240-86149-B-1-A
				2 mL								
4	240-86007-O-1 (8082A)	N/A (240-86007-1)		1000 mL	7			10/17/17	8_Days	4	TBA	240-86007-O-1-A
				2 mL								
5	240-86007-P-2 (8082A)	N/A (240-86007-1)		990 mL	7			10/17/17	8_Days	4		240-86007-P-2-A
				2 mL								
6	240-86007-Q-3 (8082A)	N/A (240-86007-1)		1040 mL	7			10/17/17	8_Days	4		240-86007-Q-3-A
				2 mL								
7	240-86007-P-4 (8082A)	N/A (240-86007-1)		1050 mL	7			10/17/17	8_Days	4		240-86007-P-4-A
				2 mL								
8	240-86007-O-5 (8082A)	N/A (240-86007-1)		950 mL	7			10/17/17	8_Days	4		240-86007-O-5-A
				2 mL								
9	240-86007-M-6 (8082A)	N/A (240-86007-1)		1020 mL	7			10/17/17	8_Days	4	TBA STR	240-86007-M-6-A
				2 mL								
10	MB~240-298457/10 N/A	N/A		1000 mL	7			N/A	N/A	N/A		MB 240-298457/10-A
				2 mL								

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

P12 Front

AB: 298666

Batch Number: 240-298457

Analyst: Scott, Caitlin

Batch Open: 10/10/2017 3:55:00PM

Method Code: 240-3520C-240

Batch End: 10/11/2017 3:54:41PM

11	LCS~240-298457/11 N/A	N/A		1000 mL 2 mL	7			N/A	N/A	N/A	LCS 240-298457/11-A
12	320-32221-K-10 (8082)	10/3 & 10/4/17 samples (320-32221-1)		1030 mL 2 mL	7			10/24/17	12_Days	4	320-32221-K-10-A STR

WI-NC-0170

Clean-ups

Batch: 258457

Clean-up	Date	Initials	Date	Initials	Culture Tubes
Acid Clean	10/11/17	TS			328/793
TBA					
Silica Gel					
$KMnO_4$					
Florisil					
Alumina					

Solid SW-846-3500 Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 240-298545

Method Code: 240-3540C-240

Analyst: Thabet, Ahmed

Batch Open: 10/11/2017 12:05:00PM

Batch End: 10/12/2017 4:05:00AM

Soxhlet Extraction

Pf 298792 K

	Input Sample Lab ID (Analytical Method)	SDG (Job #)	Initial Amount	Final Amount	Due Date	Analytical TAT	Dlv Rank	Comments	Output Sample Lab ID
1	240-86205-D-1 (8082A)	N/A (240-86205-1)	9.93 g	10 mL	10/20/17	8_Days	4	tbt/sf	240-86205-D-1-A
2	240-86216-E-1 (8082A)	N/A (240-86216-1)	10.09 g	10 mL	10/20/17	8_Days	2	sf	240-86216-E-1-G
3	240-86108-G-3 (8082)	N/A (240-86108-1)	10.07 g	10 mL	10/18/17	8_Days	4	tbt/sf	240-86108-G-3-C
4	240-86108-G-3~MS (8082)	N/A (240-86108-1)	10.24 g	10 mL	10/18/17	8_Days	4	↓	240-86108-G-3-D MS
5	240-86108-G-3~MSD (8082)	N/A (240-86108-1)	10.26 g	10 mL	10/18/17	8_Days	4	↓	240-86108-G-3-E MSD
6	MB~240-298545/6 N/A	N/A	10 g	10 mL	N/A	N/A	N/A		MB 240-298545/6-A
7	LCS~240-298545/7 N/A	N/A	10 g	10 mL	N/A	N/A	N/A		LCS 240-298545/7-A
9	240-86269-A-1 (8082)	N/A (240-86269-1)	10.17 g	10 mL	10/13/17	2_Day_RUSH	2	sf tbt/sf	240-86269-A-1-A
10	240-86267-A-1 (8082)	N/A (240-86267-1)	10.17 g	10 mL	10/13/17	2_Day_RUSH	2	sf	240-86267-A-1-A
11	240-86147-A-7-A (8082A)	N/A (240-86147-1)	1.30 g	10 mL	10/12/17	3_Day_RUSH	2	tbt / xc	240-86147-A-7-D
12	240-86147-A-8-A (8082A)	N/A (240-86147-1)	1.29 g	10 mL	10/12/17	3_Day_RUSH	2	↓	240-86147-A-8-D
	240-86147-A-9-A (8082A)	N/A (240-86147-1)	1.06 g	10 mL	10/12/17	3_Day_RUSH	2		240-86147-A-9-D

Clean-ups

Batch: 298545

Clean-up	Date	Initials	Date	Initials	Culture Tubes
Acid Clean	10-12-17	TS.			3281793
TBA	10/12/17	TS			3281793
Silica Gel					
$KMnO_4$					
Florisil					
Alumina					

WI-NC-0170

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0130424

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2023 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4,5,6-Tetrachloro-m-xylene		201.2 µg/mL	+/- 1.1725	µg/mL	Gravimetric
	CAS # 877-09-8	(Lot 0052481)		+/- 6.3751	µg/mL	Unstressed
	Purity 98%			+/- 8.3288	µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)		201.5 µg/mL	+/- 1.1742	µg/mL	Gravimetric
	CAS # 2051-24-3	(Lot ER071509-01)		+/- 6.3848	µg/mL	Unstressed
	Purity 99%			+/- 8.3415	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

3289189
ID: SGPESTSURR_00011
Exp: 11/30/23 Prpd: KMG
PESTICIDE SURROGATE Reste

Rec'd 10/13/17

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

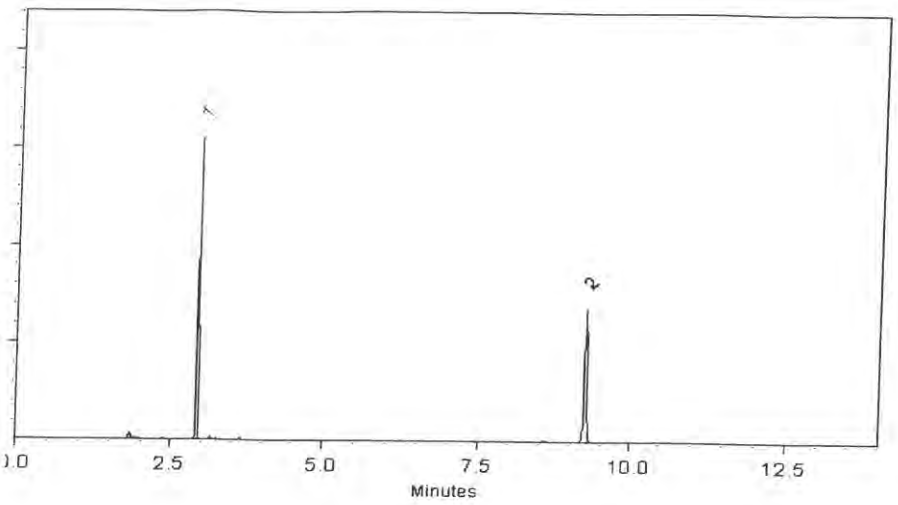
rrier Gas:
ıelium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician **Date Mixed:** 31-Aug-2017 **Balance:** B345965662

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 07-Sep-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

vm30026_00002

Rec: 4/11/17 (5)

VM30026-00002

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30026 **Lot No.:** A0120567

Description : 4-Bromofluorobenzene Mixture

4-Bromofluorobenzene 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1-Bromo-4-fluorobenzene (BFB)	2,019.3 µg/mL	+/- 11.8506	µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 20401KOV)		+/- 113.2335	µg/mL	Unstressed
	Purity 99%		+/- 115.8825	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VM567650_00028

Rec: 4/11/17 (11)

VM567650_00028

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0124069

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 0012016) **Purity** 99%	2,521.2 µg/mL	+/- 14.6582 µg/mL +/- 141.3584 µg/mL +/- 144.6660 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot PR-25433) **Purity** 98%	2,513.8 µg/mL	+/- 14.6157 µg/mL +/- 140.9489 µg/mL +/- 144.2469 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot PR-27311) **Purity** 99%	2,519.4 µg/mL	+/- 14.6480 µg/mL +/- 141.2603 µg/mL +/- 144.5656 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 20401KOV) **Purity** 99%	2,520.8 µg/mL	+/- 14.6559 µg/mL +/- 141.3360 µg/mL +/- 144.6430 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VM567650_00029

Rec: 8/22/17
VM567650-00029

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0124069

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 0012016) **Purity** 99%	2,521.2 µg/mL	+/- 14.6582 +/- 141.3584 +/- 144.6660	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot PR-25433) **Purity** 98%	2,513.8 µg/mL	+/- 14.6157 +/- 140.9489 +/- 144.2469	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot PR-27311) **Purity** 99%	2,519.4 µg/mL	+/- 14.6480 +/- 141.2603 +/- 144.5656	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 20401KOV) **Purity** 99%	2,520.8 µg/mL	+/- 14.6559 +/- 141.3360 +/- 144.6430	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VM568718_00011

VM568718_00011 Rec: 8-22-2017

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568718 **Lot No.:** A0124343

Description : 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	tert-Butyl-d9-alcohol **CAS #** 25725-11-5 (Lot I-201) **Purity** 99%	5,050.0 µg/mL	+/- 29.3596 µg/mL +/- 108.1207 µg/mL +/- 111.2640 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone-d5 **CAS #** 24313-50-6 (Lot M-276) **Purity** 99%	1,262.5 µg/mL	+/- 7.3403 µg/mL +/- 27.0303 µg/mL +/- 27.8161 µg/mL	Gravimetric Unstressed Stressed
3	Fluorobenzene **CAS #** 462-06-6 (Lot BCBK8171V) **Purity** 99%	251.6 µg/mL	+/- 1.4664 µg/mL +/- 5.3884 µg/mL +/- 5.5450 µg/mL	Gravimetric Unstressed Stressed
4	1,4-Dioxane-d8 **CAS #** 17647-74-4 (Lot I-19942) **Purity** 99%	5,048.8 µg/mL	+/- 29.3526 µg/mL +/- 108.0950 µg/mL +/- 111.2375 µg/mL	Gravimetric Unstressed Stressed
5	Chlorobenzene-d5 **CAS #** 3114-55-4 (Lot PR-23926) **Purity** 99%	251.5 µg/mL	+/- 1.4654 µg/mL +/- 5.3849 µg/mL +/- 5.5413 µg/mL	Gravimetric Unstressed Stressed
6	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-18488) **Purity** 99%	252.5 µg/mL	+/- 1.4714 µg/mL +/- 5.4070 µg/mL +/- 5.5641 µg/mL	Gravimetric Unstressed Stressed

Reagent

VM568718_00012

Rec'd: 11/8/17

VM568718_00012

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568718 **Lot No.:** A0127975

Description : 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	tert-Butyl-d9-alcohol **CAS #** 25725-11-5 **Purity** 99%	(Lot I-201)	5,022.1 µg/mL	+/- 29.1976 µg/mL +/- 107.5241 µg/mL +/- 110.6500 µg/mL		Gravimetric Unstressed Stressed
2	2-Butanone-d5 **CAS #** 24313-50-6 **Purity** 99%	(Lot M-276)	1,257.5 µg/mL	+/- 7.3114 µg/mL +/- 26.9239 µg/mL +/- 27.7067 µg/mL		Gravimetric Unstressed Stressed
3	Fluorobenzene **CAS #** 462-06-6 **Purity** 99%	(Lot BCBK8171V)	250.8 µg/mL	+/- 1.4613 µg/mL +/- 5.3699 µg/mL +/- 5.5259 µg/mL		Gravimetric Unstressed Stressed
4	1,4-Dioxane-d8 **CAS #** 17647-74-4 **Purity** 99%	(Lot I-19942)	5,009.4 µg/mL	+/- 29.1236 µg/mL +/- 107.2514 µg/mL +/- 110.3694 µg/mL		Gravimetric Unstressed Stressed
5	Chlorobenzene-d5 **CAS #** 3114-55-4 **Purity** 99%	(Lot PR-21944)	251.7 µg/mL	+/- 1.4666 µg/mL +/- 5.3891 µg/mL +/- 5.5458 µg/mL		Gravimetric Unstressed Stressed
6	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 **Purity** 99%	(Lot PR-18488)	251.3 µg/mL	+/- 1.4645 µg/mL +/- 5.3813 µg/mL +/- 5.5377 µg/mL		Gravimetric Unstressed Stressed

Reagent

VM568718_00013

Rec: 4/17/18
VM568718_00013

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568718 **Lot No.:** A0133525

Description : 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000µg/mL, P&T Methanol/Water (90:10), 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	tert-Butyl-d9-alcohol **CAS #** 25725-11-5 **Purity** 98%	(Lot CD-107)	5,043.8 µg/mL	+/- 29.3235 +/- 107.9879 +/- 111.1273	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone-d5 **CAS #** 24313-50-6 **Purity** 99%	(Lot M-276)	1,258.0 µg/mL	+/- 7.3141 +/- 26.9339 +/- 27.7169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Fluorobenzene **CAS #** 462-06-6 **Purity** 99%	(Lot BCBK8171V)	251.8 µg/mL	+/- 1.4674 +/- 5.3920 +/- 5.5487	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1,4-Dioxane-d8 **CAS #** 17647-74-4 **Purity** 99%	(Lot I-19942)	5,037.4 µg/mL	+/- 29.2862 +/- 107.8502 +/- 110.9856	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Chlorobenzene-d5 **CAS #** 3114-55-4 **Purity** 99%	(Lot PR-22736)	251.6 µg/mL	+/- 1.4660 +/- 5.3870 +/- 5.5435	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 **Purity** 99%	(Lot PR-18488)	251.4 µg/mL	+/- 1.4652 +/- 5.3841 +/- 5.5406	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Reagent

VM568720_00029

VMS68720_00029 Rec: 8/7/18

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720 **Lot No.:** A0137497

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2018 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acrolein **CAS #** 107-02-8 (Lot 171116JLM) **Purity** 99%	19,757.3 µg/mL	+/- 115.6835 µg/mL +/- 633.4822 µg/mL +/- 736.3538 µg/mL	Gravimetric Unstressed Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Reagent

VM568720_00030

VM_568720_00030 Rec. 12/26/18

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720 **Lot No.:** A0139537

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2019 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acrolein	19,780.7 µg/mL	+/- 115.8202	µg/mL	Gravimetric
	CAS # 107-02-8 (Lot 180618JACG)		+/- 634.2304	µg/mL	Unstressed
	Purity 99%		+/- 737.2234	µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Reagent

VM568720S_00028

Rcd' 9-5-18 VH5687205_00028

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720.SEC **Lot No.:** A0139592

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2019 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Acrolein		19,750.0	µg/mL	+/- 115.6406	µg/mL	Gravimetric
	CAS # 107-02-8.SEC	(Lot X19C007)			+/- 633.2471	µg/mL	Unstressed
	Purity 99%				+/- 736.0805	µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Reagent

VM569721_00003

VM569721_00003 Rec: 9/8/16

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721 **Lot No.:** A0115554

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1 (Lot 07196AK) **Purity** 99%	12,501.8 µg/mL	+/- 72.6865 µg/mL +/- 754.2890 µg/mL +/- 756.0798 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 (Lot SHBG0444V) **Purity** 98%	12,499.7 µg/mL	+/- 72.6744 µg/mL +/- 754.1625 µg/mL +/- 755.9530 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 (Lot SHBF9556V) **Purity** 99%	12,500.6 µg/mL	+/- 72.6796 µg/mL +/- 754.2166 µg/mL +/- 756.0072 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 (Lot MKBT3158V) **Purity** 99%	12,502.4 µg/mL	+/- 72.6900 µg/mL +/- 754.3252 µg/mL +/- 756.1161 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

VM569721S_00003

Rec: 7/12/16 (20)
VM569721S-00003

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Catalog No. : 569721.sec **Lot No.:** A0118013

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone **CAS #** 67-64-1.SEC (Lot P14A572) **Purity** 99%	12,550.0 µg/mL	+/- 73.4830 µg/mL +/- 757.2470 µg/mL +/- 759.0446 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3.SEC (Lot RA58J) **Purity** 99%	12,603.0 µg/mL	+/- 73.7933 µg/mL +/- 760.4450 µg/mL +/- 762.2502 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1.SEC (Lot E29T040) **Purity** 99%	12,591.5 µg/mL	+/- 73.7260 µg/mL +/- 759.7511 µg/mL +/- 761.5546 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6.SEC (Lot V3NRA) **Purity** 99%	12,588.0 µg/mL	+/- 73.7055 µg/mL +/- 759.5399 µg/mL +/- 761.3429 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

vm569722_00011

Rec: 4/17/18

VM569722_00011

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 **Lot No.:** A0131502

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot Q167-08) **Purity** 99%	2,501.3 µg/mL	+/- 20.2137 µg/mL +/- 140.9452 µg/mL +/- 144.2108 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBG9707V) **Purity** 99%	2,504.9 µg/mL	+/- 24.8531 µg/mL +/- 141.8827 µg/mL +/- 145.1364 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 1026101231B1) **Purity** 99%	2,498.3 µg/mL	+/- 21.7258 µg/mL +/- 141.0069 µg/mL +/- 144.2635 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot SHBH7966) **Purity** 99%	2,499.9 µg/mL	+/- 19.8572 µg/mL +/- 140.8167 µg/mL +/- 144.0816 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,500.4 µg/mL	+/- 24.9675 µg/mL +/- 141.6590 µg/mL +/- 144.9064 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot 23593) **Purity** 99%	2,500.1 µg/mL	+/- 25.2649 µg/mL +/- 141.6931 µg/mL +/- 144.9388 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot 4938100) **Purity** 99%	2,500.0 µg/mL	+/- 16.7114 µg/mL +/- 140.4149 µg/mL +/- 143.6892 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11) **CAS #** 75-69-4 **Purity** 99%	(Lot SHBH4155V)	2,499.5 µg/mL	+/- 20.7085 +/- 140.9189 +/- 144.1805	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

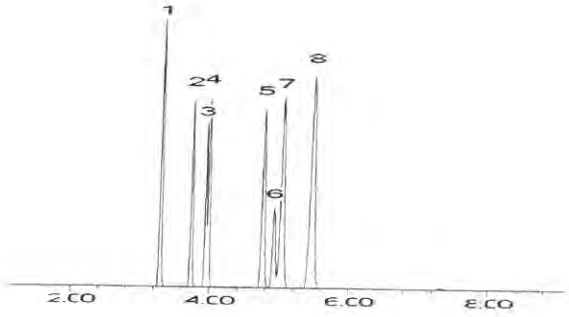
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician **Date Mixed:** 10-Oct-2017 **Balance:** B251644995

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 12-Oct-2017

Manufactured under Restek's ISO 9001:2008
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vm569722S_00005

VM 569722S-00005 Rec: 7/17/17

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Catalog No. : 569722.SEC **Lot No.:** A0124116

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8.SEC (Lot 23586) **Purity** 99%	2,503.4 µg/mL	+/- 19.5506 µg/mL +/- 140.9699 µg/mL +/- 144.2404 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3.SEC (Lot 18343) **Purity** 99%	2,508.1 µg/mL	+/- 21.1963 µg/mL +/- 141.4639 µg/mL +/- 144.7353 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4.SEC (Lot MKBK6872V) **Purity** 99%	2,518.6 µg/mL	+/- 19.4186 µg/mL +/- 141.7924 µg/mL +/- 145.0836 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0.SEC (Lot 22331) **Purity** 99%	2,504.0 µg/mL	+/- 20.5722 µg/mL +/- 141.1450 µg/mL +/- 144.4130 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9.SEC (Lot Q119-46) **Purity** 99%	2,498.5 µg/mL	+/- 19.9806 µg/mL +/- 140.7602 µg/mL +/- 144.0229 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3.SEC (Lot 00004202) **Purity** 99%	2,494.9 µg/mL	+/- 17.8868 µg/mL +/- 140.2786 µg/mL +/- 143.5429 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4.SEC (Lot SHBC0858V) **Purity** 99%	2,503.4 µg/mL	+/- 20.0421 µg/mL +/- 141.0350 µg/mL +/- 144.3039 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)		2,503.2	µg/mL	+/-	18.7037	µg/mL	Gravimetric
	CAS #	75-69-4.SEC (Lot Q12B-59)			+/-	140.8450	µg/mL	Unstressed
	Purity	99%			+/-	144.1179	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

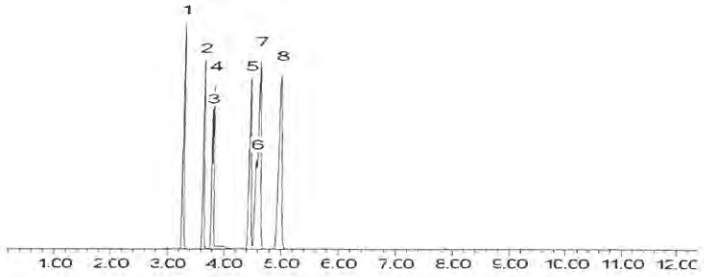
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician **Date Mixed:** 12-Jan-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 17-Jan-2017

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VM569723-00004 Rec: 5/16/16 (20)

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569723 **Lot No.:** A0115628

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Chloroethyl vinyl ether **CAS #** 110-75-8 (Lot MKBK2735V) **Purity** 99%	2,509.2 µg/mL	+/- 14.5887 µg/mL +/- 53.7223 µg/mL +/- 55.2841 µg/mL		Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Reagent

VM569723S_00005

VM569723s-00005 Rec: 1/8/16
DS

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569723.sec **Lot No.:** A0115500

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Chloroethyl vinyl ether	2,501.5 µg/mL	+/- 14.5439 µg/mL	Gravimetric
	CAS # 110-75-8.SEC (Lot BQZ2K-QD)		+/- 53.5574 µg/mL	Unstressed
	Purity 99%		+/- 55.1144 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Reagent

VM569723S_00006

VM569723s-00006 RCC: 9/9/20 (20)

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569723.sec **Lot No.:** A0115500

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Chloroethyl vinyl ether	2,501.5 µg/mL	+/- 14.5439	µg/mL	Gravimetric
	CAS # 110-75-8.SEC (Lot BQZ2K-QD)		+/- 53.5574	µg/mL	Unstressed
	Purity 99%		+/- 55.1144	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Reagent

VM569723S_00007

Rec! 5/24/17 (20)

VM569723 - 00007

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569723.SEC **Lot No.:** A0123884

Description : 8260 List 1 / Std #4 2-CEVE (2015)

8260 List 1 / Std #4 2-CEVE (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Chloroethyl vinyl ether	2,504.4 µg/mL	+/- 14.6972 µg/mL	Gravimetric
	CAS # 110-75-8.SEC (Lot BQZ2K-QD)		+/- 53.6567 µg/mL	Unstressed
	Purity 99%		+/- 55.2145 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:
Degradation of tetrachloroethylene to pentachloroethane may occur if solutions containing 2-chloroethyl vinyl ether are combined with solutions that contain tetrachloroethylene.

Reagent

VM569724_00016

VM569724_05016 Rcd: 7/13/18

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569724 **Lot No.:** A0137562

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2018 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Vinyl acetate	5,020.0 µg/mL	+/- 29.4602	µg/mL	Gravimetric
	CAS # 108-05-4 (Lot STBD7333V)		+/- 302.9053	µg/mL	Unstressed
	Purity 99%		+/- 303.6243	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Reagent

VM569724S_00019

Rcld : 7/13/18

VM5697245_00019

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569724.SEC **Lot No.:** A0137486

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2018 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Vinyl acetate	5,035.0 µg/mL	+/- 29.5482	µg/mL	Gravimetric
	CAS # 108-05-4.SEC (Lot F3Z5C)		+/- 303.8104	µg/mL	Unstressed
	Purity 99%		+/- 304.5316	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Reagent

VM569727_00002

VM569727_00002 Rec: 11/29/16 (10)

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Catalog No. : 569727 **Lot No.:** A0118487

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000 µg/ml, Water, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2019 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Cyclohexanone	25,000.4 µg/mL	+/- 146.3826 µg/mL	Gravimetric
	CAS # 108-94-1 (Lot MKBN5282V)		+/- 1.508.4819 µg/mL	Unstressed
	Purity 99%		+/- 1.512.0629 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Reagent

vm570806_00003

VM570806-00003 Rec: 12/1/17

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570806 **Lot No.:** A0126447

Description : 8260 List 2 / Std #4 Pentachloroethane

8260 List 2 / Std #4 Pentachloroethane 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Pentachloroethane	2,519.0 µg/mL	+/- 14.7829	µg/mL	Gravimetric
	CAS # 76-01-7 (Lot 160830B-BL2)		+/- 141.2521	µg/mL	Unstressed
	Purity 99%		+/- 144.5566	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

vm570807_00003

VM570807_00003
Rec: 12/1/17

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Catalog No. : 570807 **Lot No.:** A0125050

Description : 8260 List 2 / Std #5 Methylnaphthalenes

8260 List 2 / Std #5 Methylnaphthalenes 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Methylnaphthalene	2,511.8 µg/mL	+/- 14.7406	µg/mL	Gravimetric
	CAS # 91-57-6 (Lot STBF0201V)		+/- 140.8484	µg/mL	Unstressed
	Purity 95%		+/- 144.1434	µg/mL	Stressed
2	1-Methylnaphthalene	2,514.2 µg/mL	+/- 14.7547	µg/mL	Gravimetric
	CAS # 90-12-0 (Lot 523400-9)		+/- 140.9824	µg/mL	Unstressed
	Purity 98%		+/- 144.2806	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VM570808_00004

VM570808_00004 Rec: 1/11/18

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Catalog No. : 570808 **Lot No.:** A0132816

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2,500-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Propanol (isopropanol) **CAS #** 67-63-0 (Lot SHBG8138V) **Purity** 99%	25,038.4 µg/mL	+/- 146.6053 µg/mL +/- 1,238.7172 µg/mL +/- 1,269.5131 µg/mL	Gravimetric Unstressed Stressed
2	Chloroprene (2-chloro-1,3-butadiene) **CAS #** 126-99-8 (Lot 170628JLM) **Purity** 99%	2,522.0 µg/mL	+/- 14.8005 µg/mL +/- 124.7741 µg/mL +/- 127.8760 µg/mL	Gravimetric Unstressed Stressed
3	Methacrylonitrile **CAS #** 126-98-7 (Lot 1012014) **Purity** 99%	25,034.4 µg/mL	+/- 146.5819 µg/mL +/- 1,238.5193 µg/mL +/- 1,269.3102 µg/mL	Gravimetric Unstressed Stressed
4	2,2,4-Trimethylpentane (isooctane) **CAS #** 540-84-1 (Lot SHBF8066V) **Purity** 99%	2,512.8 µg/mL	+/- 14.7465 µg/mL +/- 124.3190 µg/mL +/- 127.4095 µg/mL	Gravimetric Unstressed Stressed
5	1-Butanol **CAS #** 71-36-3 (Lot SHBH5137V) **Purity** 98%	62,503.6 µg/mL	+/- 365.9535 µg/mL +/- 3,092.2204 µg/mL +/- 3,169.0963 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitropropane **CAS #** 79-46-9 (Lot BCBL0537V) **Purity** 98%	5,015.6 µg/mL	+/- 29.3677 µg/mL +/- 248.1373 µg/mL +/- 254.3062 µg/mL	Gravimetric Unstressed Stressed
7	1-Chlorohexane **CAS #** 544-10-5 (Lot 05107LK) **Purity** 98%	2,502.5 µg/mL	+/- 14.6862 µg/mL +/- 123.8108 µg/mL +/- 126.8886 µg/mL	Gravimetric Unstressed Stressed

8	1,2,3-Trimethylbenzene **CAS #** 526-73-8 **Purity** 97%	(Lot 877605-14)	2,505.7 µg/mL	+/- 14.7049 +/- 123.9679 +/- 127.0497	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Benzyl chloride **CAS #** 100-44-7 **Purity** 99%	(Lot SHBB7346V)	2,507.2 µg/mL	+/- 14.7137 +/- 124.0419 +/- 127.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3,5-Trichlorobenzene **CAS #** 108-70-3 **Purity** 99%	(Lot 11319AS)	2,502.4 µg/mL	+/- 14.6855 +/- 123.8044 +/- 126.8822	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

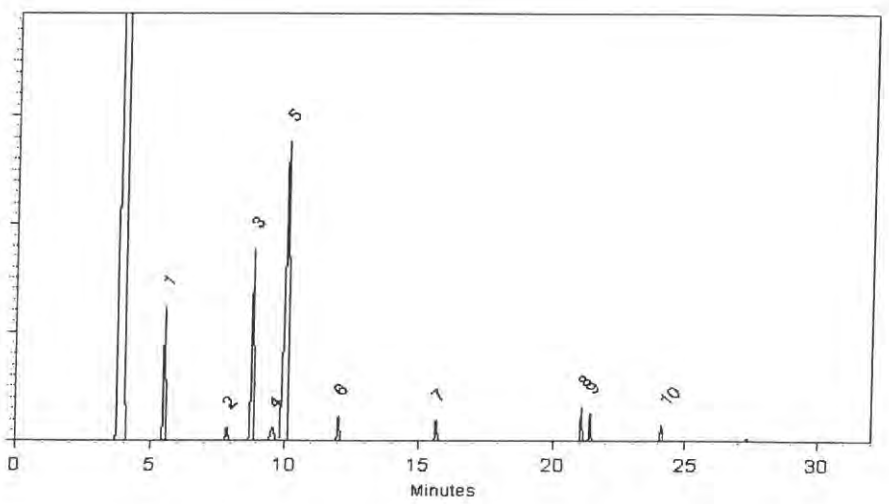
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust - Mix Technician

Date Mixed: 29-Nov-2017 **Balance:** B707717271

Amanda Miller - Operations Tech-ARM QC

Date Passed: 01-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

VM570808S_00005

Rec: 6/15/18 10 vials

VM570808S-00005

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570808.SEC **Lot No.:** A0135368

Description : 8260 List 2 / Std #6

8260 List 2 / Std #6 2,500-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Propanol (isopropanol) **CAS #** 67-63-0.SEC (Lot NWVYK) **Purity** 98%	24,998.8 µg/mL	+/- 146.3736 µg/mL +/- 1,236.7591 µg/mL +/- 1,267.5062 µg/mL	Gravimetric Unstressed Stressed
2	Chloroprene (2-chloro-1,3-butadiene) **CAS #** 126-99-8 * (Lot 180302JLM) **Purity** 99%	2,521.5 µg/mL	+/- 14.7976 µg/mL +/- 124.7494 µg/mL +/- 127.8506 µg/mL	Gravimetric Unstressed Stressed
3	Methacrylonitrile **CAS #** 126-98-7 * (Lot 1012014) **Purity** 99%	25,005.5 µg/mL	+/- 146.4127 µg/mL +/- 1,237.0896 µg/mL +/- 1,267.8449 µg/mL	Gravimetric Unstressed Stressed
4	2,2,4-Trimethylpentane (Isooctane) **CAS #** 540-84-1.SEC (Lot 4597900) **Purity** 99%	2,511.0 µg/mL	+/- 14.7360 µg/mL +/- 124.2299 µg/mL +/- 127.3182 µg/mL	Gravimetric Unstressed Stressed
5	1-Butanol **CAS #** 71-36-3.SEC (Lot QBO2D) **Purity** 99%	62,527.5 µg/mL	+/- 366.0934 µg/mL +/- 3,093.4020 µg/mL +/- 3,170.3073 µg/mL	Gravimetric Unstressed Stressed
6	2-Nitropropane **CAS #** 79-46-9.SEC (Lot Y4YWD) **Purity** 98%	5,030.3 µg/mL	+/- 29.4537 µg/mL +/- 248.8645 µg/mL +/- 255.0515 µg/mL	Gravimetric Unstressed Stressed
7	1-Chlorohexane **CAS #** 544-10-5.SEC (Lot 3890000) **Purity** 98%	2,506.8 µg/mL	+/- 14.7115 µg/mL +/- 124.0241 µg/mL +/- 127.1073 µg/mL	Gravimetric Unstressed Stressed

8	1,2,3-Trimethylbenzene **CAS #** 526-73-8.SEC **Purity** 92%	(Lot 7110200)	2,497.8 µg/mL	+/- 14.6585 +/- 123.5769 +/- 126.6489	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Benzyl chloride **CAS #** 100-44-7.SEC **Purity** 99%	(Lot H29N03)	2,522.5 µg/mL	+/- 14.8034 +/- 124.7989 +/- 127.9013	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,3,5-Trichlorobenzene **CAS #** 108-70-3.SEC **Purity** 99%	(Lot I28U021)	2,515.0 µg/mL	+/- 14.7594 +/- 124.4278 +/- 127.5210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

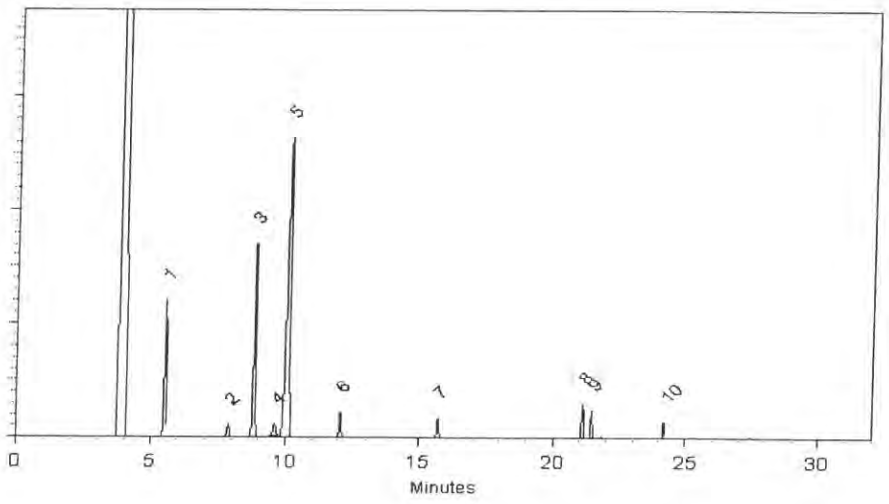
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Larry J. Moore - Mix Technician **Date Mixed:** 19-Feb-2018 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 12-Mar-2018

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

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Rec: 1/11/18
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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570809 **Lot No.:** A0131668

Description : 8260 List 2 / Std #7

8260 List 2 / Std #7 2,500-5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Ethyl acetate **CAS #** 141-78-6 (Lot SHBG6401V) **Purity** 99%	5,019.0 µg/mL	+/- 29.3873 µg/mL +/- 302.8385 µg/mL +/- 303.5574 µg/mL	Gravimetric Unstressed Stressed
2	Ethyl acrylate **CAS #** 140-88-5 (Lot 10129902) **Purity** 99%	2,521.0 µg/mL	+/- 14.7946 µg/mL +/- 152.1164 µg/mL +/- 152.4775 µg/mL	Gravimetric Unstressed Stressed
3	Methyl methacrylate **CAS #** 80-62-6 (Lot MKBV3172V) **Purity** 99%	5,027.5 µg/mL	+/- 29.4371 µg/mL +/- 303.3514 µg/mL +/- 304.0715 µg/mL	Gravimetric Unstressed Stressed
4	Butyl acetate **CAS #** 123-86-4 (Lot SHBH0056V) **Purity** 99%	2,512.0 µg/mL	+/- 14.7418 µg/mL +/- 151.5733 µg/mL +/- 151.9331 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VM571992_00002

Rec: 6/15/18 20 vials

VM571992_00002

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571992 **Lot No.:** A0123711

Description : 8260 List 1 / Std #1 MegaMix (2017)

8260 List 1 / Std #1 MegaMix (2017) 1,250-62,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7 (Lot SHBG1462V) **Purity** 99%	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 (Lot 00009482) **Purity** 99%	2,505.1 µg/mL	+/- 14.5650 +/- 151.1453 +/- 151.5041	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	1,1-dichloroethene **CAS #** 75-35-4 (Lot SHBG8609V) **Purity** 99%	2,511.5 µg/mL	+/- 14.6021 +/- 151.5299 +/- 151.8897	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0 (Lot SHBF0688V) **Purity** 99%	25,001.8 µg/mL	+/- 145.3547 +/- 1,508.4656 +/- 1,512.0470	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate **CAS #** 79-20-9 (Lot SHBG4345V) **Purity** 99%	5,000.5 µg/mL	+/- 29.0733 +/- 301.7023 +/- 302.4186	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) **CAS #** 74-88-4 (Lot SHBF2149V) **Purity** 99%	2,502.9 µg/mL	+/- 14.5519 +/- 151.0095 +/- 151.3681	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1 (Lot SHBF8133V) **Purity** 99%	2,517.1 µg/mL	+/- 14.6348 +/- 151.8693 +/- 152.2299	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane) **CAS #** 75-09-2 **Purity** 99%	(Lot SHBH2578V)	2,502.1 µg/mL	+/- 14.5476 +/- 150.9643 +/- 151.3227	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide **CAS #** 75-15-0 **Purity** 99%	(Lot S20A856)	2,501.4 µg/mL	+/- 14.5432 +/- 150.9190 +/- 151.2773	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile **CAS #** 107-13-1 **Purity** 99%	(Lot T07B2030)	25,001.3 µg/mL	+/- 145.3518 +/- 1,508.4355 +/- 1,512.0167	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Methyl-tert-butyl ether (MTBE) **CAS #** 1634-04-4 **Purity** 99%	(Lot SHBG2655V)	2,505.3 µg/mL	+/- 14.5657 +/- 151.1528 +/- 151.5117	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	cis-1,2-Dichloroethene **CAS #** 156-59-2 **Purity** 98%	(Lot MKBV2831V)	2,500.5 µg/mL	+/- 14.5379 +/- 150.8644 +/- 151.2226	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Hexane (C6) **CAS #** 110-54-3 **Purity** 99%	(Lot SHBG2674V)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	1,1-Dichloroethane **CAS #** 75-34-3 **Purity** 99%	(Lot 00008621)	2,500.4 µg/mL	+/- 14.5374 +/- 150.8587 +/- 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	2,2-Dichloropropane **CAS #** 594-20-7 **Purity** 98%	(Lot BCBR0622V)	2,501.0 µg/mL	+/- 14.5408 +/- 150.8940 +/- 151.2522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	trans-1,2-Dichloroethene **CAS #** 156-60-5 **Purity** 99%	(Lot 09431AEV)	2,503.8 µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Isobutanol (2-Methyl-1-propanol) **CAS #** 78-83-1 **Purity** 99%	(Lot SHBG8201V)	62,512.5 µg/mL	+/- 363.4341 +/- 3,771.6543 +/- 3,780.6088	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	chloroform **CAS #** 67-66-3 **Purity** 99%	(Lot MKBV2089V)	2,501.9 µg/mL	+/- 14.5461 +/- 150.9492 +/- 151.3076	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Bromochloromethane **CAS #** 74-97-5 **Purity** 99%	(Lot 00004559)	2,503.3 µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Tetrahydrofuran **CAS #** 109-99-9 **Purity** 99%	(Lot SHBG2910V)	5,001.3 µg/mL	+/- 29.0777 +/- 301.7476 +/- 302.4640	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	1,1,1-trichloroethane **CAS #** 71-55-6 **Purity** 99%	(Lot B15W12061)	2,500.3 µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	Cyclohexane **CAS #** 110-82-7 **Purity** 99%	(Lot MKBX4768V)	2,502.0 µg/mL	+/- 14.5468 +/- 150.9567 +/- 151.3151	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	1,1-Dichloropropene **CAS #** 563-58-6 **Purity** 99%	(Lot 160727JLM)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	carbon tetrachloride **CAS #** 56-23-5 **Purity** 99%	(Lot SHBG1763V)	2,503.3 µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	n-Heptane (C7) **CAS #** 142-82-5 **Purity** 99%	(Lot SHBG6171V)	2,505.5 µg/mL	+/- 14.5672 +/- 151.1679 +/- 151.5268	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2-Dichloroethane **CAS #** 107-06-2 **Purity** 99%	(Lot SHBF9313V)	2,504.8 µg/mL	+/- 14.5628 +/- 151.1227 +/- 151.4815	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Benzene **CAS #** 71-43-2 **Purity** 99%	(Lot SHBH2056V)	2,506.9 µg/mL	+/- 14.5752 +/- 151.2509 +/- 151.6100	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Trichloroethene **CAS #** 79-01-6 **Purity** 99%	(Lot SHBH1955V)	2,502.4 µg/mL	+/- 14.5490 +/- 150.9794 +/- 151.3378	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Methylcyclohexane **CAS #** 108-87-2 **Purity** 98%	(Lot SHBG0634V)	2,500.3 µg/mL	+/- 14.5372 +/- 150.8570 +/- 151.2152	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane **CAS #** 78-87-5 **Purity** 99%	(Lot 01113D0V)	2,503.0 µg/mL	+/- 14.5527 +/- 151.0171 +/- 151.3756	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1 **Purity** 99%	(Lot SHBH2584V)	50,011.4 µg/mL	+/- 290.7552 +/- 3,017.4064 +/- 3,024.5702	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3 **Purity** 98%	(Lot 10183283)	2,501.9 µg/mL	+/- 14.5465 +/- 150.9531 +/- 151.3115	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene **CAS #** 10061-01-5 **Purity** 99%	(Lot 22622)	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene **CAS #** 108-88-3 **Purity** 99%	(Lot SHBH1932V)	2,504.3 µg/mL	+/- 14.5599 +/- 151.0925 +/- 151.4512	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate **CAS #** 97-63-2 **Purity** 99%	(Lot SHBD9190V)	2,506.9 µg/mL	+/- 14.5752 +/- 151.2509 +/- 151.6100	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene **CAS #** 10061-02-6 **Purity** 99%	(Lot C584177)	2,503.6 µg/mL	+/- 14.5563 +/- 151.0548 +/- 151.4134	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane **CAS #** 79-00-5 **Purity** 99%	(Lot FGB01)	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane **CAS #** 142-28-9 **Purity** 99%	(Lot BCBG2162V)	2,503.5 µg/mL	+/- 14.5556 +/- 151.0472 +/- 151.4059	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene **CAS #** 127-18-4 **Purity** 99%	(Lot SHBD9374V)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	dibromochloromethane **CAS #** 124-48-1 **Purity** 98%	(Lot MKBW3597V)	2,500.2	µg/mL	+/- 14.5365 +/- 150.8497 +/- 151.2078	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) **CAS #** 106-93-4 **Purity** 99%	(Lot BCBH3877V)	2,501.3	µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene **CAS #** 108-90-7 **Purity** 99%	(Lot SHBF0505V)	2,500.1	µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot SHBG4347V)	1,250.3	µg/mL	+/- 7.2691 +/- 75.4331 +/- 75.6122	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	p-Xylene **CAS #** 106-42-3 **Purity** 99%	(Lot SHBG3928V)	1,251.3	µg/mL	+/- 7.2749 +/- 75.4935 +/- 75.6727	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Ethylbenzene **CAS #** 100-41-4 **Purity** 99%	(Lot SHBG5920V)	2,503.3	µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	1,1,1,2-Tetrachloroethane **CAS #** 630-20-6 **Purity** 99%	(Lot MKBS3769V)	2,500.3	µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene **CAS #** 95-47-6 **Purity** 99%	(Lot SHBH3432V)	2,504.9	µg/mL	+/- 14.5636 +/- 151.1302 +/- 151.4890	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Styrene **CAS #** 100-42-5 **Purity** 99%	(Lot MKBS7097V)	2,506.3	µg/mL	+/- 14.5716 +/- 151.2132 +/- 151.5722	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) **CAS #** 98-82-8 **Purity** 99%	(Lot 10185056)	2,501.6	µg/mL	+/- 14.5447 +/- 150.9341 +/- 151.2925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	bromoform **CAS #** 75-25-2 **Purity** 99%	(Lot SHBD8459V)	2,502.9	µg/mL	+/- 14.5519 +/- 151.0095 +/- 151.3681	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	bromodichloromethane **CAS #** 75-27-4 **Purity** 97%	(Lot MKBW5506V)	2,506.8	µg/mL	+/- 14.5750 +/- 151.2490 +/- 151.6081	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	1,1,2,2-Tetrachloroethane **CAS #** 79-34-5 **Purity** 99%	(Lot CFA4D)	2,501.3	µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane **CAS #** 96-18-4 **Purity** 99%	(Lot BCBH8722V)	2,508.5	µg/mL	+/- 14.5846 +/- 151.3489 +/- 151.7082	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-dichloro-2-butene **CAS #** 110-57-6 **Purity** 95%	(Lot MKBP6041V)	2,500.8	µg/mL	+/- 14.5396 +/- 150.8817 +/- 151.2399	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene **CAS #** 103-65-1 **Purity** 99%	(Lot MKBJ0332V)	2,501.9	µg/mL	+/- 14.5461 +/- 150.9492 +/- 151.3076	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Bromobenzene **CAS #** 108-86-1 **Purity** 99%	(Lot MKBD4032V)	2,507.0	µg/mL	+/- 14.5759 +/- 151.2584 +/- 151.6175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,3,5-Trimethylbenzene **CAS #** 108-67-8 **Purity** 99%	(Lot BCBQ2165V)	2,501.1	µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene **CAS #** 95-49-8 **Purity** 99%	(Lot MKBW5554V)	2,500.6	µg/mL	+/- 14.5388 +/- 150.8738 +/- 151.2320	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene **CAS #** 106-43-4 **Purity** 99%	(Lot MKBL7753V)	2,501.3	µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene **CAS #** 98-06-6 **Purity** 99%	(Lot S52237V)	2,507.0	µg/mL	+/- 14.5759 +/- 151.2584 +/- 151.6175	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,2,4-Trimethylbenzene **CAS #** 95-63-6 **Purity** 98%	(Lot MKBJ6229V)	2,500.8	µg/mL	+/- 14.5401 +/- 150.8866 +/- 151.2448	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene **CAS #** 135-98-8 **Purity** 99%	(Lot MKBR9260V)	2,505.4	µg/mL	+/- 14.5665 +/- 151.1604 +/- 151.5193	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	p-Isopropyltoluene (p-Cymene) **CAS #** 99-87-6 **Purity** 99%	(Lot MKBS2604V)	2,503.8	µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBM5751V)	2,503.9	µg/mL	+/- 14.5577 +/- 151.0699 +/- 151.4285	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBS1350V)	2,509.9	µg/mL	+/- 14.5926 +/- 151.4319 +/- 151.7914	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene **CAS #** 104-51-8 **Purity** 99%	(Lot 09418JJV)	2,503.3	µg/mL	+/- 14.5541 +/- 151.0322 +/- 151.3907	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot SHBD7331V)	2,503.8	µg/mL	+/- 14.5570 +/- 151.0623 +/- 151.4210	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane **CAS #** 96-12-8 **Purity** 99%	(Lot FBL01)	2,505.0	µg/mL	+/- 14.5643 +/- 151.1378 +/- 151.4966	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene **CAS #** 120-82-1 **Purity** 99%	(Lot SHBC5541V)	2,505.3	µg/mL	+/- 14.5657 +/- 151.1528 +/- 151.5117	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene **CAS #** 87-68-3 **Purity** 98%	(Lot J31X013)	2,506.5	µg/mL	+/- 14.5728 +/- 151.2266 +/- 151.5856	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBW2603V)	2,500.9	µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene		2,511.1 µg/mL	+/-	14.5999	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot 12912PFV)		+/-	151.5073	µg/mL	Unstressed
	Purity 99%			+/-	151.8670	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

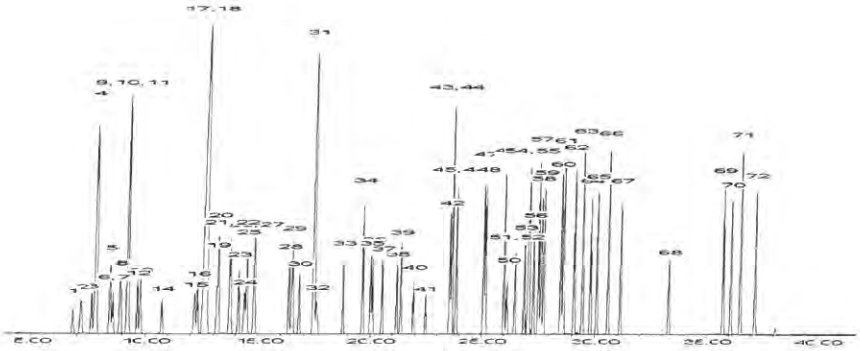
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician **Date Mixed:** 22-Dec-2016 **Balance:** B251644995

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 04-Jan-2017

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

VM571992S_00001

Rec: 1-25-17
VMS71992S-00001

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571992.sec **Lot No.:** A0123775

Description : 8260 List 1 / Std #1 MegaMix (2017)

8260 List 1 / Std #1 MegaMix (2017) 1250-62500 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7.SEC (Lot F23X068) **Purity** 98%	2,501.2 µg/mL	+/- 14.5422 µg/mL +/- 150.9088 µg/mL +/- 151.2671 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1.SEC (Lot 18342) **Purity** 99%	2,501.1 µg/mL	+/- 14.5418 µg/mL +/- 150.9040 µg/mL +/- 151.2622 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethene **CAS #** 75-35-4.SEC (Lot 2767000) **Purity** 99%	2,500.5 µg/mL	+/- 14.5381 µg/mL +/- 150.8662 µg/mL +/- 151.2244 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0.SEC (Lot XYXDO) **Purity** 98%	25,003.1 µg/mL	+/- 145.3626 µg/mL +/- 1,508.5475 µg/mL +/- 1,512.1291 µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate **CAS #** 79-20-9.SEC (Lot YDGVD) **Purity** 99%	5,000.4 µg/mL	+/- 29.0726 µg/mL +/- 301.6948 µg/mL +/- 302.4111 µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) **CAS #** 74-88-4.SEC (Lot Y25A027) **Purity** 99%	2,500.4 µg/mL	+/- 14.5374 µg/mL +/- 150.8587 µg/mL +/- 151.2169 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1.SEC (Lot VEBOC) **Purity** 98%	2,500.1 µg/mL	+/- 14.5358 µg/mL +/- 150.8423 µg/mL +/- 151.2004 µg/mL	Gravimetric Unstressed Stressed

8	Methylene chloride (dichloromethane) **CAS #** 75-09-2.SEC (Lot FGM02) **Purity** 99%	2,500.8 µg/mL	+/- 14.5396 +/- 150.8813 +/- 151.2395	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide **CAS #** 75-15-0.SEC (Lot MKBL1376V) **Purity** 99%	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile **CAS #** 107-13-1.SEC (Lot UERIL) **Purity** 99%	25,000.9 µg/mL	+/- 145.3496 +/- 1,508.4128 +/- 1,511.9941	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Methyl-tert-butyl ether (MTBE) **CAS #** 1634-04-4.SEC (Lot ZAQTA-MS) **Purity** 99%	2,500.0 µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	cis-1,2-Dichloroethene **CAS #** 156-59-2.SEC (Lot HGC01-BLKT) **Purity** 98%	2,500.7 µg/mL	+/- 14.5394 +/- 150.8792 +/- 151.2374	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Hexane (C6) **CAS #** 110-54-3.SEC (Lot 10188491) **Purity** 99%	2,501.5 µg/mL	+/- 14.5439 +/- 150.9266 +/- 151.2849	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	1,1-Dichloroethane **CAS #** 75-34-3.SEC (Lot 5379000) **Purity** 99%	2,500.3 µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	2,2-Dichloropropane **CAS #** 594-20-7.SEC (Lot I7E8E) **Purity** 98%	2,500.1 µg/mL	+/- 14.5358 +/- 150.8423 +/- 151.2004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	trans-1,2-Dichloroethene **CAS #** 156-60-5.SEC (Lot TS5UB) **Purity** 97%	2,500.2 µg/mL	+/- 14.5362 +/- 150.8466 +/- 151.2048	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Isobutanol (2-Methyl-1-propanol) **CAS #** 78-83-1.SEC (Lot 83NHH) **Purity** 99%	62,506.9 µg/mL	+/- 363.4014 +/- 3,771.3149 +/- 3,780.2687	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Chloroform **CAS #** 67-66-3.SEC (Lot 1297547) **Purity** 99%	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Bromochloromethane **CAS #** 74-97-5.SEC (Lot 5670200) **Purity** 99%	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Tetrahydrofuran **CAS #** 109-99-9.SEC (Lot K3V7J-SJ) **Purity** 99%	5,002.3 µg/mL	+/- 29.0835 +/- 301.8079 +/- 302.5245	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	1,1,1-Trichloroethane **CAS #** 71-55-6.SEC (Lot CS160712) **Purity** 98%	2,500.7 µg/mL	+/- 14.5394 +/- 150.8792 +/- 151.2374	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	Cyclohexane **CAS #** 110-82-7.SEC (Lot YADRA) **Purity** 99%	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	1,1-Dichloropropene **CAS #** 563-58-6.SEC (Lot 5221100) **Purity** 96%	2,501.3 µg/mL	+/- 14.5427 +/- 150.9133 +/- 151.2716	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Carbon tetrachloride **CAS #** 56-23-5.SEC **Purity** 99%	(Lot 11466)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	n-Heptane (C7) **CAS #** 142-82-5.SEC **Purity** 99%	(Lot OGM01)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2-Dichloroethane **CAS #** 107-06-2.SEC **Purity** 99%	(Lot FO6PK)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Benzene **CAS #** 71-43-2.SEC **Purity** 99%	(Lot B28Y008)	2,501.5 µg/mL	+/- 14.5439 +/- 150.9266 +/- 151.2849	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Trichloroethene **CAS #** 79-01-6.SEC **Purity** 99%	(Lot H04X050)	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Methylcyclohexane **CAS #** 108-87-2.SEC **Purity** 99%	(Lot 24MSD-CD)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane **CAS #** 78-87-5.SEC **Purity** 99%	(Lot OGG01)	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1.SEC **Purity** 99%	(Lot MUFZH)	50,007.1 µg/mL	+/- 290.7305 +/- 3,017.1500 +/- 3,024.3132	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3.SEC **Purity** 99%	(Lot FGI01-OICH)	2,501.6 µg/mL	+/- 14.5447 +/- 150.9341 +/- 151.2925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene **CAS #** 10061-01-5.SEC **Purity** 99%	(Lot 487OA)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene **CAS #** 108-88-3.SEC **Purity** 99%	(Lot YND2B-BD)	2,500.0 µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate **CAS #** 97-63-2.SEC **Purity** 99%	(Lot MLWYK-LS)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene **CAS #** 10061-02-6.SEC **Purity** 99%	(Lot ZDMSL)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane **CAS #** 79-00-5.SEC **Purity** 98%	(Lot 5034600)	2,500.8 µg/mL	+/- 14.5401 +/- 150.8866 +/- 151.2448	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane **CAS #** 142-28-9.SEC **Purity** 99%	(Lot AGN01-EFPC)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene **CAS #** 127-18-4.SEC **Purity** 99%	(Lot F09W014)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	Dibromochloromethane		2,500.4	µg/mL	+/- 14.5376	µg/mL	Gravimetric
	CAS # 124-48-1.SEC	(Lot 10181507)			+/- 150.8613	µg/mL	Unstressed
	Purity 97%				+/- 151.2194	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,500.5	µg/mL	+/- 14.5381	µg/mL	Gravimetric
	CAS # 106-93-4.SEC	(Lot 3505900)			+/- 150.8662	µg/mL	Unstressed
	Purity 99%				+/- 151.2244	µg/mL	Stressed
42	Chlorobenzene		2,501.0	µg/mL	+/- 14.5410	µg/mL	Gravimetric
	CAS # 108-90-7.SEC	(Lot 1161936)			+/- 150.8964	µg/mL	Unstressed
	Purity 99%				+/- 151.2547	µg/mL	Stressed
43	m-Xylene		1,250.9	µg/mL	+/- 7.2727	µg/mL	Gravimetric
	CAS # 108-38-3.SEC	(Lot OUKMG-GB)			+/- 75.4708	µg/mL	Unstressed
	Purity 99%				+/- 75.6500	µg/mL	Stressed
44	p-Xylene		1,250.5	µg/mL	+/- 7.2705	µg/mL	Gravimetric
	CAS # 106-42-3.SEC	(Lot GM01)			+/- 75.4482	µg/mL	Unstressed
	Purity 99%				+/- 75.6273	µg/mL	Stressed
45	Ethylbenzene		2,500.9	µg/mL	+/- 14.5403	µg/mL	Gravimetric
	CAS # 100-41-4.SEC	(Lot PI4SE)			+/- 150.8889	µg/mL	Unstressed
	Purity 99%				+/- 151.2471	µg/mL	Stressed
46	1,1,1,2-Tetrachloroethane		2,501.1	µg/mL	+/- 14.5418	µg/mL	Gravimetric
	CAS # 630-20-6.SEC	(Lot GC01)			+/- 150.9040	µg/mL	Unstressed
	Purity 99%				+/- 151.2622	µg/mL	Stressed
47	o-Xylene		2,500.9	µg/mL	+/- 14.5403	µg/mL	Gravimetric
	CAS # 95-47-6.SEC	(Lot FGL01-KTPK)			+/- 150.8889	µg/mL	Unstressed
	Purity 99%				+/- 151.2471	µg/mL	Stressed
48	Styrene		2,500.4	µg/mL	+/- 14.5374	µg/mL	Gravimetric
	CAS # 100-42-5.SEC	(Lot OFIOL-IA)			+/- 150.8587	µg/mL	Unstressed
	Purity 99%				+/- 151.2169	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,500.5	µg/mL	+/- 14.5381	µg/mL	Gravimetric
	CAS # 98-82-8.SEC	(Lot 2PHXG-IH)			+/- 150.8662	µg/mL	Unstressed
	Purity 99%				+/- 151.2244	µg/mL	Stressed
50	Bromoform		2,502.3	µg/mL	+/- 14.5483	µg/mL	Gravimetric
	CAS # 75-25-2.SEC	(Lot 5139000)			+/- 150.9718	µg/mL	Unstressed
	Purity 99%				+/- 151.3303	µg/mL	Stressed
51	Bromodichloromethane		2,500.1	µg/mL	+/- 14.5358	µg/mL	Gravimetric
	CAS # 75-27-4.SEC	(Lot 13780)			+/- 150.8423	µg/mL	Unstressed
	Purity 98%				+/- 151.2004	µg/mL	Stressed
52	1,1,2,2-Tetrachloroethane		2,501.3	µg/mL	+/- 14.5425	µg/mL	Gravimetric
	CAS # 79-34-5.SEC	(Lot CFA4D-AQ)			+/- 150.9115	µg/mL	Unstressed
	Purity 99%				+/- 151.2698	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,500.1	µg/mL	+/- 14.5358	µg/mL	Gravimetric
	CAS # 96-18-4.SEC	(Lot OGI01)			+/- 150.8423	µg/mL	Unstressed
	Purity 98%				+/- 151.2004	µg/mL	Stressed
54	trans-1,4-Dichloro-2-butene		2,501.0	µg/mL	+/- 14.5408	µg/mL	Gravimetric
	CAS # 110-57-6.SEC	(Lot 100700-3)			+/- 150.8940	µg/mL	Unstressed
	Purity 98%				+/- 151.2522	µg/mL	Stressed
55	n-Propylbenzene		2,500.0	µg/mL	+/- 14.5352	µg/mL	Gravimetric
	CAS # 103-65-1.SEC	(Lot T2HFC-IT)			+/- 150.8361	µg/mL	Unstressed
	Purity 99%				+/- 151.1942	µg/mL	Stressed

56	Bromobenzene		2,500.1	µg/mL	+/-	14.5359	µg/mL	Gravimetric
	CAS # 108-86-1.SEC	(Lot 2FUHG-EM)			+/-	150.8436	µg/mL	Unstressed
	Purity 99%				+/-	151.2017	µg/mL	Stressed
57	1,3,5-Trimethylbenzene		2,500.3	µg/mL	+/-	14.5367	µg/mL	Gravimetric
	CAS # 108-67-8.SEC	(Lot TOOOF)			+/-	150.8512	µg/mL	Unstressed
	Purity 99%				+/-	151.2093	µg/mL	Stressed
58	2-Chlorotoluene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 95-49-8.SEC	(Lot SW8QG-AO)			+/-	150.8889	µg/mL	Unstressed
	Purity 99%				+/-	151.2471	µg/mL	Stressed
59	4-Chlorotoluene		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 106-43-4.SEC	(Lot P4XHJ-AO)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
60	tert-Butylbenzene		2,500.1	µg/mL	+/-	14.5359	µg/mL	Gravimetric
	CAS # 98-06-6.SEC	(Lot OGN01-CAI)			+/-	150.8436	µg/mL	Unstressed
	Purity 99%				+/-	151.2017	µg/mL	Stressed
61	1,2,4-Trimethylbenzene		2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
	CAS # 95-63-6.SEC	(Lot SC7LO-QA)			+/-	150.8587	µg/mL	Unstressed
	Purity 99%				+/-	151.2169	µg/mL	Stressed
62	sec-Butylbenzene		2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
	CAS # 135-98-8.SEC	(Lot OGN01-IMA)			+/-	150.9190	µg/mL	Unstressed
	Purity 99%				+/-	151.2773	µg/mL	Stressed
63	4-Isopropyltoluene (p-cymene)		2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
	CAS # 99-87-6.SEC	(Lot 5221800)			+/-	150.9115	µg/mL	Unstressed
	Purity 99%				+/-	151.2698	µg/mL	Stressed
64	1,3-Dichlorobenzene		2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
	CAS # 541-73-1.SEC	(Lot FMDFD)			+/-	150.8889	µg/mL	Unstressed
	Purity 99%				+/-	151.2471	µg/mL	Stressed
65	1,4-Dichlorobenzene		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 106-46-7.SEC	(Lot 4Y5DC)			+/-	150.8813	µg/mL	Unstressed
	Purity 99%				+/-	151.2395	µg/mL	Stressed
66	n-Butylbenzene		2,500.8	µg/mL	+/-	14.5396	µg/mL	Gravimetric
	CAS # 104-51-8.SEC	(Lot OGN01-PNP)			+/-	150.8813	µg/mL	Unstressed
	Purity 99%				+/-	151.2395	µg/mL	Stressed
67	1,2-Dichlorobenzene		2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
	CAS # 95-50-1.SEC	(Lot R6QDM)			+/-	150.8964	µg/mL	Unstressed
	Purity 99%				+/-	151.2547	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane		2,501.5	µg/mL	+/-	14.5436	µg/mL	Gravimetric
	CAS # 96-12-8.SEC	(Lot LC00408V)			+/-	150.9236	µg/mL	Unstressed
	Purity 98%				+/-	151.2819	µg/mL	Stressed
69	1,2,4-Trichlorobenzene		2,502.5	µg/mL	+/-	14.5498	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot 3LYYC)			+/-	150.9869	µg/mL	Unstressed
	Purity 99%				+/-	151.3454	µg/mL	Stressed
70	Hexachlorobutadiene		2,501.4	µg/mL	+/-	14.5433	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 5526800)			+/-	150.9198	µg/mL	Unstressed
	Purity 97%				+/-	151.2781	µg/mL	Stressed
71	Naphthalene		2,501.8	µg/mL	+/-	14.5454	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot SKZ5N)			+/-	150.9417	µg/mL	Unstressed
	Purity 99%				+/-	151.3000	µg/mL	Stressed

72	1,2,3-Trichlorobenzene		2,500.7 µg/mL	+/-	14.5394	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)		+/-	150.8792	µg/mL	Unstressed
	Purity 98%			+/-	151.2374	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

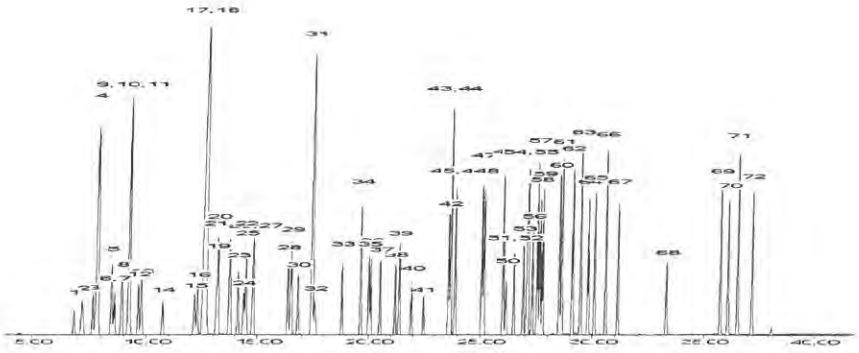
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 28-Dec-2016 **Balance:** 1127510105

Jennifer L Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 04-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

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VM571993-0001 Rec: 2-1-17

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571993 **Lot No.:** A0123796

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2500-25,000 µg/ml, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile **CAS #** 75-05-8 (Lot SHBB3177V) **Purity** 98%	25,004.5 µg/mL	+/- 145.3705 µg/mL +/- 1,236.9157 µg/mL +/- 1,267.6727 µg/mL	Gravimetric Unstressed Stressed
2	Diisopropyl ether (DIPE) **CAS #** 108-20-3 (Lot SHBC0391V) **Purity** 99%	2,505.0 µg/mL	+/- 14.5643 µg/mL +/- 123.9170 µg/mL +/- 126.9983 µg/mL	Gravimetric Unstressed Stressed
3	Ethyl-tert-butyl ether (ETBE) **CAS #** 637-92-3 (Lot MKBT8400V) **Purity** 99%	2,501.5 µg/mL	+/- 14.5439 µg/mL +/- 123.7438 µg/mL +/- 126.8208 µg/mL	Gravimetric Unstressed Stressed
4	Propionitrile **CAS #** 107-12-0 (Lot BCBM6569V) **Purity** 99%	25,003.8 µg/mL	+/- 145.3664 µg/mL +/- 1,236.8808 µg/mL +/- 1,267.6370 µg/mL	Gravimetric Unstressed Stressed
5	tert-Amyl alcohol **CAS #** 75-85-4 (Lot STBB1898V) **Purity** 99%	25,006.0 µg/mL	+/- 145.3794 µg/mL +/- 1,236.9921 µg/mL +/- 1,267.7510 µg/mL	Gravimetric Unstressed Stressed
6	tert-Amyl methyl ether (TAME) **CAS #** 994-05-8 (Lot HMBD8698V) **Purity** 98%	2,505.4 µg/mL	+/- 14.5664 µg/mL +/- 123.9353 µg/mL +/- 127.0170 µg/mL	Gravimetric Unstressed Stressed

Reagent

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Rec: 2-1-17

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571993.sec **Lot No.:** A0123771

Description : 8260 List 3/ Std#1 Polar Additions (2017)

8260 List 3/ Std#1 Polar Additions (2017) 2500-25,000 µg/ml, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetonitrile **CAS #** 75-05-8.SEC (Lot 7KGDA) **Purity** 99%	25,091.5 µg/mL	+/- 146.9162 µg/mL +/- 1,241.3442 µg/mL +/- 1,272.2054 µg/mL	Gravimetric Unstressed Stressed
2	Diisopropyl ether (DIPE) **CAS #** 108-20-3.SEC (Lot LL7TN-SH) **Purity** 98%	2,525.0 µg/mL	+/- 14.8179 µg/mL +/- 124.9211 µg/mL +/- 128.0265 µg/mL	Gravimetric Unstressed Stressed
3	Ethyl-tert-butyl ether (ETBE) **CAS #** 637-92-3.SEC (Lot MHBJG-QK) **Purity** 99%	2,509.0 µg/mL	+/- 14.7242 µg/mL +/- 124.1310 µg/mL +/- 127.2168 µg/mL	Gravimetric Unstressed Stressed
4	Propionitrile **CAS #** 107-12-0.SEC (Lot RTXQL) **Purity** 99%	25,125.5 µg/mL	+/- 147.1153 µg/mL +/- 1,243.0263 µg/mL +/- 1,273.9293 µg/mL	Gravimetric Unstressed Stressed
5	tert-Amyl alcohol **CAS #** 75-85-4.SEC (Lot MMGO1) **Purity** 99%	25,056.0 µg/mL	+/- 146.7084 µg/mL +/- 1,239.5880 µg/mL +/- 1,270.4054 µg/mL	Gravimetric Unstressed Stressed
6	tert-Amyl methyl ether (TAME) **CAS #** 994-05-8.SEC (Lot 5614600) **Purity** 99%	2,517.5 µg/mL	+/- 14.7741 µg/mL +/- 124.5515 µg/mL +/- 127.6478 µg/mL	Gravimetric Unstressed Stressed

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
WC-EFSOIL-011819	240-107194-2	100	105	97	96
	MB 240-365072/7	92	100	91	89
	LCS 240-365072/6	89	92	93	96
WC-EFSOIL-011819 MS	240-107194-2 MS	94	98	102	104
WC-EFSOIL-011819 MSD	240-107194-2 MSD	101	103	104	107

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	49-132
DCA = 1,2-Dichloroethane-d4 (Surr)	48-123
TOL = Toluene-d8 (Surr)	62-135
BFB = 4-Bromofluorobenzene (Surr)	49-141

Column to be used to flag recovery values

FORM II 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-011819	240-107194-1	87	74	93	94
	MB 240-365336/8	96	92	95	101
	LCS 240-365336/6	92	93	96	106
	240-107188-B-1 MS	90	82	98	108
	240-107188-C-1 MSD	82	68 X	96	95

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82265.D

Lab ID: LCS 240-365072/6 Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	23.9	96	73-124	
1,1-Dichloropropene	25.0	25.6	103	72-127	
1,1-Dichloroethane	25.0	24.5	98	72-122	
1,2,3-Trichlorobenzene	25.0	18.8	75	59-120	
1,2,3-Trichloropropane	25.0	21.4	86	68-128	
1,2-Dichloroethane	25.0	24.2	97	64-126	
1,1-Dichloroethene	25.0	26.1	104	57-139	
1,2-Dichloropropane	25.0	25.3	101	78-122	
1,2,4-Trimethylbenzene	25.0	21.6	87	75-121	
2-Hexanone	50.0	48.0	96	52-145	
1,1,2,2-Tetrachloroethane	25.0	19.8	79	68-128	
Acetone	50.0	53.6	107	43-159	
Benzene	25.0	24.9	100	74-123	
Bromoform	25.0	20.6	83	46-137	
Bromomethane	25.0	24.4	97	10-152	
Carbon disulfide	25.0	26.0	104	29-153	
Carbon tetrachloride	25.0	26.7	107	56-139	
1,1,1-Trichloroethane	25.0	26.5	106	64-135	
Chlorobenzene	25.0	22.1	89	80-120	
1,3-Dichloropropane	25.0	22.9	92	76-120	
Chloroethane	25.0	23.3	93	15-155	
1,2-Dibromo-3-Chloropropane	25.0	20.1	80	38-135	
Chloroform	25.0	24.4	98	72-124	
Chloromethane	25.0	22.7	91	45-128	
cis-1,2-Dichloroethene	25.0	24.9	100	74-123	
cis-1,3-Dichloropropene	25.0	24.1	97	63-137	
Bromodichloromethane	25.0	24.8	99	63-132	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	25.9	104	56-138	
Dichlorodifluoromethane	25.0	22.6	90	26-138	
1,2,4-Trichlorobenzene	25.0	17.2	69	54-120	
Ethylbenzene	25.0	25.0	100	76-120	
1,2-Dibromoethane	25.0	23.8	95	76-120	
2,2-Dichloropropane	25.0	22.7	91	42-143	
1,2-Dichlorobenzene	25.0	21.1	84	73-120	
1,3-Dichlorobenzene	25.0	20.5	82	70-120	
1,4-Dichlorobenzene	25.0	20.3	81	71-120	
2-Chloroethyl vinyl ether	25.0	21.2 J	85	58-154	
Isopropylbenzene	25.0	25.0	100	77-124	
2-Chlorotoluene	25.0	21.0	84	75-120	
2-Butanone (MEK)	50.0	53.9	108	45-148	
4-Methyl-2-pentanone (MIBK)	50.0	49.3	99	53-139	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82265.D

Lab ID: LCS 240-365072/6 Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Bromobenzene	25.0	21.0	84	75-120	
Methyl tert-butyl ether	25.0	23.3	93	66-127	
Bromochloromethane	25.0	24.0	96	72-124	
Methylene Chloride	25.0	25.4	102	62-137	
4-Chlorotoluene	25.0	21.7	87	74-121	
p-Isopropyltoluene	25.0	22.5	90	74-124	
Styrene	25.0	23.2	93	76-121	
m-Xylene & p-Xylene	25.0	24.9	99	77-120	
o-Xylene	25.0	25.3	101	79-120	
Hexachlorobutadiene	25.0	21.0	84	58-122	
Tetrachloroethene	25.0	24.1	96	76-120	
Dibromomethane	25.0	25.0	100	71-122	
Toluene	25.0	24.6	98	76-120	
Naphthalene	25.0	17.2	69	51-120	
trans-1,2-Dichloroethene	25.0	25.7	103	71-133	
n-Butylbenzene	25.0	22.0	88	64-133	
trans-1,3-Dichloropropene	25.0	20.9	84	55-121	
N-Propylbenzene	25.0	22.7	91	73-129	
Trichloroethene	25.0	25.9	104	73-126	
sec-Butylbenzene	25.0	22.4	89	73-126	
Trichlorofluoromethane	25.0	24.5	98	47-146	
tert-Butylbenzene	25.0	23.1	92	73-122	
Vinyl chloride	25.0	24.7	99	52-130	
Vinyl acetate	25.0	21.9	87	43-144	
tert-Butyl alcohol	250	190 J	76	41-139	
Xylenes, Total	50.0	50.2	100	79-120	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX9249.D

Lab ID: LCS 240-365336/6 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	11.0	110	80-124	
1,1-Dichloropropene	10.0	11.3	113	78-126	
1,1-Dichloroethane	10.0	13.8	138	75-133	*
1,2,3-Trichlorobenzene	10.0	7.75	78	39-138	
1,2,3-Trichloropropane	10.0	9.42	94	66-139	
1,2-Dichloroethane	10.0	10.3	103	71-135	
1,1-Dichloroethene	10.0	13.4	134	65-139	
1,2-Dichloropropane	10.0	11.5	115	78-133	
1,2,4-Trimethylbenzene	10.0	12.0	120	74-120	
2-Hexanone	20.0	24.3	122	43-148	
1,1,2,2-Tetrachloroethane	10.0	11.0	110	65-139	
Acetone	20.0	22.7	114	21-162	
Benzene	10.0	11.3	113	80-123	
Bromoform	10.0	8.01	80	49-141	
Bromomethane	10.0	12.0	120	41-175	
Carbon disulfide	10.0	13.5	135	60-138	
Carbon tetrachloride	10.0	11.7	117	63-140	
1,1,1-Trichloroethane	10.0	11.8	118	69-134	
Chlorobenzene	10.0	10.7	107	80-121	
1,3-Dichloropropane	10.0	10.0	100	72-134	
Chloroethane	10.0	13.1	131	33-173	
1,2-Dibromo-3-Chloropropane	10.0	8.46	85	46-132	
Chloroform	10.0	12.0	120	79-127	
Chloromethane	10.0	13.4	134	54-143	
cis-1,2-Dichloroethene	10.0	12.1	121	76-128	
cis-1,3-Dichloropropene	10.0	9.70	97	64-132	
Bromodichloromethane	10.0	10.2	102	77-125	
1,1,2-Trichlorotrifluoroethane	10.0	11.9	119	50-156	
Dichlorodifluoromethane	10.0	10.7	107	29-148	
1,2,4-Trichlorobenzene	10.0	8.53	85	42-133	
Ethylbenzene	10.0	10.3	103	80-120	
1,2-Dibromoethane	10.0	9.71	97	77-123	
2,2-Dichloropropane	10.0	11.4	114	42-150	
1,2-Dichlorobenzene	10.0	10.4	104	78-120	
1,3-Dichlorobenzene	10.0	10.1	101	78-120	
1,4-Dichlorobenzene	10.0	10.4	104	78-120	
2-Chloroethyl vinyl ether	10.0	6.08 J	61	55-137	
Isopropylbenzene	10.0	11.3	113	74-120	
2-Chlorotoluene	10.0	10.8	108	78-123	
2-Butanone (MEK)	20.0	20.3	101	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	21.7	108	49-143	
Bromobenzene	10.0	9.35	94	74-129	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX9249.D

Lab ID: LCS 240-365336/6 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Methyl tert-butyl ether	10.0	12.0	120	51-133	
Bromochloromethane	10.0	9.87	99	74-130	
Methylene Chloride	10.0	13.5	135	70-134	*
4-Chlorotoluene	10.0	11.8	118	77-125	
4-Isopropyltoluene	10.0	11.4	114	69-122	
Styrene	10.0	10.2	102	79-120	
m-Xylene & p-Xylene	10.0	10.2	102	80-120	
o-Xylene	10.0	10.8	108	80-120	
Hexachlorobutadiene	10.0	7.27	73	38-136	
Tetrachloroethene	10.0	8.61	86	74-130	
Dibromomethane	10.0	9.55	96	74-124	
Toluene	10.0	11.2	112	78-129	
Naphthalene	10.0	8.61	86	28-141	
trans-1,2-Dichloroethene	10.0	13.5	135	78-133	*
n-Butylbenzene	10.0	12.6	126	57-126	
trans-1,3-Dichloropropene	10.0	10.0	100	55-128	
N-Propylbenzene	10.0	10.8	108	77-123	
Trichloroethene	10.0	9.42	94	76-125	
sec-Butylbenzene	10.0	11.5	115	68-123	
Trichlorofluoromethane	10.0	11.6	116	51-164	
tert-Butylbenzene	10.0	10.8	108	70-121	
Vinyl chloride	10.0	14.1	141	58-143	
Vinyl acetate	10.0	9.54	95	45-151	
tert-Butyl alcohol	100	112	112	10-161	
Xylenes, Total	20.0	21.0	105	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82288.D

Lab ID: 240-107194-2 MS Client ID: WC-EFSOIL-011819 MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	28.2	3.3 U	28.0	99	16-137	
1,1-Dichloropropene	28.2	1.1 U	30.1	107	30-138	
1,1-Dichloroethane	28.2	0.76 U	29.5	104	50-133	
1,2,3-Trichlorobenzene	28.2	0.63 U	20.6	73	10-120	
1,2,3-Trichloropropane	28.2	1.7 U	29.9	106	10-178	
1,2-Dichloroethane	28.2	0.85 U	28.0	99	42-127	
1,1-Dichloroethene	28.2	0.99 U	31.9	113	36-150	
1,2-Dichloropropane	28.2	0.93 U	30.1	107	51-128	
1,2,4-Trimethylbenzene	28.2	1.1 U	27.0	96	10-149	
2-Hexanone	56.5	4.5 U	60.8	108	15-147	
1,1,2,2-Tetrachloroethane	28.2	1.6 U	27.1	96	16-178	
Acetone	56.5	23 U	76.0	135	10-160	
Benzene	28.2	0.76 U	29.7	105	39-133	
Bromoform	28.2	2.6 U	24.3	86	18-120	
Bromomethane	28.2	1.1 U	28.9	102	10-159	
Carbon disulfide	28.2	1.3 U	32.4	115	16-145	
Carbon tetrachloride	28.2	3.6 U	30.2	107	22-142	
1,1,1-Trichloroethane	28.2	0.90 U	31.5	112	38-143	
Chlorobenzene	28.2	1.0 U	26.1	92	21-131	
1,3-Dichloropropane	28.2	1.1 U	28.0	99	34-121	
Chloroethane	28.2	1.3 U	29.2	103	17-162	
1,2-Dibromo-3-Chloropropane	28.2	4.0 U	23.2	82	10-141	
Chloroform	28.2	0.86 U	29.1	103	51-130	
Chloromethane	28.2	1.1 U	28.6	101	26-149	
cis-1,2-Dichloroethene	28.2	0.71 U	29.3	104	50-128	
cis-1,3-Dichloropropene	28.2	1.6 U	29.0	103	15-132	
Bromodichloromethane	28.2	0.74 U	29.5	104	32-129	
1,1,2-Trichloro-1,2,2-trifluoroethane	28.2	1.4 U	29.7	105	37-147	
Dichlorodifluoromethane	28.2	1.0 U	27.0	95	15-150	
1,2,4-Trichlorobenzene	28.2	0.63 U	19.1	68	10-120	
Ethylbenzene	28.2	1.1 U	28.1	100	20-135	
1,2-Dibromoethane	28.2	0.84 U	28.3	100	36-125	
2,2-Dichloropropane	28.2	1.3 U	25.7	91	20-141	
1,2-Dichlorobenzene	28.2	1.2 U	26.0	92	10-130	
1,3-Dichlorobenzene	28.2	0.89 U	24.5	87	10-131	
1,4-Dichlorobenzene	28.2	0.97 U	25.1	89	10-130	
2-Chloroethyl vinyl ether	28.2	9.8 U	24.3 J	86	10-134	
Isopropylbenzene	28.2	0.91 U	29.3	104	20-138	
2-Chlorotoluene	28.2	1.0 U	27.3	97	10-179	
2-Butanone (MEK)	56.5	3.9 U	63.1	112	20-148	
4-Methyl-2-pentanone (MIBK)	56.5	4.1 U	61.8	109	29-143	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82288.D

Lab ID: 240-107194-2 MS Client ID: WC-EFSOIL-011819 MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
Bromobenzene	28.2	1.3 U	27.2	96	10-164	
Methyl tert-butyl ether	28.2	0.90 U	29.1	103	48-134	
Bromochloromethane	28.2	0.65 U	27.5	98	36-147	
Methylene Chloride	28.2	13 U	32.0	113	39-145	
4-Chlorotoluene	28.2	0.94 U	27.2	96	10-158	
p-Isopropyltoluene	28.2	3.2 U	27.3	97	10-142	
Styrene	28.2	1.3 U	26.7	94	10-134	
m-Xylene & p-Xylene	28.2	0.86 U	28.2	100	16-137	
o-Xylene	28.2	0.94 U	29.4	104	21-138	
Hexachlorobutadiene	28.2	4.1 U	22.4	79	10-120	
Tetrachloroethene	28.2	0.80 U	26.8	95	20-151	
Dibromomethane	28.2	0.73 U	29.1	103	37-138	
Toluene	28.2	0.85 U	29.0	103	29-141	
Naphthalene	28.2	3.0 U	22.4	79	10-120	
trans-1,2-Dichloroethene	28.2	0.51 U	29.5	104	44-141	
n-Butylbenzene	28.2	3.8 U	24.9	88	10-149	
trans-1,3-Dichloropropene	28.2	1.1 U	24.7	87	15-120	
N-Propylbenzene	28.2	0.80 U	29.1	103	10-162	
Trichloroethene	28.2	1.0 J	30.1	103	25-148	
sec-Butylbenzene	28.2	0.95 U	27.9	99	10-156	
Trichlorofluoromethane	28.2	1.2 U	27.9	99	38-149	
tert-Butylbenzene	28.2	0.99 U	29.5	104	10-148	
Vinyl chloride	28.2	0.92 U	30.0	106	31-148	
Vinyl acetate	28.2	2.3 U	23.4	83	10-120	
tert-Butyl alcohol	282	18 U	263	93	59-128	
Xylenes, Total	56.5	1.7 U	57.6	102	19-137	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX9268.D

Lab ID: 240-107188-B-1 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
cis-1,2-Dichloroethene	33.3	51	63.7	39	64-130	F1
Tetrachloroethene	33.3	94	68.2	-77	51-136	F1
trans-1,2-Dichloroethene	33.3	0.66 J	41.6	123	68-133	
Trichloroethene	33.3	75	62.9	-37	55-131	F1
Vinyl chloride	33.3	0.67 U	48.5	146	43-154	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82289.D

Lab ID: 240-107194-2 MSD Client ID: WC-EFSOIL-011819 MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	28.7	29.4	103	5	40	16-137	
1,1-Dichloropropene	28.7	31.3	109	4	36	30-138	
1,1-Dichloroethane	28.7	31.7	111	7	40	50-133	
1,2,3-Trichlorobenzene	28.7	21.3	74	3	40	10-120	
1,2,3-Trichloropropane	28.7	28.4	99	5	40	10-178	
1,2-Dichloroethane	28.7	29.0	101	3	34	42-127	
1,1-Dichloroethene	28.7	34.7	121	8	40	36-150	
1,2-Dichloropropane	28.7	30.6	107	2	36	51-128	
1,2,4-Trimethylbenzene	28.7	27.7	97	3	40	10-149	
2-Hexanone	57.3	58.3	102	4	40	15-147	
1,1,2,2-Tetrachloroethane	28.7	26.5	92	2	40	16-178	
Acetone	57.3	85.5	149	12	39	10-160	
Benzene	28.7	30.7	107	3	40	39-133	
Bromoform	28.7	25.7	89	6	40	18-120	
Bromomethane	28.7	30.5	106	5	40	10-159	
Carbon disulfide	28.7	35.6	124	10	40	16-145	
Carbon tetrachloride	28.7	32.2	112	7	40	22-142	
1,1,1-Trichloroethane	28.7	33.7	117	7	40	38-143	
Chlorobenzene	28.7	26.3	92	1	40	21-131	
1,3-Dichloropropane	28.7	27.4	96	2	40	34-121	
Chloroethane	28.7	32.9	115	12	40	17-162	
1,2-Dibromo-3-Chloropropane	28.7	26.5	93	13	40	10-141	
Chloroform	28.7	31.5	110	8	32	51-130	
Chloromethane	28.7	30.6	107	7	37	26-149	
cis-1,2-Dichloroethene	28.7	31.5	110	7	40	50-128	
cis-1,3-Dichloropropene	28.7	28.0	98	3	40	15-132	
Bromodichloromethane	28.7	30.4	106	3	39	32-129	
1,1,2-Trichloro-1,2,2-trifluoroethane	28.7	32.1	112	8	37	37-147	
Dichlorodifluoromethane	28.7	30.2	105	11	31	15-150	
1,2,4-Trichlorobenzene	28.7	20.5	71	7	40	10-120	
Ethylbenzene	28.7	28.0	98	0	40	20-135	
1,2-Dibromoethane	28.7	27.6	96	3	40	36-125	
2,2-Dichloropropane	28.7	28.8	100	11	40	20-141	
1,2-Dichlorobenzene	28.7	26.1	91	0	40	10-130	
1,3-Dichlorobenzene	28.7	24.6	86	0	40	10-131	
1,4-Dichlorobenzene	28.7	25.5	89	2	40	10-130	
2-Chloroethyl vinyl ether	28.7	20.2 J	70	19	40	10-134	
Isopropylbenzene	28.7	31.3	109	7	40	20-138	
2-Chlorotoluene	28.7	27.8	97	2	40	10-179	
2-Butanone (MEK)	57.3	62.7	109	1	36	20-148	
4-Methyl-2-pentanone (MIBK)	57.3	59.9	104	3	40	29-143	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82289.D

Lab ID: 240-107194-2 MSD Client ID: WC-EFSOIL-011819 MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromobenzene	28.7	26.3	92	3	40	10-164	
Methyl tert-butyl ether	28.7	31.3	109	7	34	48-134	
Bromochloromethane	28.7	30.9	108	12	40	36-147	
Methylene Chloride	28.7	35.0	122	9	40	39-145	
4-Chlorotoluene	28.7	26.9	94	1	40	10-158	
p-Isopropyltoluene	28.7	28.6	100	5	40	10-142	
Styrene	28.7	26.6	93	0	40	10-134	
m-Xylene & p-Xylene	28.7	28.9	101	3	40	16-137	
o-Xylene	28.7	30.9	108	5	40	21-138	
Hexachlorobutadiene	28.7	24.4	85	8	40	10-120	
Tetrachloroethene	28.7	28.6	100	7	40	20-151	
Dibromomethane	28.7	28.8	101	1	30	37-138	
Toluene	28.7	29.6	103	2	40	29-141	
Naphthalene	28.7	23.0	80	3	40	10-120	
trans-1,2-Dichloroethene	28.7	32.7	114	10	40	44-141	
n-Butylbenzene	28.7	26.7	93	7	40	10-149	
trans-1,3-Dichloropropene	28.7	24.4	85	1	40	15-120	
N-Propylbenzene	28.7	28.8	101	1	40	10-162	
Trichloroethene	28.7	30.1	101	0	40	25-148	
sec-Butylbenzene	28.7	29.0	101	4	40	10-156	
Trichlorofluoromethane	28.7	31.2	109	11	39	38-149	
tert-Butylbenzene	28.7	30.4	106	3	40	10-148	
Vinyl chloride	28.7	34.0	119	13	37	31-148	
Vinyl acetate	28.7	22.1	77	6	40	10-120	
tert-Butyl alcohol	287	271	95	3	39	59-128	
Xylenes, Total	57.3	59.8	104	4	40	19-137	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX9269.D

Lab ID: 240-107188-C-1 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
cis-1,2-Dichloroethene	33.3	60.5	30	5	21	64-130	F1
Tetrachloroethene	33.3	68.7	-76	1	23	51-136	F1
trans-1,2-Dichloroethene	33.3	39.6	117	5	24	68-133	
Trichloroethene	33.3	62.8	-38	0	23	55-131	F1
Vinyl chloride	33.3	47.0	141	3	29	43-154	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab File ID: UX82266.D Lab Sample ID: MB 240-365072/7

Matrix: Solid Heated Purge:(Y/N) Y

Instrument ID: A3UX8 Date Analyzed: 01/23/2019 04:50

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-365072/6	UX82265.D	01/23/2019 04:28
WC-EFSOIL-011819	240-107194-2	UX82287.D	01/23/2019 12:42
WC-EFSOIL-011819 MS	240-107194-2 MS	UX82288.D	01/23/2019 13:06
WC-EFSOIL-011819 MSD	240-107194-2 MSD	UX82289.D	01/23/2019 13:29

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab File ID: UXX9251.D Lab Sample ID: MB 240-365336/8

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX10 Date Analyzed: 01/24/2019 13:08

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-365336/6	UXX9249.D	01/24/2019 12:18
TB-011819	240-107194-1	UXX9256.D	01/24/2019 15:25
	240-107188-B-1 MS	UXX9268.D	01/24/2019 20:52
	240-107188-C-1 MSD	UXX9269.D	01/24/2019 21:17

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab File ID: BFB1940.D BFB Injection Date: 10/02/2018

Instrument ID: A3UX10 BFB Injection Time: 14:58

Analysis Batch No.: 348190

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.4	
75	30.0 - 60.0 % of mass 95	52.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	1.5	(2.0) 1
174	50.0 - 120.00 % of mass 95	73.9	
175	5.0 - 9.0 % of mass 174	5.6	(7.5) 1
176	95.0 - 101.0 % of mass 174	74.0	(100.0) 1
177	5.0 - 9.0 % of mass 176	6.7	(9.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-348190/2	UXX5939.D	10/02/2018	15:27
	STD8260 240-348190/3	UXX5940.D	10/02/2018	15:52
	STD8260 240-348190/4	UXX5941.D	10/02/2018	16:17
	STD8260 240-348190/5	UXX5942.D	10/02/2018	16:42
	STD8260 240-348190/6	UXX5943.D	10/02/2018	17:06
	STD8260 240-348190/7	UXX5944.D	10/02/2018	17:31
	STD8260 240-348190/8	UXX5945.D	10/02/2018	17:56
	ICV 240-348190/9	UXX5946.D	10/02/2018	18:21
	STDA9 240-348190/10	UXX5947.D	10/02/2018	18:46
	STDA9 240-348190/11	UXX5948.D	10/02/2018	19:11
	STDA9 240-348190/12	UXX5949.D	10/02/2018	19:36
	STDA9 240-348190/13	UXX5950.D	10/02/2018	20:01
	STDA9 240-348190/14	UXX5951.D	10/02/2018	20:25
	STDA9 240-348190/15	UXX5952.D	10/02/2018	20:50
	STDA9 240-348190/16	UXX5953.D	10/02/2018	21:14
	ICV 240-348190/17	UXX5954.D	10/02/2018	21:39

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab File ID: BFB2132.D BFB Injection Date: 01/24/2019

Instrument ID: A3UX10 BFB Injection Time: 09:41

Analysis Batch No.: 365336

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	27.4	
75	30.0 - 60.0 % of mass 95	54.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.7	(1.2) 1
174	50.0 - 120.00 % of mass 95	57.2	
175	5.0 - 9.0 % of mass 174	3.9	(6.8) 1
176	95.0 - 101.0 % of mass 174	54.7	(95.6) 1
177	5.0 - 9.0 % of mass 176	3.1	(5.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-365336/3	UXX9245.D	01/24/2019	10:39
	CCVIS 240-365336/2	UXX9246.D	01/24/2019	11:03
	LCS 240-365336/6	UXX9249.D	01/24/2019	12:18
	MB 240-365336/8	UXX9251.D	01/24/2019	13:08
TB-011819	240-107194-1	UXX9256.D	01/24/2019	15:25
	240-107188-B-1 MS	UXX9268.D	01/24/2019	20:52
	240-107188-C-1 MSD	UXX9269.D	01/24/2019	21:17

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab File ID: BFB8814.D BFB Injection Date: 11/30/2018

Instrument ID: A3UX8 BFB Injection Time: 03:22

Analysis Batch No.: 357692

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	31.2	
75	30.0 - 60.0 % of mass 95	55.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.3	(0.4) 1
174	50.0 - 120.00 % of mass 95	78.1	
175	5.0 - 9.0 % of mass 174	5.9	(7.6) 1
176	95.0 - 101.0 % of mass 174	76.4	(97.9) 1
177	5.0 - 9.0 % of mass 176	4.9	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STDA9 240-357692/12	UX81322.D	11/30/2018	07:16
	STDA9 240-357692/13	UX81323.D	11/30/2018	07:38
	STDA9 240-357692/14	UX81324.D	11/30/2018	08:00
	STDA9 240-357692/15	UX81325.D	11/30/2018	08:23
	STDA9 240-357692/16	UX81326.D	11/30/2018	08:45
	STDA9 240-357692/17	UX81327.D	11/30/2018	09:08
	STDA9 240-357692/18	UX81328.D	11/30/2018	09:30
	STDA9 240-357692/19	UX81329.D	11/30/2018	09:52
	STDA9 240-357692/20	UX81330.D	11/30/2018	10:15

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab File ID: BFB8848.D BFB Injection Date: 01/19/2019

Instrument ID: A3UX8 BFB Injection Time: 04:20

Analysis Batch No.: 364686

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	28.6	
75	30.0 - 60.0 % of mass 95	53.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.5	(0.7) 1
174	50.0 - 120.00 % of mass 95	78.6	
175	5.0 - 9.0 % of mass 174	6.0	(7.6) 1
176	95.0 - 101.0 % of mass 174	75.7	(96.3) 1
177	5.0 - 9.0 % of mass 176	4.9	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364686/3	UX82248.D	01/19/2019	05:07
	STD8260 240-364686/4	UX82249.D	01/19/2019	05:31
	STD8260 240-364686/5	UX82250.D	01/19/2019	05:54
	STD8260 240-364686/6	UX82251.D	01/19/2019	06:17
	ICIS 240-364686/7	UX82252.D	01/19/2019	06:39
	STD8260 240-364686/8	UX82253.D	01/19/2019	07:03
	STD8260 240-364686/9	UX82254.D	01/19/2019	07:26
	STD8260 240-364686/10	UX82255.D	01/19/2019	07:49
	STD8260 240-364686/11	UX82256.D	01/19/2019	08:12
	ICV 240-364686/13	UX82258.D	01/19/2019	09:00

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab File ID: BFB8849.D BFB Injection Date: 01/23/2019

Instrument ID: A3UX8 BFB Injection Time: 03:08

Analysis Batch No.: 365072

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	28.3	
75	30.0 - 60.0 % of mass 95	52.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	76.4	
175	5.0 - 9.0 % of mass 174	5.9	(7.7) 1
176	95.0 - 101.0 % of mass 174	73.0	(95.5) 1
177	5.0 - 9.0 % of mass 176	4.5	(6.2) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-365072/4	UX82263.D	01/23/2019	03:41
	CCV 240-365072/5	UX82264.D	01/23/2019	04:05
	LCS 240-365072/6	UX82265.D	01/23/2019	04:28
	MB 240-365072/7	UX82266.D	01/23/2019	04:50
WC-EFSOIL-011819	240-107194-2	UX82287.D	01/23/2019	12:42
WC-EFSOIL-011819 MS	240-107194-2 MS	UX82288.D	01/23/2019	13:06
WC-EFSOIL-011819 MSD	240-107194-2 MSD	UX82289.D	01/23/2019	13:29

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Sample No.: STD8260 240-348190/4 Date Analyzed: 10/02/2018 16:17

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXX5941.D Heated Purge: (Y/N) N

Calibration ID: 47198

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		789818	5.57	636861	8.25	356275	10.49
UPPER LIMIT		1579636	6.07	1273722	8.75	712550	10.99
LOWER LIMIT		394909	5.07	318431	7.75	178138	9.99
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-348190/9		756139	5.57	615440	8.25	331268	10.49
ICV 240-348190/17		812172	5.57	634991	8.25	333549	10.49
CCVIS 240-365336/2		585591	5.57	496478	8.25	255329	10.49

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Sample No.: CCVIS 240-365336/2 Date Analyzed: 01/24/2019 11:03

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXX9246.D Heated Purge: (Y/N) N

Calibration ID: 47200

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		585591	5.57	496478	8.25	255329	10.49
UPPER LIMIT		1171182	6.07	992956	8.75	510658	10.99
LOWER LIMIT		292796	5.07	248239	7.75	127665	9.99
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-365336/3		594413	5.56	534223	8.25	263163	10.49
LCS 240-365336/6		596724	5.57	431871	8.25	242607	10.49
MB 240-365336/8		599891	5.57	442455	8.25	238368	10.49
240-107194-1	TB-011819	602165	5.55	518094	8.25	229444	10.49
240-107188-B-1 MS		609777	5.55	468946	8.25	255166	10.49
240-107188-C-1 MSD		614786	5.55	521824	8.25	235304	10.49

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Sample No.: ICIS 240-364686/7 Date Analyzed: 01/19/2019 06:39

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UX82252.D Heated Purge: (Y/N) Y

Calibration ID: 49077

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		897871	5.16	684242	7.69	376583	9.88
UPPER LIMIT		1795742	5.66	1368484	8.19	753166	10.38
LOWER LIMIT		448936	4.66	342121	7.19	188292	9.38
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364686/13		804142	5.17	611813	7.69	354485	9.89
CCVIS 240-365072/4		897573	5.16	734820	7.69	457364	9.88

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Sample No.: CCVIS 240-365072/4 Date Analyzed: 01/23/2019 03:41

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UX82263.D Heated Purge: (Y/N) Y

Calibration ID: 49077

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		897573	5.16	734820	7.69	457364	9.88
UPPER LIMIT		1795146	5.66	1469640	8.19	914728	10.38
LOWER LIMIT		448787	4.66	367410	7.19	228682	9.38
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-365072/5		906676	5.16	753279	7.69	412904	9.88
LCS 240-365072/6		947337	5.16	769949	7.69	455086	9.88
MB 240-365072/7		845322	5.16	706519	7.69	387029	9.88
240-107194-2	WC-EFSOIL-011819	791327	5.16	655911	7.69	348766	9.88
240-107194-2 MS	WC-EFSOIL-011819 MS	920085	5.16	731284	7.69	393067	9.88
240-107194-2 MSD	WC-EFSOIL-011819 MSD	839142	5.17	657603	7.69	368560	9.88

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: TB-011819 | Lab Sample ID: 240-107194-1

Matrix: Water | Lab File ID: UXX9256.D

Analysis Method: 8260B | Date Collected: 01/18/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 01/24/2019 15:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 365336 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.4	U	10	5.4
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-43-2	Benzene	0.13	U	1.0	0.13
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
74-87-3	Chloromethane	0.20	U	1.0	0.20
75-34-3	1,1-Dichloroethane	0.17	U *	1.0	0.17
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
591-78-6	2-Hexanone	0.54	U	10	0.54
75-09-2	Methylene Chloride	2.6	U *	5.0	2.6
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
100-42-5	Styrene	0.10	U	1.0	0.10
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: TB-011819 | Lab Sample ID: 240-107194-1

Matrix: Water | Lab File ID: UXX9256.D

Analysis Method: 8260B | Date Collected: 01/18/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 01/24/2019 15:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 365336 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
156-60-5	trans-1,2-Dichloroethene	0.19	U *	1.0	0.19
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Client Sample ID: TB-011819 Lab Sample ID: 240-107194-1

Matrix: Water Lab File ID: UXX9256.D

Analysis Method: 8260B Date Collected: 01/18/2019 00:00

Sample wt/vol: 5(mL) Date Analyzed: 01/24/2019 15:25

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 365336 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	74		70-121
460-00-4	4-Bromofluorobenzene (Surr)	94		59-120
2037-26-5	Toluene-d8 (Surr)	93		70-123
1868-53-7	Dibromofluoromethane (Surr)	87		75-128

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9256.D
Lims ID: 240-107194-B-1
Client ID: TB-011819
Sample Type: Client
Inject. Date: 24-Jan-2019 15:25:30 ALS Bottle#: 13 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083932-013
Operator ID: 001644 Instrument ID: A3UX10

Method: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 25-Jan-2019 11:16:30 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.553	5.565	-0.012	99	602165	10.0	
* 2 Chlorobenzene-d5	117	8.250	8.250	0.000	92	518094	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.485	10.485	0.000	96	229444	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.985	4.985	0.000	89	137312	8.68	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.269	5.281	-0.012	94	149214	7.38	
$ 6 Toluene-d8 (Surr)	98	6.925	6.937	-0.012	95	610230	9.33	
$ 7 4-Bromofluorobenzene (Surr	95	9.350	9.350	0.000	80	233880	9.39	
9 Dichlorodifluoromethane	85		1.649				ND	
10 Chloromethane	50		1.827				ND	
11 Vinyl chloride	62		1.933				ND	
13 Bromomethane	94		2.229				ND	
14 Chloroethane	64		2.300				ND	
16 Trichlorofluoromethane	101		2.560				ND	
19 1,1-Dichloroethene	96		3.033				ND	
20 1,1,2-Trichloro-1,2,2-trif	151		3.057				ND	
21 Acetone	43		3.081				ND	
24 Carbon disulfide	76		3.234				ND	
28 Methylene Chloride	84		3.471				ND	
29 2-Methyl-2-propanol	59		3.577				ND	
30 trans-1,2-Dichloroethene	96		3.719				ND	
32 Methyl tert-butyl ether	73		3.719				ND	
34 1,1-Dichloroethane	63		4.086				ND	
35 Vinyl acetate	43		4.121				ND	
36 Isopropyl ether	87		4.133				ND	
38 Tert-butyl ethyl ether	59		4.441				ND	
40 cis-1,2-Dichloroethene	96		4.583				ND	
39 2,2-Dichloropropane	97		4.583				ND	
41 2-Butanone (MEK)	43		4.595				ND	
45 Chlorobromomethane	128		4.796				ND	
47 Chloroform	83		4.843				ND	
48 1,1,1-Trichloroethane	97		5.020				ND	
50 1,1-Dichloropropene	75		5.151				ND	
51 Carbon tetrachloride	117		5.162				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
53 Benzene	78		5.328				ND	
54 1,2-Dichloroethane	62		5.340				ND	
55 Tert-amyl methyl ether	73		5.411				ND	
58 Trichloroethene	130		5.872				ND	
61 1,2-Dichloropropane	63		6.073				ND	
63 Dibromomethane	93		6.168				ND	
65 Dichlorobromomethane	83		6.298				ND	
67 2-Chloroethyl vinyl ether	63		6.546				ND	
68 cis-1,3-Dichloropropene	75		6.688				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.818				ND	
70 Toluene	91		6.996				ND	
71 trans-1,3-Dichloropropene	75		7.173				ND	
74 Tetrachloroethene	164		7.493				ND	
75 1,3-Dichloropropane	76		7.504				ND	
76 2-Hexanone	43		7.564				ND	
78 Chlorodibromomethane	129		7.706				ND	
80 Ethylene Dibromide	107		7.824				ND	
82 Chlorobenzene	112		8.273				ND	
83 1,1,1,2-Tetrachloroethane	131		8.344				ND	
84 Ethylbenzene	106		8.368				ND	
85 m-Xylene & p-Xylene	106		8.474				ND	
86 o-Xylene	106		8.853				ND	
87 Styrene	104		8.865				ND	
88 Bromoform	173		9.054				ND	
89 Isopropylbenzene	105		9.208				ND	
92 1,1,2,2-Tetrachloroethane	83		9.480				ND	
93 Bromobenzene	156		9.503				ND	
94 1,2,3-Trichloropropane	110		9.527				ND	
96 N-Propylbenzene	120		9.598				ND	
97 2-Chlorotoluene	126		9.693				ND	
99 4-Chlorotoluene	126		9.799				ND	
100 tert-Butylbenzene	119		10.095				ND	
102 1,2,4-Trimethylbenzene	105		10.130				ND	
103 sec-Butylbenzene	105		10.308				ND	
104 1,3-Dichlorobenzene	146		10.426				ND	
105 4-Isopropyltoluene	119		10.450				ND	
106 1,4-Dichlorobenzene	146		10.509				ND	
107 1,2,3-Trimethylbenzene	105		10.556				ND	
109 n-Butylbenzene	91		10.852				ND	
110 1,2-Dichlorobenzene	146		10.876				ND	
111 1,2-Dibromo-3-Chloropropan	157		11.656				ND	
113 1,2,4-Trichlorobenzene	180		12.484				ND	
114 Hexachlorobutadiene	225		12.650				ND	
115 Naphthalene	128		12.733				ND	
116 1,2,3-Trichlorobenzene	180		12.981				ND	
S 130 Xylenes, Total	106		16.530				ND	

Reagents:

vm50ss_stk_00079	Amount Added:	1.00	Units: uL	Run Reagent
VM50IS_00074	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00009	Amount Added:	0.00	Units:	Run Reagent
vmDist_H2o_00137	Amount Added:	0.00	Units:	Run Reagent

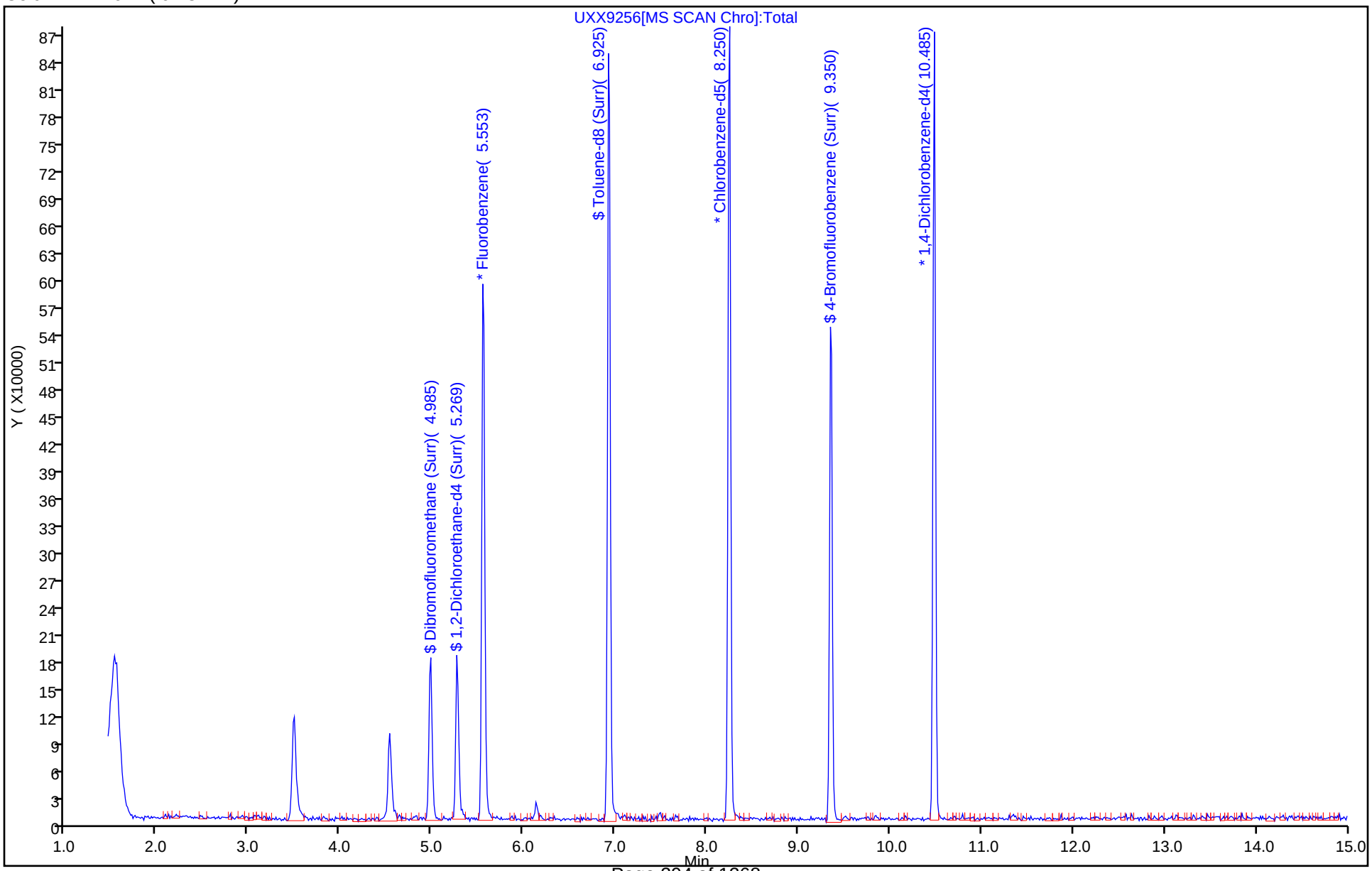
Report Date: 25-Jan-2019 11:16:57 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9256.D

Injection Date:	24-Jan-2019 15:25:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	240-107194-B-1	Lab Sample ID:	240-107194-1	Worklist Smp#:	13
Client ID:	TB-011819				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9256.D
Lims ID: 240-107194-B-1
Client ID: TB-011819
Sample Type: Client
Inject. Date: 24-Jan-2019 15:25:30 ALS Bottle#: 13 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083932-013
Operator ID: 001644 Instrument ID: A3UX10

Method: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 25-Jan-2019 11:16:30 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	10.0	8.68	86.81
$ 5 1,2-Dichloroethane-d4 (Surr)	10.0	7.38	73.82
$ 6 Toluene-d8 (Surr)	10.0	9.33	93.30
$ 7 4-Bromofluorobenzene (Surr)	10.0	9.39	93.91

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: WC-EFSOIL-011819 | Lab Sample ID: 240-107194-2

Matrix: Solid | Lab File ID: UX82287.D

Analysis Method: 8260B | Date Collected: 01/18/2019 09:30

Sample wt/vol: 5.35(g) | Date Analyzed: 01/23/2019 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.7 | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.3	U	5.5	3.3
71-55-6	1,1,1-Trichloroethane	0.90	U	5.5	0.90
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U	5.5	1.6
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.4	U	5.5	1.4
75-34-3	1,1-Dichloroethane	0.76	U	5.5	0.76
75-35-4	1,1-Dichloroethene	0.99	U	5.5	0.99
563-58-6	1,1-Dichloropropene	1.1	U	5.5	1.1
87-61-6	1,2,3-Trichlorobenzene	0.63	U	5.5	0.63
96-18-4	1,2,3-Trichloropropane	1.7	U	5.5	1.7
526-73-8	1,2,3-Trimethylbenzene	2.0	U	5.5	2.0
120-82-1	1,2,4-Trichlorobenzene	0.63	U	5.5	0.63
95-63-6	1,2,4-Trimethylbenzene	1.1	U	5.5	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	4.0	U	11	4.0
95-50-1	1,2-Dichlorobenzene	1.2	U	5.5	1.2
107-06-2	1,2-Dichloroethane	0.85	U	5.5	0.85
78-87-5	1,2-Dichloropropane	0.93	U	5.5	0.93
541-73-1	1,3-Dichlorobenzene	0.89	U	5.5	0.89
142-28-9	1,3-Dichloropropane	1.1	U	5.5	1.1
106-46-7	1,4-Dichlorobenzene	0.97	U	5.5	0.97
594-20-7	2,2-Dichloropropane	1.3	U	5.5	1.3
110-75-8	2-Chloroethyl vinyl ether	9.8	U	55	9.8
95-49-8	2-Chlorotoluene	1.0	U	5.5	1.0
591-78-6	2-Hexanone	4.5	U	22	4.5
108-86-1	Bromobenzene	1.3	U	5.5	1.3
74-97-5	Bromochloromethane	0.65	U	5.5	0.65
106-43-4	4-Chlorotoluene	0.94	U	5.5	0.94
99-87-6	p-Isopropyltoluene	3.2	U	5.5	3.2
67-64-1	Acetone	23	U	27	23
71-43-2	Benzene	0.76	U	5.5	0.76
75-25-2	Bromoform	2.6	U	5.5	2.6
74-83-9	Bromomethane	1.1	U	5.5	1.1
75-15-0	Carbon disulfide	1.3	U	5.5	1.3
56-23-5	Carbon tetrachloride	3.6	U	5.5	3.6
108-90-7	Chlorobenzene	1.0	U	5.5	1.0
75-00-3	Chloroethane	1.3	U	5.5	1.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: WC-EFSOIL-011819 | Lab Sample ID: 240-107194-2

Matrix: Solid | Lab File ID: UX82287.D

Analysis Method: 8260B | Date Collected: 01/18/2019 09:30

Sample wt/vol: 5.35(g) | Date Analyzed: 01/23/2019 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.7 | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	0.86	U	5.5	0.86
74-87-3	Chloromethane	1.1	U	5.5	1.1
156-59-2	cis-1,2-Dichloroethene	0.71	U	5.5	0.71
10061-01-5	cis-1,3-Dichloropropene	1.6	U	5.5	1.6
87-68-3	Hexachlorobutadiene	4.1	U	5.5	4.1
74-95-3	Dibromomethane	0.73	U	5.5	0.73
75-27-4	Bromodichloromethane	0.74	U	5.5	0.74
75-71-8	Dichlorodifluoromethane	1.0	U	5.5	1.0
100-41-4	Ethylbenzene	1.1	U	5.5	1.1
106-93-4	1,2-Dibromoethane	0.84	U	5.5	0.84
108-20-3	Diisopropyl ether	0.83	U	11	0.83
91-20-3	Naphthalene	3.0	U	5.5	3.0
179601-23-1	m-Xylene & p-Xylene	0.86	U	11	0.86
104-51-8	n-Butylbenzene	3.8	U	5.5	3.8
98-82-8	Isopropylbenzene	0.91	U	5.5	0.91
103-65-1	N-Propylbenzene	0.80	U	5.5	0.80
78-93-3	2-Butanone (MEK)	3.9	U	22	3.9
108-10-1	4-Methyl-2-pentanone (MIBK)	4.1	U	22	4.1
135-98-8	sec-Butylbenzene	0.95	U	5.5	0.95
1634-04-4	Methyl tert-butyl ether	0.90	U	5.5	0.90
994-05-8	Tert-amyl methyl ether	2.5	U	5.5	2.5
75-09-2	Methylene Chloride	13	U	27	13
95-47-6	o-Xylene	0.94	U	5.5	0.94
100-42-5	Styrene	1.3	U	5.5	1.3
637-92-3	Ethyl tert-butyl ether	2.5	U	5.5	2.5
98-06-6	tert-Butylbenzene	0.99	U	5.5	0.99
127-18-4	Tetrachloroethene	0.80	U	5.5	0.80
108-88-3	Toluene	0.85	U	5.5	0.85
156-60-5	trans-1,2-Dichloroethene	0.51	U	5.5	0.51
10061-02-6	trans-1,3-Dichloropropene	1.1	U	5.5	1.1
79-01-6	Trichloroethene	1.0	J	5.5	0.69
75-69-4	Trichlorofluoromethane	1.2	U	5.5	1.2
108-05-4	Vinyl acetate	2.3	U	11	2.3
75-01-4	Vinyl chloride	0.92	U	5.5	0.92
75-65-0	tert-Butyl alcohol	18	U	220	18
1330-20-7	Xylenes, Total	1.7	U	11	1.7

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: WC-EFSOIL-011819 | Lab Sample ID: 240-107194-2

Matrix: Solid | Lab File ID: UX82287.D

Analysis Method: 8260B | Date Collected: 01/18/2019 09:30

Sample wt/vol: 5.35(g) | Date Analyzed: 01/23/2019 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.7 | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	3.0	U	5.5	3.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		48-123
460-00-4	4-Bromofluorobenzene (Surr)	96		49-141
2037-26-5	Toluene-d8 (Surr)	97		62-135
1868-53-7	Dibromofluoromethane (Surr)	100		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: WC-EFSOIL-011819 | Lab Sample ID: 240-107194-2

Matrix: Solid | Lab File ID: UX82287.D

Analysis Method: 8260B | Date Collected: 01/18/2019 09:30

Sample wt/vol: 5.35(g) | Date Analyzed: 01/23/2019 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.7 | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

Number TICs Found: 1 | TIC Result Total: 21

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Unknown	4.24	21	T J	

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82287.D
Lims ID: 240-107194-B-2-A
Client ID: WC-EFSOIL-011819
Sample Type: Client
Inject. Date: 23-Jan-2019 12:42:30 ALS Bottle#: 26 Worklist Smp#: 28
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083884-028
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 24-Jan-2019 05:11:14 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: latat Date: 24-Jan-2019 02:28:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.160	5.156	0.004	99	791327	50.0	
* 2 Chlorobenzene-d5	117	7.692	7.688	0.004	97	655911	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.881	9.877	0.004	95	348766	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.639	4.635	0.004	93	194414	49.9	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.899	4.896	0.003	94	254159	52.7	
$ 6 Toluene-d8 (Surr)	98	6.437	6.434	0.003	95	746077	48.5	
$ 7 4-Bromofluorobenzene (Surr	95	8.769	8.765	0.003	85	280482	48.0	
9 Dichlorodifluoromethane	85		1.594				ND	
10 Chloromethane	50		1.772				ND	
11 Vinyl chloride	62		1.890				ND	
13 Bromomethane	94		2.186				ND	
14 Chloroethane	64		2.281				ND	
16 Trichlorofluoromethane	101		2.505				ND	
19 1,1-Dichloroethene	96		2.931				ND	
20 1,1,2-Trichloro-1,2,2-trif	151		2.943				ND	
21 Acetone	43	2.970	2.967	0.003	96	29302	18.6	
24 Carbon disulfide	76		3.121				ND	
28 Methylene Chloride	84	3.314	3.310	0.004	95	18543	1.27	
29 2-Methyl-2-propanol	59		3.393				ND	
32 Methyl tert-butyl ether	73		3.523				ND	
31 trans-1,2-Dichloroethene	96		3.523				ND	
34 1,1-Dichloroethane	63		3.843				ND	
35 Vinyl acetate	43		3.866				ND	
36 Isopropyl ether	87		3.891				ND	
38 Tert-butyl ethyl ether	59		4.164				ND	
39 cis-1,2-Dichloroethene	96		4.280				ND	
40 2-Butanone (MEK)	43		4.280				ND	
41 2,2-Dichloropropane	77		4.292				ND	
45 Chlorobromomethane	128		4.458				ND	
47 Chloroform	83		4.517				ND	
48 1,1,1-Trichloroethane	97		4.671				ND	
50 1,1-Dichloropropene	75		4.801				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 Carbon tetrachloride	117		4.801				ND	
54 Benzene	78		4.955				ND	
53 1,2-Dichloroethane	62		4.955				ND	
55 Tert-amyl methyl ether	73		5.027				ND	
58 Trichloroethene	130	5.455	5.452	0.003	94	4302	0.9527	
61 1,2-Dichloropropane	63		5.629				ND	
63 Dibromomethane	93		5.724				ND	
65 Dichlorobromomethane	83		5.830				ND	
67 2-Chloroethyl vinyl ether	63		6.055				ND	
68 cis-1,3-Dichloropropene	75		6.197				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.304				ND	
70 Toluene	91		6.493				ND	
71 trans-1,3-Dichloropropene	75		6.647				ND	
74 1,3-Dichloropropane	76		6.966				ND	
75 Tetrachloroethene	164		6.966				ND	
76 2-Hexanone	43		7.014				ND	
78 Chlorodibromomethane	129		7.168				ND	
80 Ethylene Dibromide	107		7.286				ND	
82 Chlorobenzene	112		7.712				ND	
83 1,1,1,2-Tetrachloroethane	131		7.783				ND	
84 Ethylbenzene	106		7.807				ND	
85 m-Xylene & p-Xylene	106		7.913				ND	
86 o-Xylene	106		8.280				ND	
87 Styrene	104		8.292				ND	
88 Bromoform	173		8.469				ND	
89 Isopropylbenzene	105		8.623				ND	
92 1,1,2,2-Tetrachloroethane	83		8.883				ND	
93 Bromobenzene	156		8.919				ND	
94 1,2,3-Trichloropropane	110		8.931				ND	
96 N-Propylbenzene	120		9.013				ND	
97 2-Chlorotoluene	126		9.096				ND	
99 4-Chlorotoluene	126		9.203				ND	
100 tert-Butylbenzene	119		9.499				ND	
102 1,2,4-Trimethylbenzene	105		9.534				ND	
103 sec-Butylbenzene	105		9.712				ND	
104 1,3-Dichlorobenzene	146		9.818				ND	
105 4-Isopropyltoluene	119		9.842				ND	
106 1,4-Dichlorobenzene	146		9.901				ND	
107 1,2,3-Trimethylbenzene	105		9.950				ND	
109 n-Butylbenzene	91		10.244				ND	
110 1,2-Dichlorobenzene	146		10.268				ND	
111 1,2-Dibromo-3-Chloropropan	157		11.037				ND	
113 1,2,4-Trichlorobenzene	180	11.869	11.865	0.004	71	1473	0.2705	
114 Hexachlorobutadiene	225		12.043				ND	
115 Naphthalene	128	12.117	12.114	0.003	93	10921	1.06	
116 1,2,3-Trichlorobenzene	180		12.362				ND	
S 128 Xylenes, Total	106		16.530				ND	

Reagents:

VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00011	Amount Added:	0.00	Units:	Run Reagent
VMUX8SS_00030	Amount Added:	1.15	Units: uL	Run Reagent
vmDist_H2o_00135	Amount Added:	0.00	Units:	Run Reagent

TestAmerica Canton
Tentatively Identified Quantitation Report

Data File:	\\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82287.D				
Lims ID:	240-107194-B-2-A				
Client ID:	WC-EFSOIL-011819				
Sample Type:	Client				
Inject. Date:	23-Jan-2019 12:42:30	ALS Bottle#:	26	Worklist Smp#:	28
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	240-0083884-028				
Operator ID:	402279	Instrument ID:	A3UX8		
Method:	\\chromna\Canton\ChromData\A3UX8\20190123-83884.b\8260_8.m				
Limit Group:	MSV 8260B ICAL				
Last Update:	24-Jan-2019 05:11:14	Calib Date:	19-Jan-2019 08:12:30		
Tic RT Window:	1.600 -0.000	Response:	area		
Quant By:	Nearest ISTD	Quant LOD:	10.00000		
MS Library:	\\chromna\Canton\Database\NIST98.L				
Min. Match:	10				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	CTX0328				
First Level Reviewer: latat		Date:	24-Jan-2019 02:28:05		

Tentative Identified Compound Results

RT	Area	Amount ug/l	Quant Cpnd	Qual	Lib Entry	Molecular Formula	Mol. Weight	Flags
		Unknown						
4.237	703669	19.1	1					

Quantitation Compounds

Compound	RT	Area	Amount ug/l
* 1 Fluorobenzene	5.160	1842998	50.0

QC Flag Legend

Processing Flags

Reagents:

VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00011	Amount Added:	0.00	Units:	Run Reagent
VMUX8SS_00030	Amount Added:	1.15	Units: uL	Run Reagent
vmDist_H2o_00135	Amount Added:	0.00	Units:	Run Reagent

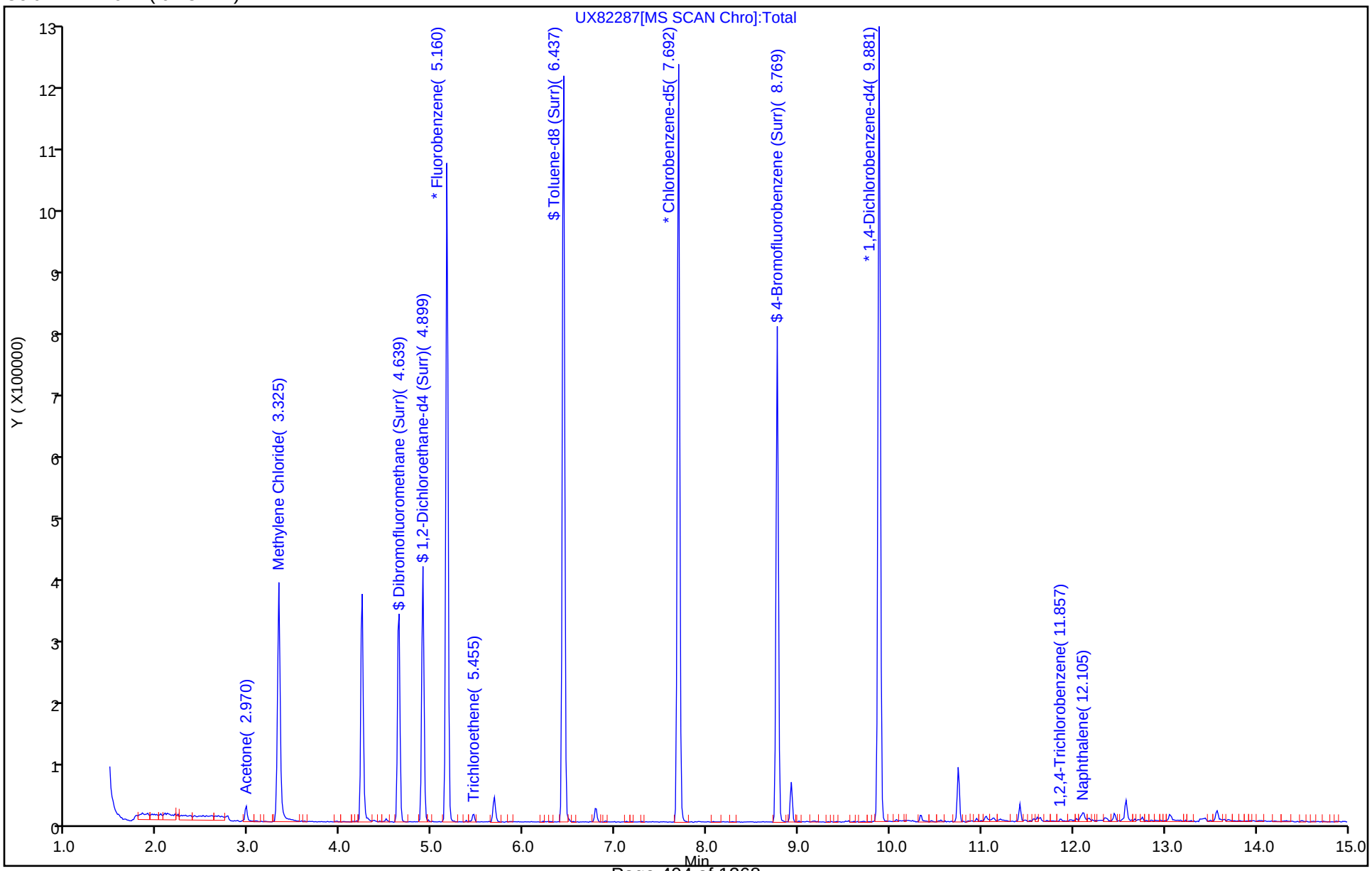
Report Date: 24-Jan-2019 05:11:30 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82287.D

Injection Date:	23-Jan-2019 12:42:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	240-107194-B-2-A	Lab Sample ID:	240-107194-2	Worklist Smp#:	28
Client ID:	WC-EFSOIL-011819				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



Report Date: 24-Jan-2019 05:11:30 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton
Recovery Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82287.D
Lims ID: 240-107194-B-2-A
Client ID: WC-EFSOIL-011819
Sample Type: Client
Inject. Date: 23-Jan-2019 12:42:30 ALS Bottle#: 26 Worklist Smp#: 28
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083884-028
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 24-Jan-2019 05:11:14 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: latat Date: 24-Jan-2019 02:28:05

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	49.9	99.90
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	52.7	105.37
$ 6 Toluene-d8 (Surr)	50.0	48.5	97.01
$ 7 4-Bromofluorobenzene (Surr)	50.0	48.0	95.99

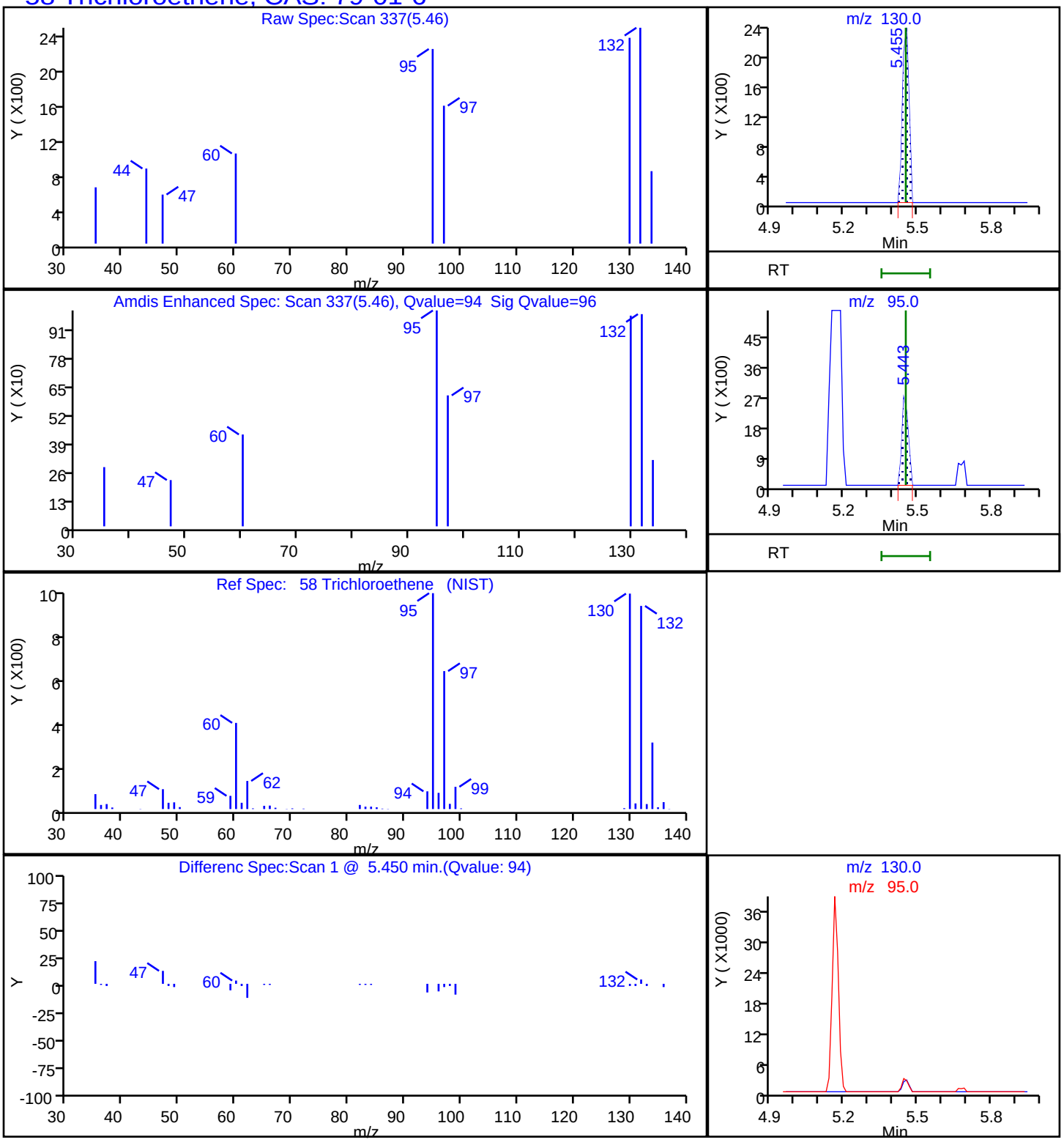
Report Date: 24-Jan-2019 05:11:30 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82287.D

Injection Date:	23-Jan-2019 12:42:30	Instrument ID:	A3UX8		
Lims ID:	240-107194-B-2-A	Lab Sample ID:	240-107194-2		
Client ID:	WC-EFSOIL-011819				
Operator ID:	402279	ALS Bottle#:	26	Worklist Smp#:	28
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_8	Limit Group:	MSV 8260B ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

58 Trichloroethene, CAS: 79-01-6



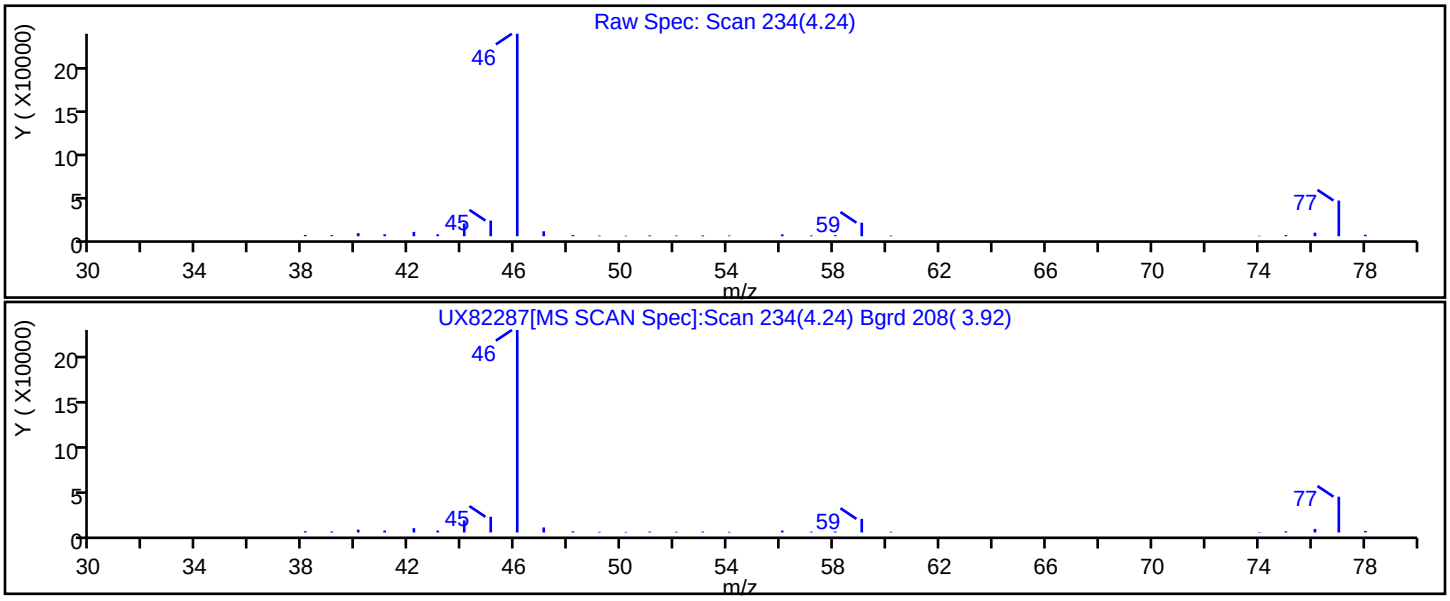
Report Date: 24-Jan-2019 05:11:30 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82287.D

Injection Date:	23-Jan-2019 12:42:30	Instrument ID:	A3UX8		
Lims ID:	240-107194-B-2-A	Lab Sample ID:	240-107194-2		
Client ID:	WC-EFSOIL-011819				
Operator ID:	402279	ALS Bottle#:	26	Worklist Smp#:	28
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_8	Limit Group:	MSV 8260B ICAL		
Column:		Detector	MS SCAN		

No Library Matches Found above the Threshold: 10



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 348190

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47198

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-348190/8	UXX5945.D
Level 2	STD8260 240-348190/7	UXX5944.D
Level 3	STD8260 240-348190/6	UXX5943.D
Level 4	STD8260 240-348190/5	UXX5942.D
Level 5	STD8260 240-348190/4	UXX5941.D
Level 6	STD8260 240-348190/3	UXX5940.D
Level 7	STD8260 240-348190/2	UXX5939.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3986 0.3382	0.3469 0.3117	0.3262	0.3301	0.3565	Ave		0.3440				8.2		15.0			
Chloromethane	0.4771 0.3669	0.4153 0.3611	0.3616	0.4096	0.4292	Ave		0.4030			0.1000	10.7		15.0			
Butadiene	0.3883 0.3725	0.3775 0.3703	0.3527	0.3739	0.4108	Ave		0.3780				4.7		15.0			
Vinyl chloride	0.4026 0.3470	0.3452 0.3521	0.3372	0.3489	0.3811	Ave		0.3591				6.6		15.0			
Bromomethane	0.2403 0.1972	0.1914 0.2205	0.2119	0.2029	0.2209	Ave		0.2122				7.9		15.0			
Chloroethane	0.1117 0.2143	0.2186 0.2313	0.2159	0.2153	0.2303	Lin1	-0.083	0.2307							0.9980		0.9900
Dichlorofluoromethane	0.5501 0.5074	0.4617 0.5209	0.5054	0.5164	0.5386	Ave		0.5143				5.5		15.0			
Trichlorofluoromethane	0.4682 0.3899	0.3776 0.4011	0.3751	0.3751	0.4149	Ave		0.4003				8.4		15.0			
Ethyl ether	0.2561 0.2177	0.2417 0.2142	0.2353	0.2411	0.2397	Ave		0.2351				6.2		15.0			
Acrolein	0.0403 0.0375	0.0410 0.0339	0.0386	0.0353	0.0397	Ave		0.0380				7.0		15.0			
1,1-Dichloroethene	0.3446 0.2740	0.2791 0.2715	0.2796	0.2787	0.2876	Ave		0.2879				8.9		15.0			
1,1,2-Trichlorotrifluoroethane	0.1322 0.2035	0.2059 0.2056	0.2050	0.2313	0.2165	Lin1	-0.032	0.2098							0.9970		0.9900
Acetone	0.1463 0.0675	0.0965 0.0644	0.0885	0.0777	0.0810	Lin1	0.1639	0.0640							0.9950		0.9900
Iodomethane	0.5427 0.5017	0.5096 0.5092	0.5234	0.5285	0.5479	Ave		0.5233				3.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 348190

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47198

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon disulfide	1.0127 0.9201	0.9409 0.9562	0.9557	0.9958	0.9910	Ave		0.9675				3.4		15.0			
3-Chloro-1-propene	0.2357 0.2033	0.2057 0.2087	0.2074	0.2014	0.2273	Ave		0.2128				6.2		15.0			
Methyl acetate	0.1949 0.1408	0.1585 0.1440	0.1606	0.1661	0.1583	Ave		0.1605				11.0		15.0			
Methylene Chloride	0.4013 0.3119	0.3665 0.3223	0.3560	0.3559	0.3536	Ave		0.3525				8.3		15.0			
tert-Butyl alcohol	0.0301 0.0258	0.0299 0.0249	0.0307	0.0239	0.0295	Ave		0.0278				10.3		15.0			
Acrylonitrile	0.0977 0.0917	0.0937 0.0925	0.0997	0.0941	0.1011	Ave		0.0958				3.9		15.0			
trans-1,2-Dichloroethene	0.3348 0.3058	0.3029 0.3147	0.3236	0.3237	0.3275	Ave		0.3190				3.7		15.0			
Methyl tert-butyl ether	0.8966 0.8291	0.8616 0.8787	0.9302	0.8910	0.9034	Ave		0.8844				3.7		15.0			
Hexane	0.0638 0.0462	0.0514 0.0518	0.0557	0.0504	0.0584	Ave		0.0540				10.8		15.0			
1,1-Dichloroethane	0.6013 0.5343	0.5352 0.5612	0.5907	0.5768	0.5836	Ave		0.5690			0.1000	4.6		15.0			
Vinyl acetate	0.4651 0.4165	0.4611 0.4455	0.4553	0.4524	0.4613	Ave		0.4510				3.7		15.0			
cis-1,2-Dichloroethene	0.3394 0.3093	0.3313 0.3253	0.3471	0.3356	0.3565	Ave		0.3349				4.5		15.0			
2,2-Dichloropropane	0.1122 0.0904	0.0933 0.0944	0.0896	0.0949	0.0920	Ave		0.0953				8.1		15.0			
2-Butanone (MEK)	0.0989 0.0762	0.1048 0.0805	0.0993	0.0843	0.1037	Ave		0.0926				12.8		15.0			
Bromochloromethane	0.1660 0.1357	0.1344 0.1470	0.1502	0.1576	0.1564	Ave		0.1496				7.8		15.0			
Tetrahydrofuran	0.0829 0.0579	0.0682 0.0560	0.0714	0.0638	0.0664	Ave		0.0667				13.5		15.0			
Chloroform	0.5292 0.4519	0.4814 0.4740	0.4981	0.5143	0.5073	Ave		0.4937				5.3		15.0			
1,1,1-Trichloroethane	0.5311 0.4378	0.4701 0.4721	0.4782	0.4982	0.4838	Ave		0.4816				5.9		15.0			
Cyclohexane	0.5437 0.5052	0.5073 0.5448	0.5405	0.5590	0.5488	Ave		0.5356				3.9		15.0			
1,1-Dichloropropene	0.3852 0.3109	0.3326 0.3420	0.3441	0.3617	0.3598	Ave		0.3480				6.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 348190

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47198

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon tetrachloride	0.4279 0.3710	0.3569 0.3965	0.3801	0.3987	0.4092	Ave		0.3915				6.1		15.0			
Isobutyl alcohol	0.0108 0.0076	0.0096 0.0079	0.0104	0.0082	0.0095	Ave		0.0091				13.5		15.0			
Benzene	1.2600 1.0302	1.1482 1.1226	1.1302	1.1667	1.1698	Ave		1.1468				6.0		15.0			
1,2-Dichloroethane	0.4897 0.3706	0.4209 0.3931	0.4112	0.4346	0.4186	Ave		0.4198				8.9		15.0			
n-Heptane	0.0494 0.0413	0.0394 0.0413	0.0433	0.0511	0.0432	Ave		0.0441				9.9		15.0			
Trichloroethene	0.3156 0.2617	0.2659 0.2787	0.2980	0.2867	0.2938	Ave		0.2858				6.6		15.0			
Methylcyclohexane	0.4067 0.3851	0.3951 0.3940	0.3993	0.4239	0.4117	Ave		0.4023				3.2		15.0			
1,2-Dichloropropane	0.3159 0.2729	0.2918 0.2858	0.2942	0.3131	0.3103	Ave		0.2977				5.4		15.0			
Dibromomethane	0.1949 0.1463	0.1721 0.1554	0.1696	0.1743	0.1697	Ave		0.1689				9.1		15.0			
1,4-Dioxane	0.0027 0.0025	0.0034 0.0021	0.0025	0.0023	0.0032	Qua	-0.018	0.0032	-0.000001						0.9940		0.9900
Bromodichloromethane	0.3945 0.3317	0.3718 0.3664	0.3726	0.3885	0.3911	Ave		0.3738				5.8		15.0			
2-Chloroethyl vinyl ether	0.1630 0.1498	0.1513 0.1529	0.1583	0.1630	0.1603	Ave		0.1569				3.5		15.0			
cis-1,3-Dichloropropene	0.4299 0.3874	0.3932 0.4199	0.4217	0.4239	0.4223	Ave		0.4140				4.0		15.0			
4-Methyl-2-pentanone (MIBK)	0.2462 0.2049	0.2263 0.2115	0.2414	0.2454	0.2341	Ave		0.2300				7.2		15.0			
Toluene	1.6334 1.3415	1.5205 1.5700	1.5373	1.5169	1.5509	Ave		1.5244				5.9		15.0			
trans-1,3-Dichloropropene	0.4811 0.4083	0.4262 0.4652	0.4474	0.4658	0.4662	Ave		0.4515				5.7		15.0			
Ethyl methacrylate	0.3847 0.3241	0.3570 0.3716	0.3779	0.3963	0.3796	Ave		0.3702				6.4		15.0			
1,1,2-Trichloroethane	0.3190 0.2429	0.2893 0.2789	0.2791	0.2838	0.2918	Ave		0.2836				8.0		15.0			
Tetrachloroethene	0.2711 0.2317	0.2798 0.2653	0.2578	0.2769	0.2759	Ave		0.2655				6.3		15.0			
1,3-Dichloropropane	0.5727 0.4146	0.4670 0.4596	0.4848	0.5094	0.4964	Ave		0.4864				10.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 348190

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47198

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Hexanone	0.2005 0.1601	0.1931 0.1646	0.2046	0.1909	0.1907	Ave		0.1864				9.2		15.0			
Chlorodibromomethane	0.3016 0.2988	0.2926 0.3369	0.3271	0.3245	0.3319	Ave		0.3162				5.7		15.0			
1,2-Dibromoethane	0.3003 0.2550	0.2684 0.2802	0.2701	0.2818	0.2992	Ave		0.2793				5.9		15.0			
Chlorobenzene	1.0444 0.8960	1.0188 1.0039	0.9937	0.9947	1.0128	Ave		0.9949			0.3000	4.7		15.0			
1,1,1,2-Tetrachloroethane	0.3982 0.3308	0.3718 0.3876	0.3847	0.3675	0.3862	Ave		0.3753				5.9		15.0			
Ethylbenzene	0.6089 0.5076	0.5249 0.5575	0.5496	0.5604	0.5762	Ave		0.5550				6.0		15.0			
m-Xylene & p-Xylene	0.7544 0.6259	0.6871 0.7113	0.6580	0.6907	0.6851	Ave		0.6875				5.9		15.0			
o-Xylene	0.7596 0.6453	0.7221 0.7473	0.6952	0.7106	0.7318	Ave		0.7160				5.3		15.0			
Styrene	1.1786 1.0718	1.1098 1.2402	1.0656	1.1379	1.1730	Ave		1.1396				5.5		15.0			
Bromoform	0.1792 0.1903	0.1888 0.2289	0.1821	0.1866	0.2026	Ave		0.1941			0.1000	8.8		15.0			
Isopropylbenzene	1.8296 1.5815	1.6753 1.9166	1.7107	1.7237	1.7825	Ave		1.7457				6.2		15.0			
1,1,2,2-Tetrachloroethane	0.7123 0.5621	0.6782 0.5883	0.7162	0.7613	0.7109	Ave		0.6756			0.3000	10.8		15.0			
Bromobenzene	0.7588 0.6600	0.7936 0.7327	0.7832	0.8349	0.8102	Ave		0.7676				7.5		15.0			
1,2,3-Trichloropropane	0.2209 0.1826	0.2336 0.1825	0.2254	0.2224	0.2166	Ave		0.2120				9.8		15.0			
trans-1,4-Dichloro-2-butene	0.0971 0.1237	0.1507 0.1392	0.1591	0.1362	0.1485	Lin1	-0.003	0.1374							0.9920		0.9900
N-Propylbenzene	0.7888 0.7117	0.7971 0.7749	0.8072	0.8562	0.8507	Ave		0.7981				6.1		15.0			
2-Chlorotoluene	0.8519 0.6536	0.6781 0.7034	0.7591	0.7984	0.7975	Ave		0.7489				9.7		15.0			
1,3,5-Trimethylbenzene	2.4725 2.2872	2.4258 2.5026	2.5932	2.6801	2.6778	Ave		2.5199				5.6		15.0			
4-Chlorotoluene	0.7474 0.6827	0.7494 0.7252	0.7413	0.8080	0.7621	Ave		0.7451				5.1		15.0			
tert-Butylbenzene	2.1833 1.7620	2.1298 1.9882	1.9822	2.1193	2.1556	Ave		2.0458				7.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 348190

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47198

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,4-Trimethylbenzene	3.0184 2.4470	2.7364 2.6608	2.8336	2.7881	2.8564	Ave		2.7630				6.5		15.0			
sec-Butylbenzene	2.8650 2.4842	2.7533 2.7550	2.7314	2.8090	2.9317	Ave		2.7614				5.1		15.0			
1,3-Dichlorobenzene	1.6396 1.3415	1.5060 1.4575	1.5179	1.5621	1.5464	Ave		1.5102				6.2		15.0			
4-Isopropyltoluene	2.4637 2.1908	2.2931 2.4151	2.4682	2.4741	2.5061	Ave		2.4016				4.8		15.0			
1,4-Dichlorobenzene	1.5988 1.3676	1.5405 1.5084	1.5328	1.6208	1.5998	Ave		1.5384				5.6		15.0			
n-Butylbenzene	1.9641 1.7432	1.9760 1.8954	1.9703	2.0006	2.0286	Ave		1.9397				4.9		15.0			
1,2-Dichlorobenzene	1.5565 1.3671	1.5596 1.4796	1.5968	1.5809	1.6164	Ave		1.5367				5.6		15.0			
1,2-Dibromo-3-Chloropropane	0.1680 0.1243	0.1634 0.1389	0.1712	0.1562	0.1559	Ave		0.1540				10.9		15.0			
1,2,4-Trichlorobenzene	1.0593 0.8110	1.0103 0.8100	0.9076	0.9011	1.0217	Ave		0.9316				10.9		15.0			
Hexachlorobutadiene	0.4119 0.2653	0.3002 0.2445	0.2971	0.2897	0.3260	Qua	0.0760	0.2993	-0.001434						0.9980		0.9900
Naphthalene	2.6504 2.1132	2.4882 2.0761	2.5897	2.4549	2.6105	Ave		2.4261				9.8		15.0			
1,2,3-Trichlorobenzene	1.0673 0.7835	0.9878 0.7246	0.9377	0.8773	0.9727	Ave		0.9073				13.3		15.0			
Dibromofluoromethane (Surr)	0.2613 0.2569	0.2591 0.2541	0.2664	0.2702	0.2708	Ave		0.2627				2.5		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3641 0.3199	0.3549 0.3210	0.3402	0.3167	0.3329	Ave		0.3357				5.5		15.0			
Toluene-d8 (Surr)	1.2871 1.1605	1.3529 1.2930	1.2292	1.2496	1.2649	Ave		1.2625				4.7		15.0			
4-Bromofluorobenzene (Surr)	0.4660 0.4795	0.4708 0.5146	0.4769	0.4653	0.4919	Ave		0.4807				3.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 348190

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47198

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-348190/8	UXX5945.D
Level 2	STD8260 240-348190/7	UXX5944.D
Level 3	STD8260 240-348190/6	UXX5943.D
Level 4	STD8260 240-348190/5	UXX5942.D
Level 5	STD8260 240-348190/4	UXX5941.D
Level 6	STD8260 240-348190/3	UXX5940.D
Level 7	STD8260 240-348190/2	UXX5939.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	29702 514557	49306 983706	96492	125358	281542	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Chloromethane	FB	Ave	35559 558142	59028 1139409	106974	155540	339023	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Butadiene	FB	Ave	28939 566804	53656 1168420	104330	141964	324473	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Vinyl chloride	FB	Ave	30003 527876	49059 1111107	99749	132484	300976	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Bromomethane	FB	Ave	17909 299966	27208 695854	62698	77029	174504	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Chloroethane	FB	Lin1	8326 326090	31062 729967	63869	81755	181873	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	40997 771948	65618 1643670	149507	196060	425393	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	34895 593135	53671 1265887	110955	142428	327669	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethyl ether	FB	Ave	19083 331251	34347 675875	69595	91555	189334	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Acrolein	FB	Ave	15013 285095	29169 534864	57102	67032	156817	5.00 100	10.0 200	20.0	25.0	50.0
1,1-Dichloroethene	FB	Ave	25681 416816	39664 856734	82722	105838	227156	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,2-Trichlorotrifluoroethane	FB	Lin1	9855 309577	29262 648736	60642	87826	171003	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Acetone	FB	Lin1	21800 205299	27438 406703	52366	59024	127962	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Iodomethane	FB	Ave	40446 763308	72419 1606886	154849	200675	432735	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Carbon disulfide	FB	Ave	75471 1399853	133722 3017501	282734	378111	782683	1.00 20.0	2.00 40.0	4.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 348190

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47198

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
3-Chloro-1-propene	FB	Ave	17566 309282	29228 658534	61342	76468	179488	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Methyl acetate	FB	Ave	29045 428545	45042 909030	95048	126100	249995	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Methylene Chloride	FB	Ave	29904 474592	52083 1017150	105307	135144	279268	1.00 20.0	2.00 40.0	4.00	5.00	10.0
tert-Butyl alcohol	FB	Ave	22408 392784	42479 785080	90900	90591	233093	10.0 200	20.0 400	40.0	50.0	100
Acrylonitrile	FB	Ave	72831 1395587	133123 2918908	294885	357275	798555	10.0 200	20.0 400	40.0	50.0	100
trans-1,2-Dichloroethene	FB	Ave	24954 465280	43043 993015	95719	122892	258631	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Methyl tert-butyl ether	FB	Ave	66819 1261437	122456 2773005	275180	338334	713524	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Hexane	FB	Ave	4752 70252	7303 163590	16483	19143	46098	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1-Dichloroethane	FB	Ave	44813 812922	76059 1771078	174733	219004	460948	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Vinyl acetate	FB	Ave	34661 633638	65528 1405879	134694	171771	364316	1.00 20.0	2.00 40.0	4.00	5.00	10.0
cis-1,2-Dichloroethene	FB	Ave	25292 470642	47089 1026709	102678	127410	281579	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2,2-Dichloropropane	FB	Ave	8364 137490	13262 297781	26495	36034	72680	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	14745 231977	29788 508179	58774	64038	163857	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Bromochloromethane	FB	Ave	12372 206532	19102 464023	44433	59842	123496	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Tetrahydrofuran	FB	Ave	12349 176156	19381 353680	42256	48442	104928	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Chloroform	FB	Ave	39440 687485	68417 1495865	147357	195295	400639	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,1-Trichloroethane	FB	Ave	39579 666091	66817 1489765	141477	189167	382116	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Cyclohexane	FB	Ave	40517 768592	72096 1719352	159885	212264	433465	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	28707 473071	47265 1079383	101794	137348	284153	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Carbon tetrachloride	FB	Ave	31891 564380	50727 1251286	112446	151393	323195	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Isobutyl alcohol	CBNZ d5	Ave	15567 252528	25786 508277	61586	65605	150525	25.0 500	50.0 1000	100	125	250

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 348190

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47198

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	93899 1567390	163180 3542746	334335	443011	923963	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dichloroethane	FB	Ave	36495 563877	59820 1240480	121653	165013	330637	1.00 20.0	2.00 40.0	4.00	5.00	10.0
n-Heptane	FB	Ave	3680 62798	5603 130324	12823	19398	34121	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Trichloroethene	FB	Ave	23518 398156	37793 879438	88143	108876	232021	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Methylcyclohexane	FB	Ave	30311 585934	56155 1243335	118131	160970	325155	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dichloropropane	FB	Ave	23541 415183	41474 902011	87035	118902	245104	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Dibromomethane	FB	Ave	14524 222579	24453 490472	50177	66172	134033	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,4-Dioxane	FB	Qua	3984 77487	9548 133459	14536	17749	51135	20.0 400	40.0 800	80.0	100	200
Bromodichloromethane	FB	Ave	29398 504627	52845 1156392	110220	147502	308915	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Ave	24294 455859	43002 964865	93684	123818	253171	2.00 40.0	4.00 80.0	8.00	10.0	20.0
cis-1,3-Dichloropropene	FB	Ave	32036 589452	55884 1325129	124749	160953	333506	1.00 20.0	2.00 40.0	4.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	36693 623507	64321 1335139	142818	186347	369803	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Toluene	CBNZ d5	Ave	94411 1773988	163738 4022193	364924	486520	987739	1.00 20.0	2.00 40.0	4.00	5.00	10.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	27810 539870	45894 1191800	106207	149395	296932	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Ave	22235 428540	38450 952039	89700	127102	241738	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,2-Trichloroethane	CBNZ d5	Ave	18441 321237	31150 714597	66256	91013	185848	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	15669 306405	30127 679783	61206	88799	175682	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,3-Dichloropropane	CBNZ d5	Ave	33102 548275	50296 1177346	115086	163398	316160	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Hexanone	CBNZ d5	Ave	23174 423322	41590 843364	97136	122476	242960	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Chlorodibromomethane	CBNZ d5	Ave	17431 395090	31514 863135	77635	104067	211372	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dibromoethane	CBNZ d5	Ave	17360 337253	28905 717928	64125	90394	190578	1.00 20.0	2.00 40.0	4.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 348190

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47198

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorobenzene	CBNZ d5	Ave	60368 1184812	109713 2571998	235880	319037	645008	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	23016 437489	40039 993121	91323	117864	245955	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	35195 671218	56525 1428374	130454	179744	366978	1.00 20.0	2.00 40.0	4.00	5.00	10.0
m-Xylene & p-Xylene	CBNZ d5	Ave	43604 827660	73996 1822298	156186	221524	436330	1.00 20.0	2.00 40.0	4.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	43905 853338	77759 1914562	165032	227919	466041	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Styrene	CBNZ d5	Ave	68125 1417346	119516 3177334	252959	364983	747052	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Bromoform	CBNZ d5	Ave	10359 251662	20327 586449	43222	59836	129035	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Isopropylbenzene	CBNZ d5	Ave	105750 2091262	180416 4910038	406092	552849	1135218	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	22805 447641	40471 975654	92437	130252	253276	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Bromobenzene	DCBd 4	Ave	24293 525557	47356 1215279	101075	142846	288667	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	7073 145421	13937 302742	29093	38050	77183	1.00 20.0	2.00 40.0	4.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Lin1	3110 98479	8994 230911	20531	23302	52920	1.00 20.0	2.00 40.0	4.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	25253 566807	47561 1285152	104182	146487	303075	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	27274 520503	40464 1166610	97963	136591	284129	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	79157 1821446	144751 4150687	334679	458536	954033	1.00 20.0	2.00 40.0	4.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	23929 543666	44716 1202708	95669	138235	271503	1.00 20.0	2.00 40.0	4.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	69898 1403191	127089 3297539	255822	362585	767980	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	96634 1948656	163283 4413140	365703	477013	1017650	1.00 20.0	2.00 40.0	4.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	91722 1978322	164294 4569258	352509	480582	1044498	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	52492 1068286	89865 2417404	195901	267256	550957	1.00 20.0	2.00 40.0	4.00	5.00	10.0
4-Isopropyltoluene	DCBd 4	Ave	78874 1744696	136832 4005507	318550	423296	892863	1.00 20.0	2.00 40.0	4.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 348190

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47198

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,4-Dichlorobenzene	DCBd 4	Ave	51185 1089088	91925 2501722	197818	277301	569972	1.00 20.0	2.00 40.0	4.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	62879 1388235	117911 3143613	254281	342280	722754	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	49830 1088688	93064 2454053	206076	270475	575895	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	5380 98986	9748 230360	22093	26723	55531	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	33912 645835	60286 1343492	117135	154166	364018	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Qua	13186 211312	17916 405483	38345	49562	116162	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Naphthalene	DCBd 4	Ave	84851 1682830	148471 3443386	334226	420006	930050	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	34169 623919	58942 1201706	121014	150099	346559	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Dibromofluoromethane (Surr)	FB	Ave	19470 390826	36825 801982	78811	102613	213883	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	27137 486740	50442 1012863	100639	120256	262894	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Toluene-d8 (Surr)	CBNZ d5	Ave	74395 1534612	145690 3312433	291793	400786	805597	1.00 20.0	2.00 40.0	4.00	5.00	10.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	26936 634068	50696 1318259	113207	149244	313290	1.00 20.0	2.00 40.0	4.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5939.D
Lims ID: STD8260 L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 02-Oct-2018 15:27:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-002
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub82

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:29:08 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: williamsla Date: 02-Oct-2018 16:17:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.568	5.565	0.003	99	788936	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.253	8.250	0.003	86	640476	10.0	10.0	a
* 3 1,4-Dichlorobenzene-d4	152	10.488	10.486	0.002	91	414638	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	5.000	4.997	0.003	93	801982	40.0	38.7	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.284	5.281	0.003	99	1012863	40.0	38.2	
$ 6 Toluene-d8 (Surr)	98	6.940	6.937	0.003	94	3312433	40.0	41.0	
$ 7 4-Bromofluorobenzene (Surr	95	9.353	9.350	0.003	92	1318259	40.0	42.8	
9 Dichlorodifluoromethane	85	1.676	1.662	0.014	100	983706	40.0	36.2	
10 Chloromethane	50	1.830	1.827	0.003	98	1139409	40.0	35.8	
12 Butadiene	54	1.948	1.945	0.003	89	1168420	40.0	39.2	
11 Vinyl chloride	62	1.948	1.957	-0.009	81	1111107	40.0	39.2	
13 Bromomethane	94	2.256	2.265	-0.009	92	695854	40.0	41.6	
14 Chloroethane	64	2.327	2.348	-0.021	98	729967	40.0	40.5	
15 Dichlorofluoromethane	67	2.540	2.549	-0.009	98	1643670	40.0	40.5	
16 Trichlorofluoromethane	101	2.587	2.584	0.003	97	1265887	40.0	40.1	
17 Ethyl ether	59	2.823	2.833	-0.010	92	675875	40.0	36.4	
18 Acrolein	56	2.953	2.951	0.002	99	534864	200.0	178.2	
19 1,1-Dichloroethene	96	3.036	3.045	-0.009	96	856734	40.0	37.7	
20 1,1,2-Trichloro-1,2,2-trif	151	3.072	3.069	0.003	94	648736	40.0	39.3	
21 Acetone	43	3.095	3.093	0.002	100	406703	80.0	78.0	
22 Iodomethane	142	3.178	3.187	-0.009	98	1606886	40.0	38.9	
24 Carbon disulfide	76	3.249	3.247	0.002	100	3017501	40.0	39.5	
26 3-Chloro-1-propene	76	3.368	3.377	-0.009	88	658534	40.0	39.2	
27 Methyl acetate	43	3.391	3.400	-0.009	98	909030	80.0	71.8	
28 Methylene Chloride	84	3.486	3.483	0.003	98	1017150	40.0	36.6	
29 2-Methyl-2-propanol	59	3.580	3.578	0.002	98	785080	400.0	357.7	
31 Acrylonitrile	53	3.699	3.708	-0.009	100	2918908	400.0	386.3	
32 Methyl tert-butyl ether	73	3.734	3.732	0.002	97	2773005	40.0	39.7	
30 trans-1,2-Dichloroethene	96	3.722	3.732	-0.010	94	993015	40.0	39.5	
33 Hexane	86	3.959	3.968	-0.009	89	163590	40.0	38.4	
34 1,1-Dichloroethane	63	4.089	4.098	-0.009	97	1771078	40.0	39.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	4.125	4.134	-0.009	98	1405879	40.0	39.5	
40 cis-1,2-Dichloroethene	96	4.586	4.595	-0.009	88	1026709	40.0	38.9	
41 2-Butanone (MEK)	43	4.598	4.595	0.003	99	508179	80.0	69.6	
39 2,2-Dichloropropane	97	4.598	4.595	0.003	91	297781	40.0	39.6	
45 Chlorobromomethane	128	4.799	4.796	0.003	97	464023	40.0	39.3	
46 Tetrahydrofuran	42	4.834	4.843	-0.009	97	353680	80.0	67.3	
47 Chloroform	83	4.858	4.855	0.003	95	1495865	40.0	38.4	
48 1,1,1-Trichloroethane	97	5.023	5.021	0.002	98	1489765	40.0	39.2	
49 Cyclohexane	56	5.071	5.080	-0.009	92	1719352	40.0	40.7	
51 Carbon tetrachloride	117	5.165	5.163	0.002	97	1251286	40.0	40.5	
50 1,1-Dichloropropene	75	5.154	5.163	-0.009	93	1079383	40.0	39.3	
52 Isobutyl alcohol	41	5.236	5.234	0.002	95	508277	1000.0	868.8	
53 Benzene	78	5.343	5.340	0.003	97	3542746	40.0	39.2	
54 1,2-Dichloroethane	62	5.343	5.352	-0.009	98	1240480	40.0	37.5	
56 n-Heptane	100	5.544	5.541	0.003	90	130324	40.0	37.4	
58 Trichloroethene	130	5.887	5.884	0.003	95	879438	40.0	39.0	
60 Methylcyclohexane	83	6.053	6.050	0.003	95	1243335	40.0	39.2	
61 1,2-Dichloropropane	63	6.076	6.074	0.002	95	902011	40.0	38.4	
63 Dibromomethane	93	6.183	6.180	0.003	96	490472	40.0	36.8	
64 1,4-Dioxane	88	6.183	6.192	-0.009	97	133459	800.0	803.3	
65 Dichlorobromomethane	83	6.301	6.310	-0.009	98	1156392	40.0	39.2	
67 2-Chloroethyl vinyl ether	63	6.549	6.559	-0.010	92	964865	80.0	77.9	
68 cis-1,3-Dichloropropene	75	6.691	6.689	0.002	93	1325129	40.0	40.6	
69 4-Methyl-2-pentanone (MIBK	43	6.821	6.819	0.002	95	1335139	80.0	73.6	
70 Toluene	91	6.999	6.996	0.003	98	4022193	40.0	41.2	
71 trans-1,3-Dichloropropene	75	7.176	7.174	0.002	95	1191800	40.0	41.2	
72 Ethyl methacrylate	69	7.247	7.245	0.002	89	952039	40.0	40.2	
73 1,1,2-Trichloroethane	97	7.354	7.351	0.003	92	714597	40.0	39.3	
74 Tetrachloroethene	164	7.496	7.493	0.003	96	679783	40.0	40.0	
75 1,3-Dichloropropane	76	7.507	7.505	0.002	93	1177346	40.0	37.8	
76 2-Hexanone	43	7.567	7.564	0.003	94	843364	80.0	70.7	
78 Chlorodibromomethane	129	7.720	7.718	0.002	91	863135	40.0	42.6	
80 Ethylene Dibromide	107	7.827	7.824	0.003	98	717928	40.0	40.1	
82 Chlorobenzene	112	8.276	8.274	0.002	94	2571998	40.0	40.4	
83 1,1,1,2-Tetrachloroethane	131	8.347	8.345	0.002	95	993121	40.0	41.3	
84 Ethylbenzene	106	8.371	8.368	0.003	98	1428374	40.0	40.2	
85 m-Xylene & p-Xylene	106	8.477	8.475	0.002	99	1822298	40.0	41.4	
86 o-Xylene	106	8.856	8.853	0.003	96	1914562	40.0	41.8	
87 Styrene	104	8.868	8.865	0.003	94	3177334	40.0	43.5	
88 Bromoform	173	9.057	9.054	0.003	96	586449	40.0	47.2	
89 Isopropylbenzene	105	9.199	9.208	-0.009	95	4910038	40.0	43.9	
92 1,1,2,2-Tetrachloroethane	83	9.483	9.480	0.003	95	975654	40.0	34.8	
93 Bromobenzene	156	9.518	9.516	0.002	95	1215279	40.0	38.2	
94 1,2,3-Trichloropropane	110	9.542	9.539	0.003	86	302742	40.0	34.4	
95 trans-1,4-Dichloro-2-buten	53	9.542	9.539	0.003	81	230911	40.0	40.6	
96 N-Propylbenzene	120	9.601	9.598	0.003	99	1285152	40.0	38.8	
97 2-Chlorotoluene	126	9.696	9.693	0.003	96	1166610	40.0	37.6	
98 1,3,5-Trimethylbenzene	105	9.767	9.764	0.003	94	4150687	40.0	39.7	
99 4-Chlorotoluene	126	9.802	9.800	0.002	97	1202708	40.0	38.9	
100 tert-Butylbenzene	119	10.098	10.095	0.003	91	3297539	40.0	38.9	
102 1,2,4-Trimethylbenzene	105	10.133	10.143	-0.010	96	4413140	40.0	38.5	
103 sec-Butylbenzene	105	10.311	10.308	0.003	93	4569258	40.0	39.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	10.429	10.426	0.003	98	2417404	40.0	38.6	
105 4-Isopropyltoluene	119	10.441	10.450	-0.009	97	4005507	40.0	40.2	
106 1,4-Dichlorobenzene	146	10.512	10.509	0.003	96	2501722	40.0	39.2	
109 n-Butylbenzene	91	10.855	10.852	0.003	98	3143613	40.0	39.1	
110 1,2-Dichlorobenzene	146	10.879	10.876	0.003	98	2454053	40.0	38.5	
111 1,2-Dibromo-3-Chloropropan	157	11.659	11.657	0.002	88	230360	40.0	36.1	
113 1,2,4-Trichlorobenzene	180	12.487	12.485	0.002	94	1343492	40.0	34.8	
114 Hexachlorobutadiene	225	12.653	12.650	0.003	98	405483	40.0	40.1	
115 Naphthalene	128	12.736	12.733	0.003	100	3443386	40.0	34.2	
116 1,2,3-Trichlorobenzene	180	12.984	12.981	0.003	98	1201706	40.0	31.9	
S 128 1,2-Dichloroethene, Total	96				0			78.3	
S 129 1,3-Dichloropropene, Total	75				0			81.8	
S 130 Xylenes, Total	106				0		80.0	83.1	
S 131 Trihalomethanes, Total	1				0		160.0	167.4	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

VMRPRIMW_00303	Amount Added:	32.00	Units: uL
VMRGAS_00263	Amount Added:	32.00	Units: uL
vm50ss_00337	Amount Added:	32.00	Units: uL
VMAROLISTDW_00267	Amount Added:	32.00	Units: uL
VM50IS_00071	Amount Added:	1.00	Units: uL

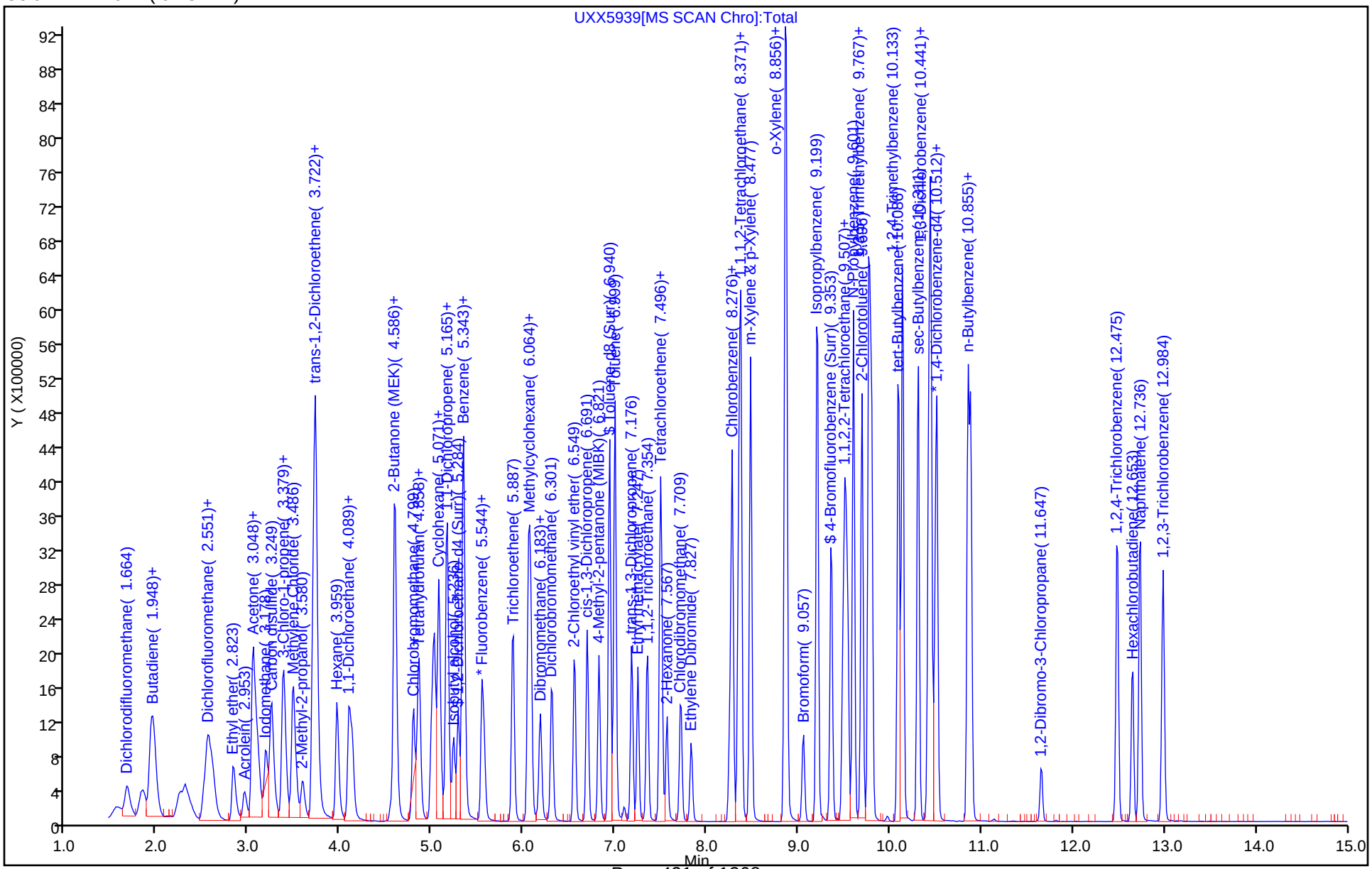
Report Date: 03-Oct-2018 12:29:09 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5939.D

Injection Date:	02-Oct-2018 15:27:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	STD8260 L7			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

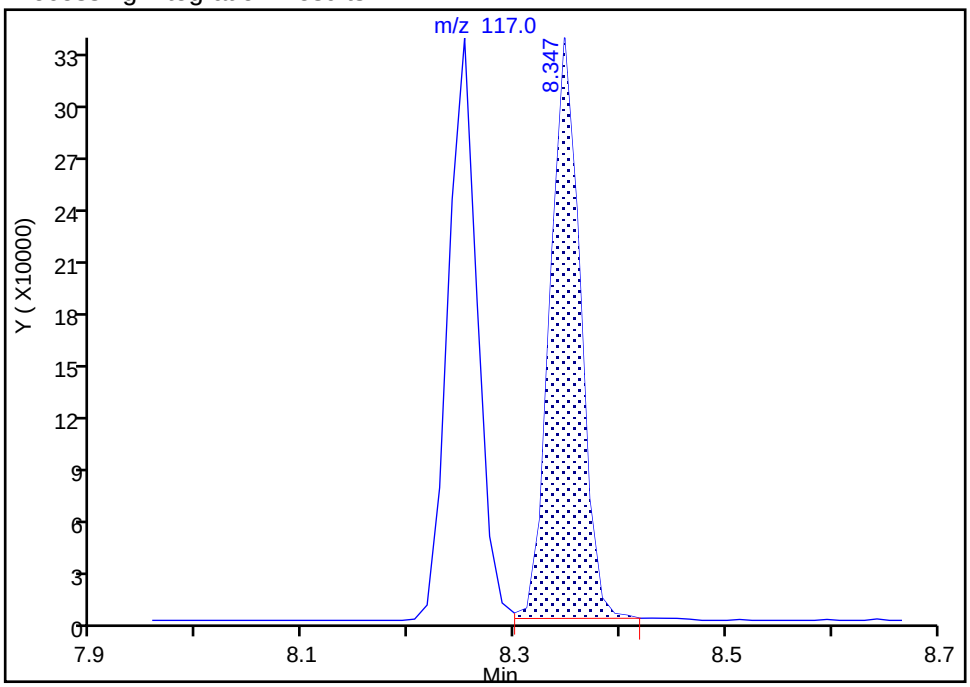
Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5939.D
Injection Date: 02-Oct-2018 15:27:30 Instrument ID: A3UX10
Lims ID: STD8260 L7
Client ID:
Operator ID: 001644 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_10 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

* 2 Chlorobenzene-d5, CAS: 3114-55-4

Signal: 1

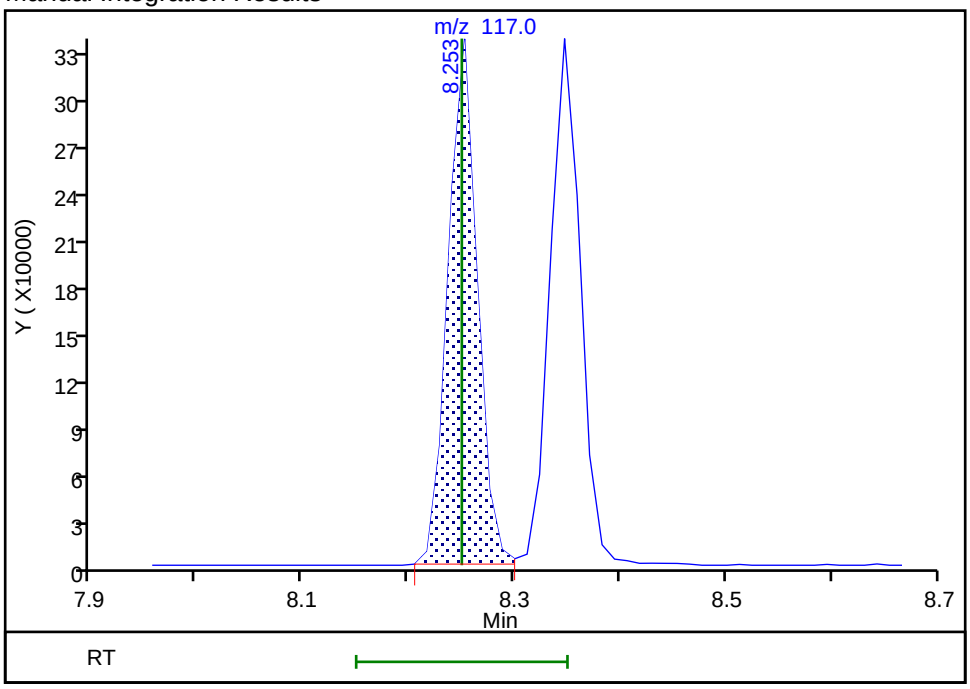
Processing Integration Results

RT: 8.35
Area: 661247
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 8.25
Area: 640476
Amount: 10.000000
Amount Units: ug/l



Reviewer: williamsla, 02-Oct-2018 16:16:32
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5940.D
Lims ID: STD8260 L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 02-Oct-2018 15:52:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-003
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub82

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:29:14 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: williamsla Date: 02-Oct-2018 16:17:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.565	5.565	0.000	99	760710	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.250	8.250	0.000	86	661175	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.485	10.486	-0.001	94	398179	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.997	4.997	0.000	92	390826	20.0	19.6	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.281	5.281	0.000	98	486740	20.0	19.1	
$ 6 Toluene-d8 (Surr)	98	6.937	6.937	0.000	93	1534612	20.0	18.4	
$ 7 4-Bromofluorobenzene (Surr	95	9.362	9.350	0.012	92	634068	20.0	19.9	
9 Dichlorodifluoromethane	85	1.673	1.662	0.011	100	514557	20.0	19.7	
10 Chloromethane	50	1.827	1.827	0.000	99	558142	20.0	18.2	
12 Butadiene	54	1.945	1.945	0.000	88	566804	20.0	19.7	
11 Vinyl chloride	62	1.945	1.957	-0.012	82	527876	20.0	19.3	
13 Bromomethane	94	2.253	2.265	-0.012	91	299966	20.0	18.6	
14 Chloroethane	64	2.312	2.348	-0.036	99	326090	20.0	18.9	
15 Dichlorofluoromethane	67	2.537	2.549	-0.012	98	771948	20.0	19.7	
16 Trichlorofluoromethane	101	2.584	2.584	0.000	95	593135	20.0	19.5	
17 Ethyl ether	59	2.832	2.833	-0.001	91	331251	20.0	18.5	
18 Acrolein	56	2.951	2.951	0.000	99	285095	100.0	98.5	
19 1,1-Dichloroethene	96	3.045	3.045	0.000	96	416816	20.0	19.0	
20 1,1,2-Trichloro-1,2,2-trif	151	3.057	3.069	-0.012	94	309577	20.0	19.6	
21 Acetone	43	3.093	3.093	0.000	100	205299	40.0	39.6	
22 Iodomethane	142	3.187	3.187	0.000	98	763308	20.0	19.2	
24 Carbon disulfide	76	3.246	3.247	-0.001	100	1399853	20.0	19.0	
26 3-Chloro-1-propene	76	3.377	3.377	-0.001	88	309282	20.0	19.1	
27 Methyl acetate	43	3.388	3.400	-0.012	98	428545	40.0	35.1	
28 Methylene Chloride	84	3.483	3.483	0.000	98	474592	20.0	17.7	
29 2-Methyl-2-propanol	59	3.578	3.578	0.000	98	392784	200.0	185.6	
31 Acrylonitrile	53	3.696	3.708	-0.012	100	1395587	200.0	191.5	
30 trans-1,2-Dichloroethene	96	3.731	3.732	-0.001	69	465280	20.0	19.2	
32 Methyl tert-butyl ether	73	3.731	3.732	-0.001	98	1261437	20.0	18.8	
33 Hexane	86	3.956	3.968	-0.012	89	70252	20.0	17.1	
34 1,1-Dichloroethane	63	4.098	4.098	0.000	97	812922	20.0	18.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	4.134	4.134	0.000	97	633638	20.0	18.5	
41 2-Butanone (MEK)	43	4.595	4.595	0.000	98	231977	40.0	32.9	
40 cis-1,2-Dichloroethene	96	4.595	4.595	0.000	87	470642	20.0	18.5	
39 2,2-Dichloropropane	97	4.595	4.595	0.000	73	137490	20.0	19.0	
45 Chlorobromomethane	128	4.796	4.796	0.000	96	206532	20.0	18.1	
46 Tetrahydrofuran	42	4.831	4.843	-0.012	97	176156	40.0	34.7	
47 Chloroform	83	4.855	4.855	0.000	94	687485	20.0	18.3	
48 1,1,1-Trichloroethane	97	5.021	5.021	0.000	97	666091	20.0	18.2	
49 Cyclohexane	56	5.068	5.080	-0.012	92	768592	20.0	18.9	
50 1,1-Dichloropropene	75	5.163	5.163	0.000	92	473071	20.0	17.9	
51 Carbon tetrachloride	117	5.163	5.163	0.000	98	564380	20.0	19.0	
52 Isobutyl alcohol	41	5.234	5.234	0.000	93	252528	500.0	418.1	
53 Benzene	78	5.340	5.340	0.000	98	1567390	20.0	18.0	
54 1,2-Dichloroethane	62	5.352	5.352	0.000	97	563877	20.0	17.7	
56 n-Heptane	100	5.541	5.541	0.000	90	62798	20.0	18.7	
58 Trichloroethene	130	5.884	5.884	0.000	94	398156	20.0	18.3	
60 Methylcyclohexane	83	6.050	6.050	0.000	92	585934	20.0	19.1	
61 1,2-Dichloropropane	63	6.073	6.074	-0.001	95	415183	20.0	18.3	
63 Dibromomethane	93	6.180	6.180	0.000	95	222579	20.0	17.3	
64 1,4-Dioxane	88	6.180	6.192	-0.012	96	77487	400.0	386.3	
65 Dichlorobromomethane	83	6.310	6.310	0.000	97	504627	20.0	17.7	
67 2-Chloroethyl vinyl ether	63	6.558	6.559	-0.001	92	455859	40.0	38.2	
68 cis-1,3-Dichloropropene	75	6.688	6.689	-0.001	94	589452	20.0	18.7	
69 4-Methyl-2-pentanone (MIBK	43	6.819	6.819	0.000	94	623507	40.0	35.6	
70 Toluene	91	6.996	6.996	0.000	98	1773988	20.0	17.6	
71 trans-1,3-Dichloropropene	75	7.173	7.174	-0.001	95	539870	20.0	18.1	
72 Ethyl methacrylate	69	7.244	7.245	-0.001	89	428540	20.0	17.5	
73 1,1,2-Trichloroethane	97	7.351	7.351	0.000	92	321237	20.0	17.1	
74 Tetrachloroethene	164	7.493	7.493	0.000	96	306405	20.0	17.5	
75 1,3-Dichloropropane	76	7.505	7.505	0.000	93	548275	20.0	17.0	
76 2-Hexanone	43	7.564	7.564	0.000	94	423322	40.0	34.4	
78 Chlorodibromomethane	129	7.718	7.718	0.000	90	395090	20.0	18.9	
80 Ethylene Dibromide	107	7.824	7.824	0.000	99	337253	20.0	18.3	
82 Chlorobenzene	112	8.274	8.274	0.000	94	1184812	20.0	18.0	
83 1,1,1,2-Tetrachloroethane	131	8.344	8.345	-0.001	94	437489	20.0	17.6	
84 Ethylbenzene	106	8.368	8.368	0.000	98	671218	20.0	18.3	
85 m-Xylene & p-Xylene	106	8.475	8.475	0.000	99	827660	20.0	18.2	
86 o-Xylene	106	8.853	8.853	0.000	96	853338	20.0	18.0	
87 Styrene	104	8.865	8.865	0.000	94	1417346	20.0	18.8	
88 Bromoform	173	9.054	9.054	0.000	95	251662	20.0	19.6	
89 Isopropylbenzene	105	9.208	9.208	0.000	95	2091262	20.0	18.1	
92 1,1,2,2-Tetrachloroethane	83	9.480	9.480	0.000	96	447641	20.0	16.6	
93 Bromobenzene	156	9.516	9.516	0.000	95	525557	20.0	17.2	
95 trans-1,4-Dichloro-2-buten	53	9.539	9.539	0.000	73	98479	20.0	18.0	
94 1,2,3-Trichloropropane	110	9.539	9.539	0.000	85	145421	20.0	17.2	
96 N-Propylbenzene	120	9.598	9.598	0.000	99	566807	20.0	17.8	
97 2-Chlorotoluene	126	9.693	9.693	0.000	96	520503	20.0	17.5	
98 1,3,5-Trimethylbenzene	105	9.764	9.764	0.000	94	1821446	20.0	18.2	
99 4-Chlorotoluene	126	9.799	9.800	-0.001	98	543666	20.0	18.3	
100 tert-Butylbenzene	119	10.095	10.095	0.000	91	1403191	20.0	17.2	
102 1,2,4-Trimethylbenzene	105	10.142	10.143	-0.001	96	1948656	20.0	17.7	
103 sec-Butylbenzene	105	10.308	10.308	0.000	94	1978322	20.0	18.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	10.426	10.426	0.000	99	1068286	20.0	17.8	
105 4-Isopropyltoluene	119	10.450	10.450	0.000	97	1744696	20.0	18.2	
106 1,4-Dichlorobenzene	146	10.509	10.509	0.000	95	1089088	20.0	17.8	
109 n-Butylbenzene	91	10.852	10.852	0.000	98	1388235	20.0	18.0	
110 1,2-Dichlorobenzene	146	10.876	10.876	0.000	98	1088688	20.0	17.8	
111 1,2-Dibromo-3-Chloropropan	157	11.656	11.657	-0.001	83	98986	20.0	16.1	
113 1,2,4-Trichlorobenzene	180	12.484	12.485	-0.001	95	645835	20.0	17.4	
114 Hexachlorobutadiene	225	12.650	12.650	0.000	97	211312	20.0	19.3	
115 Naphthalene	128	12.733	12.733	0.000	100	1682830	20.0	17.4	
116 1,2,3-Trichlorobenzene	180	12.981	12.981	0.000	98	623919	20.0	17.3	
S 128 1,2-Dichloroethene, Total	96				0			37.6	
S 129 1,3-Dichloropropene, Total	75				0			36.8	
S 130 Xylenes, Total	106				0		40.0	36.2	
S 131 Trihalomethanes, Total	1				0		80.0	74.6	

Reagents:

VMRPRIMW_00303	Amount Added:	16.00	Units: uL
VMRGAS_00263	Amount Added:	16.00	Units: uL
vm50ss_00337	Amount Added:	16.00	Units: uL
VMAROLISTDW_00267	Amount Added:	16.00	Units: uL
VM50IS_00071	Amount Added:	1.00	Units: uL

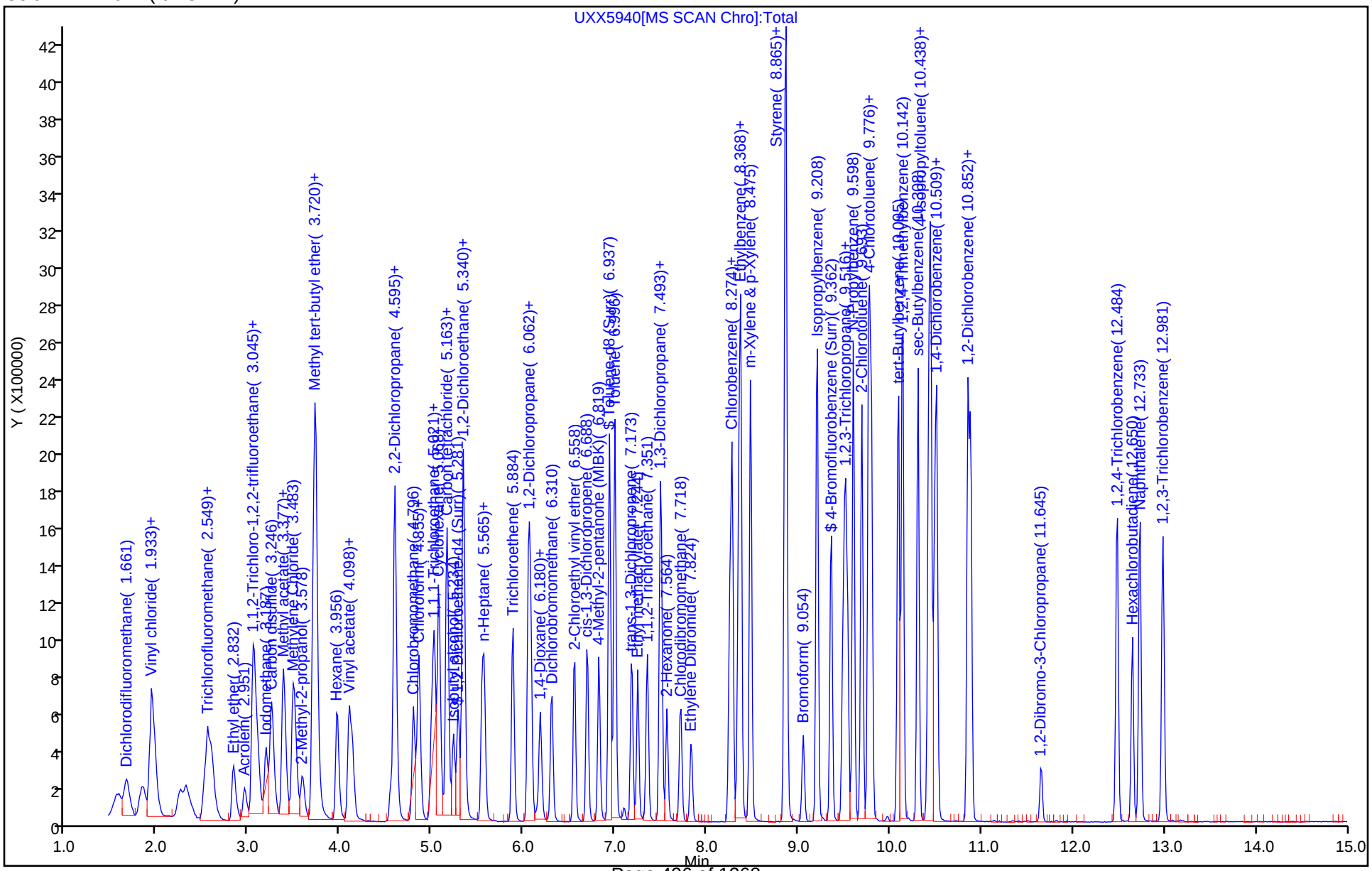
Report Date: 03-Oct-2018 12:29:16 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5940.D

Injection Date:	02-Oct-2018 15:52:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	STD8260 L6			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5941.D
Lims ID: STD8260 L5
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 02-Oct-2018 16:17:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-004
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub82

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:29:20 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: williamsla Date: 03-Oct-2018 11:15:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.567	5.567	0.000	98	789818	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.252	8.252	0.000	87	636861	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.487	0.000	93	356275	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.999	4.999	0.000	93	213883	10.0	10.3	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.283	5.283	0.000	98	262894	10.0	9.92	
$ 6 Toluene-d8 (Surr)	98	6.939	6.939	0.000	94	805597	10.0	10.0	
$ 7 4-Bromofluorobenzene (Surr	95	9.352	9.352	0.000	87	313290	10.0	10.2	
9 Dichlorodifluoromethane	85	1.675	1.675	0.000	100	281542	10.0	10.4	
10 Chloromethane	50	1.841	1.841	0.000	97	339023	10.0	10.7	M
12 Butadiene	54	1.947	1.947	0.000	87	324473	10.0	10.9	
11 Vinyl chloride	62	1.959	1.959	0.000	86	300976	10.0	10.6	
13 Bromomethane	94	2.278	2.278	0.000	92	174504	10.0	10.4	
14 Chloroethane	64	2.326	2.326	0.000	99	181873	10.0	10.3	
15 Dichlorofluoromethane	67	2.538	2.538	0.000	97	425393	10.0	10.5	
16 Trichlorofluoromethane	101	2.586	2.586	0.000	92	327669	10.0	10.4	
17 Ethyl ether	59	2.834	2.834	0.000	92	189334	10.0	10.2	
18 Acrolein	56	2.952	2.952	0.000	97	156817	50.0	52.2	
19 1,1-Dichloroethene	96	3.047	3.047	0.000	95	227156	10.0	10.0	
20 1,1,2-Trichloro-1,2,2-trif	151	3.059	3.059	0.000	93	171003	10.0	10.5	
21 Acetone	43	3.094	3.094	0.000	98	127962	20.0	22.8	
22 Iodomethane	142	3.189	3.189	0.000	97	432735	10.0	10.5	
24 Carbon disulfide	76	3.248	3.248	0.000	100	782683	10.0	10.2	
26 3-Chloro-1-propene	76	3.378	3.378	0.000	88	179488	10.0	10.7	
27 Methyl acetate	43	3.390	3.390	0.000	98	249995	20.0	19.7	
28 Methylene Chloride	84	3.485	3.485	0.000	95	279268	10.0	10.0	
29 2-Methyl-2-propanol	59	3.579	3.579	0.000	97	233093	100.0	106.1	
31 Acrylonitrile	53	3.698	3.698	0.000	98	798555	100.0	105.6	
32 Methyl tert-butyl ether	73	3.733	3.733	0.000	98	713524	10.0	10.2	
30 trans-1,2-Dichloroethene	96	3.721	3.721	0.000	68	258631	10.0	10.3	
33 Hexane	86	3.970	3.970	0.000	88	46098	10.0	10.8	
34 1,1-Dichloroethane	63	4.100	4.100	0.000	97	460948	10.0	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	4.135	4.135	0.000	97	364316	10.0	10.2	
40 cis-1,2-Dichloroethene	96	4.597	4.597	0.000	87	281579	10.0	10.6	
41 2-Butanone (MEK)	43	4.597	4.597	0.000	48	163857	20.0	22.4	
39 2,2-Dichloropropane	97	4.597	4.597	0.000	70	72680	10.0	9.66	
45 Chlorobromomethane	128	4.798	4.798	0.000	95	123496	10.0	10.5	
46 Tetrahydrofuran	42	4.845	4.845	0.000	97	104928	20.0	19.9	
47 Chloroform	83	4.857	4.857	0.000	94	400639	10.0	10.3	
48 1,1,1-Trichloroethane	97	5.022	5.022	0.000	97	382116	10.0	10.0	
49 Cyclohexane	56	5.070	5.070	0.000	91	433465	10.0	10.2	
51 Carbon tetrachloride	117	5.164	5.164	0.000	98	323195	10.0	10.5	
50 1,1-Dichloropropene	75	5.164	5.164	0.000	93	284153	10.0	10.3	
52 Isobutyl alcohol	41	5.235	5.235	0.000	97	150525	250.0	258.8	
53 Benzene	78	5.342	5.342	0.000	96	923963	10.0	10.2	
54 1,2-Dichloroethane	62	5.354	5.354	0.000	97	330637	10.0	9.97	
56 n-Heptane	100	5.543	5.543	0.000	88	34121	10.0	9.79	
58 Trichloroethene	130	5.886	5.886	0.000	94	232021	10.0	10.3	
60 Methylcyclohexane	83	6.052	6.052	0.000	93	325155	10.0	10.2	
61 1,2-Dichloropropane	63	6.075	6.075	0.000	96	245104	10.0	10.4	
63 Dibromomethane	93	6.182	6.182	0.000	94	134033	10.0	10.0	
64 1,4-Dioxane	88	6.182	6.182	0.000	44	51135	200.0	230.2	
65 Dichlorobromomethane	83	6.300	6.300	0.000	98	308915	10.0	10.5	
67 2-Chloroethyl vinyl ether	63	6.548	6.548	0.000	94	253171	20.0	20.4	
68 cis-1,3-Dichloropropene	75	6.690	6.690	0.000	94	333506	10.0	10.2	
69 4-Methyl-2-pentanone (MIBK	43	6.820	6.820	0.000	96	369803	20.0	20.4	
70 Toluene	91	6.998	6.998	0.000	97	987739	10.0	10.2	
71 trans-1,3-Dichloropropene	75	7.175	7.175	0.000	97	296932	10.0	10.3	
72 Ethyl methacrylate	69	7.246	7.246	0.000	88	241738	10.0	10.3	
73 1,1,2-Trichloroethane	97	7.353	7.353	0.000	91	185848	10.0	10.3	
74 Tetrachloroethene	164	7.495	7.495	0.000	96	175682	10.0	10.4	
75 1,3-Dichloropropane	76	7.506	7.506	0.000	92	316160	10.0	10.2	
76 2-Hexanone	43	7.566	7.566	0.000	93	242960	20.0	20.5	
78 Chlorodibromomethane	129	7.719	7.719	0.000	91	211372	10.0	10.5	
80 Ethylene Dibromide	107	7.826	7.826	0.000	97	190578	10.0	10.7	
82 Chlorobenzene	112	8.275	8.275	0.000	94	645008	10.0	10.2	
83 1,1,1,2-Tetrachloroethane	131	8.346	8.346	0.000	93	245955	10.0	10.3	
84 Ethylbenzene	106	8.370	8.370	0.000	98	366978	10.0	10.4	
85 m-Xylene & p-Xylene	106	8.476	8.476	0.000	99	436330	10.0	9.97	
86 o-Xylene	106	8.855	8.855	0.000	97	466041	10.0	10.2	
87 Styrene	104	8.867	8.867	0.000	94	747052	10.0	10.3	
88 Bromoform	173	9.056	9.056	0.000	96	129035	10.0	10.4	
89 Isopropylbenzene	105	9.198	9.198	0.000	96	1135218	10.0	10.2	
92 1,1,2,2-Tetrachloroethane	83	9.482	9.482	0.000	96	253276	10.0	10.5	
93 Bromobenzene	156	9.505	9.505	0.000	96	288667	10.0	10.6	
94 1,2,3-Trichloropropane	110	9.541	9.541	0.000	86	77183	10.0	10.2	
95 trans-1,4-Dichloro-2-buten	53	9.541	9.541	0.000	68	52920	10.0	10.8	
96 N-Propylbenzene	120	9.600	9.600	0.000	99	303075	10.0	10.7	
97 2-Chlorotoluene	126	9.695	9.695	0.000	96	284129	10.0	10.6	
98 1,3,5-Trimethylbenzene	105	9.766	9.766	0.000	94	954033	10.0	10.6	
99 4-Chlorotoluene	126	9.801	9.801	0.000	98	271503	10.0	10.2	
100 tert-Butylbenzene	119	10.097	10.097	0.000	93	767980	10.0	10.5	
102 1,2,4-Trimethylbenzene	105	10.132	10.132	0.000	98	1017650	10.0	10.3	
103 sec-Butylbenzene	105	10.310	10.310	0.000	94	1044498	10.0	10.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	10.428	10.428	0.000	98	550957	10.0	10.2	
105 4-Isopropyltoluene	119	10.440	10.440	0.000	97	892863	10.0	10.4	
106 1,4-Dichlorobenzene	146	10.511	10.511	0.000	95	569972	10.0	10.4	
109 n-Butylbenzene	91	10.854	10.854	0.000	97	722754	10.0	10.5	
110 1,2-Dichlorobenzene	146	10.878	10.878	0.000	97	575895	10.0	10.5	
111 1,2-Dibromo-3-Chloropropan	157	11.658	11.658	0.000	82	55531	10.0	10.1	
113 1,2,4-Trichlorobenzene	180	12.486	12.486	0.000	93	364018	10.0	11.0	
114 Hexachlorobutadiene	225	12.652	12.652	0.000	96	116162	10.0	11.2	
115 Naphthalene	128	12.723	12.723	0.000	100	930050	10.0	10.8	
116 1,2,3-Trichlorobenzene	180	12.983	12.983	0.000	96	346559	10.0	10.7	
S 130 Xylenes, Total	106				0		20.0	20.2	
S 131 Trihalomethanes, Total	1				0		40.0	41.7	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VMRPRIMW_00303	Amount Added:	8.00	Units: uL
VMRGAS_00263	Amount Added:	8.00	Units: uL
vm50ss_00337	Amount Added:	8.00	Units: uL
VMAROLISTDW_00267	Amount Added:	8.00	Units: uL
VM50IS_00071	Amount Added:	1.00	Units: uL

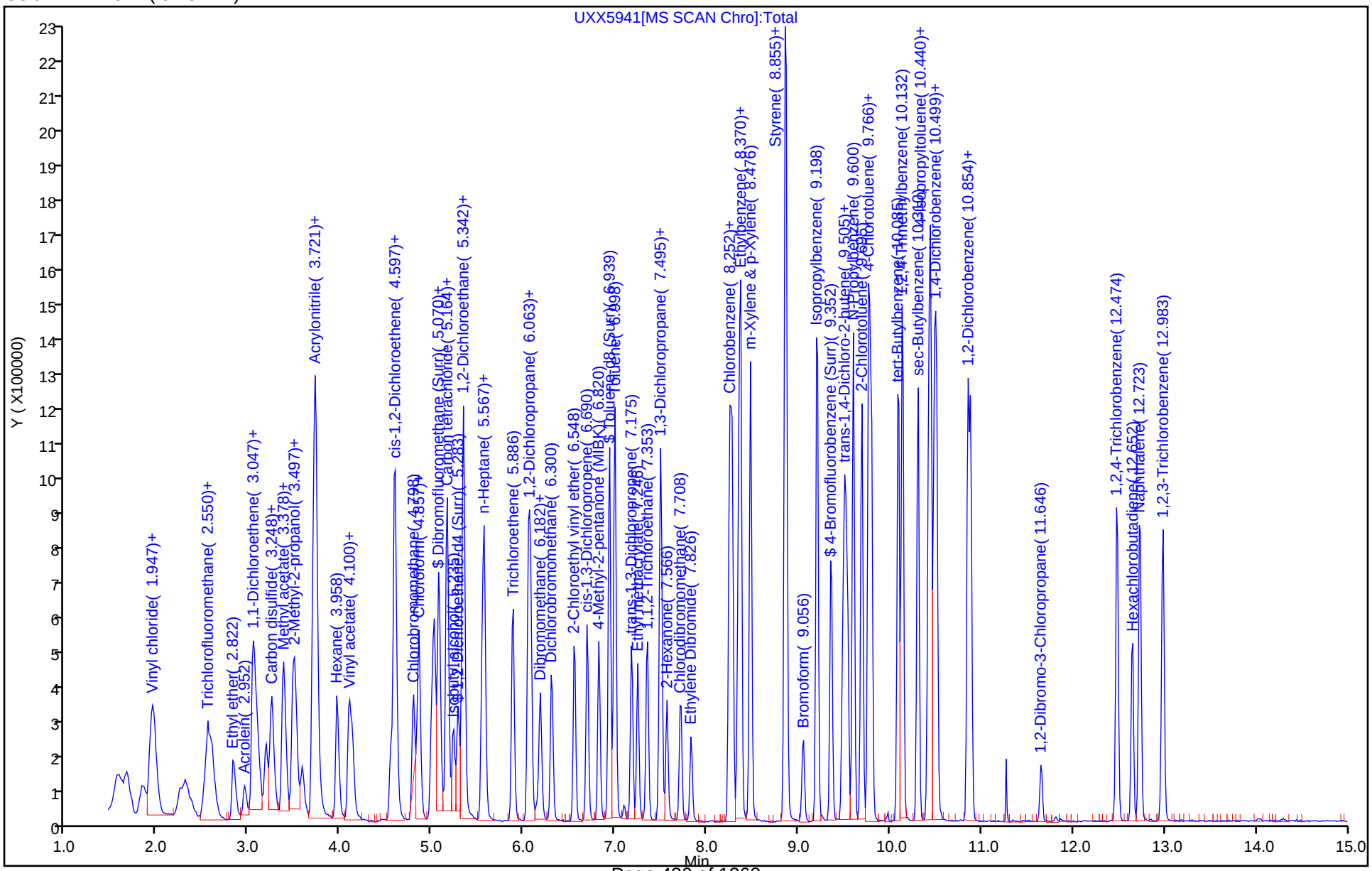
Report Date: 03-Oct-2018 12:29:22 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5941.D

Injection Date:	02-Oct-2018 16:17:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	STD8260 L5			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

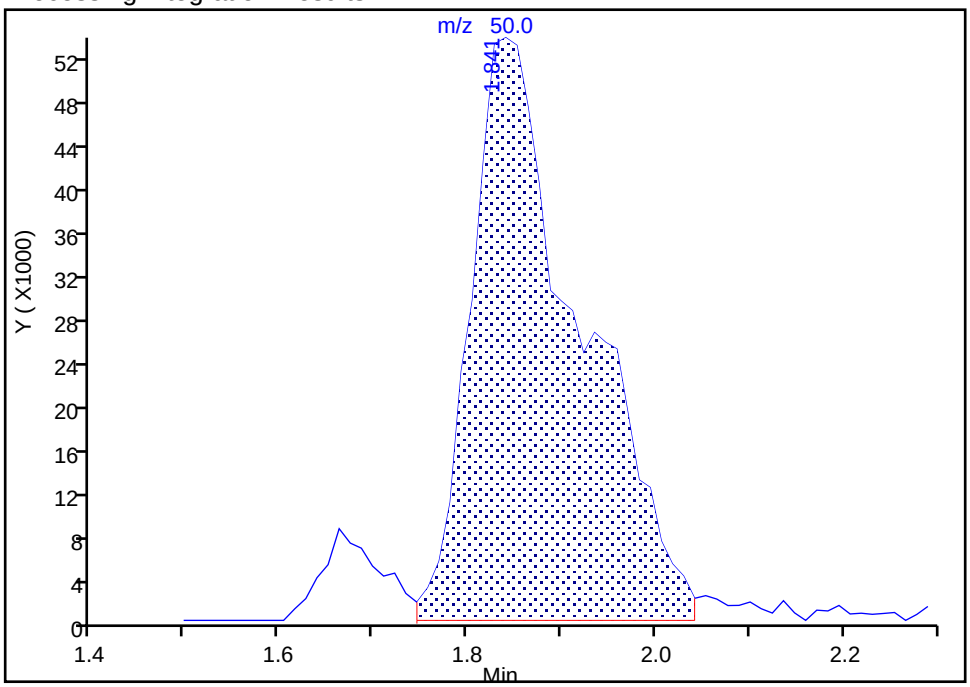
Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5941.D
Injection Date: 02-Oct-2018 16:17:30 Instrument ID: A3UX10
Lims ID: STD8260 L5
Client ID:
Operator ID: 001644 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_10 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

10 Chloromethane, CAS: 74-87-3

Signal: 1

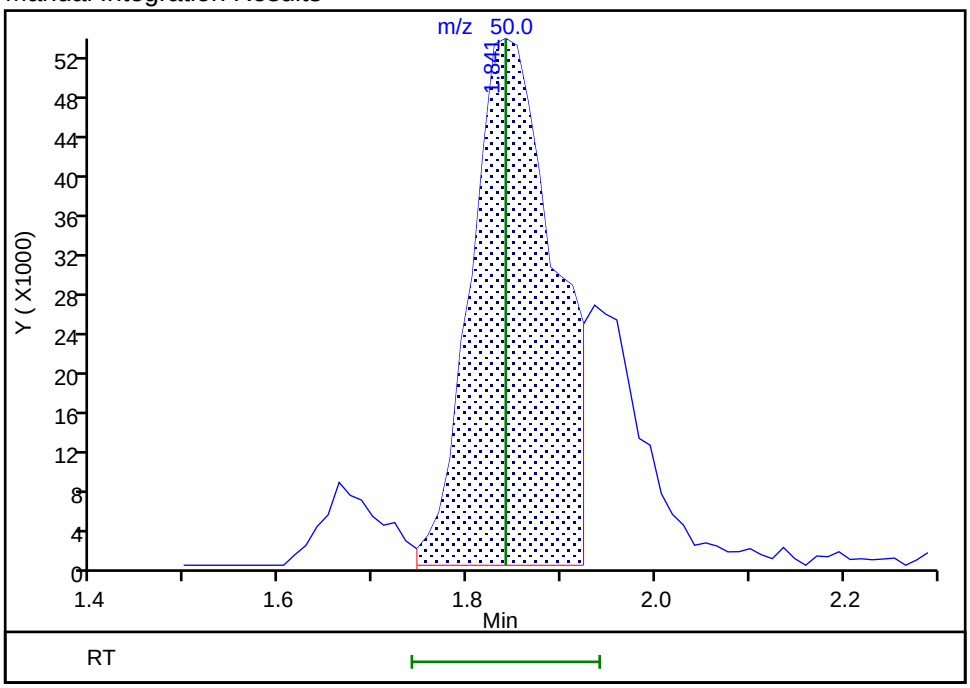
Processing Integration Results

RT: 1.84
Area: 438674
Amount: 15.711090
Amount Units: ug/l



Manual Integration Results

RT: 1.84
Area: 339023
Amount: 10.651584
Amount Units: ug/l



Reviewer: bosworthh, 03-Oct-2018 11:27:24
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5942.D
Lims ID: STD8260 L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 02-Oct-2018 16:42:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-005
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub82

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:29:28 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: bosworthh Date: 03-Oct-2018 11:28:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.565	5.565	0.000	98	759407	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.250	8.250	0.000	88	641477	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.486	10.486	0.000	95	342177	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.997	4.997	0.000	91	102613	5.00	5.14	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.281	5.281	0.000	96	120256	5.00	4.72	
$ 6 Toluene-d8 (Surr)	98	6.937	6.937	0.000	94	400786	5.00	4.95	
$ 7 4-Bromofluorobenzene (Surr	95	9.350	9.350	0.000	89	149244	5.00	4.84	
9 Dichlorodifluoromethane	85	1.662	1.662	0.000	96	125358	5.00	4.80	
10 Chloromethane	50	1.827	1.827	0.000	99	155540	5.00	5.08	M
12 Butadiene	54	1.945	1.945	0.000	85	141964	5.00	4.95	
11 Vinyl chloride	62	1.957	1.957	0.000	94	132484	5.00	4.86	
13 Bromomethane	94	2.265	2.265	0.000	93	77029	5.00	4.78	
14 Chloroethane	64	2.348	2.348	0.000	96	81755	5.00	5.03	
15 Dichlorofluoromethane	67	2.549	2.549	0.000	96	196060	5.00	5.02	
16 Trichlorofluoromethane	101	2.584	2.584	0.000	97	142428	5.00	4.69	
17 Ethyl ether	59	2.833	2.833	0.000	92	91555	5.00	5.13	
18 Acrolein	56	2.951	2.951	0.000	96	67032	25.0	23.2	
19 1,1-Dichloroethene	96	3.045	3.045	0.000	94	105838	5.00	4.84	
20 1,1,2-Trichloro-1,2,2-trif	151	3.069	3.069	0.000	66	87826	5.00	5.67	
21 Acetone	43	3.093	3.093	0.000	71	59024	10.0	9.59	
22 Iodomethane	142	3.187	3.187	0.000	98	200675	5.00	5.05	
24 Carbon disulfide	76	3.247	3.247	0.000	100	378111	5.00	5.15	
26 3-Chloro-1-propene	76	3.377	3.377	0.000	87	76468	5.00	4.73	
27 Methyl acetate	43	3.400	3.400	0.000	82	126100	10.0	10.3	
28 Methylene Chloride	84	3.483	3.483	0.000	96	135144	5.00	5.05	
29 2-Methyl-2-propanol	59	3.578	3.578	0.000	97	90591	50.0	42.9	
31 Acrylonitrile	53	3.708	3.708	0.000	99	357275	50.0	49.1	
30 trans-1,2-Dichloroethene	96	3.732	3.732	0.000	70	122892	5.00	5.07	
32 Methyl tert-butyl ether	73	3.732	3.732	0.000	98	338334	5.00	5.04	
33 Hexane	86	3.968	3.968	0.000	88	19143	5.00	4.67	
34 1,1-Dichloroethane	63	4.098	4.098	0.000	97	219004	5.00	5.07	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	4.134	4.134	0.000	97	171771	5.00	5.02	
41 2-Butanone (MEK)	43	4.595	4.595	0.000	42	64038	10.0	9.11	
40 cis-1,2-Dichloroethene	96	4.595	4.595	0.000	85	127410	5.00	5.01	
39 2,2-Dichloropropane	97	4.595	4.595	0.000	66	36034	5.00	4.98	
45 Chlorobromomethane	128	4.796	4.796	0.000	96	59842	5.00	5.27	
46 Tetrahydrofuran	42	4.843	4.843	0.000	97	48442	10.0	9.57	
47 Chloroform	83	4.855	4.855	0.000	95	195295	5.00	5.21	
48 1,1,1-Trichloroethane	97	5.021	5.021	0.000	97	189167	5.00	5.17	
49 Cyclohexane	56	5.080	5.080	0.000	92	212264	5.00	5.22	
50 1,1-Dichloropropene	75	5.163	5.163	0.000	91	137348	5.00	5.20	
51 Carbon tetrachloride	117	5.163	5.163	0.000	97	151393	5.00	5.09	
52 Isobutyl alcohol	41	5.234	5.234	0.000	97	65605	125.0	112.0	
53 Benzene	78	5.340	5.340	0.000	97	443011	5.00	5.09	
54 1,2-Dichloroethane	62	5.352	5.352	0.000	97	165013	5.00	5.18	
56 n-Heptane	100	5.541	5.541	0.000	91	19398	5.00	5.79	
58 Trichloroethene	130	5.884	5.884	0.000	93	108876	5.00	5.02	
60 Methylcyclohexane	83	6.050	6.050	0.000	95	160970	5.00	5.27	
61 1,2-Dichloropropane	63	6.074	6.074	0.000	92	118902	5.00	5.26	
63 Dibromomethane	93	6.180	6.180	0.000	93	66172	5.00	5.16	
64 1,4-Dioxane	88	6.192	6.192	0.000	35	17749	100.0	81.5	M
65 Dichlorobromomethane	83	6.310	6.310	0.000	97	147502	5.00	5.20	
67 2-Chloroethyl vinyl ether	63	6.559	6.559	0.000	93	123818	10.0	10.4	
68 cis-1,3-Dichloropropene	75	6.689	6.689	0.000	92	160953	5.00	5.12	
69 4-Methyl-2-pentanone (MIBK	43	6.819	6.819	0.000	95	186347	10.0	10.7	
70 Toluene	91	6.996	6.996	0.000	98	486520	5.00	4.98	
71 trans-1,3-Dichloropropene	75	7.174	7.174	0.000	97	149395	5.00	5.16	
72 Ethyl methacrylate	69	7.245	7.245	0.000	88	127102	5.00	5.35	
73 1,1,2-Trichloroethane	97	7.351	7.351	0.000	93	91013	5.00	5.00	
74 Tetrachloroethene	164	7.493	7.493	0.000	96	88799	5.00	5.21	
75 1,3-Dichloropropane	76	7.505	7.505	0.000	92	163398	5.00	5.24	
76 2-Hexanone	43	7.564	7.564	0.000	97	122476	10.0	10.2	
78 Chlorodibromomethane	129	7.718	7.718	0.000	92	104067	5.00	5.13	
80 Ethylene Dibromide	107	7.824	7.824	0.000	99	90394	5.00	5.04	
82 Chlorobenzene	112	8.274	8.274	0.000	93	319037	5.00	5.00	
83 1,1,1,2-Tetrachloroethane	131	8.345	8.345	0.000	94	117864	5.00	4.90	
84 Ethylbenzene	106	8.368	8.368	0.000	98	179744	5.00	5.05	
85 m-Xylene & p-Xylene	106	8.475	8.475	0.000	99	221524	5.00	5.02	
86 o-Xylene	106	8.853	8.853	0.000	96	227919	5.00	4.96	
87 Styrene	104	8.865	8.865	0.000	93	364983	5.00	4.99	
88 Bromoform	173	9.054	9.054	0.000	95	59836	5.00	4.81	
89 Isopropylbenzene	105	9.208	9.208	0.000	96	552849	5.00	4.94	
92 1,1,2,2-Tetrachloroethane	83	9.480	9.480	0.000	95	130252	5.00	5.63	
93 Bromobenzene	156	9.516	9.516	0.000	97	142846	5.00	5.44	
95 trans-1,4-Dichloro-2-buten	53	9.539	9.539	0.000	66	23302	5.00	4.98	
94 1,2,3-Trichloropropane	110	9.539	9.539	0.000	86	38050	5.00	5.24	
96 N-Propylbenzene	120	9.598	9.598	0.000	99	146487	5.00	5.36	
97 2-Chlorotoluene	126	9.693	9.693	0.000	96	136591	5.00	5.33	
98 1,3,5-Trimethylbenzene	105	9.764	9.764	0.000	94	458536	5.00	5.32	
99 4-Chlorotoluene	126	9.800	9.800	0.000	98	138235	5.00	5.42	
100 tert-Butylbenzene	119	10.095	10.095	0.000	91	362585	5.00	5.18	
102 1,2,4-Trimethylbenzene	105	10.143	10.143	0.000	96	477013	5.00	5.05	
103 sec-Butylbenzene	105	10.308	10.308	0.000	94	480582	5.00	5.09	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	10.426	10.426	0.000	97	267256	5.00	5.17	
105 4-Isopropyltoluene	119	10.450	10.450	0.000	96	423296	5.00	5.15	
106 1,4-Dichlorobenzene	146	10.509	10.509	0.000	94	277301	5.00	5.27	
109 n-Butylbenzene	91	10.852	10.852	0.000	98	342280	5.00	5.16	
110 1,2-Dichlorobenzene	146	10.876	10.876	0.000	97	270475	5.00	5.14	
111 1,2-Dibromo-3-Chloropropan	157	11.657	11.657	0.000	86	26723	5.00	5.07	
113 1,2,4-Trichlorobenzene	180	12.485	12.485	0.000	93	154166	5.00	4.84	
114 Hexachlorobutadiene	225	12.650	12.650	0.000	95	49562	5.00	4.69	
115 Naphthalene	128	12.733	12.733	0.000	100	420006	5.00	5.06	
116 1,2,3-Trichlorobenzene	180	12.981	12.981	0.000	96	150099	5.00	4.84	
S 128 1,2-Dichloroethene, Total	96				0			10.1	
S 129 1,3-Dichloropropene, Total	75				0			10.3	
S 130 Xylenes, Total	106				0		10.0	9.99	
S 131 Trihalomethanes, Total	1				0		20.0	20.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VMRPRIMW_00303	Amount Added:	4.00	Units: uL
VMRGAS_00263	Amount Added:	4.00	Units: uL
vm50ss_00337	Amount Added:	4.00	Units: uL
VMAROLISTDW_00267	Amount Added:	4.00	Units: uL
VM50IS_00071	Amount Added:	1.00	Units: uL

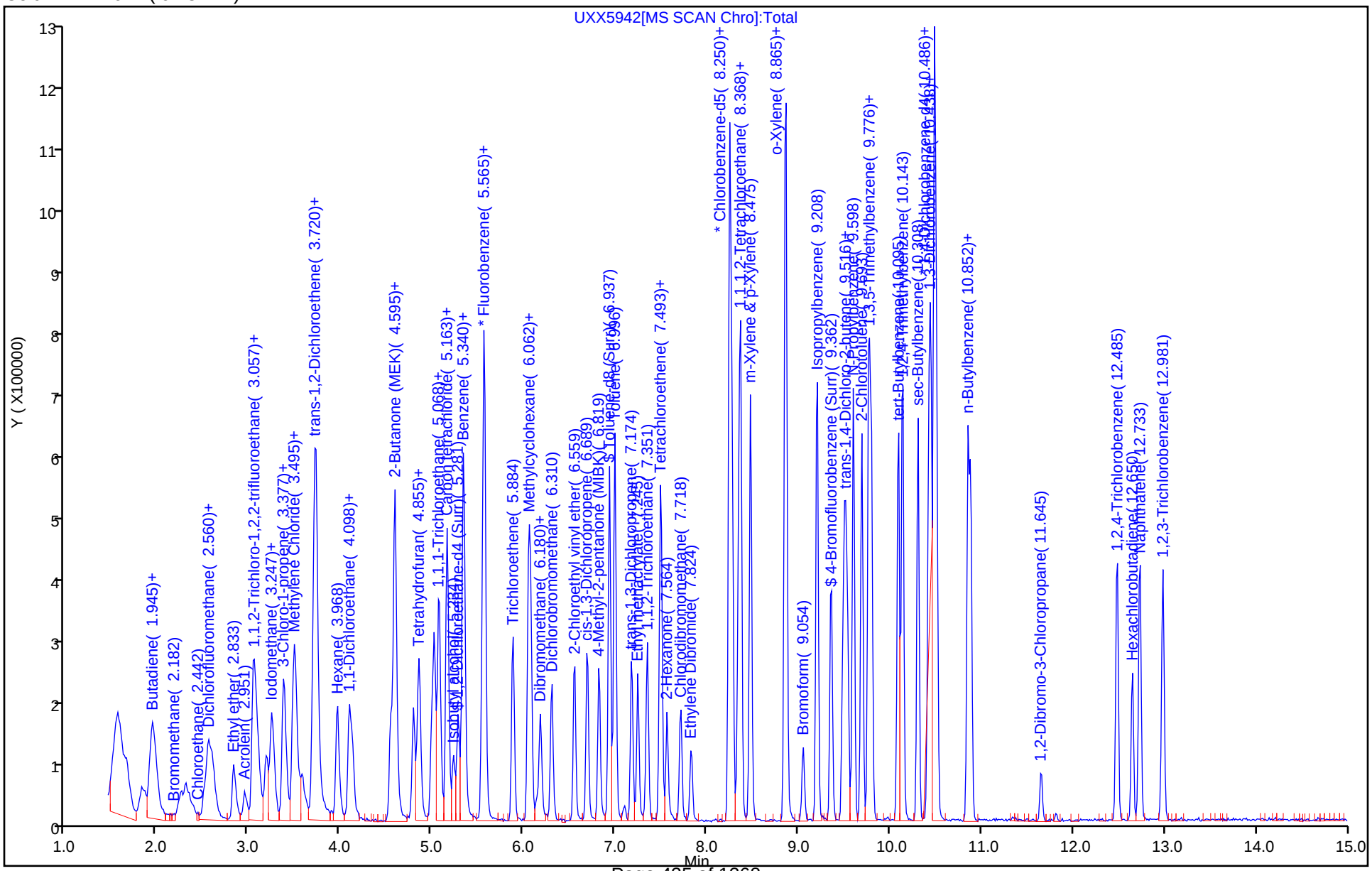
Report Date: 03-Oct-2018 12:29:30 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5942.D

Injection Date:	02-Oct-2018 16:42:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	STD8260 L4			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

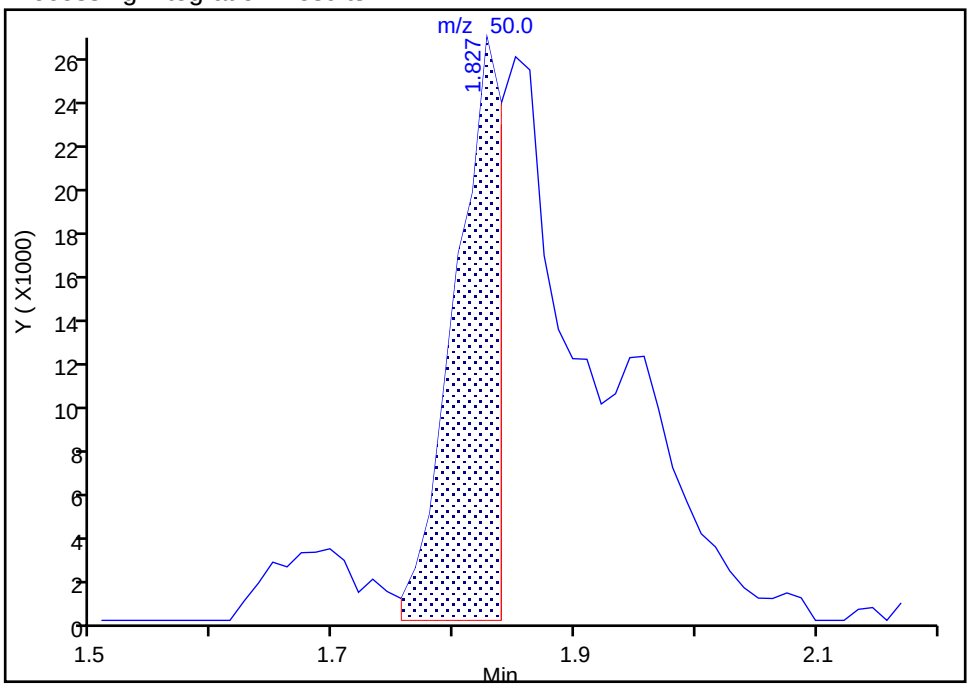
Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5942.D
Injection Date: 02-Oct-2018 16:42:30 Instrument ID: A3UX10
Lims ID: STD8260 L4
Client ID:
Operator ID: 001644 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_10 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

10 Chloromethane, CAS: 74-87-3

Signal: 1

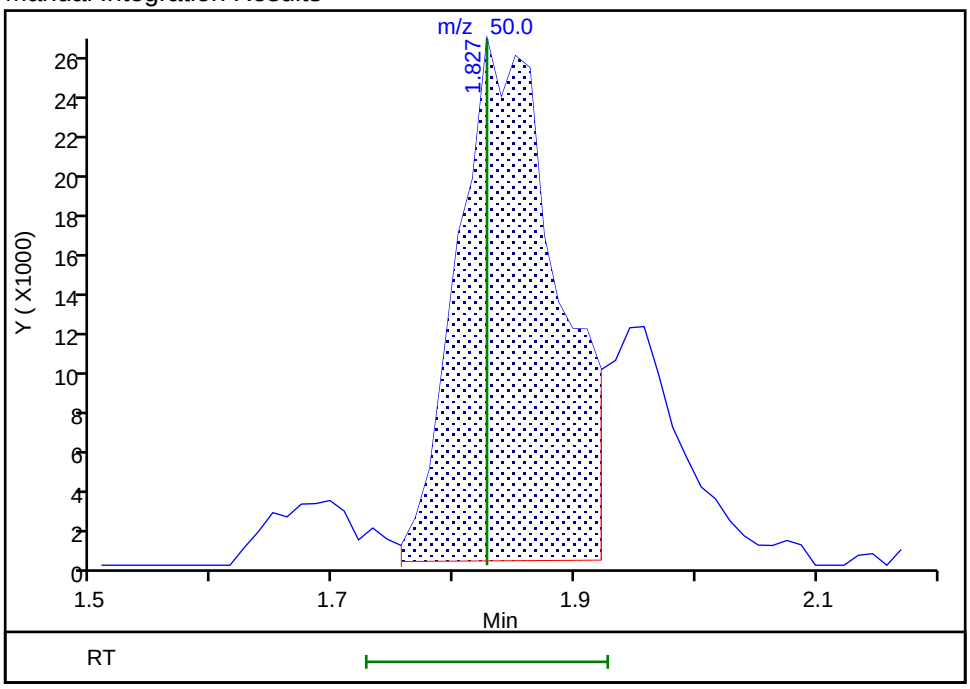
Processing Integration Results

RT: 1.83
Area: 75731
Amount: 3.043824
Amount Units: ug/l



Manual Integration Results

RT: 1.83
Area: 155540
Amount: 5.082526
Amount Units: ug/l



Reviewer: bosworthh, 03-Oct-2018 11:28:13
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

TestAmerica Canton

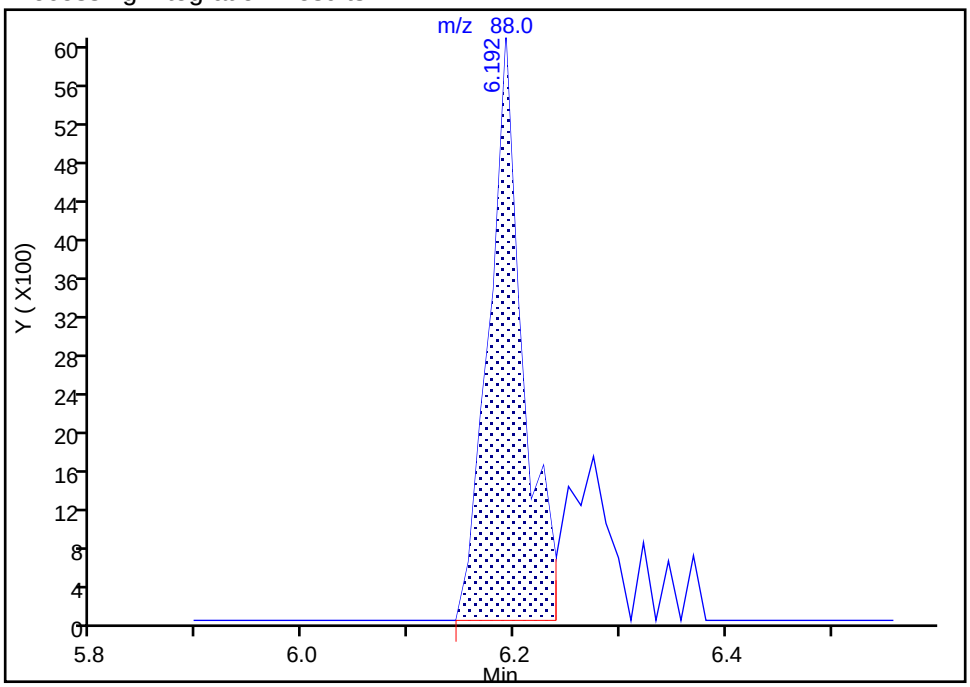
Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5942.D
Injection Date: 02-Oct-2018 16:42:30 Instrument ID: A3UX10
Lims ID: STD8260 L4
Client ID:
Operator ID: 001644 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_10 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

64 1,4-Dioxane, CAS: 123-91-1

Signal: 1

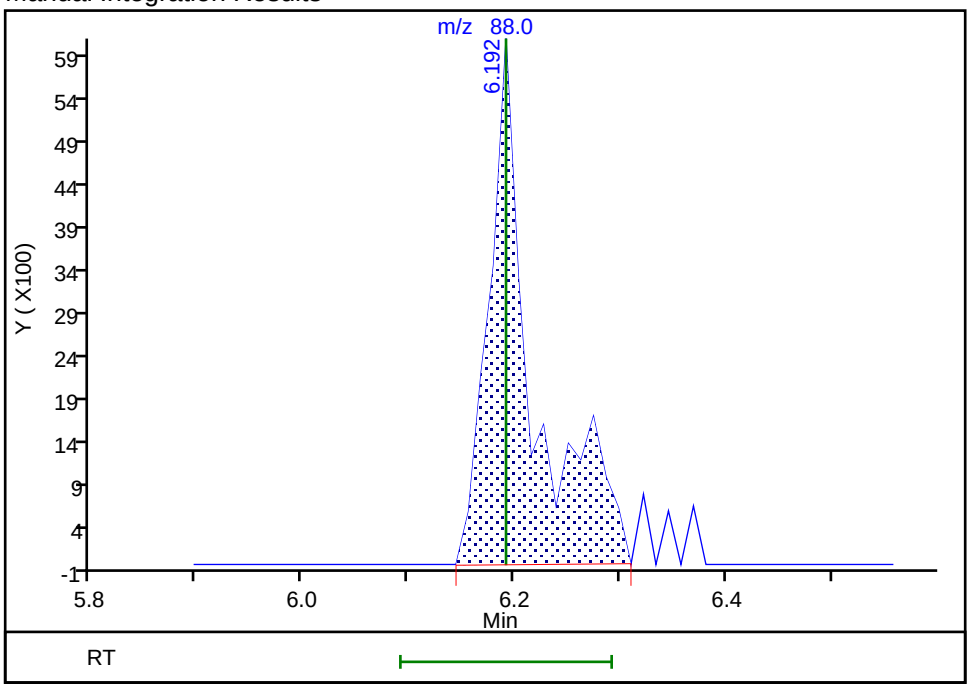
Processing Integration Results

RT: 6.19
Area: 13530
Amount: 66.398879
Amount Units: ug/l



Manual Integration Results

RT: 6.19
Area: 17749
Amount: 81.454515
Amount Units: ug/l



Reviewer: bosworthh, 03-Oct-2018 12:13:36
Audit Action: Manually Integrated Audit Reason: Baseline

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5943.D
Lims ID: STD8260 L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 02-Oct-2018 17:06:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-006
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub82

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:29:35 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: williamsla Date: 03-Oct-2018 11:32:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.564	5.565	-0.001	98	739562	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.249	8.250	-0.001	88	593448	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.484	10.486	-0.002	96	322649	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.996	4.997	-0.001	93	78811	4.00	4.06	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.280	5.281	-0.001	97	100639	4.00	4.05	
$ 6 Toluene-d8 (Surr)	98	6.936	6.937	-0.001	93	291793	4.00	3.89	
$ 7 4-Bromofluorobenzene (Surr	95	9.361	9.350	0.011	88	113207	4.00	3.97	
9 Dichlorodifluoromethane	85	1.672	1.662	0.010	97	96492	4.00	3.79	
10 Chloromethane	50	1.826	1.827	-0.001	97	106974	4.00	3.59	
12 Butadiene	54	1.944	1.945	-0.001	89	104330	4.00	3.73	
11 Vinyl chloride	62	1.944	1.957	-0.013	87	99749	4.00	3.76	
13 Bromomethane	94	2.264	2.265	-0.001	86	62698	4.00	4.00	
14 Chloroethane	64	2.323	2.348	-0.025	98	63869	4.00	4.11	
15 Dichlorofluoromethane	67	2.536	2.549	-0.013	96	149507	4.00	3.93	
16 Trichlorofluoromethane	101	2.583	2.584	-0.001	95	110955	4.00	3.75	
17 Ethyl ether	59	2.831	2.833	-0.002	90	69595	4.00	4.00	
18 Acrolein	56	2.961	2.951	0.010	98	57102	20.0	20.3	
19 1,1-Dichloroethene	96	3.044	3.045	-0.001	96	82722	4.00	3.89	
20 1,1,2-Trichloro-1,2,2-trif	151	3.080	3.069	0.011	75	60642	4.00	4.06	
21 Acetone	43	3.103	3.093	0.010	97	52366	8.00	8.51	
22 Iodomethane	142	3.186	3.187	-0.001	98	154849	4.00	4.00	
24 Carbon disulfide	76	3.245	3.247	-0.002	99	282734	4.00	3.95	
26 3-Chloro-1-propene	76	3.375	3.377	-0.002	87	61342	4.00	3.90	
27 Methyl acetate	43	3.387	3.400	-0.013	74	95048	8.00	8.01	
28 Methylene Chloride	84	3.482	3.483	-0.001	94	105307	4.00	4.04	
29 2-Methyl-2-propanol	59	3.588	3.578	0.010	98	90900	40.0	44.2	
31 Acrylonitrile	53	3.707	3.708	-0.001	99	294885	40.0	41.6	
30 trans-1,2-Dichloroethene	96	3.730	3.732	-0.002	67	95719	4.00	4.06	
32 Methyl tert-butyl ether	73	3.730	3.732	-0.002	97	275180	4.00	4.21	
33 Hexane	86	3.967	3.968	-0.001	90	16483	4.00	4.13	
34 1,1-Dichloroethane	63	4.097	4.098	-0.001	97	174733	4.00	4.15	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	4.132	4.134	-0.002	97	134694	4.00	4.04	
40 cis-1,2-Dichloroethene	96	4.594	4.595	-0.001	88	102678	4.00	4.15	
41 2-Butanone (MEK)	43	4.606	4.595	0.011	54	58774	8.00	8.59	
39 2,2-Dichloropropane	97	4.594	4.595	-0.001	89	26495	4.00	3.76	
45 Chlorobromomethane	128	4.795	4.796	-0.001	95	44433	4.00	4.02	
46 Tetrahydrofuran	42	4.842	4.843	-0.001	97	42256	8.00	8.57	
47 Chloroform	83	4.854	4.855	-0.001	96	147357	4.00	4.04	
48 1,1,1-Trichloroethane	97	5.020	5.021	-0.001	98	141477	4.00	3.97	
49 Cyclohexane	56	5.079	5.080	-0.001	91	159885	4.00	4.04	
51 Carbon tetrachloride	117	5.162	5.163	-0.001	96	112446	4.00	3.88	
50 1,1-Dichloropropene	75	5.162	5.163	-0.001	90	101794	4.00	3.95	
52 Isobutyl alcohol	41	5.233	5.234	-0.001	93	61586	100.0	113.6	
53 Benzene	78	5.339	5.340	-0.001	97	334335	4.00	3.94	
54 1,2-Dichloroethane	62	5.351	5.352	-0.001	96	121653	4.00	3.92	
56 n-Heptane	100	5.540	5.541	-0.001	91	12823	4.00	3.93	
58 Trichloroethene	130	5.883	5.884	-0.001	96	88143	4.00	4.17	
60 Methylcyclohexane	83	6.049	6.050	-0.001	95	118131	4.00	3.97	
61 1,2-Dichloropropane	63	6.072	6.074	-0.002	93	87035	4.00	3.95	
64 1,4-Dioxane	88	6.191	6.192	-0.001	41	14536	80.0	69.0	
63 Dibromomethane	93	6.179	6.180	-0.001	96	50177	4.00	4.02	
65 Dichlorobromomethane	83	6.309	6.310	-0.001	98	110220	4.00	3.99	
67 2-Chloroethyl vinyl ether	63	6.557	6.559	-0.002	93	93684	8.00	8.07	
68 cis-1,3-Dichloropropene	75	6.699	6.689	0.010	92	124749	4.00	4.07	
69 4-Methyl-2-pentanone (MIBK	43	6.818	6.819	-0.001	96	142818	8.00	8.40	
70 Toluene	91	6.995	6.996	-0.001	97	364924	4.00	4.03	
71 trans-1,3-Dichloropropene	75	7.184	7.174	0.010	95	106207	4.00	3.96	
72 Ethyl methacrylate	69	7.243	7.245	-0.002	87	89700	4.00	4.08	
73 1,1,2-Trichloroethane	97	7.350	7.351	-0.001	93	66256	4.00	3.94	
74 Tetrachloroethene	164	7.492	7.493	-0.001	94	61206	4.00	3.88	
75 1,3-Dichloropropane	76	7.504	7.505	-0.001	95	115086	4.00	3.99	
76 2-Hexanone	43	7.563	7.564	-0.001	94	97136	8.00	8.78	
78 Chlorodibromomethane	129	7.717	7.718	-0.001	90	77635	4.00	4.14	
80 Ethylene Dibromide	107	7.823	7.824	-0.001	100	64125	4.00	3.87	
82 Chlorobenzene	112	8.272	8.274	-0.002	93	235880	4.00	4.00	
83 1,1,1,2-Tetrachloroethane	131	8.343	8.345	-0.002	92	91323	4.00	4.10	
84 Ethylbenzene	106	8.367	8.368	-0.001	99	130454	4.00	3.96	
85 m-Xylene & p-Xylene	106	8.474	8.475	-0.001	99	156186	4.00	3.83	
86 o-Xylene	106	8.852	8.853	-0.001	94	165032	4.00	3.88	
87 Styrene	104	8.864	8.865	-0.001	90	252959	4.00	3.74	
88 Bromoform	173	9.053	9.054	-0.001	91	43222	4.00	3.75	
89 Isopropylbenzene	105	9.207	9.208	-0.001	96	406092	4.00	3.92	
92 1,1,2,2-Tetrachloroethane	83	9.479	9.480	-0.001	95	92437	4.00	4.24	
93 Bromobenzene	156	9.514	9.516	-0.002	95	101075	4.00	4.08	
94 1,2,3-Trichloropropane	110	9.538	9.539	-0.001	84	29093	4.00	4.25	
95 trans-1,4-Dichloro-2-buten	53	9.538	9.539	-0.001	68	20531	4.00	4.66	
96 N-Propylbenzene	120	9.597	9.598	-0.001	99	104182	4.00	4.05	
97 2-Chlorotoluene	126	9.692	9.693	-0.001	96	97963	4.00	4.05	
98 1,3,5-Trimethylbenzene	105	9.763	9.764	-0.001	94	334679	4.00	4.12	
99 4-Chlorotoluene	126	9.798	9.800	-0.002	98	95669	4.00	3.98	
100 tert-Butylbenzene	119	10.094	10.095	-0.001	92	255822	4.00	3.88	
102 1,2,4-Trimethylbenzene	105	10.141	10.143	-0.002	96	365703	4.00	4.10	
103 sec-Butylbenzene	105	10.307	10.308	-0.001	94	352509	4.00	3.96	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	10.425	10.426	-0.001	97	195901	4.00	4.02	
105 4-Isopropyltoluene	119	10.449	10.450	-0.001	97	318550	4.00	4.11	
106 1,4-Dichlorobenzene	146	10.508	10.509	-0.001	94	197818	4.00	3.99	
109 n-Butylbenzene	91	10.851	10.852	-0.001	98	254281	4.00	4.06	
110 1,2-Dichlorobenzene	146	10.875	10.876	-0.001	97	206076	4.00	4.16	
111 1,2-Dibromo-3-Chloropropan	157	11.655	11.657	-0.002	78	22093	4.00	4.45	
113 1,2,4-Trichlorobenzene	180	12.483	12.485	-0.002	94	117135	4.00	3.90	
114 Hexachlorobutadiene	225	12.649	12.650	-0.001	95	38345	4.00	3.79	
115 Naphthalene	128	12.732	12.733	-0.001	100	334226	4.00	4.27	
116 1,2,3-Trichlorobenzene	180	12.980	12.981	-0.001	95	121014	4.00	4.13	
S 128 1,2-Dichloroethene, Total	96				0			8.20	
S 129 1,3-Dichloropropene, Total	75				0			8.04	
S 130 Xylenes, Total	106				0		8.00	7.71	
S 131 Trihalomethanes, Total	1				0		16.0	15.9	

Reagents:

VMRPRIMW_00303	Amount Added:	3.20	Units: uL
VMRGAS_00263	Amount Added:	3.20	Units: uL
vm50ss_00337	Amount Added:	3.20	Units: uL
VMAROLISTDW_00267	Amount Added:	3.20	Units: uL
VM50IS_00071	Amount Added:	1.00	Units: uL

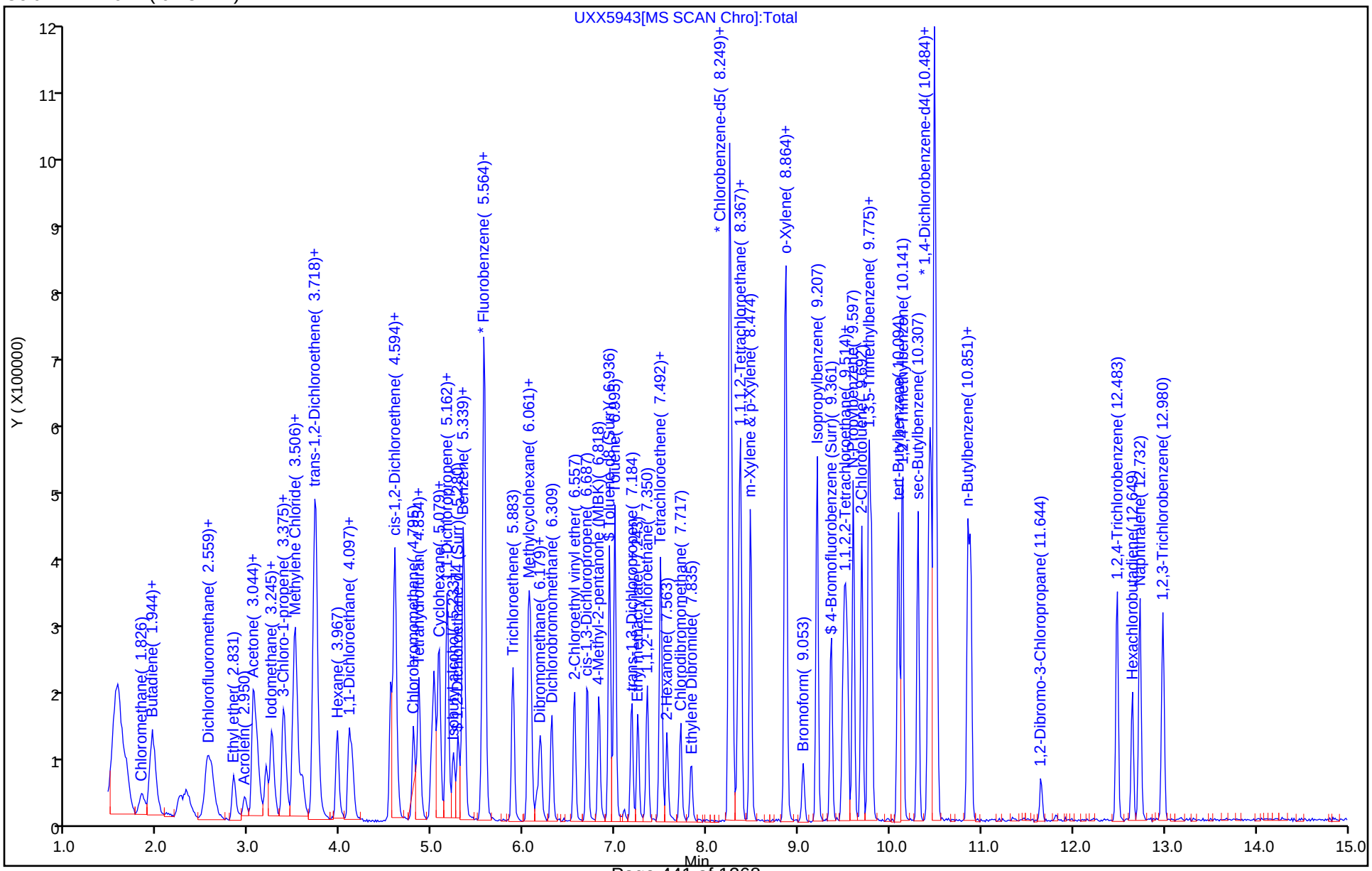
Report Date: 03-Oct-2018 12:29:37 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5943.D

Injection Date:	02-Oct-2018 17:06:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	STD8260 L3			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5944.D
Lims ID: STD8260 L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 02-Oct-2018 17:31:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-007
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub82

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:29:44 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.564	5.565	-0.001	98	710597	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.249	8.250	-0.001	88	538446	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.485	10.486	-0.001	96	298355	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.997	4.997	0.000	91	36825	2.00	1.97	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.281	5.281	0.000	96	50442	2.00	2.11	
$ 6 Toluene-d8 (Surr)	98	6.937	6.937	-0.001	95	145690	2.00	2.14	
$ 7 4-Bromofluorobenzene (Surr	95	9.361	9.350	0.011	90	50696	2.00	1.96	
9 Dichlorodifluoromethane	85	1.685	1.662	0.023	66	49306	2.00	2.02	
10 Chloromethane	50	1.827	1.827	0.000	98	59028	2.00	2.06	
12 Butadiene	54	1.957	1.945	0.012	88	53656	2.00	2.00	
11 Vinyl chloride	62	1.945	1.957	-0.012	87	49059	2.00	1.92	
13 Bromomethane	94	2.264	2.265	-0.001	72	27208	2.00	1.80	
14 Chloroethane	64	2.335	2.348	-0.013	97	31062	2.00	2.26	
15 Dichlorofluoromethane	67	2.524	2.549	-0.025	97	65618	2.00	1.80	
16 Trichlorofluoromethane	101	2.572	2.584	-0.012	95	53671	2.00	1.89	
17 Ethyl ether	59	2.832	2.833	-0.001	91	34347	2.00	2.06	
18 Acrolein	56	2.950	2.951	-0.001	93	29169	10.0	10.8	
19 1,1-Dichloroethene	96	3.045	3.045	0.000	94	39664	2.00	1.94	
20 1,1,2-Trichloro-1,2,2-trif	151	3.057	3.069	-0.012	75	29262	2.00	2.12	
21 Acetone	43	3.104	3.093	0.011	96	27438	4.00	3.47	
22 Iodomethane	142	3.187	3.187	0.000	97	72419	2.00	1.95	
24 Carbon disulfide	76	3.246	3.247	-0.001	100	133722	2.00	1.95	
26 3-Chloro-1-propene	76	3.376	3.377	-0.001	88	29228	2.00	1.93	
27 Methyl acetate	43	3.388	3.400	-0.012	59	45042	4.00	3.95	
28 Methylene Chloride	84	3.483	3.483	0.000	95	52083	2.00	2.08	
29 2-Methyl-2-propanol	59	3.577	3.578	-0.001	99	42479	20.0	21.5	
31 Acrylonitrile	53	3.707	3.708	-0.001	99	133123	20.0	19.6	
32 Methyl tert-butyl ether	73	3.731	3.732	-0.001	97	122456	2.00	1.95	
30 trans-1,2-Dichloroethene	96	3.719	3.732	-0.013	68	43043	2.00	1.90	
33 Hexane	86	3.956	3.968	-0.012	87	7303	2.00	1.90	
34 1,1-Dichloroethane	63	4.098	4.098	0.000	97	76059	2.00	1.88	
35 Vinyl acetate	43	4.133	4.134	-0.001	97	65528	2.00	2.04	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 2-Butanone (MEK)	43	4.594	4.595	-0.001	45	29788	4.00	4.53	
40 cis-1,2-Dichloroethene	96	4.594	4.595	-0.001	88	47089	2.00	1.98	
39 2,2-Dichloropropane	97	4.594	4.595	-0.001	64	13262	2.00	1.96	
45 Chlorobromomethane	128	4.796	4.796	0.000	95	19102	2.00	1.80	
46 Tetrahydrofuran	42	4.831	4.843	-0.012	80	19381	4.00	4.09	
47 Chloroform	83	4.855	4.855	0.000	97	68417	2.00	1.95	
48 1,1,1-Trichloroethane	97	5.020	5.021	-0.001	96	66817	2.00	1.95	
49 Cyclohexane	56	5.068	5.080	-0.012	92	72096	2.00	1.89	
50 1,1-Dichloropropene	75	5.162	5.163	-0.001	90	47265	2.00	1.91	
51 Carbon tetrachloride	117	5.162	5.163	-0.001	92	50727	2.00	1.82	
52 Isobutyl alcohol	41	5.245	5.234	0.011	89	25786	50.0	52.4	
53 Benzene	78	5.340	5.340	0.000	97	163180	2.00	2.00	
54 1,2-Dichloroethane	62	5.351	5.352	-0.001	96	59820	2.00	2.01	
56 n-Heptane	100	5.541	5.541	0.000	78	5603	2.00	1.79	
58 Trichloroethene	130	5.884	5.884	0.000	91	37793	2.00	1.86	
60 Methylcyclohexane	83	6.049	6.050	-0.001	93	56155	2.00	1.96	
61 1,2-Dichloropropane	63	6.073	6.074	-0.001	93	41474	2.00	1.96	
63 Dibromomethane	93	6.179	6.180	-0.001	91	24453	2.00	2.04	
64 1,4-Dioxane	88	6.191	6.192	-0.001	40	9548	40.0	48.6	
65 Dichlorobromomethane	83	6.310	6.310	0.000	97	52845	2.00	1.99	
67 2-Chloroethyl vinyl ether	63	6.558	6.559	-0.001	92	43002	4.00	3.86	
68 cis-1,3-Dichloropropene	75	6.688	6.689	-0.001	92	55884	2.00	1.90	
69 4-Methyl-2-pentanone (MIBK	43	6.818	6.819	-0.001	96	64321	4.00	3.94	
70 Toluene	91	6.996	6.996	0.000	98	163738	2.00	1.99	
71 trans-1,3-Dichloropropene	75	7.185	7.174	0.011	94	45894	2.00	1.89	
72 Ethyl methacrylate	69	7.244	7.245	-0.001	90	38450	2.00	1.93	
73 1,1,2-Trichloroethane	97	7.351	7.351	-0.001	93	31150	2.00	2.04	
74 Tetrachloroethene	164	7.492	7.493	-0.001	95	30127	2.00	2.11	
75 1,3-Dichloropropane	76	7.504	7.505	-0.001	91	50296	2.00	1.92	
76 2-Hexanone	43	7.563	7.564	-0.001	93	41590	4.00	4.14	
78 Chlorodibromomethane	129	7.717	7.718	-0.001	92	31514	2.00	1.85	
80 Ethylene Dibromide	107	7.824	7.824	0.000	99	28905	2.00	1.92	
82 Chlorobenzene	112	8.273	8.274	-0.001	94	109713	2.00	2.05	
83 1,1,1,2-Tetrachloroethane	131	8.344	8.345	-0.001	92	40039	2.00	1.98	
84 Ethylbenzene	106	8.368	8.368	0.000	99	56525	2.00	1.89	
85 m-Xylene & p-Xylene	106	8.474	8.475	-0.001	97	73996	2.00	2.00	
86 o-Xylene	106	8.853	8.853	0.000	96	77759	2.00	2.02	
87 Styrene	104	8.865	8.865	0.000	92	119516	2.00	1.95	
88 Bromoform	173	9.054	9.054	0.000	94	20327	2.00	1.95	
89 Isopropylbenzene	105	9.208	9.208	0.000	95	180416	2.00	1.92	
92 1,1,2,2-Tetrachloroethane	83	9.480	9.480	0.000	95	40471	2.00	2.01	
93 Bromobenzene	156	9.515	9.516	-0.001	97	47356	2.00	2.07	
94 1,2,3-Trichloropropane	110	9.539	9.539	0.000	86	13937	2.00	2.20	
95 trans-1,4-Dichloro-2-buten	53	9.539	9.539	0.000	66	8994	2.00	2.22	
96 N-Propylbenzene	120	9.598	9.598	0.000	99	47561	2.00	2.00	
97 2-Chlorotoluene	126	9.693	9.693	0.000	95	40464	2.00	1.81	
98 1,3,5-Trimethylbenzene	105	9.764	9.764	0.000	95	144751	2.00	1.93	
99 4-Chlorotoluene	126	9.799	9.800	-0.001	97	44716	2.00	2.01	
100 tert-Butylbenzene	119	10.095	10.095	0.000	92	127089	2.00	2.08	
102 1,2,4-Trimethylbenzene	105	10.142	10.143	-0.001	96	163283	2.00	1.98	
103 sec-Butylbenzene	105	10.308	10.308	0.000	94	164294	2.00	1.99	
104 1,3-Dichlorobenzene	146	10.426	10.426	0.000	99	89865	2.00	1.99	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 4-Isopropyltoluene	119	10.450	10.450	0.000	96	136832	2.00	1.91	
106 1,4-Dichlorobenzene	146	10.509	10.509	0.000	93	91925	2.00	2.00	
109 n-Butylbenzene	91	10.852	10.852	0.000	98	117911	2.00	2.04	
110 1,2-Dichlorobenzene	146	10.887	10.876	0.011	96	93064	2.00	2.03	
111 1,2-Dibromo-3-Chloropropan	157	11.656	11.657	-0.001	84	9748	2.00	2.12	
113 1,2,4-Trichlorobenzene	180	12.484	12.485	-0.001	92	60286	2.00	2.17	
114 Hexachlorobutadiene	225	12.650	12.650	0.000	89	17916	2.00	1.77	
115 Naphthalene	128	12.732	12.733	-0.001	98	148471	2.00	2.05	
116 1,2,3-Trichlorobenzene	180	12.981	12.981	0.000	94	58942	2.00	2.18	
S 128 1,2-Dichloroethene, Total	96				0			3.88	
S 129 1,3-Dichloropropene, Total	75				0			3.79	
S 130 Xylenes, Total	106				0		4.00	4.02	
S 131 Trihalomethanes, Total	1				0		8.00	7.74	

Reagents:

VMRPRIMW_00303	Amount Added:	1.60	Units: uL
VMRGAS_00263	Amount Added:	1.60	Units: uL
vm50ss_00337	Amount Added:	1.60	Units: uL
VMAROLISTDW_00267	Amount Added:	1.60	Units: uL
VM50IS_00071	Amount Added:	1.00	Units: uL

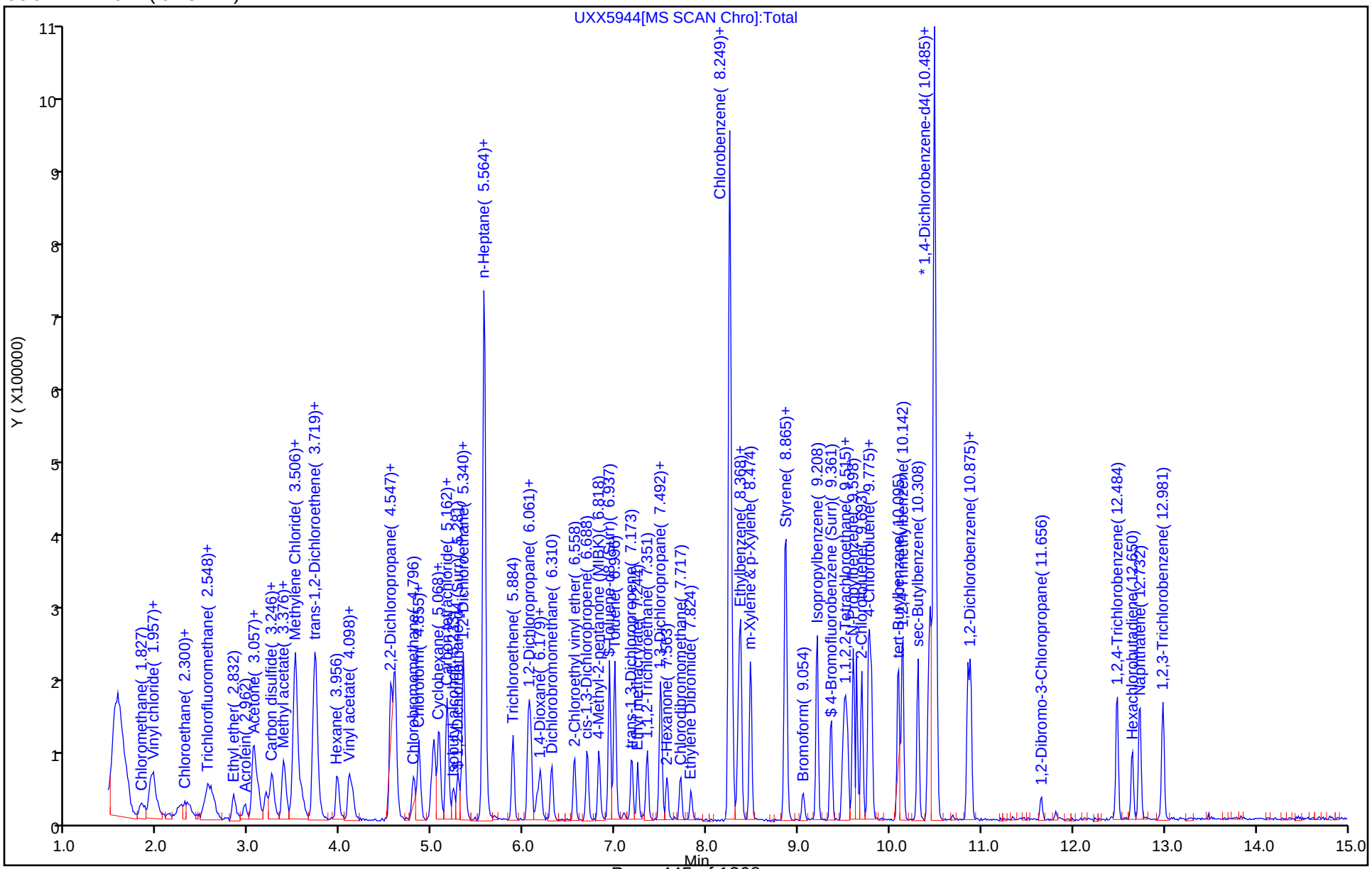
Report Date: 03-Oct-2018 12:29:46 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5944.D

Injection Date:	02-Oct-2018 17:31:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	STD8260 L2			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5945.D
Lims ID: STD8260 L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 02-Oct-2018 17:56:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-008
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub82

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:29:52 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: bosworthh Date: 03-Oct-2018 11:29:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.576	5.565	0.011	99	745248	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.249	8.250	-0.001	88	578008	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.485	10.486	-0.001	96	320147	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.996	4.997	-0.001	90	19470	1.00	0.99	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.280	5.281	-0.001	96	27137	1.00	1.08	
$ 6 Toluene-d8 (Surr)	98	6.936	6.937	-0.001	93	74395	1.00	1.02	
$ 7 4-Bromofluorobenzene (Surr	95	9.361	9.350	0.011	92	26936	1.00	0.9694	
9 Dichlorodifluoromethane	85	1.685	1.662	0.022	86	29702	1.00	1.16	
10 Chloromethane	50	1.862	1.827	0.035	94	35559	1.00	1.18	M
12 Butadiene	54	1.957	1.945	0.012	81	28939	1.00	1.03	
11 Vinyl chloride	62	1.945	1.957	-0.012	93	30003	1.00	1.12	
13 Bromomethane	94	2.264	2.265	-0.001	90	17909	1.00	1.13	
14 Chloroethane	64	2.359	2.348	0.011	13	8326	1.00	0.8460	
15 Dichlorofluoromethane	67	2.548	2.549	-0.001	92	40997	1.00	1.07	
16 Trichlorofluoromethane	101	2.572	2.584	-0.012	89	34895	1.00	1.17	
17 Ethyl ether	59	2.832	2.833	-0.001	89	19083	1.00	1.09	
18 Acrolein	56	2.974	2.951	0.023	94	15013	5.00	5.29	
19 1,1-Dichloroethene	96	3.057	3.045	0.012	97	25681	1.00	1.20	
20 1,1,2-Trichloro-1,2,2-trif	151	3.080	3.069	0.011	56	9855	1.00	0.7843	
21 Acetone	43	3.104	3.093	0.011	100	21800	2.00	2.01	
22 Iodomethane	142	3.187	3.187	0.000	98	40446	1.00	1.04	
24 Carbon disulfide	76	3.258	3.247	0.011	98	75471	1.00	1.05	
26 3-Chloro-1-propene	76	3.376	3.377	-0.001	85	17566	1.00	1.11	
27 Methyl acetate	43	3.388	3.400	-0.012	70	29045	2.00	2.43	
28 Methylene Chloride	84	3.482	3.483	-0.001	95	29904	1.00	1.14	
29 2-Methyl-2-propanol	59	3.589	3.578	0.011	96	22408	10.0	10.8	
31 Acrylonitrile	53	3.707	3.708	-0.001	99	72831	10.0	10.2	
30 trans-1,2-Dichloroethene	96	3.731	3.732	-0.001	70	24954	1.00	1.05	
32 Methyl tert-butyl ether	73	3.731	3.732	-0.001	99	66819	1.00	1.01	
33 Hexane	86	3.956	3.968	-0.012	90	4752	1.00	1.18	
34 1,1-Dichloroethane	63	4.098	4.098	0.000	96	44813	1.00	1.06	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	4.133	4.134	-0.001	97	34661	1.00	1.03	
40 cis-1,2-Dichloroethene	96	4.594	4.595	-0.001	88	25292	1.00	1.01	
41 2-Butanone (MEK)	43	4.594	4.595	-0.001	48	14745	2.00	2.14	
39 2,2-Dichloropropane	97	4.594	4.595	-0.001	76	8364	1.00	1.18	
45 Chlorobromomethane	128	4.795	4.796	-0.001	94	12372	1.00	1.11	
46 Tetrahydrofuran	42	4.843	4.843	0.000	45	12349	2.00	2.49	
47 Chloroform	83	4.855	4.855	0.000	92	39440	1.00	1.07	
48 1,1,1-Trichloroethane	97	5.020	5.021	-0.001	97	39579	1.00	1.10	
49 Cyclohexane	56	5.067	5.080	-0.013	90	40517	1.00	1.02	
51 Carbon tetrachloride	117	5.162	5.163	-0.001	94	31891	1.00	1.09	
50 1,1-Dichloropropene	75	5.162	5.163	-0.001	87	28707	1.00	1.11	
52 Isobutyl alcohol	41	5.233	5.234	-0.001	94	15567	25.0	29.5	
53 Benzene	78	5.340	5.340	0.000	96	93899	1.00	1.10	
54 1,2-Dichloroethane	62	5.351	5.352	-0.001	63	36495	1.00	1.17	
56 n-Heptane	100	5.541	5.541	0.000	59	3680	1.00	1.12	
58 Trichloroethene	130	5.884	5.884	0.000	93	23518	1.00	1.10	
60 Methylcyclohexane	83	6.049	6.050	-0.001	89	30311	1.00	1.01	
61 1,2-Dichloropropane	63	6.073	6.074	-0.001	91	23541	1.00	1.06	
63 Dibromomethane	93	6.179	6.180	-0.001	89	14524	1.00	1.15	
64 1,4-Dioxane	88	6.179	6.192	-0.013	44	3984	20.0	22.5	
65 Dichlorobromomethane	83	6.309	6.310	-0.001	96	29398	1.00	1.06	
67 2-Chloroethyl vinyl ether	63	6.558	6.559	-0.001	92	24294	2.00	2.08	
68 cis-1,3-Dichloropropene	75	6.688	6.689	-0.001	90	32036	1.00	1.04	
69 4-Methyl-2-pentanone (MIBK	43	6.818	6.819	-0.001	94	36693	2.00	2.14	
70 Toluene	91	6.996	6.996	0.000	98	94411	1.00	1.07	
71 trans-1,3-Dichloropropene	75	7.185	7.174	0.011	96	27810	1.00	1.07	
72 Ethyl methacrylate	69	7.244	7.245	-0.001	89	22235	1.00	1.04	
73 1,1,2-Trichloroethane	97	7.350	7.351	-0.001	82	18441	1.00	1.13	
74 Tetrachloroethene	164	7.492	7.493	-0.001	93	15669	1.00	1.02	
75 1,3-Dichloropropane	76	7.504	7.505	-0.001	92	33102	1.00	1.18	
76 2-Hexanone	43	7.563	7.564	-0.001	96	23174	2.00	2.15	
78 Chlorodibromomethane	129	7.717	7.718	-0.001	92	17431	1.00	0.9538	
80 Ethylene Dibromide	107	7.824	7.824	0.000	97	17360	1.00	1.08	
82 Chlorobenzene	112	8.273	8.274	-0.001	93	60368	1.00	1.05	
83 1,1,1,2-Tetrachloroethane	131	8.344	8.345	-0.001	89	23016	1.00	1.06	
84 Ethylbenzene	106	8.368	8.368	0.000	98	35195	1.00	1.10	
85 m-Xylene & p-Xylene	106	8.474	8.475	-0.001	99	43604	1.00	1.10	
86 o-Xylene	106	8.853	8.853	0.000	94	43905	1.00	1.06	
87 Styrene	104	8.864	8.865	-0.001	94	68125	1.00	1.03	
88 Bromoform	173	9.054	9.054	0.000	93	10359	1.00	0.9235	
89 Isopropylbenzene	105	9.207	9.208	-0.001	96	105750	1.00	1.05	
92 1,1,2,2-Tetrachloroethane	83	9.491	9.480	0.011	97	22805	1.00	1.05	
93 Bromobenzene	156	9.515	9.516	-0.001	97	24293	1.00	0.9885	
95 trans-1,4-Dichloro-2-buten	53	9.539	9.539	0.000	66	3110	1.00	0.7319	
94 1,2,3-Trichloropropane	110	9.539	9.539	0.000	83	7073	1.00	1.04	
96 N-Propylbenzene	120	9.598	9.598	0.000	99	25253	1.00	0.9884	
97 2-Chlorotoluene	126	9.692	9.693	-0.001	96	27274	1.00	1.14	
98 1,3,5-Trimethylbenzene	105	9.763	9.764	-0.001	95	79157	1.00	0.9812	
99 4-Chlorotoluene	126	9.799	9.800	-0.001	98	23929	1.00	1.00	
100 tert-Butylbenzene	119	10.095	10.095	0.000	92	69898	1.00	1.07	
102 1,2,4-Trimethylbenzene	105	10.142	10.143	-0.001	94	96634	1.00	1.09	
103 sec-Butylbenzene	105	10.308	10.308	0.000	95	91722	1.00	1.04	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	10.426	10.426	0.000	98	52492	1.00	1.09	
105 4-Isopropyltoluene	119	10.449	10.450	-0.001	96	78874	1.00	1.03	
106 1,4-Dichlorobenzene	146	10.509	10.509	0.000	90	51185	1.00	1.04	
109 n-Butylbenzene	91	10.852	10.852	0.000	95	62879	1.00	1.01	
110 1,2-Dichlorobenzene	146	10.887	10.876	0.011	94	49830	1.00	1.01	
111 1,2-Dibromo-3-Chloropropan	157	11.656	11.657	-0.001	82	5380	1.00	1.09	
113 1,2,4-Trichlorobenzene	180	12.484	12.485	-0.001	94	33912	1.00	1.14	
114 Hexachlorobutadiene	225	12.650	12.650	0.000	88	13186	1.00	1.13	
115 Naphthalene	128	12.732	12.733	-0.001	99	84851	1.00	1.09	
116 1,2,3-Trichlorobenzene	180	12.981	12.981	0.000	91	34169	1.00	1.18	
S 128 1,2-Dichloroethene, Total	96				0			2.06	
S 129 1,3-Dichloropropene, Total	75				0			2.10	
S 130 Xylenes, Total	106				0		2.00	2.16	
S 131 Trihalomethanes, Total	1				0		4.00	4.00	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VMRPRIMW_00303	Amount Added:	0.80	Units: uL
VMAROLISTDW_00267	Amount Added:	0.80	Units: uL
VMRGAS_00263	Amount Added:	0.80	Units: uL
vm50ss_00337	Amount Added:	0.80	Units: uL
VM50IS_00071	Amount Added:	1.00	Units: uL

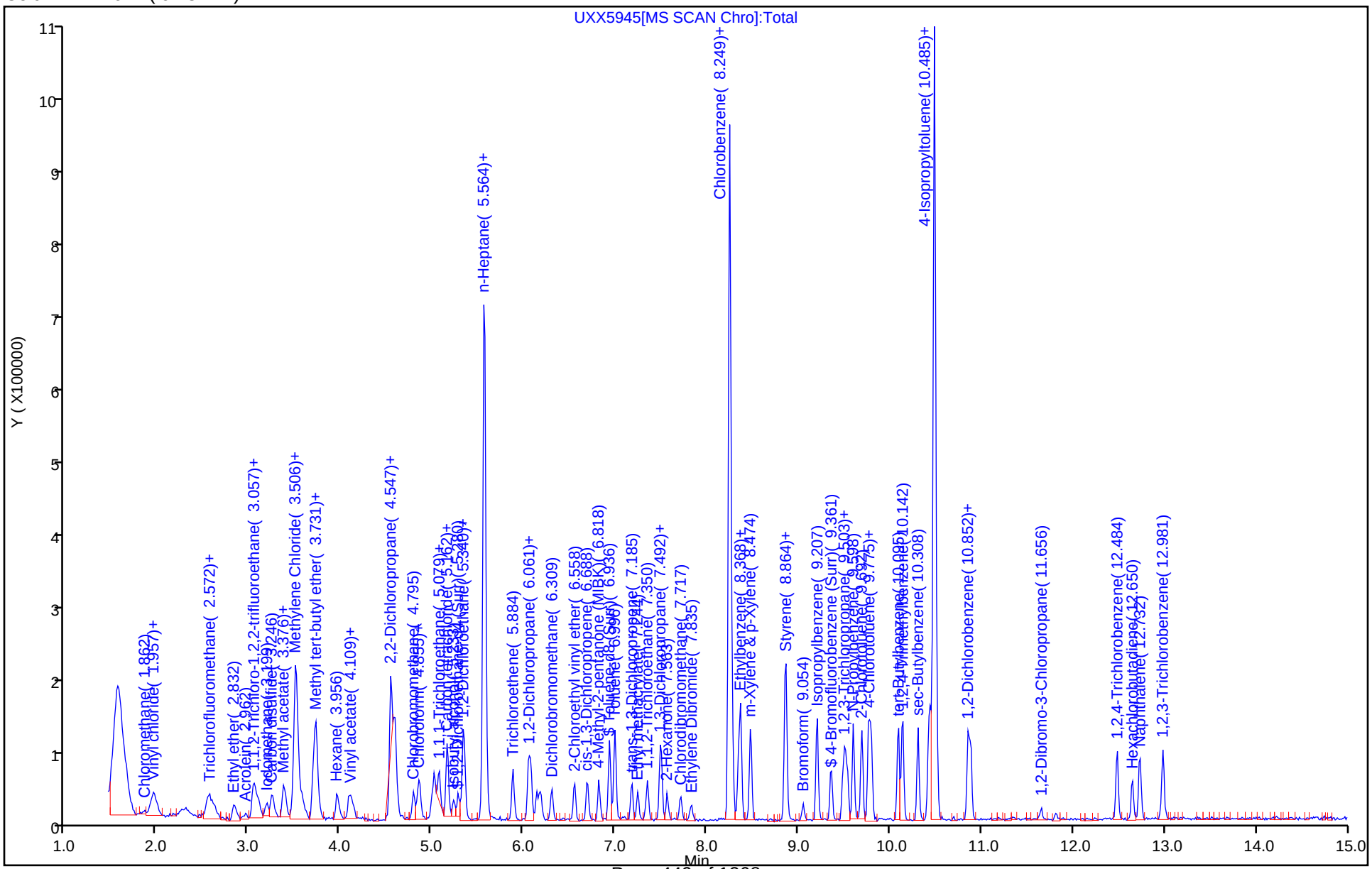
Report Date: 03-Oct-2018 12:29:55 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5945.D

Injection Date:	02-Oct-2018 17:56:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	STD8260 L1			Worklist Smp#:	8
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

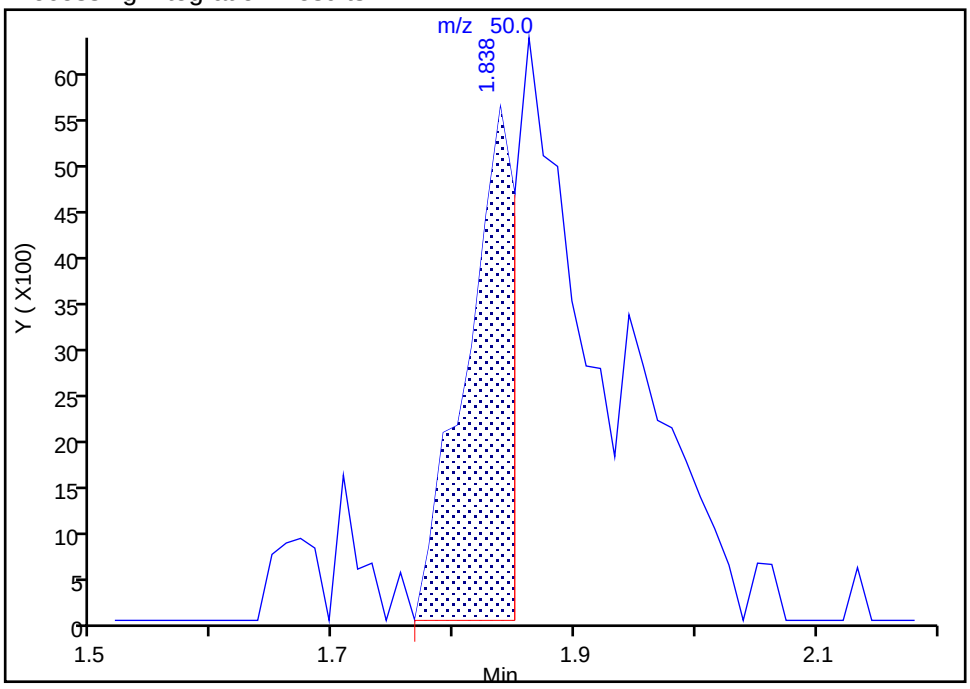
Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5945.D
Injection Date: 02-Oct-2018 17:56:30 Instrument ID: A3UX10
Lims ID: STD8260 L1
Client ID:
Operator ID: 001644 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_10 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

10 Chloromethane, CAS: 74-87-3

Signal: 1

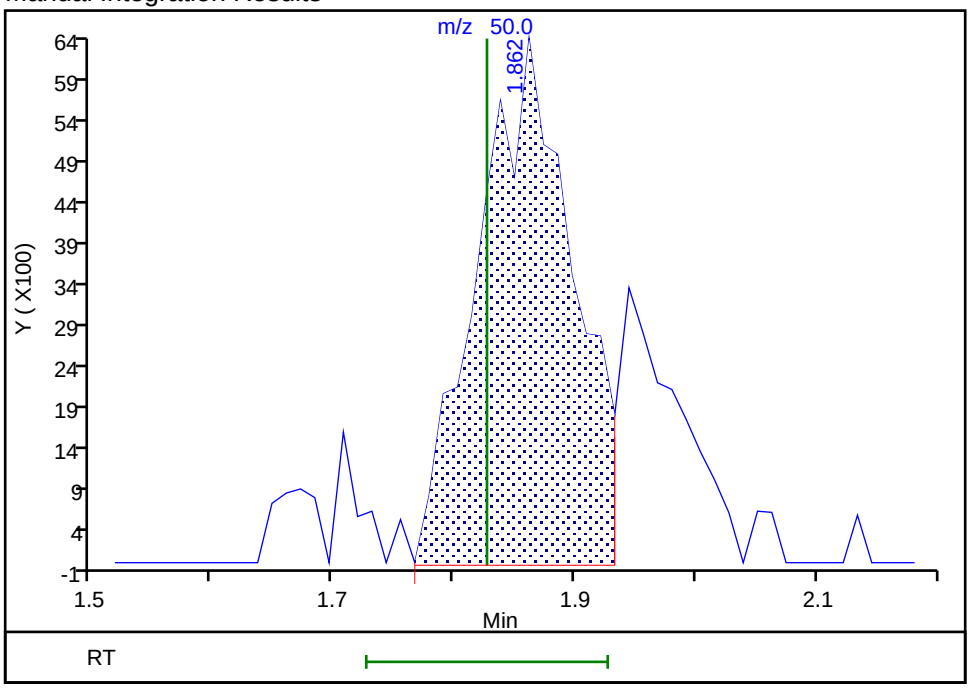
Processing Integration Results

RT: 1.84
Area: 16014
Amount: 0.665907
Amount Units: ug/l



Manual Integration Results

RT: 1.86
Area: 35559
Amount: 1.184025
Amount Units: ug/l



Reviewer: bosworthh, 03-Oct-2018 11:29:28
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 348190

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 18:46 Calibration End Date: 10/02/2018 21:14 Calibration ID: 47200

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-348190/16	UXX5953.D
Level 2	STDA9 240-348190/15	UXX5952.D
Level 3	STDA9 240-348190/14	UXX5951.D
Level 4	STDA9 240-348190/13	UXX5950.D
Level 5	STDA9 240-348190/12	UXX5949.D
Level 6	STDA9 240-348190/11	UXX5948.D
Level 7	STDA9 240-348190/10	UXX5947.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0248 0.0296	0.0311 0.0264	0.0282	0.0312	0.0284	Ave		0.0285				8.2		15.0			
Diisopropyl ether	0.2859 0.2638	0.2629 0.2534	0.2649	0.2723	0.2646	Ave		0.2668				3.8		15.0			
2-Chloro-1,3-butadiene	0.4236 0.4837	0.4595 0.4524	0.4515	0.4761	0.4654	Ave		0.4589				4.3		15.0			
Ethyl tert-butyl ether	1.0369 1.0942	0.9995 1.0362	1.0293	1.0578	1.0486	Ave		1.0432				2.8		15.0			
Ethyl acetate	0.2091 0.1720	0.1829 0.1636	0.1787	0.1860	0.1711	Ave		0.1805				8.2		15.0			
Propionitrile	0.0327 0.0321	0.0314 0.0306	0.0317	0.0320	0.0329	Ave		0.0319				2.5		15.0			
Methacrylonitrile	0.1174 0.1215	0.1197 0.1236	0.1186	0.1246	0.1236	Ave		0.1213				2.3		15.0			
Tert-amyl methyl ether	0.8449 0.9108	0.8409 0.9077	0.8518	0.8930	0.8686	Ave		0.8740				3.4		15.0			
n-Butanol	0.0094 0.0094	0.0104 0.0091	0.0094	0.0104	0.0102	Ave		0.0098				5.7		15.0			
Ethyl acrylate	0.2971 0.3127	0.2852 0.2955	0.2858	0.2870	0.3039	Ave		0.2953				3.5		15.0			
Methyl methacrylate	0.1717 0.1995	0.1871 0.1831	0.1835	0.1882	0.1902	Ave		0.1862				4.5		15.0			
2-Nitropropane	0.0593 0.0612	0.0509 0.0587	0.0587	0.0583	0.0573	Ave		0.0577				5.6		15.0			
n-Butyl acetate	0.2208 0.2176	0.2132 0.2092	0.2211	0.2002	0.2094	Ave		0.2130				3.5		15.0			
1-Chlorohexane	0.3743 0.3924	0.3510 0.3842	0.3756	0.3874	0.3754	Ave		0.3772				3.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 348190

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 18:46 Calibration End Date: 10/02/2018 21:14 Calibration ID: 47200

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0233 0.0229	0.0243 0.0206	0.0225	0.0241	0.0251	Ave		0.0233				6.3		15.0			
Pentachloroethane	0.1982 0.2161	0.2248 0.2345	0.2157	0.2370	0.1404	Qua	0.1669	0.1658	0.0008435						0.9940		0.9900
1,2,3-Trimethylbenzene	2.9755 2.9408	2.8944 3.1097	2.9076	3.0893	3.0441	Ave		2.9945				2.9		15.0			
Benzyl chloride	0.1638 0.2485	0.2107 0.2719	0.2081	0.2393	0.2290	Lin1	-0.131	0.2642							0.9960		0.9900
1,3,5-Trichlorobenzene	0.9634 0.9263	0.9863 0.9788	0.9363	0.9645	0.9837	Ave		0.9627				2.4		15.0			
2-Methylnaphthalene	1.6895 1.6058	1.6701 1.2588	1.5009	1.8260	1.7931	Ave		1.6206				11.9		15.0			
1-Chloro-1-fluoroethane TIC	0.0942 0.3249	0.0025 0.2953	0.3001	0.3142	0.3074	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 348190

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 18:46 Calibration End Date: 10/02/2018 21:14 Calibration ID: 47200

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-348190/16	UXX5953.D
Level 2	STDA9 240-348190/15	UXX5952.D
Level 3	STDA9 240-348190/14	UXX5951.D
Level 4	STDA9 240-348190/13	UXX5950.D
Level 5	STDA9 240-348190/12	UXX5949.D
Level 6	STDA9 240-348190/11	UXX5948.D
Level 7	STDA9 240-348190/10	UXX5947.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Ave	19137 454628	47410 867840	84488	116568	222121	10.0 200	20.0 400	40.0	50.0	100
Diisopropyl ether	FB	Ave	22027 405742	40081 832328	79251	101900	206714	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Chloro-1,3-butadiene	FB	Ave	32630 743875	70056 1485985	135097	178161	363629	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethyl tert-butyl ether	FB	Ave	79881 1682708	152392 3403919	307994	395810	819238	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethyl acetate	FB	Ave	32221 528949	55781 1074531	106957	139212	267326	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Propionitrile	FB	Ave	25229 493812	47812 1006421	94964	119883	257293	10.0 200	20.0 400	40.0	50.0	100
Methacrylonitrile	FB	Ave	90439 1867794	182524 4061695	354745	466075	965823	10.0 200	20.0 400	40.0	50.0	100
Tert-amyl methyl ether	FB	Ave	65092 1400675	128206 2981774	254884	334155	678568	1.00 20.0	2.00 40.0	4.00	5.00	10.0
n-Butanol	CBNZ d5	Ave	14074 308942	30403 575535	54972	75335	156071	25.0 500	50.0 1000	100	125	250
Ethyl acrylate	FB	Ave	22889 480847	43483 970669	85531	107388	237448	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Methyl methacrylate	FB	Ave	26456 613559	57067 1202793	109790	140851	297125	2.00 40.0	4.00 80.0	8.00	10.0	20.0
2-Nitropropane	FB	Ave	9135 188156	15519 385413	35101	43638	89460	2.00 40.0	4.00 80.0	8.00	10.0	20.0
n-Butyl acetate	CBNZ d5	Ave	13244 286447	24986 527034	51779	57817	128200	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1-Chlorohexane	CBNZ d5	Ave	22455 516619	41143 968020	87976	111904	229854	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Cyclohexanone	DCBd 4	Ave	7065 158799	15056 280311	28227	37360	79413	10.0 200	20.0 400	40.0	50.0	100

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 348190

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 18:46 Calibration End Date: 10/02/2018 21:14 Calibration ID: 47200

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Pentachloroethane	CBNZ d5	Qua	23778 568960	52694 1181839	101051	136893	171916	2.00 40.0	4.00 80.0	8.00	10.0	20.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	90130 2042284	179035 4222901	365175	479512	964178	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Benzyl chloride	DCBd 4	Lin1	4961 172601	13030 369230	26134	37138	72546	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	29182 643263	61009 1329156	117587	149702	311582	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Methylnaphthalene	DCBd 4	Ave	102348 2230272	206615 3418791	377018	566840	1135847	2.00 40.0	4.00 80.0	8.00	10.0	20.0
1-Chloro-1-fluoroethane TIC	FB	None	7259 499667	387 969913	89798	117578	240192	1.00 20.0	2.00 40.0	4.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
None = No Calib Curve
Qua = Quadratic ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5947.D
Lims ID: STDA9 L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 02-Oct-2018 18:46:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-010
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub88

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:30:08 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: williamsla Date: 03-Oct-2018 12:01:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.564	5.565	-0.001	99	821230	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.250	8.250	0.000	88	629902	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.485	10.486	-0.001	96	339497	10.0	10.0	
25 Acetonitrile	41	3.353	3.342	0.011	98	867840	400.0	370.4	
36 Isopropyl ether	87	4.145	4.146	-0.001	93	832328	40.0	38.0	
37 2-Chloro-1,3-butadiene	53	4.169	4.170	-0.001	95	1485985	40.0	39.4	
38 Tert-butyl ethyl ether	59	4.453	4.453	0.000	99	3403919	40.0	39.7	
42 Ethyl acetate	43	4.642	4.643	-0.001	99	1074531	80.0	72.5	
43 Propionitrile	54	4.654	4.655	-0.001	99	1006421	400.0	383.7	
44 Methacrylonitrile	41	4.784	4.785	-0.001	91	4061695	400.0	407.8	
55 Tert-amyl methyl ether	73	5.423	5.423	0.000	98	2981774	40.0	41.5	
57 n-Butanol	56	5.789	5.790	-0.001	83	575535	1000.0	936.4	
59 Ethyl acrylate	55	5.955	5.956	-0.001	99	970669	40.0	40.0	
62 Methyl methacrylate	41	6.156	6.157	-0.001	90	1202793	80.0	78.7	
66 2-Nitropropane	41	6.499	6.500	-0.001	99	385413	80.0	81.3	
77 n-Butyl acetate	56	7.670	7.671	-0.001	97	527034	40.0	39.3	
81 1-Chlorohexane	91	8.238	8.239	-0.001	96	968020	40.0	40.7	
91 Cyclohexanone	55	9.302	9.303	-0.001	93	280311	400.0	355.0	
101 Pentachloroethane	167	10.118	10.119	-0.001	91	1181839	80.0	79.8	
107 1,2,3-Trimethylbenzene	105	10.556	10.557	-0.001	99	4222901	40.0	41.5	
108 Benzyl chloride	126	10.639	10.640	-0.001	99	369230	40.0	41.7	
112 1,3,5-Trichlorobenzene	180	11.869	11.858	0.011	98	1329156	40.0	40.7	
117 2-Methylnaphthalene	142	14.034	14.035	-0.001	99	3418791	80.0	62.1	
T 155 1-Chloro-1-fluoroethane TI	47	2.241	2.200	0.041	96	969913	40.0	40.0	

Reagents:

VMRA9W_00267 Amount Added: 32.00 Units: uL
VM50IS_00071 Amount Added: 1.00 Units: uL

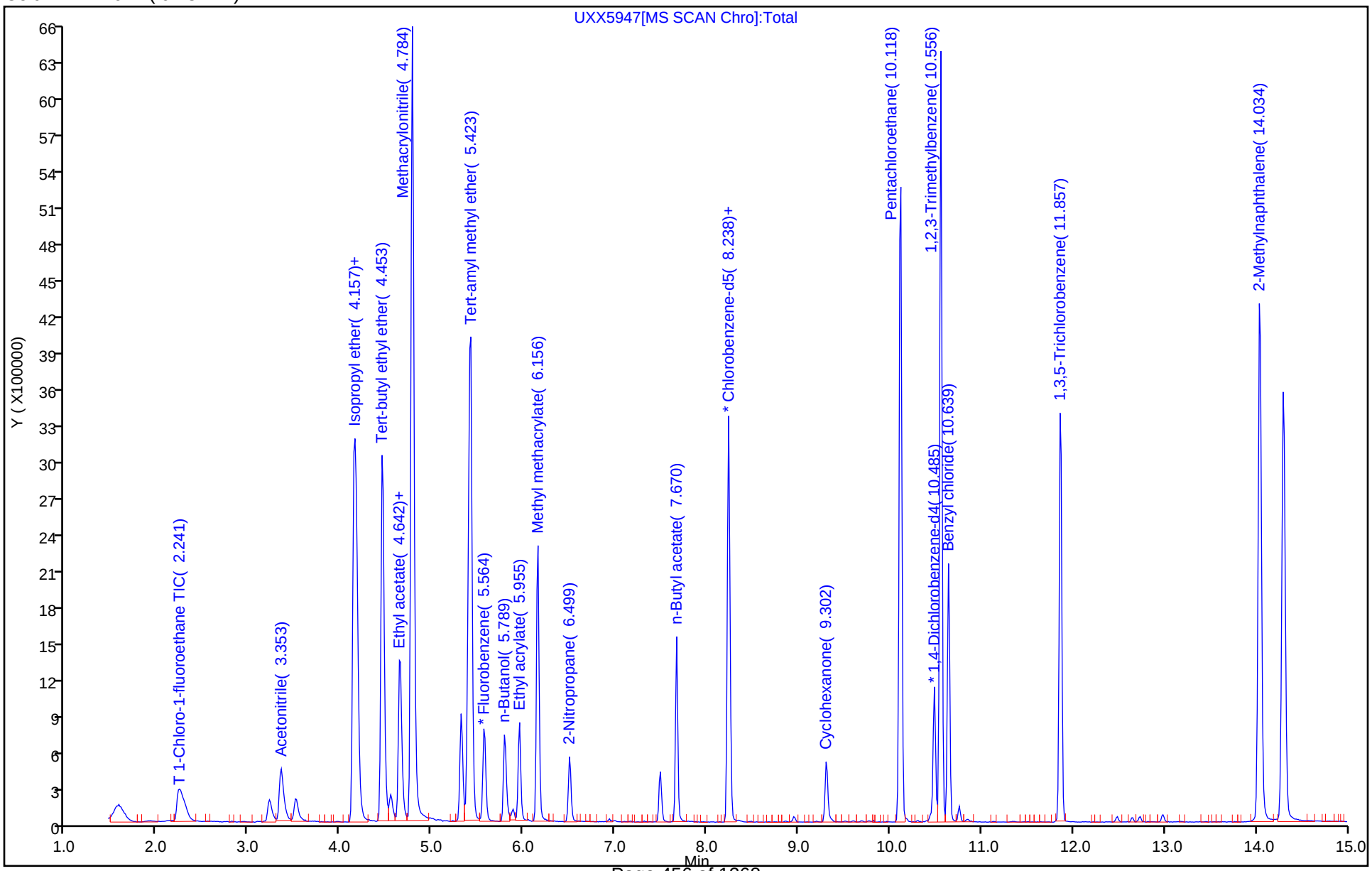
Report Date: 03-Oct-2018 12:30:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5947.D

Injection Date:	02-Oct-2018 18:46:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	STDA9 L7			Worklist Smp#:	10
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5948.D
Lims ID: STDA9 L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 02-Oct-2018 19:11:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-011
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub88

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:30:27 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.567	5.565	0.002	99	768931	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.252	8.250	0.002	88	658244	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.486	0.001	96	347229	10.0	10.0	
25 Acetonitrile	41	3.343	3.342	0.001	98	454628	200.0	207.2	
36 Isopropyl ether	87	4.147	4.146	0.001	92	405742	20.0	19.8	
37 2-Chloro-1,3-butadiene	53	4.171	4.170	0.001	95	743875	20.0	21.1	
38 Tert-butyl ethyl ether	59	4.455	4.453	0.002	99	1682708	20.0	21.0	
42 Ethyl acetate	43	4.644	4.643	0.001	99	528949	40.0	38.1	
43 Propionitrile	54	4.656	4.655	0.001	99	493812	200.0	201.1	
44 Methacrylonitrile	41	4.786	4.785	0.001	91	1867794	200.0	200.3	
55 Tert-amyl methyl ether	73	5.425	5.423	0.002	96	1400675	20.0	20.8	
57 n-Butanol	56	5.791	5.790	0.001	83	308942	500.0	481.0	
59 Ethyl acrylate	55	5.957	5.956	0.001	98	480847	20.0	21.2	
62 Methyl methacrylate	41	6.146	6.157	-0.011	90	613559	40.0	42.9	
66 2-Nitropropane	41	6.501	6.500	0.001	98	188156	40.0	42.4	
77 n-Butyl acetate	56	7.672	7.671	0.001	96	286447	20.0	20.4	
81 1-Chlorohexane	91	8.240	8.239	0.001	96	516619	20.0	20.8	
91 Cyclohexanone	55	9.304	9.303	0.001	91	158799	200.0	196.7	
101 Pentachloroethane	167	10.121	10.119	0.002	93	568960	40.0	42.1	
107 1,2,3-Trimethylbenzene	105	10.558	10.557	0.001	99	2042284	20.0	19.6	
108 Benzyl chloride	126	10.641	10.640	0.001	99	172601	20.0	19.3	
112 1,3,5-Trichlorobenzene	180	11.859	11.858	0.001	97	643263	20.0	19.2	
117 2-Methylnaphthalene	142	14.036	14.035	0.001	99	2230272	40.0	39.6	
T 155 1-Chloro-1-fluoroethane TI	47	2.243	2.200	0.043	97	499667	20.0	20.0	

Reagents:

VMRA9W_00267 Amount Added: 16.00 Units: uL
VM50IS_00071 Amount Added: 1.00 Units: uL

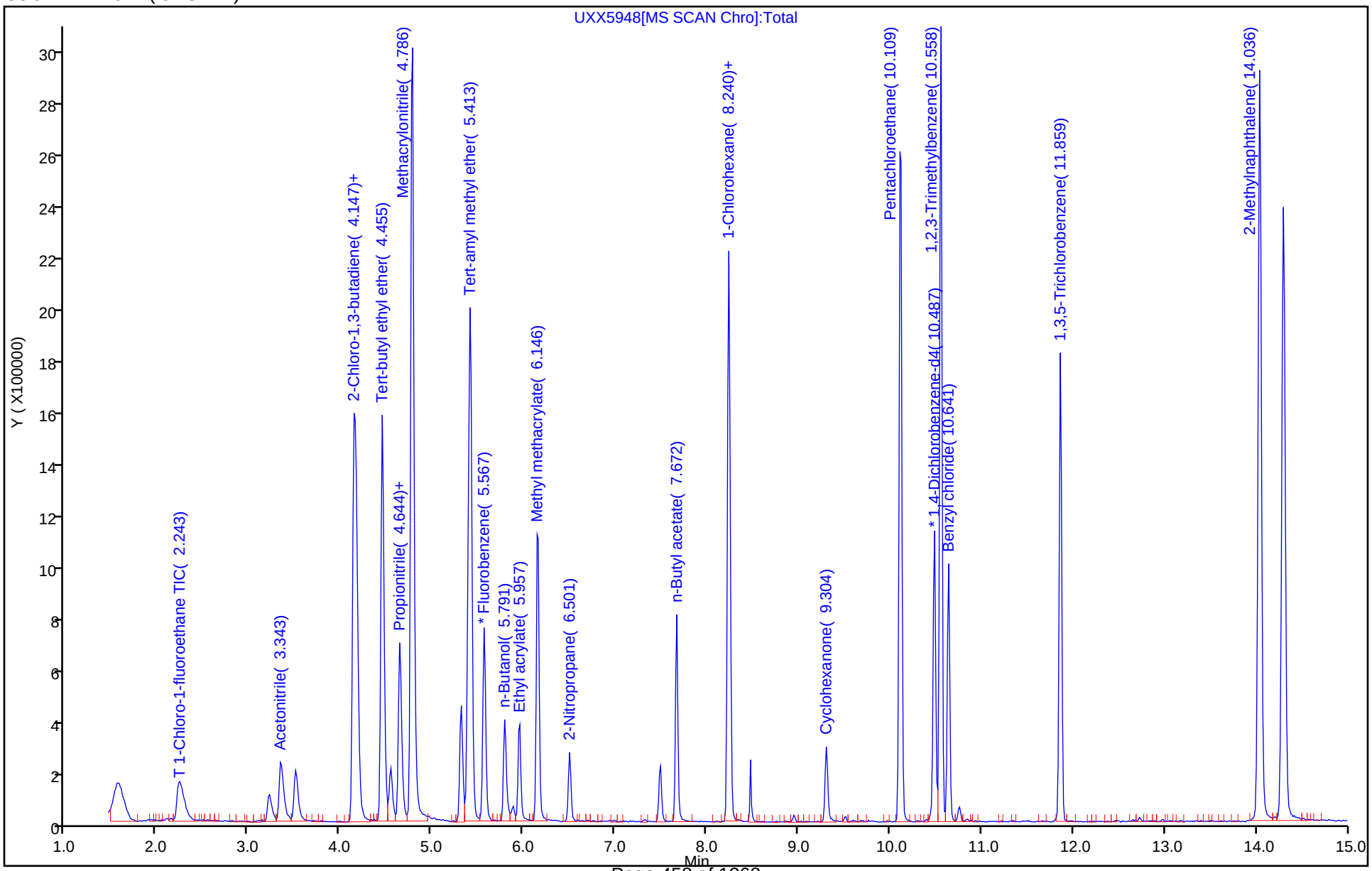
Report Date: 03-Oct-2018 12:30:29 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5948.D

Injection Date:	02-Oct-2018 19:11:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	STDA9 L6			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5949.D
Lims ID: STDA9 L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 02-Oct-2018 19:36:30 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-012
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub88

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:30:41 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

First Level Reviewer: williamsla Date: 03-Oct-2018 11:32:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.565	5.565	0.000	99	781260	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.250	8.250	0.000	87	612281	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.486	10.486	0.000	96	316734	10.0	10.0	
25 Acetonitrile	41	3.342	3.342	0.000	97	222121	100.0	99.6	
36 Isopropyl ether	87	4.146	4.146	0.000	93	206714	10.0	9.92	
37 2-Chloro-1,3-butadiene	53	4.170	4.170	0.000	95	363629	10.0	10.1	
38 Tert-butyl ethyl ether	59	4.453	4.453	0.000	99	819238	10.0	10.1	
42 Ethyl acetate	43	4.643	4.643	0.000	99	267326	20.0	19.0	
43 Propionitrile	54	4.655	4.655	0.000	100	257293	100.0	103.1	
44 Methacrylonitrile	41	4.785	4.785	0.000	90	965823	100.0	101.9	
55 Tert-amyl methyl ether	73	5.423	5.423	0.000	96	678568	10.0	9.94	
57 n-Butanol	56	5.790	5.790	0.000	83	156071	250.0	261.2	
59 Ethyl acrylate	55	5.956	5.956	0.000	98	237448	10.0	10.3	
62 Methyl methacrylate	41	6.157	6.157	0.000	90	297125	20.0	20.4	
66 2-Nitropropane	41	6.500	6.500	0.000	98	89460	20.0	19.8	
77 n-Butyl acetate	56	7.671	7.671	0.000	96	128200	10.0	9.83	
81 1-Chlorohexane	91	8.239	8.239	0.000	95	229854	10.0	9.95	
91 Cyclohexanone	55	9.303	9.303	0.000	92	79413	100.0	107.8	
101 Pentachloroethane	167	10.119	10.119	0.000	92	171916	20.0	14.8	
107 1,2,3-Trimethylbenzene	105	10.557	10.557	0.000	98	964178	10.0	10.2	
108 Benzyl chloride	126	10.640	10.640	0.000	99	72546	10.0	9.16	
112 1,3,5-Trichlorobenzene	180	11.858	11.858	0.000	96	311582	10.0	10.2	
117 2-Methylnaphthalene	142	14.035	14.035	0.000	99	1135847	20.0	22.1	
T 155 1-Chloro-1-fluoroethane TI	47	2.242	2.200	0.042	95	240192	10.0	10.0	

Reagents:

VMRA9W_00267 Amount Added: 8.00 Units: uL
VM50IS_00071 Amount Added: 1.00 Units: uL

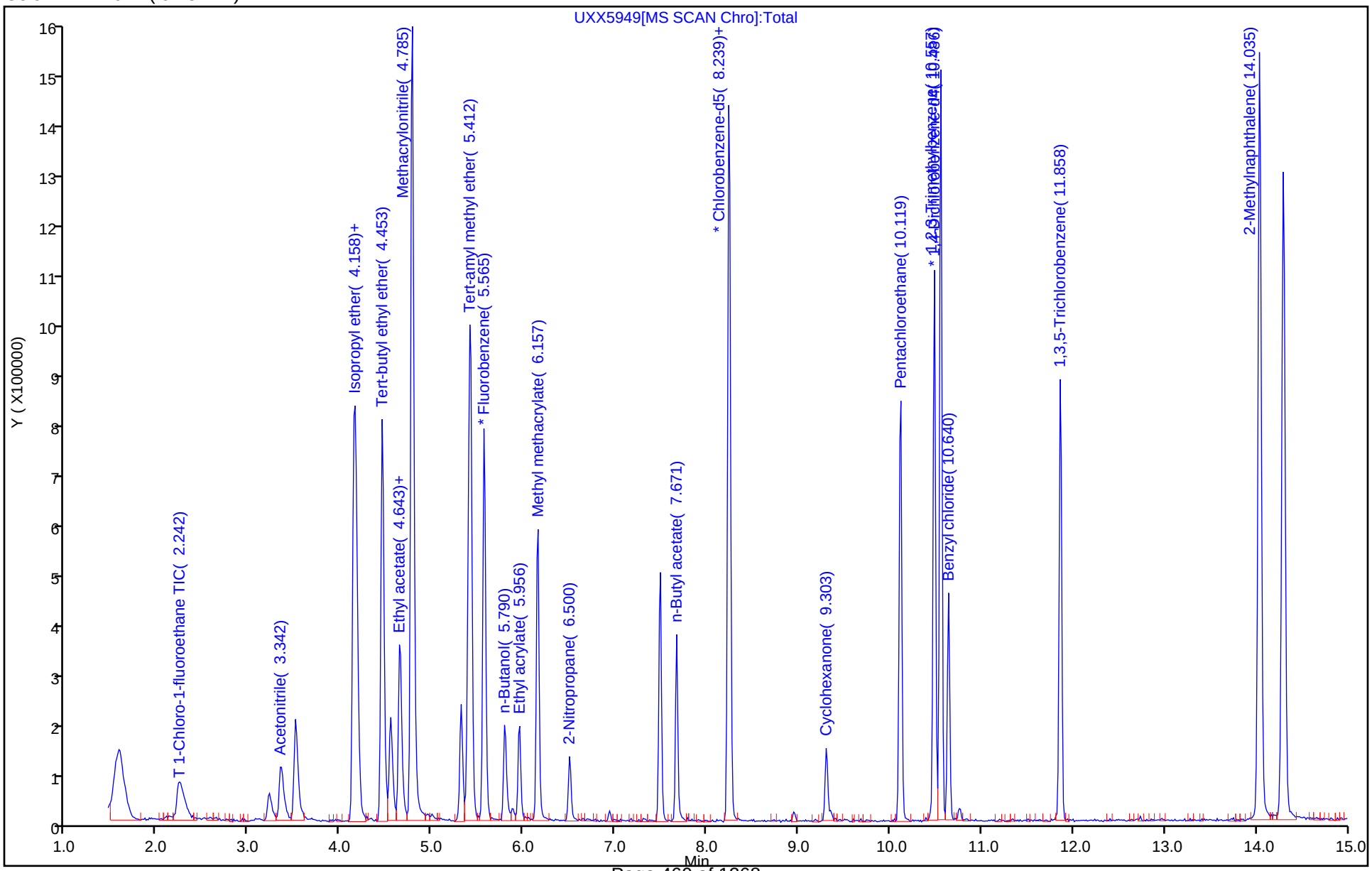
Report Date: 03-Oct-2018 12:30:42 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5949.D

Injection Date:	02-Oct-2018 19:36:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	STDA9 L5			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5950.D
Lims ID: STDA9 L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 02-Oct-2018 20:01:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-013
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub88

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:30:50 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.564	5.564	0.000	99	748361	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.250	8.250	0.000	88	577707	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.485	10.485	0.000	96	310432	10.0	10.0	
25 Acetonitrile	41	3.352	3.352	0.000	98	116568	50.0	54.6	
36 Isopropyl ether	87	4.145	4.145	0.000	92	101900	5.00	5.10	
37 2-Chloro-1,3-butadiene	53	4.169	4.169	0.000	95	178161	5.00	5.19	
38 Tert-butyl ethyl ether	59	4.453	4.453	0.000	98	395810	5.00	5.07	
42 Ethyl acetate	43	4.642	4.642	0.000	99	139212	10.0	10.3	
43 Propionitrile	54	4.654	4.654	0.000	99	119883	50.0	50.2	
44 Methacrylonitrile	41	4.784	4.784	0.000	89	466075	50.0	51.4	
55 Tert-amyl methyl ether	73	5.422	5.422	0.000	96	334155	5.00	5.11	
57 n-Butanol	56	5.789	5.789	0.000	81	75335	125.0	133.6	
59 Ethyl acrylate	55	5.955	5.955	0.000	98	107388	5.00	4.86	
62 Methyl methacrylate	41	6.156	6.156	0.000	89	140851	10.0	10.1	
66 2-Nitropropane	41	6.499	6.499	0.000	97	43638	10.0	10.1	
77 n-Butyl acetate	56	7.670	7.670	0.000	97	57817	5.00	4.70	
81 1-Chlorohexane	91	8.238	8.238	0.000	93	111904	5.00	5.14	
91 Cyclohexanone	55	9.302	9.302	0.000	92	37360	50.0	51.8	
101 Pentachloroethane	167	10.118	10.118	0.000	95	136893	10.0	12.5	
107 1,2,3-Trimethylbenzene	105	10.556	10.556	0.000	99	479512	5.00	5.16	
108 Benzyl chloride	126	10.639	10.639	0.000	99	37138	5.00	5.02	
112 1,3,5-Trichlorobenzene	180	11.869	11.869	0.000	96	149702	5.00	5.01	
117 2-Methylnaphthalene	142	14.034	14.034	0.000	99	566840	10.0	11.3	
T 155 1-Chloro-1-fluoroethane TI	47	2.252	2.200	0.052	86	117578	5.00	5.00	

Reagents:

VMRA9W_00267 Amount Added: 4.00 Units: uL
VM50IS_00071 Amount Added: 1.00 Units: uL

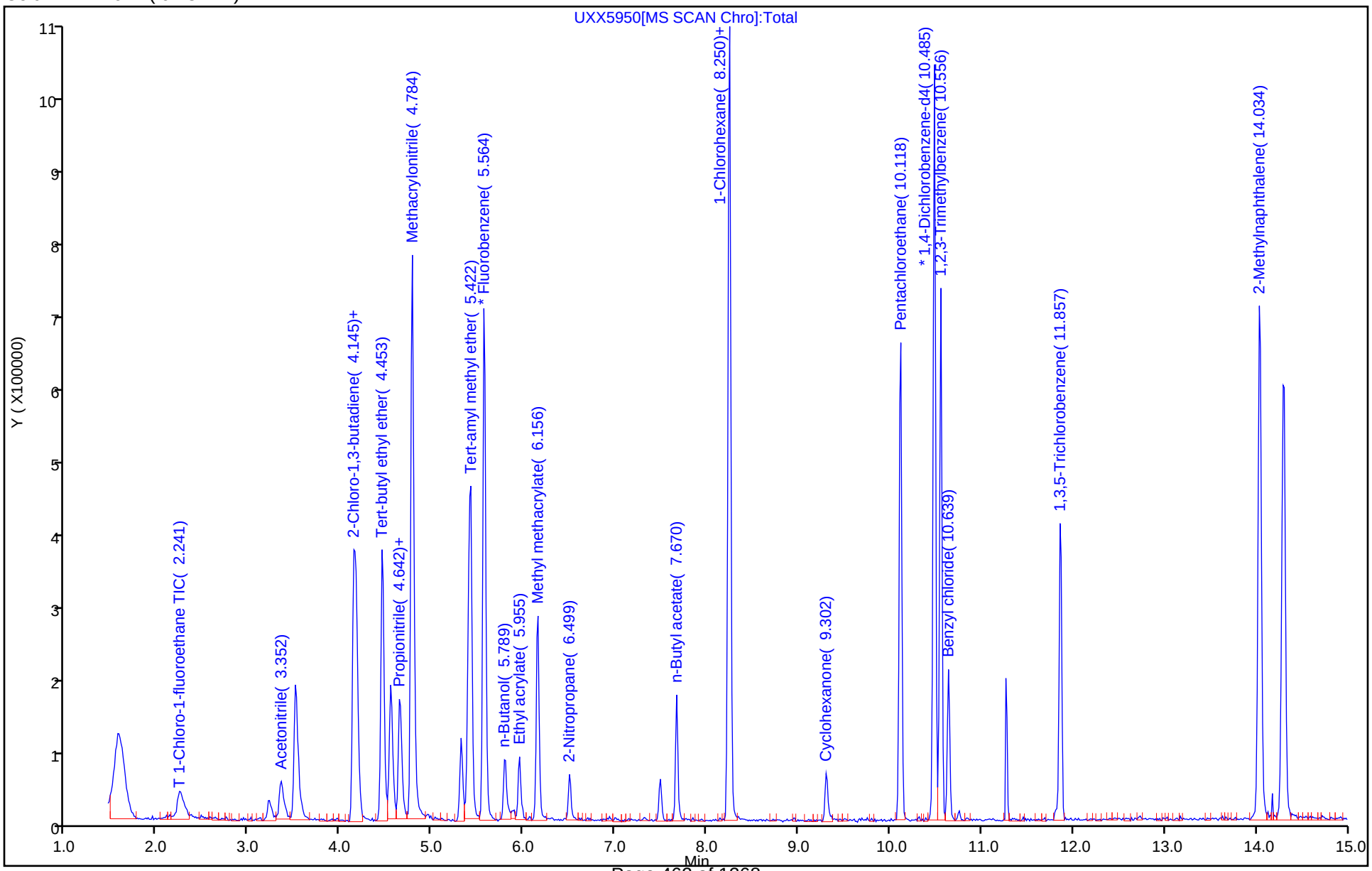
Report Date: 03-Oct-2018 12:30:54 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5950.D

Injection Date:	02-Oct-2018 20:01:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	STDA9 L4			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5951.D
Lims ID: STDA9 L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 02-Oct-2018 20:25:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-014
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub88

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:31:04 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.565	5.564	0.001	99	748056	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.250	8.250	0.000	88	585516	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.486	10.485	0.001	96	313983	10.0	10.0	
25 Acetonitrile	41	3.353	3.352	0.001	100	84488	40.0	39.6	
36 Isopropyl ether	87	4.146	4.145	0.001	92	79251	4.00	3.97	
37 2-Chloro-1,3-butadiene	53	4.169	4.169	0.000	95	135097	4.00	3.94	
38 Tert-butyl ethyl ether	59	4.453	4.453	0.000	98	307994	4.00	3.95	
42 Ethyl acetate	43	4.642	4.642	0.000	99	106957	8.00	7.92	
43 Propionitrile	54	4.654	4.654	0.000	99	94964	40.0	39.7	
44 Methacrylonitrile	41	4.784	4.784	0.000	91	354745	40.0	39.1	
55 Tert-amyl methyl ether	73	5.423	5.422	0.001	98	254884	4.00	3.90	
57 n-Butanol	56	5.802	5.789	0.013	86	54972	100.0	96.2	
59 Ethyl acrylate	55	5.955	5.955	0.000	98	85531	4.00	3.87	
62 Methyl methacrylate	41	6.156	6.156	0.000	89	109790	8.00	7.88	
66 2-Nitropropane	41	6.499	6.499	0.000	98	35101	8.00	8.13	
77 n-Butyl acetate	56	7.671	7.670	0.001	94	51779	4.00	4.15	
81 1-Chlorohexane	91	8.238	8.238	0.000	97	87976	4.00	3.98	
91 Cyclohexanone	55	9.315	9.302	0.013	94	28227	40.0	38.7	
101 Pentachloroethane	167	10.119	10.118	0.001	93	101051	8.00	8.99	
107 1,2,3-Trimethylbenzene	105	10.557	10.556	0.001	99	365175	4.00	3.88	
108 Benzyl chloride	126	10.639	10.639	0.000	99	26134	4.00	3.65	
112 1,3,5-Trichlorobenzene	180	11.858	11.869	-0.011	95	117587	4.00	3.89	
117 2-Methylnaphthalene	142	14.034	14.034	0.000	98	377018	8.00	7.41	
T 155 1-Chloro-1-fluoroethane TI	47	2.241	2.200	0.041	83	89798	4.00	4.00	

Reagents:

VMRA9W_00267 Amount Added: 3.20 Units: uL
VM50IS_00071 Amount Added: 1.00 Units: uL

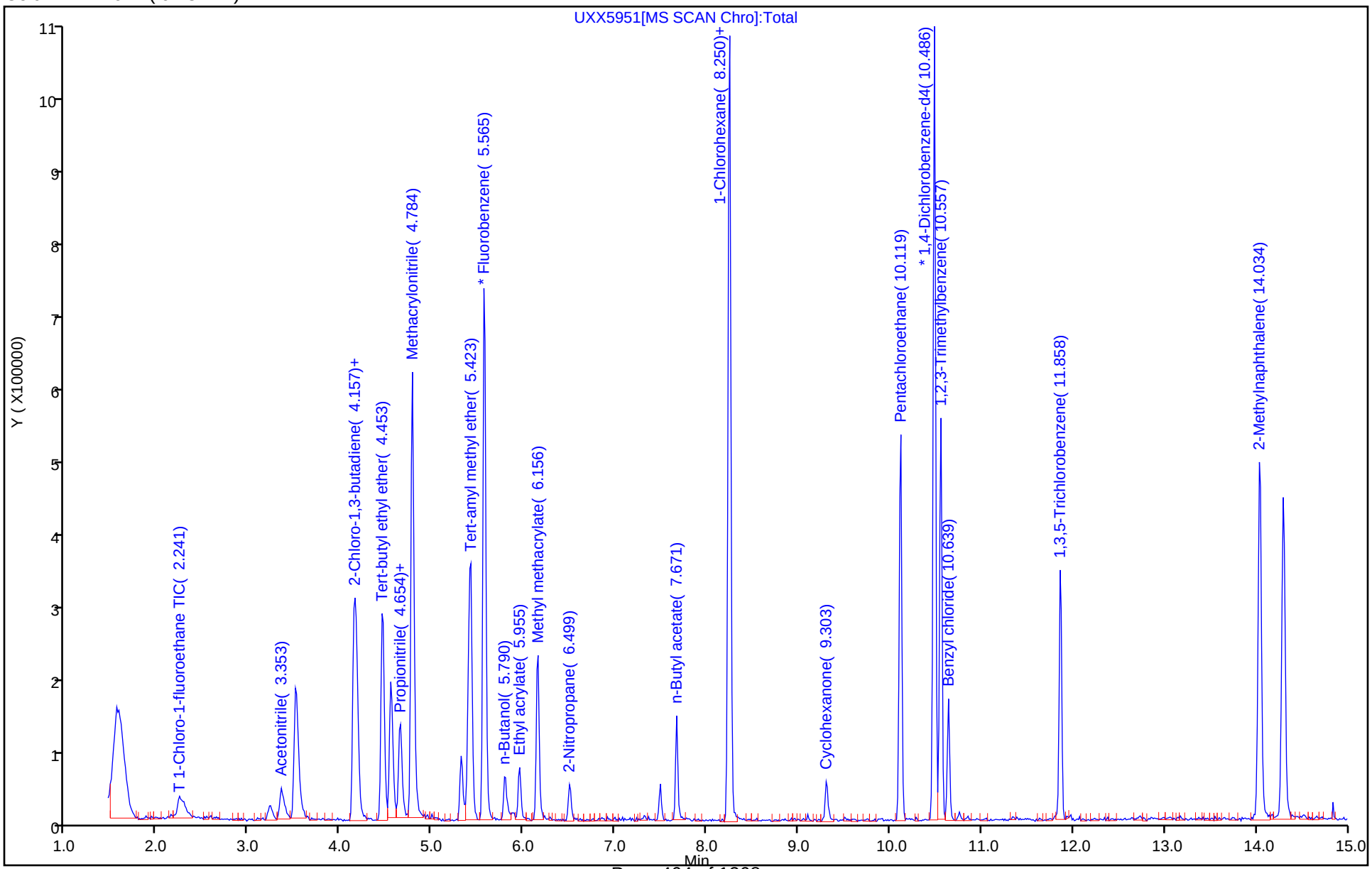
Report Date: 03-Oct-2018 12:31:06 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5951.D

Injection Date:	02-Oct-2018 20:25:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	STDA9 L3			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5952.D
Lims ID: STDA9 L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 02-Oct-2018 20:50:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-015
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub88

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:31:15 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.568	5.564	0.004	99	762338	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.253	8.250	0.003	88	586052	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.489	10.485	0.004	96	309279	10.0	10.0	
25 Acetonitrile	41	3.344	3.352	-0.008	100	47410	20.0	21.8	
36 Isopropyl ether	87	4.149	4.145	0.004	92	40081	2.00	1.97	
37 2-Chloro-1,3-butadiene	53	4.172	4.169	0.003	94	70056	2.00	2.00	
38 Tert-butyl ethyl ether	59	4.456	4.453	0.003	98	152392	2.00	1.92	
42 Ethyl acetate	43	4.645	4.642	0.003	99	55781	4.00	4.05	
43 Propionitrile	54	4.657	4.654	0.003	88	47812	20.0	19.6	
44 Methacrylonitrile	41	4.787	4.784	0.003	86	182524	20.0	19.7	
55 Tert-amyl methyl ether	73	5.426	5.422	0.004	96	128206	2.00	1.92	
57 n-Butanol	56	5.793	5.789	0.004	81	30403	50.0	53.2	
59 Ethyl acrylate	55	5.958	5.955	0.003	98	43483	2.00	1.93	
62 Methyl methacrylate	41	6.148	6.156	-0.008	90	57067	4.00	4.02	
66 2-Nitropropane	41	6.502	6.499	0.003	97	15519	4.00	3.53	
77 n-Butyl acetate	56	7.673	7.670	0.003	94	24986	2.00	2.00	
81 1-Chlorohexane	91	8.241	8.238	0.003	90	41143	2.00	1.86	
91 Cyclohexanone	55	9.306	9.302	0.004	89	15056	20.0	20.9	
101 Pentachloroethane	167	10.110	10.118	-0.008	95	52694	4.00	4.32	
107 1,2,3-Trimethylbenzene	105	10.560	10.556	0.004	98	179035	2.00	1.93	
108 Benzyl chloride	126	10.642	10.639	0.003	99	13030	2.00	2.09	
112 1,3,5-Trichlorobenzene	180	11.861	11.869	-0.008	95	61009	2.00	2.05	
117 2-Methylnaphthalene	142	14.037	14.034	0.003	98	206615	4.00	4.12	
T 155 1-Chloro-1-fluoroethane TI	47	2.185	2.200	-0.015	1	387	2.00	2.00	

Reagents:

VMRA9W_00267 Amount Added: 1.60 Units: uL
VM50IS_00071 Amount Added: 1.00 Units: uL

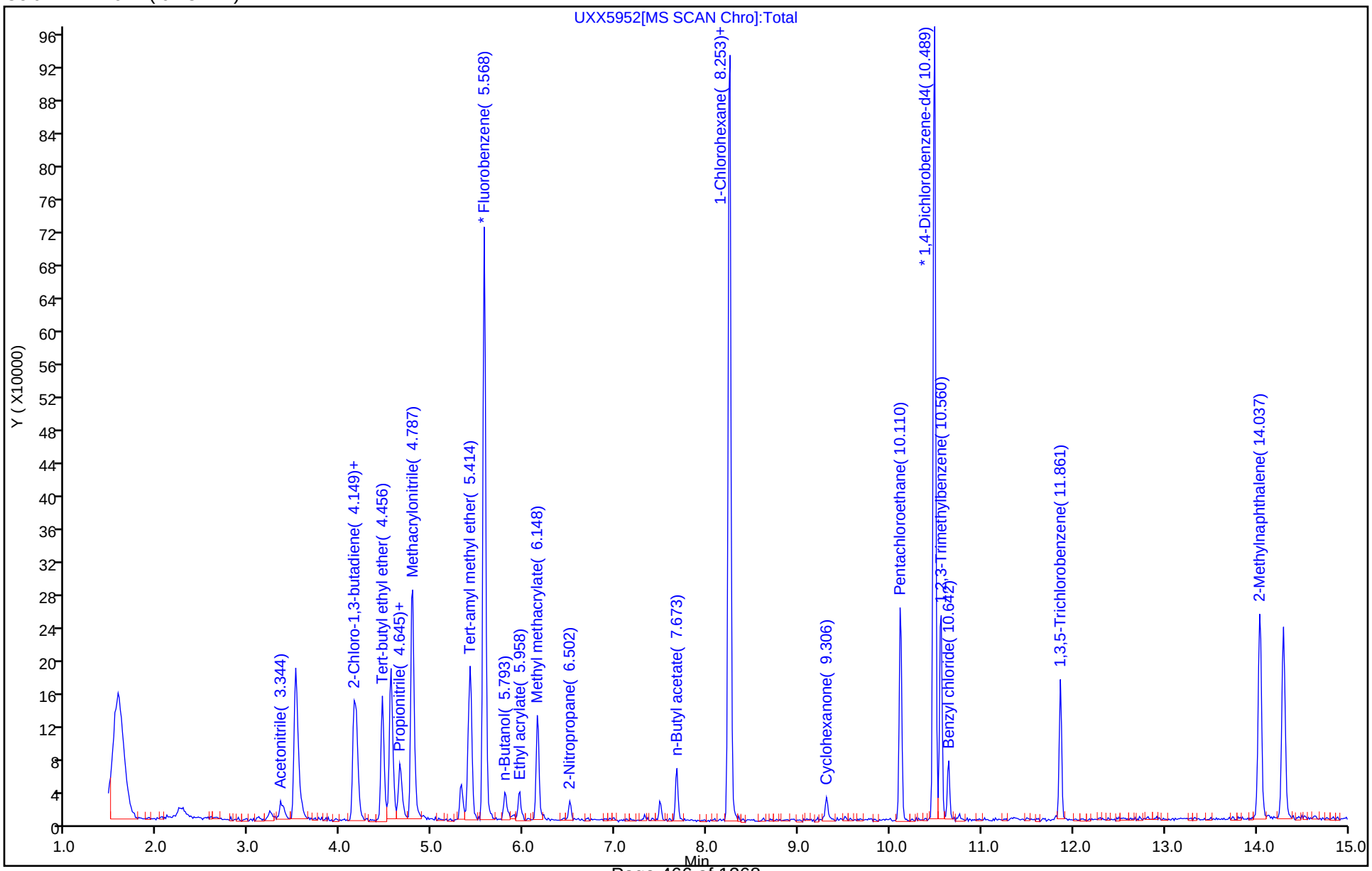
Report Date: 03-Oct-2018 12:31:16 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5952.D

Injection Date:	02-Oct-2018 20:50:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	STDA9 L2			Worklist Smp#:	15
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D
Lims ID: STDA9 L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 02-Oct-2018 21:14:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-016
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub88

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:31:24 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.564	5.564	0.000	99	770373	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.249	8.250	-0.001	88	599936	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.485	10.485	0.000	97	302903	10.0	10.0	
25 Acetonitrile	41	3.352	3.352	0.000	93	19137	10.0	8.71	
36 Isopropyl ether	87	4.145	4.145	0.000	94	22027	1.00	1.07	
37 2-Chloro-1,3-butadiene	53	4.168	4.169	-0.001	93	32630	1.00	0.9230	
38 Tert-butyl ethyl ether	59	4.452	4.453	-0.001	99	79881	1.00	0.99	
42 Ethyl acetate	43	4.653	4.642	0.011	96	32221	2.00	2.32	
43 Propionitrile	54	4.653	4.654	-0.001	91	25229	10.0	10.3	
44 Methacrylonitrile	41	4.783	4.784	-0.001	89	90439	10.0	9.68	
55 Tert-amyl methyl ether	73	5.422	5.422	0.000	97	65092	1.00	0.9668	
57 n-Butanol	56	5.801	5.789	0.012	84	14074	25.0	24.0	
59 Ethyl acrylate	55	5.954	5.955	-0.001	97	22889	1.00	1.01	
62 Methyl methacrylate	41	6.155	6.156	-0.001	87	26456	2.00	1.84	
66 2-Nitropropane	41	6.498	6.499	-0.001	98	9135	2.00	2.05	
77 n-Butyl acetate	56	7.669	7.670	-0.001	94	13244	1.00	1.04	
81 1-Chlorohexane	91	8.237	8.238	-0.001	89	22455	1.00	0.99	
91 Cyclohexanone	55	9.302	9.302	0.000	90	7065	10.0	10.0	
101 Pentachloroethane	167	10.118	10.118	0.000	92	23778	2.00	1.37	
107 1,2,3-Trimethylbenzene	105	10.556	10.556	0.000	97	90130	1.00	0.99	
108 Benzyl chloride	126	10.650	10.639	0.011	99	4961	1.00	1.12	
112 1,3,5-Trichlorobenzene	180	11.857	11.869	-0.012	95	29182	1.00	1.00	
117 2-Methylnaphthalene	142	14.033	14.034	-0.001	99	102348	2.00	2.08	
T 155 1-Chloro-1-fluoroethane TI	47	2.228	2.200	0.028	14	7259	1.00	1.00	

Reagents:

VM50IS_00071 Amount Added: 1.00 Units: uL
VMRA9W_00267 Amount Added: 0.80 Units: uL

Report Date: 03-Oct-2018 12:31:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Injection Date:	02-Oct-2018 21:14:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	STDA9 L1			Worklist Smp#:	16
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 07:16 Calibration End Date: 11/30/2018 10:15 Calibration ID: 48278

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-357692/20	UX81330.D
Level 2	STDA9 240-357692/19	UX81329.D
Level 3	STDA9 240-357692/18	UX81328.D
Level 4	STDA9 240-357692/17	UX81327.D
Level 5	STDA9 240-357692/16	UX81326.D
Level 6	STDA9 240-357692/15	UX81325.D
Level 7	STDA9 240-357692/14	UX81324.D
Level 8	STDA9 240-357692/13	UX81323.D
Level 9	STDA9 240-357692/12	UX81322.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Acetonitrile	+++++ 0.0329	0.0356 0.0337	0.0459 0.0323	0.0392 0.0312	0.0354	Ave		0.0358				13.4		15.0			
Diisopropyl ether	0.2075 0.2265	0.2212 0.2336	0.2380 0.2310	0.2296 0.2213	0.2281	Ave		0.2263				3.9		15.0			
2-Chloro-1,3-butadiene	0.6583 0.6872	0.5621 0.7038	0.7374 0.7349	0.6720 0.7133	0.6898	Ave		0.6843				7.7		15.0			
Ethyl tert-butyl ether	0.8577 0.8634	0.7525 0.9006	0.9754 0.8720	0.8739 0.8389	0.8630	Ave		0.8664				6.7		15.0			
Propionitrile	0.0358 0.0292	0.0288 0.0290	0.0395 0.0297	0.0322 0.0279	0.0305	Ave		0.0314				12.3		15.0			
Ethyl acetate	+++++ 0.2199	0.2603 0.2147	0.2868 0.2386	0.2429 0.2114	0.2332	Ave		0.2385				10.6		15.0			
Methacrylonitrile	0.2017 0.1685	0.1567 0.1659	0.2088 0.1779	0.1815 0.1657	0.1760	Ave		0.1781				9.7		15.0			
Tert-amyl methyl ether	0.5006 0.5709	0.4504 0.6108	0.6352 0.5856	0.5857 0.5598	0.5648	Ave		0.5626				10.0		15.0			
n-Butanol	+++++ 0.0047	0.0033 0.0049	0.0041 0.0051	0.0042 0.0047	0.0039	Ave		0.0044				13.5		15.0			
Ethyl acrylate	0.2335 0.2212	0.1751 0.2186	0.2229 0.2539	0.2132 0.2163	0.2098	Ave		0.2183				9.6		15.0			
Methyl methacrylate	0.2107 0.2163	0.1800 0.2146	0.2359 0.2439	0.2088 0.2090	0.2089	Ave		0.2142				8.5		15.0			
2-Nitropropane	+++++ 0.0323	+++++ 0.0369	0.0317 0.0496	0.0285 +++++	0.0330	Qua	0.1320	0.0241	0.0000629						1.0000		0.9900
n-Butyl acetate	+++++ 0.3234	+++++ 0.3306	0.3296 0.3775	0.2936 +++++	0.2820	Ave		0.3228				10.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 07:16 Calibration End Date: 11/30/2018 10:15 Calibration ID: 48278

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1-Chlorohexane	+++++ 0.4332	+++++ 0.4538	0.4223 0.4976	0.3987 0.4493	0.4197	Ave		0.4392				7.2		15.0			
Cyclohexanone	+++++ 0.0079	+++++ 0.0090	0.0077 0.0095	0.0081 0.0091	0.0071	Ave		0.0084				10.5		15.0			
Pentachloroethane	+++++ 0.3616	0.2003 0.3981	0.2813 0.3817	0.2591 0.3865	0.2885	Lin1	-1.192	0.3858							0.9980		0.9900
1,2,3-Trimethylbenzene	3.5343 3.4716	2.6987 3.4357	3.4621 3.3796	3.0677 3.2470	3.4050	Ave		3.3002				8.1		15.0			
Benzyl chloride	+++++ 0.0831	+++++ 0.1056	+++++ 0.1342	0.0509 0.1368	0.0610	Qua	-0.916	0.1023	0.0001604						0.9990		0.9900
1,3,5-Trichlorobenzene	1.6308 1.1935	1.2237 1.1858	1.4381 1.1229	1.2026 1.0996	1.2971	Ave		1.2660				13.4		15.0			
2-Methylnaphthalene	1.4491 1.2035	1.1110 1.2078	0.9369 1.0829	1.0546 0.9959	1.1963	Ave		1.1376				13.2		15.0			
1-Chloro-1-fluoroethane TIC	0.6206 0.4708	0.4384 0.4847	0.6340 0.4735	0.5483 0.4627	0.4858	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 07:16 Calibration End Date: 11/30/2018 10:15 Calibration ID: 48278

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-357692/20	UX81330.D
Level 2	STDA9 240-357692/19	UX81329.D
Level 3	STDA9 240-357692/18	UX81328.D
Level 4	STDA9 240-357692/17	UX81327.D
Level 5	STDA9 240-357692/16	UX81326.D
Level 6	STDA9 240-357692/15	UX81325.D
Level 7	STDA9 240-357692/14	UX81324.D
Level 8	STDA9 240-357692/13	UX81323.D
Level 9	STDA9 240-357692/12	UX81322.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acetonitrile	FB	Ave	+++++ 264533	10991 528905	33544 1080699	56990 1285693	111839	+++++ 500	20.0 1000	50.0 2000	100 2500	200
Diisopropyl ether	FB	Ave	3021 182224	6825 366997	17391 772697	33385 911194	72081	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Chloro-1,3-butadiene	FB	Ave	9584 552939	17344 1105506	53891 2458699	97706 2936617	218000	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Ethyl tert-butyl ether	FB	Ave	12487 694739	23218 1414715	71280 2917288	127064 3454008	272705	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Propionitrile	FB	Ave	5206 234764	8884 456055	28900 993083	46836 1149165	96247	10.0 500	20.0 1000	50.0 2000	100 2500	200
Ethyl acetate	FB	Ave	+++++ 353926	16061 674415	41914 1596709	70627 1740454	147407	+++++ 100	4.00 200	10.0 400	20.0 500	40.0
Methacrylonitrile	FB	Ave	29366 1355765	48364 2606121	152577 5952587	263838 6820427	556135	10.0 500	20.0 1000	50.0 2000	100 2500	200
Tert-amyl methyl ether	FB	Ave	7288 459333	13897 959532	46421 1959070	85152 2304938	178498	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
n-Butanol	FB	Ave	+++++ 95019	2575 192593	7539 428345	15168 484393	31043	+++++ 1250	50.0 2500	125 5000	250 6250	500
Ethyl acrylate	FB	Ave	3399 178012	5404 343402	16289 849313	30994 890732	66288	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Methyl methacrylate	FB	Ave	6134 348045	11105 674095	34474 1631845	60710 1721261	132047	2.00 100	4.00 200	10.0 400	20.0 500	40.0
2-Nitropropane	FB	Qua	+++++ 52002	+++++ 115986	4628 331782	8294 +++++	20877	+++++ 100	+++++ 200	10.0 400	20.0 +++++	40.0
n-Butyl acetate	FB	Ave	+++++ 260212	+++++ 519258	24087 1263084	42684 +++++	89111	+++++ 50.0	+++++ 100	5.00 200	10.0 +++++	20.0
1-Chlorohexane	CBNZ d5	Ave	+++++ 228804	+++++ 464802	20911 1102927	38265 1193853	86918	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 07:16 Calibration End Date: 11/30/2018 10:15 Calibration ID: 48278

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Cyclohexanone	CBNZ d5	Ave	+++++ 41847	+++++ 92378	3813 211319	7769 242673	14736	+++++ 500	+++++ 1000	50.0 2000	100 2500	200
Pentachloroethane	DCBd 4	Lin1	+++++ 182005	3809 405387	13315 822330	24861 1019931	57367	+++++ 100	4.00 200	10.0 400	20.0 500	40.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	15897 873600	25657 1749353	81944 3640722	147174 4284228	338551	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Benzyl chloride	DCBd 4	Qua	+++++ 20910	+++++ 53749	+++++ 144556	2441 180471	6069	+++++ 50.0	+++++ 100	+++++ 200	10.0 250	20.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	7335 300329	11634 603796	34038 1209602	57694 1450903	128969	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Methylnaphthalene	DCBd 4	Ave	13036 605698	21125 1229959	44349 2333072	101194 2627993	237895	2.00 100	4.00 200	10.0 400	20.0 500	40.0
1-Chloro-1-fluoroethane TIC	FB	None	9035 378859	13527 761389	46331 1584321	79721 1904925	153533	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
None = No Calib Curve
Qua = Quadratic ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81322.D
Lims ID: STDA9 L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 30-Nov-2018 07:16:30 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0082416-012
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub65

Method: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 01-Dec-2018 02:23:14 Calib Date: 30-Nov-2018 10:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: latat Date: 30-Nov-2018 22:57:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.160	5.157	0.003	98	823432	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.692	7.689	0.003	96	531405	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.881	9.878	0.003	95	263892	50.0	50.0	
25 Acetonitrile	41	3.184	3.181	0.003	99	1285693	2500.0	2182.3	
36 Isopropyl ether	87	3.894	3.891	0.003	95	911194	250.0	244.5	
37 2-Chloro-1,3-butadiene	53	3.918	3.915	0.003	94	2936617	250.0	260.6	
38 Tert-butyl ethyl ether	59	4.166	4.164	0.002	96	3454008	250.0	242.1	
43 Propionitrile	54	4.320	4.317	0.003	76	1149165	2500.0	2222.5	
42 Ethyl acetate	43	4.320	4.317	0.003	99	1740454	500.0	443.2	
44 Methacrylonitrile	41	4.438	4.436	0.002	98	6820427	2500.0	2325.7	
55 Tert-amyl methyl ether	73	5.030	5.027	0.003	90	2304938	250.0	248.8	
57 n-Butanol	56	5.337	5.335	0.002	95	484393	6250.0	6718.7	
59 Ethyl acrylate	55	5.491	5.501	-0.010	99	890732	250.0	247.8	
62 Methyl methacrylate	41	5.681	5.690	-0.009	88	1721261	500.0	487.9	
66 2-Nitropropane	41	6.000	5.998	0.002	99	366509	500.0	431.9	
77 n-Butyl acetate	43	7.112	7.122	-0.010	97	1301796	250.0	244.9	
81 1-Chlorohexane	91	7.669	7.678	-0.009	76	1193853	250.0	255.7	
91 Cyclohexanone	55	8.710	8.707	0.003	96	242673	2500.0	2731.2	
101 Pentachloroethane	167	9.514	9.512	0.002	0	1019931	500.0	503.9	
107 1,2,3-Trimethylbenzene	105	9.952	9.950	0.002	99	4284228	250.0	246.0	
108 Benzyl chloride	126	10.035	10.033	0.002	99	180471	250.0	247.3	
112 1,3,5-Trichlorobenzene	180	11.254	11.251	0.003	96	1450903	250.0	217.1	
117 2-Methylnaphthalene	142	13.431	13.441	-0.010	93	2627993	500.0	437.7	
T 156 1-Chloro-1-fluoroethane TI	47	2.202	2.198	0.004	0	1904925	250.0	115.7	

Reagents:

VMRA9W_00275	Amount Added:	25.00	Units: uL	
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00134	Amount Added:	0.00	Units:	Run Reagent

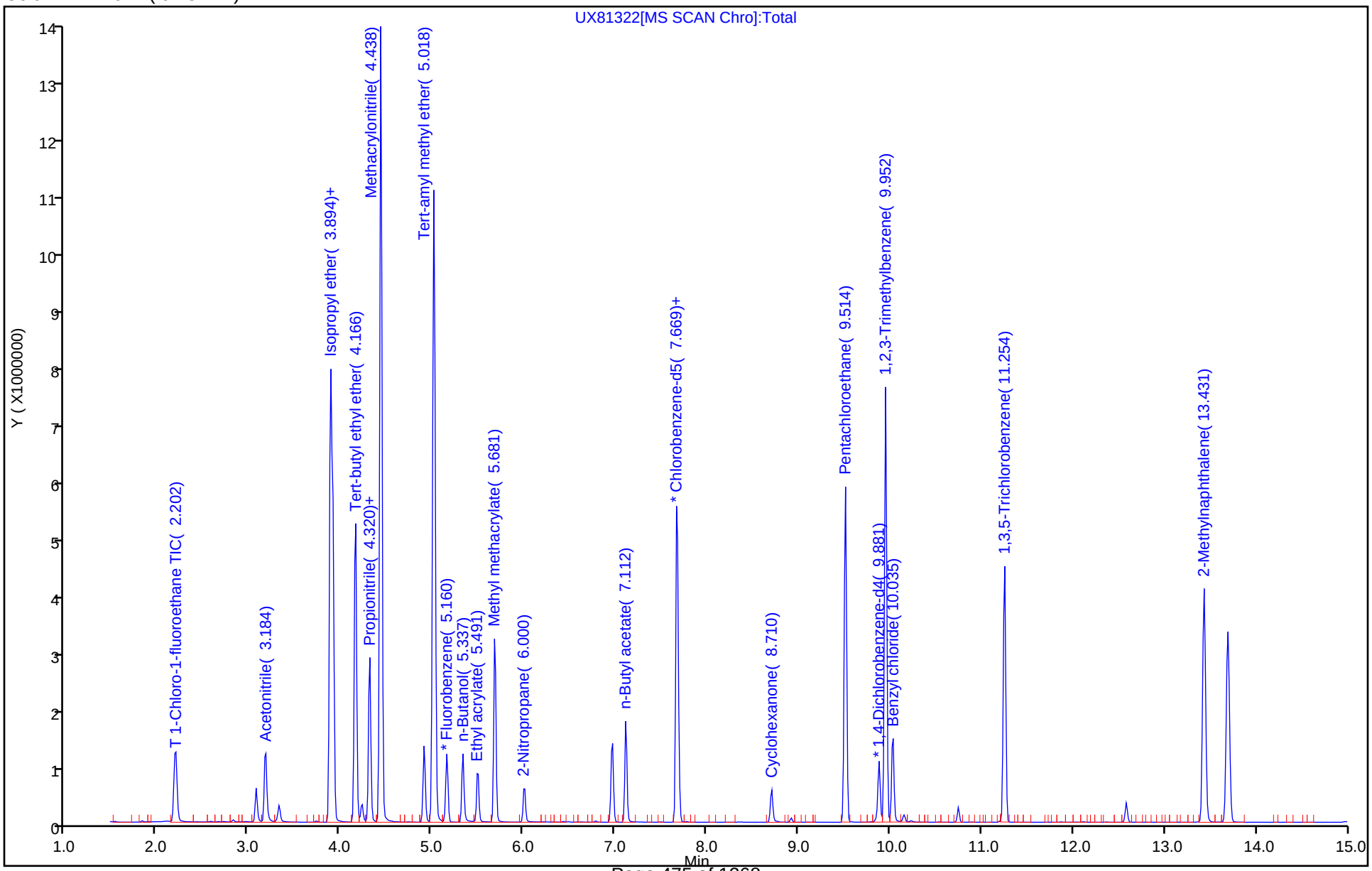
Report Date: 01-Dec-2018 02:23:14 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81322.D

Injection Date:	30-Nov-2018 07:16:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STDA9 L9			Worklist Smp#:	12
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81323.D
Lims ID: STDA9 L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 30-Nov-2018 07:38:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0082416-013
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub65

Method: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 01-Dec-2018 02:23:15 Calib Date: 30-Nov-2018 10:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: latat Date: 30-Nov-2018 22:58:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.157	5.157	0.000	98	836413	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.689	7.689	0.000	96	554105	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.879	9.878	0.001	94	269314	50.0	50.0	
25 Acetonitrile	41	3.181	3.181	0.000	99	1080699	2000.0	1805.9	
36 Isopropyl ether	87	3.891	3.891	0.000	95	772697	200.0	204.1	
37 2-Chloro-1,3-butadiene	53	3.915	3.915	0.000	94	2458699	200.0	214.8	
38 Tert-butyl ethyl ether	59	4.163	4.164	-0.001	96	2917288	200.0	201.3	
42 Ethyl acetate	43	4.317	4.317	0.000	99	1596709	400.0	400.3	
43 Propionitrile	54	4.317	4.317	0.000	73	993083	2000.0	1890.8	
44 Methacrylonitrile	41	4.435	4.436	-0.001	98	5952587	2000.0	1998.3	
55 Tert-amyl methyl ether	73	5.027	5.027	0.000	90	1959070	200.0	208.1	
57 n-Butanol	56	5.335	5.335	0.000	96	428345	5000.0	5849.1	
59 Ethyl acrylate	55	5.500	5.501	-0.001	99	849313	200.0	232.6	
62 Methyl methacrylate	41	5.678	5.690	-0.012	88	1631845	400.0	455.4	
66 2-Nitropropane	41	6.009	5.998	0.011	100	331782	400.0	400.2	
77 n-Butyl acetate	43	7.110	7.122	-0.012	97	1263084	200.0	233.9	
81 1-Chlorohexane	91	7.678	7.678	0.000	81	1102927	200.0	226.6	
91 Cyclohexanone	55	8.707	8.707	0.000	94	211319	2000.0	2280.9	
101 Pentachloroethane	167	9.512	9.512	0.000	0	822330	400.0	398.8	
107 1,2,3-Trimethylbenzene	105	9.950	9.950	0.000	99	3640722	200.0	204.8	
108 Benzyl chloride	126	10.032	10.033	-0.001	99	144556	200.0	205.3	
112 1,3,5-Trichlorobenzene	180	11.251	11.251	0.000	96	1209602	200.0	177.4	
117 2-Methylnaphthalene	142	13.428	13.441	-0.013	93	2333072	400.0	380.8	
T 156 1-Chloro-1-fluoroethane TI	47	2.199	2.198	0.001	0	1584321	200.0	94.7	

Reagents:

VMRA9W_00275	Amount Added:	20.00	Units: uL	
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00134	Amount Added:	0.00	Units:	Run Reagent

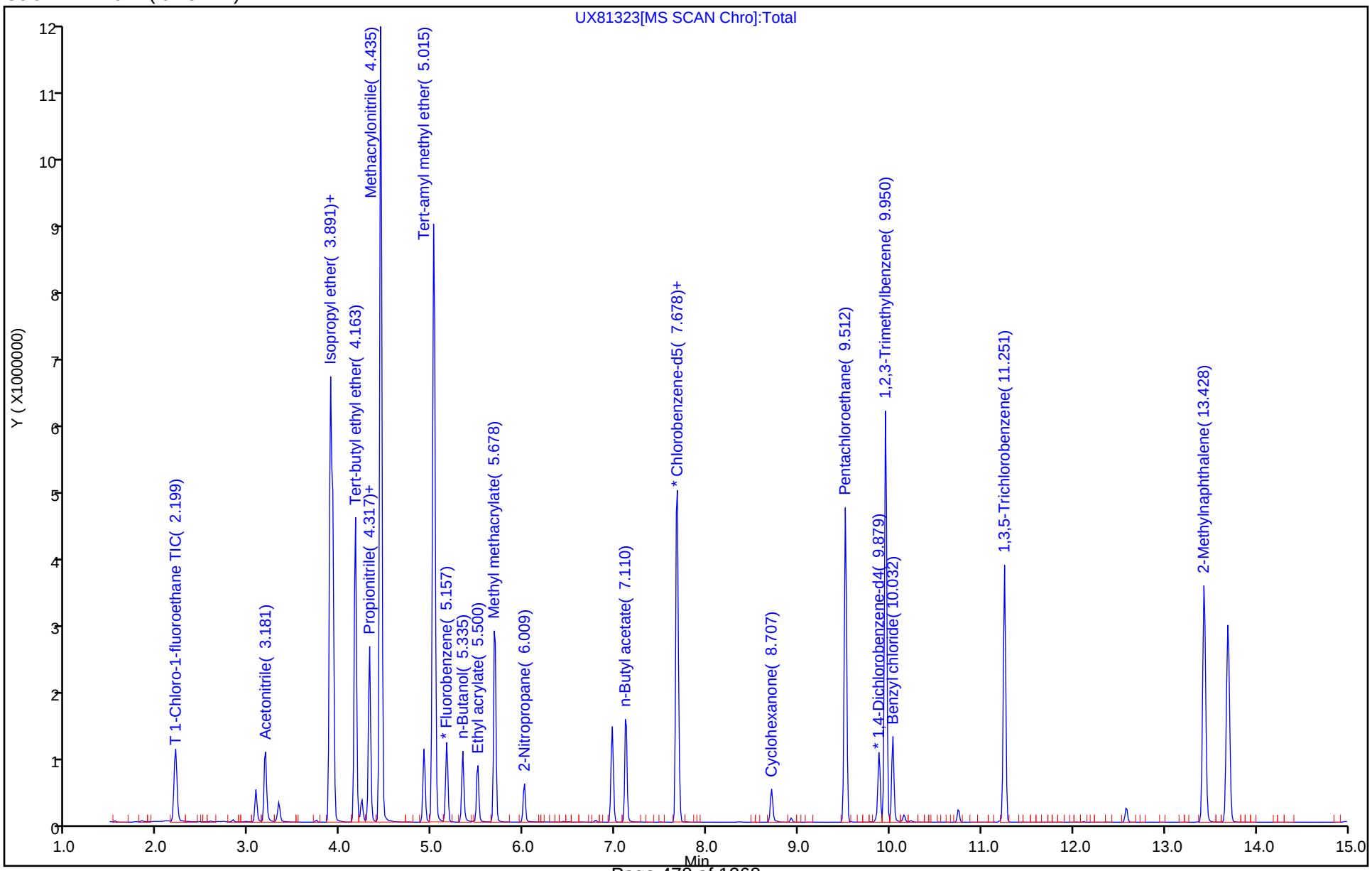
Report Date: 01-Dec-2018 02:23:15 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81323.D

Injection Date:	30-Nov-2018 07:38:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STDA9 L8			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81324.D
Lims ID: STDA9 L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 30-Nov-2018 08:00:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0082416-014
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub65

Method: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 01-Dec-2018 02:23:16 Calib Date: 30-Nov-2018 10:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: latat Date: 30-Nov-2018 23:25:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.159	5.157	0.002	98	785416	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.691	7.689	0.002	95	512103	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.880	9.878	0.002	96	254586	50.0	50.0	
25 Acetonitrile	41	3.171	3.181	-0.010	99	528905	1000.0	941.2	
36 Isopropyl ether	87	3.893	3.891	0.002	94	366997	100.0	103.2	
37 2-Chloro-1,3-butadiene	53	3.917	3.915	0.001	94	1105506	100.0	102.8	
38 Tert-butyl ethyl ether	59	4.165	4.164	0.001	97	1414715	100.0	104.0	
43 Propionitrile	54	4.319	4.317	0.002	78	456055	1000.0	924.7	
42 Ethyl acetate	43	4.319	4.317	0.002	99	674415	200.0	180.0	
44 Methacrylonitrile	41	4.437	4.436	0.001	98	2606121	1000.0	931.7	
55 Tert-amyl methyl ether	73	5.029	5.027	0.002	90	959532	100.0	108.6	
57 n-Butanol	56	5.336	5.335	0.001	93	192593	2500.0	2800.6	
59 Ethyl acrylate	55	5.490	5.501	-0.011	99	343402	100.0	100.2	
62 Methyl methacrylate	41	5.680	5.690	-0.010	88	674095	200.0	200.3	
66 2-Nitropropane	41	6.011	5.998	0.013	98	115986	200.0	198.5	
77 n-Butyl acetate	43	7.111	7.122	-0.011	97	519258	100.0	102.4	
81 1-Chlorohexane	91	7.668	7.678	-0.010	76	464802	100.0	103.3	
91 Cyclohexanone	55	8.709	8.707	0.002	95	92378	1000.0	1078.9	
101 Pentachloroethane	167	9.513	9.512	0.001	0	405387	200.0	209.4	
107 1,2,3-Trimethylbenzene	105	9.951	9.950	0.001	99	1749353	100.0	104.1	
108 Benzyl chloride	126	10.034	10.033	0.001	98	53749	100.0	97.3	
112 1,3,5-Trichlorobenzene	180	11.253	11.251	0.002	96	603796	100.0	93.7	
117 2-Methylnaphthalene	142	13.430	13.441	-0.011	93	1229959	200.0	212.4	
T 156 1-Chloro-1-fluoroethane TI	47	2.201	2.198	0.003	0	761389	100.0	48.5	

Reagents:

VMRA9W_00275	Amount Added:	10.00	Units: uL	
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00134	Amount Added:	0.00	Units:	Run Reagent

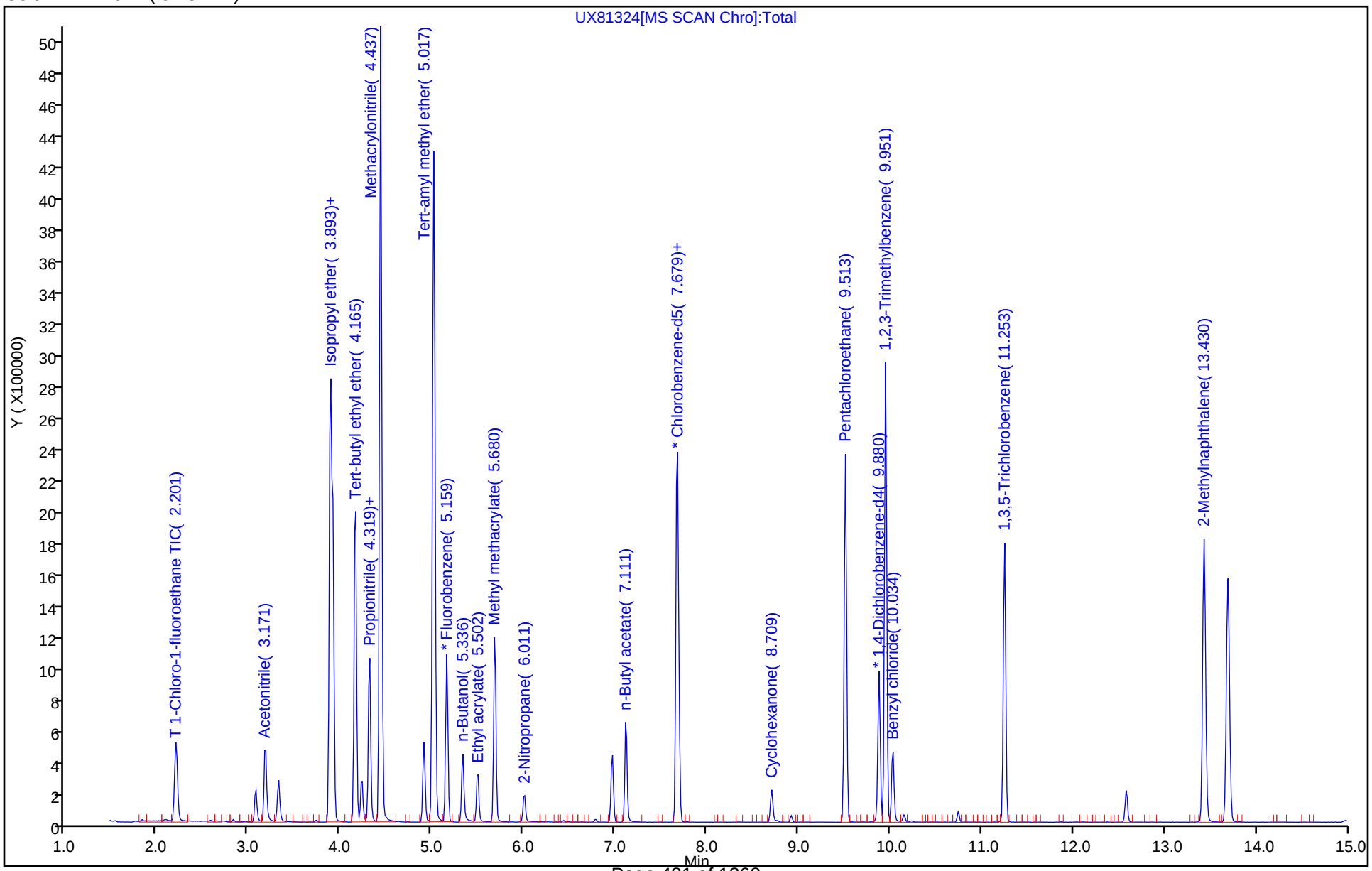
Report Date: 01-Dec-2018 02:23:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81324.D

Injection Date:	30-Nov-2018 08:00:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STDA9 L7			Worklist Smp#:	14
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81325.D
Lims ID: STDA9 L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 30-Nov-2018 08:23:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0082416-015
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub65

Method: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 01-Dec-2018 02:23:17 Calib Date: 30-Nov-2018 10:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: latat Date: 30-Nov-2018 23:27:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.157	5.157	0.000	98	804643	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.689	7.689	0.000	95	528205	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.878	9.878	0.000	95	251639	50.0	50.0	
25 Acetonitrile	41	3.180	3.181	-0.001	99	264533	500.0	459.5	
36 Isopropyl ether	87	3.890	3.891	-0.001	94	182224	50.0	50.0	
37 2-Chloro-1,3-butadiene	53	3.914	3.915	-0.001	94	552939	50.0	50.2	
38 Tert-butyl ethyl ether	59	4.163	4.164	-0.001	96	694739	50.0	49.8	
42 Ethyl acetate	43	4.316	4.317	-0.001	99	353926	100.0	92.2	
43 Propionitrile	54	4.316	4.317	-0.001	76	234764	500.0	464.6	
44 Methacrylonitrile	41	4.435	4.436	-0.001	98	1355765	500.0	473.1	
55 Tert-amyl methyl ether	73	5.026	5.027	-0.001	89	459333	50.0	50.7	
57 n-Butanol	56	5.334	5.335	-0.001	93	95019	1250.0	1348.7	
59 Ethyl acrylate	55	5.500	5.501	-0.001	99	178012	50.0	50.7	
62 Methyl methacrylate	41	5.677	5.690	-0.013	88	348045	100.0	101.0	
66 2-Nitropropane	41	6.009	5.998	0.011	99	52002	100.0	101.8	
77 n-Butyl acetate	43	7.121	7.122	-0.001	97	260212	50.0	50.1	
81 1-Chlorohexane	91	7.677	7.678	-0.001	81	228804	50.0	49.3	
91 Cyclohexanone	55	8.706	8.707	-0.001	92	41847	500.0	473.8	
101 Pentachloroethane	167	9.511	9.512	-0.001	0	182005	100.0	96.8	
107 1,2,3-Trimethylbenzene	105	9.949	9.950	-0.001	99	873600	50.0	52.6	
108 Benzyl chloride	126	10.032	10.033	-0.001	96	20910	50.0	46.2	
112 1,3,5-Trichlorobenzene	180	11.250	11.251	-0.001	95	300329	50.0	47.1	
117 2-Methylnaphthalene	142	13.428	13.441	-0.013	93	605698	100.0	105.8	
T 156 1-Chloro-1-fluoroethane TI	47	2.198	2.198	0.000	0	378859	50.0	23.5	

Reagents:

VMRA9W_00275	Amount Added:	5.00	Units: uL	
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00134	Amount Added:	0.00	Units:	Run Reagent

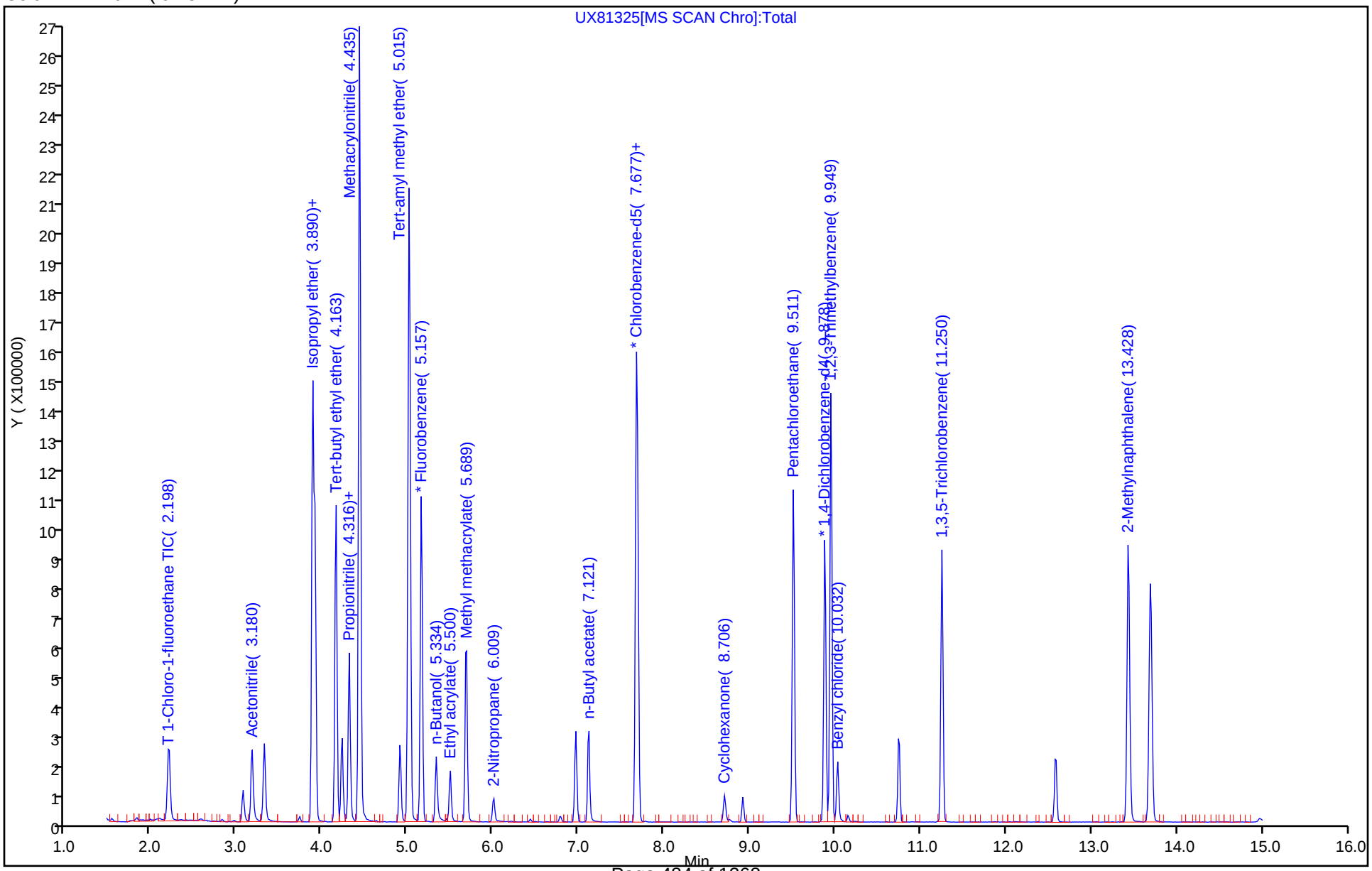
Report Date: 01-Dec-2018 02:23:17 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81325.D

Injection Date:	30-Nov-2018 08:23:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STDA9 L6			Worklist Smp#:	15
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81326.D
Lims ID: STDA9 L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 30-Nov-2018 08:45:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0082416-016
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub65

Method: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 01-Dec-2018 02:23:18 Calib Date: 30-Nov-2018 10:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: latat Date: 30-Nov-2018 23:51:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.158	5.158	0.000	98	790029	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.690	7.690	0.000	96	517773	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.879	9.879	0.000	93	248568	50.0	50.0	
25 Acetonitrile	41	3.181	3.181	0.000	99	111839	200.0	197.9	
36 Isopropyl ether	87	3.891	3.891	0.000	93	72081	20.0	20.2	
37 2-Chloro-1,3-butadiene	53	3.915	3.915	0.000	94	218000	20.0	20.2	
38 Tert-butyl ethyl ether	59	4.164	4.164	0.000	95	272705	20.0	19.9	
43 Propionitrile	54	4.317	4.317	0.000	80	96247	200.0	194.0	
42 Ethyl acetate	43	4.317	4.317	0.000	99	147407	40.0	39.1	
44 Methacrylonitrile	41	4.436	4.436	0.000	98	556135	200.0	197.7	
55 Tert-amyl methyl ether	73	5.027	5.027	0.000	87	178498	20.0	20.1	
57 n-Butanol	56	5.335	5.335	0.000	88	31043	500.0	448.8	
59 Ethyl acrylate	55	5.501	5.501	0.000	98	66288	20.0	19.2	
62 Methyl methacrylate	41	5.690	5.690	0.000	88	132047	40.0	39.0	
66 2-Nitropropane	41	5.998	5.998	0.000	93	20877	40.0	44.3	
77 n-Butyl acetate	43	7.122	7.122	0.000	96	89111	20.0	17.5	
81 1-Chlorohexane	91	7.678	7.678	0.000	74	86918	20.0	19.1	
91 Cyclohexanone	55	8.707	8.707	0.000	90	14736	200.0	170.2	
101 Pentachloroethane	167	9.512	9.512	0.000	0	57367	40.0	33.0	
107 1,2,3-Trimethylbenzene	105	9.950	9.950	0.000	99	338551	20.0	20.6	
108 Benzyl chloride	126	10.033	10.033	0.000	94	6069	20.0	20.2	
112 1,3,5-Trichlorobenzene	180	11.251	11.251	0.000	95	128969	20.0	20.5	
117 2-Methylnaphthalene	142	13.441	13.441	0.000	93	237895	40.0	42.1	
T 156 1-Chloro-1-fluoroethane TI	47	2.199	2.198	0.001	0	153533	20.0	9.72	

Reagents:

VMRA9W_00275	Amount Added:	2.00	Units: uL	
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00134	Amount Added:	0.00	Units:	Run Reagent

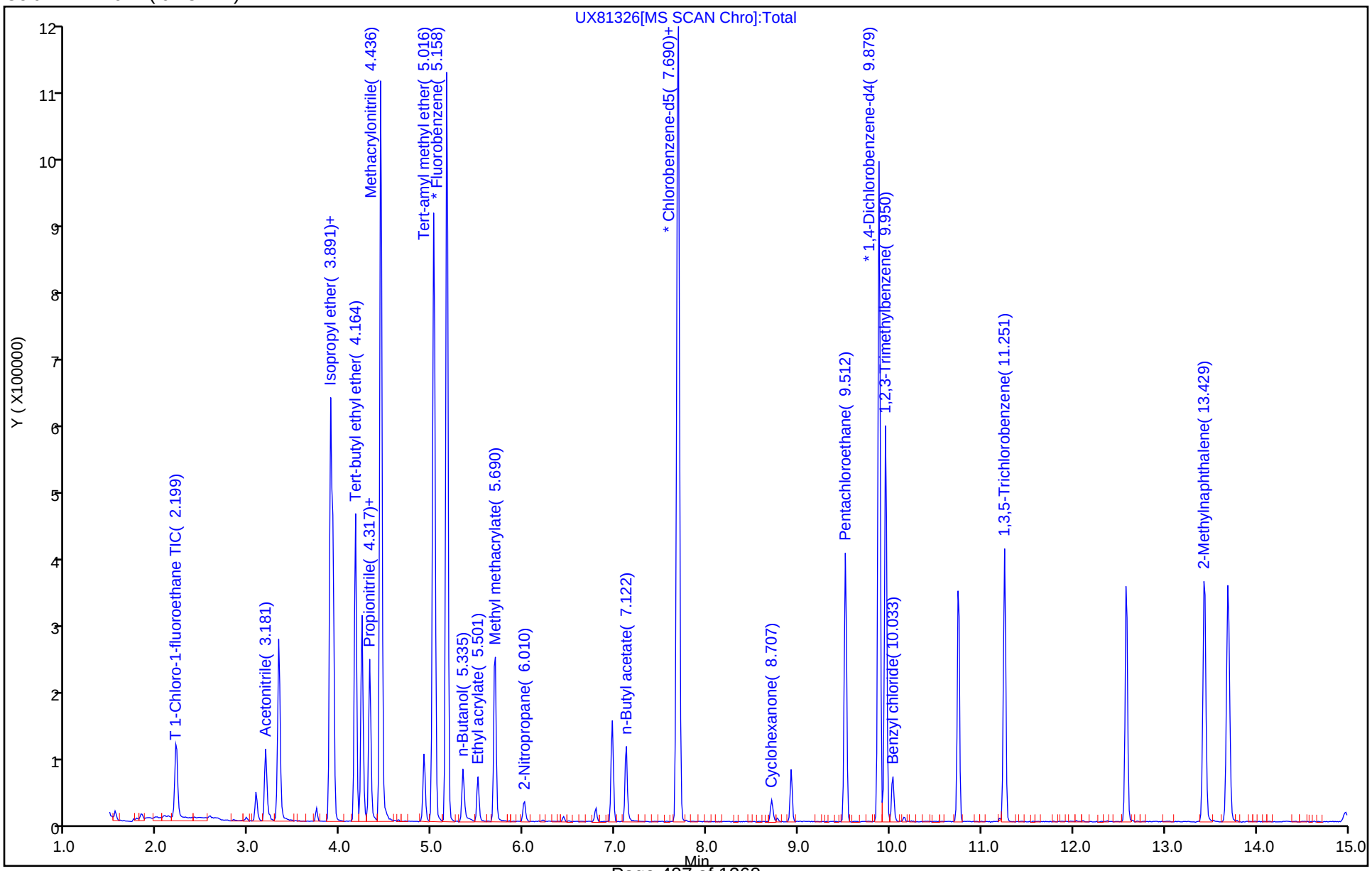
Report Date: 01-Dec-2018 02:23:19 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81326.D

Injection Date:	30-Nov-2018 08:45:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STDA9 L5			Worklist Smp#:	16
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81327.D
Lims ID: STDA9 L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 30-Nov-2018 09:08:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0082416-017
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub65

Method: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 01-Dec-2018 02:23:19 Calib Date: 30-Nov-2018 10:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: latat Date: 30-Nov-2018 23:51:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.157	5.158	-0.001	98	726965	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.689	7.690	-0.001	96	479856	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.878	9.879	-0.001	94	239878	50.0	50.0	
25 Acetonitrile	41	3.181	3.181	0.000	99	56990	100.0	109.6	
36 Isopropyl ether	87	3.891	3.891	0.000	93	33385	10.0	10.1	
37 2-Chloro-1,3-butadiene	53	3.915	3.915	0.000	94	97706	10.0	9.82	
38 Tert-butyl ethyl ether	59	4.163	4.164	-0.001	95	127064	10.0	10.1	
42 Ethyl acetate	43	4.317	4.317	0.000	99	70627	20.0	20.4	
43 Propionitrile	54	4.317	4.317	0.000	79	46836	100.0	102.6	
44 Methacrylonitrile	41	4.435	4.436	-0.001	99	263838	100.0	101.9	
55 Tert-amyl methyl ether	73	5.027	5.027	0.000	91	85152	10.0	10.4	
57 n-Butanol	56	5.335	5.335	0.000	88	15168	250.0	238.3	
59 Ethyl acrylate	55	5.500	5.501	-0.001	98	30994	10.0	9.77	
62 Methyl methacrylate	41	5.690	5.690	0.000	87	60710	20.0	19.5	
66 2-Nitropropane	41	6.009	5.998	0.011	90	8294	20.0	17.4	
77 n-Butyl acetate	43	7.121	7.122	-0.001	95	42684	10.0	9.10	
81 1-Chlorohexane	91	7.678	7.678	0.000	75	38265	10.0	9.08	
91 Cyclohexanone	55	8.707	8.707	0.000	88	7769	100.0	96.8	
101 Pentachloroethane	167	9.512	9.512	0.000	0	24861	20.0	16.5	
107 1,2,3-Trimethylbenzene	105	9.949	9.950	-0.001	98	147174	10.0	9.30	
108 Benzyl chloride	126	10.032	10.033	-0.001	94	2441	10.0	13.6	
112 1,3,5-Trichlorobenzene	180	11.251	11.251	0.000	93	57694	10.0	9.50	
117 2-Methylnaphthalene	142	13.440	13.441	-0.001	93	101194	20.0	18.5	
T 156 1-Chloro-1-fluoroethane TI	47	2.199	2.198	0.001	0	79721	10.0	5.48	

Reagents:

VMRA9W_00275	Amount Added:	1.00	Units: uL	
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00134	Amount Added:	0.00	Units:	Run Reagent

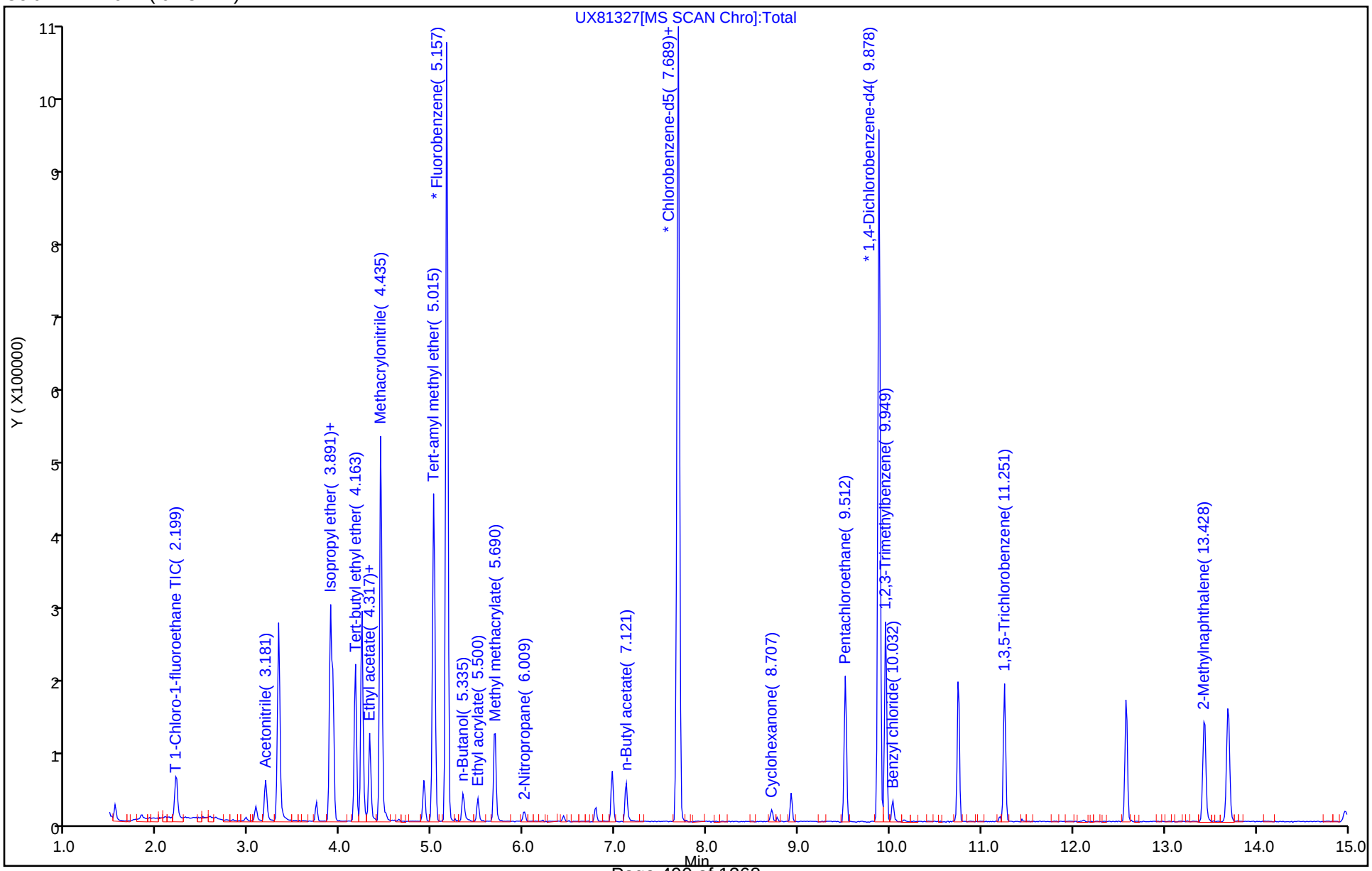
Report Date: 01-Dec-2018 02:23:20 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81327.D

Injection Date:	30-Nov-2018 09:08:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STDA9 L4			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81328.D
Lims ID: STDA9 L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Nov-2018 09:30:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0082416-018
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub65

Method: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 01-Dec-2018 02:23:20 Calib Date: 30-Nov-2018 10:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: latat Date: 30-Nov-2018 23:52:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.157	5.158	-0.001	98	730783	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.689	7.690	-0.001	96	495184	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.878	9.879	-0.001	94	236687	50.0	50.0	
25 Acetonitrile	41	3.181	3.181	0.000	98	33544	50.0	64.2	
36 Isopropyl ether	87	3.891	3.891	0.000	94	17391	5.00	5.26	
37 2-Chloro-1,3-butadiene	53	3.914	3.915	-0.001	94	53891	5.00	5.39	
38 Tert-butyl ethyl ether	59	4.163	4.164	-0.001	93	71280	5.00	5.63	
43 Propionitrile	54	4.317	4.317	0.000	84	28900	50.0	63.0	
42 Ethyl acetate	43	4.317	4.317	0.000	98	41914	10.0	12.0	
44 Methacrylonitrile	41	4.435	4.436	-0.001	98	152577	50.0	58.6	
55 Tert-amyl methyl ether	73	5.027	5.027	0.000	90	46421	5.00	5.64	
57 n-Butanol	56	5.334	5.335	-0.001	84	7539	125.0	117.8	
59 Ethyl acrylate	55	5.500	5.501	-0.001	96	16289	5.00	5.11	
62 Methyl methacrylate	41	5.689	5.690	-0.001	87	34474	10.0	11.0	
66 2-Nitropropane	41	6.009	5.998	0.011	91	4628	10.0	7.53	
77 n-Butyl acetate	43	7.121	7.122	-0.001	94	24087	5.00	5.11	
81 1-Chlorohexane	91	7.677	7.678	-0.001	74	20911	5.00	4.81	
91 Cyclohexanone	55	8.707	8.707	0.000	82	3813	50.0	46.1	a
101 Pentachloroethane	167	9.511	9.512	-0.001	0	13315	10.0	10.4	
107 1,2,3-Trimethylbenzene	105	9.949	9.950	-0.001	98	81944	5.00	5.25	
108 Benzyl chloride	126	10.032	10.033	-0.001	94	1767	5.00	12.4	
112 1,3,5-Trichlorobenzene	180	11.251	11.251	0.000	95	34038	5.00	5.68	
117 2-Methylnaphthalene	142	13.440	13.441	-0.001	91	44349	10.0	8.24	
T 156 1-Chloro-1-fluoroethane TI	47	2.198	2.198	0.000	0	46331	5.00	3.17	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

VMRA9W_00275	Amount Added:	0.50	Units: uL	
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00134	Amount Added:	0.00	Units:	Run Reagent

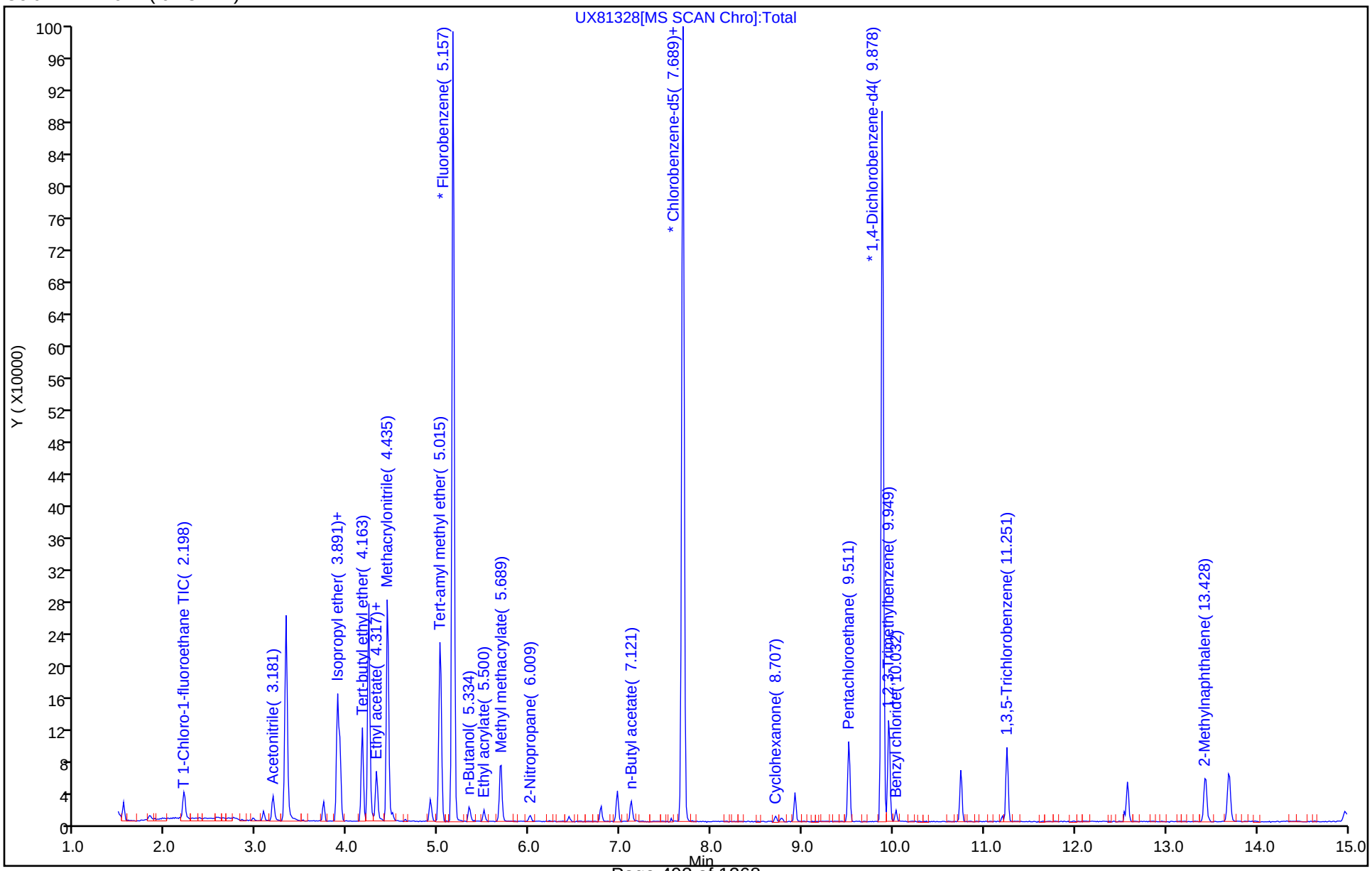
Report Date: 01-Dec-2018 02:23:21 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81328.D

Injection Date:	30-Nov-2018 09:30:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STDA9 L3			Worklist Smp#:	18
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

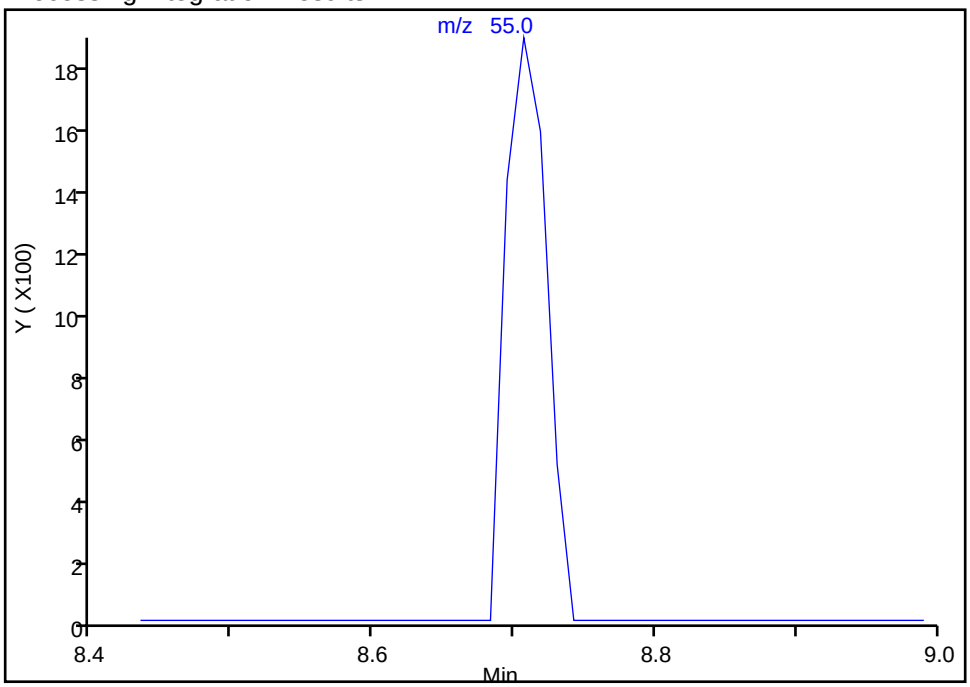
Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81328.D
Injection Date: 30-Nov-2018 09:30:30 Instrument ID: A3UX8
Lims ID: STDA9 L3
Client ID:
Operator ID: 402279 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

91 Cyclohexanone, CAS: 108-94-1

Signal: 1

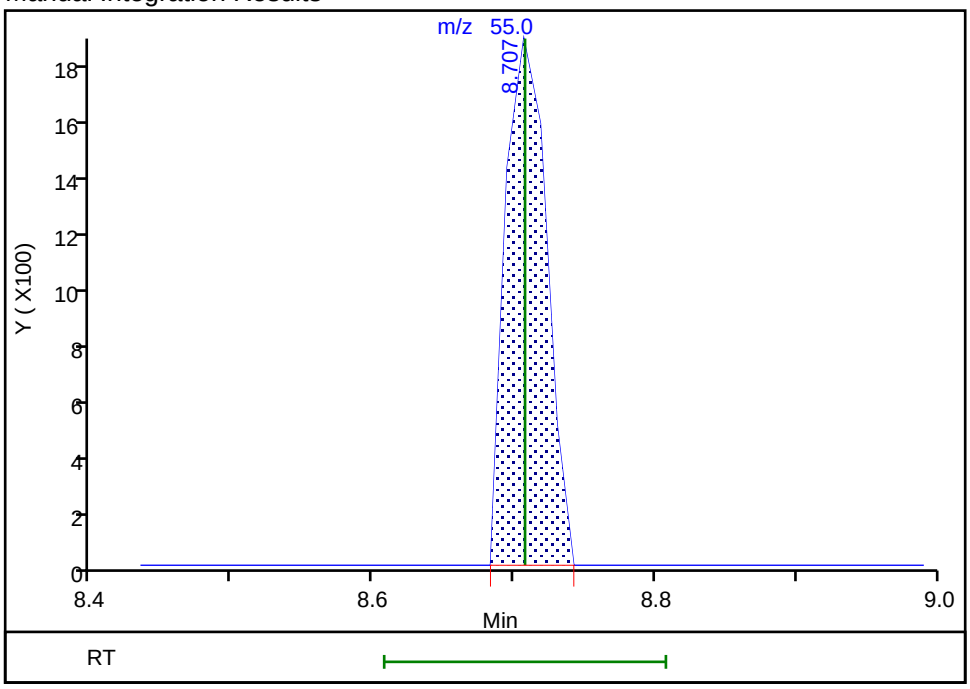
Processing Integration Results

Not Detected
Expected RT: 8.71



Manual Integration Results

RT: 8.71
Area: 3813
Amount: 46.053741
Amount Units: ug/l



Reviewer: latat, 30-Nov-2018 23:52:12
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81329.D
Lims ID: STDA9 L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 30-Nov-2018 09:52:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0082416-019
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub65

Method: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 01-Dec-2018 02:23:21 Calib Date: 30-Nov-2018 10:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: latat Date: 30-Nov-2018 23:53:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.157	5.158	-0.001	98	771379	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.689	7.690	-0.001	95	506897	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.878	9.879	-0.001	93	237675	50.0	50.0	
25 Acetonitrile	41	3.181	3.181	0.000	99	10991	20.0	19.9	
36 Isopropyl ether	87	3.891	3.891	0.000	91	6825	2.00	1.95	
37 2-Chloro-1,3-butadiene	53	3.915	3.915	0.000	93	17344	2.00	1.64	
38 Tert-butyl ethyl ether	59	4.163	4.164	-0.001	93	23218	2.00	1.74	
42 Ethyl acetate	43	4.317	4.317	0.000	97	16061	4.00	4.37	
43 Propionitrile	54	4.317	4.317	0.000	74	8884	20.0	18.3	
44 Methacrylonitrile	41	4.435	4.436	-0.001	98	48364	20.0	17.6	
55 Tert-amyl methyl ether	73	5.027	5.027	0.000	81	13897	2.00	1.60	
57 n-Butanol	56	5.335	5.335	0.000	78	2575	50.0	38.1	
59 Ethyl acrylate	55	5.500	5.501	-0.001	93	5404	2.00	1.60	
62 Methyl methacrylate	41	5.690	5.690	0.000	87	11105	4.00	3.36	
66 2-Nitropropane	41	6.009	5.998	0.011	69	1301	4.00	-1.99	
77 n-Butyl acetate	43	7.121	7.122	-0.001	94	6516	2.00	1.31	a
81 1-Chlorohexane	91	7.678	7.678	0.000	76	5962	2.00	1.34	
91 Cyclohexanone	55	8.695	8.707	-0.012	1	1149	20.0	13.6	a
101 Pentachloroethane	167	9.523	9.512	0.011	0	3809	4.00	5.17	
107 1,2,3-Trimethylbenzene	105	9.949	9.950	-0.001	98	25657	2.00	1.64	
108 Benzyl chloride	126		10.033				ND	ND	Ua
112 1,3,5-Trichlorobenzene	180	11.251	11.251	0.000	92	11634	2.00	1.93	
117 2-Methylnaphthalene	142	13.428	13.441	-0.013	93	21125	4.00	3.91	
T 156 1-Chloro-1-fluoroethane TI	47	2.211	2.198	0.013	0	13527	2.00	0.8768	a

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags
U - Marked Undetected
a - User Assigned ID

Reagents:

VMRA9W_00275	Amount Added:	0.20	Units: uL	
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00134	Amount Added:	0.00	Units:	Run Reagent

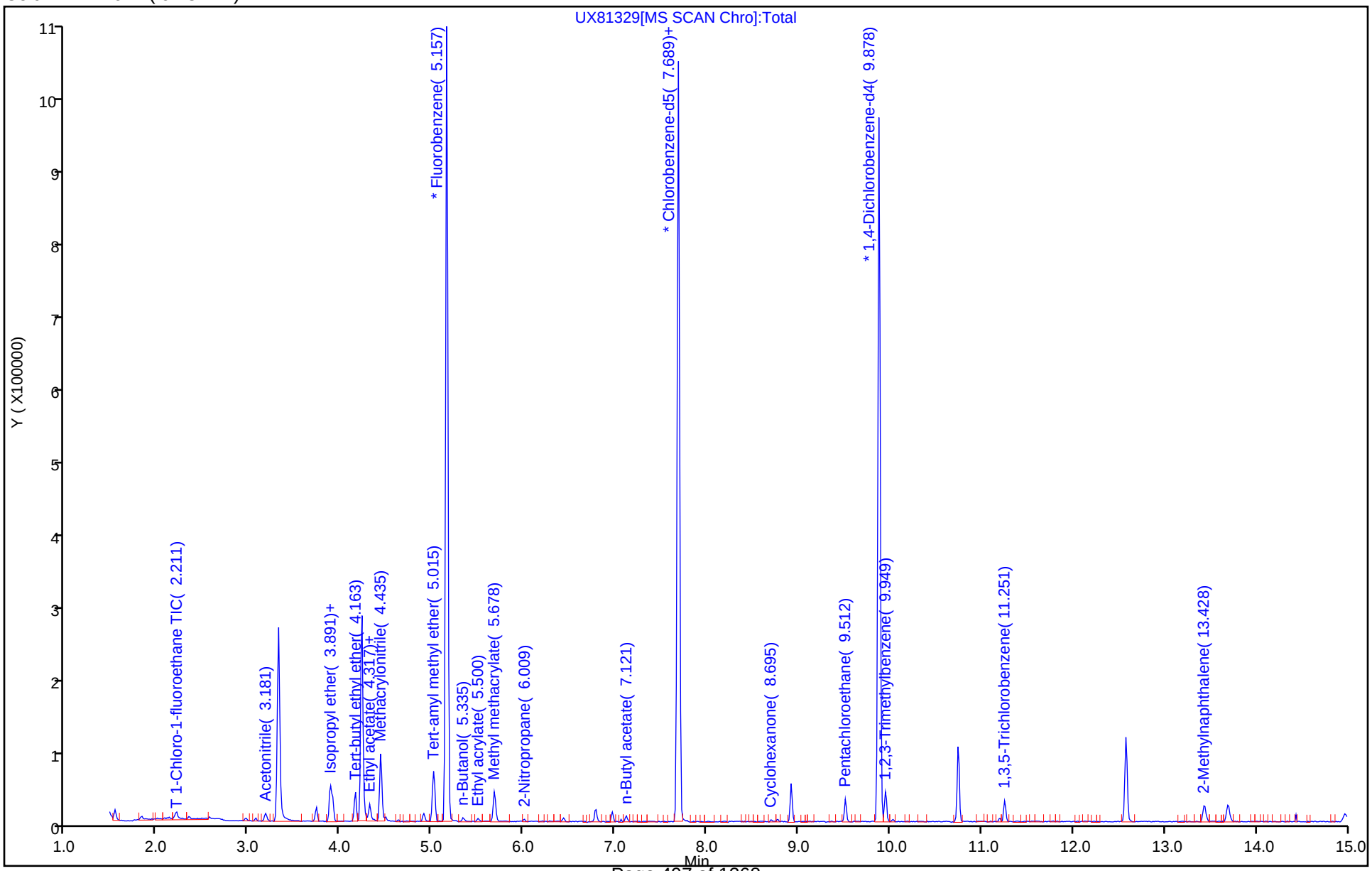
Report Date: 01-Dec-2018 02:23:22 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81329.D

Injection Date:	30-Nov-2018 09:52:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STDA9 L2			Worklist Smp#:	19
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

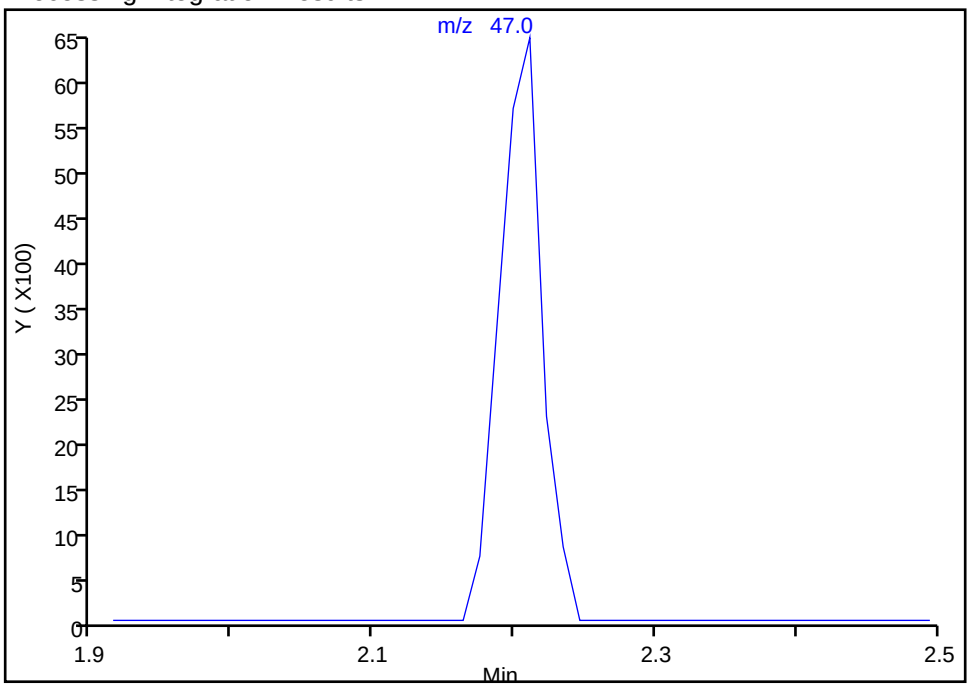
Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81329.D
Injection Date: 30-Nov-2018 09:52:30 Instrument ID: A3UX8
Lims ID: STDA9 L2
Client ID:
Operator ID: 402279 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

T 156 1-Chloro-1-fluoroethane TIC, CAS: 1615-75-4

Signal: 1

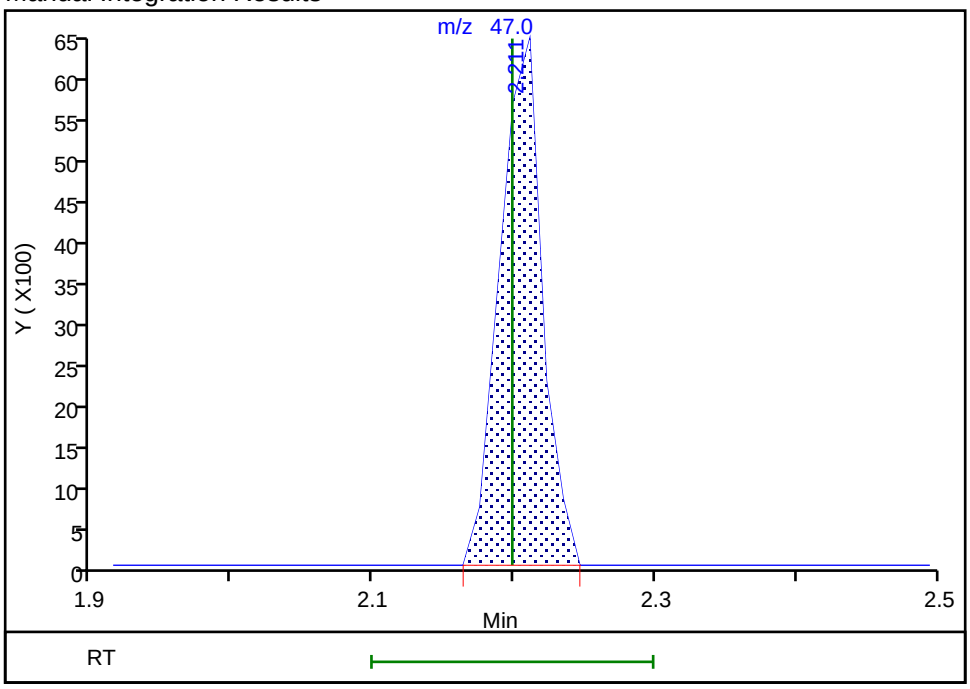
Processing Integration Results

Not Detected
Expected RT: 2.20



Manual Integration Results

RT: 2.21
Area: 13527
Amount: 0.876806
Amount Units: ug/l



Reviewer: latat, 30-Nov-2018 23:53:01
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

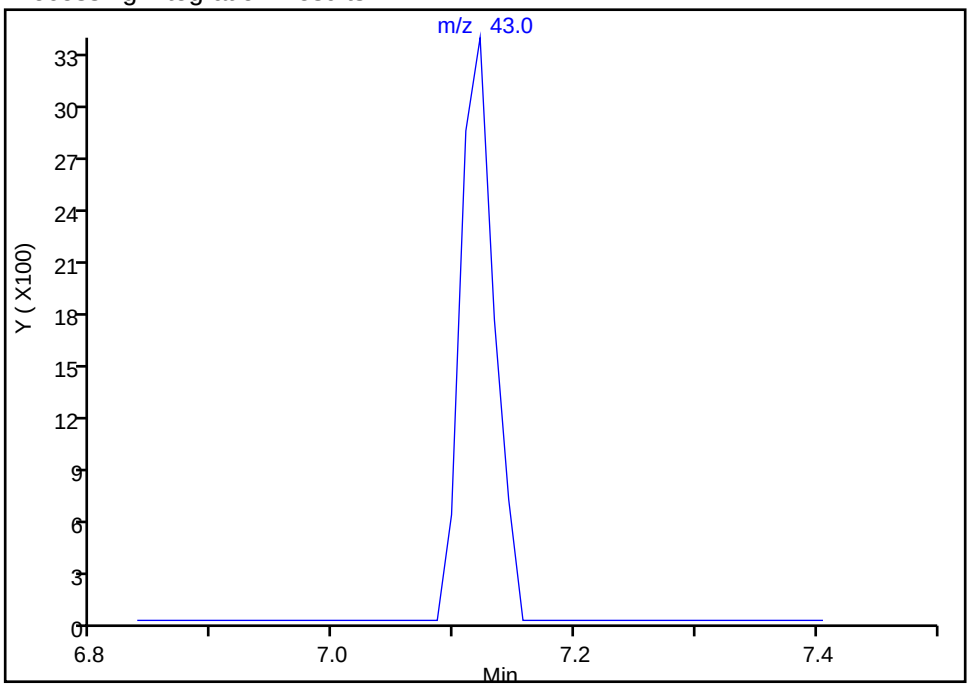
Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81329.D
Injection Date: 30-Nov-2018 09:52:30 Instrument ID: A3UX8
Lims ID: STDA9 L2
Client ID:
Operator ID: 402279 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

77 n-Butyl acetate, CAS: 123-86-4

Signal: 1

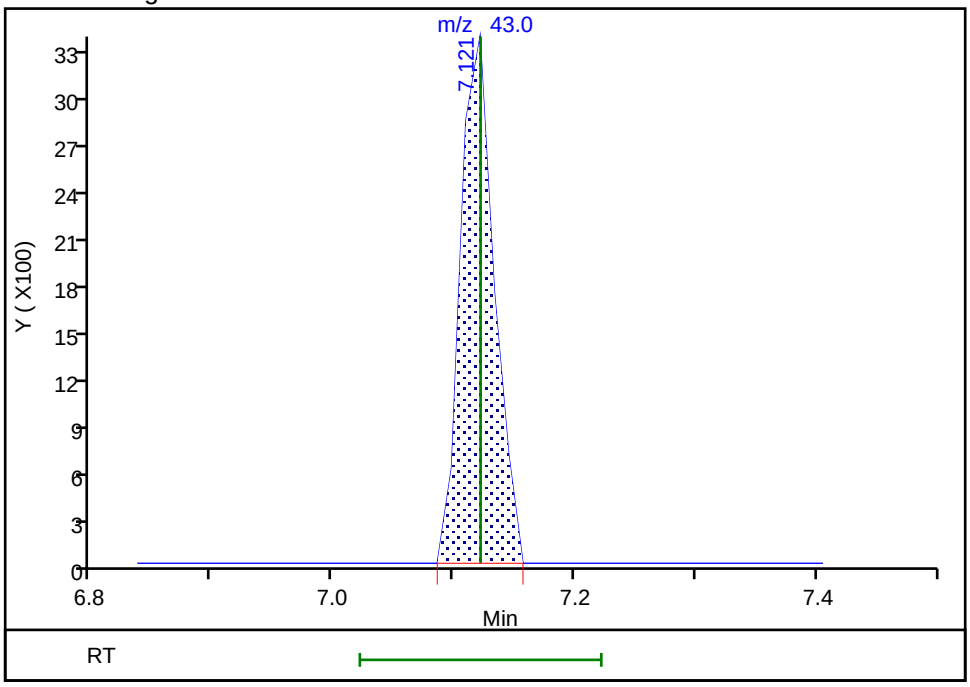
Not Detected
Expected RT: 7.12

Processing Integration Results



Manual Integration Results

RT: 7.12
Area: 6516
Amount: 1.308530
Amount Units: ug/l



Reviewer: latat, 30-Nov-2018 23:52:34
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

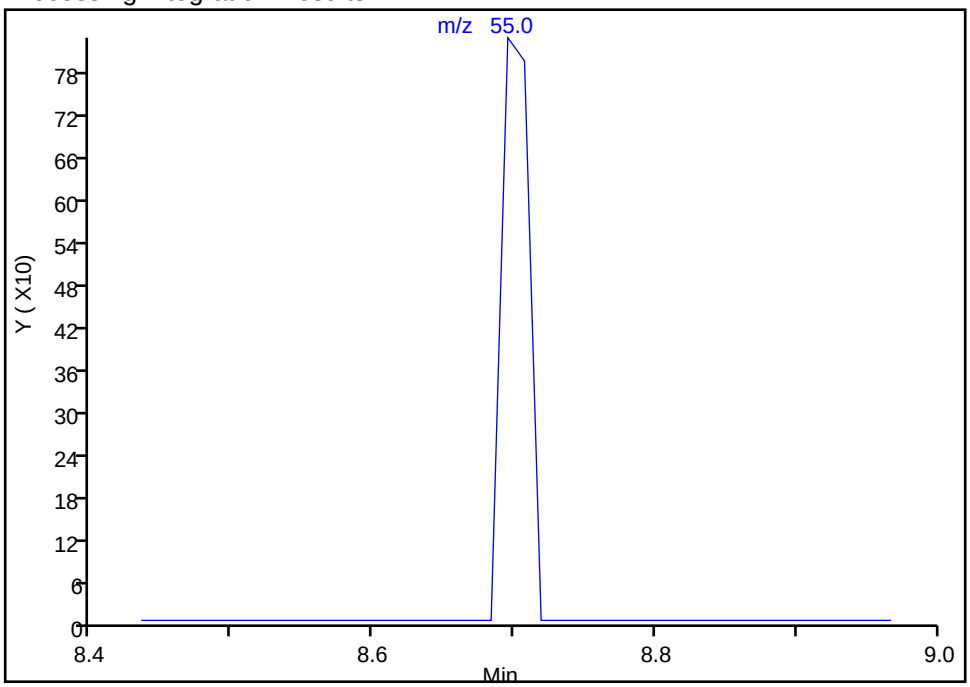
Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81329.D
Injection Date: 30-Nov-2018 09:52:30 Instrument ID: A3UX8
Lims ID: STDA9 L2
Client ID:
Operator ID: 402279 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

91 Cyclohexanone, CAS: 108-94-1

Signal: 1

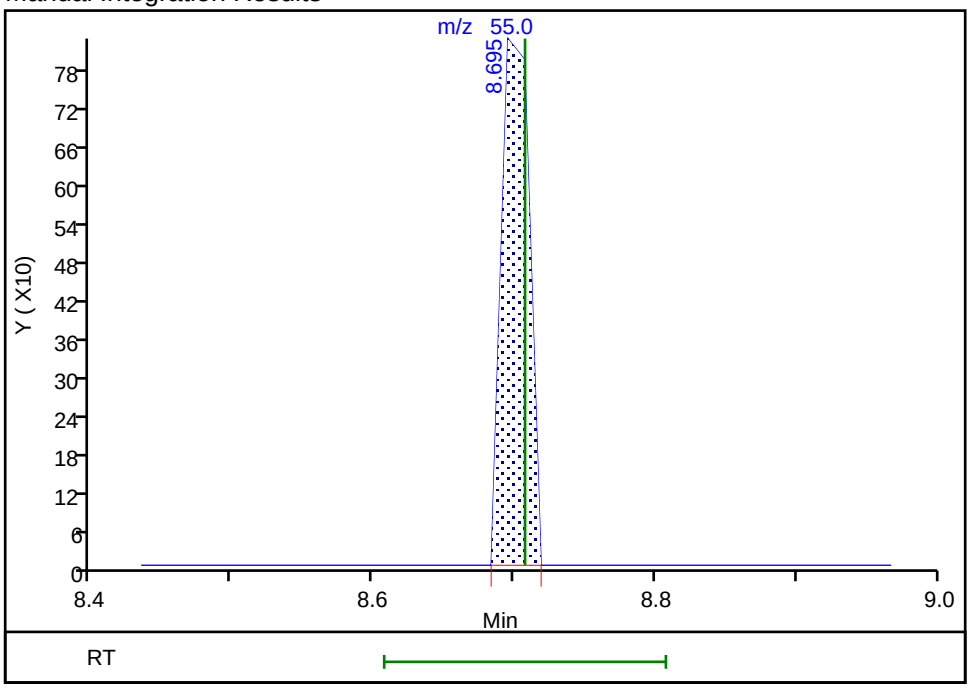
Not Detected
Expected RT: 8.71

Processing Integration Results



Manual Integration Results

RT: 8.70
Area: 1149
Amount: 13.557044
Amount Units: ug/l



Reviewer: latat, 30-Nov-2018 23:52:41
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D
Lims ID: STDA9 L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 30-Nov-2018 10:15:30 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0082416-020
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub65

Method: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 01-Dec-2018 02:23:23 Calib Date: 30-Nov-2018 10:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: latat Date: 30-Nov-2018 23:54:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.157	5.158	-0.001	98	727898	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.689	7.690	-0.001	96	472763	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.878	9.879	-0.001	93	224895	50.0	50.0	
25 Acetonitrile	41	3.181	3.181	0.000	89	7209	10.0	13.8	
36 Isopropyl ether	87	3.891	3.891	0.000	93	3021	1.00	0.9170	
37 2-Chloro-1,3-butadiene	53	3.915	3.915	0.000	91	9584	1.00	0.9620	
38 Tert-butyl ethyl ether	59	4.163	4.164	-0.001	92	12487	1.00	0.99	
43 Propionitrile	54	4.317	4.317	0.000	71	5206	10.0	11.4	
42 Ethyl acetate	43		4.317				ND	ND	Ua
44 Methacrylonitrile	41	4.435	4.436	-0.001	98	29366	10.0	11.3	
55 Tert-amyl methyl ether	73	5.027	5.027	0.000	51	7288	1.00	0.8898	
57 n-Butanol	56	5.335	5.335	0.000	81	2028	25.0	31.8	
59 Ethyl acrylate	55	5.500	5.501	-0.001	91	3399	1.00	1.07	
62 Methyl methacrylate	41	5.690	5.690	0.000	40	6134	2.00	1.97	a
66 2-Nitropropane	41	6.009	5.998	0.011	8	892	2.00	-2.96	a
77 n-Butyl acetate	43	7.121	7.122	-0.001	90	3656	1.00	0.7780	a
81 1-Chlorohexane	91	7.677	7.678	-0.001	33	4988	1.00	1.20	a
91 Cyclohexanone	55		8.707				ND	ND	
101 Pentachloroethane	167	9.512	9.512	0.000	0	2805	2.00	4.70	
107 1,2,3-Trimethylbenzene	105	9.949	9.950	-0.001	97	15897	1.00	1.07	
108 Benzyl chloride	126		10.033				ND	ND	
112 1,3,5-Trichlorobenzene	180	11.251	11.251	0.000	95	7335	1.00	1.29	
117 2-Methylnaphthalene	142	13.428	13.441	-0.013	86	13036	2.00	2.55	
T 156 1-Chloro-1-fluoroethane TI	47	2.211	2.198	0.013	0	9035	1.00	0.6206	a

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags
U - Marked Undetected
a - User Assigned ID

Reagents:

VMRA9W_00275	Amount Added:	0.10	Units: uL	
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00134	Amount Added:	0.00	Units:	Run Reagent

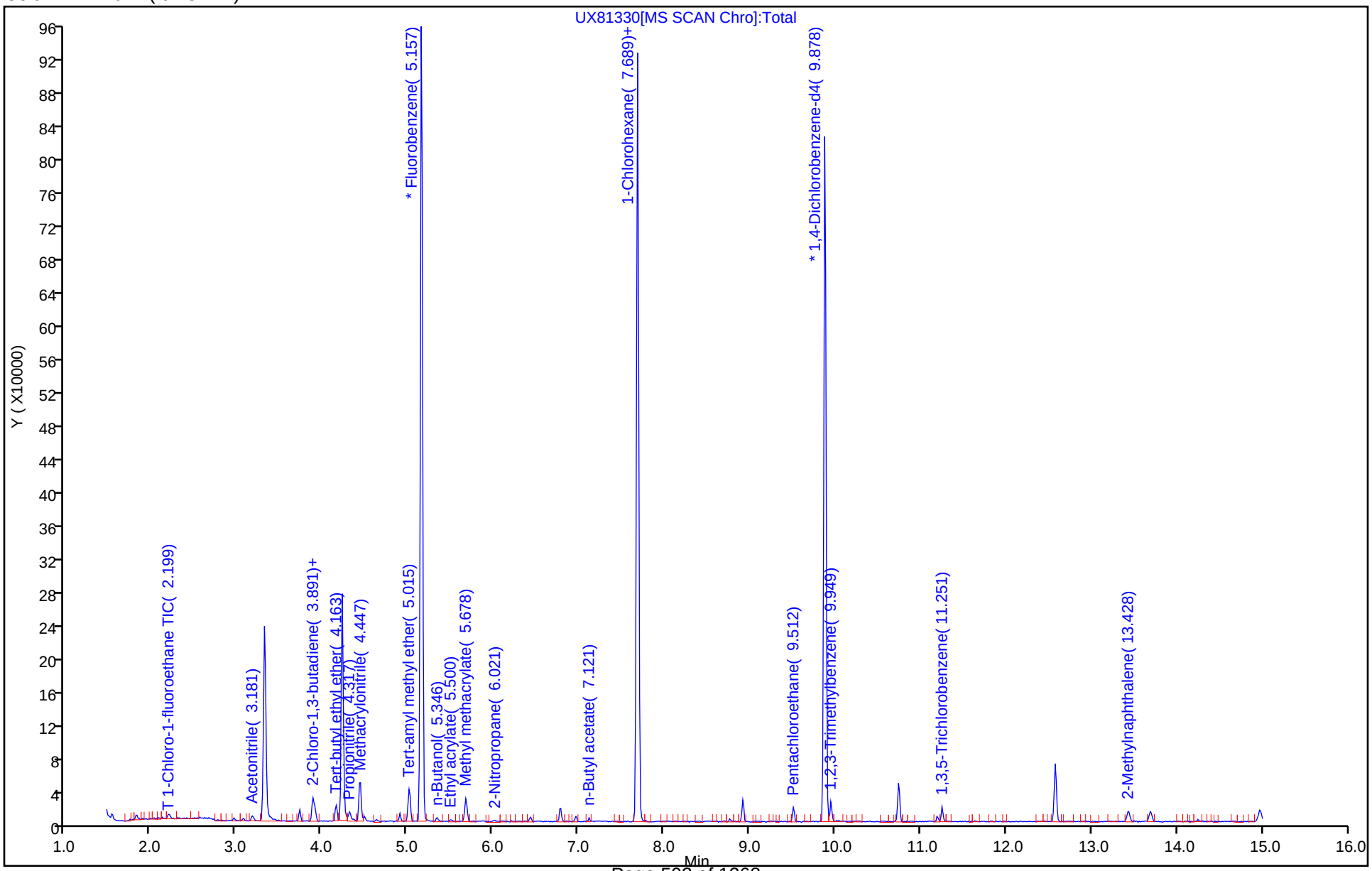
Report Date: 01-Dec-2018 02:23:23 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D

Injection Date:	30-Nov-2018 10:15:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STDA9 L1			Worklist Smp#:	20
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

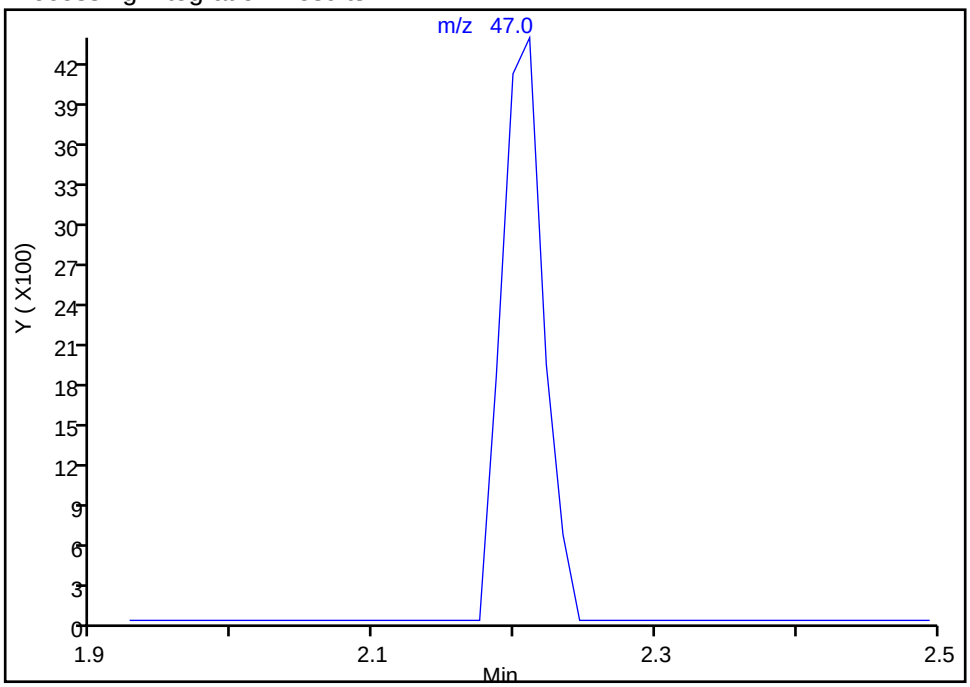
Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D
Injection Date: 30-Nov-2018 10:15:30 Instrument ID: A3UX8
Lims ID: STDA9 L1
Client ID:
Operator ID: 402279 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

T 156 1-Chloro-1-fluoroethane TIC, CAS: 1615-75-4

Signal: 1

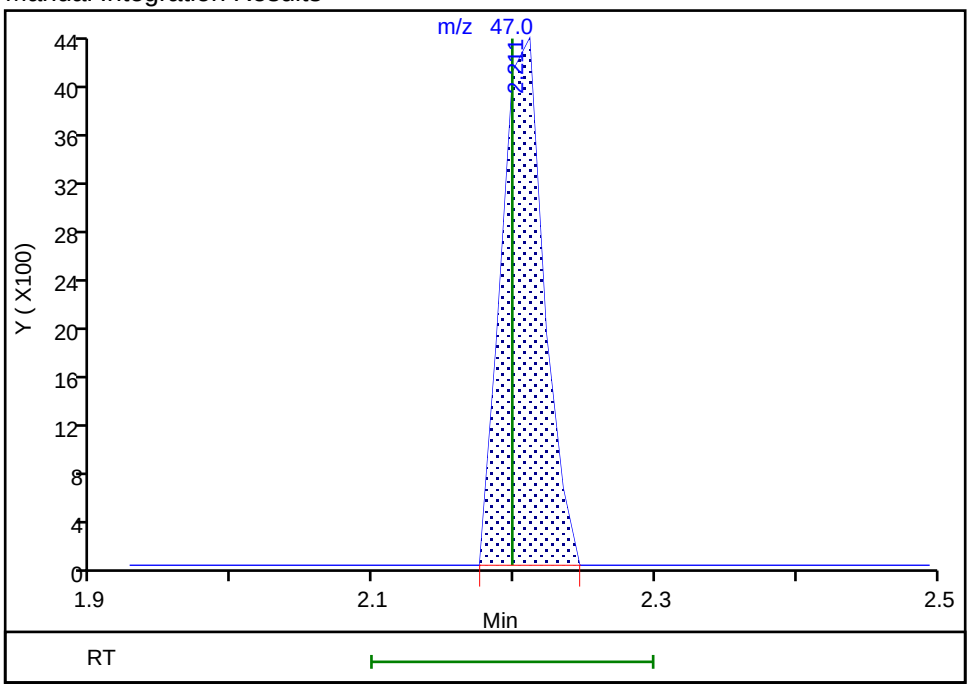
Processing Integration Results

Not Detected
Expected RT: 2.20



Manual Integration Results

RT: 2.21
Area: 9035
Amount: 0.620623
Amount Units: ug/l



Reviewer: latat, 30-Nov-2018 23:54:22
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

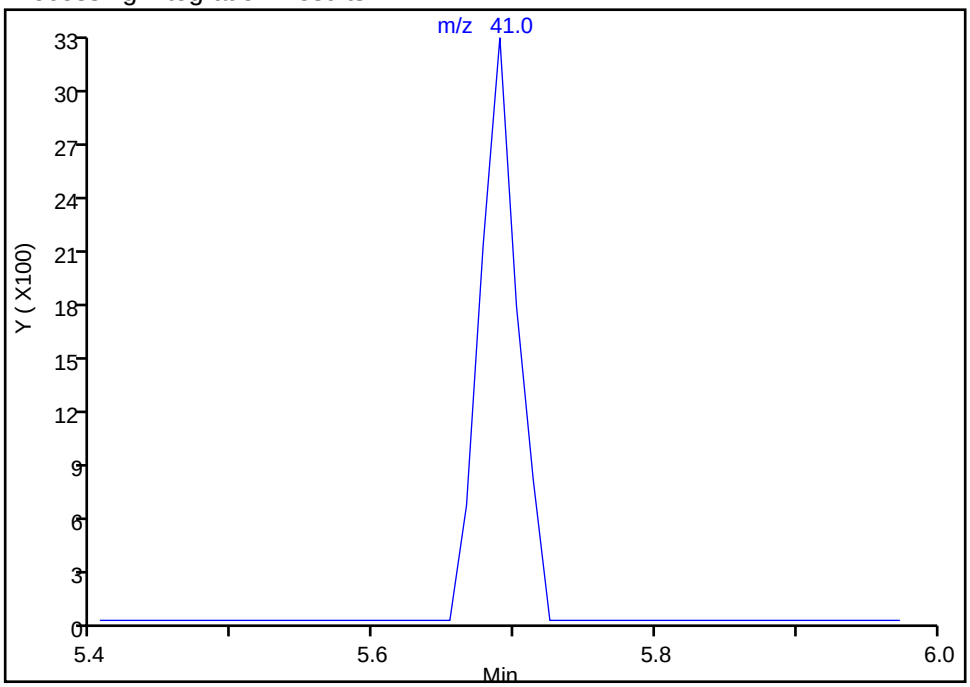
Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D
Injection Date: 30-Nov-2018 10:15:30 Instrument ID: A3UX8
Lims ID: STDA9 L1
Client ID:
Operator ID: 402279 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

62 Methyl methacrylate, CAS: 80-62-6

Signal: 1

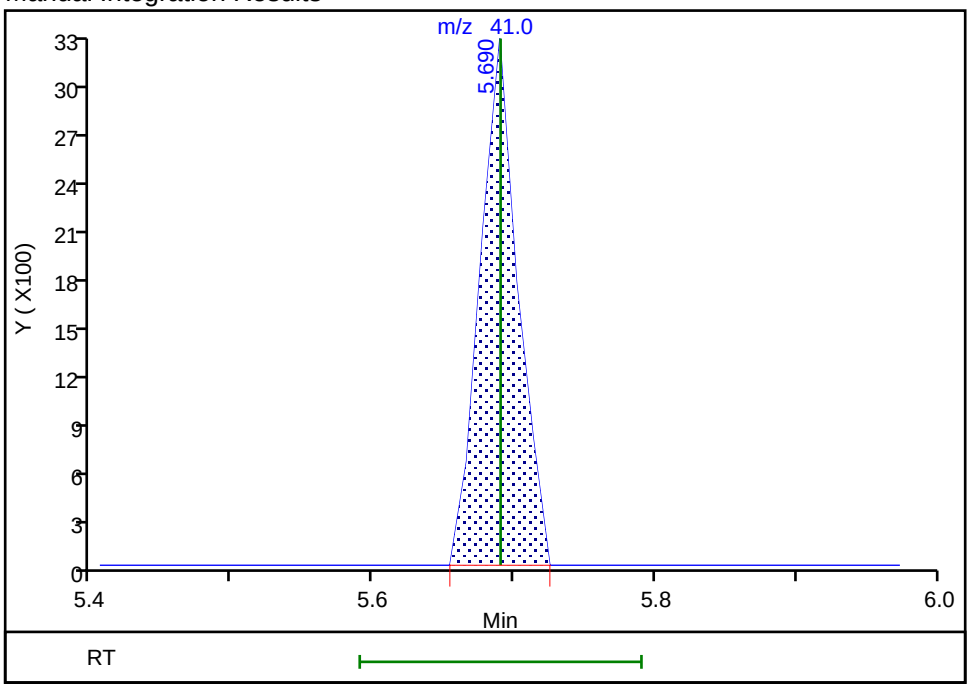
Not Detected
Expected RT: 5.69

Processing Integration Results



Manual Integration Results

RT: 5.69
Area: 6134
Amount: 1.966930
Amount Units: ug/l



Reviewer: latat, 30-Nov-2018 23:53:50
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

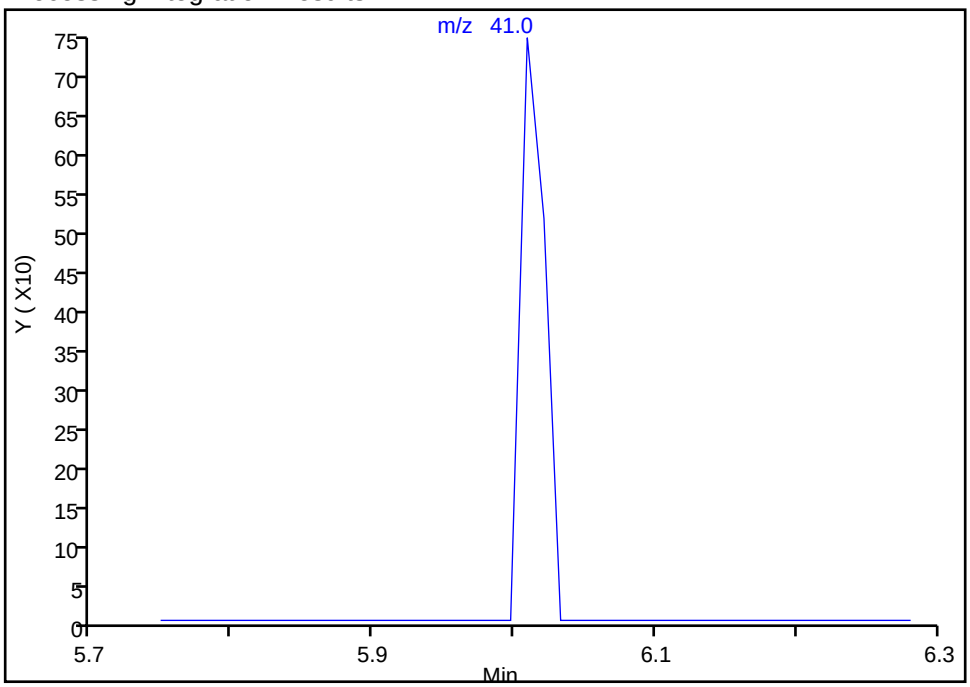
Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D
Injection Date: 30-Nov-2018 10:15:30 Instrument ID: A3UX8
Lims ID: STDA9 L1
Client ID:
Operator ID: 402279 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

66 2-Nitropropane, CAS: 79-46-9

Signal: 1

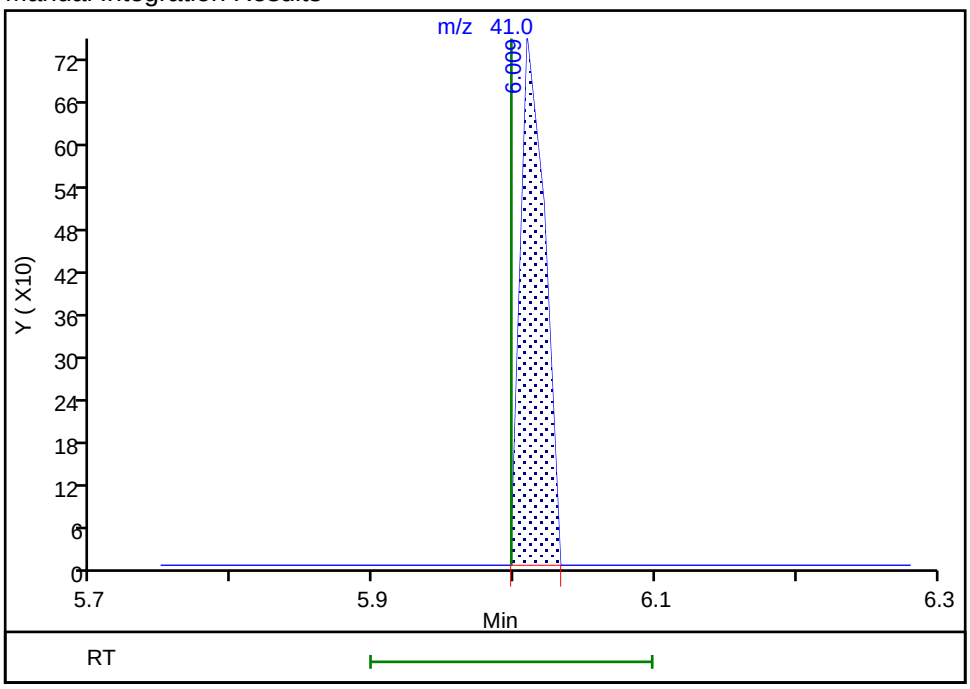
Not Detected
Expected RT: 6.00

Processing Integration Results



Manual Integration Results

RT: 6.01
Area: 892
Amount: -2.963678
Amount Units: ug/l



Reviewer: latat, 30-Nov-2018 23:53:56
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

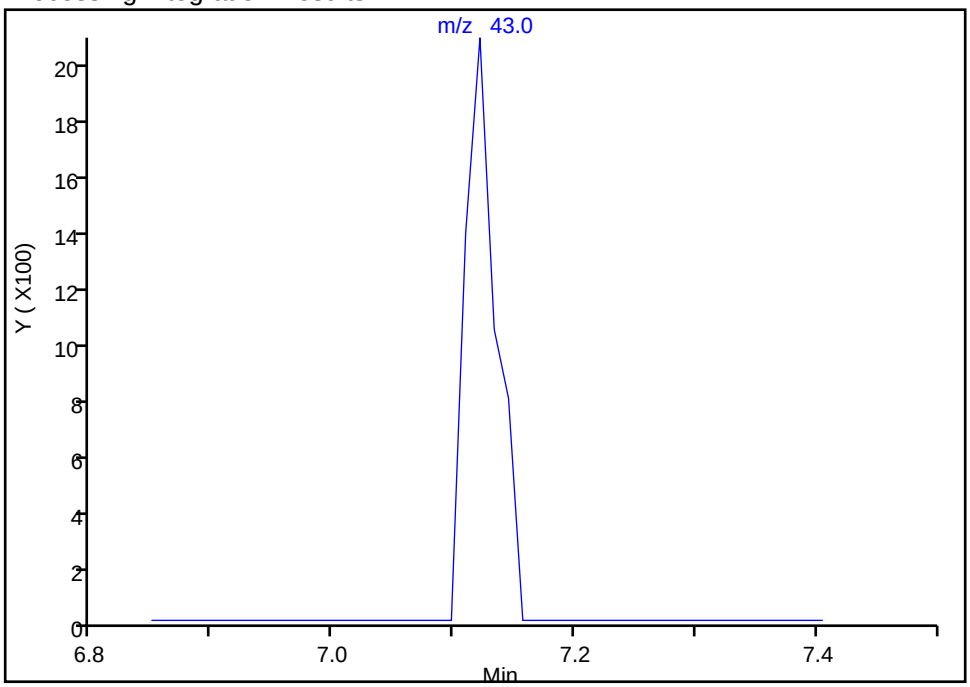
Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D
Injection Date: 30-Nov-2018 10:15:30 Instrument ID: A3UX8
Lims ID: STDA9 L1
Client ID:
Operator ID: 402279 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

77 n-Butyl acetate, CAS: 123-86-4

Signal: 1

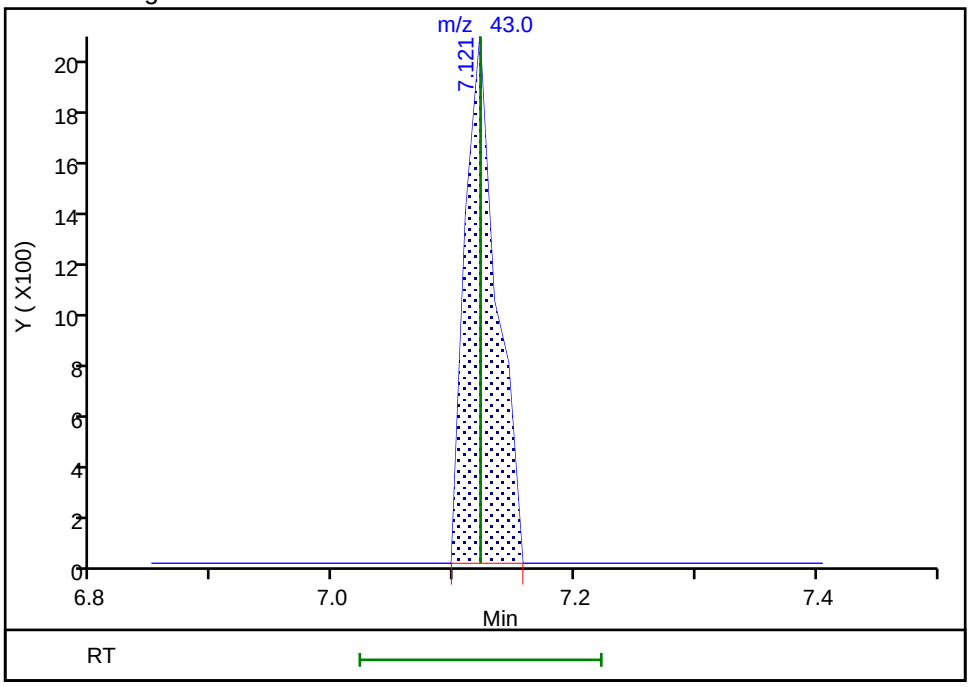
Not Detected
Expected RT: 7.12

Processing Integration Results



Manual Integration Results

RT: 7.12
Area: 3656
Amount: 0.778047
Amount Units: ug/l



Reviewer: latat, 30-Nov-2018 23:54:03
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

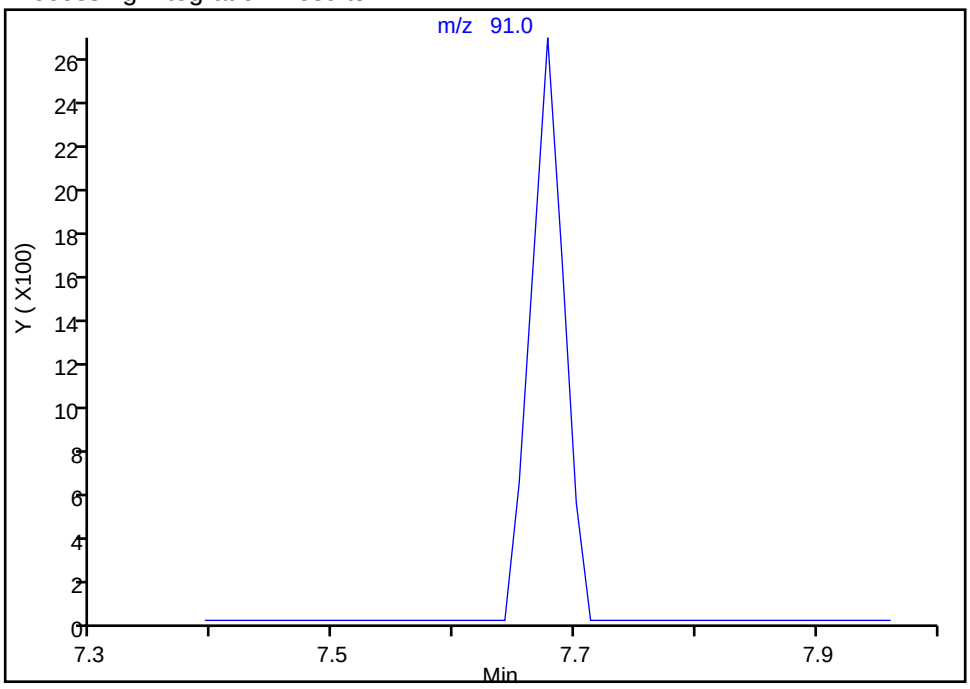
Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D
Injection Date: 30-Nov-2018 10:15:30 Instrument ID: A3UX8
Lims ID: STDA9 L1
Client ID:
Operator ID: 402279 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

81 1-Chlorohexane, CAS: 544-10-5

Signal: 1

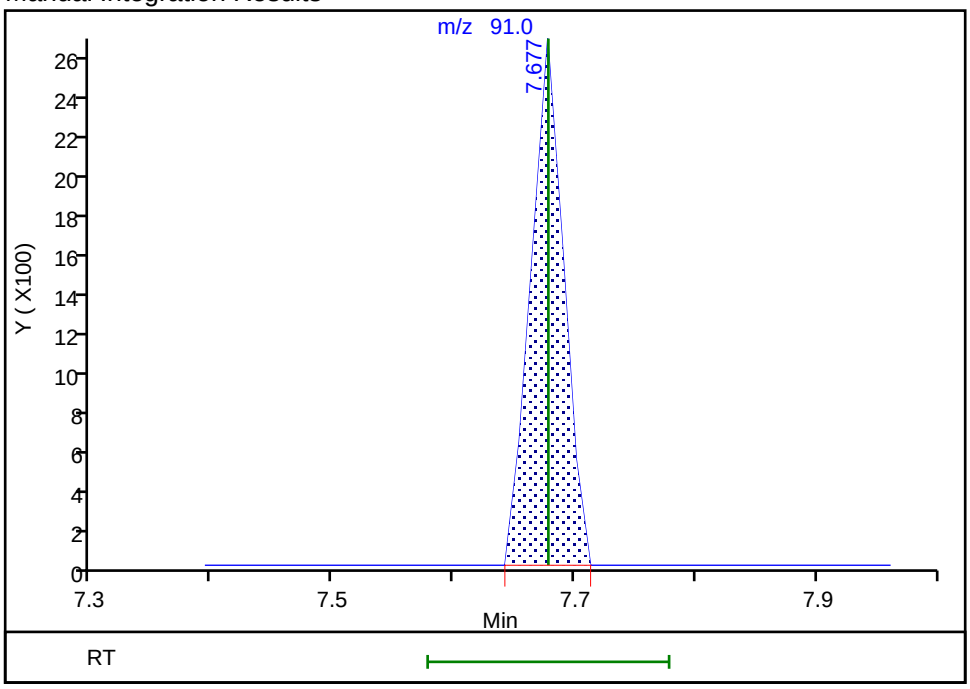
Not Detected
Expected RT: 7.68

Processing Integration Results



Manual Integration Results

RT: 7.68
Area: 4988
Amount: 1.201054
Amount Units: ug/l



Reviewer: latat, 30-Nov-2018 23:54:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 364686

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 01/19/2019 05:07 Calibration End Date: 01/19/2019 08:12 Calibration ID: 49077

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364686/11	UX82256.D
Level 2	STD8260 240-364686/10	UX82255.D
Level 3	STD8260 240-364686/9	UX82254.D
Level 4	STD8260 240-364686/8	UX82253.D
Level 5	ICIS 240-364686/7	UX82252.D
Level 6	STD8260 240-364686/6	UX82251.D
Level 7	STD8260 240-364686/5	UX82250.D
Level 8	STD8260 240-364686/4	UX82249.D
Level 9	STD8260 240-364686/3	UX82248.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3542 0.3185	0.3485 0.3080	0.3424 0.2835	0.3181 0.2694	0.3202	Ave		0.3181				9.0		15.0			
Chloromethane	0.4783 0.3904	0.4214 0.3968	0.4436 0.3567	0.3492 0.3217	0.3657	Ave		0.3915			0.1000	12.7		15.0			
Vinyl chloride	0.3103 0.2640	0.2426 0.2631	0.2926 0.2431	0.2611 0.2267	0.2564	Ave		0.2622				9.8		15.0			
Butadiene	0.3727 0.3432	0.3522 0.3458	0.3772 0.3208	0.3262 0.2964	0.3307	Ave		0.3406				7.5		15.0			
Bromomethane	0.1671 0.1537	0.1634 0.1250	0.1696 +++++	0.1538 +++++	0.1527	Ave		0.1550				9.6		15.0			
Chloroethane	+++++ 0.1702	0.1790 0.1667	0.1956 +++++	0.1694 +++++	0.1644	Ave		0.1742				6.7		15.0			
Dichlorofluoromethane	0.4737 0.4072	0.4312 0.3855	0.4521 0.3345	0.3968 0.3268	0.3849	Ave		0.3992				12.3		15.0			
Trichlorofluoromethane	0.4602 0.3873	0.4118 0.3685	0.4275 0.3252	0.3913 0.3247	0.3786	Ave		0.3861				11.5		15.0			
Ethyl ether	0.2870 0.2526	0.2622 0.2440	0.3081 0.2292	0.2482 0.2134	0.2607	Ave		0.2561				11.1		15.0			
Acrolein	0.0204 0.0279	0.0242 0.0269	0.0288 0.0249	0.0250 0.0240	0.0279	Ave		0.0255				10.3		15.0			
1,1-Dichloroethene	0.2483 0.2473	0.2476 0.2383	0.3035 0.2217	0.2312 0.2113	0.2450	Ave		0.2438				10.6		15.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2133 0.1989	0.2182 0.1904	0.2511 0.1783	0.1873 0.1701	0.2089	Ave		0.2018				12.1		15.0			
Acetone	0.2450 0.0937	0.1676 0.0874	0.1313 0.0786	0.1016 0.0749	0.0950	Lin1	0.3873	0.0788							0.9950		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 364686

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 01/19/2019 05:07 Calibration End Date: 01/19/2019 08:12 Calibration ID: 49077

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Iodomethane	0.4676 0.4297	0.4658 0.4041	0.4792 0.3673	0.3950 0.3479	0.4044	Ave		0.4179				11.0		15.0			
Carbon disulfide	0.6801 0.7478	0.6802 0.7570	0.7583 0.7048	0.6015 0.6762	0.6557	Ave		0.6957				7.5		15.0			
3-Chloro-1-propene	0.1131 0.1510	0.1154 0.1530	0.1469 0.1476	0.1251 0.1422	0.1435	Ave		0.1375				11.2		15.0			
Methyl acetate	0.2662 0.2129	0.2183 0.2031	0.2611 0.1935	0.2060 0.1769	0.2119	Ave		0.2167				13.5		15.0			
Methylene Chloride	+++++ 0.2992	0.6062 0.2740	0.4547 0.2529	0.3242 0.2398	0.3046	Lin1	0.8552	0.2494							0.9960		0.9900
tert-Butyl alcohol	0.0246 0.0188	0.0208 0.0181	0.0252 0.0164	0.0196 +++++	0.0206	Ave		0.0205				14.8		15.0			
Acrylonitrile	0.1067 0.0943	0.0983 0.0902	0.1159 0.0834	0.0915 0.0792	0.0957	Ave		0.0950				11.8		15.0			
trans-1,2-Dichloroethene	0.3327 0.2848	0.3150 0.2749	0.3661 0.2578	0.2758 0.2454	0.2838	Ave		0.2929				13.0		15.0			
Methyl tert-butyl ether	0.6859 0.6352	0.6242 0.5926	0.7303 0.5699	0.5848 0.5324	0.6391	Ave		0.6216				9.7		15.0			
Hexane	0.0693 0.0776	0.0659 0.0797	0.0944 0.0768	0.0783 0.0720	0.0777	Ave		0.0768				10.5		15.0			
1,1-Dichloroethane	0.6176 0.5451	0.5646 0.5320	0.6701 0.5056	0.5385 0.4789	0.5466	Ave		0.5554			0.1000	10.4		15.0			
Vinyl acetate	0.4066 0.5666	0.4129 0.6151	0.5902 0.6007	0.4710 0.5288	0.5428	Ave		0.5261				15.0		15.0			
2-Butanone (MEK)	+++++ 0.1368	+++++ 0.1275	0.1982 0.1166	0.1466 0.1054	0.1418	Lin1	0.9684	0.1121							0.9930		0.9900
cis-1,2-Dichloroethene	0.3332 0.3154	0.3410 0.3008	0.4076 0.2809	0.3193 0.2667	0.3157	Ave		0.3201				12.6		15.0			
2,2-Dichloropropane	0.3544 0.2889	0.3061 0.2797	0.3210 0.2645	0.2822 0.2405	0.2757	Ave		0.2903				11.5		15.0			
Bromochloromethane	0.1727 0.1340	0.1566 0.1277	0.1639 0.1195	0.1290 0.1119	0.1337	Ave		0.1388				15.0		15.0			
Tetrahydrofuran	0.0920 0.0809	0.0758 0.0787	0.0920 0.0740	0.0764 0.0677	0.0803	Ave		0.0798				10.0		15.0			
Chloroform	0.5440 0.5122	0.5291 0.4901	0.6281 0.4641	0.5032 0.4447	0.5105	Ave		0.5140				10.2		15.0			
1,1,1-Trichloroethane	0.3819 0.4189	0.3583 0.4228	0.4593 0.3989	0.3776 0.3761	0.4093	Ave		0.4003				7.7		15.0			
Cyclohexane	0.5488 0.5920	0.5289 0.5792	0.6557 0.5583	0.5315 0.5256	0.5713	Ave		0.5657				7.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 364686

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 01/19/2019 05:07 Calibration End Date: 01/19/2019 08:12 Calibration ID: 49077

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.3919 0.3992	0.3550 0.3855	0.4648 0.3690	0.3730 0.3476	0.4015	Ave		0.3875				8.9		15.0			
Carbon tetrachloride	0.3038 0.3561	0.2981 0.3642	0.3832 0.3525	0.3049 0.3325	0.3403	Ave		0.3373				8.9		15.0			
Isobutyl alcohol	+++++ 0.0104	+++++ 0.0097	0.0135 0.0089	0.0100 0.0081	0.0105	Lin1	0.6879	0.0086							0.9940		0.9900
1,2-Dichloroethane	0.4935 0.4395	0.5128 0.4195	0.5699 0.3989	0.4279 0.3683	0.4429	Ave		0.4526				13.8		15.0			
Benzene	1.2612 1.1428	1.2031 1.1079	1.4490 1.0519	1.1226 0.9866	1.1545	Ave		1.1644				11.4		15.0			
n-Heptane	+++++ 0.0827	0.0659 0.0823	0.0849 0.0837	0.0763 0.0739	0.0844	Ave		0.0792				8.5		15.0			
Trichloroethene	0.2902 0.2886	0.2973 0.2781	0.3401 0.2623	0.2766 0.2446	0.2903	Ave		0.2853				9.2		15.0			
Methylcyclohexane	0.4771 0.5001	0.4539 0.4938	0.5386 0.4661	0.4614 0.4457	0.4836	Ave		0.4800				5.9		15.0			
1,2-Dichloropropane	0.3183 0.2839	0.2559 0.2734	0.3472 0.2648	0.2820 0.2419	0.2883	Ave		0.2840				11.3		15.0			
Dibromomethane	0.1318 0.1466	0.1488 0.1401	0.1757 0.1320	0.1326 0.1224	0.1453	Ave		0.1417				10.9		15.0			
1,4-Dioxane	+++++ 0.0021	+++++ 0.0021	0.0030 0.0019	0.0022 +++++	0.0021	Lin1	0.0950	0.0019							0.9970		0.9900
Bromodichloromethane	0.2911 0.3300	0.2551 0.3380	0.3360 0.3337	0.2931 0.3134	0.3126	Ave		0.3115				8.9		15.0			
2-Chloroethyl vinyl ether	+++++ 0.1017	0.0692 0.1055	0.0978 0.1059	0.0852 0.0917	0.0963	Ave		0.0942				13.0		15.0			
cis-1,3-Dichloropropene	+++++ 0.3485	+++++ 0.3605	0.3228 0.3657	0.2714 0.3298	0.3064	Ave		0.3293				10.1		15.0			
4-Methyl-2-pentanone (MIBK)	0.2079 0.2640	0.2335 0.2526	0.2776 0.2385	0.2372 0.2090	0.2594	Ave		0.2422				9.8		15.0			
Toluene	1.4156 1.4841	1.2950 1.4758	1.7473 1.4224	1.4351 1.3398	1.5174	Ave		1.4592				8.8		15.0			
trans-1,3-Dichloropropene	+++++ 0.3603	+++++ 0.3896	0.3043 0.4054	0.2572 0.3652	0.3246	Ave		0.3438				15.0		15.0			
Ethyl methacrylate	+++++ 0.3267	+++++ 0.3267	0.2863 0.3157	0.2458 0.2721	0.3115	Ave		0.2978				10.3		15.0			
1,1,2-Trichloroethane	0.2700 0.2483	0.2851 0.2476	0.3097 0.2295	0.2442 0.2111	0.2612	Ave		0.2563				11.5		15.0			
1,3-Dichloropropane	0.3974 0.4506	0.4601 0.4348	0.5959 0.4237	0.4568 0.3798	0.4721	Ave		0.4524				13.6		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 364686

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 01/19/2019 05:07 Calibration End Date: 01/19/2019 08:12 Calibration ID: 49077

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Tetrachloroethene	0.3362 0.2888	0.2662 0.2866	0.3677 0.2724	0.2931 0.2546	0.2993	Ave		0.2961				12.0		15.0			
2-Hexanone	0.1727 0.2353	0.1819 0.2271	0.2514 0.2123	0.2137 0.1830	0.2366	Ave		0.2126				13.1		15.0			
Dibromochloromethane	+++++ 0.2502	+++++ 0.2640	0.2339 0.2640	0.1889 0.2488	0.2388	Ave		0.2412				10.7		15.0			
1,2-Dibromoethane	0.2144 0.2376	0.2278 0.2353	0.2797 0.2221	0.2181 0.2025	0.2408	Ave		0.2309				9.5		15.0			
Chlorobenzene	1.1535 0.9305	1.0339 0.9050	1.2526 0.8630	0.9188 0.8041	0.9687	Ave		0.9811			0.3000	14.6		15.0			
1,1,1,2-Tetrachloroethane	0.2372 0.3176	0.2813 0.3205	0.3597 0.3054	0.2760 0.2888	0.3111	Ave		0.2997				11.5		15.0			
Ethylbenzene	0.4251 0.5154	0.4306 0.5094	0.6023 0.4902	0.4987 0.4530	0.5383	Ave		0.4959				11.2		15.0			
m-Xylene & p-Xylene	0.5444 0.6180	0.5411 0.6165	0.6972 0.6034	0.5868 0.5542	0.6390	Ave		0.6001				8.4		15.0			
o-Xylene	0.4317 0.6211	0.4704 0.6051	0.6863 0.5590	0.5799 0.5307	0.6428	Ave		0.5697				14.4		15.0			
Styrene	0.7220 1.0101	0.6922 0.9910	1.0519 0.9535	0.9288 0.8941	0.9752	Ave		0.9132				13.8		15.0			
Bromoform	+++++ 0.1283	+++++ 0.1360	0.1220 0.1396	0.1096 0.1288	0.1120	Ave		0.1252			0.1000	9.1		15.0			
Isopropylbenzene	1.2053 1.6514	1.2569 1.6417	1.7822 1.5623	1.4806 1.4559	1.6560	Ave		1.5214				12.6		15.0			
1,1,2,2-Tetrachloroethane	0.5987 0.5276	0.5036 0.5129	0.6974 0.4719	0.5598 0.4358	0.5726	Ave		0.5423			0.3000	14.2		15.0			
Bromobenzene	0.6997 0.6951	0.7032 0.6841	0.8934 0.6355	0.7023 0.5964	0.7471	Ave		0.7063				11.7		15.0			
1,2,3-Trichloropropane	+++++ 0.1867	+++++ 0.1770	0.2428 0.1554	0.2057 0.1429	0.2037	Lin1	0.6376	0.1523							0.9910		0.9900
trans-1,4-Dichloro-2-butene	+++++ 0.1884	0.1383 0.1932	0.1963 0.1892	0.1729 0.1746	0.1951	Ave		0.1810				10.7		15.0			
N-Propylbenzene	0.6396 0.7966	0.6664 0.8115	0.9243 0.7653	0.7852 0.7063	0.8447	Ave		0.7711				11.6		15.0			
2-Chlorotoluene	0.6789 0.6813	0.6181 0.6924	0.8840 0.6387	0.6923 0.6041	0.7340	Ave		0.6915				12.0		15.0			
1,3,5-Trimethylbenzene	1.9940 2.5570	1.8576 2.5831	2.8713 2.4122	2.4207 2.2903	2.6998	Ave		2.4096				13.5		15.0			
4-Chlorotoluene	0.6920 0.7147	0.6265 0.6875	0.9050 0.6503	0.7193 0.6243	0.7569	Ave		0.7085				12.1		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 364686

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 01/19/2019 05:07 Calibration End Date: 01/19/2019 08:12 Calibration ID: 49077

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
tert-Butylbenzene	1.6621 2.2693	1.5736 2.2621	2.3633 2.1256	2.0700 2.0223	2.2976	Ave		2.0718				13.6		15.0			
1,2,4-Trimethylbenzene	+++++ 2.6431	1.9911 2.6337	3.0280 2.4728	2.5676 2.3601	2.7846	Ave		2.5601				11.9		15.0			
sec-Butylbenzene	+++++ 3.2808	2.3677 3.2453	3.6848 3.0453	3.0904 2.9043	3.4033	Ave		3.1277				12.4		15.0			
1,3-Dichlorobenzene	1.5117 1.3767	1.4661 1.3319	1.8574 1.2393	1.4496 1.1703	1.4935	Ave		1.4329				13.8		15.0			
p-Isopropyltoluene	+++++ 2.7520	1.9448 2.7396	3.0508 2.5641	2.5998 2.4382	2.8741	Ave		2.6204				12.7		15.0			
1,4-Dichlorobenzene	+++++ 1.3832	+++++ 1.3539	2.0170 1.2511	1.5537 1.1902	1.5279	Lin1	4.3754	1.2250							0.9970		0.9900
n-Butylbenzene	1.9641 2.4449	1.8930 2.4497	2.5500 2.2993	2.2611 2.1840	2.5176	Ave		2.2849				10.3		15.0			
1,2-Dichlorobenzene	+++++ 1.2732	+++++ 1.2274	1.8326 1.1357	1.4302 1.0810	1.4138	Lin1	4.1229	1.1129							0.9970		0.9900
1,2-Dibromo-3-Chloropropane	+++++ 0.0628	+++++ 0.0730	0.0702 0.0687	0.0660 0.0650	0.0667	Ave		0.0675				5.1		15.0			
1,2,4-Trichlorobenzene	0.8845 0.7083	0.8742 0.7236	0.9478 0.7029	0.7436 0.6771	0.7642	Ave		0.7807				12.3		15.0			
Hexachlorobutadiene	+++++ 0.4141	+++++ 0.3972	0.6044 0.3761	0.4897 0.3657	0.5009	Lin1	1.4345	0.3700							0.9980		0.9900
Naphthalene	1.5166 1.4853	1.3607 1.5326	1.6059 1.4498	1.4308 1.3693	1.5556	Ave		1.4785				5.6		15.0			
1,2,3-Trichlorobenzene	+++++ 0.6557	+++++ 0.6548	0.9478 0.6222	0.7769 0.6008	0.7924	Lin1	2.0113	0.6097							0.9980		0.9900
Dibromofluoromethane (Surr)	+++++ 0.2336	+++++ 0.2325	0.2992 0.2216	0.2685 0.2141	0.2519	Ave		0.2459				12.1		15.0			
1,2-Dichloroethane-d4 (Surr)	+++++ 0.2958	+++++ 0.3112	0.4388 0.2967	0.3792 0.2826	0.3585	Lin1	0.8937	0.2879							0.9980		0.9900
Toluene-d8 (Surr)	+++++ 1.1907	+++++ 1.1832	1.6846 1.1327	1.3806 1.0863	1.3385	Lin1	3.2225	1.1062							0.9990		0.9900
4-Bromofluorobenzene (Surr)	+++++ 0.4701	+++++ 0.4513	0.6650 0.4272	0.5488 0.4026	0.5105	Lin1	1.4681	0.4149							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 364686

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 01/19/2019 05:07 Calibration End Date: 01/19/2019 08:12 Calibration ID: 49077

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364686/11	UX82256.D
Level 2	STD8260 240-364686/10	UX82255.D
Level 3	STD8260 240-364686/9	UX82254.D
Level 4	STD8260 240-364686/8	UX82253.D
Level 5	ICIS 240-364686/7	UX82252.D
Level 6	STD8260 240-364686/6	UX82251.D
Level 7	STD8260 240-364686/5	UX82250.D
Level 8	STD8260 240-364686/4	UX82249.D
Level 9	STD8260 240-364686/3	UX82248.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Ave	5482 292828	11006 613301	30500 1152689	57766 1354720	115008	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Chloromethane	FB	Ave	7404 358884	13309 790079	39521 1450603	63416 1617358	131348	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Vinyl chloride	FB	Ave	4803 242739	7662 523899	26070 988673	47408 1139916	92072	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Butadiene	FB	Ave	5769 315534	11123 688625	33604 1304695	59239 1490482	118784	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromomethane	FB	Ave	2587 141302	5162 248910	15107 +++++	27924 +++++	54840	1.00 50.0	2.00 100	5.00 +++++	10.0 +++++	20.0
Chloroethane	FB	Ave	+++++ 156491	5654 332017	17428 +++++	30761 +++++	59059	+++++ 50.0	2.00 100	5.00 +++++	10.0 +++++	20.0
Dichlorofluoromethane	FB	Ave	7332 374377	13619 767552	40277 1360289	72053 1642937	138236	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Trichlorofluoromethane	FB	Ave	7123 356014	13006 733749	38087 1322428	71058 1632285	135988	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Ethyl ether	FB	Ave	4442 232260	8281 485849	27449 931909	45067 1072696	93621	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Acrolein	FB	Ave	1578 128362	3814 267568	12830 505501	22671 602746	50180	5.00 250	10.0 500	25.0 1000	50.0 1250	100
1,1-Dichloroethene	FB	Ave	3844 227342	7821 474472	27040 901625	41983 1062450	87992	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,2-Trichloro-1,2,2-trifluoroetha ne	FB	Ave	3301 182846	6893 379159	22368 725238	34010 855369	75032	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Acetone	FB	Lin1	7583 172229	10585 348177	23402 639257	36888 753210	68271	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Iodomethane	FB	Ave	7237 395067	14713 804582	42693 1493408	71718 1749062	145243	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 364686

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 01/19/2019 05:07 Calibration End Date: 01/19/2019 08:12 Calibration ID: 49077

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Carbon disulfide	FB	Ave	10527 687462	21484 1507348	67549 2865857	109221 3399932	235509	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
3-Chloro-1-propene	FB	Ave	1751 138834	3645 304667	13087 600293	22716 715044	51530	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Methyl acetate	FB	Ave	8240 391378	13790 808934	46517 1573740	74795 1779262	152229	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Methylene Chloride	FB	Lin1	+++++ 275071	19146 545496	40507 1028272	58861 1205821	109380	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
tert-Butyl alcohol	FB	Ave	3801 172918	6575 360387	22433 668214	35633 +++++	73851	10.0 500	20.0 1000	50.0 2000	100 +++++	200
Acrylonitrile	FB	Ave	16512 866597	31043 1796147	103267 3390055	166069 3982781	343571	10.0 500	20.0 1000	50.0 2000	100 2500	200
trans-1,2-Dichloroethene	FB	Ave	5150 261847	9949 547441	32611 1048176	50085 1233945	101925	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Methyl tert-butyl ether	FB	Ave	10617 583939	19716 1180027	65055 2317542	106189 2676596	229536	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Hexane	FB	Ave	1072 71375	2080 158606	8408 312154	14226 361913	27910	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1-Dichloroethane	FB	Ave	9560 501114	17833 1059261	59691 2055925	97781 2408028	196314	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Vinyl acetate	FB	Ave	6293 520852	13040 1224670	52581 2442522	85527 2658887	194929	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Butanone (MEK)	FB	Lin1	+++++ 251443	+++++ 507633	35317 948068	53225 1060206	101843	+++++ 100	+++++ 200	10.0 400	20.0 500	40.0
cis-1,2-Dichloroethene	FB	Ave	5157 289978	10770 599024	36306 1142201	57980 1341139	113393	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2,2-Dichloropropane	FB	Ave	5486 265576	9669 556826	28595 1075544	51244 1209326	99004	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromochloromethane	FB	Ave	2673 123204	4946 254309	14601 485755	23429 562534	48022	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Tetrahydrofuran	FB	Ave	2848 148763	4791 313308	16392 601930	27733 680515	57707	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Chloroform	FB	Ave	8421 470827	16711 975912	55955 1887192	91375 2235881	183353	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,1-Trichloroethane	FB	Ave	5911 385117	11316 841885	40920 1621949	68564 1891211	146986	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Cyclohexane	FB	Ave	8494 544239	16706 1153229	58415 2270320	96511 2642585	205197	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1-Dichloropropene	FB	Ave	6066 366985	11214 767604	41408 1500695	67732 1747838	144216	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Carbon tetrachloride	FB	Ave	4702 327343	9414 725145	34138 1433548	55367 1671743	122224	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 364686

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 01/19/2019 05:07 Calibration End Date: 01/19/2019 08:12 Calibration ID: 49077

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isobutyl alcohol	FB	Lin1	+++++ 238286	+++++ 480366	30120 901087	45581 1023292	94165	+++++ 1250	+++++ 2500	125 5000	250 6250	500
1,2-Dichloroethane	FB	Ave	7638 403994	16197 835332	50771 1622198	77699 1851838	159066	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Benzene	FB	Ave	19521 1050560	38001 2205953	129082 4277472	203848 4960569	414636	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
n-Heptane	FB	Ave	+++++ 75994	2082 163802	7563 340296	13846 371591	30303	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
Trichloroethene	FB	Ave	4492 265284	9391 553633	30301 1066478	50223 1229659	104244	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Methylcyclohexane	FB	Ave	7385 459758	14335 983307	47981 1895245	83782 2240967	173698	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2-Dichloropropane	FB	Ave	4927 261029	8084 544351	30931 1076980	51202 1216419	103532	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Dibromomethane	FB	Ave	2040 134797	4700 279002	15653 536578	24076 615209	52170	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,4-Dioxane	FB	Lin1	+++++ 39306	+++++ 82048	5314 152823	8067 +++++	14781	+++++ 1000	+++++ 2000	100 4000	200 +++++	400
Bromodichloromethane	FB	Ave	4506 303386	8057 673036	29936 1357136	53224 1575514	112264	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Chloroethyl vinyl ether	FB	Ave	+++++ 186939	4369 420086	17421 861132	30938 922271	69197	+++++ 100	4.00 200	10.0 400	20.0 500	40.0
cis-1,3-Dichloropropene	FB	Ave	+++++ 320336	+++++ 717750	28754 1486874	49277 1657979	110029	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	6436 485449	14749 1005982	49456 1939806	86147 2101183	186305	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Toluene	CBNZ d5	Ave	16965 1064400	31047 2253804	120816 4425521	201056 5071355	415302	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	+++++ 258365	+++++ 595006	21041 1261260	36035 1382300	88851	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Ethyl methacrylate	CBNZ d5	Ave	+++++ 234330	+++++ 498938	19794 982143	34442 1029913	85263	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
1,1,2-Trichloroethane	CBNZ d5	Ave	3236 178075	6836 378086	21411 713925	34209 799180	71494	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,3-Dichloropropane	CBNZ d5	Ave	4763 323168	11032 664097	41201 1318364	64006 1437732	129206	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Tetrachloroethene	CBNZ d5	Ave	4029 207139	6383 437755	25422 847518	41070 963755	81911	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Hexanone	CBNZ d5	Ave	4139 337461	8720 693657	34764 1320993	59884 1385146	129493	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Dibromochloromethane	CBNZ d5	Ave	+++++ 179448	+++++ 403241	16176 821288	26460 941819	65358	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 364686

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 01/19/2019 05:07 Calibration End Date: 01/19/2019 08:12 Calibration ID: 49077

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2-Dibromoethane	CBNZ d5	Ave	2569 170396	5461 359365	19340 690948	30559 766342	65897	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Chlorobenzene	CBNZ d5	Ave	13823 667303	24789 1382152	86608 2685140	128734 3043614	265134	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	2842 227762	6743 489535	24871 950034	38675 1093243	85159	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Ethylbenzene	CBNZ d5	Ave	5094 369629	10324 777921	41648 1525226	69868 1714774	147321	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
m-Xylene & p-Xylene	CBNZ d5	Ave	6524 443238	12973 941494	48205 1877392	82219 2097677	174900	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
o-Xylene	CBNZ d5	Ave	5174 445423	11277 924103	47454 1739266	81247 2008775	175931	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Styrene	CBNZ d5	Ave	8652 724405	16595 1513430	72733 2966508	130133 3384291	266919	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromoform	CBNZ d5	Ave	+++++ 92019	+++++ 207695	8436 434452	15352 487426	30664	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Isopropylbenzene	CBNZ d5	Ave	14444 1184341	30134 2507224	123231 4860829	207440 5510637	453233	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	3941 209859	6966 419437	26893 797554	43184 881344	86258	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromobenzene	DCBd 4	Ave	4606 276500	9727 559452	34453 1073915	54177 1206228	112539	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2,3-Trichloropropane	DCBd 4	Lin1	+++++ 74268	+++++ 144725	9363 262653	15871 289011	30691	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	+++++ 74935	1913 157975	7571 319717	13339 353150	29385	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
N-Propylbenzene	DCBd 4	Ave	4210 316895	9218 663676	35645 1293253	60572 1428546	127238	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Chlorotoluene	DCBd 4	Ave	4469 271008	8550 566253	34091 1079431	53404 1221781	110563	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	13126 1017132	25693 2112467	110727 4076491	186741 4632308	406682	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
4-Chlorotoluene	DCBd 4	Ave	4555 284290	8666 562232	34899 1098925	55489 1262675	114018	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
tert-Butylbenzene	DCBd 4	Ave	10941 902718	21766 1849991	91136 3592054	159687 4090226	346094	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	+++++ 1051389	27540 2153840	116772 4178847	198069 4773429	419448	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
sec-Butylbenzene	DCBd 4	Ave	+++++ 1305055	32749 2654003	142097 5146354	238400 5874217	512647	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	9951 547646	20279 1089212	71626 2094268	111829 2367078	224970	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 364686

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 01/19/2019 05:07 Calibration End Date: 01/19/2019 08:12 Calibration ID: 49077

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
p-Isopropyltoluene	DCBd 4	Ave	+++++ 1094704	26900 2240449	117650 4333144	200560 4931375	432939	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,4-Dichlorobenzene	DCBd 4	Lin1	+++++ 550215	+++++ 1107249	77781 2114211	119855 2407262	230156	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
n-Butylbenzene	DCBd 4	Ave	12929 972564	26183 2003408	98336 3885632	174431 4417319	379229	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2-Dichlorobenzene	DCBd 4	Lin1	+++++ 506486	+++++ 1003768	70671 1919256	110330 2186437	212964	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	+++++ 24978	+++++ 59732	2709 116117	5090 131515	10051	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	5822 281754	12091 591736	36549 1187910	57362 1369441	115119	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Hexachlorobutadiene	DCBd 4	Lin1	+++++ 164716	+++++ 324824	23307 635524	37778 739609	75454	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Naphthalene	DCBd 4	Ave	9983 590846	18821 1253410	61928 2450047	110374 2769530	234332	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2,3-Trichlorobenzene	DCBd 4	Lin1	+++++ 260813	+++++ 535536	36549 1051400	59930 1215156	119355	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Dibromofluoromethane (Surr)	FB	Ave	+++++ 214788	+++++ 463003	26656 901290	48754 1076703	90472	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Lin1	+++++ 271933	+++++ 619624	39086 1206541	68857 1420798	128746	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Toluene-d8 (Surr)	CBNZ d5	Lin1	+++++ 853973	+++++ 1806971	116480 3524101	193432 4111719	366348	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Lin1	+++++ 337137	+++++ 689225	45982 1329253	76882 1523746	139730	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82248.D
Lims ID: STD8260 L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 19-Jan-2019 05:07:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083802-003
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub64

Method: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 23-Jan-2019 02:33:34 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: latat Date: 19-Jan-2019 06:20:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.159	5.157	0.002	99	1005564	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.691	7.690	0.001	97	757014	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.880	9.879	0.001	94	404516	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.627	4.637	-0.010	93	1076703	250.0	217.7	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.899	4.897	0.002	94	1420798	250.0	242.3	
$ 6 Toluene-d8 (Surr)	98	6.437	6.435	0.002	96	4111719	250.0	242.6	
$ 7 4-Bromofluorobenzene (Surr	95	8.768	8.766	0.002	85	1523746	250.0	239.0	
9 Dichlorodifluoromethane	85	1.586	1.596	-0.010	99	1354720	250.0	211.8	
10 Chloromethane	50	1.775	1.773	0.002	99	1617358	250.0	205.4	
11 Vinyl chloride	62	1.881	1.892	-0.011	100	1139916	250.0	216.2	
12 Butadiene	54	1.905	1.903	0.002	0	1490482	250.0	217.6	
13 Bromomethane	94	2.154	2.187	-0.033	92	366492	250.0	117.5	
14 Chloroethane	64	2.248	2.282	-0.034	94	565713	250.0	161.4	
15 Dichlorofluoromethane	67	2.449	2.460	-0.011	99	1642937	250.0	204.6	
16 Trichlorofluoromethane	101	2.497	2.507	-0.010	99	1632285	250.0	210.2	
17 Ethyl ether	59	2.745	2.744	0.001	96	1072696	250.0	208.2	
18 Acrolein	56	2.840	2.838	0.002	98	602746	1250.0	1173.3	
19 1,1-Dichloroethene	96	2.923	2.933	-0.010	94	1062450	250.0	216.7	
20 1,1,2-Trichloro-1,2,2-trif	151	2.935	2.945	-0.011	95	855369	250.0	210.7	
21 Acetone	43	2.970	2.968	0.002	97	753210	500.0	470.3	
23 Iodomethane	142	3.053	3.063	-0.010	100	1749062	250.0	208.1	
24 Carbon disulfide	76	3.112	3.122	-0.010	99	3399932	250.0	243.0	
26 3-Chloro-1-propene	76	3.207	3.217	-0.010	86	715044	250.0	258.5	
27 Methyl acetate	43	3.218	3.229	-0.011	100	1779262	500.0	408.3	
28 Methylene Chloride	84	3.301	3.311	-0.010	94	1205821	250.0	237.0	
29 2-Methyl-2-propanol	59	3.396	3.382	0.014	90	737432	2500.0	1787.7	
30 Acrylonitrile	53	3.491	3.489	0.002	98	3982781	2500.0	2084.5	
31 trans-1,2-Dichloroethene	96	3.526	3.524	0.002	91	1233945	250.0	209.5	
32 Methyl tert-butyl ether	73	3.526	3.524	0.002	96	2676596	250.0	214.1	
33 Hexane	86	3.727	3.737	-0.010	94	361913	250.0	234.2	
34 1,1-Dichloroethane	63	3.834	3.844	-0.010	98	2408028	250.0	215.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	3.869	3.868	0.001	97	2658887	250.0	251.3	
41 2,2-Dichloropropane	77	4.283	4.282	0.001	78	1209326	250.0	207.1	
40 2-Butanone (MEK)	43	4.272	4.282	-0.010	57	1060206	500.0	461.8	
39 cis-1,2-Dichloroethene	96	4.272	4.282	-0.010	90	1341139	250.0	208.3	
45 Chlorobromomethane	128	4.461	4.459	0.002	90	562534	250.0	201.6	
47 Chloroform	83	4.508	4.507	0.001	99	2235881	250.0	216.3	
46 Tetrahydrofuran	42	4.496	4.507	-0.011	92	680515	500.0	424.3	
48 1,1,1-Trichloroethane	97	4.674	4.672	0.002	97	1891211	250.0	234.9	
49 Cyclohexane	56	4.721	4.731	-0.010	99	2642585	250.0	232.3	
50 1,1-Dichloropropene	75	4.792	4.791	0.001	86	1747838	250.0	224.3	
51 Carbon tetrachloride	117	4.804	4.802	0.002	96	1671743	250.0	246.5	
52 Isobutyl alcohol	41	4.828	4.826	0.002	94	1023292	6250.0	5819.8	
53 1,2-Dichloroethane	62	4.958	4.956	0.002	61	1851838	250.0	203.5	
54 Benzene	78	4.958	4.956	0.002	96	4960569	250.0	211.8	
56 n-Heptane	100	5.135	5.146	-0.011	97	371591	250.0	233.2	
58 Trichloroethene	130	5.443	5.453	-0.010	95	1229659	250.0	214.3	
60 Methylcyclohexane	83	5.621	5.619	0.002	93	2240967	250.0	232.1	
61 1,2-Dichloropropane	63	5.621	5.631	-0.010	88	1216419	250.0	213.0	
64 1,4-Dioxane	88	5.715	5.725	-0.010	44	164432	5000.0	4212.8	
63 Dibromomethane	93	5.715	5.725	-0.010	96	615209	250.0	215.9	
65 Dichlorobromomethane	83	5.834	5.832	0.002	97	1575514	250.0	251.5	
67 2-Chloroethyl vinyl ether	63	6.058	6.057	0.001	89	922271	500.0	487.1	
68 cis-1,3-Dichloropropene	75	6.200	6.199	0.001	85	1657979	250.0	250.4	
69 4-Methyl-2-pentanone (MIBK	43	6.307	6.305	0.002	99	2101183	500.0	431.4	
70 Toluene	91	6.484	6.495	-0.010	97	5071355	250.0	229.6	
71 trans-1,3-Dichloropropene	75	6.650	6.648	0.002	95	1382300	250.0	265.6	
72 Ethyl methacrylate	69	6.709	6.719	-0.010	92	1029913	250.0	228.4	
73 1,1,2-Trichloroethane	97	6.816	6.814	0.002	96	799180	250.0	206.0	
75 Tetrachloroethene	164	6.969	6.968	0.001	97	963755	250.0	215.0	
74 1,3-Dichloropropane	76	6.958	6.968	-0.010	91	1437732	250.0	209.9	
76 2-Hexanone	43	7.017	7.015	0.002	97	1385146	500.0	430.2	
78 Chlorodibromomethane	129	7.171	7.169	0.002	90	941819	250.0	257.9	
80 Ethylene Dibromide	107	7.277	7.287	-0.010	98	766342	250.0	219.2	
82 Chlorobenzene	112	7.715	7.713	0.002	90	3043614	250.0	204.9	
83 1,1,1,2-Tetrachloroethane	131	7.786	7.784	0.002	92	1093243	250.0	240.9	
84 Ethylbenzene	106	7.810	7.808	0.002	99	1714774	250.0	228.4	
85 m-Xylene & p-Xylene	106	7.916	7.914	0.002	99	2097677	250.0	230.9	
86 o-Xylene	106	8.283	8.281	0.002	98	2008775	250.0	232.9	
87 Styrene	104	8.283	8.293	-0.010	93	3384291	250.0	244.8	
88 Bromoform	173	8.460	8.471	-0.011	95	487426	250.0	257.2	
89 Isopropylbenzene	105	8.626	8.624	0.002	97	5510637	250.0	239.2	
92 1,1,2,2-Tetrachloroethane	83	8.875	8.885	-0.010	98	881344	250.0	200.9	
93 Bromobenzene	156	8.922	8.920	0.002	96	1206228	250.0	211.1	
94 1,2,3-Trichloropropane	110	8.934	8.932	0.002	90	289011	250.0	230.3	
95 trans-1,4-Dichloro-2-buten	53	8.934	8.932	0.002	75	353150	250.0	241.2	
96 N-Propylbenzene	120	9.017	9.015	0.002	99	1428546	250.0	229.0	
97 2-Chlorotoluene	126	9.099	9.098	0.001	94	1221781	250.0	218.4	
98 1,3,5-Trimethylbenzene	105	9.170	9.181	-0.011	94	4632308	250.0	237.6	
99 4-Chlorotoluene	126	9.206	9.204	0.002	99	1262675	250.0	220.3	
100 tert-Butylbenzene	119	9.490	9.500	-0.010	94	4090226	250.0	244.0	
102 1,2,4-Trimethylbenzene	105	9.537	9.536	0.001	95	4773429	250.0	230.5	
103 sec-Butylbenzene	105	9.703	9.713	-0.010	96	5874217	250.0	232.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	9.821	9.820	0.001	96	2367078	250.0	204.2	
105 4-Isopropyltoluene	119	9.845	9.843	0.002	97	4931375	250.0	232.6	
106 1,4-Dichlorobenzene	146	9.904	9.902	0.002	95	2407262	250.0	239.3	
109 n-Butylbenzene	91	10.247	10.246	0.001	99	4417319	250.0	239.0	
110 1,2-Dichlorobenzene	146	10.271	10.269	0.002	95	2186437	250.0	239.1	
111 1,2-Dibromo-3-Chloropropan	157	11.028	11.026	0.002	73	131515	250.0	240.8	
113 1,2,4-Trichlorobenzene	180	11.868	11.867	0.001	94	1369441	250.0	216.8	
114 Hexachlorobutadiene	225	12.034	12.044	-0.010	95	739609	250.0	243.2	
115 Naphthalene	128	12.117	12.115	0.002	98	2769530	250.0	231.5	
116 1,2,3-Trichlorobenzene	180	12.365	12.364	0.001	95	1215156	250.0	243.0	
S 126 1,2-Dichloroethene, Total	96				0			417.8	
S 127 1,3-Dichloropropene, Total	75				0			515.9	
S 128 Xylenes, Total	106				0		500.0	463.8	
S 157 Total BTEX	1				0		1250.0	1133.6	
S 129 Trihalomethanes, Total	1				0		1000.0	982.8	

Reagents:

VMAROLISTDW_00281	Amount Added:	25.00	Units: uL
VMRGAS_00278	Amount Added:	25.00	Units: uL
VMRPRIMW_00318	Amount Added:	25.00	Units: uL
vmDist_H2o_00124	Amount Added:	0.00	Units:
VM568718_00012	Amount Added:	1.00	Units: uL
vm50ss_00351	Amount Added:	25.00	Units: uL

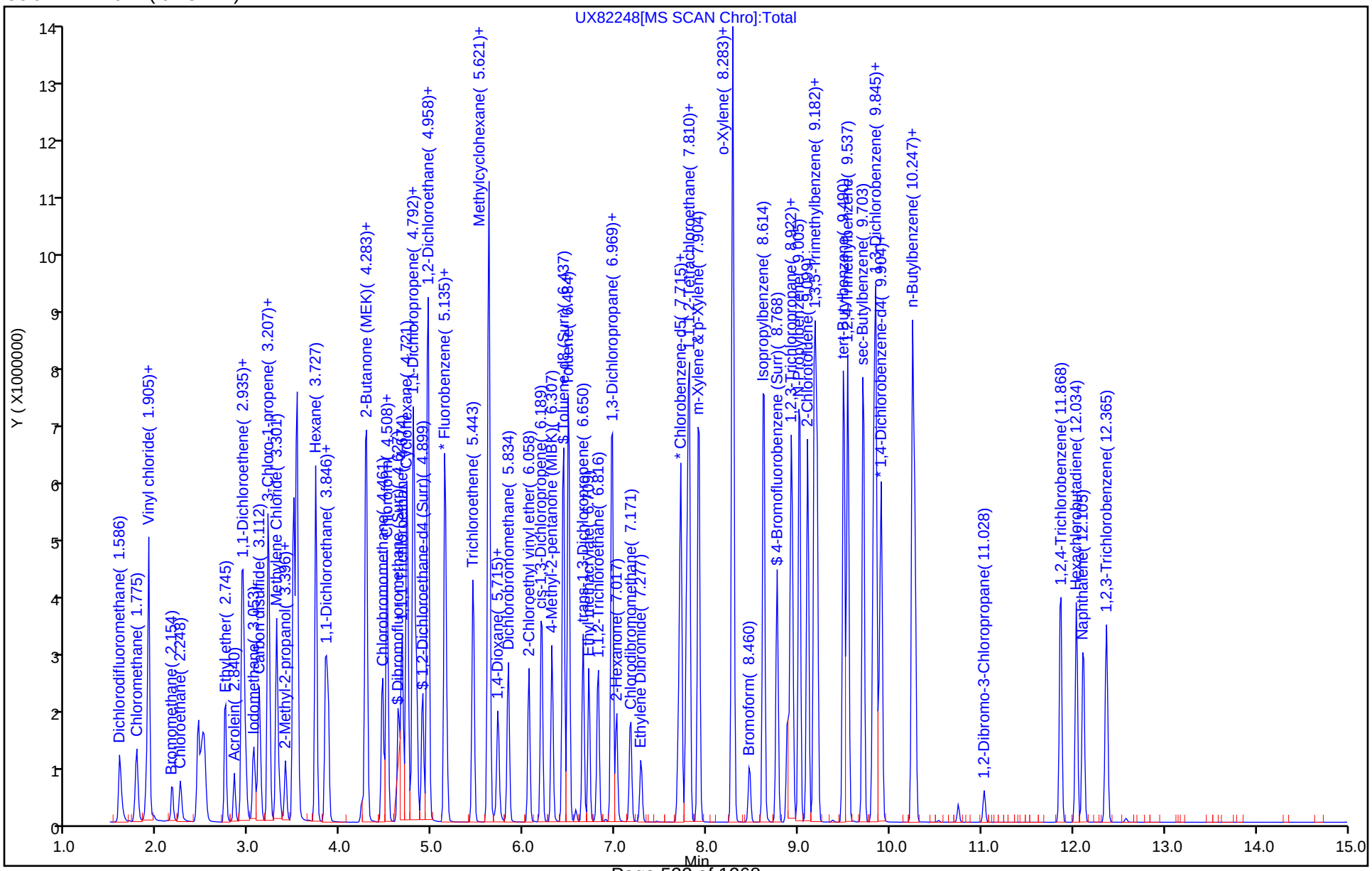
Report Date: 23-Jan-2019 02:33:34 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82248.D

Injection Date:	19-Jan-2019 05:07:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STD8260 L9			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82249.D
Lims ID: STD8260 L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 19-Jan-2019 05:31:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083802-004
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub64

Method: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 23-Jan-2019 02:33:36 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: latat Date: 19-Jan-2019 06:48:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.160	5.157	0.003	99	1016595	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.692	7.690	0.002	97	777820	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.881	9.879	0.002	97	422484	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.628	4.637	-0.009	93	901290	200.0	180.2	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.900	4.897	0.003	97	1206541	200.0	203.0	
$ 6 Toluene-d8 (Surr)	98	6.438	6.435	0.003	95	3524101	200.0	201.9	
$ 7 4-Bromofluorobenzene (Surr	95	8.769	8.766	0.003	84	1329253	200.0	202.4	
9 Dichlorodifluoromethane	85	1.587	1.596	-0.009	99	1152689	200.0	178.2	
10 Chloromethane	50	1.776	1.773	0.003	100	1450603	200.0	182.2	
11 Vinyl chloride	62	1.882	1.892	-0.010	99	988673	200.0	185.4	
12 Butadiene	54	1.906	1.903	0.003	0	1304695	200.0	188.4	
13 Bromomethane	94	2.166	2.187	-0.021	92	309787	200.0	98.3	
14 Chloroethane	64	2.249	2.282	-0.033	95	525183	200.0	148.2	
15 Dichlorofluoromethane	67	2.450	2.460	-0.010	99	1360289	200.0	167.6	
16 Trichlorofluoromethane	101	2.498	2.507	-0.009	99	1322428	200.0	168.4	
17 Ethyl ether	59	2.746	2.744	0.002	94	931909	200.0	178.9	
18 Acrolein	56	2.841	2.838	0.003	98	505501	1000.0	973.3	
19 1,1-Dichloroethene	96	2.924	2.933	-0.009	94	901625	200.0	181.9	
20 1,1,2-Trichloro-1,2,2-trif	151	2.947	2.945	0.002	94	725238	200.0	176.7	
21 Acetone	43	2.971	2.968	0.003	97	639257	400.0	394.0	
23 Iodomethane	142	3.054	3.063	-0.009	100	1493408	200.0	175.8	
24 Carbon disulfide	76	3.113	3.122	-0.009	98	2865857	200.0	202.6	
26 3-Chloro-1-propene	76	3.208	3.217	-0.009	85	600293	200.0	214.7	
27 Methyl acetate	43	3.231	3.229	0.002	100	1573740	400.0	357.3	
28 Methylene Chloride	84	3.302	3.311	-0.009	94	1028272	200.0	199.4	
29 2-Methyl-2-propanol	59	3.397	3.382	0.015	91	668214	2000.0	1602.4	
30 Acrylonitrile	53	3.492	3.489	0.003	97	3390055	2000.0	1755.0	
32 Methyl tert-butyl ether	73	3.527	3.524	0.003	97	2317542	200.0	183.4	
31 trans-1,2-Dichloroethene	96	3.527	3.524	0.003	91	1048176	200.0	176.0	
33 Hexane	86	3.740	3.737	0.003	95	312154	200.0	199.8	
34 1,1-Dichloroethane	63	3.847	3.844	0.003	98	2055925	200.0	182.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	3.870	3.868	0.002	97	2442522	200.0	228.4	
41 2,2-Dichloropropane	77	4.284	4.282	0.002	80	1075544	200.0	182.2	
39 cis-1,2-Dichloroethene	96	4.273	4.282	-0.009	90	1142201	200.0	175.5	
40 2-Butanone (MEK)	43	4.273	4.282	-0.009	59	948068	400.0	407.5	
45 Chlorobromomethane	128	4.462	4.459	0.003	91	485755	200.0	172.2	
46 Tetrahydrofuran	42	4.509	4.507	0.002	91	601930	400.0	371.2	
47 Chloroform	83	4.509	4.507	0.002	99	1887192	200.0	180.6	
48 1,1,1-Trichloroethane	97	4.675	4.672	0.003	97	1621949	200.0	199.3	
49 Cyclohexane	56	4.722	4.731	-0.009	99	2270320	200.0	197.4	
50 1,1-Dichloropropene	75	4.793	4.791	0.002	86	1500695	200.0	190.5	
51 Carbon tetrachloride	117	4.805	4.802	0.003	97	1433548	200.0	209.0	
52 Isobutyl alcohol	41	4.829	4.826	0.003	89	901087	5000.0	5058.9	
54 Benzene	78	4.959	4.956	0.003	96	4277472	200.0	180.7	
53 1,2-Dichloroethane	62	4.959	4.956	0.003	61	1622198	200.0	176.3	
56 n-Heptane	100	5.136	5.146	-0.010	97	340296	200.0	211.2	
58 Trichloroethene	130	5.456	5.453	0.003	95	1066478	200.0	183.8	
60 Methylcyclohexane	83	5.622	5.619	0.003	92	1895245	200.0	194.2	
61 1,2-Dichloropropane	63	5.622	5.631	-0.009	91	1076980	200.0	186.5	
63 Dibromomethane	93	5.716	5.725	-0.009	95	536578	200.0	186.3	
64 1,4-Dioxane	88	5.716	5.725	-0.009	44	152823	4000.0	3868.9	
65 Dichlorobromomethane	83	5.835	5.832	0.002	97	1357136	200.0	214.3	
67 2-Chloroethyl vinyl ether	63	6.059	6.057	0.002	89	861132	400.0	449.8	
68 cis-1,3-Dichloropropene	75	6.201	6.199	0.002	86	1486874	200.0	222.1	
69 4-Methyl-2-pentanone (MIBK	43	6.308	6.305	0.003	98	1939806	400.0	393.9	
70 Toluene	91	6.485	6.495	-0.009	97	4425521	200.0	195.0	
71 trans-1,3-Dichloropropene	75	6.651	6.648	0.003	95	1261260	200.0	235.8	
72 Ethyl methacrylate	69	6.710	6.719	-0.009	91	982143	200.0	212.0	
73 1,1,2-Trichloroethane	97	6.817	6.814	0.003	95	713925	200.0	179.1	
74 1,3-Dichloropropane	76	6.959	6.968	-0.009	92	1318364	200.0	187.3	
75 Tetrachloroethene	164	6.970	6.968	0.002	94	847518	200.0	184.0	
76 2-Hexanone	43	7.018	7.015	0.003	97	1320993	400.0	399.3	
78 Chlorodibromomethane	129	7.172	7.169	0.003	91	821288	200.0	218.8	
80 Ethylene Dibromide	107	7.278	7.287	-0.009	98	690948	200.0	192.4	
82 Chlorobenzene	112	7.716	7.713	0.003	91	2685140	200.0	175.9	
83 1,1,1,2-Tetrachloroethane	131	7.787	7.784	0.003	92	950034	200.0	203.7	
84 Ethylbenzene	106	7.811	7.808	0.003	99	1525226	200.0	197.7	
85 m-Xylene & p-Xylene	106	7.917	7.914	0.003	99	1877392	200.0	201.1	
86 o-Xylene	106	8.284	8.281	0.003	97	1739266	200.0	196.3	
87 Styrene	104	8.284	8.293	-0.009	84	2966508	200.0	208.8	
88 Bromoform	173	8.461	8.471	-0.010	95	434452	200.0	223.1	
89 Isopropylbenzene	105	8.627	8.624	0.003	97	4860829	200.0	205.4	
92 1,1,2,2-Tetrachloroethane	83	8.876	8.885	-0.009	98	797554	200.0	174.1	
93 Bromobenzene	156	8.923	8.920	0.003	96	1073915	200.0	179.9	
95 trans-1,4-Dichloro-2-buten	53	8.935	8.932	0.003	76	319717	200.0	209.1	
94 1,2,3-Trichloropropane	110	8.935	8.932	0.003	90	262653	200.0	199.9	
96 N-Propylbenzene	120	9.018	9.015	0.003	99	1293253	200.0	198.5	
97 2-Chlorotoluene	126	9.100	9.098	0.002	94	1079431	200.0	184.7	
98 1,3,5-Trimethylbenzene	105	9.171	9.181	-0.010	94	4076491	200.0	200.2	
99 4-Chlorotoluene	126	9.207	9.204	0.003	99	1098925	200.0	183.6	
100 tert-Butylbenzene	119	9.491	9.500	-0.009	93	3592054	200.0	205.2	
102 1,2,4-Trimethylbenzene	105	9.538	9.536	0.002	95	4178847	200.0	193.2	
103 sec-Butylbenzene	105	9.704	9.713	-0.009	96	5146354	200.0	194.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	9.822	9.820	0.002	96	2094268	200.0	173.0	
105 4-Isopropyltoluene	119	9.846	9.843	0.003	97	4333144	200.0	195.7	
106 1,4-Dichlorobenzene	146	9.905	9.902	0.003	92	2114211	200.0	200.7	
109 n-Butylbenzene	91	10.248	10.246	0.002	99	3885632	200.0	201.3	
110 1,2-Dichlorobenzene	146	10.272	10.269	0.003	95	1919256	200.0	200.4	
111 1,2-Dibromo-3-Chloropropan	157	11.029	11.026	0.003	73	116117	200.0	203.6	
113 1,2,4-Trichlorobenzene	180	11.869	11.867	0.002	94	1187910	200.0	180.1	
114 Hexachlorobutadiene	225	12.035	12.044	-0.009	95	635524	200.0	199.4	
115 Naphthalene	128	12.118	12.115	0.003	98	2450047	200.0	196.1	
116 1,2,3-Trichlorobenzene	180	12.366	12.364	0.002	95	1051400	200.0	200.8	
S 126 1,2-Dichloroethene, Total	96				0			351.5	
S 127 1,3-Dichloropropene, Total	75				0			457.9	
S 128 Xylenes, Total	106				0		400.0	397.4	
S 129 Trihalomethanes, Total	1				0		800.0	836.8	
S 157 Total BTEX	1				0		1000.0	970.7	

Reagents:

VMAROLISTDW_00281	Amount Added:	20.00	Units: uL
VMRGAS_00278	Amount Added:	20.00	Units: uL
VMRPRIMW_00318	Amount Added:	20.00	Units: uL
vmDist_H2o_00124	Amount Added:	0.00	Units:
VM568718_00012	Amount Added:	1.00	Units: uL
vm50ss_00351	Amount Added:	20.00	Units: uL

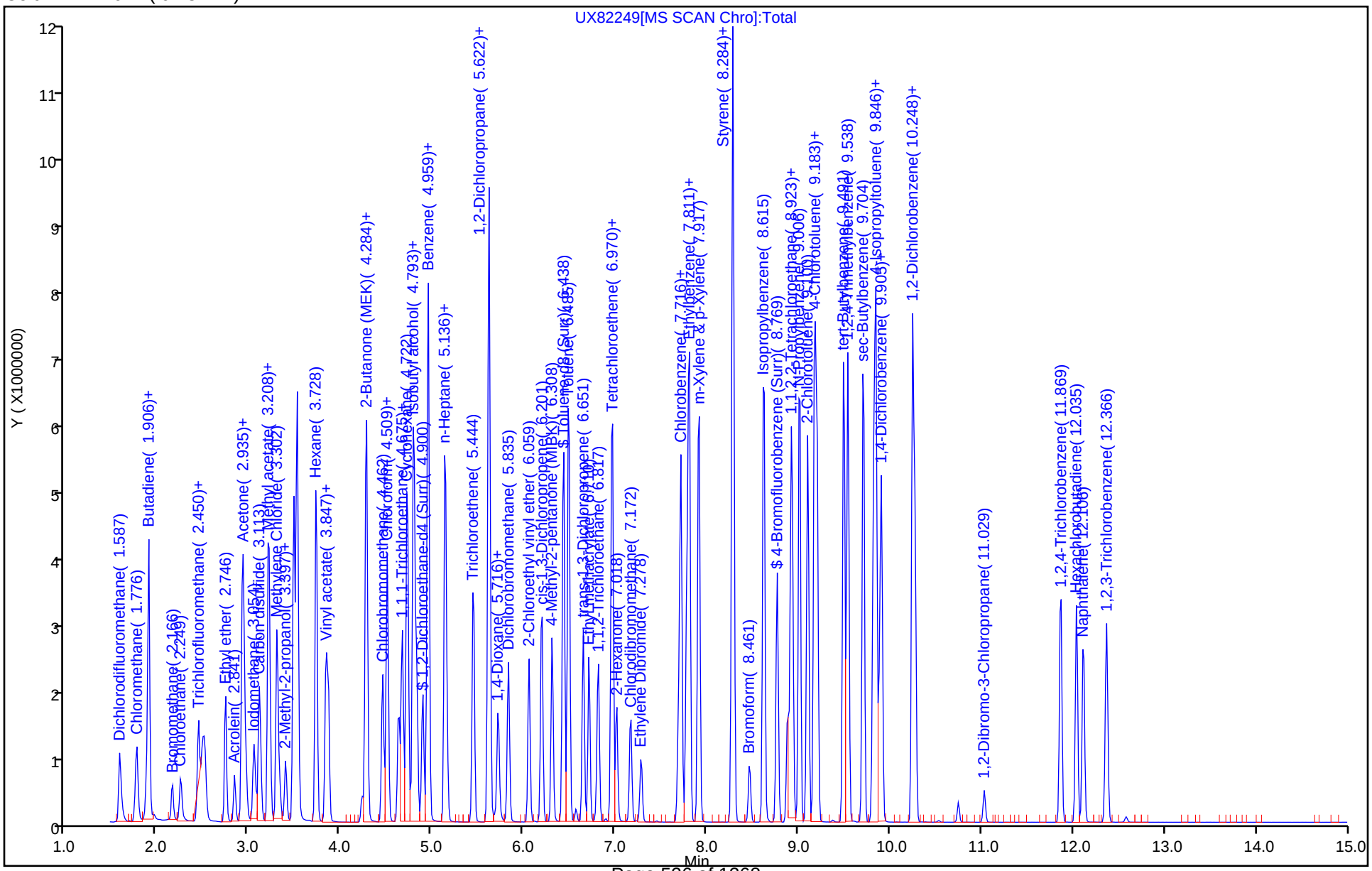
Report Date: 23-Jan-2019 02:33:37 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82249.D

Injection Date:	19-Jan-2019 05:31:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STD8260 L8			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82250.D
Lims ID: STD8260 L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 19-Jan-2019 05:54:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083802-005
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub64

Method: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 23-Jan-2019 02:33:40 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: latat Date: 19-Jan-2019 06:49:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.157	5.157	0.000	99	995560	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.689	7.690	-0.001	98	763612	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.878	9.879	-0.001	96	408905	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.636	4.637	-0.001	93	463003	100.0	94.5	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.897	4.897	0.000	99	619624	100.0	105.0	
$ 6 Toluene-d8 (Surr)	98	6.435	6.435	0.000	95	1806971	100.0	104.0	
$ 7 4-Bromofluorobenzene (Surr	95	8.766	8.766	0.000	84	689225	100.0	105.2	
9 Dichlorodifluoromethane	85	1.595	1.596	-0.001	99	613301	100.0	96.8	
10 Chloromethane	50	1.773	1.773	0.000	100	790079	100.0	101.3	
11 Vinyl chloride	62	1.891	1.892	-0.001	99	523899	100.0	100.3	
12 Butadiene	54	1.903	1.903	0.000	0	688625	100.0	101.5	
13 Bromomethane	94	2.175	2.187	-0.012	93	248910	100.0	80.6	
14 Chloroethane	64	2.270	2.282	-0.012	95	332017	100.0	95.7	
15 Dichlorofluoromethane	67	2.447	2.460	-0.013	99	767552	100.0	96.6	
16 Trichlorofluoromethane	101	2.506	2.507	-0.001	99	733749	100.0	95.4	
17 Ethyl ether	59	2.743	2.744	-0.001	96	485849	100.0	95.3	
18 Acrolein	56	2.838	2.838	0.000	98	267568	500.0	526.1	
19 1,1-Dichloroethene	96	2.932	2.933	-0.001	94	474472	100.0	97.7	
20 1,1,2-Trichloro-1,2,2-trif	151	2.944	2.945	-0.001	95	379159	100.0	94.3	
21 Acetone	43	2.968	2.968	0.000	96	348177	200.0	217.0	
23 Iodomethane	142	3.051	3.063	-0.012	99	804582	100.0	96.7	
24 Carbon disulfide	76	3.110	3.122	-0.012	99	1507348	100.0	108.8	
26 3-Chloro-1-propene	76	3.216	3.217	-0.001	85	304667	100.0	111.2	
27 Methyl acetate	43	3.228	3.229	-0.001	100	808934	200.0	187.5	
28 Methylene Chloride	84	3.311	3.311	0.000	95	545496	100.0	106.4	
29 2-Methyl-2-propanol	59	3.394	3.382	0.012	90	360387	1000.0	882.5	
30 Acrylonitrile	53	3.489	3.489	0.000	97	1796147	1000.0	949.5	
31 trans-1,2-Dichloroethene	96	3.524	3.524	0.000	91	547441	100.0	93.9	
32 Methyl tert-butyl ether	73	3.524	3.524	0.000	97	1180027	100.0	95.3	
33 Hexane	86	3.737	3.737	0.000	94	158606	100.0	103.7	
34 1,1-Dichloroethane	63	3.844	3.844	0.000	98	1059261	100.0	95.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	3.867	3.868	-0.001	97	1224670	100.0	116.9	
41 2,2-Dichloropropane	77	4.293	4.282	0.011	80	556826	100.0	96.3	
40 2-Butanone (MEK)	43	4.281	4.282	-0.001	60	507633	200.0	218.9	
39 cis-1,2-Dichloroethene	96	4.281	4.282	-0.001	89	599024	100.0	94.0	
45 Chlorobromomethane	128	4.459	4.459	0.000	91	254309	100.0	92.0	
47 Chloroform	83	4.518	4.507	0.011	99	975912	100.0	95.4	
46 Tetrahydrofuran	42	4.506	4.507	-0.001	92	313308	200.0	197.3	
48 1,1,1-Trichloroethane	97	4.672	4.672	0.000	97	841885	100.0	105.6	
49 Cyclohexane	56	4.731	4.731	0.000	98	1153229	100.0	102.4	
50 1,1-Dichloropropene	75	4.790	4.791	-0.001	86	767604	100.0	99.5	
51 Carbon tetrachloride	117	4.802	4.802	0.000	95	725145	100.0	108.0	
52 Isobutyl alcohol	41	4.826	4.826	0.000	92	480366	2500.0	2717.5	
53 1,2-Dichloroethane	62	4.956	4.956	0.000	61	835332	100.0	92.7	
54 Benzene	78	4.956	4.956	0.000	96	2205953	100.0	95.1	
56 n-Heptane	100	5.145	5.146	-0.001	97	163802	100.0	103.8	
58 Trichloroethene	130	5.453	5.453	0.000	96	553633	100.0	97.4	
60 Methylcyclohexane	83	5.618	5.619	-0.001	93	983307	100.0	102.9	
61 1,2-Dichloropropane	63	5.630	5.631	-0.001	88	544351	100.0	96.3	
64 1,4-Dioxane	88	5.725	5.725	0.000	45	82048	2000.0	2098.6	
63 Dibromomethane	93	5.713	5.725	-0.012	95	279002	100.0	98.9	
65 Dichlorobromomethane	83	5.831	5.832	-0.001	97	673036	100.0	108.5	
67 2-Chloroethyl vinyl ether	63	6.056	6.057	-0.001	89	420086	200.0	224.1	
68 cis-1,3-Dichloropropene	75	6.198	6.199	-0.001	86	717750	100.0	109.5	
69 4-Methyl-2-pentanone (MIBK	43	6.305	6.305	0.000	99	1005982	200.0	208.6	
70 Toluene	91	6.494	6.495	0.000	97	2253804	100.0	101.1	
71 trans-1,3-Dichloropropene	75	6.648	6.648	0.000	95	595006	100.0	113.3	
72 Ethyl methacrylate	69	6.719	6.719	0.000	91	498938	100.0	109.7	
73 1,1,2-Trichloroethane	97	6.814	6.814	0.000	95	378086	100.0	96.6	
75 Tetrachloroethene	164	6.967	6.968	-0.001	91	437755	100.0	96.8	
74 1,3-Dichloropropane	76	6.967	6.968	-0.001	95	664097	100.0	96.1	
76 2-Hexanone	43	7.015	7.015	0.000	97	693657	200.0	213.6	
78 Chlorodibromomethane	129	7.169	7.169	0.000	90	403241	100.0	109.5	
80 Ethylene Dibromide	107	7.287	7.287	0.000	98	359365	100.0	101.9	
82 Chlorobenzene	112	7.713	7.713	0.000	90	1382152	100.0	92.2	
83 1,1,1,2-Tetrachloroethane	131	7.784	7.784	0.000	92	489535	100.0	106.9	
84 Ethylbenzene	106	7.807	7.808	-0.001	99	777921	100.0	102.7	
85 m-Xylene & p-Xylene	106	7.914	7.914	0.000	98	941494	100.0	102.7	
86 o-Xylene	106	8.281	8.281	0.000	99	924103	100.0	106.2	
87 Styrene	104	8.293	8.293	0.000	94	1513430	100.0	108.5	
88 Bromoform	173	8.470	8.471	-0.001	95	207695	100.0	108.6	
89 Isopropylbenzene	105	8.624	8.624	0.000	97	2507224	100.0	107.9	
92 1,1,2,2-Tetrachloroethane	83	8.884	8.885	-0.001	98	419437	100.0	94.6	
93 Bromobenzene	156	8.920	8.920	0.000	95	559452	100.0	96.9	
94 1,2,3-Trichloropropane	110	8.932	8.932	0.000	90	144725	100.0	112.0	
95 trans-1,4-Dichloro-2-buten	53	8.932	8.932	0.000	77	157975	100.0	106.7	
96 N-Propylbenzene	120	9.014	9.015	-0.001	99	663676	100.0	105.2	
97 2-Chlorotoluene	126	9.097	9.098	-0.001	95	566253	100.0	100.1	
98 1,3,5-Trimethylbenzene	105	9.180	9.181	-0.001	94	2112467	100.0	107.2	
99 4-Chlorotoluene	126	9.204	9.204	0.000	99	562232	100.0	97.0	
100 tert-Butylbenzene	119	9.500	9.500	0.000	93	1849991	100.0	109.2	
102 1,2,4-Trimethylbenzene	105	9.535	9.536	-0.001	97	2153840	100.0	102.9	
103 sec-Butylbenzene	105	9.713	9.713	0.000	95	2654003	100.0	103.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	9.819	9.820	-0.001	96	1089212	100.0	92.9	
105 4-Isopropyltoluene	119	9.843	9.843	0.000	97	2240449	100.0	104.5	
106 1,4-Dichlorobenzene	146	9.902	9.902	0.000	94	1107249	100.0	107.0	
109 n-Butylbenzene	91	10.245	10.246	-0.001	98	2003408	100.0	107.2	
110 1,2-Dichlorobenzene	146	10.269	10.269	0.000	94	1003768	100.0	106.6	
111 1,2-Dibromo-3-Chloropropan	157	11.038	11.026	0.012	92	59732	100.0	108.2	
113 1,2,4-Trichlorobenzene	180	11.866	11.867	-0.001	94	591736	100.0	92.7	
114 Hexachlorobutadiene	225	12.044	12.044	0.000	96	324824	100.0	103.5	
115 Naphthalene	128	12.115	12.115	0.000	98	1253410	100.0	103.7	
116 1,2,3-Trichlorobenzene	180	12.363	12.364	-0.001	95	535536	100.0	104.1	
S 126 1,2-Dichloroethene, Total	96				0			187.9	
S 127 1,3-Dichloropropene, Total	75				0			222.8	
S 128 Xylenes, Total	106				0		200.0	209.0	
S 157 Total BTEX	1				0		500.0	508.0	
S 129 Trihalomethanes, Total	1				0		400.0	422.0	

Reagents:

VMAROLISTDW_00281	Amount Added:	10.00	Units: uL
VMRGAS_00278	Amount Added:	10.00	Units: uL
VMRPRIMW_00318	Amount Added:	10.00	Units: uL
vmDist_H2o_00124	Amount Added:	0.00	Units:
VM568718_00012	Amount Added:	1.00	Units: uL
vm50ss_00351	Amount Added:	10.00	Units: uL

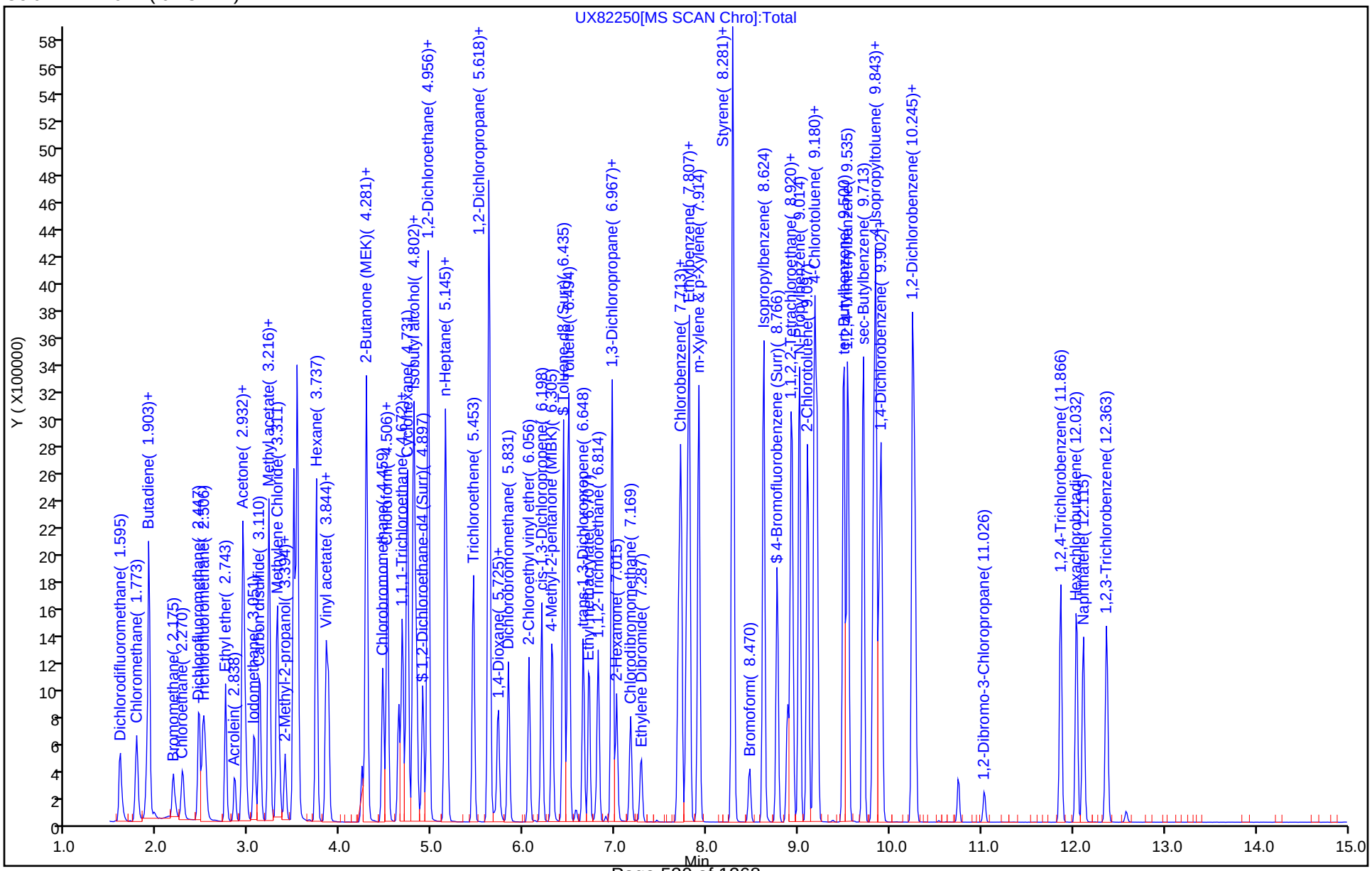
Report Date: 23-Jan-2019 02:33:41 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82250.D

Injection Date:	19-Jan-2019 05:54:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STD8260 L7			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82251.D
Lims ID: STD8260 L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 19-Jan-2019 06:17:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083802-006
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub64

Method: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 23-Jan-2019 02:33:45 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: latat Date: 19-Jan-2019 06:50:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.157	5.157	0.000	99	919305	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.690	7.690	0.000	98	717182	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.879	9.879	0.000	97	397790	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.637	4.637	0.000	93	214788	50.0	47.5	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.897	4.897	0.000	98	271933	50.0	48.3	
$ 6 Toluene-d8 (Surr)	98	6.435	6.435	0.000	95	853973	50.0	50.9	
$ 7 4-Bromofluorobenzene (Surr	95	8.766	8.766	0.000	85	337137	50.0	53.1	
9 Dichlorodifluoromethane	85	1.596	1.596	0.000	99	292828	50.0	50.1	
10 Chloromethane	50	1.773	1.773	0.000	100	358884	50.0	49.9	
11 Vinyl chloride	62	1.880	1.892	-0.012	99	242739	50.0	50.3	
12 Butadiene	54	1.903	1.903	0.000	0	315534	50.0	50.4	
13 Bromomethane	94	2.187	2.187	0.000	93	141302	50.0	49.6	
14 Chloroethane	64	2.282	2.282	0.000	95	156491	50.0	48.8	
15 Dichlorofluoromethane	67	2.460	2.460	0.000	99	374377	50.0	51.0	
16 Trichlorofluoromethane	101	2.507	2.507	0.000	99	356014	50.0	50.1	
17 Ethyl ether	59	2.744	2.744	0.000	95	232260	50.0	49.3	
18 Acrolein	56	2.838	2.838	0.000	97	128362	250.0	273.3	
19 1,1-Dichloroethene	96	2.933	2.933	0.000	95	227342	50.0	50.7	
20 1,1,2-Trichloro-1,2,2-trif	151	2.945	2.945	0.000	94	182846	50.0	49.3	
21 Acetone	43	2.968	2.968	0.000	97	172229	100.0	113.9	
23 Iodomethane	142	3.051	3.063	-0.012	100	395067	50.0	51.4	
24 Carbon disulfide	76	3.122	3.122	0.000	99	687462	50.0	53.7	
26 3-Chloro-1-propene	76	3.217	3.217	0.000	84	138834	50.0	54.9	
27 Methyl acetate	43	3.229	3.229	0.000	100	391378	100.0	98.3	
28 Methylene Chloride	84	3.311	3.311	0.000	94	275071	50.0	56.6	
29 2-Methyl-2-propanol	59	3.394	3.382	0.012	89	172918	500.0	458.5	
30 Acrylonitrile	53	3.489	3.489	0.000	97	866597	500.0	496.1	
32 Methyl tert-butyl ether	73	3.524	3.524	0.000	96	583939	50.0	51.1	
31 trans-1,2-Dichloroethene	96	3.524	3.524	0.000	91	261847	50.0	48.6	
33 Hexane	86	3.737	3.737	0.000	95	71375	50.0	50.5	
34 1,1-Dichloroethane	63	3.844	3.844	0.000	98	501114	50.0	49.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	3.868	3.868	0.000	97	520852	50.0	53.9	
41 2,2-Dichloropropane	77	4.294	4.282	0.012	79	265576	50.0	49.8	
39 cis-1,2-Dichloroethene	96	4.282	4.282	0.000	89	289978	50.0	49.3	
40 2-Butanone (MEK)	43	4.282	4.282	0.000	61	251443	100.0	113.4	
45 Chlorobromomethane	128	4.459	4.459	0.000	91	123204	50.0	48.3	
46 Tetrahydrofuran	42	4.507	4.507	0.000	91	148763	100.0	101.4	
47 Chloroform	83	4.518	4.507	0.011	99	470827	50.0	49.8	
48 1,1,1-Trichloroethane	97	4.672	4.672	0.000	97	385117	50.0	52.3	
49 Cyclohexane	56	4.731	4.731	0.000	99	544239	50.0	52.3	
50 1,1-Dichloropropene	75	4.791	4.791	0.000	88	366985	50.0	51.5	
51 Carbon tetrachloride	117	4.802	4.802	0.000	93	327343	50.0	52.8	
52 Isobutyl alcohol	41	4.826	4.826	0.000	91	238286	1250.0	1422.9	
54 Benzene	78	4.956	4.956	0.000	95	1050560	50.0	49.1	
53 1,2-Dichloroethane	62	4.956	4.956	0.000	62	403994	50.0	48.6	
56 n-Heptane	100	5.146	5.146	0.000	97	75994	50.0	52.2	
58 Trichloroethene	130	5.453	5.453	0.000	95	265284	50.0	50.6	
60 Methylcyclohexane	83	5.619	5.619	0.000	92	459758	50.0	52.1	
61 1,2-Dichloropropane	63	5.631	5.631	0.000	90	261029	50.0	50.0	
63 Dibromomethane	93	5.714	5.725	-0.011	94	134797	50.0	51.7	
64 1,4-Dioxane	88	5.725	5.725	0.000	46	39306	1000.0	1064.9	
65 Dichlorobromomethane	83	5.832	5.832	0.000	97	303386	50.0	53.0	
67 2-Chloroethyl vinyl ether	63	6.057	6.057	0.000	88	186939	100.0	108.0	
68 cis-1,3-Dichloropropene	75	6.199	6.199	0.000	86	320336	50.0	52.9	
69 4-Methyl-2-pentanone (MIBK	43	6.305	6.305	0.000	99	485449	100.0	109.0	
70 Toluene	91	6.494	6.495	0.000	97	1064400	50.0	50.9	
71 trans-1,3-Dichloropropene	75	6.648	6.648	0.000	95	258365	50.0	52.4	
72 Ethyl methacrylate	69	6.719	6.719	0.000	92	234330	50.0	54.9	
73 1,1,2-Trichloroethane	97	6.814	6.814	0.000	96	178075	50.0	48.4	
74 1,3-Dichloropropane	76	6.968	6.968	0.000	94	323168	50.0	49.8	
75 Tetrachloroethene	164	6.968	6.968	0.000	90	207139	50.0	48.8	
76 2-Hexanone	43	7.015	7.015	0.000	97	337461	100.0	110.6	
78 Chlorodibromomethane	129	7.169	7.169	0.000	90	179448	50.0	51.9	
80 Ethylene Dibromide	107	7.287	7.287	0.000	97	170396	50.0	51.4	
82 Chlorobenzene	112	7.713	7.713	0.000	89	667303	50.0	47.4	
83 1,1,1,2-Tetrachloroethane	131	7.784	7.784	0.000	91	227762	50.0	53.0	
84 Ethylbenzene	106	7.808	7.808	0.000	99	369629	50.0	52.0	
85 m-Xylene & p-Xylene	106	7.914	7.914	0.000	98	443238	50.0	51.5	
86 o-Xylene	106	8.281	8.281	0.000	98	445423	50.0	54.5	
87 Styrene	104	8.293	8.293	0.000	94	724405	50.0	55.3	
88 Bromoform	173	8.471	8.471	0.000	95	92019	50.0	51.2	
89 Isopropylbenzene	105	8.624	8.624	0.000	97	1184341	50.0	54.3	
92 1,1,2,2-Tetrachloroethane	83	8.885	8.885	0.000	99	209859	50.0	48.6	
93 Bromobenzene	156	8.920	8.920	0.000	96	276500	50.0	49.2	
95 trans-1,4-Dichloro-2-buten	53	8.932	8.932	0.000	68	74935	50.0	52.0	
94 1,2,3-Trichloropropane	110	8.932	8.932	0.000	90	74268	50.0	57.1	
96 N-Propylbenzene	120	9.015	9.015	0.000	99	316895	50.0	51.7	
97 2-Chlorotoluene	126	9.098	9.098	0.000	95	271008	50.0	49.3	
98 1,3,5-Trimethylbenzene	105	9.181	9.181	0.000	94	1017132	50.0	53.1	
99 4-Chlorotoluene	126	9.204	9.204	0.000	99	284290	50.0	50.4	
100 tert-Butylbenzene	119	9.500	9.500	0.000	94	902718	50.0	54.8	
102 1,2,4-Trimethylbenzene	105	9.536	9.536	0.000	98	1051389	50.0	51.6	
103 sec-Butylbenzene	105	9.713	9.713	0.000	95	1305055	50.0	52.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	9.820	9.820	0.000	96	547646	50.0	48.0	
105 4-Isopropyltoluene	119	9.843	9.843	0.000	97	1094704	50.0	52.5	
106 1,4-Dichlorobenzene	146	9.902	9.902	0.000	91	550215	50.0	52.9	
109 n-Butylbenzene	91	10.245	10.246	-0.001	98	972564	50.0	53.5	
110 1,2-Dichlorobenzene	146	10.269	10.269	0.000	94	506486	50.0	53.5	
111 1,2-Dibromo-3-Chloropropan	157	11.038	11.026	0.012	76	24978	50.0	46.5	
113 1,2,4-Trichlorobenzene	180	11.867	11.867	0.000	95	281754	50.0	45.4	
114 Hexachlorobutadiene	225	12.044	12.044	0.000	95	164716	50.0	52.1	
115 Naphthalene	128	12.115	12.115	0.000	98	590846	50.0	50.2	
116 1,2,3-Trichlorobenzene	180	12.364	12.364	0.000	94	260813	50.0	50.5	
S 126 1,2-Dichloroethene, Total	96				0			97.9	
S 127 1,3-Dichloropropene, Total	75				0			105.3	
S 128 Xylenes, Total	106				0		100.0	106.0	
S 129 Trihalomethanes, Total	1				0		200.0	205.9	
S 157 Total BTEX	1				0		250.0	257.9	

Reagents:

VMAROLISTDW_00281	Amount Added:	5.00	Units: uL
VMRGAS_00278	Amount Added:	5.00	Units: uL
VMRPRIMW_00318	Amount Added:	5.00	Units: uL
vmDist_H2o_00124	Amount Added:	0.00	Units:
VM568718_00012	Amount Added:	1.00	Units: uL
vm50ss_00351	Amount Added:	5.00	Units: uL

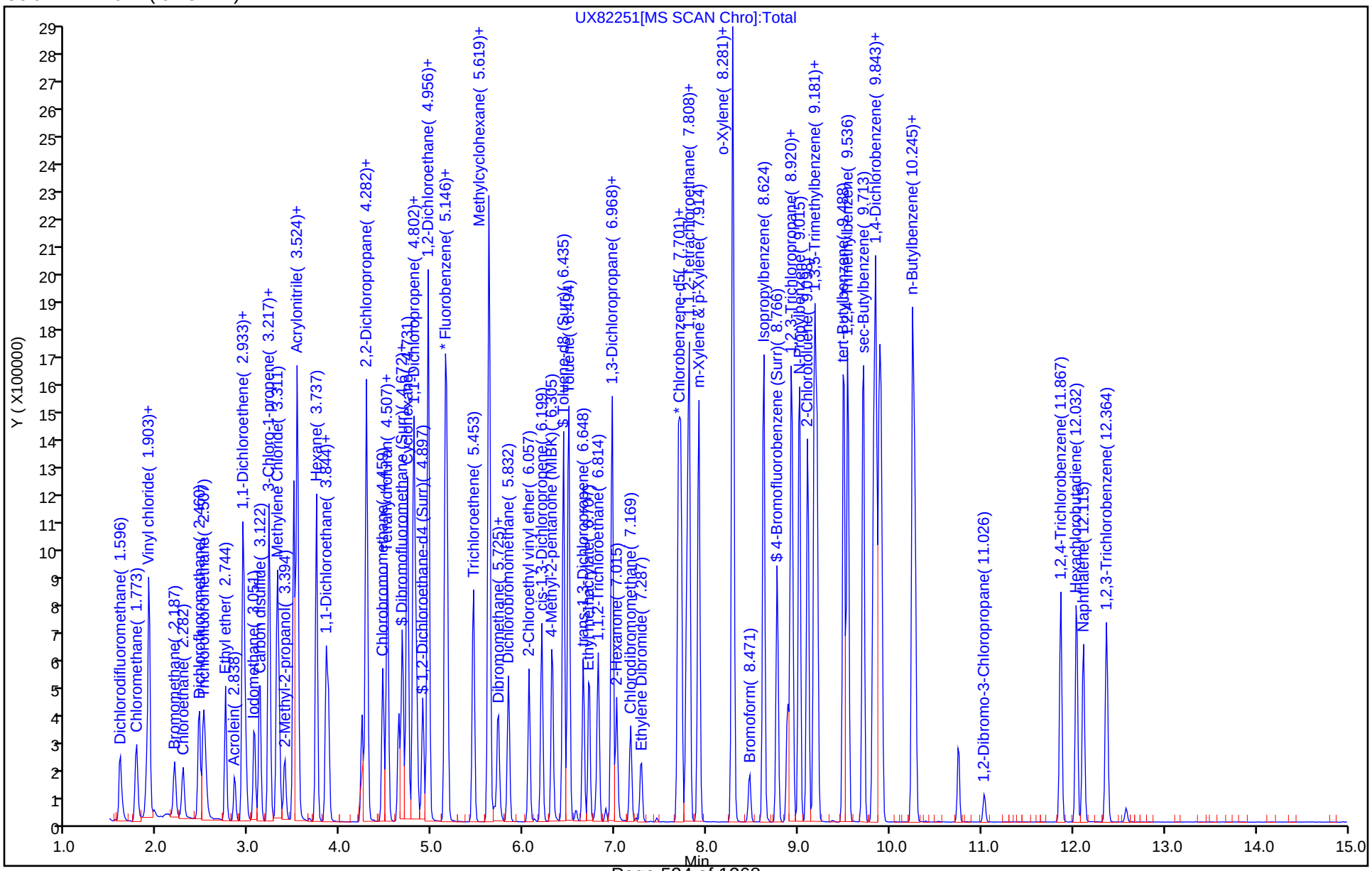
Report Date: 23-Jan-2019 02:33:45 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82251.D

Injection Date:	19-Jan-2019 06:17:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STD8260 L6			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82252.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 19-Jan-2019 06:39:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083802-007
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub64

Method: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 23-Jan-2019 02:33:48 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: latat Date: 23-Jan-2019 01:40:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.157	5.157	0.000	99	897871	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.690	7.690	0.000	97	684242	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.879	9.879	0.000	96	376583	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.637	4.637	0.000	93	90472	20.0	20.5	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.897	4.897	0.000	94	128746	20.0	21.8	
$ 6 Toluene-d8 (Surr)	98	6.435	6.435	0.000	95	366348	20.0	21.3	
$ 7 4-Bromofluorobenzene (Surr	95	8.766	8.766	0.000	85	139730	20.0	21.1	
9 Dichlorodifluoromethane	85	1.596	1.596	0.000	99	115008	20.0	20.1	
10 Chloromethane	50	1.773	1.773	0.000	99	131348	20.0	18.7	
11 Vinyl chloride	62	1.892	1.892	0.000	99	92072	20.0	19.6	
12 Butadiene	54	1.903	1.903	0.000	0	118784	20.0	19.4	
13 Bromomethane	94	2.187	2.187	0.000	92	54840	20.0	19.7	
14 Chloroethane	64	2.282	2.282	0.000	95	59059	20.0	18.9	
15 Dichlorofluoromethane	67	2.460	2.460	0.000	97	138236	20.0	19.3	
16 Trichlorofluoromethane	101	2.507	2.507	0.000	98	135988	20.0	19.6	
17 Ethyl ether	59	2.744	2.744	0.000	95	93621	20.0	20.4	
18 Acrolein	56	2.838	2.838	0.000	98	50180	100.0	109.4	
19 1,1-Dichloroethene	96	2.933	2.933	0.000	96	87992	20.0	20.1	
20 1,1,2-Trichloro-1,2,2-trif	151	2.945	2.945	0.000	92	75032	20.0	20.7	
21 Acetone	43	2.968	2.968	0.000	97	68271	40.0	43.3	
23 Iodomethane	142	3.063	3.063	0.000	100	145243	20.0	19.4	
24 Carbon disulfide	76	3.122	3.122	0.000	99	235509	20.0	18.9	
26 3-Chloro-1-propene	76	3.217	3.217	0.000	84	51530	20.0	20.9	
27 Methyl acetate	43	3.229	3.229	0.000	100	152229	40.0	39.1	
28 Methylene Chloride	84	3.311	3.311	0.000	93	109380	20.0	21.0	
29 2-Methyl-2-propanol	59	3.382	3.382	0.000	90	73851	200.0	200.5	
30 Acrylonitrile	53	3.489	3.489	0.000	98	343571	200.0	201.4	
31 trans-1,2-Dichloroethene	96	3.524	3.524	0.000	82	101925	20.0	19.4	
32 Methyl tert-butyl ether	73	3.524	3.524	0.000	95	229536	20.0	20.6	
33 Hexane	86	3.737	3.737	0.000	95	27910	20.0	20.2	
34 1,1-Dichloroethane	63	3.844	3.844	0.000	98	196314	20.0	19.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	3.868	3.868	0.000	97	194929	20.0	20.6	
41 2,2-Dichloropropane	77	4.282	4.282	0.000	76	99004	20.0	19.0	
40 2-Butanone (MEK)	43	4.282	4.282	0.000	60	101843	40.0	42.0	
39 cis-1,2-Dichloroethene	96	4.282	4.282	0.000	89	113393	20.0	19.7	
45 Chlorobromomethane	128	4.459	4.459	0.000	91	48022	20.0	19.3	
47 Chloroform	83	4.507	4.507	0.000	99	183353	20.0	19.9	
46 Tetrahydrofuran	42	4.507	4.507	0.000	92	57707	40.0	40.3	
48 1,1,1-Trichloroethane	97	4.672	4.672	0.000	97	146986	20.0	20.4	
49 Cyclohexane	56	4.731	4.731	0.000	98	205197	20.0	20.2	
50 1,1-Dichloropropene	75	4.791	4.791	0.000	87	144216	20.0	20.7	
51 Carbon tetrachloride	117	4.802	4.802	0.000	97	122224	20.0	20.2	
52 Isobutyl alcohol	41	4.826	4.826	0.000	91	94165	500.0	528.2	
53 1,2-Dichloroethane	62	4.956	4.956	0.000	61	159066	20.0	19.6	
54 Benzene	78	4.956	4.956	0.000	96	414636	20.0	19.8	
56 n-Heptane	100	5.146	5.146	0.000	95	30303	20.0	21.3	
58 Trichloroethene	130	5.453	5.453	0.000	95	104244	20.0	20.3	
60 Methylcyclohexane	83	5.619	5.619	0.000	94	173698	20.0	20.1	
61 1,2-Dichloropropane	63	5.631	5.631	0.000	86	103532	20.0	20.3	
64 1,4-Dioxane	88	5.725	5.725	0.000	46	14781	400.0	379.6	
63 Dibromomethane	93	5.725	5.725	0.000	94	52170	20.0	20.5	
65 Dichlorobromomethane	83	5.832	5.832	0.000	97	112264	20.0	20.1	
67 2-Chloroethyl vinyl ether	63	6.057	6.057	0.000	88	69197	40.0	40.9	
68 cis-1,3-Dichloropropene	75	6.199	6.199	0.000	85	110029	20.0	18.6	
69 4-Methyl-2-pentanone (MIBK	43	6.305	6.305	0.000	98	186305	40.0	42.8	
70 Toluene	91	6.495	6.495	0.000	98	415302	20.0	20.8	
71 trans-1,3-Dichloropropene	75	6.648	6.648	0.000	94	88851	20.0	18.9	
72 Ethyl methacrylate	69	6.719	6.719	0.000	92	85263	20.0	20.9	
73 1,1,2-Trichloroethane	97	6.814	6.814	0.000	96	71494	20.0	20.4	
75 Tetrachloroethene	164	6.968	6.968	0.000	91	81911	20.0	20.2	
74 1,3-Dichloropropane	76	6.968	6.968	0.000	95	129206	20.0	20.9	
76 2-Hexanone	43	7.015	7.015	0.000	97	129493	40.0	44.5	
78 Chlorodibromomethane	129	7.169	7.169	0.000	89	65358	20.0	19.8	
80 Ethylene Dibromide	107	7.287	7.287	0.000	99	65897	20.0	20.9	
82 Chlorobenzene	112	7.713	7.713	0.000	90	265134	20.0	19.7	
83 1,1,1,2-Tetrachloroethane	131	7.784	7.784	0.000	91	85159	20.0	20.8	
84 Ethylbenzene	106	7.808	7.808	0.000	98	147321	20.0	21.7	
85 m-Xylene & p-Xylene	106	7.914	7.914	0.000	99	174900	20.0	21.3	
86 o-Xylene	106	8.281	8.281	0.000	98	175931	20.0	22.6	
87 Styrene	104	8.293	8.293	0.000	94	266919	20.0	21.4	
88 Bromoform	173	8.471	8.471	0.000	95	30664	20.0	17.9	
89 Isopropylbenzene	105	8.624	8.624	0.000	97	453233	20.0	21.8	
92 1,1,2,2-Tetrachloroethane	83	8.885	8.885	0.000	97	86258	20.0	21.1	
93 Bromobenzene	156	8.920	8.920	0.000	95	112539	20.0	21.2	
94 1,2,3-Trichloropropane	110	8.932	8.932	0.000	91	30691	20.0	22.6	
95 trans-1,4-Dichloro-2-buten	53	8.932	8.932	0.000	67	29385	20.0	21.6	
96 N-Propylbenzene	120	9.015	9.015	0.000	99	127238	20.0	21.9	
97 2-Chlorotoluene	126	9.098	9.098	0.000	95	110563	20.0	21.2	
98 1,3,5-Trimethylbenzene	105	9.181	9.181	0.000	93	406682	20.0	22.4	
99 4-Chlorotoluene	126	9.204	9.204	0.000	99	114018	20.0	21.4	
100 tert-Butylbenzene	119	9.500	9.500	0.000	94	346094	20.0	22.2	
102 1,2,4-Trimethylbenzene	105	9.536	9.536	0.000	98	419448	20.0	21.8	
103 sec-Butylbenzene	105	9.713	9.713	0.000	95	512647	20.0	21.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	9.820	9.820	0.000	95	224970	20.0	20.8	
105 4-Isopropyltoluene	119	9.843	9.843	0.000	97	432939	20.0	21.9	
106 1,4-Dichlorobenzene	146	9.902	9.902	0.000	93	230156	20.0	21.4	
109 n-Butylbenzene	91	10.246	10.246	0.000	98	379229	20.0	22.0	
110 1,2-Dichlorobenzene	146	10.269	10.269	0.000	95	212964	20.0	21.7	
111 1,2-Dibromo-3-Chloropropan	157	11.026	11.026	0.000	67	10051	20.0	19.8	
113 1,2,4-Trichlorobenzene	180	11.867	11.867	0.000	94	115119	20.0	19.6	
114 Hexachlorobutadiene	225	12.044	12.044	0.000	95	75454	20.0	23.2	
115 Naphthalene	128	12.115	12.115	0.000	98	234332	20.0	21.0	
116 1,2,3-Trichlorobenzene	180	12.364	12.364	0.000	95	119355	20.0	22.7	
S 128 Xylenes, Total	106				0		40.0	43.9	
S 157 Total BTEX	1				0		100.0	106.2	
S 129 Trihalomethanes, Total	1				0		80.0	77.6	

Reagents:

VMAROLISTDW_00281	Amount Added:	2.00	Units: uL
VMRGAS_00278	Amount Added:	2.00	Units: uL
VMRPRIMW_00318	Amount Added:	2.00	Units: uL
vmDist_H2o_00124	Amount Added:	0.00	Units:
VM568718_00012	Amount Added:	1.00	Units: uL
vm50ss_00351	Amount Added:	2.00	Units: uL

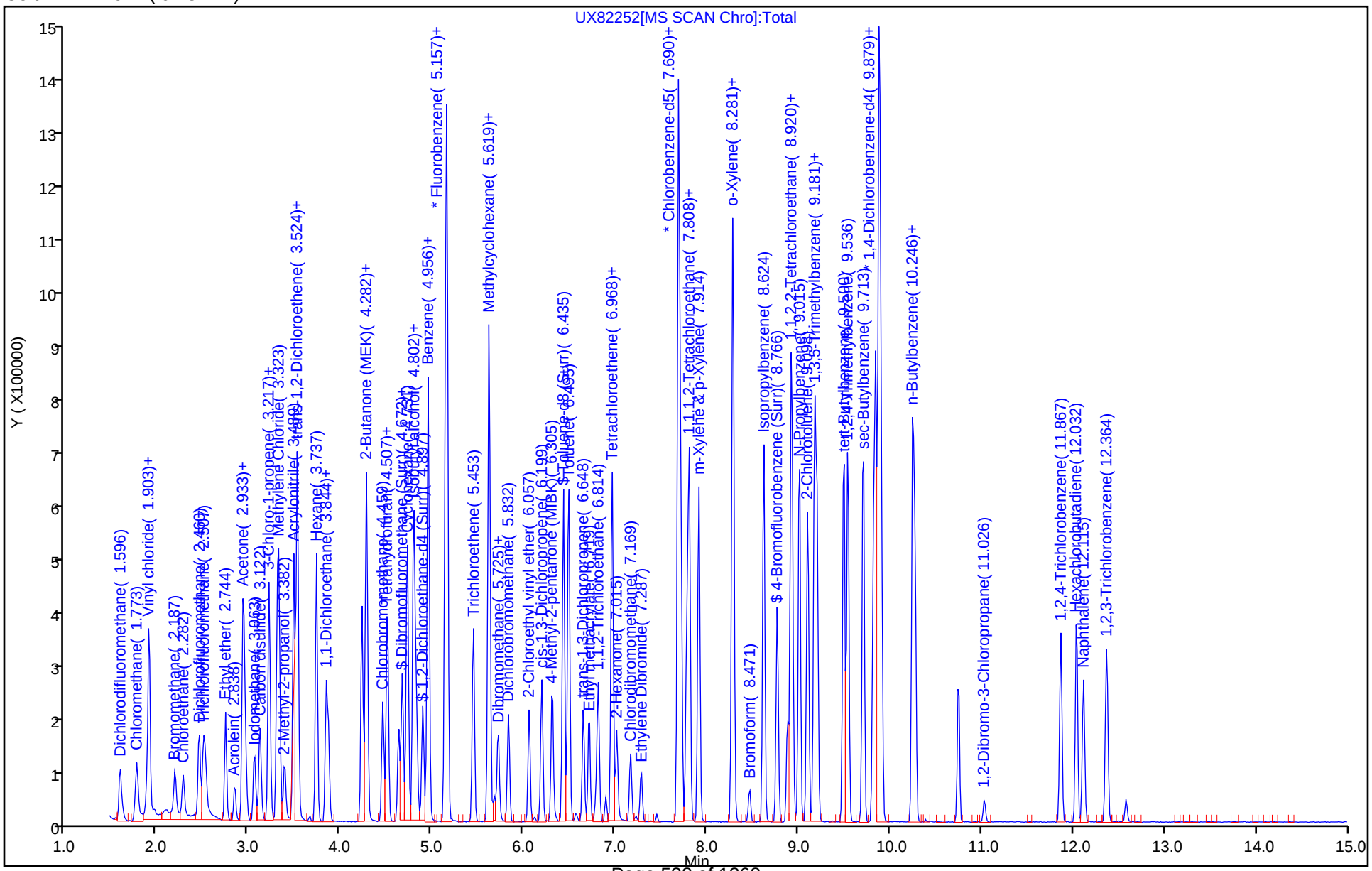
Report Date: 23-Jan-2019 02:33:49 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82252.D

Injection Date:	19-Jan-2019 06:39:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	ICIS			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82253.D
Lims ID: STD8260 L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 19-Jan-2019 07:03:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083802-008
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub64

Method: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 23-Jan-2019 02:33:51 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: latat Date: 23-Jan-2019 01:42:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.168	5.157	0.011	99	907916	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.688	7.690	-0.002	98	700517	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.889	9.879	0.010	97	385715	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.635	4.637	-0.002	91	48754	10.0	10.9	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.895	4.897	-0.002	96	68857	10.0	10.1	
$ 6 Toluene-d8 (Surr)	98	6.434	6.435	-0.001	95	193432	10.0	9.57	
$ 7 4-Bromofluorobenzene (Surr	95	8.765	8.766	-0.001	86	76882	10.0	9.69	
9 Dichlorodifluoromethane	85	1.594	1.596	-0.002	99	57766	10.0	10.0	
10 Chloromethane	50	1.772	1.773	-0.001	100	63416	10.0	8.92	
11 Vinyl chloride	62	1.890	1.892	-0.002	100	47408	10.0	9.96	
12 Butadiene	54	1.914	1.903	0.011	0	59239	10.0	9.58	
13 Bromomethane	94	2.186	2.187	-0.001	94	27924	10.0	9.92	
14 Chloroethane	64	2.280	2.282	-0.002	95	30761	10.0	9.72	
15 Dichlorofluoromethane	67	2.458	2.460	-0.002	99	72053	10.0	9.94	
16 Trichlorofluoromethane	101	2.505	2.507	-0.002	99	71058	10.0	10.1	
17 Ethyl ether	59	2.742	2.744	-0.002	94	45067	10.0	9.69	
18 Acrolein	56	2.848	2.838	0.010	95	22671	50.0	48.9	
19 1,1-Dichloroethene	96	2.931	2.933	-0.002	95	41983	10.0	9.48	
20 1,1,2-Trichloro-1,2,2-trif	151	2.943	2.945	-0.002	92	34010	10.0	9.28	
21 Acetone	43	2.967	2.968	-0.001	97	36888	20.0	20.9	
23 Iodomethane	142	3.061	3.063	-0.002	99	71718	10.0	9.45	
24 Carbon disulfide	76	3.120	3.122	-0.002	99	109221	10.0	8.65	
26 3-Chloro-1-propene	76	3.215	3.217	-0.002	84	22716	10.0	9.10	
27 Methyl acetate	43	3.227	3.229	-0.002	100	74795	20.0	19.0	
28 Methylene Chloride	84	3.310	3.311	-0.001	94	58861	10.0	9.57	
29 2-Methyl-2-propanol	59	3.393	3.382	0.011	88	35633	100.0	95.7	
30 Acrylonitrile	53	3.487	3.489	-0.002	98	166069	100.0	96.3	
32 Methyl tert-butyl ether	73	3.535	3.524	0.011	94	106189	10.0	9.41	
31 trans-1,2-Dichloroethene	96	3.523	3.524	-0.001	88	50085	10.0	9.42	
33 Hexane	86	3.736	3.737	-0.001	93	14226	10.0	10.2	
34 1,1-Dichloroethane	63	3.842	3.844	-0.002	98	97781	10.0	9.69	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	3.866	3.868	-0.002	98	85527	10.0	8.95	
41 2,2-Dichloropropane	77	4.292	4.282	0.010	75	51244	10.0	9.72	
39 cis-1,2-Dichloroethene	96	4.280	4.282	-0.002	88	57980	10.0	9.98	
40 2-Butanone (MEK)	43	4.280	4.282	-0.002	59	53225	20.0	17.5	
45 Chlorobromomethane	128	4.469	4.459	0.010	89	23429	10.0	9.30	
46 Tetrahydrofuran	42	4.505	4.507	-0.002	90	27733	20.0	19.1	
47 Chloroform	83	4.517	4.507	0.010	98	91375	10.0	9.79	
48 1,1,1-Trichloroethane	97	4.671	4.672	-0.001	97	68564	10.0	9.43	
49 Cyclohexane	56	4.730	4.731	-0.001	98	96511	10.0	9.40	
50 1,1-Dichloropropene	75	4.801	4.791	0.010	87	67732	10.0	9.63	
51 Carbon tetrachloride	117	4.813	4.802	0.011	97	55367	10.0	9.04	
52 Isobutyl alcohol	41	4.824	4.826	-0.002	93	45581	250.0	211.3	
54 Benzene	78	4.955	4.956	-0.001	95	203848	10.0	9.64	
53 1,2-Dichloroethane	62	4.955	4.956	-0.001	62	77699	10.0	9.45	
56 n-Heptane	100	5.144	5.146	-0.002	95	13846	10.0	9.62	
58 Trichloroethene	130	5.452	5.453	-0.001	96	50223	10.0	9.69	
60 Methylcyclohexane	83	5.617	5.619	-0.002	90	83782	10.0	9.61	
61 1,2-Dichloropropane	63	5.629	5.631	-0.002	89	51202	10.0	9.93	
63 Dibromomethane	93	5.724	5.725	-0.001	91	24076	10.0	9.36	
64 1,4-Dioxane	88	5.724	5.725	-0.001	45	8067	200.0	182.1	
65 Dichlorobromomethane	83	5.830	5.832	-0.002	96	53224	10.0	9.41	
67 2-Chloroethyl vinyl ether	63	6.055	6.057	-0.002	87	30938	20.0	18.1	
68 cis-1,3-Dichloropropene	75	6.197	6.199	-0.002	85	49277	10.0	8.24	
69 4-Methyl-2-pentanone (MIBK	43	6.315	6.305	0.010	99	86147	20.0	19.6	
70 Toluene	91	6.493	6.495	-0.001	97	201056	10.0	9.83	
71 trans-1,3-Dichloropropene	75	6.658	6.648	0.010	92	36035	10.0	7.48	
72 Ethyl methacrylate	69	6.718	6.719	-0.001	89	34442	10.0	8.25	
73 1,1,2-Trichloroethane	97	6.812	6.814	-0.002	96	34209	10.0	9.53	
74 1,3-Dichloropropane	76	6.966	6.968	-0.002	92	64006	10.0	10.1	
75 Tetrachloroethene	164	6.966	6.968	-0.002	87	41070	10.0	9.90	
76 2-Hexanone	43	7.013	7.015	-0.002	95	59884	20.0	20.1	
78 Chlorodibromomethane	129	7.167	7.169	-0.002	90	26460	10.0	7.83	
80 Ethylene Dibromide	107	7.286	7.287	-0.001	99	30559	10.0	9.45	
82 Chlorobenzene	112	7.712	7.713	-0.001	92	128734	10.0	9.37	
83 1,1,1,2-Tetrachloroethane	131	7.783	7.784	-0.001	89	38675	10.0	9.21	
84 Ethylbenzene	106	7.806	7.808	-0.002	98	69868	10.0	10.1	
85 m-Xylene & p-Xylene	106	7.913	7.914	-0.001	98	82219	10.0	9.78	
86 o-Xylene	106	8.280	8.281	-0.001	98	81247	10.0	10.2	
87 Styrene	104	8.291	8.293	-0.002	93	130133	10.0	10.2	
88 Bromoform	173	8.469	8.471	-0.002	93	15352	10.0	8.75	
89 Isopropylbenzene	105	8.623	8.624	-0.001	97	207440	10.0	9.73	
92 1,1,2,2-Tetrachloroethane	83	8.883	8.885	-0.002	96	43184	10.0	10.3	
93 Bromobenzene	156	8.919	8.920	-0.001	91	54177	10.0	9.94	
95 trans-1,4-Dichloro-2-buten	53	8.930	8.932	-0.002	69	13339	10.0	9.55	
94 1,2,3-Trichloropropane	110	8.930	8.932	-0.002	93	15871	10.0	9.32	
96 N-Propylbenzene	120	9.013	9.015	-0.002	99	60572	10.0	10.2	
97 2-Chlorotoluene	126	9.108	9.098	0.010	95	53404	10.0	10.0	
98 1,3,5-Trimethylbenzene	105	9.179	9.181	-0.002	94	186741	10.0	10.0	
99 4-Chlorotoluene	126	9.203	9.204	-0.001	99	55489	10.0	10.2	
100 tert-Butylbenzene	119	9.498	9.500	-0.002	94	159687	10.0	10.0	
102 1,2,4-Trimethylbenzene	105	9.546	9.536	0.010	97	198069	10.0	10.0	
103 sec-Butylbenzene	105	9.711	9.713	-0.002	95	238400	10.0	9.88	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	9.818	9.820	-0.002	97	111829	10.0	10.1	
105 4-Isopropyltoluene	119	9.842	9.843	-0.001	97	200560	10.0	9.92	
106 1,4-Dichlorobenzene	146	9.913	9.902	0.010	94	119855	10.0	9.11	
109 n-Butylbenzene	91	10.244	10.246	-0.002	99	174431	10.0	9.90	
110 1,2-Dichlorobenzene	146	10.279	10.269	0.010	96	110330	10.0	9.15	
111 1,2-Dibromo-3-Chloropropan	157	11.037	11.026	0.011	62	5090	10.0	9.77	
113 1,2,4-Trichlorobenzene	180	11.865	11.867	-0.002	94	57362	10.0	9.52	
114 Hexachlorobutadiene	225	12.042	12.044	-0.002	95	37778	10.0	9.36	
115 Naphthalene	128	12.113	12.115	-0.002	97	110374	10.0	9.68	
116 1,2,3-Trichlorobenzene	180	12.374	12.364	0.010	95	59930	10.0	9.44	
S 126 1,2-Dichloroethene, Total	96				0			19.4	
S 127 1,3-Dichloropropene, Total	75				0			15.7	
S 128 Xylenes, Total	106				0		20.0	20.0	
S 129 Trihalomethanes, Total	1				0		40.0	35.8	
S 157 Total BTEX	1				0		50.0	49.5	

Reagents:

VMAROLISTDW_00281	Amount Added:	1.00	Units: uL
VMRGAS_00278	Amount Added:	1.00	Units: uL
VMRPRIMW_00318	Amount Added:	1.00	Units: uL
vmDist_H2o_00124	Amount Added:	0.00	Units:
VM568718_00012	Amount Added:	1.00	Units: uL
vm50ss_00351	Amount Added:	1.00	Units: uL

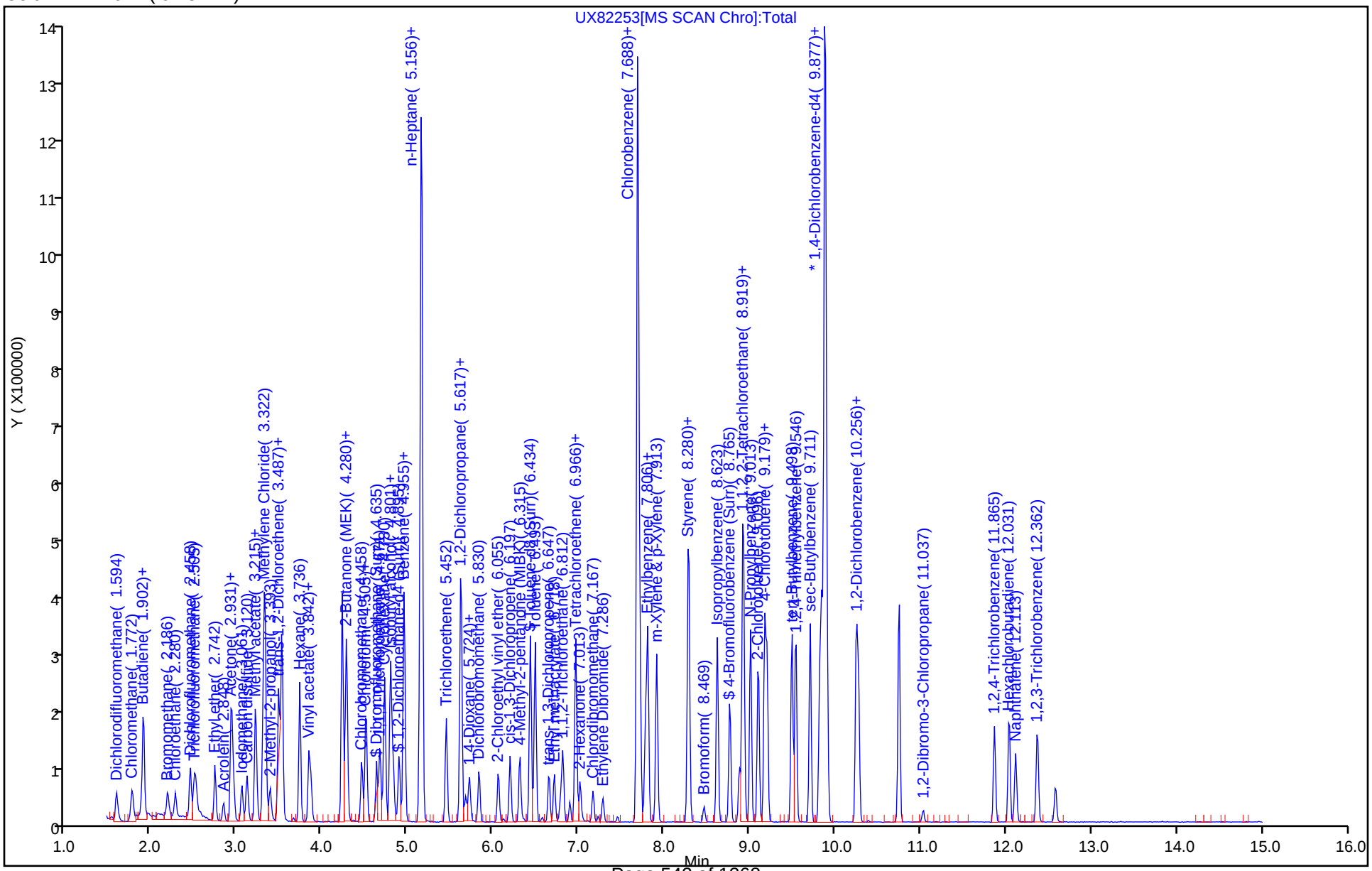
Report Date: 23-Jan-2019 02:33:52 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82253.D

Injection Date:	19-Jan-2019 07:03:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STD8260 L4			Worklist Smp#:	8
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82254.D
Lims ID: STD8260 L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 19-Jan-2019 07:26:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083802-009
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub64

Method: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 23-Jan-2019 02:33:55 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: latat Date: 23-Jan-2019 01:42:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.168	5.157	0.011	99	890831	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.688	7.690	-0.002	98	691446	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.889	9.879	0.010	97	385635	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.635	4.637	-0.002	93	26656	5.00	6.08	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.896	4.897	-0.001	94	39086	5.00	4.52	
$ 6 Toluene-d8 (Surr)	98	6.434	6.435	-0.001	95	116480	5.00	4.70	
$ 7 4-Bromofluorobenzene (Surr	95	8.765	8.766	-0.001	86	45982	5.00	4.48	
9 Dichlorodifluoromethane	85	1.594	1.596	-0.002	99	30500	5.00	5.38	
10 Chloromethane	50	1.772	1.773	-0.001	99	39521	5.00	5.67	
11 Vinyl chloride	62	1.890	1.892	-0.002	99	26070	5.00	5.58	
12 Butadiene	54	1.902	1.903	-0.001	0	33604	5.00	5.54	
13 Bromomethane	94	2.186	2.187	-0.001	96	15107	5.00	5.47	
14 Chloroethane	64	2.281	2.282	-0.001	97	17428	5.00	5.61	
15 Dichlorofluoromethane	67	2.458	2.460	-0.002	99	40277	5.00	5.66	
16 Trichlorofluoromethane	101	2.505	2.507	-0.002	98	38087	5.00	5.54	
17 Ethyl ether	59	2.742	2.744	-0.002	92	27449	5.00	6.01	
18 Acrolein	56	2.849	2.838	0.011	98	12830	25.0	28.2	
19 1,1-Dichloroethene	96	2.931	2.933	-0.002	95	27040	5.00	6.22	
20 1,1,2-Trichloro-1,2,2-trif	151	2.943	2.945	-0.002	94	22368	5.00	6.22	
21 Acetone	43	2.967	2.968	-0.001	97	23402	10.0	11.8	
23 Iodomethane	142	3.062	3.063	-0.001	100	42693	5.00	5.73	
24 Carbon disulfide	76	3.121	3.122	-0.001	98	67549	5.00	5.45	
26 3-Chloro-1-propene	76	3.215	3.217	-0.002	84	13087	5.00	5.34	
27 Methyl acetate	43	3.227	3.229	-0.002	99	46517	10.0	12.1	
28 Methylene Chloride	84	3.310	3.311	-0.001	94	40507	5.00	5.69	
29 2-Methyl-2-propanol	59	3.393	3.382	0.011	88	22433	50.0	61.4	
30 Acrylonitrile	53	3.488	3.489	-0.001	97	103267	50.0	61.0	
31 trans-1,2-Dichloroethene	96	3.523	3.524	-0.001	91	32611	5.00	6.25	
32 Methyl tert-butyl ether	73	3.535	3.524	0.011	94	65055	5.00	5.87	
33 Hexane	86	3.736	3.737	-0.001	90	8408	5.00	6.14	
34 1,1-Dichloroethane	63	3.843	3.844	-0.001	98	59691	5.00	6.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	3.866	3.868	-0.002	98	52581	5.00	5.61	
41 2,2-Dichloropropane	77	4.292	4.282	0.010	70	28595	5.00	5.53	
40 2-Butanone (MEK)	43	4.280	4.282	-0.002	59	35317	10.0	9.05	
39 cis-1,2-Dichloroethene	96	4.280	4.282	-0.002	88	36306	5.00	6.37	
45 Chlorobromomethane	128	4.470	4.459	0.011	90	14601	5.00	5.91	
47 Chloroform	83	4.517	4.507	0.010	97	55955	5.00	6.11	
46 Tetrahydrofuran	42	4.505	4.507	-0.002	88	16392	10.0	11.5	
48 1,1,1-Trichloroethane	97	4.671	4.672	-0.001	95	40920	5.00	5.74	
49 Cyclohexane	56	4.730	4.731	-0.001	96	58415	5.00	5.80	
50 1,1-Dichloropropene	75	4.801	4.791	0.010	86	41408	5.00	6.00	
51 Carbon tetrachloride	117	4.813	4.802	0.011	98	34138	5.00	5.68	
52 Isobutyl alcohol	41	4.825	4.826	-0.001	87	30120	125.0	116.3	
53 1,2-Dichloroethane	62	4.955	4.956	-0.001	62	50771	5.00	6.30	
54 Benzene	78	4.955	4.956	-0.001	95	129082	5.00	6.22	
56 n-Heptane	100	5.144	5.146	-0.002	94	7563	5.00	5.36	
58 Trichloroethene	130	5.452	5.453	-0.001	96	30301	5.00	5.96	
60 Methylcyclohexane	83	5.618	5.619	-0.001	94	47981	5.00	5.61	
61 1,2-Dichloropropane	63	5.629	5.631	-0.002	75	30931	5.00	6.11	
64 1,4-Dioxane	88	5.712	5.725	-0.013	43	5314	100.0	105.9	
63 Dibromomethane	93	5.724	5.725	-0.001	94	15653	5.00	6.20	
65 Dichlorobromomethane	83	5.831	5.832	-0.002	93	29936	5.00	5.39	
67 2-Chloroethyl vinyl ether	63	6.055	6.057	-0.002	86	17421	10.0	10.4	
68 cis-1,3-Dichloropropene	75	6.197	6.199	-0.002	85	28754	5.00	4.90	
69 4-Methyl-2-pentanone (MIBK	43	6.316	6.305	0.011	98	49456	10.0	11.5	
70 Toluene	91	6.493	6.495	-0.001	97	120816	5.00	5.99	
71 trans-1,3-Dichloropropene	75	6.659	6.648	0.011	91	21041	5.00	4.43	
72 Ethyl methacrylate	69	6.718	6.719	-0.001	91	19794	5.00	4.81	
73 1,1,2-Trichloroethane	97	6.813	6.814	-0.001	96	21411	5.00	6.04	
75 Tetrachloroethene	164	6.966	6.968	-0.002	84	25422	5.00	6.21	
74 1,3-Dichloropropane	76	6.966	6.968	-0.002	93	41201	5.00	6.59	
76 2-Hexanone	43	7.014	7.015	-0.001	96	34764	10.0	11.8	
78 Chlorodibromomethane	129	7.168	7.169	-0.001	88	16176	5.00	4.85	
80 Ethylene Dibromide	107	7.286	7.287	-0.001	94	19340	5.00	6.06	
82 Chlorobenzene	112	7.724	7.713	0.011	92	86608	5.00	6.38	
83 1,1,1,2-Tetrachloroethane	131	7.783	7.784	-0.001	89	24871	5.00	6.00	
84 Ethylbenzene	106	7.807	7.808	-0.001	99	41648	5.00	6.07	
85 m-Xylene & p-Xylene	106	7.913	7.914	-0.001	98	48205	5.00	5.81	
86 o-Xylene	106	8.280	8.281	-0.001	97	47454	5.00	6.02	
87 Styrene	104	8.292	8.293	-0.001	93	72733	5.00	5.76	
88 Bromoform	173	8.469	8.471	-0.002	94	8436	5.00	4.87	
89 Isopropylbenzene	105	8.623	8.624	-0.001	97	123231	5.00	5.86	
92 1,1,2,2-Tetrachloroethane	83	8.883	8.885	-0.002	96	26893	5.00	6.43	
93 Bromobenzene	156	8.919	8.920	-0.001	72	34453	5.00	6.32	
94 1,2,3-Trichloropropane	110	8.931	8.932	-0.001	92	9363	5.00	3.78	
95 trans-1,4-Dichloro-2-buten	53	8.943	8.932	0.011	66	7571	5.00	5.42	
96 N-Propylbenzene	120	9.014	9.015	-0.001	99	35645	5.00	5.99	
97 2-Chlorotoluene	126	9.108	9.098	0.010	95	34091	5.00	6.39	
98 1,3,5-Trimethylbenzene	105	9.179	9.181	-0.002	95	110727	5.00	5.96	
99 4-Chlorotoluene	126	9.203	9.204	-0.001	98	34899	5.00	6.39	
100 tert-Butylbenzene	119	9.499	9.500	-0.001	94	91136	5.00	5.70	
102 1,2,4-Trimethylbenzene	105	9.546	9.536	0.010	97	116772	5.00	5.91	
103 sec-Butylbenzene	105	9.712	9.713	-0.001	95	142097	5.00	5.89	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	9.818	9.820	-0.002	97	71626	5.00	6.48	
105 4-Isopropyltoluene	119	9.842	9.843	-0.001	97	117650	5.00	5.82	
106 1,4-Dichlorobenzene	146	9.901	9.902	-0.001	92	77781	5.00	4.66	
109 n-Butylbenzene	91	10.244	10.246	-0.002	98	98336	5.00	5.58	
110 1,2-Dichlorobenzene	146	10.280	10.269	0.011	95	70671	5.00	4.53	
111 1,2-Dibromo-3-Chloropropan	157	11.037	11.026	0.011	65	2709	5.00	5.20	
113 1,2,4-Trichlorobenzene	180	11.865	11.867	-0.002	93	36549	5.00	6.07	
114 Hexachlorobutadiene	225	12.043	12.044	-0.001	96	23307	5.00	4.29	
115 Naphthalene	128	12.114	12.115	-0.001	98	61928	5.00	5.43	
116 1,2,3-Trichlorobenzene	180	12.374	12.364	0.010	95	36549	5.00	4.47	
S 126 1,2-Dichloroethene, Total	96				0			12.6	
S 127 1,3-Dichloropropene, Total	75				0			9.33	
S 128 Xylenes, Total	106				0		10.0	11.8	
S 157 Total BTEX	1				0		25.0	30.1	
S 129 Trihalomethanes, Total	1				0		20.0	21.2	

Reagents:

VMAROLISTDW_00281	Amount Added:	0.50	Units: uL	
VMRGAS_00278	Amount Added:	0.50	Units: uL	
VMRPRIMW_00318	Amount Added:	0.50	Units: uL	
vmDist_H2o_00124	Amount Added:	0.00	Units:	
VM568718_00012	Amount Added:	1.00	Units: uL	
vm50ss_00351	Amount Added:	0.50	Units: uL	

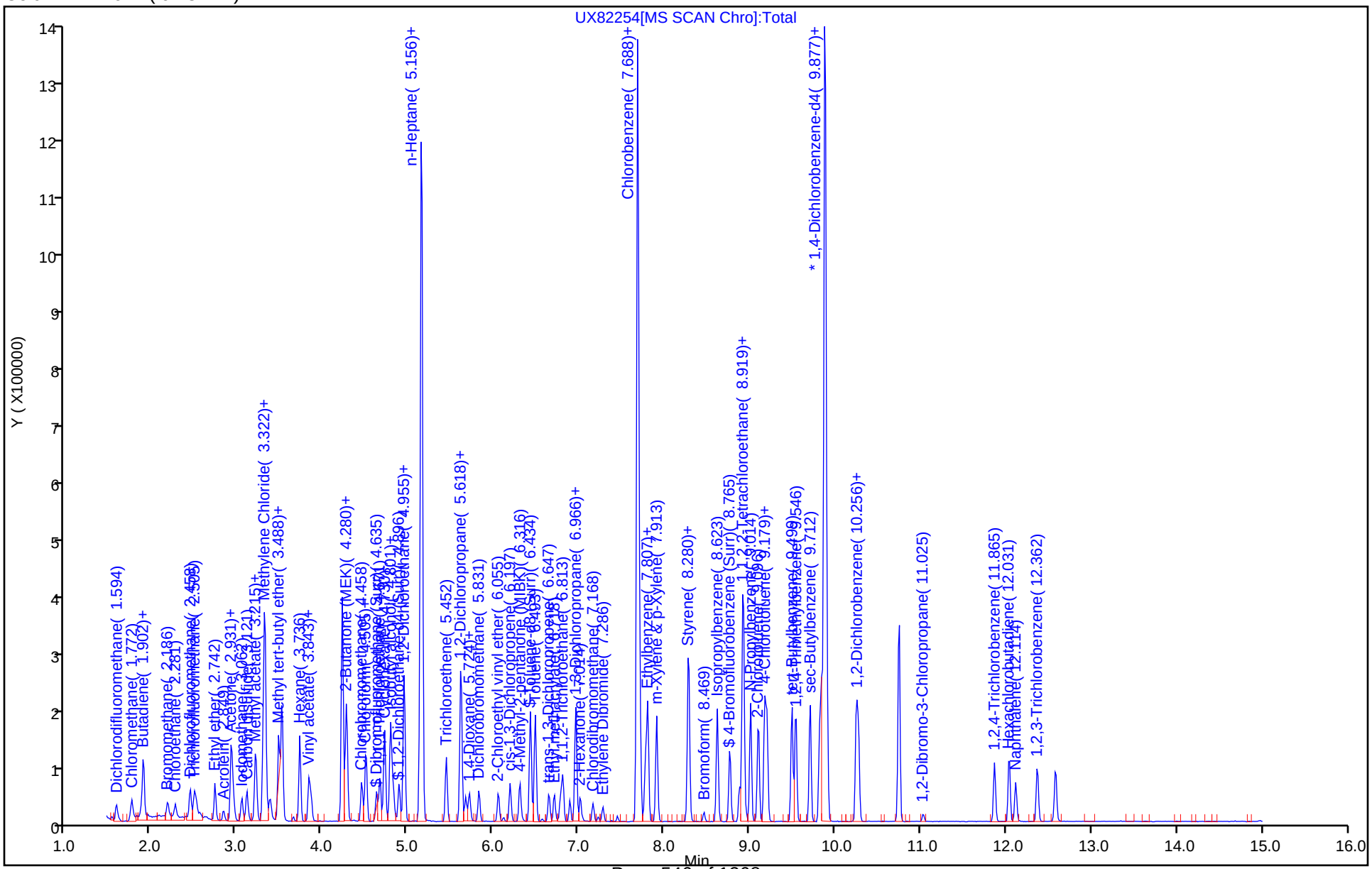
Report Date: 23-Jan-2019 02:33:56 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82254.D

Injection Date:	19-Jan-2019 07:26:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STD8260 L3			Worklist Smp#:	9
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82255.D
Lims ID: STD8260 L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 19-Jan-2019 07:49:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083802-010
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub64

Method: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 23-Jan-2019 02:33:59 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: latat Date: 23-Jan-2019 01:44:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.157	5.157	0.000	99	789622	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.689	7.690	-0.001	97	599377	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.878	9.879	-0.001	95	345791	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.637	4.637	-0.001	90	10501	2.00	2.70	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.897	4.897	0.000	96	16066	2.00	0.4296	
$ 6 Toluene-d8 (Surr)	98	6.435	6.435	0.000	96	44856	2.00	0.4695	
$ 7 4-Bromofluorobenzene (Surr	95	8.766	8.766	0.000	84	19613	2.00	0.4049	
9 Dichlorodifluoromethane	85	1.584	1.596	-0.012	96	11006	2.00	2.19	
10 Chloromethane	50	1.773	1.773	0.000	97	13309	2.00	2.15	
11 Vinyl chloride	62	1.879	1.892	-0.013	41	7662	2.00	1.85	
12 Butadiene	54	1.903	1.903	0.000	0	11123	2.00	2.07	
13 Bromomethane	94	2.187	2.187	0.000	93	5162	2.00	2.11	
14 Chloroethane	64	2.282	2.282	0.000	92	5654	2.00	2.05	
15 Dichlorofluoromethane	67	2.447	2.460	-0.013	97	13619	2.00	2.16	
16 Trichlorofluoromethane	101	2.507	2.507	0.000	94	13006	2.00	2.13	
17 Ethyl ether	59	2.743	2.744	-0.001	95	8281	2.00	2.05	
18 Acrolein	56	2.850	2.838	0.012	98	3814	10.0	9.45	
19 1,1-Dichloroethene	96	2.933	2.933	0.000	91	7821	2.00	2.03	
20 1,1,2-Trichloro-1,2,2-trif	151	2.944	2.945	-0.001	92	6893	2.00	2.16	
21 Acetone	43	2.968	2.968	0.000	96	10585	4.00	3.59	
23 Iodomethane	142	3.051	3.063	-0.012	96	14713	2.00	2.23	
24 Carbon disulfide	76	3.122	3.122	0.000	98	21484	2.00	1.96	
26 3-Chloro-1-propene	76	3.217	3.217	0.000	82	3645	2.00	1.68	
27 Methyl acetate	43	3.228	3.229	-0.001	99	13790	4.00	4.03	
28 Methylene Chloride	84	3.311	3.311	0.000	94	19146	2.00	1.43	
29 2-Methyl-2-propanol	59	3.382	3.382	0.000	93	6575	20.0	20.3	
30 Acrylonitrile	53	3.489	3.489	0.000	97	31043	20.0	20.7	
32 Methyl tert-butyl ether	73	3.524	3.524	0.000	89	19716	2.00	2.01	
31 trans-1,2-Dichloroethene	96	3.524	3.524	0.000	93	9949	2.00	2.15	
33 Hexane	86	3.737	3.737	0.000	91	2080	2.00	1.71	
34 1,1-Dichloroethane	63	3.844	3.844	0.000	96	17833	2.00	2.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	3.867	3.868	-0.001	98	13040	2.00	1.57	
41 2,2-Dichloropropane	77	4.293	4.282	0.011	82	9669	2.00	2.11	
39 cis-1,2-Dichloroethene	96	4.282	4.282	0.000	88	10770	2.00	2.13	
40 2-Butanone (MEK)	43	4.282	4.282	0.000	65	12421	4.00	-1.62	
45 Chlorobromomethane	128	4.459	4.459	0.000	93	4946	2.00	2.26	
46 Tetrahydrofuran	42	4.506	4.507	-0.001	49	4791	4.00	3.80	a
47 Chloroform	83	4.506	4.507	-0.001	93	16711	2.00	2.06	
48 1,1,1-Trichloroethane	97	4.672	4.672	0.000	95	11316	2.00	1.79	
49 Cyclohexane	56	4.731	4.731	0.000	96	16706	2.00	1.87	
50 1,1-Dichloropropene	75	4.790	4.791	-0.001	86	11214	2.00	1.83	
51 Carbon tetrachloride	117	4.802	4.802	0.000	83	9414	2.00	1.77	
52 Isobutyl alcohol	41	4.838	4.826	0.012	85	7507	50.0	-24.6	
54 Benzene	78	4.956	4.956	0.000	96	38001	2.00	2.07	
53 1,2-Dichloroethane	62	4.956	4.956	0.000	63	16197	2.00	2.27	
56 n-Heptane	100	5.145	5.146	-0.001	81	2082	2.00	1.66	
58 Trichloroethene	130	5.453	5.453	0.000	94	9391	2.00	2.08	
60 Methylcyclohexane	83	5.619	5.619	0.000	90	14335	2.00	1.89	
61 1,2-Dichloropropane	63	5.630	5.631	-0.001	81	8084	2.00	1.80	
63 Dibromomethane	93	5.725	5.725	0.000	91	4700	2.00	2.10	
64 1,4-Dioxane	88		5.725				ND	ND	
65 Dichlorobromomethane	83	5.832	5.832	0.000	94	8057	2.00	1.64	
67 2-Chloroethyl vinyl ether	63	6.056	6.057	-0.001	81	4369	4.00	2.94	
68 cis-1,3-Dichloropropene	75	6.198	6.199	-0.001	86	6796	2.00	1.31	
69 4-Methyl-2-pentanone (MIBK	43	6.317	6.305	0.012	96	14749	4.00	3.86	
70 Toluene	91	6.494	6.495	0.000	96	31047	2.00	1.77	
71 trans-1,3-Dichloropropene	75	6.648	6.648	0.000	87	4724	2.00	1.15	
72 Ethyl methacrylate	69	6.719	6.719	0.000	89	4245	2.00	1.19	
73 1,1,2-Trichloroethane	97	6.814	6.814	0.000	88	6836	2.00	2.22	
74 1,3-Dichloropropane	76	6.968	6.968	0.000	91	11032	2.00	2.03	
75 Tetrachloroethene	164	6.968	6.968	0.000	88	6383	2.00	1.80	
76 2-Hexanone	43	7.015	7.015	0.000	92	8720	4.00	3.42	
78 Chlorodibromomethane	129	7.169	7.169	0.000	85	3813	2.00	1.32	
80 Ethylene Dibromide	107	7.287	7.287	0.000	95	5461	2.00	1.97	a
82 Chlorobenzene	112	7.713	7.713	0.000	93	24789	2.00	2.11	
83 1,1,1,2-Tetrachloroethane	131	7.784	7.784	0.000	79	6743	2.00	1.88	
84 Ethylbenzene	106	7.808	7.808	0.000	98	10324	2.00	1.74	
85 m-Xylene & p-Xylene	106	7.914	7.914	0.000	96	12973	2.00	1.80	
86 o-Xylene	106	8.281	8.281	0.000	95	11277	2.00	1.65	
87 Styrene	104	8.293	8.293	0.000	92	16595	2.00	1.52	
88 Bromoform	173	8.470	8.471	-0.001	83	1951	2.00	1.30	a
89 Isopropylbenzene	105	8.624	8.624	0.000	95	30134	2.00	1.65	
92 1,1,2,2-Tetrachloroethane	83	8.884	8.885	-0.001	93	6966	2.00	1.86	
93 Bromobenzene	156	8.920	8.920	0.000	42	9727	2.00	1.99	
95 trans-1,4-Dichloro-2-buten	53	8.932	8.932	0.000	40	1913	2.00	1.53	
94 1,2,3-Trichloropropane	110	8.932	8.932	0.000	45	3434	2.00	-0.9261	
96 N-Propylbenzene	120	9.015	9.015	0.000	99	9218	2.00	1.73	
97 2-Chlorotoluene	126	9.109	9.098	0.011	96	8550	2.00	1.79	
98 1,3,5-Trimethylbenzene	105	9.180	9.181	-0.001	92	25693	2.00	1.54	
99 4-Chlorotoluene	126	9.204	9.204	0.000	98	8666	2.00	1.77	
100 tert-Butylbenzene	119	9.500	9.500	0.000	94	21766	2.00	1.52	
102 1,2,4-Trimethylbenzene	105	9.535	9.536	-0.001	94	27540	2.00	1.56	
103 sec-Butylbenzene	105	9.713	9.713	0.000	96	32749	2.00	1.51	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	9.819	9.820	-0.001	95	20279	2.00	2.05	
105 4-Isopropyltoluene	119	9.843	9.843	0.000	95	26900	2.00	1.48	
106 1,4-Dichlorobenzene	146	9.902	9.902	0.000	90	21815	2.00	-1.00	
109 n-Butylbenzene	91	10.245	10.246	-0.001	97	26183	2.00	1.66	
110 1,2-Dichlorobenzene	146	10.269	10.269	0.000	94	21014	2.00	-0.9744	
111 1,2-Dibromo-3-Chloropropan	157		11.026				ND	ND	
113 1,2,4-Trichlorobenzene	180	11.866	11.867	-0.001	90	12091	2.00	2.24	
114 Hexachlorobutadiene	225	12.044	12.044	0.000	92	7104	2.00	-1.10	
115 Naphthalene	128	12.115	12.115	0.000	95	18821	2.00	1.84	
116 1,2,3-Trichlorobenzene	180	12.363	12.364	-0.001	93	12124	2.00	-0.4235	
S 126 1,2-Dichloroethene, Total	96				0			4.28	
S 127 1,3-Dichloropropene, Total	75				0			2.45	
S 128 Xylenes, Total	106				0		4.00	3.45	
S 129 Trihalomethanes, Total	1				0		8.00	6.32	
S 157 Total BTEX	1				0		10.0	9.03	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

a - User Assigned ID

Reagents:

VMAROLISTDW_00281	Amount Added:	0.20	Units: uL
VMRGAS_00278	Amount Added:	0.20	Units: uL
VMRPRIMW_00318	Amount Added:	0.20	Units: uL
vmDist_H2o_00124	Amount Added:	0.00	Units:
VM568718_00012	Amount Added:	1.00	Units: uL
vm50ss_00351	Amount Added:	0.20	Units: uL

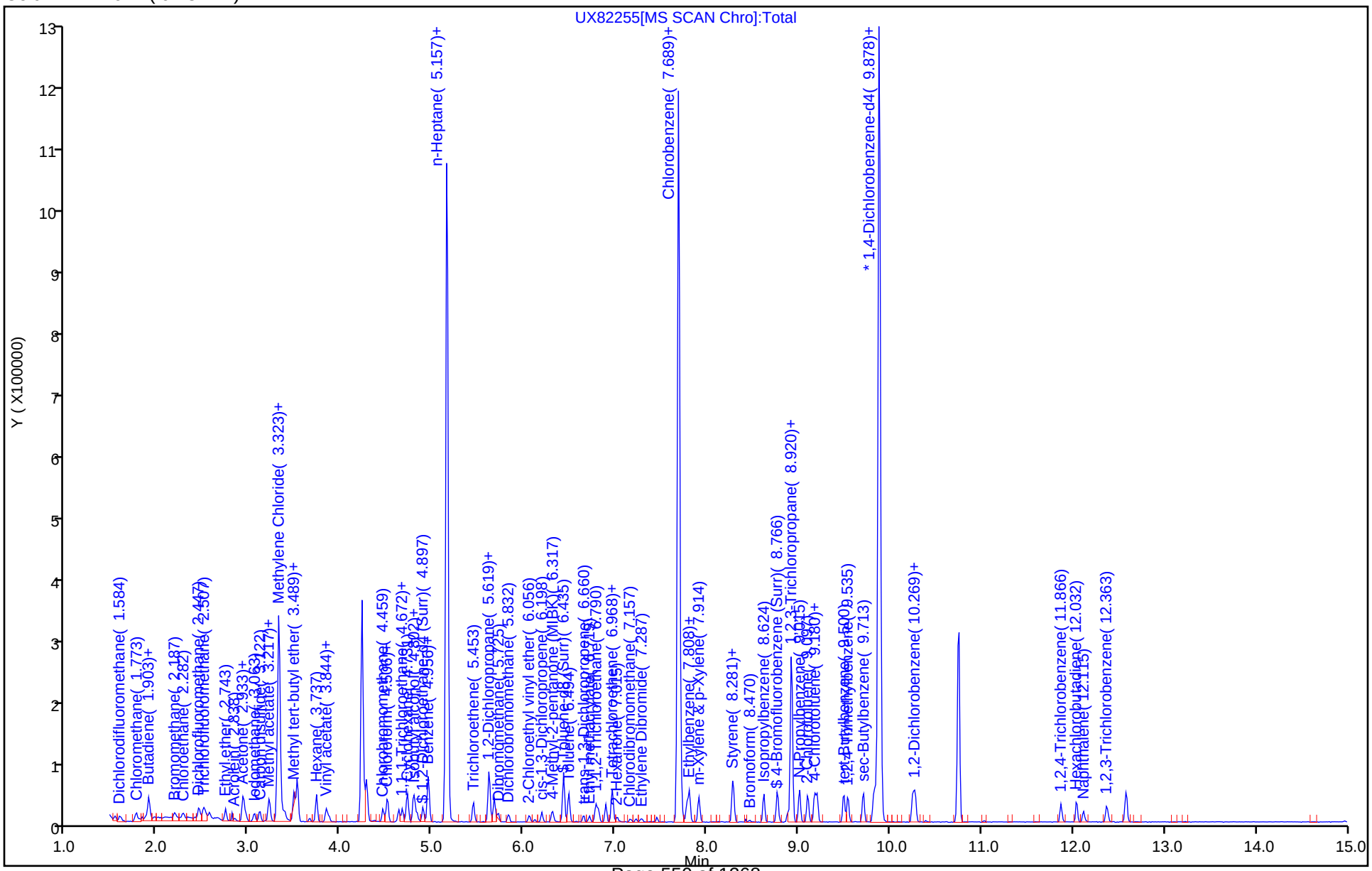
Report Date: 23-Jan-2019 02:34:00 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82255.D

Injection Date:	19-Jan-2019 07:49:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STD8260 L2			Worklist Smp#:	10
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

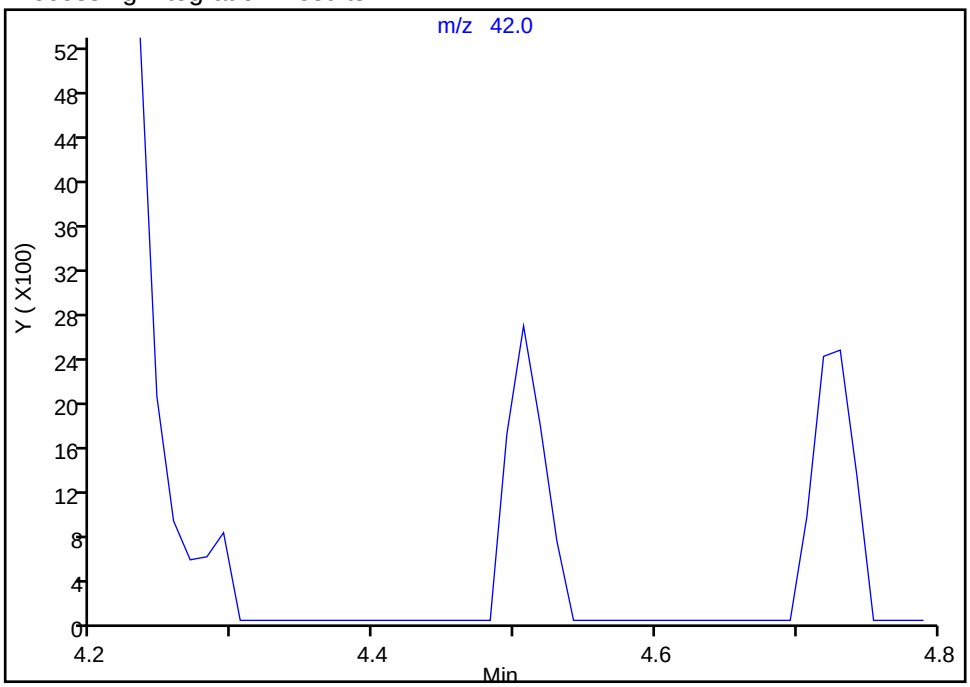
Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82255.D
Injection Date: 19-Jan-2019 07:49:30 Instrument ID: A3UX8
Lims ID: STD8260 L2
Client ID:
Operator ID: 402279 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

46 Tetrahydrofuran, CAS: 109-99-9

Signal: 1

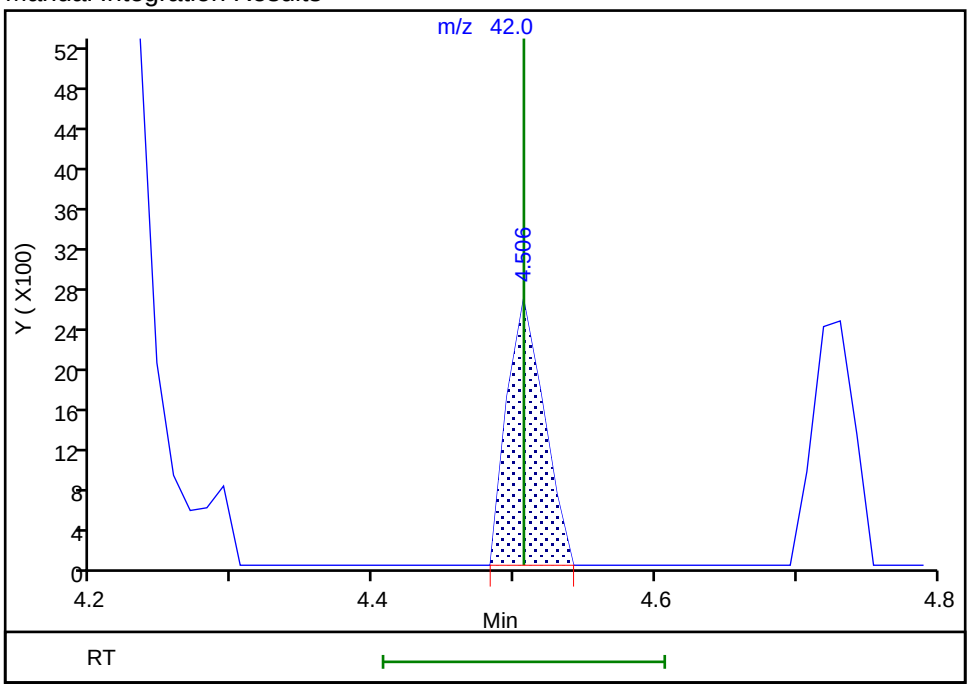
Not Detected
Expected RT: 4.51

Processing Integration Results



Manual Integration Results

RT: 4.51
Area: 4791
Amount: 3.803659
Amount Units: ug/l



Reviewer: latat, 23-Jan-2019 01:54:39
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

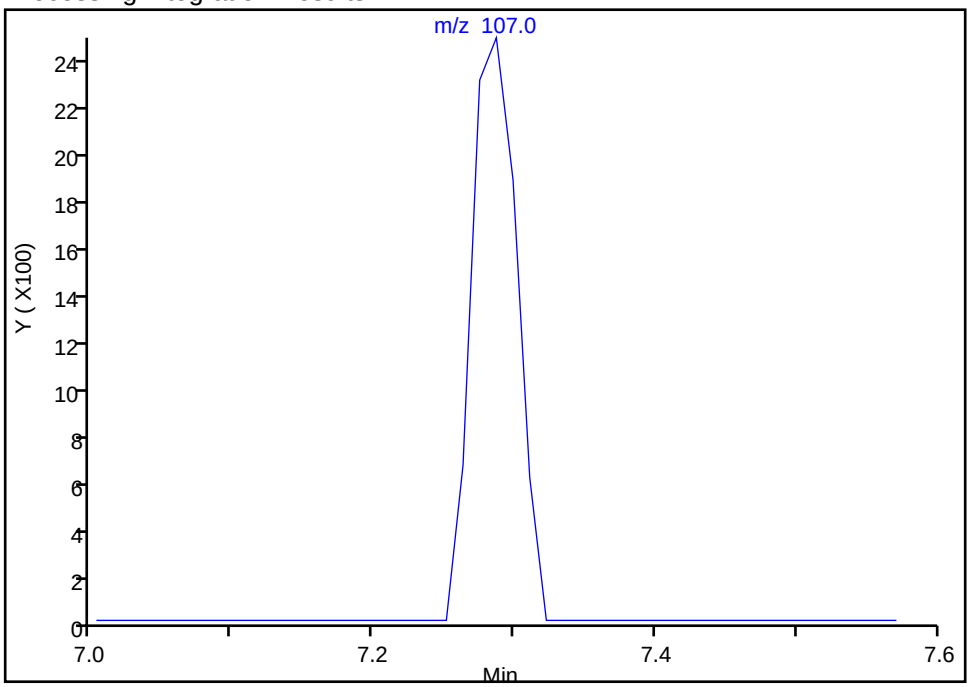
Data File:	\\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82255.D				
Injection Date:	19-Jan-2019 07:49:30	Instrument ID:	A3UX8		
Lims ID:	STD8260 L2				
Client ID:					
Operator ID:	402279	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	8260_8	Limit Group:	MSV 8260B ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

80 Ethylene Dibromide, CAS: 106-93-4

Signal: 1

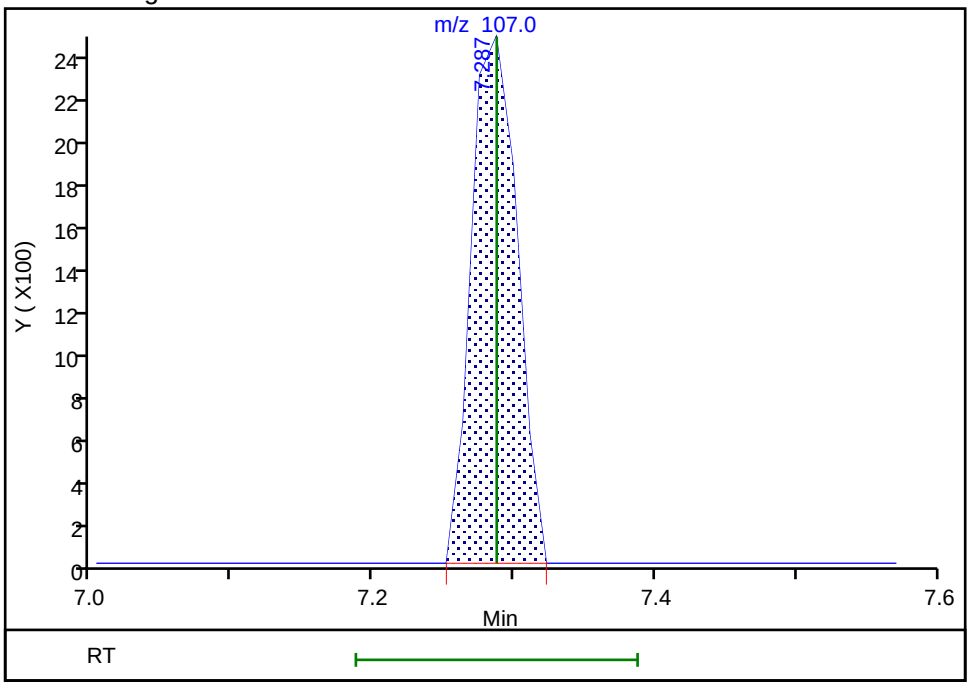
Not Detected
Expected RT: 7.29

Processing Integration Results



Manual Integration Results

RT: 7.29
Area: 5461
Amount: 1.972887
Amount Units: ug/l



Reviewer: latat, 23-Jan-2019 01:54:53
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

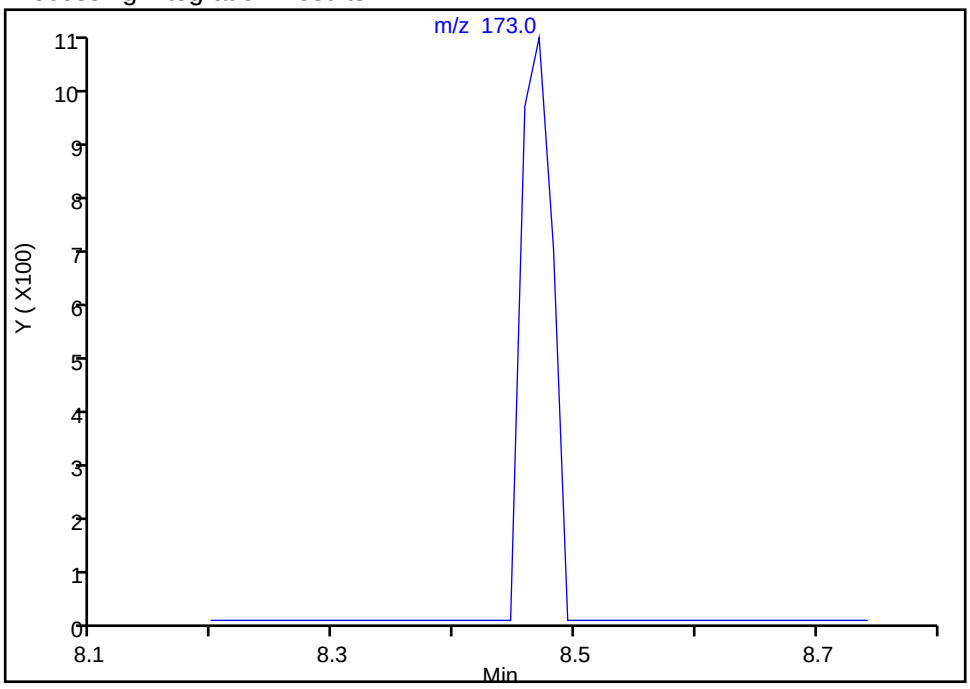
Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82255.D
Injection Date: 19-Jan-2019 07:49:30 Instrument ID: A3UX8
Lims ID: STD8260 L2
Client ID:
Operator ID: 402279 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

88 Bromoform, CAS: 75-25-2

Signal: 1

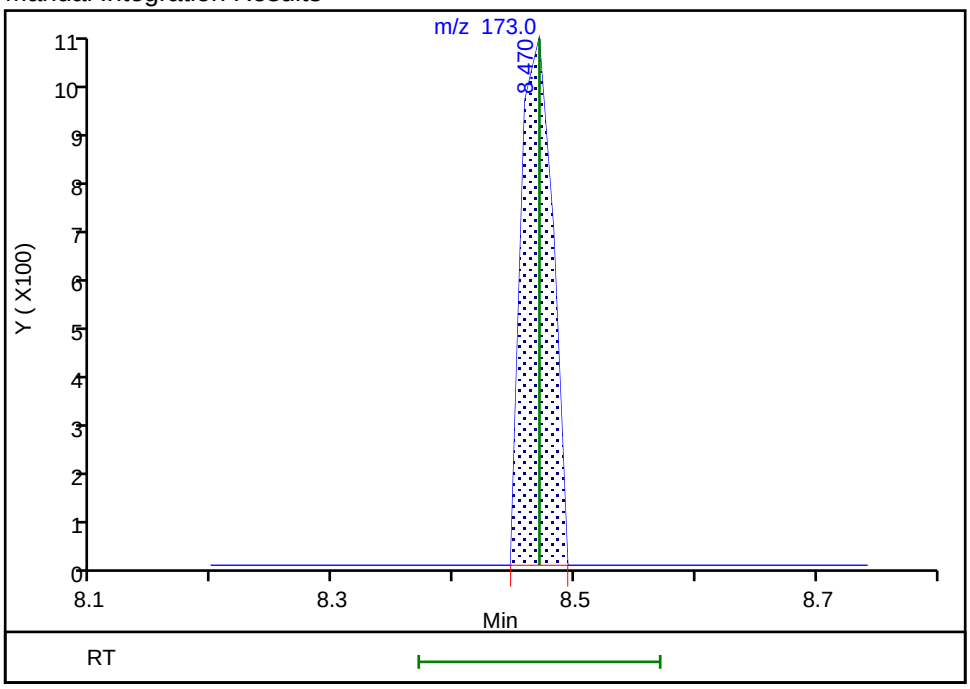
Not Detected
Expected RT: 8.47

Processing Integration Results



Manual Integration Results

RT: 8.47
Area: 1951
Amount: 1.300038
Amount Units: ug/l



Reviewer: latat, 23-Jan-2019 01:55:04
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D
Lims ID: STD8260 L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 19-Jan-2019 08:12:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083802-011
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub64

Method: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 23-Jan-2019 02:34:03 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: latat Date: 23-Jan-2019 01:58:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.158	5.157	0.001	99	773924	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.690	7.690	0.000	97	599195	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.880	9.879	0.001	95	329130	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.638	4.637	0.001	86	6560	1.00	1.72	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.898	4.897	0.001	92	10321	1.00	-0.7881	a
$ 6 Toluene-d8 (Surr)	98	6.436	6.435	0.001	94	29925	1.00	-0.6558	
$ 7 4-Bromofluorobenzene (Surr	95	8.767	8.766	0.001	85	12208	1.00	-1.08	
9 Dichlorodifluoromethane	85	1.597	1.596	0.001	94	5482	1.00	1.11	
10 Chloromethane	50	1.774	1.773	0.001	96	7404	1.00	1.22	
11 Vinyl chloride	62	1.881	1.892	-0.011	34	4803	1.00	1.18	
12 Butadiene	54	1.916	1.903	0.013	0	5769	1.00	1.09	
13 Bromomethane	94	2.188	2.187	0.001	82	2587	1.00	1.08	
14 Chloroethane	64	2.283	2.282	0.001	87	4024	1.00	1.49	a
15 Dichlorofluoromethane	67	2.460	2.460	0.000	97	7332	1.00	1.19	
16 Trichlorofluoromethane	101	2.508	2.507	0.001	96	7123	1.00	1.19	
17 Ethyl ether	59	2.744	2.744	0.000	97	4442	1.00	1.12	
18 Acrolein	56	2.839	2.838	0.001	38	1578	5.00	3.99	a
19 1,1-Dichloroethene	96	2.934	2.933	0.001	92	3844	1.00	1.02	
20 1,1,2-Trichloro-1,2,2-trif	151	2.946	2.945	0.001	66	3301	1.00	1.06	
21 Acetone	43	2.969	2.968	0.001	92	7583	2.00	1.30	
23 Iodomethane	142	3.064	3.063	0.001	97	7237	1.00	1.12	
24 Carbon disulfide	76	3.123	3.122	0.001	98	10527	1.00	0.9775	
26 3-Chloro-1-propene	76	3.218	3.217	0.001	81	1751	1.00	0.8225	
27 Methyl acetate	43	3.229	3.229	0.000	83	8240	2.00	2.46	
28 Methylene Chloride	84	3.312	3.311	0.001	91	12698	1.00	-0.1398	
29 2-Methyl-2-propanol	59	3.383	3.382	0.001	83	3801	10.0	12.0	
30 Acrylonitrile	53	3.490	3.489	0.001	98	16512	10.0	11.2	
31 trans-1,2-Dichloroethene	96	3.525	3.524	0.001	81	5150	1.00	1.14	
32 Methyl tert-butyl ether	73	3.525	3.524	0.001	92	10617	1.00	1.10	
33 Hexane	86	3.738	3.737	0.001	79	1072	1.00	0.9013	
34 1,1-Dichloroethane	63	3.845	3.844	0.001	93	9560	1.00	1.11	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	3.868	3.868	0.000	93	6293	1.00	0.7728	
41 2,2-Dichloropropane	77	4.283	4.282	0.001	54	5486	1.00	1.22	a
40 2-Butanone (MEK)	43	4.283	4.282	0.001	69	6580	2.00	-4.85	
39 cis-1,2-Dichloroethene	96	4.283	4.282	0.001	85	5157	1.00	1.04	
45 Chlorobromomethane	128	4.460	4.459	0.001	89	2673	1.00	1.24	
47 Chloroform	83	4.507	4.507	0.000	94	8421	1.00	1.06	
46 Tetrahydrofuran	42	4.496	4.507	-0.011	63	2848	2.00	2.31	a
48 1,1,1-Trichloroethane	97	4.673	4.672	0.001	91	5911	1.00	0.9539	
49 Cyclohexane	56	4.732	4.731	0.001	92	8494	1.00	0.9700	
50 1,1-Dichloropropene	75	4.803	4.791	0.012	86	6066	1.00	1.01	
51 Carbon tetrachloride	117	4.803	4.802	0.001	77	4702	1.00	0.9006	
52 Isobutyl alcohol	41	4.827	4.826	0.001	81	3977	25.0	-50.0	
53 1,2-Dichloroethane	62	4.957	4.956	0.001	60	7638	1.00	1.09	
54 Benzene	78	4.957	4.956	0.001	97	19521	1.00	1.08	
56 n-Heptane	100		5.146				ND	ND	Ua
58 Trichloroethene	130	5.454	5.453	0.001	93	4492	1.00	1.02	
60 Methylcyclohexane	83	5.620	5.619	0.001	85	7385	1.00	0.99	
61 1,2-Dichloropropane	63	5.620	5.631	-0.011	69	4927	1.00	1.12	
64 1,4-Dioxane	88		5.725				ND	ND	
63 Dibromomethane	93	5.726	5.725	0.001	91	2040	1.00	0.9302	
65 Dichlorobromomethane	83	5.833	5.832	0.001	94	4506	1.00	0.9347	
67 2-Chloroethyl vinyl ether	63	6.058	6.057	0.001	1	1630	2.00	1.12	a
68 cis-1,3-Dichloropropene	75	6.200	6.199	0.001	76	3238	1.00	0.6353	a
69 4-Methyl-2-pentanone (MIBK	43	6.318	6.305	0.013	96	6436	2.00	1.72	
70 Toluene	91	6.495	6.495	0.001	97	16965	1.00	0.9702	
71 trans-1,3-Dichloropropene	75	6.649	6.648	0.001	1	2357	1.00	0.5721	a
72 Ethyl methacrylate	69	6.720	6.719	0.001	84	2125	1.00	0.5954	
73 1,1,2-Trichloroethane	97	6.815	6.814	0.001	79	3236	1.00	1.05	
75 Tetrachloroethene	164	6.969	6.968	0.001	91	4029	1.00	1.14	
74 1,3-Dichloropropane	76	6.969	6.968	0.001	80	4763	1.00	0.8786	
76 2-Hexanone	43	7.028	7.015	0.013	90	4139	2.00	1.62	
78 Chlorodibromomethane	129	7.158	7.169	-0.011	85	1867	1.00	0.6458	
80 Ethylene Dibromide	107	7.288	7.287	0.001	83	2569	1.00	0.9284	a
82 Chlorobenzene	112	7.714	7.713	0.001	95	13823	1.00	1.18	
83 1,1,1,2-Tetrachloroethane	131	7.785	7.784	0.001	78	2842	1.00	0.7912	
84 Ethylbenzene	106	7.809	7.808	0.001	98	5094	1.00	0.8572	
85 m-Xylene & p-Xylene	106	7.915	7.914	0.001	97	6524	1.00	0.9072	
86 o-Xylene	106	8.282	8.281	0.001	88	5174	1.00	0.7579	
87 Styrene	104	8.294	8.293	0.001	85	8652	1.00	0.7906	
88 Bromoform	173		8.471				ND	ND	Ua
89 Isopropylbenzene	105	8.625	8.624	0.001	94	14444	1.00	0.7922	
92 1,1,2,2-Tetrachloroethane	83	8.874	8.885	-0.011	75	3941	1.00	1.10	
93 Bromobenzene	156	8.921	8.920	0.001	39	4606	1.00	0.99	
94 1,2,3-Trichloropropane	110	8.933	8.932	0.001	44	1693	1.00	-2.50	
95 trans-1,4-Dichloro-2-buten	53		8.932				ND	ND	
96 N-Propylbenzene	120	9.016	9.015	0.001	99	4210	1.00	0.8294	
97 2-Chlorotoluene	126	9.099	9.098	0.001	93	4469	1.00	0.9817	
98 1,3,5-Trimethylbenzene	105	9.181	9.181	0.000	91	13126	1.00	0.8276	
99 4-Chlorotoluene	126	9.205	9.204	0.001	95	4555	1.00	0.9767	
100 tert-Butylbenzene	119	9.489	9.500	-0.011	91	10941	1.00	0.8023	
102 1,2,4-Trimethylbenzene	105	9.536	9.536	0.000	94	11609	1.00	0.6889	
103 sec-Butylbenzene	105	9.714	9.713	0.001	94	15065	1.00	0.7317	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	9.820	9.820	0.000	93	9951	1.00	1.05	
105 4-Isopropyltoluene	119	9.844	9.843	0.001	93	11498	1.00	0.6666	
106 1,4-Dichlorobenzene	146	9.903	9.902	0.001	91	12990	1.00	-1.96	
109 n-Butylbenzene	91	10.246	10.246	0.000	96	12929	1.00	0.8596	
110 1,2-Dichlorobenzene	146	10.270	10.269	0.001	94	9609	1.00	-2.39	
111 1,2-Dibromo-3-Chloropropan	157		11.026				ND	ND	
113 1,2,4-Trichlorobenzene	180	11.867	11.867	0.000	90	5822	1.00	1.13	
114 Hexachlorobutadiene	225	12.033	12.044	-0.011	90	4740	1.00	-1.93	
115 Naphthalene	128	12.116	12.115	0.001	92	9983	1.00	1.03	
116 1,2,3-Trichlorobenzene	180	12.376	12.364	0.012	92	7226	1.00	-1.50	
S 126 1,2-Dichloroethene, Total	96				0			2.18	
S 127 1,3-Dichloropropene, Total	75				0			1.21	
S 128 Xylenes, Total	106				0		2.00	1.67	
S 157 Total BTEX	1				0		5.00	4.58	
S 129 Trihalomethanes, Total	1				0		4.00	2.64	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

VMAROLISTDW_00281	Amount Added:	0.10	Units: uL
VMRGAS_00278	Amount Added:	0.10	Units: uL
VMRPRIMW_00318	Amount Added:	0.10	Units: uL
vmDist_H2o_00124	Amount Added:	0.00	Units:
VM568718_00012	Amount Added:	1.00	Units: uL
vm50ss_00351	Amount Added:	0.10	Units: uL

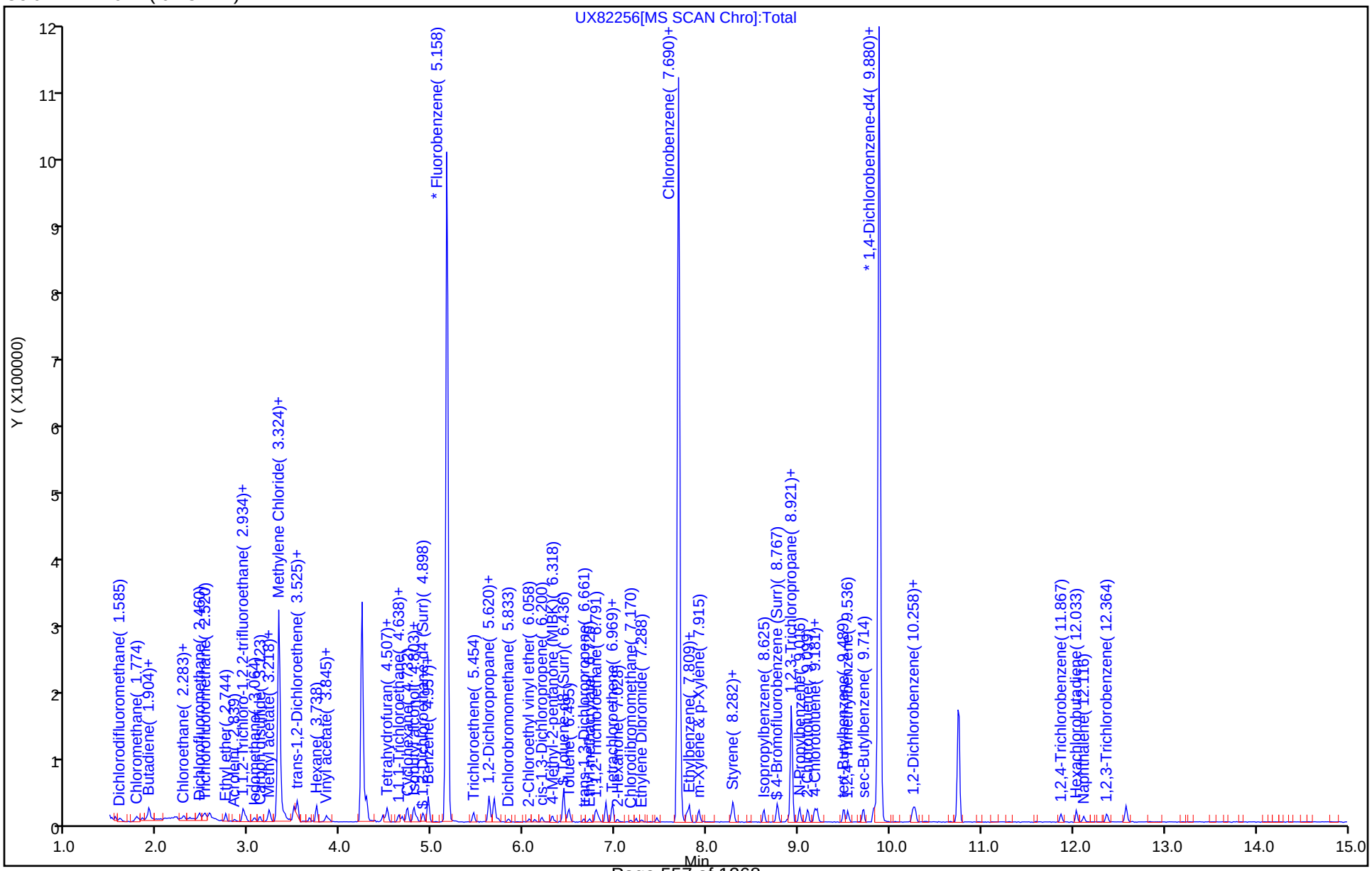
Report Date: 23-Jan-2019 02:34:05 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Injection Date:	19-Jan-2019 08:12:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	STD8260 L1			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

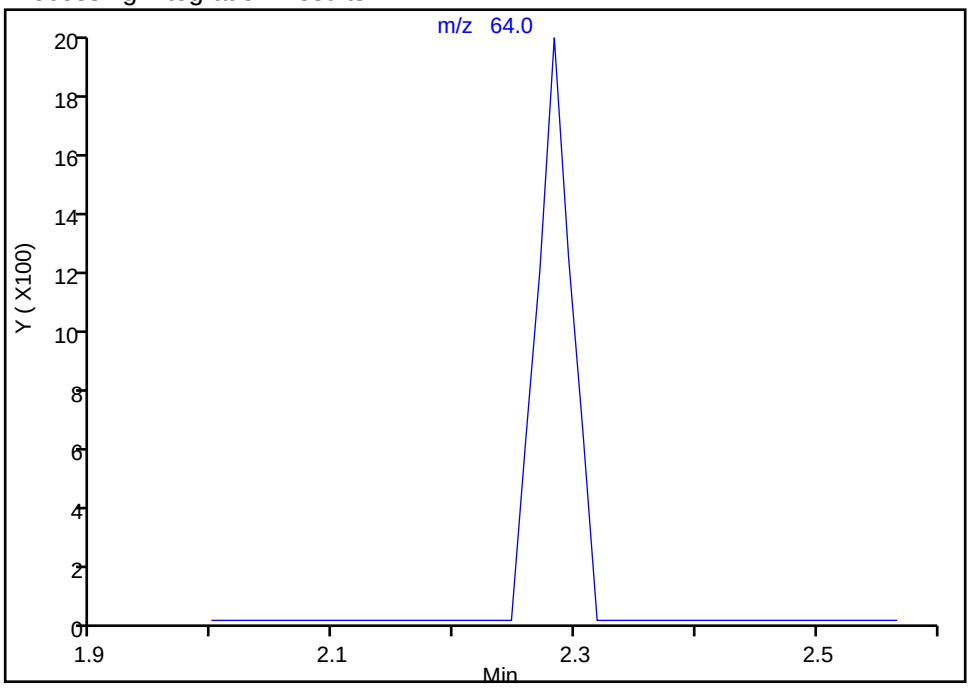
Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D
Injection Date: 19-Jan-2019 08:12:30 Instrument ID: A3UX8
Lims ID: STD8260 L1
Client ID:
Operator ID: 402279 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

14 Chloroethane, CAS: 75-00-3

Signal: 1

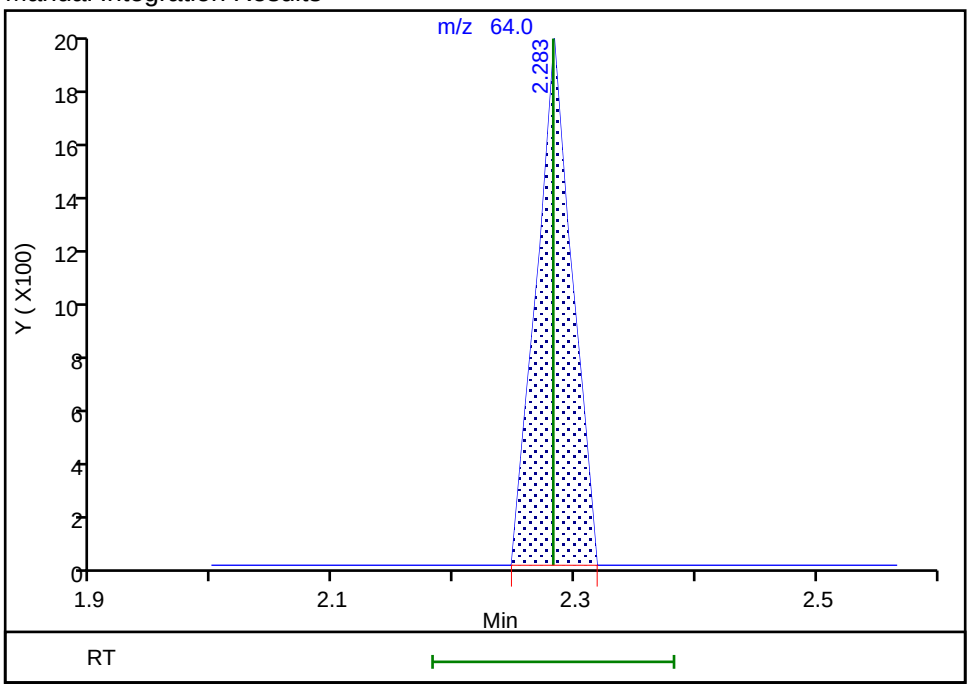
Not Detected
Expected RT: 2.28

Processing Integration Results



Manual Integration Results

RT: 2.28
Area: 4024
Amount: 1.492002
Amount Units: ug/l



Reviewer: latat, 23-Jan-2019 01:55:48
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

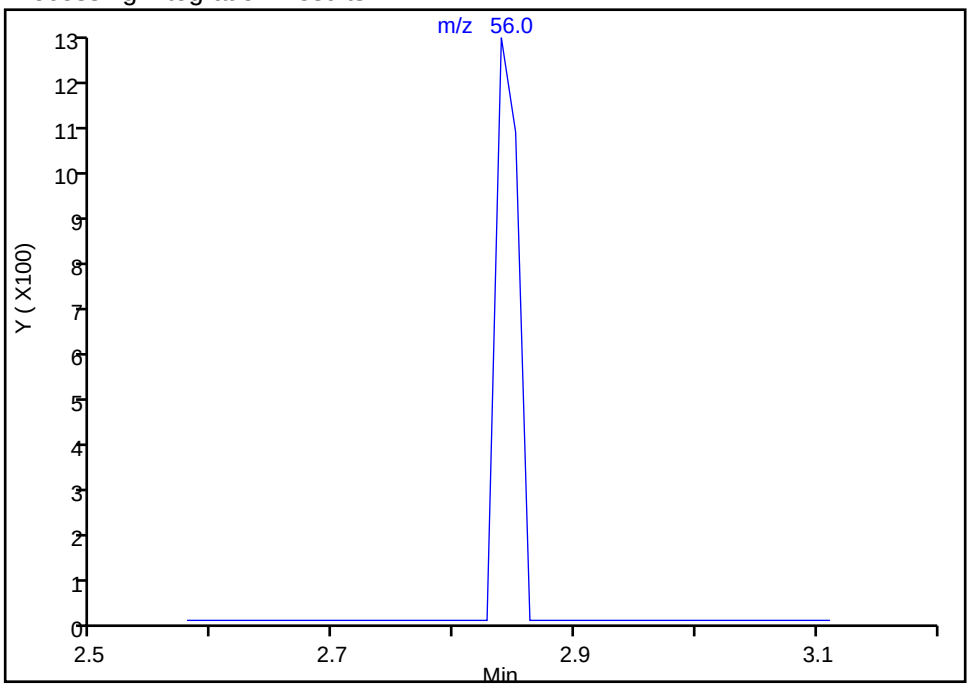
Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D
Injection Date: 19-Jan-2019 08:12:30 Instrument ID: A3UX8
Lims ID: STD8260 L1
Client ID:
Operator ID: 402279 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

18 Acrolein, CAS: 107-02-8

Signal: 1

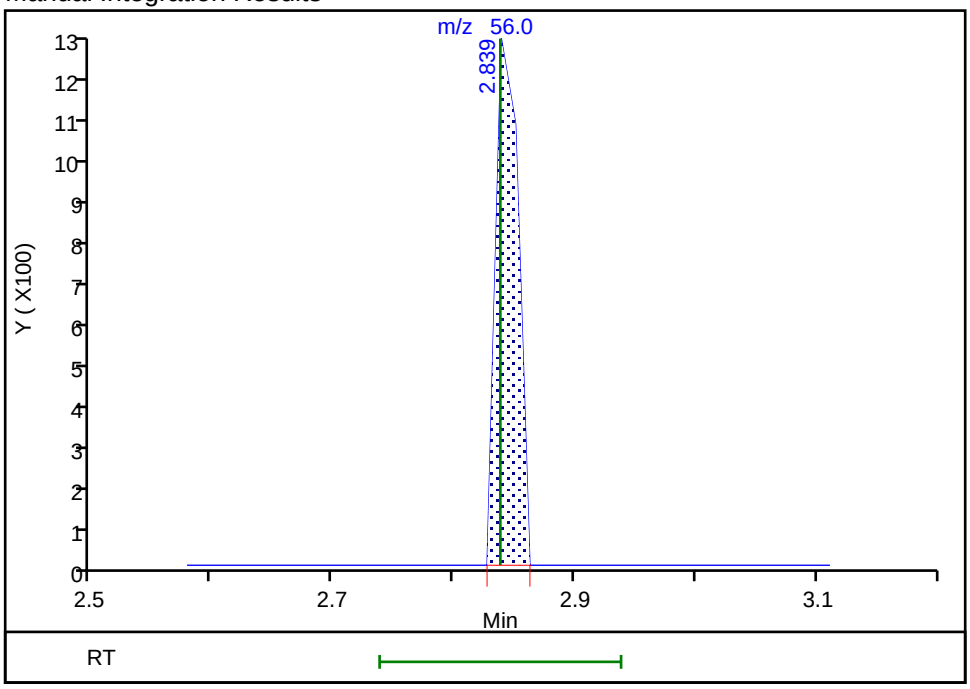
Not Detected
Expected RT: 2.84

Processing Integration Results



Manual Integration Results

RT: 2.84
Area: 1578
Amount: 3.991003
Amount Units: ug/l



Reviewer: latat, 23-Jan-2019 01:55:55
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

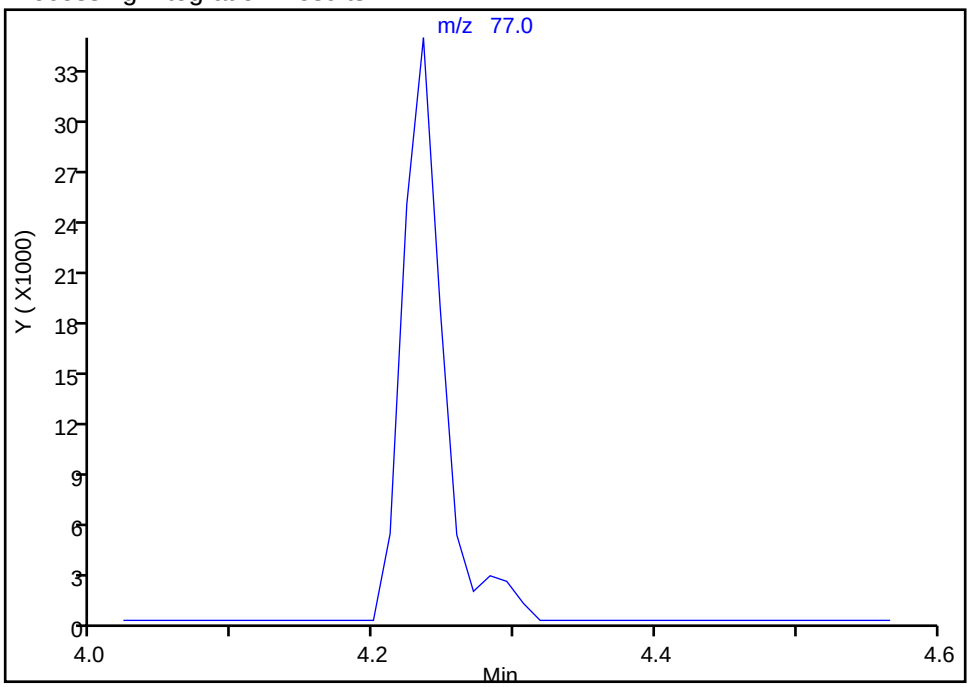
Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D
Injection Date: 19-Jan-2019 08:12:30 Instrument ID: A3UX8
Lims ID: STD8260 L1
Client ID:
Operator ID: 402279 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

41 2,2-Dichloropropane, CAS: 594-20-7

Signal: 1

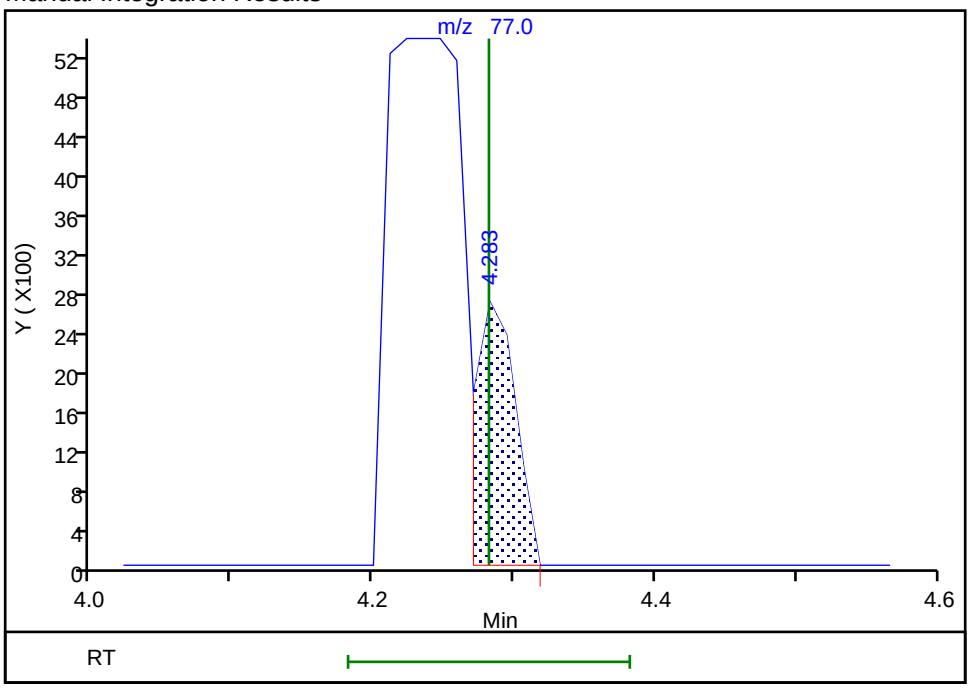
Not Detected
Expected RT: 4.28

Processing Integration Results



Manual Integration Results

RT: 4.28
Area: 5486
Amount: 1.220769
Amount Units: ug/l



Reviewer: latat, 23-Jan-2019 01:57:02
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

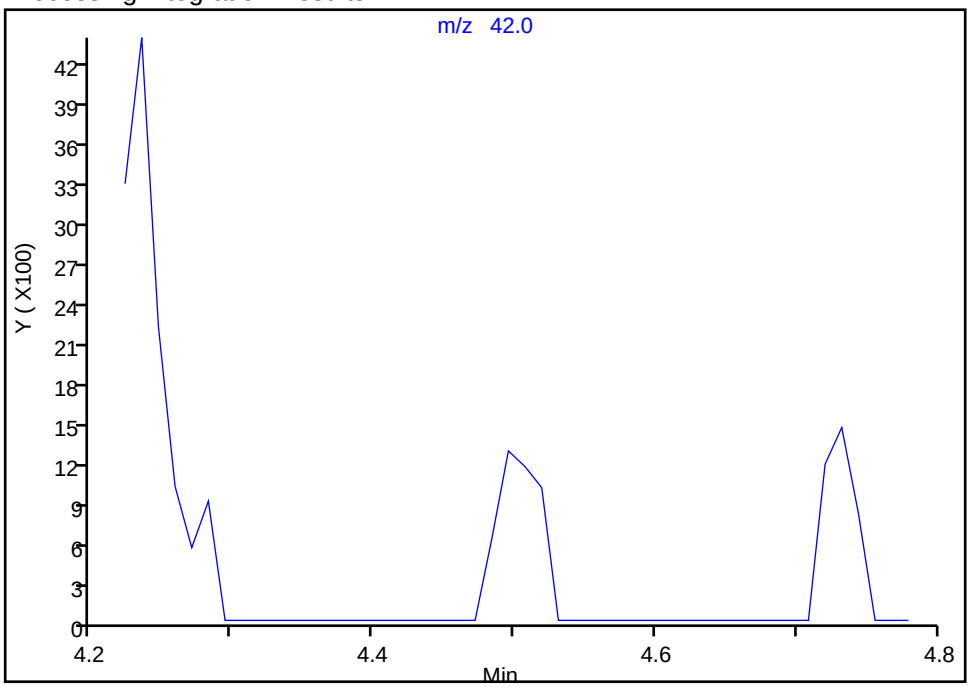
Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D
Injection Date: 19-Jan-2019 08:12:30 Instrument ID: A3UX8
Lims ID: STD8260 L1
Client ID:
Operator ID: 402279 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

46 Tetrahydrofuran, CAS: 109-99-9

Signal: 1

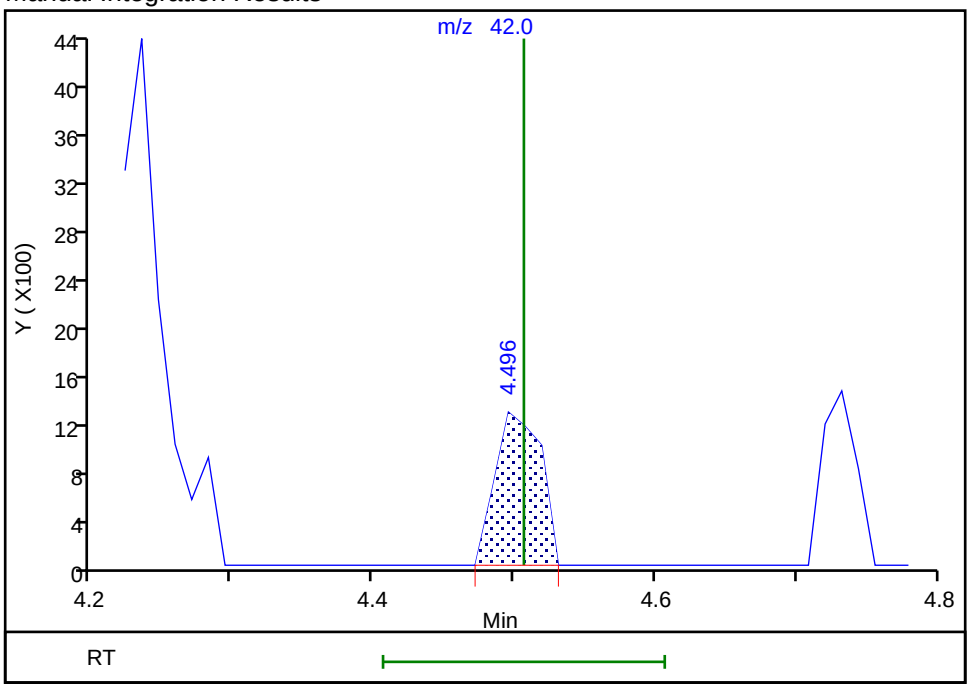
Not Detected
Expected RT: 4.51

Processing Integration Results



Manual Integration Results

RT: 4.50
Area: 2848
Amount: 2.306940
Amount Units: ug/l



Reviewer: latat, 23-Jan-2019 01:57:21
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

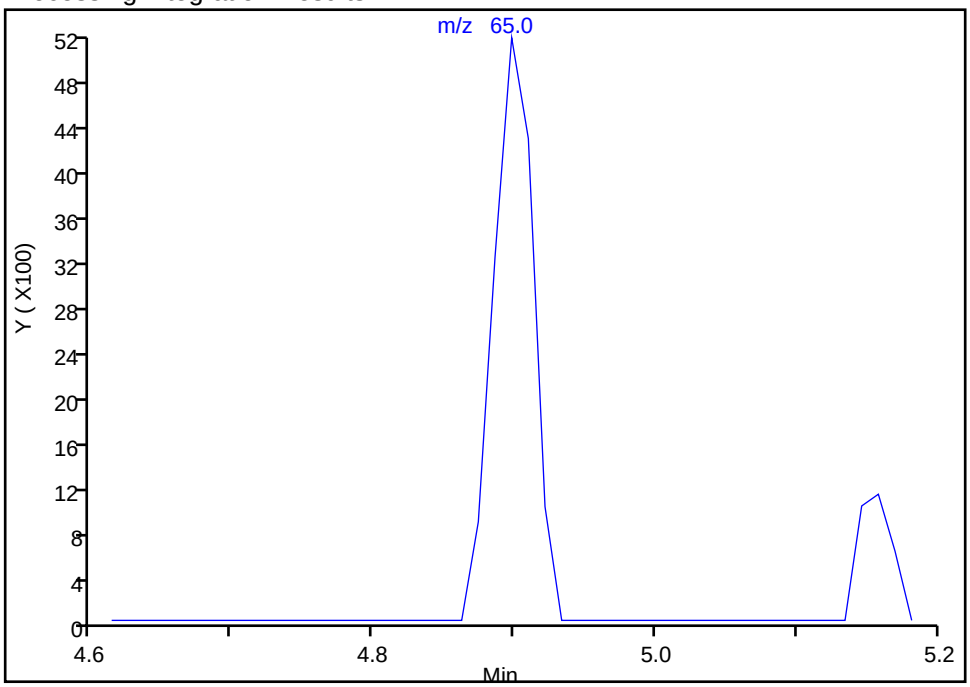
Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D
Injection Date: 19-Jan-2019 08:12:30 Instrument ID: A3UX8
Lims ID: STD8260 L1
Client ID:
Operator ID: 402279 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

$ 5 1,2-Dichloroethane-d4 (Surr), CAS: 17060-07-0

Signal: 1

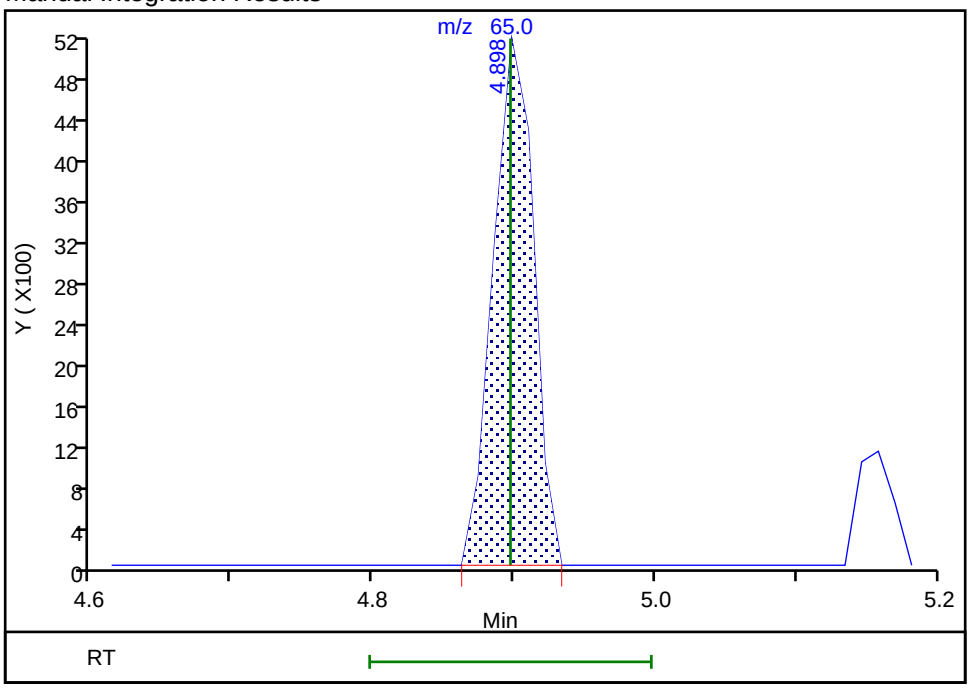
Not Detected
Expected RT: 4.90

Processing Integration Results



Manual Integration Results

RT: 4.90
Area: 10321
Amount: -0.788071
Amount Units: ug/l



Reviewer: latat, 23-Jan-2019 01:55:40
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

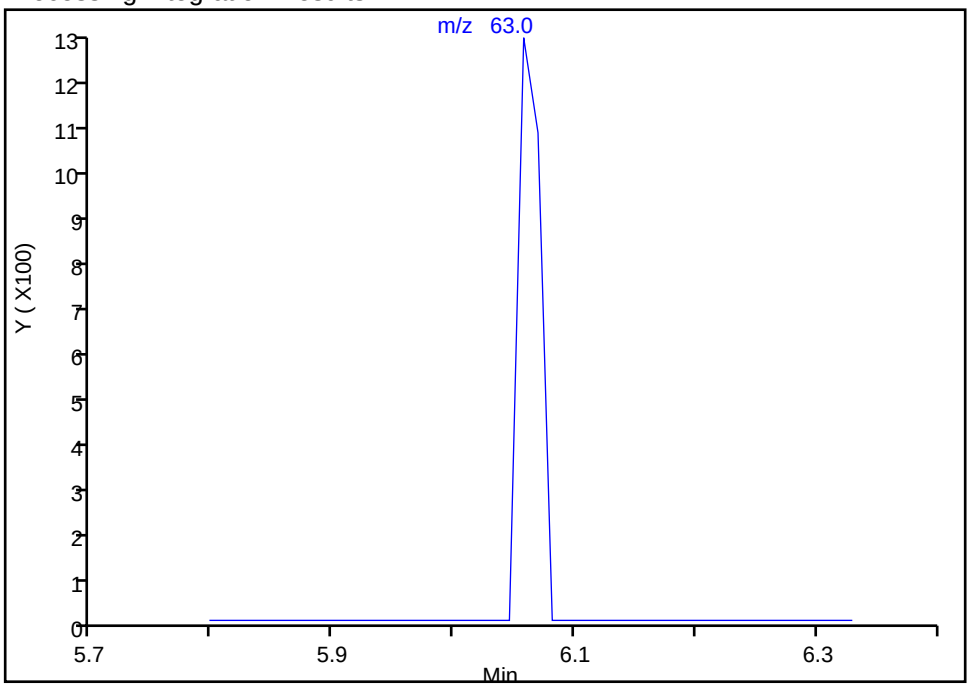
Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D
Injection Date: 19-Jan-2019 08:12:30 Instrument ID: A3UX8
Lims ID: STD8260 L1
Client ID:
Operator ID: 402279 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

67 2-Chloroethyl vinyl ether, CAS: 110-75-8

Signal: 1

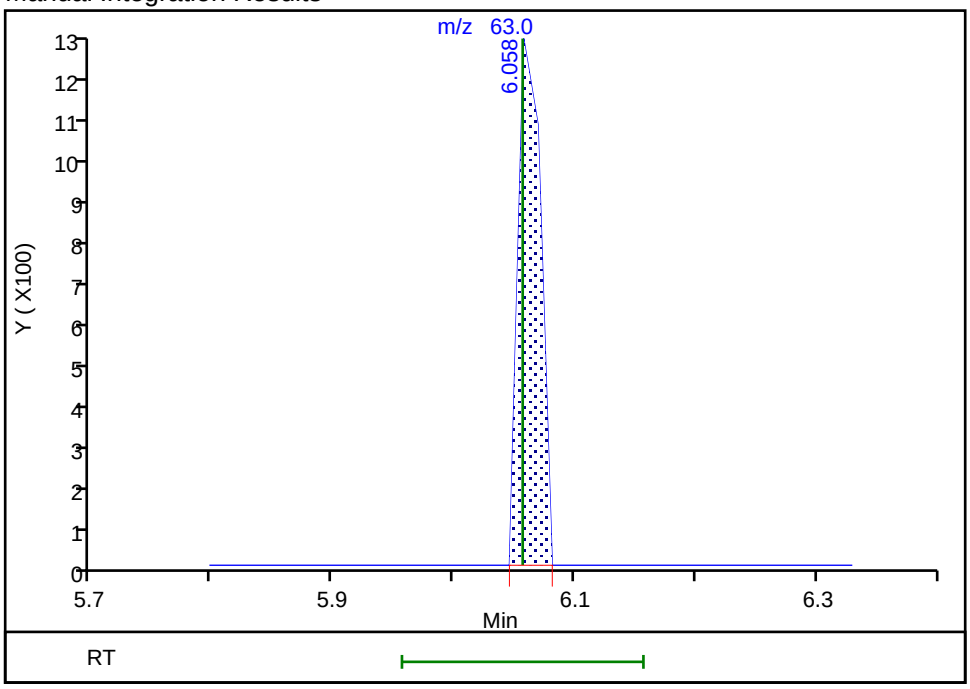
Not Detected
Expected RT: 6.06

Processing Integration Results



Manual Integration Results

RT: 6.06
Area: 1630
Amount: 1.118460
Amount Units: ug/l



Reviewer: latat, 23-Jan-2019 01:57:33
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

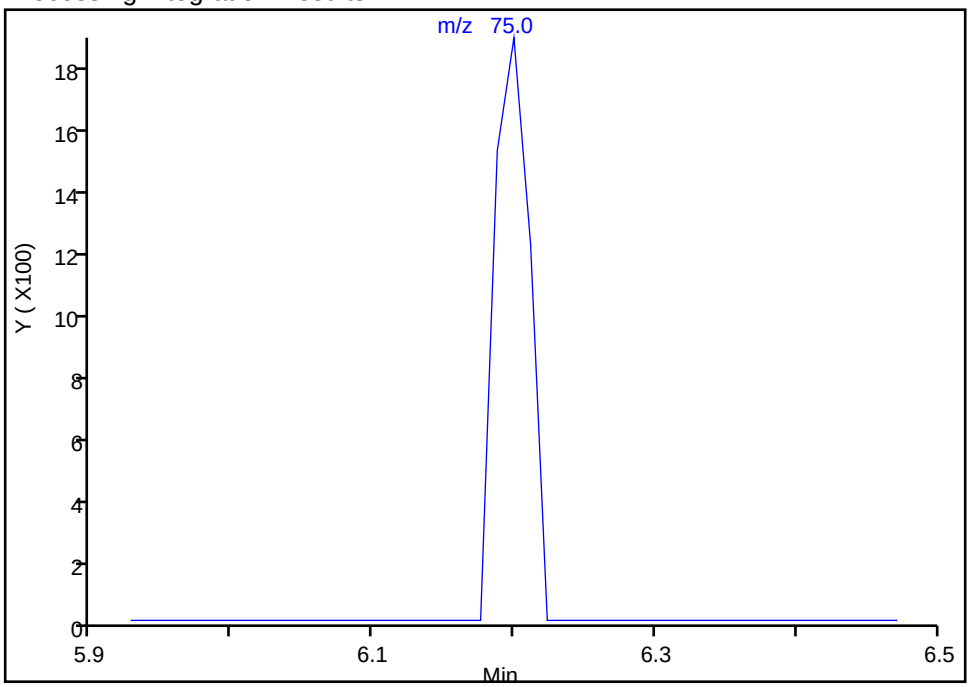
Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D
Injection Date: 19-Jan-2019 08:12:30 Instrument ID: A3UX8
Lims ID: STD8260 L1
Client ID:
Operator ID: 402279 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

68 cis-1,3-Dichloropropene, CAS: 10061-01-5

Signal: 1

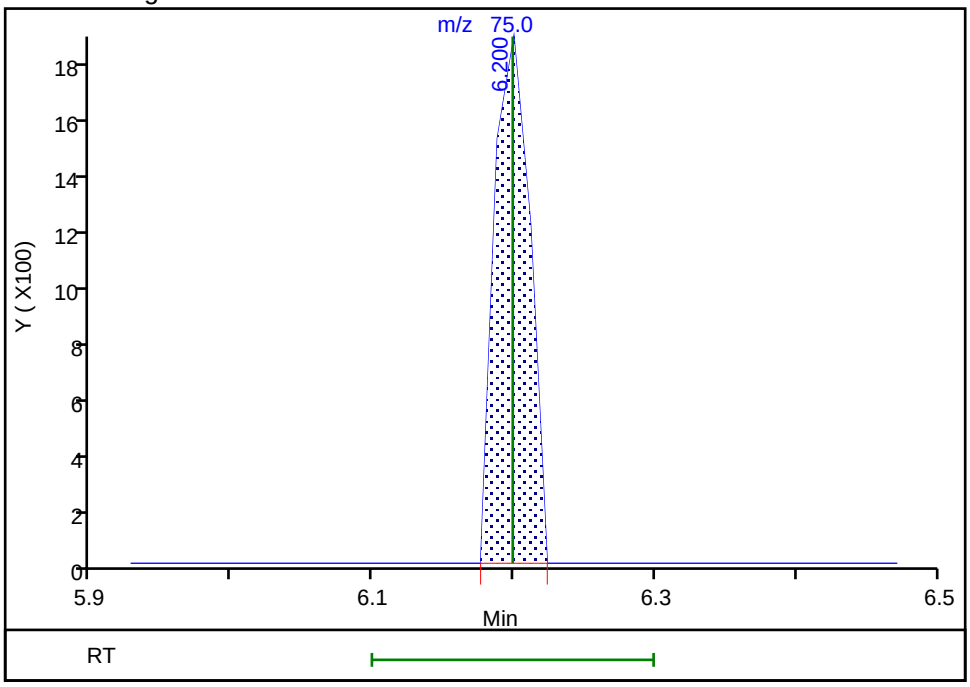
Processing Integration Results

Not Detected
Expected RT: 6.20



Manual Integration Results

RT: 6.20
Area: 3238
Amount: 0.635336
Amount Units: ug/l



Reviewer: latat, 23-Jan-2019 01:56:35
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

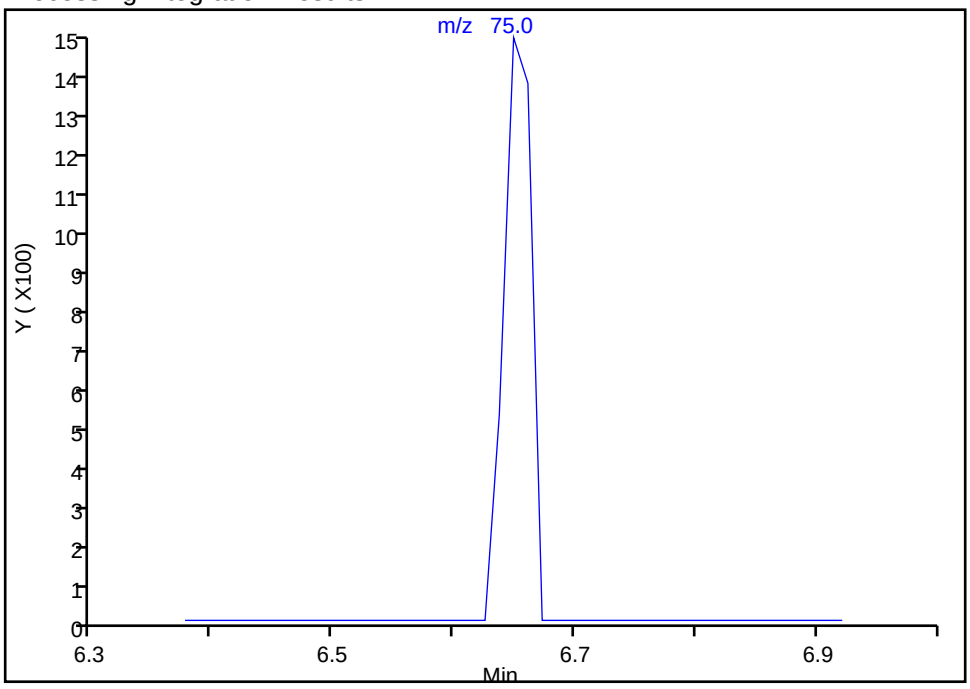
Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D
Injection Date: 19-Jan-2019 08:12:30 Instrument ID: A3UX8
Lims ID: STD8260 L1
Client ID:
Operator ID: 402279 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

71 trans-1,3-Dichloropropene, CAS: 10061-02-6

Signal: 1

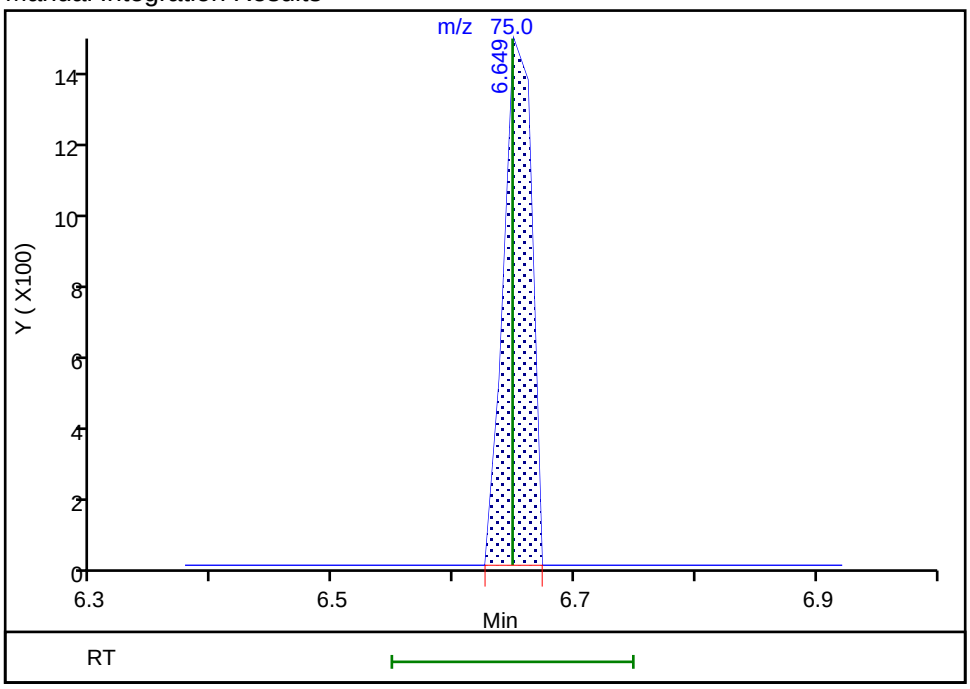
Not Detected
Expected RT: 6.65

Processing Integration Results



Manual Integration Results

RT: 6.65
Area: 2357
Amount: 0.572085
Amount Units: ug/l



Reviewer: latat, 23-Jan-2019 01:56:44
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

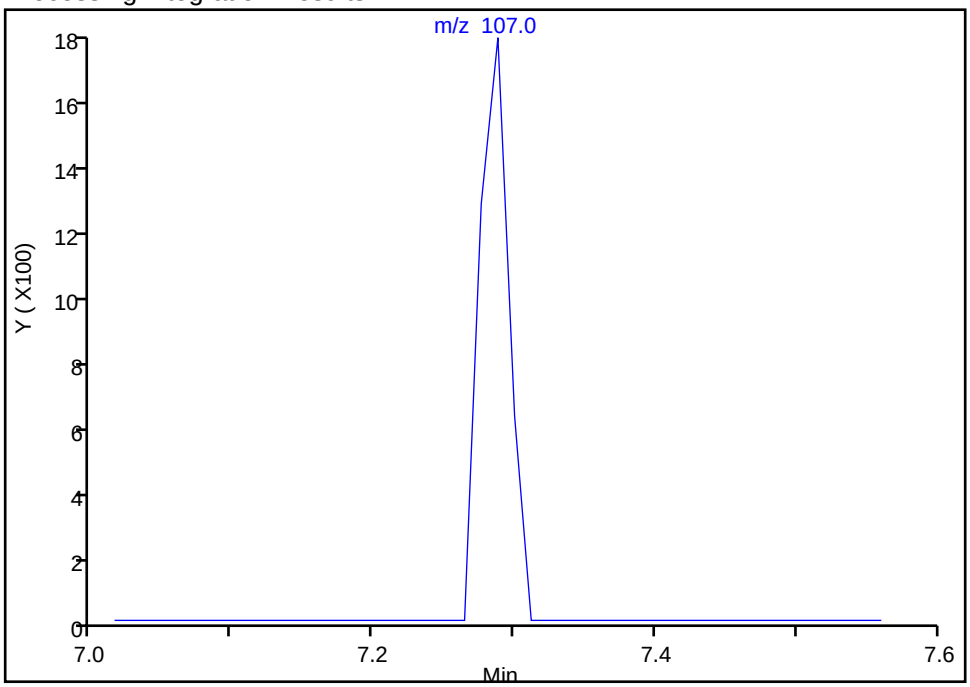
Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D
Injection Date: 19-Jan-2019 08:12:30 Instrument ID: A3UX8
Lims ID: STD8260 L1
Client ID:
Operator ID: 402279 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

80 Ethylene Dibromide, CAS: 106-93-4

Signal: 1

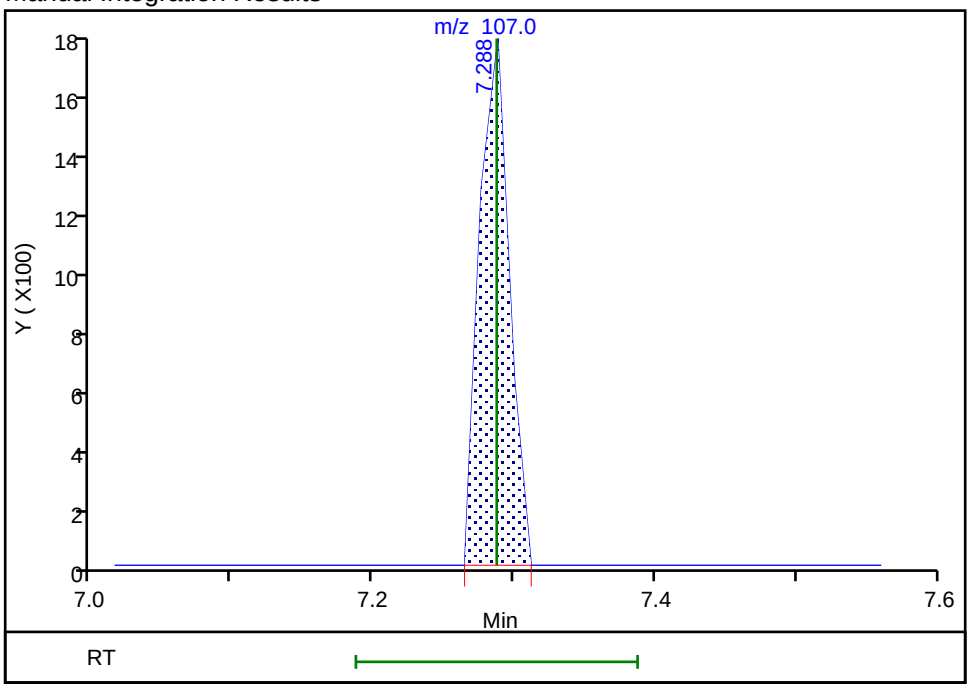
Processing Integration Results

Not Detected
Expected RT: 7.29



Manual Integration Results

RT: 7.29
Area: 2569
Amount: 0.928380
Amount Units: ug/l



Reviewer: latat, 23-Jan-2019 01:56:53
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-348190/9 Calibration Date: 10/02/2018 18:21

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX5946.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3440	0.3451		0.0100	0.0100	0.3	50.0
Chloromethane	Ave	0.4030	0.3613	0.1000	0.00896	0.0100	-10.4	50.0
Butadiene	Ave	0.3780	0.3331		0.00881	0.0100	-11.9	50.0
Vinyl chloride	Ave	0.3591	0.3452		0.00961	0.0100	-3.9	20.0
Bromomethane	Ave	0.2122	0.1913		0.00901	0.0100	-9.9	50.0
Chloroethane	Lin1		0.1940		0.00877	0.0100	-12.3	50.0
Dichlorofluoromethane	Ave	0.5143	0.4937		0.00960	0.0100	-4.0	50.0
Trichlorofluoromethane	Ave	0.4003	0.3666		0.00916	0.0100	-8.4	50.0
Ethyl ether	Ave	0.2351	0.2403		0.0102	0.0100	2.2	50.0
Acrolein	Ave	0.0380	0.0424		0.0557	0.0500	11.4	50.0
1,1-Dichloroethene	Ave	0.2879	0.3055		0.0106	0.0100	6.1	20.0
1,1,2-Trichlorotrifluoroethane	Lin1		0.2166		0.0105	0.0100	4.8	50.0
Acetone	Lin1		0.0612		0.0166	0.0200	-17.2	50.0
Iodomethane	Ave	0.5233	0.5267		0.0101	0.0100	0.7	50.0
Carbon disulfide	Ave	0.9675	0.9637		0.00996	0.0100	-0.4	50.0
3-Chloro-1-propene	Ave	0.2128	0.2096		0.00985	0.0100	-1.5	50.0
Methyl acetate	Ave	0.1605	0.1565		0.0195	0.0200	-2.5	50.0
Methylene Chloride	Ave	0.3525	0.3388		0.00961	0.0100	-3.9	50.0
tert-Butyl alcohol	Ave	0.0278	0.0215		0.0774	0.100	-22.6	50.0
Acrylonitrile	Ave	0.0958	0.0915		0.0955	0.100	-4.5	50.0
Methyl tert-butyl ether	Ave	0.8844	0.8779		0.00993	0.0100	-0.7	50.0
trans-1,2-Dichloroethene	Ave	0.3190	0.3363		0.0105	0.0100	5.4	50.0
Hexane	Ave	0.0540	0.0562		0.0104	0.0100	4.1	20.0
1,1-Dichloroethane	Ave	0.5690	0.5736	0.1000	0.0101	0.0100	0.8	50.0
Vinyl acetate	Ave	0.4510	0.4649		0.0103	0.0100	3.1	50.0
2,2-Dichloropropane	Ave	0.0953	0.0924		0.00970	0.0100	-3.0	50.0
2-Butanone (MEK)	Ave	0.0926	0.0789		0.0171	0.0200	-14.7	50.0
cis-1,2-Dichloroethene	Ave	0.3349	0.3388		0.0101	0.0100	1.2	50.0
Bromochloromethane	Ave	0.1496	0.1507		0.0101	0.0100	0.7	50.0
Tetrahydrofuran	Ave	0.0667	0.0564		0.0169	0.0200	-15.4	50.0
Chloroform	Ave	0.4937	0.4935		0.0100	0.0100	-0.0	20.0
1,1,1-Trichloroethane	Ave	0.4816	0.4753		0.00987	0.0100	-1.3	50.0
Cyclohexane	Ave	0.5356	0.5471		0.0102	0.0100	2.1	50.0
1,1-Dichloropropene	Ave	0.3480	0.3613		0.0104	0.0100	3.8	50.0
Carbon tetrachloride	Ave	0.3915	0.3928		0.0100	0.0100	0.3	50.0
Isobutyl alcohol	Ave	0.0091	0.0077		0.211	0.250	-15.8	50.0
Benzene	Ave	1.147	1.145		0.00999	0.0100	-0.1	50.0
1,2-Dichloroethane	Ave	0.4198	0.4202		0.0100	0.0100	0.1	50.0
n-Heptane	Ave	0.0441	0.0488		0.0111	0.0100	10.6	50.0
Trichloroethene	Ave	0.2858	0.2864		0.0100	0.0100	0.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-348190/9 Calibration Date: 10/02/2018 18:21

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX5946.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4023	0.3992		0.00992	0.0100	-0.8	50.0
1,2-Dichloropropane	Ave	0.2977	0.3081		0.0103	0.0100	3.5	20.0
1,4-Dioxane	Qua		0.0016		0.111	0.200	-44.5	50.0
Dibromomethane	Ave	0.1689	0.1608		0.00952	0.0100	-4.8	50.0
Bromodichloromethane	Ave	0.3738	0.3860		0.0103	0.0100	3.3	50.0
2-Chloroethyl vinyl ether	Ave	0.1569	0.1547		0.00985	0.0100	-1.5	50.0
cis-1,3-Dichloropropene	Ave	0.4140	0.4330		0.0105	0.0100	4.6	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2300	0.2246		0.0195	0.0200	-2.3	50.0
Toluene	Ave	1.524	1.527		0.0100	0.0100	0.2	20.0
trans-1,3-Dichloropropene	Ave	0.4515	0.4624		0.0102	0.0100	2.4	50.0
Ethyl methacrylate	Ave	0.3702	0.3874		0.0105	0.0100	4.7	50.0
1,1,2-Trichloroethane	Ave	0.2836	0.2833		0.00999	0.0100	-0.0	50.0
Tetrachloroethene	Ave	0.2655	0.2614		0.00984	0.0100	-1.6	50.0
1,3-Dichloropropane	Ave	0.4864	0.4763		0.00979	0.0100	-2.1	50.0
2-Hexanone	Ave	0.1864	0.1863		0.0200	0.0200	-0.0	50.0
Chlorodibromomethane	Ave	0.3162	0.3326		0.0105	0.0100	5.2	50.0
1,2-Dibromoethane	Ave	0.2793	0.2762		0.00989	0.0100	-1.1	50.0
Chlorobenzene	Ave	0.9949	0.9762	0.3000	0.00981	0.0100	-1.9	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3753	0.3601		0.00960	0.0100	-4.0	50.0
Ethylbenzene	Ave	0.5550	0.5421		0.00977	0.0100	-2.3	20.0
m-Xylene & p-Xylene	Ave	0.6875	0.6797		0.00989	0.0100	-1.1	50.0
o-Xylene	Ave	0.7160	0.6810		0.00951	0.0100	-4.9	50.0
Styrene	Ave	1.140	1.099		0.00965	0.0100	-3.5	50.0
Bromoform	Ave	0.1941	0.1912	0.1000	0.00985	0.0100	-1.5	50.0
Isopropylbenzene	Ave	1.746	1.691		0.00969	0.0100	-3.1	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6756	0.6826	0.3000	0.0101	0.0100	1.0	50.0
Bromobenzene	Ave	0.7676	0.7690		0.0100	0.0100	0.2	50.0
1,2,3-Trichloropropane	Ave	0.2120	0.2116		0.00998	0.0100	-0.2	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.1573		0.0115	0.0100	14.7	50.0
N-Propylbenzene	Ave	0.7981	0.8486		0.0106	0.0100	6.3	50.0
2-Chlorotoluene	Ave	0.7489	0.7353		0.00982	0.0100	-1.8	50.0
1,3,5-Trimethylbenzene	Ave	2.520	2.599		0.0103	0.0100	3.2	50.0
4-Chlorotoluene	Ave	0.7451	0.7947		0.0107	0.0100	6.6	50.0
tert-Butylbenzene	Ave	2.046	2.073		0.0101	0.0100	1.3	50.0
1,2,4-Trimethylbenzene	Ave	2.763	2.787		0.0101	0.0100	0.9	50.0
sec-Butylbenzene	Ave	2.761	2.810		0.0102	0.0100	1.8	50.0
1,3-Dichlorobenzene	Ave	1.510	1.514		0.0100	0.0100	0.3	50.0
4-Isopropyltoluene	Ave	2.402	2.473		0.0103	0.0100	3.0	50.0
1,4-Dichlorobenzene	Ave	1.538	1.522		0.00989	0.0100	-1.1	50.0
n-Butylbenzene	Ave	1.940	1.904		0.00981	0.0100	-1.9	50.0
1,2-Dichlorobenzene	Ave	1.537	1.510		0.00983	0.0100	-1.7	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-348190/9 Calibration Date: 10/02/2018 18:21

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX5946.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1540	0.1474		0.00957	0.0100	-4.3	50.0
1,2,4-Trichlorobenzene	Ave	0.9316	0.8227		0.00883	0.0100	-11.7	50.0
Hexachlorobutadiene	Qua		0.2234		0.00748	0.0100	-25.2	50.0
Naphthalene	Ave	2.426	2.081		0.00858	0.0100	-14.2	50.0
1,2,3-Trichlorobenzene	Ave	0.9073	0.7077		0.00780	0.0100	-22.0	50.0
Dibromofluoromethane (Surr)	Ave	0.2627	0.2751		0.0105	0.0100	4.7	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3357	0.3486		0.0104	0.0100	3.9	50.0
Toluene-d8 (Surr)	Ave	1.262	1.312		0.0104	0.0100	3.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.4807	0.4846		0.0101	0.0100	0.8	50.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5946.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 02-Oct-2018 18:21:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-009
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub63

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:29:52 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.566	5.565	0.001	98	756139	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.251	8.250	0.001	86	615440	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.486	10.486	0.000	95	331268	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.998	4.997	0.001	93	208004	10.0	10.5	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.282	5.281	0.001	98	263590	10.0	10.4	
$ 6 Toluene-d8 (Surr)	98	6.938	6.937	0.001	94	807523	10.0	10.4	
$ 7 4-Bromofluorobenzene (Surr	95	9.351	9.350	0.001	88	298215	10.0	10.1	
9 Dichlorodifluoromethane	85	1.686	1.662	0.024	99	260949	10.0	10.0	
10 Chloromethane	50	1.851	1.827	0.024	99	273156	10.0	8.96	
12 Butadiene	54	1.958	1.945	0.013	83	251855	10.0	8.81	
11 Vinyl chloride	62	1.970	1.957	0.013	93	260987	10.0	9.61	
13 Bromomethane	94	2.277	2.265	0.012	92	144616	10.0	9.01	
14 Chloroethane	64	2.336	2.348	-0.012	99	146721	10.0	8.77	
15 Dichlorofluoromethane	67	2.549	2.549	0.000	92	373319	10.0	9.60	
16 Trichlorofluoromethane	101	2.597	2.584	0.013	93	277192	10.0	9.16	
17 Ethyl ether	59	2.833	2.833	0.000	91	181675	10.0	10.2	
18 Acrolein	56	2.951	2.951	0.000	99	160194	50.0	55.7	
19 1,1-Dichloroethene	96	3.046	3.045	0.001	96	230996	10.0	10.6	
20 1,1,2-Trichloro-1,2,2-trif	151	3.070	3.069	0.001	92	163784	10.0	10.5	
21 Acetone	43	3.105	3.093	0.012	98	92507	20.0	16.6	
22 Iodomethane	142	3.188	3.187	0.001	98	398276	10.0	10.1	
24 Carbon disulfide	76	3.247	3.247	0.000	100	728689	10.0	9.96	
26 3-Chloro-1-propene	76	3.377	3.377	0.000	88	158504	10.0	9.85	
27 Methyl acetate	43	3.401	3.400	0.001	98	236671	20.0	19.5	
28 Methylene Chloride	84	3.484	3.483	0.001	95	256191	10.0	9.61	
29 2-Methyl-2-propanol	59	3.578	3.578	0.000	98	162888	100.0	77.4	
31 Acrylonitrile	53	3.709	3.708	0.000	99	691822	100.0	95.5	
32 Methyl tert-butyl ether	73	3.732	3.732	0.000	98	663789	10.0	9.93	
30 trans-1,2-Dichloroethene	96	3.732	3.732	0.000	71	254251	10.0	10.5	
33 Hexane	86	3.969	3.968	0.001	89	42454	10.0	10.4	
34 1,1-Dichloroethane	63	4.099	4.098	0.001	97	433741	10.0	10.1	
35 Vinyl acetate	43	4.134	4.134	0.000	97	351545	10.0	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 2-Butanone (MEK)	43	4.596	4.595	0.001	42	119348	20.0	17.1	
40 cis-1,2-Dichloroethene	96	4.596	4.595	0.001	85	256177	10.0	10.1	
39 2,2-Dichloropropane	97	4.596	4.595	0.001	70	69884	10.0	9.70	
45 Chlorobromomethane	128	4.797	4.796	0.001	95	113953	10.0	10.1	
46 Tetrahydrofuran	42	4.844	4.843	0.001	95	85271	20.0	16.9	
47 Chloroform	83	4.856	4.855	0.001	96	373179	10.0	10.0	
48 1,1,1-Trichloroethane	97	5.021	5.021	0.000	98	359358	10.0	9.87	
49 Cyclohexane	56	5.081	5.080	0.001	91	413674	10.0	10.2	
50 1,1-Dichloropropene	75	5.163	5.163	0.000	91	273218	10.0	10.4	
51 Carbon tetrachloride	117	5.163	5.163	0.000	92	297022	10.0	10.0	
52 Isobutyl alcohol	41	5.234	5.234	0.000	96	118397	250.0	210.6	
53 Benzene	78	5.341	5.340	0.001	97	865903	10.0	9.99	
54 1,2-Dichloroethane	62	5.353	5.352	0.001	97	317755	10.0	10.0	
56 n-Heptane	100	5.542	5.541	0.001	91	36918	10.0	11.1	
58 Trichloroethene	130	5.885	5.884	0.001	94	216544	10.0	10.0	
60 Methylcyclohexane	83	6.051	6.050	0.001	95	301857	10.0	9.92	
61 1,2-Dichloropropane	63	6.074	6.074	0.000	94	232927	10.0	10.3	
63 Dibromomethane	93	6.181	6.180	0.001	95	121619	10.0	9.52	
64 1,4-Dioxane	88	6.181	6.192	-0.011	37	24227	200.0	110.9	
65 Dichlorobromomethane	83	6.311	6.310	0.001	98	291857	10.0	10.3	
67 2-Chloroethyl vinyl ether	63	6.547	6.559	-0.012	92	116938	10.0	9.85	
68 cis-1,3-Dichloropropene	75	6.689	6.689	0.000	93	327430	10.0	10.5	
69 4-Methyl-2-pentanone (MIBK	43	6.819	6.819	0.000	95	339622	20.0	19.5	
70 Toluene	91	6.997	6.996	0.001	97	939987	10.0	10.0	
71 trans-1,3-Dichloropropene	75	7.174	7.174	0.000	96	284590	10.0	10.2	
72 Ethyl methacrylate	69	7.245	7.245	0.000	89	238428	10.0	10.5	
73 1,1,2-Trichloroethane	97	7.352	7.351	0.001	93	174374	10.0	10.0	
74 Tetrachloroethene	164	7.494	7.493	0.001	93	160843	10.0	9.84	
75 1,3-Dichloropropane	76	7.505	7.505	0.000	93	293110	10.0	9.79	
76 2-Hexanone	43	7.565	7.564	0.001	94	229315	20.0	20.0	
78 Chlorodibromomethane	129	7.718	7.718	0.000	90	204701	10.0	10.5	
80 Ethylene Dibromide	107	7.825	7.824	0.001	100	170009	10.0	9.89	
82 Chlorobenzene	112	8.274	8.274	0.000	93	600799	10.0	9.81	
83 1,1,1,2-Tetrachloroethane	131	8.345	8.345	0.000	92	221623	10.0	9.60	
84 Ethylbenzene	106	8.369	8.368	0.001	99	333615	10.0	9.77	
85 m-Xylene & p-Xylene	106	8.475	8.475	0.000	99	418327	10.0	9.89	
86 o-Xylene	106	8.854	8.853	0.001	97	419106	10.0	9.51	
87 Styrene	104	8.866	8.865	0.001	94	676504	10.0	9.65	
88 Bromoform	173	9.055	9.054	0.001	94	117676	10.0	9.85	
89 Isopropylbenzene	105	9.209	9.208	0.001	96	1040869	10.0	9.69	
92 1,1,2,2-Tetrachloroethane	83	9.481	9.480	0.001	97	226135	10.0	10.1	
93 Bromobenzene	156	9.516	9.516	0.000	97	254758	10.0	10.0	
94 1,2,3-Trichloropropane	110	9.540	9.539	0.001	85	70080	10.0	9.98	
95 trans-1,4-Dichloro-2-buten	53	9.540	9.539	0.001	70	52102	10.0	11.5	
96 N-Propylbenzene	120	9.599	9.598	0.001	99	281107	10.0	10.6	
97 2-Chlorotoluene	126	9.694	9.693	0.001	96	243568	10.0	9.82	
98 1,3,5-Trimethylbenzene	105	9.765	9.764	0.001	94	861102	10.0	10.3	
99 4-Chlorotoluene	126	9.800	9.800	0.000	98	263249	10.0	10.7	
100 tert-Butylbenzene	119	10.096	10.095	0.001	92	686806	10.0	10.1	
102 1,2,4-Trimethylbenzene	105	10.131	10.143	-0.012	97	923259	10.0	10.1	
103 sec-Butylbenzene	105	10.309	10.308	0.001	94	930926	10.0	10.2	
104 1,3-Dichlorobenzene	146	10.427	10.426	0.001	98	501587	10.0	10.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 4-Isopropyltoluene	119	10.451	10.450	0.001	97	819344	10.0	10.3	
106 1,4-Dichlorobenzene	146	10.510	10.509	0.001	94	504218	10.0	9.89	
109 n-Butylbenzene	91	10.853	10.852	0.001	97	630665	10.0	9.81	
110 1,2-Dichlorobenzene	146	10.877	10.876	0.001	97	500236	10.0	9.83	
111 1,2-Dibromo-3-Chloropropan	157	11.645	11.657	-0.012	83	48818	10.0	9.57	
113 1,2,4-Trichlorobenzene	180	12.485	12.485	0.000	94	272548	10.0	8.83	
114 Hexachlorobutadiene	225	12.651	12.650	0.001	97	74011	10.0	7.48	
115 Naphthalene	128	12.734	12.733	0.001	99	689371	10.0	8.58	
116 1,2,3-Trichlorobenzene	180	12.982	12.981	0.001	97	234431	10.0	7.80	
S 130 Xylenes, Total	106				0		20.0	19.4	
S 131 Trihalomethanes, Total	1				0		40.0	40.7	

Reagents:

VMFASPW_00269	Amount Added:	8.00	Units: uL
VMFASGW_00276	Amount Added:	8.00	Units: uL
VMFASAW_00250	Amount Added:	8.00	Units: uL
VM50IS_00071	Amount Added:	1.00	Units: uL
vm50ss_00337	Amount Added:	8.00	Units: uL

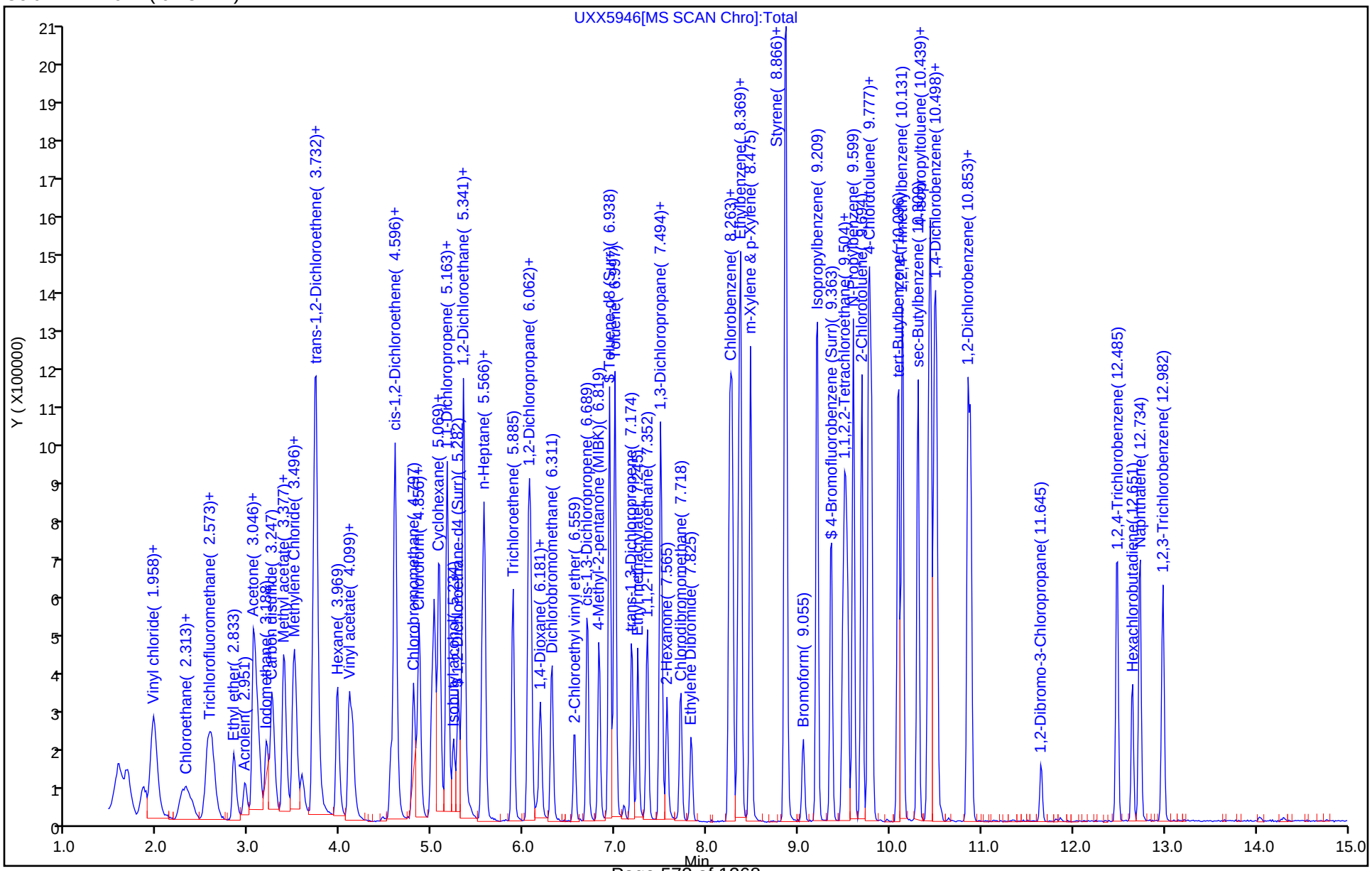
Report Date: 03-Oct-2018 12:30:02 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5946.D

Injection Date:	02-Oct-2018 18:21:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	ICV			Worklist Smp#:	9
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-348190/17 Calibration Date: 10/02/2018 21:39

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 18:46

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 21:14

Lab File ID: UXX5954.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0285	0.0258		0.0905	0.100	-9.5	50.0
Diisopropyl ether	Ave	0.2668	0.2824		0.0106	0.0100	5.9	50.0
2-Chloro-1,3-butadiene	Ave	0.4589	0.4729		0.0103	0.0100	3.1	50.0
Ethyl tert-butyl ether	Ave	1.043	1.055		0.0101	0.0100	1.2	50.0
Ethyl acetate	Ave	0.1805	0.1894		0.0210	0.0200	4.9	50.0
Propionitrile	Ave	0.0319	0.0345		0.108	0.100	7.9	50.0
Methacrylonitrile	Ave	0.1213	0.1277		0.105	0.100	5.3	50.0
Tert-amyl methyl ether	Ave	0.8740	0.8858		0.0101	0.0100	1.4	50.0
n-Butanol	Ave	0.0098	0.0093		0.238	0.250	-4.7	50.0
Ethyl acrylate	Ave	0.2953	0.3009		0.0102	0.0100	1.9	50.0
Methyl methacrylate	Ave	0.1862	0.1870		0.0201	0.0200	0.4	50.0
2-Nitropropane	Ave	0.0577	0.0602		0.0208	0.0200	4.2	50.0
n-Butyl acetate	Ave	0.2130	0.2141		0.0100	0.0100	0.5	50.0
1-Chlorohexane	Ave	0.3772	0.3855		0.0102	0.0100	2.2	50.0
Cyclohexanone	Ave	0.0233	0.0197		0.0846	0.100	-15.4	50.0
Pentachloroethane	Qua		0.2180		0.0227	0.0200	13.3	50.0
1,2,3-Trimethylbenzene	Ave	2.994	2.955		0.00987	0.0100	-1.3	50.0
Benzyl chloride	Lin1		0.2556		0.0102	0.0100	1.7	50.0
1,3,5-Trichlorobenzene	Ave	0.9627	0.9202		0.00956	0.0100	-4.4	50.0
2-Methylnaphthalene	Ave	1.621	1.137		0.0140	0.0200	-29.9	50.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5954.D
Lims ID: ICV A9
Client ID:
Sample Type: ICV
Inject. Date: 02-Oct-2018 21:39:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-017
Operator ID: 001644 Instrument ID: A3UX10
Sublist:

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:31:24 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.567	5.564	0.002	99	812172	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.252	8.250	0.002	88	634991	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.487	10.485	0.002	96	333549	10.0	10.0	
25 Acetonitrile	41	3.343	3.352	-0.009	100	209840	100.0	90.5	
36 Isopropyl ether	87	4.147	4.145	0.002	93	229388	10.0	10.6	
37 2-Chloro-1,3-butadiene	53	4.171	4.169	0.002	94	384090	10.0	10.3	
38 Tert-butyl ethyl ether	59	4.455	4.453	0.002	98	857059	10.0	10.1	
42 Ethyl acetate	43	4.644	4.642	0.002	99	307654	20.0	21.0	
43 Propionitrile	54	4.656	4.654	0.002	100	279778	100.0	107.9	
44 Methacrylonitrile	41	4.786	4.784	0.002	90	1036822	100.0	105.3	
55 Tert-amyl methyl ether	73	5.425	5.422	0.003	96	719406	10.0	10.1	
57 n-Butanol	56	5.791	5.789	0.002	85	147549	250.0	238.1	
59 Ethyl acrylate	55	5.957	5.955	0.002	99	244391	10.0	10.2	
62 Methyl methacrylate	41	6.146	6.156	-0.010	89	303704	20.0	20.1	
66 2-Nitropropane	41	6.501	6.499	0.002	99	97706	20.0	20.8	
77 n-Butyl acetate	56	7.672	7.670	0.002	97	135920	10.0	10.0	
81 1-Chlorohexane	91	8.240	8.238	0.002	95	244798	10.0	10.2	
91 Cyclohexanone	55	9.304	9.302	0.002	93	65634	100.0	84.6	
101 Pentachloroethane	167	10.120	10.118	0.002	93	276790	20.0	22.7	
107 1,2,3-Trimethylbenzene	105	10.558	10.556	0.002	99	985704	10.0	9.87	
108 Benzyl chloride	126	10.641	10.639	0.002	99	85266	10.0	10.2	
112 1,3,5-Trichlorobenzene	180	11.859	11.869	-0.010	96	306930	10.0	9.56	
117 2-Methylnaphthalene	142	14.036	14.034	0.002	99	758341	20.0	14.0	

Reagents:

VMFASA9W_00203 Amount Added: 8.00 Units: uL
VM50IS_00071 Amount Added: 1.00 Units: uL

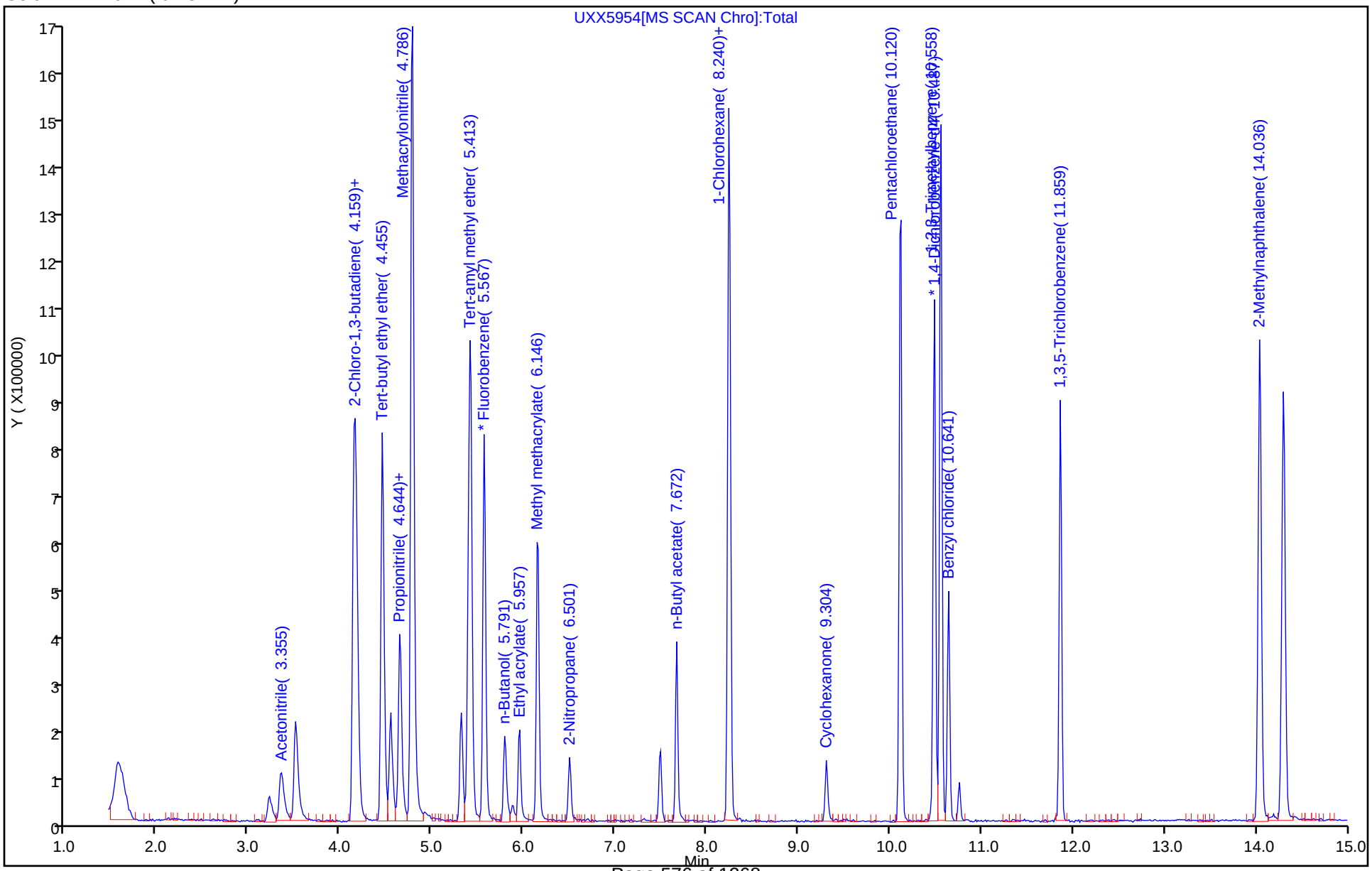
Report Date: 03-Oct-2018 12:31:36 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5954.D

Injection Date:	02-Oct-2018 21:39:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	ICV A9			Worklist Smp#:	17
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCV 240-365336/3 Calibration Date: 01/24/2019 10:39

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 18:46

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 21:14

Lab File ID: UXX9245.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0285	0.0354		0.124	0.100	24.1	50.0
Diisopropyl ether	Ave	0.2668	0.2955		0.0111	0.0100	10.7	50.0
2-Chloro-1,3-butadiene	Ave	0.4589	0.5836		0.0127	0.0100	27.2	50.0
Ethyl acetate	Ave	0.1805	0.0736		0.00815	0.0200	-59.2*	50.0
Ethyl tert-butyl ether	Ave	1.043	1.337		0.0128	0.0100	28.2	50.0
Propionitrile	Ave	0.0319	0.0335		0.105	0.100	4.8	50.0
Methacrylonitrile	Ave	0.1213	0.1242		0.102	0.100	2.4	50.0
Tert-amyl methyl ether	Ave	0.8740	0.8848		0.0101	0.0100	1.2	50.0
n-Butanol	Ave	0.0098	0.0077		0.198	0.250	-20.7	50.0
Ethyl acrylate	Ave	0.2953	0.3040		0.0103	0.0100	2.9	50.0
Methyl methacrylate	Ave	0.1862	0.2007		0.0216	0.0200	7.8	50.0
2-Nitropropane	Ave	0.0577	0.0531		0.0184	0.0200	-8.1	50.0
n-Butyl acetate	Ave	0.2130	0.2457		0.0115	0.0100	15.3	50.0
1-Chlorohexane	Ave	0.3772	0.3661		0.00970	0.0100	-3.0	50.0
Cyclohexanone	Ave	0.0233	0.0203		0.0874	0.100	-12.6	50.0
Pentachloroethane	Qua		0.1753		0.0184	0.0200	-7.9	50.0
1,2,3-Trimethylbenzene	Ave	2.994	3.163		0.0106	0.0100	5.6	50.0
Benzyl chloride	Lin1		0.2035		0.00820	0.0100	-18.0	50.0
1,3,5-Trichlorobenzene	Ave	0.9627	0.6909		0.00718	0.0100	-28.2	50.0
2-Methylnaphthalene	Ave	1.621	0.4330		0.00534	0.0200	-73.3*	50.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9245.D
Lims ID: CCV A9 L4
Client ID:
Sample Type: CCV
Inject. Date: 24-Jan-2019 10:39:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083932-003
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub88

Method: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 25-Jan-2019 11:16:30 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: williamsla Date: 24-Jan-2019 11:31:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.564	5.564	0.000	98	594413	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.249	8.249	0.000	92	534223	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.485	10.485	0.000	97	263163	10.0	10.0	
25 Acetonitrile	41	3.329	3.329	0.000	100	210445	100.0	124.1	
36 Isopropyl ether	87	4.133	4.133	0.000	94	175618	10.0	11.1	
37 2-Chloro-1,3-butadiene	53	4.157	4.157	0.000	96	346879	10.0	12.7	
38 Tert-butyl ethyl ether	59	4.441	4.441	0.000	98	794946	10.0	12.8	a
42 Ethyl acetate	43	4.441	4.441	0.000	37	87468	20.0	8.15	
43 Propionitrile	54	4.642	4.642	0.000	99	198998	100.0	104.8	
44 Methacrylonitrile	41	4.772	4.772	0.000	94	738145	100.0	102.4	
55 Tert-amyl methyl ether	73	5.411	5.411	0.000	92	525960	10.0	10.1	
57 n-Butanol	56	5.789	5.789	0.000	85	103391	250.0	198.4	
59 Ethyl acrylate	55	5.943	5.943	0.000	98	180720	10.0	10.3	
62 Methyl methacrylate	41	6.144	6.144	0.000	91	238591	20.0	21.6	
66 2-Nitropropane	41	6.499	6.499	0.000	96	63073	20.0	18.4	
77 n-Butyl acetate	56	7.670	7.670	0.000	98	131233	10.0	11.5	
81 1-Chlorohexane	91	8.238	8.238	0.000	84	195560	10.0	9.70	
91 Cyclohexanone	55	9.302	9.302	0.000	96	53494	100.0	87.4	
101 Pentachloroethane	167	10.118	10.118	0.000	92	187301	20.0	18.4	
107 1,2,3-Trimethylbenzene	105	10.556	10.556	0.000	99	832462	10.0	10.6	
108 Benzyl chloride	126	10.639	10.639	0.000	99	53549	10.0	8.20	
112 1,3,5-Trichlorobenzene	180	11.857	11.857	0.000	90	181818	10.0	7.18	
117 2-Methylnaphthalene	142	14.045	14.045	0.000	98	227874	20.0	5.34	
T 155 1-Chloro-1-fluoroethane TI	47	2.229	2.200	0.029	97	285314	10.0	0	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

VMRA9W_00282	Amount Added:	8.00	Units: uL
VM50IS_00074	Amount Added:	1.00	Units: uL

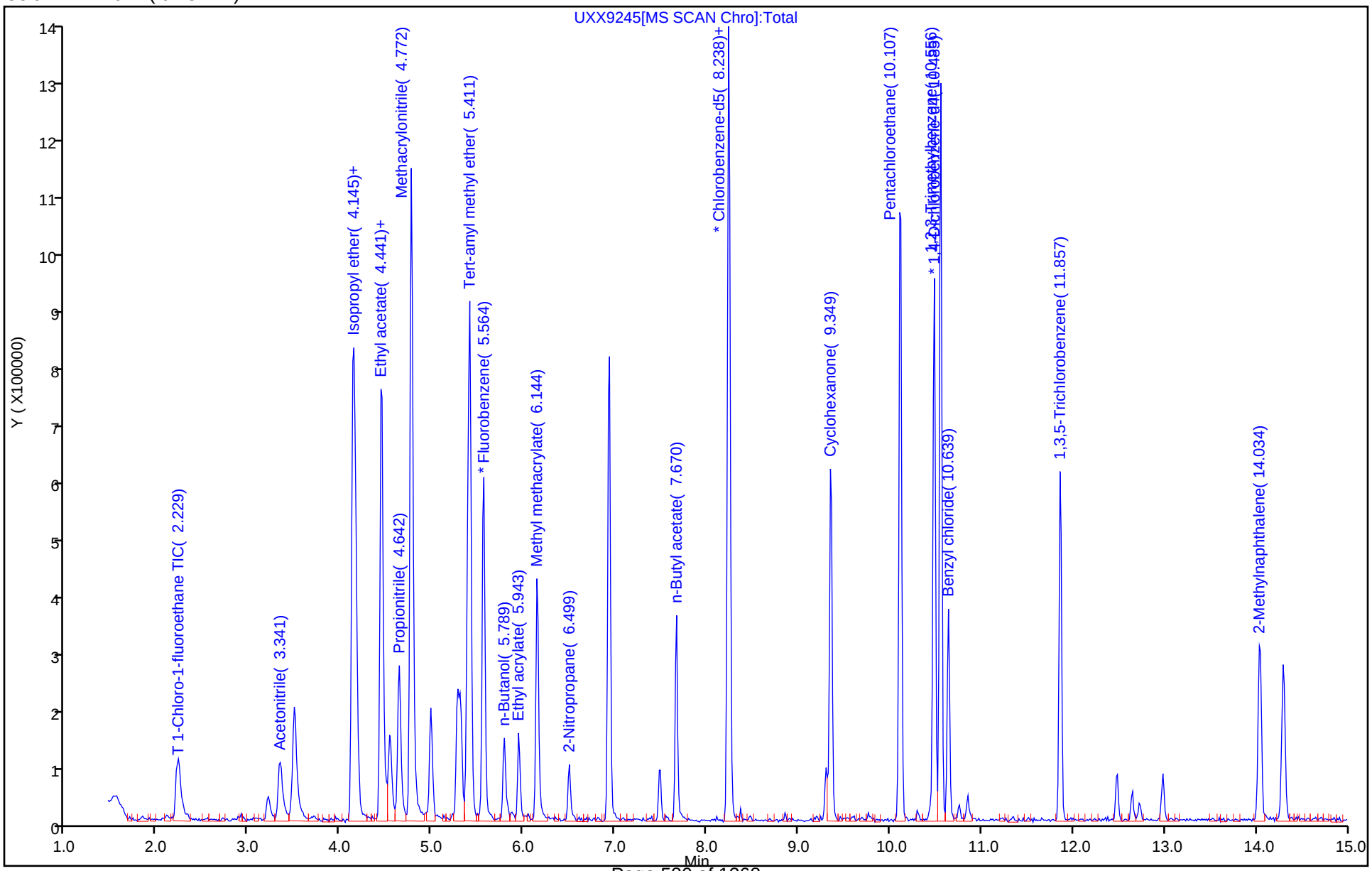
Report Date: 25-Jan-2019 11:16:31 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9245.D

Injection Date:	24-Jan-2019 10:39:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	CCV A9 L4			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

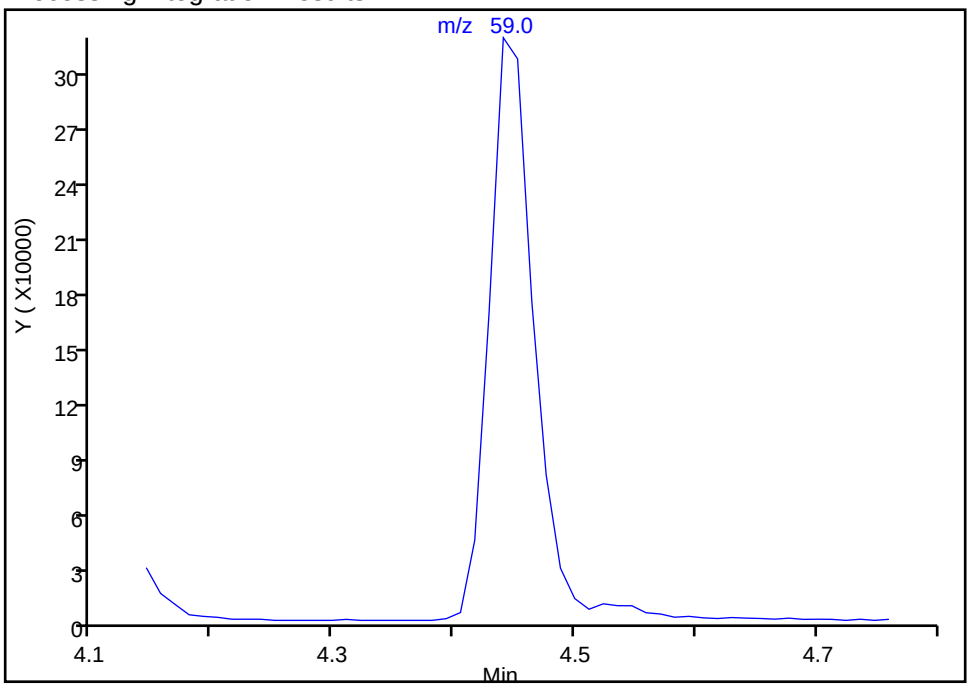
Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9245.D
Injection Date: 24-Jan-2019 10:39:30 Instrument ID: A3UX10
Lims ID: CCV A9 L4
Client ID:
Operator ID: 001644 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_10 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

38 Tert-butyl ethyl ether, CAS: 637-92-3

Signal: 1

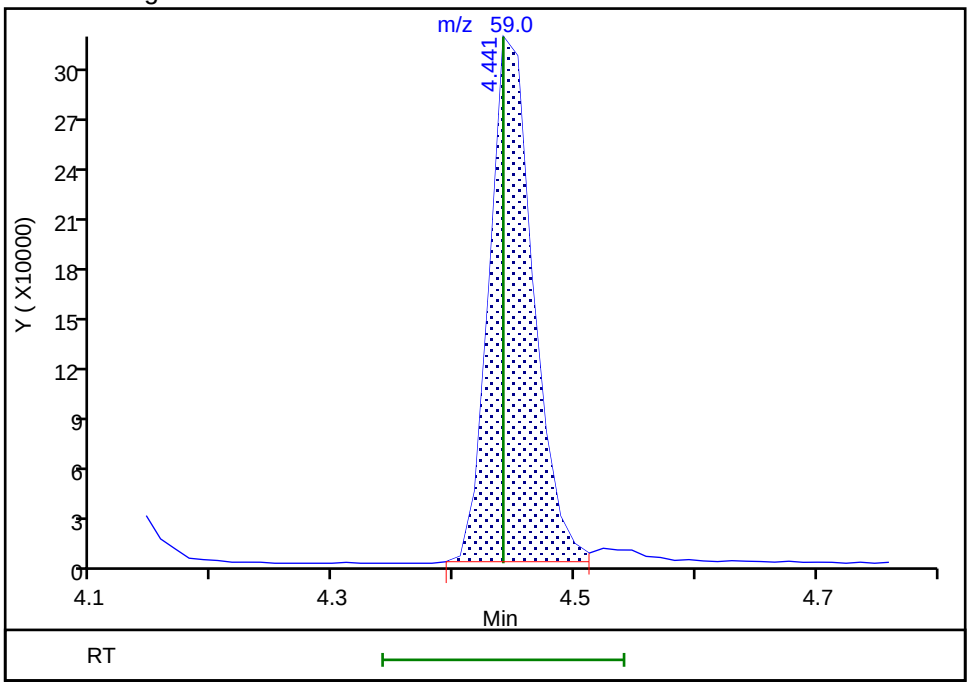
Not Detected
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44
Area: 794946
Amount: 12.819533
Amount Units: ug/l



Reviewer: williamsla, 24-Jan-2019 11:31:29
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCVIS 240-365336/2 Calibration Date: 01/24/2019 11:03

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX9246.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3440	0.3354		0.00975	0.0100	-2.5	50.0
Chloromethane	Ave	0.4030	0.4578	0.1000	0.0114	0.0100	13.6	50.0
Butadiene	Ave	0.3780	0.4567		0.0121	0.0100	20.8	50.0
Vinyl chloride	Ave	0.3591	0.4033		0.0112	0.0100	12.3	20.0
Bromomethane	Ave	0.2122	0.2155		0.0102	0.0100	1.6	50.0
Chloroethane	Lin1		0.2448		0.0110	0.0100	9.7	50.0
Dichlorofluoromethane	Ave	0.5143	0.5174		0.0101	0.0100	0.6	50.0
Trichlorofluoromethane	Ave	0.4003	0.3790		0.00947	0.0100	-5.3	50.0
Ethyl ether	Ave	0.2351	0.2680		0.0114	0.0100	14.0	50.0
Acrolein	Ave	0.0380	0.0370		0.0486	0.0500	-2.7	50.0
1,1-Dichloroethene	Ave	0.2879	0.3315		0.0115	0.0100	15.1	20.0
1,1,2-Trichlorotrifluoroethane	Lin1		0.2129		0.0103	0.0100	3.0	50.0
Acetone	Lin1		0.0716		0.0198	0.0200	-0.9	50.0
Iodomethane	Ave	0.5233	0.5408		0.0103	0.0100	3.3	50.0
Carbon disulfide	Ave	0.9675	1.186		0.0123	0.0100	22.6	50.0
3-Chloro-1-propene	Ave	0.2128	0.2578		0.0121	0.0100	21.2	50.0
Methyl acetate	Ave	0.1605	0.1572		0.0196	0.0200	-2.0	50.0
Methylene Chloride	Ave	0.3525	0.4324		0.0123	0.0100	22.7	50.0
tert-Butyl alcohol	Ave	0.0278	0.0265		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0958	0.1024		0.107	0.100	6.9	50.0
Methyl tert-butyl ether	Ave	0.8844	0.9139		0.0103	0.0100	3.3	50.0
trans-1,2-Dichloroethene	Ave	0.3190	0.3696		0.0116	0.0100	15.9	50.0
Hexane	Ave	0.0540	0.0478		0.00886	0.0100	-11.4	20.0
1,1-Dichloroethane	Ave	0.5690	0.6892	0.1000	0.0121	0.0100	21.1	50.0
Vinyl acetate	Ave	0.4510	0.3198		0.00709	0.0100	-29.1	50.0
2,2-Dichloropropane	Ave	0.0953	0.0962		0.0101	0.0100	1.0	50.0
cis-1,2-Dichloroethene	Ave	0.3349	0.3621		0.0108	0.0100	8.1	50.0
2-Butanone (MEK)	Ave	0.0926	0.0820		0.0177	0.0200	-11.4	50.0
Bromochloromethane	Ave	0.1496	0.1389		0.00928	0.0100	-7.2	50.0
Tetrahydrofuran	Ave	0.0667	0.0544		0.0163	0.0200	-18.5	50.0
Chloroform	Ave	0.4937	0.5228		0.0106	0.0100	5.9	20.0
1,1,1-Trichloroethane	Ave	0.4816	0.5102		0.0106	0.0100	5.9	50.0
Cyclohexane	Ave	0.5356	0.6919		0.0129	0.0100	29.2	50.0
1,1-Dichloropropene	Ave	0.3480	0.3445		0.00990	0.0100	-1.0	50.0
Carbon tetrachloride	Ave	0.3915	0.4147		0.0106	0.0100	5.9	50.0
Isobutyl alcohol	Ave	0.0091	0.0083		0.226	0.250	-9.6	50.0
Benzene	Ave	1.147	1.134		0.00989	0.0100	-1.1	50.0
1,2-Dichloroethane	Ave	0.4198	0.3773		0.00899	0.0100	-10.1	50.0
n-Heptane	Ave	0.0441	0.0297		0.00673	0.0100	-32.7	50.0
Trichloroethene	Ave	0.2858	0.2385		0.00834	0.0100	-16.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCVIS 240-365336/2 Calibration Date: 01/24/2019 11:03

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX9246.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4023	0.3991		0.00992	0.0100	-0.8	50.0
1,2-Dichloropropane	Ave	0.2977	0.2981		0.0100	0.0100	0.1	20.0
Dibromomethane	Ave	0.1689	0.1440		0.00852	0.0100	-14.8	50.0
1,4-Dioxane	Qua		0.0016		0.109	0.200	-45.7	50.0
Bromodichloromethane	Ave	0.3738	0.3284		0.00878	0.0100	-12.2	50.0
2-Chloroethyl vinyl ether	Ave	0.1569	0.1087		0.0139	0.0200	-30.7	50.0
cis-1,3-Dichloropropene	Ave	0.4140	0.3686		0.00890	0.0100	-11.0	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2300	0.2327		0.0202	0.0200	1.2	50.0
Toluene	Ave	1.524	1.378		0.00904	0.0100	-9.6	20.0
trans-1,3-Dichloropropene	Ave	0.4515	0.3803		0.00842	0.0100	-15.8	50.0
Ethyl methacrylate	Ave	0.3702	0.3346		0.00904	0.0100	-9.6	50.0
1,1,2-Trichloroethane	Ave	0.2836	0.2461		0.00868	0.0100	-13.2	50.0
Tetrachloroethene	Ave	0.2655	0.1891		0.00712	0.0100	-28.8	50.0
1,3-Dichloropropane	Ave	0.4864	0.4505		0.00926	0.0100	-7.4	50.0
2-Hexanone	Ave	0.1864	0.1976		0.0212	0.0200	6.0	50.0
Chlorodibromomethane	Ave	0.3162	0.2519		0.00797	0.0100	-20.3	50.0
1,2-Dibromoethane	Ave	0.2793	0.2434		0.00871	0.0100	-12.9	50.0
Chlorobenzene	Ave	0.9949	0.9530	0.3000	0.00958	0.0100	-4.2	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3753	0.3271		0.00872	0.0100	-12.8	50.0
Ethylbenzene	Ave	0.5550	0.5272		0.00950	0.0100	-5.0	20.0
m-Xylene & p-Xylene	Ave	0.6875	0.6642		0.00966	0.0100	-3.4	50.0
o-Xylene	Ave	0.7160	0.6663		0.00931	0.0100	-6.9	50.0
Styrene	Ave	1.140	1.146		0.0101	0.0100	0.5	50.0
Bromoform	Ave	0.1941	0.1250	0.1000	0.00644	0.0100	-35.6	50.0
Isopropylbenzene	Ave	1.746	1.638		0.00938	0.0100	-6.2	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6756	0.7198	0.3000	0.0107	0.0100	6.5	50.0
Bromobenzene	Ave	0.7676	0.6852		0.00893	0.0100	-10.7	50.0
1,2,3-Trichloropropane	Ave	0.2120	0.1921		0.00906	0.0100	-9.4	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.1806		0.0132	0.0100	31.7	50.0
N-Propylbenzene	Ave	0.7981	0.8181		0.0103	0.0100	2.5	50.0
2-Chlorotoluene	Ave	0.7489	0.7864		0.0105	0.0100	5.0	50.0
1,3,5-Trimethylbenzene	Ave	2.520	2.783		0.0110	0.0100	10.5	50.0
4-Chlorotoluene	Ave	0.7451	0.8007		0.0107	0.0100	7.5	50.0
tert-Butylbenzene	Ave	2.046	1.879		0.00919	0.0100	-8.1	50.0
1,2,4-Trimethylbenzene	Ave	2.763	3.016		0.0109	0.0100	9.1	50.0
sec-Butylbenzene	Ave	2.761	2.809		0.0102	0.0100	1.7	50.0
1,3-Dichlorobenzene	Ave	1.510	1.422		0.00941	0.0100	-5.9	50.0
4-Isopropyltoluene	Ave	2.402	2.377		0.00990	0.0100	-1.0	50.0
1,4-Dichlorobenzene	Ave	1.538	1.491		0.00969	0.0100	-3.1	50.0
n-Butylbenzene	Ave	1.940	2.078		0.0107	0.0100	7.2	50.0
1,2-Dichlorobenzene	Ave	1.537	1.413		0.00920	0.0100	-8.0	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCVIS 240-365336/2 Calibration Date: 01/24/2019 11:03

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX9246.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1540	0.0962		0.00625	0.0100	-37.5	50.0
1,2,4-Trichlorobenzene	Ave	0.9316	0.6197		0.00665	0.0100	-33.5	50.0
Hexachlorobutadiene	Qua		0.1694		0.00555	0.0100	-44.5	50.0
Naphthalene	Ave	2.426	1.649		0.00680	0.0100	-32.0	50.0
1,2,3-Trichlorobenzene	Ave	0.9073	0.5718		0.00630	0.0100	-37.0	50.0
Dibromofluoromethane (Surr)	Ave	0.2627	0.2397		0.00912	0.0100	-8.8	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3357	0.3155		0.00940	0.0100	-6.0	50.0
Toluene-d8 (Surr)	Ave	1.262	1.198		0.00949	0.0100	-5.1	50.0
4-Bromofluorobenzene (Surr)	Ave	0.4807	0.5709		0.0119	0.0100	18.8	50.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9246.D
Lims ID: CCVIS L4 8260
Client ID:
Sample Type: CCVIS
Inject. Date: 24-Jan-2019 11:03:30 ALS Bottle#: 3 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083932-002
Operator ID: 001644 Instrument ID: A3UX10
Sublist: chrom-8260_10*sub82

Method: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 25-Jan-2019 11:16:27 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: williamsla Date: 24-Jan-2019 11:45:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.565	5.565	0.000	98	585591	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.250	8.250	0.000	90	496478	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.485	10.485	0.000	97	255329	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.985	4.985	0.000	91	140349	10.0	9.12	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.281	5.281	0.000	96	184755	10.0	9.40	
$ 6 Toluene-d8 (Surr)	98	6.937	6.937	0.000	95	594976	10.0	9.49	
$ 7 4-Bromofluorobenzene (Surr	95	9.350	9.350	0.000	76	283443	10.0	11.9	
9 Dichlorodifluoromethane	85	1.649	1.649	0.000	99	196395	10.0	9.75	
10 Chloromethane	50	1.827	1.827	0.000	99	268091	10.0	11.4	
12 Butadiene	54	1.921	1.921	0.000	88	267421	10.0	12.1	
11 Vinyl chloride	62	1.933	1.933	0.000	74	236166	10.0	11.2	
13 Bromomethane	94	2.229	2.229	0.000	91	126196	10.0	10.2	
14 Chloroethane	64	2.300	2.300	0.000	98	143321	10.0	11.0	
15 Dichlorofluoromethane	67	2.513	2.513	0.000	99	302969	10.0	10.1	
16 Trichlorofluoromethane	101	2.560	2.560	0.000	98	221965	10.0	9.47	
17 Ethyl ether	59	2.820	2.820	0.000	94	156912	10.0	11.4	
18 Acrolein	56	2.939	2.939	0.000	98	108388	50.0	48.6	
19 1,1-Dichloroethene	96	3.033	3.033	0.000	93	194107	10.0	11.5	
20 1,1,2-Trichloro-1,2,2-trif	151	3.057	3.057	0.000	95	124668	10.0	10.3	
21 Acetone	43	3.081	3.081	0.000	99	83857	20.0	19.8	
22 Iodomethane	142	3.175	3.175	0.000	98	316671	10.0	10.3	
24 Carbon disulfide	76	3.234	3.234	0.000	99	694699	10.0	12.3	
26 3-Chloro-1-propene	76	3.364	3.364	0.000	88	150984	10.0	12.1	
27 Methyl acetate	43	3.376	3.376	0.000	99	184149	20.0	19.6	
28 Methylene Chloride	84	3.471	3.471	0.000	98	253197	10.0	12.3	
29 2-Methyl-2-propanol	59	3.577	3.577	0.000	96	155085	100.0	95.2	
31 Acrylonitrile	53	3.684	3.684	0.000	99	599857	100.0	106.9	
30 trans-1,2-Dichloroethene	96	3.719	3.719	0.000	75	216427	10.0	11.6	
32 Methyl tert-butyl ether	73	3.719	3.719	0.000	99	535176	10.0	10.3	
33 Hexane	86	3.944	3.944	0.000	89	27991	10.0	8.86	
34 1,1-Dichloroethane	63	4.086	4.086	0.000	97	403594	10.0	12.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	4.121	4.121	0.000	98	187264	10.0	7.09	
40 cis-1,2-Dichloroethene	96	4.583	4.583	0.000	89	212067	10.0	10.8	
39 2,2-Dichloropropane	97	4.583	4.583	0.000	86	56325	10.0	10.1	
41 2-Butanone (MEK)	43	4.595	4.595	0.000	42	96007	20.0	17.7	
45 Chlorobromomethane	128	4.796	4.796	0.000	90	81314	10.0	9.28	
46 Tetrahydrofuran	42	4.831	4.831	0.000	97	63657	20.0	16.3	
47 Chloroform	83	4.843	4.843	0.000	98	306137	10.0	10.6	
48 1,1,1-Trichloroethane	97	5.020	5.020	0.000	96	298752	10.0	10.6	
49 Cyclohexane	56	5.068	5.068	0.000	92	405147	10.0	12.9	
50 1,1-Dichloropropene	75	5.151	5.151	0.000	91	201729	10.0	9.90	
51 Carbon tetrachloride	117	5.162	5.162	0.000	96	242827	10.0	10.6	
52 Isobutyl alcohol	41	5.222	5.222	0.000	92	102440	250.0	225.9	
53 Benzene	78	5.328	5.328	0.000	97	664158	10.0	9.89	
54 1,2-Dichloroethane	62	5.340	5.340	0.000	96	220946	10.0	8.99	
56 n-Heptane	100	5.541	5.541	0.000	92	17403	10.0	6.73	
58 Trichloroethene	130	5.872	5.872	0.000	93	139638	10.0	8.34	
60 Methylcyclohexane	83	6.050	6.050	0.000	98	233697	10.0	9.92	
61 1,2-Dichloropropane	63	6.073	6.073	0.000	97	174573	10.0	10.0	
63 Dibromomethane	93	6.168	6.168	0.000	85	84310	10.0	8.52	
64 1,4-Dioxane	88	6.180	6.180	0.000	39	18375	200.0	108.7	
65 Dichlorobromomethane	83	6.298	6.298	0.000	96	192286	10.0	8.78	
67 2-Chloroethyl vinyl ether	63	6.546	6.546	0.000	93	127306	20.0	13.9	
68 cis-1,3-Dichloropropene	75	6.688	6.688	0.000	92	215843	10.0	8.90	
69 4-Methyl-2-pentanone (MIBK	43	6.818	6.818	0.000	98	272538	20.0	20.2	
70 Toluene	91	6.996	6.996	0.000	97	684330	10.0	9.04	
71 trans-1,3-Dichloropropene	75	7.173	7.173	0.000	97	188803	10.0	8.42	
72 Ethyl methacrylate	69	7.244	7.244	0.000	92	166119	10.0	9.04	
73 1,1,2-Trichloroethane	97	7.351	7.351	0.000	92	122189	10.0	8.68	
74 Tetrachloroethene	164	7.493	7.493	0.000	84	93870	10.0	7.12	
75 1,3-Dichloropropane	76	7.504	7.504	0.000	95	223647	10.0	9.26	
76 2-Hexanone	43	7.564	7.564	0.000	96	196221	20.0	21.2	
78 Chlorodibromomethane	129	7.706	7.706	0.000	89	125081	10.0	7.97	
80 Ethylene Dibromide	107	7.824	7.824	0.000	98	120829	10.0	8.71	
82 Chlorobenzene	112	8.273	8.273	0.000	92	473151	10.0	9.58	
83 1,1,1,2-Tetrachloroethane	131	8.344	8.344	0.000	92	162373	10.0	8.72	
84 Ethylbenzene	106	8.368	8.368	0.000	99	261749	10.0	9.50	
85 m-Xylene & p-Xylene	106	8.474	8.474	0.000	99	329735	10.0	9.66	
86 o-Xylene	106	8.853	8.853	0.000	95	330777	10.0	9.31	
87 Styrene	104	8.865	8.865	0.000	89	568814	10.0	10.1	
88 Bromoform	173	9.054	9.054	0.000	86	62072	10.0	6.44	
89 Isopropylbenzene	105	9.208	9.208	0.000	97	813013	10.0	9.38	
92 1,1,2,2-Tetrachloroethane	83	9.480	9.480	0.000	95	183774	10.0	10.7	
93 Bromobenzene	156	9.503	9.503	0.000	95	174955	10.0	8.93	
94 1,2,3-Trichloropropane	110	9.527	9.527	0.000	86	49037	10.0	9.06	
95 trans-1,4-Dichloro-2-buten	53	9.539	9.539	0.000	68	46108	10.0	13.2	
96 N-Propylbenzene	120	9.598	9.598	0.000	100	208873	10.0	10.3	
97 2-Chlorotoluene	126	9.693	9.693	0.000	95	200786	10.0	10.5	
98 1,3,5-Trimethylbenzene	105	9.764	9.764	0.000	93	710706	10.0	11.0	
99 4-Chlorotoluene	126	9.799	9.799	0.000	99	204447	10.0	10.7	
100 tert-Butylbenzene	119	10.095	10.095	0.000	93	479841	10.0	9.19	
102 1,2,4-Trimethylbenzene	105	10.130	10.130	0.000	97	769954	10.0	10.9	
103 sec-Butylbenzene	105	10.308	10.308	0.000	95	717213	10.0	10.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	10.426	10.426	0.000	94	362962	10.0	9.41	
105 4-Isopropyltoluene	119	10.450	10.450	0.000	97	606826	10.0	9.90	
106 1,4-Dichlorobenzene	146	10.509	10.509	0.000	91	380702	10.0	9.69	
109 n-Butylbenzene	91	10.852	10.852	0.000	98	530688	10.0	10.7	
110 1,2-Dichlorobenzene	146	10.876	10.876	0.000	92	360831	10.0	9.20	
111 1,2-Dibromo-3-Chloropropan	157	11.656	11.656	0.000	84	24563	10.0	6.25	
113 1,2,4-Trichlorobenzene	180	12.484	12.484	0.000	91	158237	10.0	6.65	
114 Hexachlorobutadiene	225	12.650	12.650	0.000	81	43249	10.0	5.55	
115 Naphthalene	128	12.733	12.733	0.000	99	421138	10.0	6.80	
116 1,2,3-Trichlorobenzene	180	12.981	12.981	0.000	92	146001	10.0	6.30	
S 130 Xylenes, Total	106				0		20.0	19.0	
S 131 Trihalomethanes, Total	1				0		40.0	33.8	

Reagents:

VMRPRIMW_00318	Amount Added:	8.00	Units: uL	
VMRGAS_00279	Amount Added:	8.00	Units: uL	
VMAROLISTDW_00281	Amount Added:	8.00	Units: uL	
vm50ss_stk_00079	Amount Added:	1.00	Units: uL	Run Reagent
VM50IS_00074	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00009	Amount Added:	0.00	Units:	Run Reagent
vmDist_H2o_00137	Amount Added:	0.00	Units:	Run Reagent

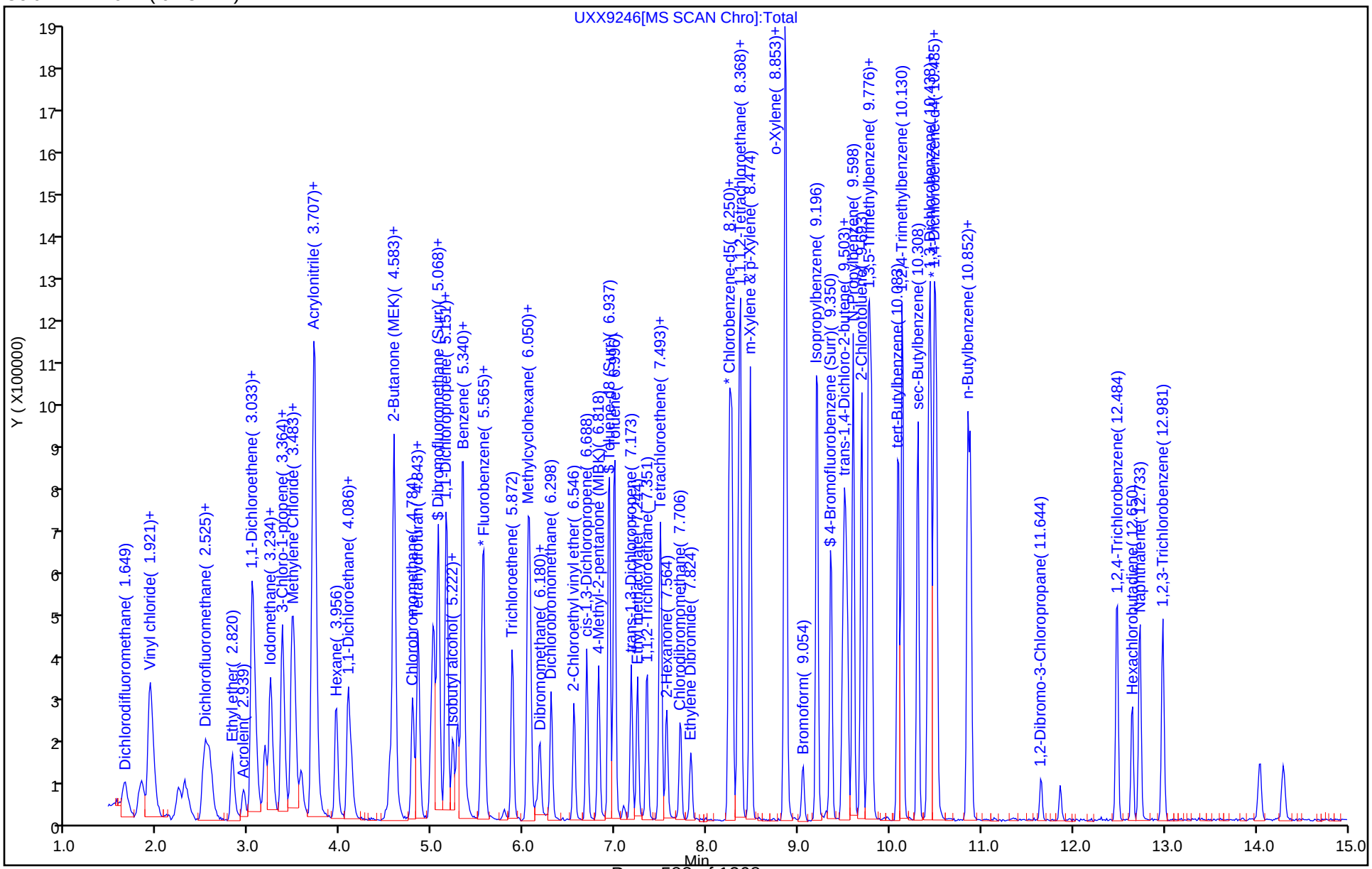
Report Date: 25-Jan-2019 11:16:28 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9246.D

Injection Date:	24-Jan-2019 11:03:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	CCVIS L4 8260			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-364686/13 Calibration Date: 01/19/2019 09:00

Instrument ID: A3UX8 Calib Start Date: 01/19/2019 05:07

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/19/2019 08:12

Lab File ID: UX82258.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3181	0.2966		0.0233	0.0250	-6.8	50.0
Chloromethane	Ave	0.3915	0.3872	0.1000	0.0247	0.0250	-1.1	50.0
Vinyl chloride	Ave	0.2622	0.2699		0.0257	0.0250	2.9	20.0
Butadiene	Ave	0.3406	0.3093		0.0227	0.0250	-9.2	50.0
Bromomethane	Ave	0.1550	0.1587		0.0256	0.0250	2.4	50.0
Chloroethane	Ave	0.1742	0.1635		0.0235	0.0250	-6.2	50.0
Dichlorofluoromethane	Ave	0.3992	0.4139		0.0259	0.0250	3.7	50.0
Trichlorofluoromethane	Ave	0.3861	0.3884		0.0251	0.0250	0.6	50.0
Ethyl ether	Ave	0.2561	0.2891		0.0282	0.0250	12.8	50.0
Acrolein	Ave	0.0255	0.0200		0.0976	0.125	-21.9	50.0
1,1-Dichloroethene	Ave	0.2438	0.2684		0.0275	0.0250	10.1	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2018	0.2056		0.0255	0.0250	1.9	50.0
Acetone	Lin1		0.1070		0.0629	0.0500	25.9	50.0
Iodomethane	Ave	0.4179	0.4559		0.0273	0.0250	9.1	50.0
Carbon disulfide	Ave	0.6957	0.7311		0.0263	0.0250	5.1	50.0
3-Chloro-1-propene	Ave	0.1375	0.1622		0.0295	0.0250	17.9	50.0
Methyl acetate	Ave	0.2167	0.2266		0.0523	0.0500	4.6	50.0
Methylene Chloride	Lin1		0.3420		0.0309	0.0250	23.4	50.0
tert-Butyl alcohol	Ave	0.0205	0.0211		0.257	0.250	3.0	50.0
Acrylonitrile	Ave	0.0950	0.1033		0.272	0.250	8.8	50.0
trans-1,2-Dichloroethene	Ave	0.2929	0.3267		0.0279	0.0250	11.5	50.0
Methyl tert-butyl ether	Ave	0.6216	0.6583		0.0265	0.0250	5.9	50.0
Hexane	Ave	0.0768	0.0786		0.0256	0.0250	2.3	20.0
1,1-Dichloroethane	Ave	0.5554	0.6020	0.1000	0.0271	0.0250	8.4	50.0
Vinyl acetate	Ave	0.5261	0.5883		0.0280	0.0250	11.8	50.0
2-Butanone (MEK)	Lin1		0.1513		0.0588	0.0500	17.7	50.0
cis-1,2-Dichloroethene	Ave	0.3201	0.3489		0.0273	0.0250	9.0	50.0
2,2-Dichloropropane	Ave	0.2903	0.2713		0.0234	0.0250	-6.6	50.0
Bromochloromethane	Ave	0.1388	0.1488		0.0268	0.0250	7.2	50.0
Tetrahydrofuran	Ave	0.0798	0.0849		0.0532	0.0500	6.5	50.0
Chloroform	Ave	0.5140	0.5777		0.0281	0.0250	12.4	20.0
1,1,1-Trichloroethane	Ave	0.4003	0.4495		0.0281	0.0250	12.3	50.0
Cyclohexane	Ave	0.5657	0.6198		0.0274	0.0250	9.6	50.0
1,1-Dichloropropene	Ave	0.3875	0.4133		0.0267	0.0250	6.6	50.0
Carbon tetrachloride	Ave	0.3373	0.3689		0.0273	0.0250	9.4	50.0
Isobutyl alcohol	Lin1		0.0106		0.688	0.625	10.1	50.0
1,2-Dichloroethane	Ave	0.4526	0.4799		0.0265	0.0250	6.0	50.0
Benzene	Ave	1.164	1.239		0.0266	0.0250	6.4	50.0
n-Heptane	Ave	0.0792	0.0809		0.0255	0.0250	2.1	50.0
Trichloroethene	Ave	0.2853	0.2913		0.0255	0.0250	2.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-364686/13 Calibration Date: 01/19/2019 09:00

Instrument ID: A3UX8 Calib Start Date: 01/19/2019 05:07

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/19/2019 08:12

Lab File ID: UX82258.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4800	0.5004		0.0261	0.0250	4.2	50.0
1,2-Dichloropropane	Ave	0.2840	0.3081		0.0271	0.0250	8.5	20.0
1,4-Dioxane	Lin1		0.0023		0.540	0.500	8.0	50.0
Dibromomethane	Ave	0.1417	0.1504		0.0265	0.0250	6.2	50.0
Bromodichloromethane	Ave	0.3115	0.3242		0.0260	0.0250	4.1	50.0
2-Chloroethyl vinyl ether	Ave	0.0942	0.0846		0.0225	0.0250	-10.2	50.0
cis-1,3-Dichloropropene	Ave	0.3293	0.3303		0.0251	0.0250	0.3	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2422	0.2632		0.0543	0.0500	8.7	50.0
Toluene	Ave	1.459	1.592		0.0273	0.0250	9.1	20.0
trans-1,3-Dichloropropene	Ave	0.3438	0.3283		0.0239	0.0250	-4.5	50.0
Ethyl methacrylate	Ave	0.2978	0.2929		0.0246	0.0250	-1.7	50.0
1,1,2-Trichloroethane	Ave	0.2563	0.2719		0.0265	0.0250	6.1	50.0
1,3-Dichloropropane	Ave	0.4524	0.4619		0.0255	0.0250	2.1	50.0
Tetrachloroethene	Ave	0.2961	0.3036		0.0256	0.0250	2.5	50.0
2-Hexanone	Ave	0.2126	0.2386		0.0561	0.0500	12.2	50.0
Dibromochloromethane	Ave	0.2412	0.2478		0.0257	0.0250	2.7	50.0
1,2-Dibromoethane	Ave	0.2309	0.2402		0.0260	0.0250	4.0	50.0
Chlorobenzene	Ave	0.9811	0.9725	0.3000	0.0248	0.0250	-0.9	50.0
1,1,1,2-Tetrachloroethane	Ave	0.2997	0.3275		0.0273	0.0250	9.3	50.0
Ethylbenzene	Ave	0.4959	0.5037		0.0254	0.0250	1.6	20.0
m-Xylene & p-Xylene	Ave	0.6001	0.6391		0.0266	0.0250	6.5	50.0
o-Xylene	Ave	0.5697	0.6351		0.0279	0.0250	11.5	50.0
Styrene	Ave	0.9132	0.9655		0.0264	0.0250	5.7	50.0
Bromoform	Ave	0.1252	0.1207	0.1000	0.0241	0.0250	-3.6	50.0
Isopropylbenzene	Ave	1.521	1.678		0.0276	0.0250	10.3	50.0
1,1,2,2-Tetrachloroethane	Ave	0.5423	0.5734	0.3000	0.0264	0.0250	5.7	50.0
Bromobenzene	Ave	0.7063	0.7131		0.0252	0.0250	1.0	50.0
1,2,3-Trichloropropane	Lin1		0.1987		0.0284	0.0250	13.7	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1810	0.1834		0.0253	0.0250	1.3	50.0
N-Propylbenzene	Ave	0.7711	0.7879		0.0255	0.0250	2.2	50.0
2-Chlorotoluene	Ave	0.6915	0.6983		0.0252	0.0250	1.0	50.0
1,3,5-Trimethylbenzene	Ave	2.410	2.527		0.0262	0.0250	4.9	50.0
4-Chlorotoluene	Ave	0.7085	0.7262		0.0256	0.0250	2.5	50.0
tert-Butylbenzene	Ave	2.072	2.168		0.0262	0.0250	4.7	50.0
1,2,4-Trimethylbenzene	Ave	2.560	2.619		0.0256	0.0250	2.3	50.0
sec-Butylbenzene	Ave	3.128	3.184		0.0254	0.0250	1.8	50.0
1,3-Dichlorobenzene	Ave	1.433	1.408		0.0246	0.0250	-1.8	50.0
p-Isopropyltoluene	Ave	2.620	2.675		0.0255	0.0250	2.1	50.0
1,4-Dichlorobenzene	Lin1		1.432		0.0257	0.0250	2.6	50.0
n-Butylbenzene	Ave	2.285	2.202		0.0241	0.0250	-3.6	50.0
1,2-Dichlorobenzene	Lin1		1.374		0.0272	0.0250	8.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-364686/13 Calibration Date: 01/19/2019 09:00

Instrument ID: A3UX8 Calib Start Date: 01/19/2019 05:07

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/19/2019 08:12

Lab File ID: UX82258.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.0675	0.0647		0.0240	0.0250	-4.1	50.0
1,2,4-Trichlorobenzene	Ave	0.7807	0.6543		0.0210	0.0250	-16.2	50.0
Hexachlorobutadiene	Lin1		0.4171		0.0243	0.0250	-2.8	50.0
Naphthalene	Ave	1.479	1.335		0.0226	0.0250	-9.7	50.0
1,2,3-Trichlorobenzene	Lin1		0.6812		0.0246	0.0250	-1.5	50.0
Dibromofluoromethane (Surr)	Ave	0.2459	0.2362		0.0480	0.0500	-4.0	50.0
1,2-Dichloroethane-d4 (Surr)	Lin1		0.3048		0.0498	0.0500	-0.3	50.0
Toluene-d8 (Surr)	Lin1		1.176		0.0502	0.0500	0.5	50.0
4-Bromofluorobenzene (Surr)	Lin1		0.4528		0.0510	0.0500	2.1	50.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82258.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 19-Jan-2019 09:00:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083802-013
Operator ID: 402279 Instrument ID: A3UX8
Sublist:

Method: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 23-Jan-2019 02:34:03 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: latat Date: 23-Jan-2019 02:27:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.168	5.157	0.011	99	804142	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.688	7.690	-0.002	97	611813	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.889	9.879	0.010	97	354485	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.636	4.637	-0.001	93	189920	50.0	48.0	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.896	4.897	-0.001	98	245118	50.0	49.8	
$ 6 Toluene-d8 (Surr)	98	6.434	6.435	-0.001	95	719251	50.0	50.2	
$ 7 4-Bromofluorobenzene (Surr	95	8.765	8.766	-0.001	87	277021	50.0	51.0	
9 Dichlorodifluoromethane	85	1.595	1.596	-0.002	99	119252	25.0	23.3	
10 Chloromethane	50	1.772	1.773	-0.001	99	155668	25.0	24.7	
11 Vinyl chloride	62	1.890	1.892	-0.002	99	108519	25.0	25.7	
12 Butadiene	54	1.914	1.903	0.011	0	124376	25.0	22.7	
13 Bromomethane	94	2.186	2.187	-0.001	94	63823	25.0	25.6	
14 Chloroethane	64	2.281	2.282	-0.001	95	65732	25.0	23.5	
15 Dichlorofluoromethane	67	2.458	2.460	-0.002	99	166420	25.0	25.9	
16 Trichlorofluoromethane	101	2.506	2.507	-0.001	98	156144	25.0	25.1	
17 Ethyl ether	59	2.742	2.744	-0.002	94	116221	25.0	28.2	
18 Acrolein	56	2.849	2.838	0.011	98	40116	125.0	97.6	
19 1,1-Dichloroethene	96	2.932	2.933	-0.001	94	107914	25.0	27.5	
20 1,1,2-Trichloro-1,2,2-trif	151	2.943	2.945	-0.002	94	82665	25.0	25.5	
21 Acetone	43	2.967	2.968	-0.001	97	86014	50.0	62.9	
23 Iodomethane	142	3.062	3.063	-0.001	99	183305	25.0	27.3	
24 Carbon disulfide	76	3.121	3.122	-0.001	99	293933	25.0	26.3	
26 3-Chloro-1-propene	76	3.216	3.217	-0.001	85	65219	25.0	29.5	
27 Methyl acetate	43	3.227	3.229	-0.002	99	182246	50.0	52.3	
28 Methylene Chloride	84	3.310	3.311	-0.001	93	137499	25.0	30.9	
29 2-Methyl-2-propanol	59	3.393	3.382	0.011	88	84934	250.0	257.5	
30 Acrylonitrile	53	3.488	3.489	-0.001	99	415463	250.0	271.9	
32 Methyl tert-butyl ether	73	3.535	3.524	0.011	95	264681	25.0	26.5	
31 trans-1,2-Dichloroethene	96	3.523	3.524	-0.001	89	131359	25.0	27.9	
33 Hexane	86	3.736	3.737	-0.001	94	31593	25.0	25.6	
34 1,1-Dichloroethane	63	3.843	3.844	-0.001	98	242046	25.0	27.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	3.866	3.868	-0.002	98	236548	25.0	28.0	
41 2,2-Dichloropropane	77	4.292	4.282	0.010	75	109060	25.0	23.4	
39 cis-1,2-Dichloroethene	96	4.281	4.282	-0.001	89	140285	25.0	27.3	
40 2-Butanone (MEK)	43	4.281	4.282	-0.001	60	121625	50.0	58.8	
45 Chlorobromomethane	128	4.458	4.459	-0.001	91	59840	25.0	26.8	
46 Tetrahydrofuran	42	4.505	4.507	-0.002	91	68284	50.0	53.2	
47 Chloroform	83	4.517	4.507	0.010	98	232260	25.0	28.1	
48 1,1,1-Trichloroethane	97	4.671	4.672	-0.001	97	180714	25.0	28.1	
49 Cyclohexane	56	4.730	4.731	-0.001	98	249216	25.0	27.4	
50 1,1-Dichloropropene	75	4.801	4.791	0.010	88	166166	25.0	26.7	
51 Carbon tetrachloride	117	4.813	4.802	0.011	93	148307	25.0	27.3	
52 Isobutyl alcohol	41	4.825	4.826	-0.001	92	106545	625.0	688.4	
54 Benzene	78	4.955	4.956	-0.001	96	498139	25.0	26.6	
53 1,2-Dichloroethane	62	4.955	4.956	-0.001	62	192955	25.0	26.5	
56 n-Heptane	100	5.144	5.146	-0.002	95	32540	25.0	25.5	
58 Trichloroethene	130	5.452	5.453	-0.001	94	117132	25.0	25.5	
60 Methylcyclohexane	83	5.618	5.619	-0.001	94	201203	25.0	26.1	
61 1,2-Dichloropropane	63	5.629	5.631	-0.002	85	123867	25.0	27.1	
63 Dibromomethane	93	5.724	5.725	-0.001	93	60483	25.0	26.5	
64 1,4-Dioxane	88	5.724	5.725	-0.001	45	18187	500.0	540.0	
65 Dichlorobromomethane	83	5.831	5.832	-0.001	97	130336	25.0	26.0	
67 2-Chloroethyl vinyl ether	63	6.055	6.057	-0.002	91	34012	25.0	22.5	
68 cis-1,3-Dichloropropene	75	6.197	6.199	-0.002	86	132805	25.0	25.1	
69 4-Methyl-2-pentanone (MIBK	43	6.316	6.305	0.011	99	211650	50.0	54.3	
70 Toluene	91	6.493	6.495	-0.001	97	486918	25.0	27.3	
71 trans-1,3-Dichloropropene	75	6.647	6.648	-0.001	95	100424	25.0	23.9	
72 Ethyl methacrylate	69	6.718	6.719	-0.001	92	89594	25.0	24.6	
73 1,1,2-Trichloroethane	97	6.813	6.814	-0.001	96	83170	25.0	26.5	
74 1,3-Dichloropropane	76	6.967	6.968	-0.001	94	141298	25.0	25.5	
75 Tetrachloroethene	164	6.967	6.968	-0.001	86	92860	25.0	25.6	
76 2-Hexanone	43	7.014	7.015	-0.001	97	145946	50.0	56.1	
78 Chlorodibromomethane	129	7.168	7.169	-0.001	90	75816	25.0	25.7	
80 Ethylene Dibromide	107	7.286	7.287	-0.001	99	73492	25.0	26.0	
82 Chlorobenzene	112	7.712	7.713	-0.001	91	297487	25.0	24.8	
83 1,1,1,2-Tetrachloroethane	131	7.783	7.784	-0.001	90	100179	25.0	27.3	
84 Ethylbenzene	106	7.807	7.808	-0.001	99	154095	25.0	25.4	
85 m-Xylene & p-Xylene	106	7.913	7.914	-0.001	98	195507	25.0	26.6	
86 o-Xylene	106	8.280	8.281	-0.001	98	194265	25.0	27.9	
87 Styrene	104	8.292	8.293	-0.001	92	295341	25.0	26.4	
88 Bromoform	173	8.469	8.471	-0.002	94	36933	25.0	24.1	
89 Isopropylbenzene	105	8.623	8.624	-0.001	97	513203	25.0	27.6	
92 1,1,2,2-Tetrachloroethane	83	8.884	8.885	-0.001	98	101623	25.0	26.4	
93 Bromobenzene	156	8.919	8.920	-0.001	95	126398	25.0	25.2	
95 trans-1,4-Dichloro-2-buten	53	8.931	8.932	-0.001	68	32512	25.0	25.3	
94 1,2,3-Trichloropropane	110	8.931	8.932	-0.001	91	35216	25.0	28.4	
96 N-Propylbenzene	120	9.014	9.015	-0.001	100	139647	25.0	25.5	
97 2-Chlorotoluene	126	9.108	9.098	0.010	96	123770	25.0	25.2	
98 1,3,5-Trimethylbenzene	105	9.179	9.181	-0.002	95	447878	25.0	26.2	
99 4-Chlorotoluene	126	9.203	9.204	-0.001	99	128710	25.0	25.6	
100 tert-Butylbenzene	119	9.499	9.500	-0.001	93	384317	25.0	26.2	
102 1,2,4-Trimethylbenzene	105	9.546	9.536	0.010	96	464201	25.0	25.6	
103 sec-Butylbenzene	105	9.712	9.713	-0.001	95	564273	25.0	25.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	9.818	9.820	-0.002	97	249527	25.0	24.6	
105 4-Isopropyltoluene	119	9.842	9.843	-0.001	97	474202	25.0	25.5	
106 1,4-Dichlorobenzene	146	9.901	9.902	-0.001	93	253800	25.0	25.7	
109 n-Butylbenzene	91	10.244	10.246	-0.002	98	390224	25.0	24.1	
110 1,2-Dichlorobenzene	146	10.280	10.269	0.011	96	243465	25.0	27.2	
111 1,2-Dibromo-3-Chloropropan	157	11.037	11.026	0.011	66	11474	25.0	24.0	
113 1,2,4-Trichlorobenzene	180	11.865	11.867	-0.002	95	115975	25.0	21.0	
114 Hexachlorobutadiene	225	12.043	12.044	-0.001	95	73922	25.0	24.3	
115 Naphthalene	128	12.114	12.115	-0.001	98	236540	25.0	22.6	
116 1,2,3-Trichlorobenzene	180	12.374	12.364	0.010	94	120731	25.0	24.6	
S 128 Xylenes, Total	106				0		50.0	54.5	
S 129 Trihalomethanes, Total	1				0		100.0	103.9	
S 157 Total BTEX	1				0		125.0	133.8	

Reagents:

VMFASPW_00285	Amount Added:	2.50	Units: uL	
VMFASAW_00264	Amount Added:	2.50	Units: uL	
VMFASGW_00293	Amount Added:	2.50	Units: uL	
VM568718_00012	Amount Added:	1.00	Units: uL	Run Reagent
VMUX8SS_00030	Amount Added:	1.15	Units: uL	Run Reagent
vmDist_H2o_00132	Amount Added:	0.00	Units:	Run Reagent

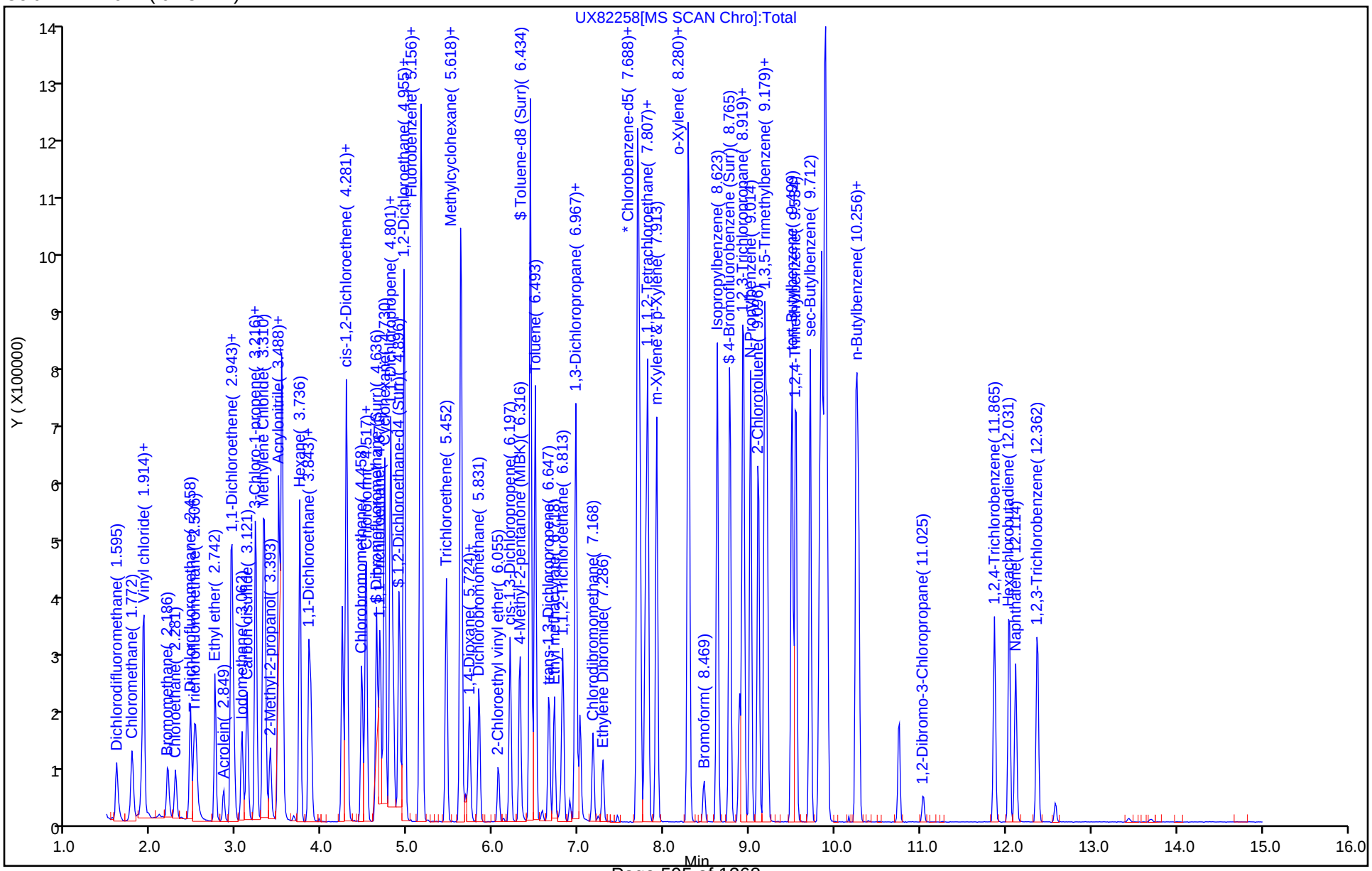
Report Date: 23-Jan-2019 02:34:09 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82258.D

Injection Date:	19-Jan-2019 09:00:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	ICV			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCVIS 240-365072/4 Calibration Date: 01/23/2019 03:41

Instrument ID: A3UX8 Calib Start Date: 01/19/2019 05:07

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/19/2019 08:12

Lab File ID: UX82263.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3181	0.3355		0.0211	0.0200	5.5	50.0
Chloromethane	Ave	0.3915	0.3993	0.1000	0.0204	0.0200	2.0	50.0
Vinyl chloride	Ave	0.2622	0.2869		0.0219	0.0200	9.4	20.0
Butadiene	Ave	0.3406	0.3573		0.0210	0.0200	4.9	50.0
Bromomethane	Ave	0.1550	0.1709		0.0220	0.0200	10.2	50.0
Chloroethane	Ave	0.1742	0.1836		0.0211	0.0200	5.4	50.0
Dichlorofluoromethane	Ave	0.3992	0.4325		0.0217	0.0200	8.4	50.0
Trichlorofluoromethane	Ave	0.3861	0.4259		0.0221	0.0200	10.3	50.0
Ethyl ether	Ave	0.2561	0.2289		0.0179	0.0200	-10.6	50.0
Acrolein	Ave	0.0255	0.0263		0.103	0.100	3.1	50.0
1,1-Dichloroethene	Ave	0.2438	0.2652		0.0218	0.0200	8.8	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2018	0.2161		0.0214	0.0200	7.1	50.0
Acetone	Lin1		0.0965		0.0440	0.0400	10.1	50.0
Iodomethane	Ave	0.4179	0.4339		0.0208	0.0200	3.8	50.0
Carbon disulfide	Ave	0.6957	0.7959		0.0229	0.0200	14.4	50.0
3-Chloro-1-propene	Ave	0.1375	0.1510		0.0220	0.0200	9.8	50.0
Methyl acetate	Ave	0.2167	0.2121		0.0392	0.0400	-2.1	50.0
Methylene Chloride	Lin1		0.3288		0.0229	0.0200	14.7	50.0
tert-Butyl alcohol	Ave	0.0205	0.0178		0.173	0.200	-13.4	50.0
Acrylonitrile	Ave	0.0950	0.0955		0.201	0.200	0.6	50.0
Methyl tert-butyl ether	Ave	0.6216	0.6115		0.0197	0.0200	-1.6	50.0
trans-1,2-Dichloroethene	Ave	0.2929	0.3102		0.0212	0.0200	5.9	50.0
Hexane	Ave	0.0768	0.0830		0.0216	0.0200	8.0	20.0
1,1-Dichloroethane	Ave	0.5554	0.5687	0.1000	0.0205	0.0200	2.4	50.0
Vinyl acetate	Ave	0.5261	0.4825		0.0183	0.0200	-8.3	50.0
2-Butanone (MEK)	Lin1		0.1373		0.0404	0.0400	0.9	50.0
cis-1,2-Dichloroethene	Ave	0.3201	0.3300		0.0206	0.0200	3.1	50.0
2,2-Dichloropropane	Ave	0.2903	0.2875		0.0198	0.0200	-1.0	50.0
Bromochloromethane	Ave	0.1388	0.1373		0.0198	0.0200	-1.1	50.0
Tetrahydrofuran	Ave	0.0798	0.0758		0.0380	0.0400	-4.9	50.0
Chloroform	Ave	0.5140	0.5317		0.0207	0.0200	3.4	20.0
1,1,1-Trichloroethane	Ave	0.4003	0.4290		0.0214	0.0200	7.2	50.0
Cyclohexane	Ave	0.5657	0.6071		0.0215	0.0200	7.3	50.0
1,1-Dichloropropene	Ave	0.3875	0.4100		0.0212	0.0200	5.8	50.0
Carbon tetrachloride	Ave	0.3373	0.3735		0.0221	0.0200	10.7	50.0
Isobutyl alcohol	Lin1		0.0099		0.493	0.500	-1.3	50.0
1,2-Dichloroethane	Ave	0.4526	0.4476		0.0198	0.0200	-1.1	50.0
Benzene	Ave	1.164	1.194		0.0205	0.0200	2.5	50.0
n-Heptane	Ave	0.0792	0.0774		0.0195	0.0200	-2.3	50.0
Trichloroethene	Ave	0.2853	0.2894		0.0203	0.0200	1.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCVIS 240-365072/4 Calibration Date: 01/23/2019 03:41

Instrument ID: A3UX8 Calib Start Date: 01/19/2019 05:07

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/19/2019 08:12

Lab File ID: UX82263.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4800	0.5210		0.0217	0.0200	8.5	50.0
1,2-Dichloropropane	Ave	0.2840	0.2808		0.0198	0.0200	-1.1	20.0
1,4-Dioxane	Lin1		0.0021		0.386	0.400	-3.4	50.0
Dibromomethane	Ave	0.1417	0.1433		0.0202	0.0200	1.1	50.0
Bromodichloromethane	Ave	0.3115	0.3322		0.0213	0.0200	6.7	50.0
2-Chloroethyl vinyl ether	Ave	0.0942	0.0832		0.0354	0.0400	-11.6	50.0
cis-1,3-Dichloropropene	Ave	0.3293	0.2910		0.0177	0.0200	-11.6	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2422	0.2389		0.0395	0.0400	-1.3	50.0
Toluene	Ave	1.459	1.397		0.0192	0.0200	-4.2	20.0
trans-1,3-Dichloropropene	Ave	0.3438	0.2723		0.0158	0.0200	-20.8	50.0
Ethyl methacrylate	Ave	0.2978	0.2547		0.0171	0.0200	-14.5	50.0
1,1,2-Trichloroethane	Ave	0.2563	0.2372		0.0185	0.0200	-7.5	50.0
1,3-Dichloropropane	Ave	0.4524	0.3937		0.0174	0.0200	-13.0	50.0
Tetrachloroethene	Ave	0.2961	0.2756		0.0186	0.0200	-6.9	50.0
2-Hexanone	Ave	0.2126	0.2026		0.0381	0.0400	-4.7	50.0
Dibromochloromethane	Ave	0.2412	0.2144		0.0178	0.0200	-11.1	50.0
1,2-Dibromoethane	Ave	0.2309	0.2153		0.0187	0.0200	-6.7	50.0
Chlorobenzene	Ave	0.9811	0.8726	0.3000	0.0178	0.0200	-11.1	50.0
1,1,1,2-Tetrachloroethane	Ave	0.2997	0.2996		0.0200	0.0200	-0.0	50.0
Ethylbenzene	Ave	0.4959	0.4753		0.0192	0.0200	-4.2	20.0
m-Xylene & p-Xylene	Ave	0.6001	0.5817		0.0194	0.0200	-3.1	50.0
o-Xylene	Ave	0.5697	0.5688		0.0200	0.0200	-0.2	50.0
Styrene	Ave	0.9132	0.8773		0.0192	0.0200	-3.9	50.0
Bromoform	Ave	0.1252	0.1124	0.1000	0.0180	0.0200	-10.2	50.0
Isopropylbenzene	Ave	1.521	1.521		0.0200	0.0200	-0.0	50.0
1,1,2,2-Tetrachloroethane	Ave	0.5423	0.4659	0.3000	0.0172	0.0200	-14.1	50.0
Bromobenzene	Ave	0.7063	0.5622		0.0159	0.0200	-20.4	50.0
1,2,3-Trichloropropane	Lin1		0.1605		0.0169	0.0200	-15.6	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1810	0.1419		0.0157	0.0200	-21.6	50.0
N-Propylbenzene	Ave	0.7711	0.6931		0.0180	0.0200	-10.1	50.0
2-Chlorotoluene	Ave	0.6915	0.5999		0.0173	0.0200	-13.3	50.0
1,3,5-Trimethylbenzene	Ave	2.410	2.177		0.0181	0.0200	-9.7	50.0
4-Chlorotoluene	Ave	0.7085	0.6181		0.0174	0.0200	-12.8	50.0
tert-Butylbenzene	Ave	2.072	1.892		0.0183	0.0200	-8.7	50.0
1,2,4-Trimethylbenzene	Ave	2.560	2.283		0.0178	0.0200	-10.8	50.0
sec-Butylbenzene	Ave	3.128	2.783		0.0178	0.0200	-11.0	50.0
1,3-Dichlorobenzene	Ave	1.433	1.225		0.0171	0.0200	-14.5	50.0
p-Isopropyltoluene	Ave	2.620	2.343		0.0179	0.0200	-10.6	50.0
1,4-Dichlorobenzene	Lin1		1.237		0.0166	0.0200	-16.9	50.0
n-Butylbenzene	Ave	2.285	2.017		0.0177	0.0200	-11.7	50.0
1,2-Dichlorobenzene	Lin1		1.155		0.0170	0.0200	-14.8	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCVIS 240-365072/4 Calibration Date: 01/23/2019 03:41

Instrument ID: A3UX8 Calib Start Date: 01/19/2019 05:07

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/19/2019 08:12

Lab File ID: UX82263.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.0675	0.0541		0.0160	0.0200	-19.8	50.0
1,2,4-Trichlorobenzene	Ave	0.7807	0.5669		0.0145	0.0200	-27.4	50.0
Hexachlorobutadiene	Lin1		0.3810		0.0167	0.0200	-16.4	50.0
Naphthalene	Ave	1.479	1.030		0.0139	0.0200	-30.3	50.0
1,2,3-Trichlorobenzene	Lin1		0.5618		0.0151	0.0200	-24.4	50.0
Dibromofluoromethane (Surr)	Ave	0.2459	0.2240		0.0455	0.0500	-8.9	50.0
1,2-Dichloroethane-d4 (Surr)	Lin1		0.2895		0.0472	0.0500	-5.6	50.0
Toluene-d8 (Surr)	Lin1		1.066		0.0452	0.0500	-9.5	50.0
4-Bromofluorobenzene (Surr)	Lin1		0.4333		0.0487	0.0500	-2.7	50.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82263.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 23-Jan-2019 03:41:30 ALS Bottle#: 2 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083884-004
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub64

Method: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 24-Jan-2019 05:11:12 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: latat Date: 23-Jan-2019 04:48:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.156	5.156	0.000	99	897573	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.688	7.688	0.000	98	734820	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.877	9.877	0.000	96	457364	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.635	4.635	0.000	92	201005	50.0	45.5	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.896	4.896	0.000	98	259871	50.0	47.2	
$ 6 Toluene-d8 (Surr)	98	6.434	6.434	0.000	96	782943	50.0	45.2	
$ 7 4-Bromofluorobenzene (Surr	95	8.765	8.765	0.000	84	318352	50.0	48.7	
9 Dichlorodifluoromethane	85	1.594	1.594	0.000	99	120460	20.0	21.1	
10 Chloromethane	50	1.772	1.772	0.000	100	143371	20.0	20.4	
11 Vinyl chloride	62	1.890	1.890	0.000	99	103016	20.0	21.9	
12 Butadiene	54	1.914	1.914	0.000	0	128296	20.0	21.0	
13 Bromomethane	94	2.186	2.186	0.000	93	61354	20.0	22.0	
14 Chloroethane	64	2.281	2.281	0.000	96	65908	20.0	21.1	
15 Dichlorofluoromethane	67	2.458	2.458	0.000	100	155293	20.0	21.7	
16 Trichlorofluoromethane	101	2.505	2.505	0.000	97	152905	20.0	22.1	
17 Ethyl ether	59	2.742	2.742	0.000	95	82183	20.0	17.9	
18 Acrolein	56	2.837	2.837	0.000	97	47267	100.0	103.1	
19 1,1-Dichloroethene	96	2.931	2.931	0.000	95	95212	20.0	21.8	
20 1,1,2-Trichloro-1,2,2-trif	151	2.943	2.943	0.000	94	77590	20.0	21.4	
21 Acetone	43	2.967	2.967	0.000	97	69267	40.0	44.0	
23 Iodomethane	142	3.062	3.062	0.000	100	155795	20.0	20.8	
24 Carbon disulfide	76	3.121	3.121	0.000	98	285752	20.0	22.9	
26 3-Chloro-1-propene	76	3.215	3.215	0.000	85	54217	20.0	22.0	
27 Methyl acetate	43	3.227	3.227	0.000	99	152283	40.0	39.2	
28 Methylene Chloride	84	3.310	3.310	0.000	94	118050	20.0	22.9	
29 2-Methyl-2-propanol	59	3.393	3.393	0.000	87	63742	200.0	173.1	
30 Acrylonitrile	53	3.488	3.488	0.000	97	343024	200.0	201.1	
32 Methyl tert-butyl ether	73	3.523	3.523	0.000	94	219529	20.0	19.7	
31 trans-1,2-Dichloroethene	96	3.523	3.523	0.000	89	111365	20.0	21.2	
33 Hexane	86	3.736	3.736	0.000	92	29785	20.0	21.6	
34 1,1-Dichloroethane	63	3.843	3.843	0.000	98	204183	20.0	20.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Vinyl acetate	43	3.866	3.866	0.000	98	173212	20.0	18.3	
39 cis-1,2-Dichloroethene	96	4.280	4.280	0.000	89	118474	20.0	20.6	
40 2-Butanone (MEK)	43	4.280	4.280	0.000	57	98574	40.0	40.4	
41 2,2-Dichloropropane	77	4.292	4.292	0.000	73	103233	20.0	19.8	
45 Chlorobromomethane	128	4.458	4.458	0.000	90	49286	20.0	19.8	
46 Tetrahydrofuran	42	4.505	4.505	0.000	91	54451	40.0	38.0	
47 Chloroform	83	4.517	4.517	0.000	99	190897	20.0	20.7	
48 1,1,1-Trichloroethane	97	4.671	4.671	0.000	96	154018	20.0	21.4	
49 Cyclohexane	56	4.730	4.730	0.000	98	217950	20.0	21.5	
50 1,1-Dichloropropene	75	4.801	4.801	0.000	87	147189	20.0	21.2	
51 Carbon tetrachloride	117	4.801	4.801	0.000	97	134108	20.0	22.1	
52 Isobutyl alcohol	41	4.825	4.825	0.000	90	88749	500.0	493.5	
54 Benzene	78	4.955	4.955	0.000	95	428552	20.0	20.5	
53 1,2-Dichloroethane	62	4.955	4.955	0.000	61	160711	20.0	19.8	
56 n-Heptane	100	5.144	5.144	0.000	96	27786	20.0	19.5	
58 Trichloroethene	130	5.452	5.452	0.000	94	103897	20.0	20.3	
60 Methylcyclohexane	83	5.617	5.617	0.000	91	187035	20.0	21.7	
61 1,2-Dichloropropane	63	5.629	5.629	0.000	91	100831	20.0	19.8	
64 1,4-Dioxane	88	5.724	5.724	0.000	44	15005	400.0	386.2	
63 Dibromomethane	93	5.724	5.724	0.000	95	51437	20.0	20.2	
65 Dichlorobromomethane	83	5.830	5.830	0.000	96	119260	20.0	21.3	
67 2-Chloroethyl vinyl ether	63	6.055	6.055	0.000	89	59754	40.0	35.4	
68 cis-1,3-Dichloropropene	75	6.197	6.197	0.000	84	104484	20.0	17.7	
69 4-Methyl-2-pentanone (MIBK	43	6.304	6.304	0.000	98	171557	40.0	39.5	
70 Toluene	91	6.493	6.493	0.000	97	410714	20.0	19.2	
71 trans-1,3-Dichloropropene	75	6.647	6.647	0.000	93	80026	20.0	15.8	
72 Ethyl methacrylate	69	6.718	6.718	0.000	91	74857	20.0	17.1	
73 1,1,2-Trichloroethane	97	6.813	6.813	0.000	96	69710	20.0	18.5	
74 1,3-Dichloropropane	76	6.966	6.966	0.000	92	115730	20.0	17.4	
75 Tetrachloroethene	164	6.966	6.966	0.000	91	80998	20.0	18.6	
76 2-Hexanone	43	7.014	7.014	0.000	96	119126	40.0	38.1	
78 Chlorodibromomethane	129	7.168	7.168	0.000	92	63005	20.0	17.8	
80 Ethylene Dibromide	107	7.286	7.286	0.000	97	63294	20.0	18.7	
82 Chlorobenzene	112	7.712	7.712	0.000	93	256492	20.0	17.8	
83 1,1,1,2-Tetrachloroethane	131	7.783	7.783	0.000	90	88070	20.0	20.0	
84 Ethylbenzene	106	7.807	7.807	0.000	99	139693	20.0	19.2	
85 m-Xylene & p-Xylene	106	7.913	7.913	0.000	99	170979	20.0	19.4	
86 o-Xylene	106	8.280	8.280	0.000	98	167189	20.0	20.0	
87 Styrene	104	8.292	8.292	0.000	92	257856	20.0	19.2	
88 Bromoform	173	8.469	8.469	0.000	94	33048	20.0	18.0	
89 Isopropylbenzene	105	8.623	8.623	0.000	97	446951	20.0	20.0	
92 1,1,2,2-Tetrachloroethane	83	8.883	8.883	0.000	98	85225	20.0	17.2	
93 Bromobenzene	156	8.919	8.919	0.000	94	102853	20.0	15.9	
95 trans-1,4-Dichloro-2-buten	53	8.931	8.931	0.000	70	25958	20.0	15.7	
94 1,2,3-Trichloropropane	110	8.931	8.931	0.000	91	29354	20.0	16.9	
96 N-Propylbenzene	120	9.013	9.013	0.000	99	126795	20.0	18.0	
97 2-Chlorotoluene	126	9.096	9.096	0.000	95	109740	20.0	17.3	
98 1,3,5-Trimethylbenzene	105	9.179	9.179	0.000	94	398264	20.0	18.1	
99 4-Chlorotoluene	126	9.203	9.203	0.000	99	113073	20.0	17.4	
100 tert-Butylbenzene	119	9.499	9.499	0.000	94	346202	20.0	18.3	
102 1,2,4-Trimethylbenzene	105	9.534	9.534	0.000	98	417613	20.0	17.8	
103 sec-Butylbenzene	105	9.712	9.712	0.000	95	509161	20.0	17.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 1,3-Dichlorobenzene	146	9.818	9.818	0.000	95	224038	20.0	17.1	
105 4-Isopropyltoluene	119	9.842	9.842	0.000	97	428565	20.0	17.9	
106 1,4-Dichlorobenzene	146	9.901	9.901	0.000	92	226315	20.0	16.6	
109 n-Butylbenzene	91	10.244	10.244	0.000	99	369008	20.0	17.7	
110 1,2-Dichlorobenzene	146	10.268	10.268	0.000	95	211216	20.0	17.0	
111 1,2-Dibromo-3-Chloropropan	157	11.037	11.037	0.000	67	9902	20.0	16.0	
113 1,2,4-Trichlorobenzene	180	11.865	11.865	0.000	95	103711	20.0	14.5	
114 Hexachlorobutadiene	225	12.043	12.043	0.000	95	69701	20.0	16.7	
115 Naphthalene	128	12.114	12.114	0.000	98	188455	20.0	13.9	
116 1,2,3-Trichlorobenzene	180	12.362	12.362	0.000	94	102773	20.0	15.1	
S 128 Xylenes, Total	106				0		40.0	39.4	
S 157 Total BTEX	1				0		100.0	98.2	
S 129 Trihalomethanes, Total	1				0		80.0	77.8	

Reagents:

VMRPRIMW_00318	Amount Added:	2.00	Units: uL	
VMAROLISTDW_00281	Amount Added:	2.00	Units: uL	
VMRGAS_00279	Amount Added:	2.00	Units: uL	
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00011	Amount Added:	0.00	Units:	Run Reagent
VMUX8SS_00030	Amount Added:	1.15	Units: uL	Run Reagent
vmDist_H2o_00135	Amount Added:	0.00	Units:	Run Reagent

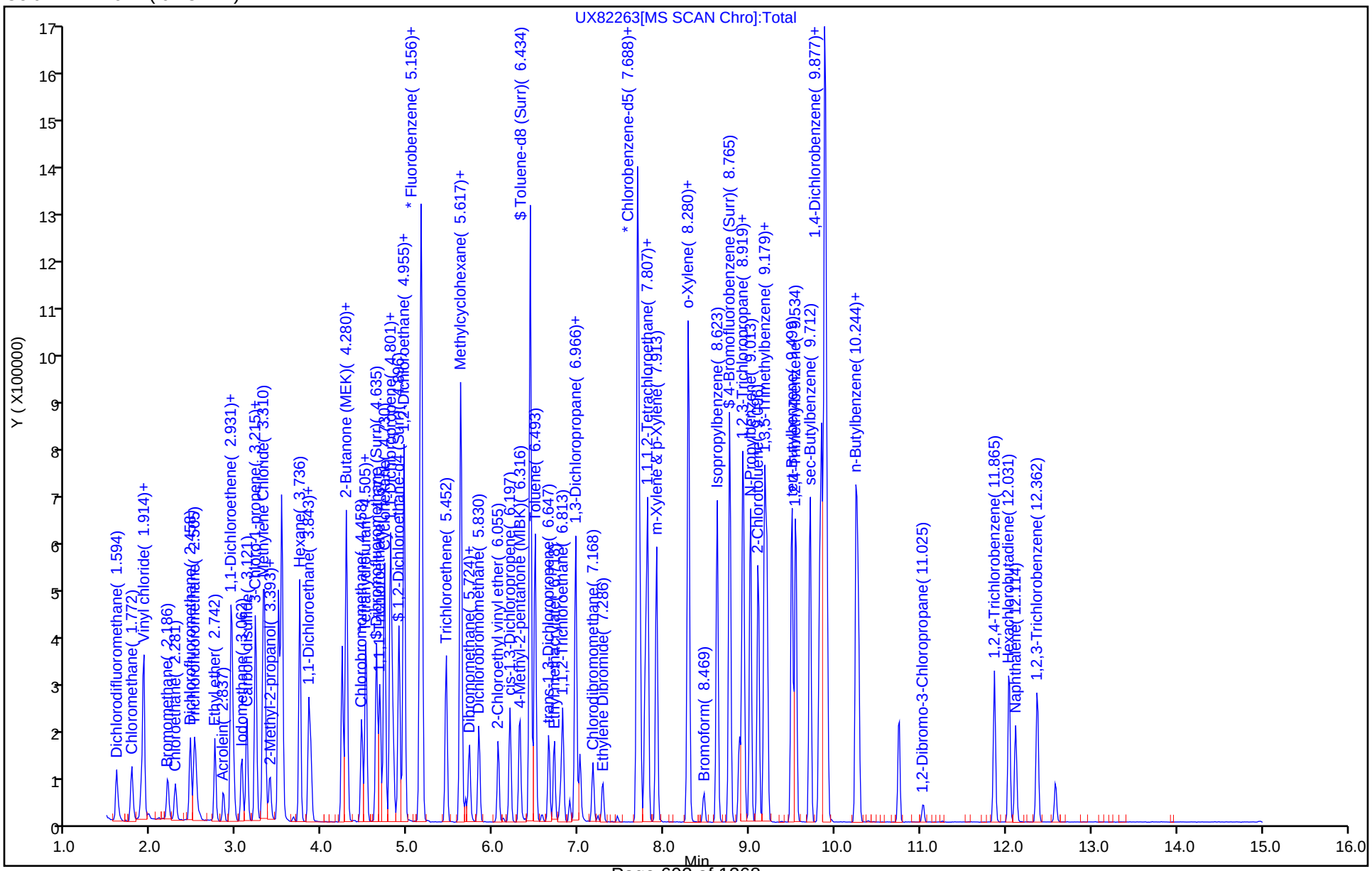
Report Date: 24-Jan-2019 05:11:13 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82263.D

Injection Date:	23-Jan-2019 03:41:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	CCVIS			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCV 240-365072/5 Calibration Date: 01/23/2019 04:05

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 07:16

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 10:15

Lab File ID: UX82264.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0358	0.0324		0.181	0.200	-9.4	50.0
Diisopropyl ether	Ave	0.2263	0.2154		0.0190	0.0200	-4.8	50.0
2-Chloro-1,3-butadiene	Ave	0.6843	0.5925		0.0173	0.0200	-13.4	50.0
Ethyl tert-butyl ether	Ave	0.8664	0.6769		0.0156	0.0200	-21.9	50.0
Ethyl acetate	Ave	0.2385	0.2432		0.0408	0.0400	2.0	50.0
Propionitrile	Ave	0.0314	0.0328		0.209	0.200	4.4	50.0
Methacrylonitrile	Ave	0.1781	0.1805		0.203	0.200	1.4	50.0
Tert-amyl methyl ether	Ave	0.5626	0.4908		0.0174	0.0200	-12.8	50.0
n-Butanol	Ave	0.0044	0.0045		0.514	0.500	2.8	50.0
Ethyl acrylate	Ave	0.2183	0.2268		0.0208	0.0200	3.9	50.0
Methyl methacrylate	Ave	0.2142	0.2220		0.0415	0.0400	3.7	50.0
2-Nitropropane	Qua		0.0374		0.0501	0.0400	25.3	50.0
n-Butyl acetate	Ave	0.3228	0.3024		0.0187	0.0200	-6.3	50.0
1-Chlorohexane	Ave	0.4392	0.3364		0.0153	0.0200	-23.4	50.0
Cyclohexanone	Ave	0.0084	0.0053		0.127	0.200	-36.4	50.0
Pentachloroethane	Lin1		0.2806		0.0322	0.0400	-19.6	50.0
1,2,3-Trimethylbenzene	Ave	3.300	2.327		0.0141	0.0200	-29.5	50.0
Benzyl chloride	Qua		0.0622		0.0205	0.0200	2.3	50.0
1,3,5-Trichlorobenzene	Ave	1.266	0.8518		0.0135	0.0200	-32.7	50.0
2-Methylnaphthalene	Ave	1.138	0.4829		0.0170	0.0400	-57.5*	50.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82264.D
Lims ID: CCV A9
Client ID:
Sample Type: CCV
Inject. Date: 23-Jan-2019 04:05:30 ALS Bottle#: 3 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083884-005
Operator ID: 402279 Instrument ID: A3UX8
Sublist: chrom-8260_8*sub65

Method: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 24-Jan-2019 05:11:14 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: latat Date: 23-Jan-2019 04:49:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.160	5.156	0.004	98	906676	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.692	7.688	0.004	97	753279	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.881	9.877	0.004	95	412904	50.0	50.0	
25 Acetonitrile	41	3.183	3.181	0.002	99	117521	200.0	181.2	
36 Isopropyl ether	87	3.893	3.891	0.002	93	78113	20.0	19.0	
37 2-Chloro-1,3-butadiene	53	3.917	3.915	0.002	94	214891	20.0	17.3	
38 Tert-butyl ethyl ether	59	4.166	4.164	0.002	94	245483	20.0	15.6	
43 Propionitrile	54	4.319	4.317	0.002	76	118895	200.0	208.8	
42 Ethyl acetate	43	4.319	4.317	0.002	99	176398	40.0	40.8	
44 Methacrylonitrile	41	4.438	4.436	0.002	99	654779	200.0	202.8	
55 Tert-amyl methyl ether	73	5.029	5.027	0.002	85	177997	20.0	17.4	
57 n-Butanol	56	5.337	5.335	0.002	94	40821	500.0	514.2	
59 Ethyl acrylate	55	5.503	5.501	0.002	99	82256	20.0	20.8	
62 Methyl methacrylate	41	5.680	5.690	-0.010	91	161052	40.0	41.5	
66 2-Nitropropane	41	6.011	5.998	0.013	97	27121	40.0	50.1	
77 n-Butyl acetate	43	7.124	7.122	0.002	97	109682	20.0	18.7	
81 1-Chlorohexane	91	7.680	7.678	0.002	77	101364	20.0	15.3	
91 Cyclohexanone	55	8.709	8.707	0.002	94	16022	200.0	127.2	
101 Pentachloroethane	167	9.514	9.512	0.002	0	92689	40.0	32.2	
107 1,2,3-Trimethylbenzene	105	9.952	9.950	0.002	100	384325	20.0	14.1	
108 Benzyl chloride	126	10.035	10.033	0.002	95	10279	20.0	20.5	
112 1,3,5-Trichlorobenzene	180	11.253	11.251	0.002	96	140685	20.0	13.5	
117 2-Methylnaphthalene	142	13.442	13.441	0.001	92	159516	40.0	17.0	
T 156 1-Chloro-1-fluoroethane TI	47	2.213	2.198	0.015	0	121059	20.0	6.68	

Reagents:

VMRA9W_00282 Amount Added: 2.00 Units: uL
VM568718_00013 Amount Added: 1.00 Units: uL

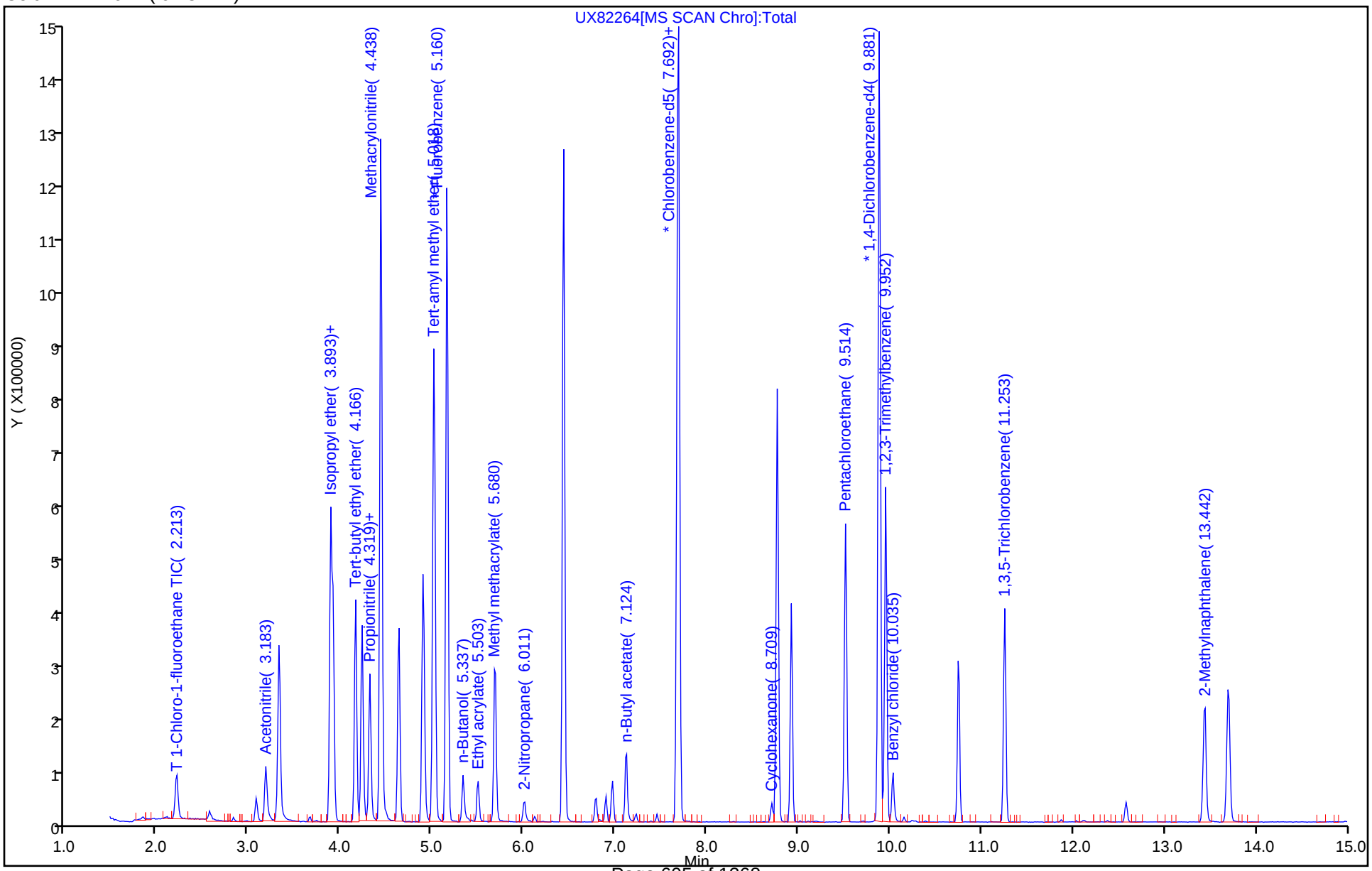
Report Date: 24-Jan-2019 05:11:15 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82264.D

Injection Date:	23-Jan-2019 04:05:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	CCV A9			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\BFB1940.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 02-Oct-2018 14:58:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0080450-001
Operator ID: 001644 Instrument ID: A3UX10

Method: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 03-Oct-2018 12:29:03 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK022

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	3.674	3.674	0.000	0	187859	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

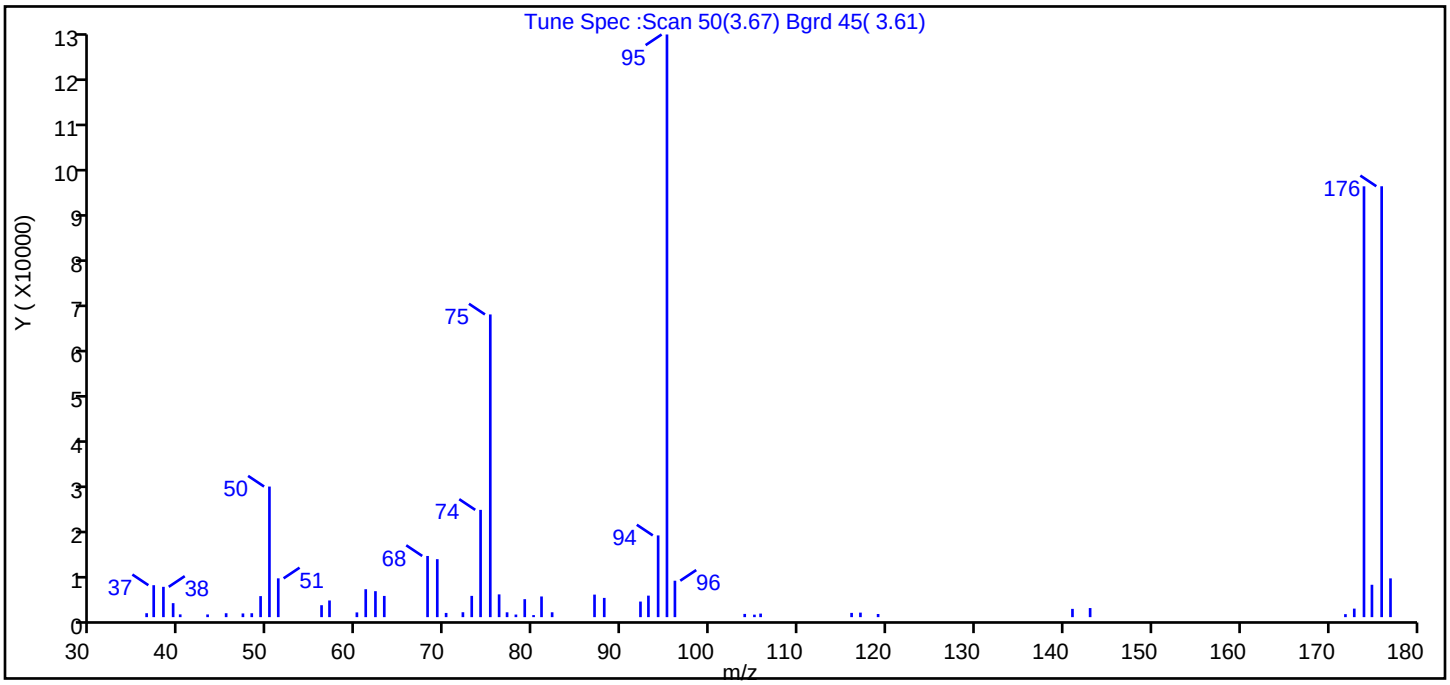
vmbfb_00020 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\BFB1940.D
Injection Date: 02-Oct-2018 14:58:30 Instrument ID: A3UX10
Lims ID: BFB
Client ID:
Operator ID: 001644 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_10 Limit Group: MSV 8260B ICAL
Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	22.4
75	30 to 60% of m/z 95	52.0
96	5 to 9% of m/z 95	6.3
173	Less than 2% of m/z 174	1.5 (2.0)
174	50 to 120% of m/z 95	73.9
175	5 to 9% of m/z 174	5.6 (7.5)
176	Greater than 95% but less than 101% of m/z 174	74.0 (100.0)
177	5 to 9% of m/z 176	6.7 (9.0)

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\BFB1940.D\8260_10.rslt\spectra.d
Injection Date: 02-Oct-2018 14:58:30
Spectrum: Tune Spec :Scan 50(3.67) Bgrd 45(3.61)
Base Peak: 95.10
Minimum % Base Peak: 0
Number of Points: 53

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.20	814	60.00	980	79.00	3719	116.00	880
37.00	6611	61.00	5778	80.00	425	117.00	936
38.10	6274	62.10	5372	80.90	4279	119.00	652
39.20	2895	63.10	4390	82.10	1008	141.00	1712
40.00	572	68.00	12659	86.90	4664	143.00	1881
43.10	558	69.10	11997	88.00	3982	171.90	621
45.20	810	70.10	871	92.10	3225	172.90	1766
47.10	766	72.00	1017	93.00	4451	174.00	89152
48.10	810	73.00	4402	94.10	16912	174.90	6699
49.10	4352	74.00	22200	95.10	120576	176.00	89168
50.10	27024	75.10	62640	96.00	7539	177.00	8026
51.10	8031	76.10	4709	103.90	670		
56.00	2469	77.00	1000	105.00	516		
56.90	3451	78.00	537	105.70	738		

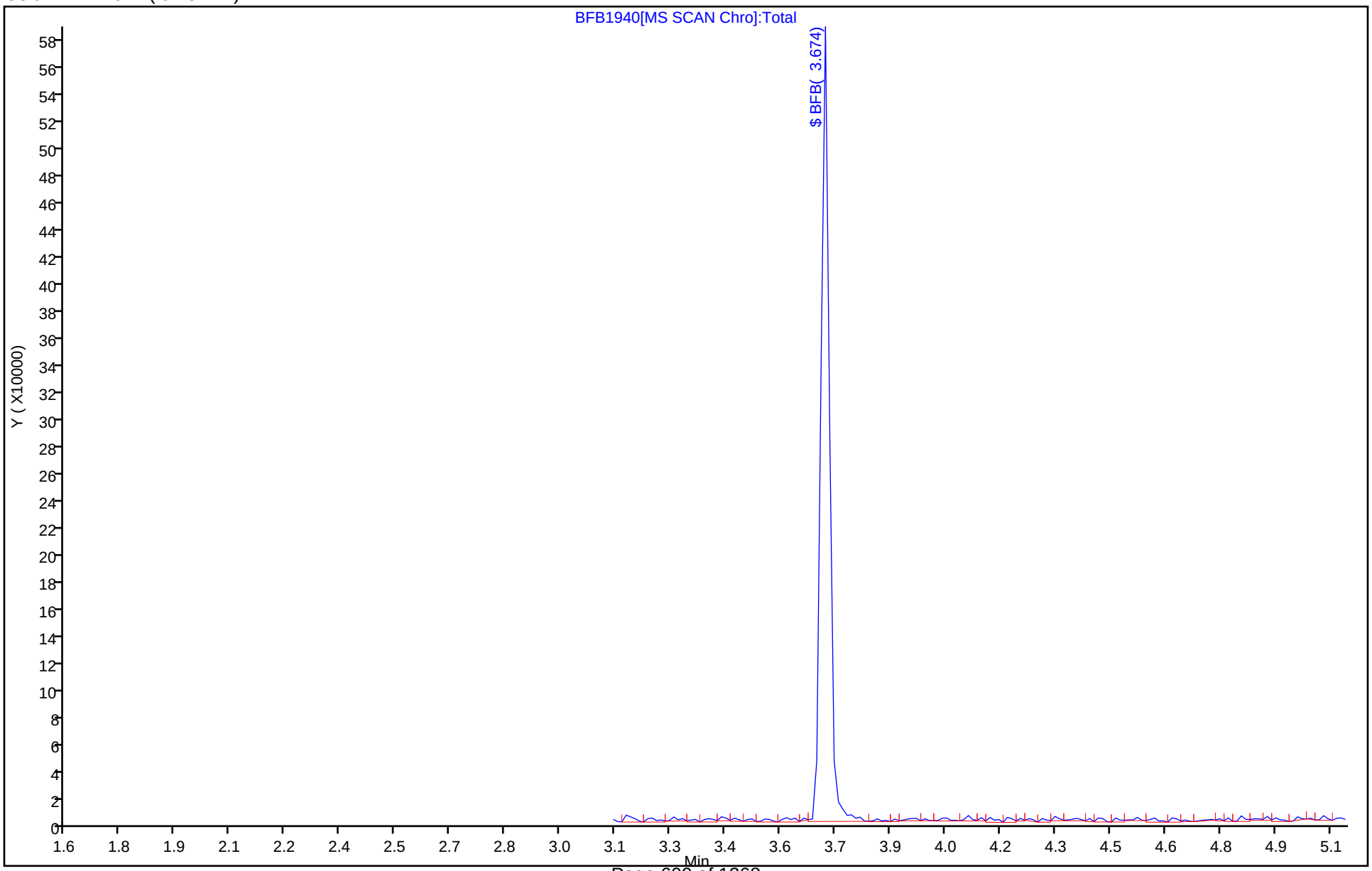
Report Date: 03-Oct-2018 12:29:04 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\BFB1940.D

Injection Date:	02-Oct-2018 14:58:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\BFB2132.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 24-Jan-2019 09:41:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0083932-001
Operator ID: 001644 Instrument ID: A3UX10

Method: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 25-Jan-2019 11:16:24 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	3.782	3.782	0.000	0	545437	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

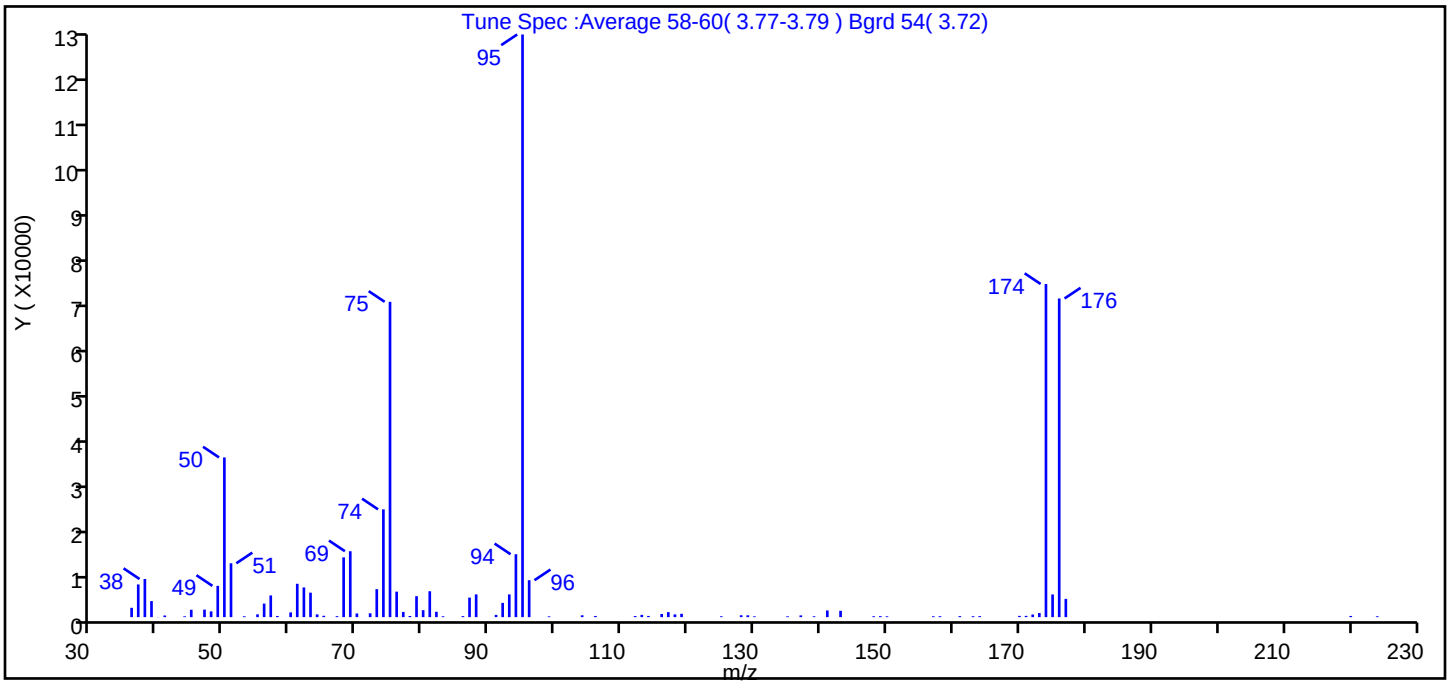
VMBFB_00021 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\BFB2132.D
Injection Date: 24-Jan-2019 09:41:30 Instrument ID: A3UX10
Lims ID: BFB
Client ID:
Operator ID: 001644 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_10 Limit Group: MSV 8260B ICAL
Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	27.4
75	30 to 60% of m/z 95	54.1
96	5 to 9% of m/z 95	6.3
173	Less than 2% of m/z 174	0.7 (1.2)
174	50 to 120% of m/z 95	57.2
175	5 to 9% of m/z 174	3.9 (6.8)
176	Greater than 95% but less than 101% of m/z 174	54.7 (95.6)
177	5 to 9% of m/z 176	3.1 (5.7)

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\BFB2132.D\8260_10.rslt\spectra.d
Injection Date: 24-Jan-2019 09:41:30
Spectrum: Tune Spec :Average 58-60(3.77-3.79) Bgrd 54(3.72)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1973	64.00	586	92.00	3020	141.00	1413
37.00	6922	65.00	289	93.00	4809	143.00	1345
38.00	8076	67.00	209	94.00	13321	148.00	188
39.00	3404	68.00	12664	95.00	123376	149.00	210
40.00	29	69.00	13959	96.00	7822	150.00	174
41.00	349	70.00	779	99.00	167	157.00	183
44.00	175	72.00	818	104.00	391	158.00	197
45.00	1564	73.00	5927	106.00	251	161.00	214
47.00	1597	74.00	22824	112.00	234	163.00	193
48.00	1226	75.00	66768	113.00	480	164.00	213
49.00	6622	76.00	5401	114.00	256	170.00	268
50.00	33816	77.00	1106	116.00	670	171.00	275
51.00	11405	78.00	243	117.00	1061	172.00	560
53.00	185	79.00	4443	118.00	584	173.00	867
55.00	592	80.00	1477	119.00	711	174.00	70544
56.00	2871	81.00	5487	125.00	181	175.00	4802
57.00	4600	82.00	1146	128.00	400	176.00	67472
58.00	250	83.00	184	129.00	391	177.00	3866
60.00	1001	86.00	214	130.00	170	220.00	252
61.00	7067	87.00	4135	135.00	176	224.00	182
62.00	6290	88.00	4818	137.00	369		
63.00	5181	91.00	475	139.00	178		

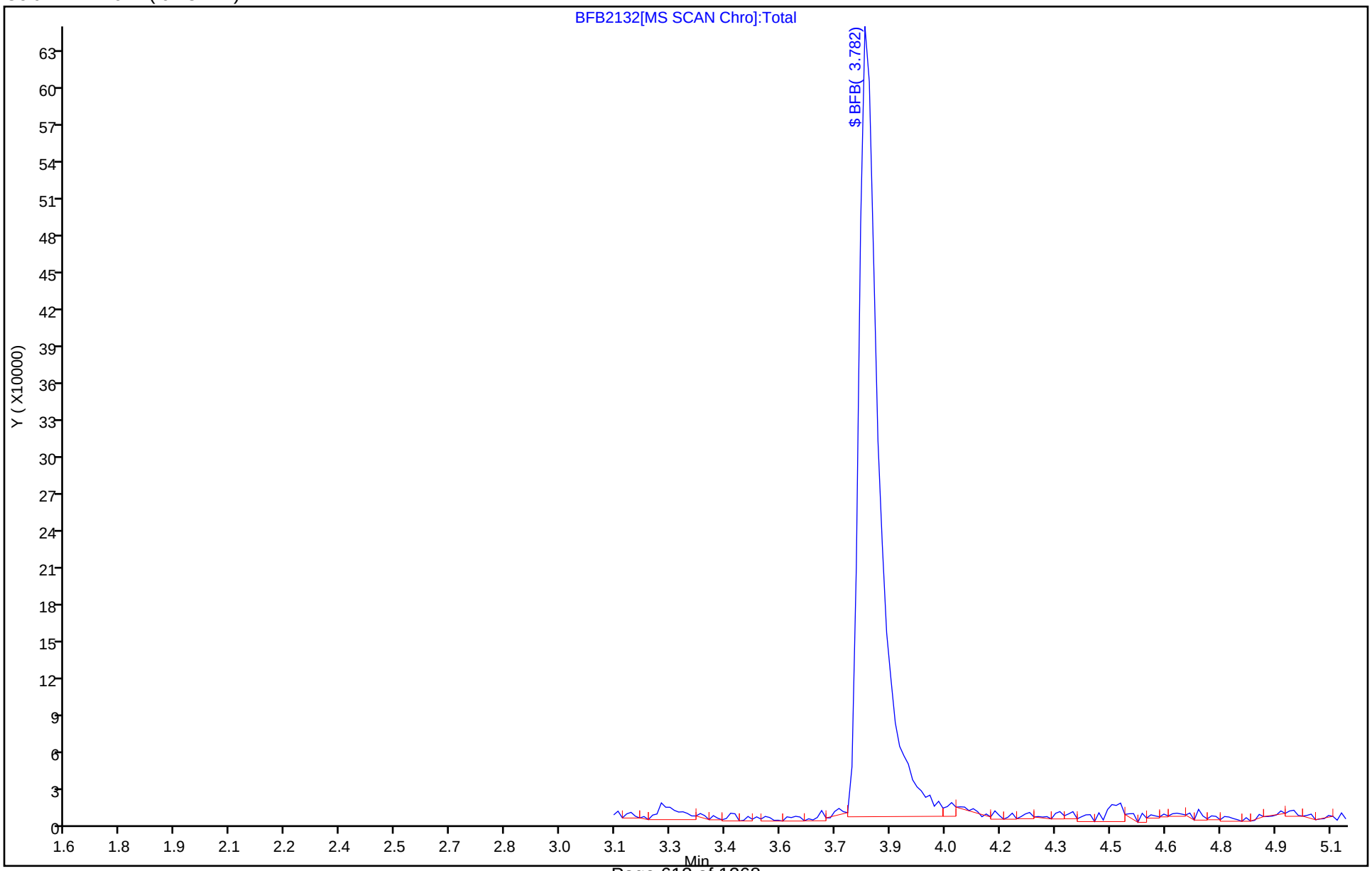
Report Date: 25-Jan-2019 11:16:25 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\BFB2132.D

Injection Date:	24-Jan-2019 09:41:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\BFB8814.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	30-Nov-2018 03:22:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Sample Info:	240-0082416-001				
Misc. Info.:	BFB				
Operator ID:	402279	Instrument ID:	A3UX8		
Method:	\\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\8260_8.m				
Limit Group:	MSV 8260B ICAL				
Last Update:	01-Dec-2018 02:22:53	Calib Date:	30-Nov-2018 10:15:30		
Integrator:	RTE	ID Type:	RT Order ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	CTX0320				
First Level Reviewer: latat		Date:	30-Nov-2018 04:23:30		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	3.707	3.707	0.000	0	417658	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

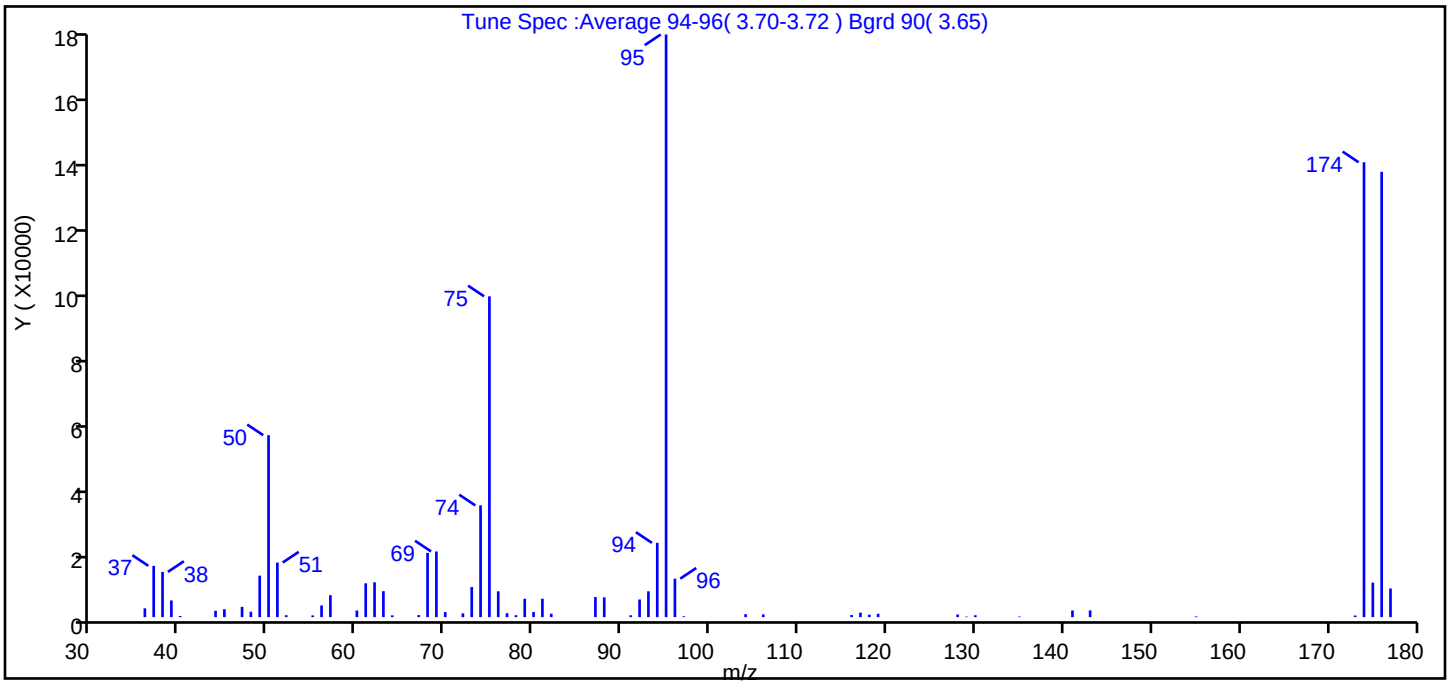
vmbfb_00021 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\BFB8814.D
Injection Date: 30-Nov-2018 03:22:30 Instrument ID: A3UX8
Lims ID: BFB
Client ID:
Operator ID: 402279 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	31.2
75	30 to 60% of m/z 95	55.1
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.3 (0.4)
174	50 to 120% of m/z 95	78.1
175	5 to 9% of m/z 174	5.9 (7.6)
176	Greater than 95% but less than 101% of m/z 174	76.4 (97.9)
177	5 to 9% of m/z 176	4.9 (6.4)

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\BFB8814.D\8260_8.rslt\spectra.d
Injection Date: 30-Nov-2018 03:22:30
Spectrum: Tune Spec :Average 94-96(3.70-3.72) Bgrd 90(3.65)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 63

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2666	60.00	2006	79.00	5546	117.00	1355
37.00	15484	61.00	10227	80.00	1537	118.00	739
38.00	13662	62.00	10522	81.00	5555	119.00	1030
39.00	5040	63.00	7848	82.00	1037	128.00	784
40.00	353	64.00	544	87.00	6064	129.00	173
44.00	1911	67.00	626	88.00	5981	130.00	570
45.00	2395	68.00	19400	91.00	566	135.00	184
47.00	3103	69.00	19832	92.00	5333	141.00	2016
48.00	1645	70.00	1523	93.00	7803	143.00	2032
49.00	12538	72.00	1142	94.00	22432	155.00	219
50.00	54936	73.00	9093	95.00	175936	173.00	498
51.00	16488	74.00	33752	96.00	11620	174.00	137344
52.00	583	75.00	96872	97.00	254	175.00	10429
55.00	530	76.00	7806	104.00	890	176.00	134464
56.00	3537	77.00	1191	106.00	835	177.00	8642
57.00	6629	78.00	581	116.00	637		

Report Date: 01-Dec-2018 02:22:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\BFB8814.D

Injection Date:	30-Nov-2018 03:22:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\BFB8848.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 19-Jan-2019 04:20:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0083802-001
Misc. Info.: BFB
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 23-Jan-2019 02:33:32 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0312

First Level Reviewer: latat Date: 19-Jan-2019 05:21:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	3.706	3.706	0.000	0	452778	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

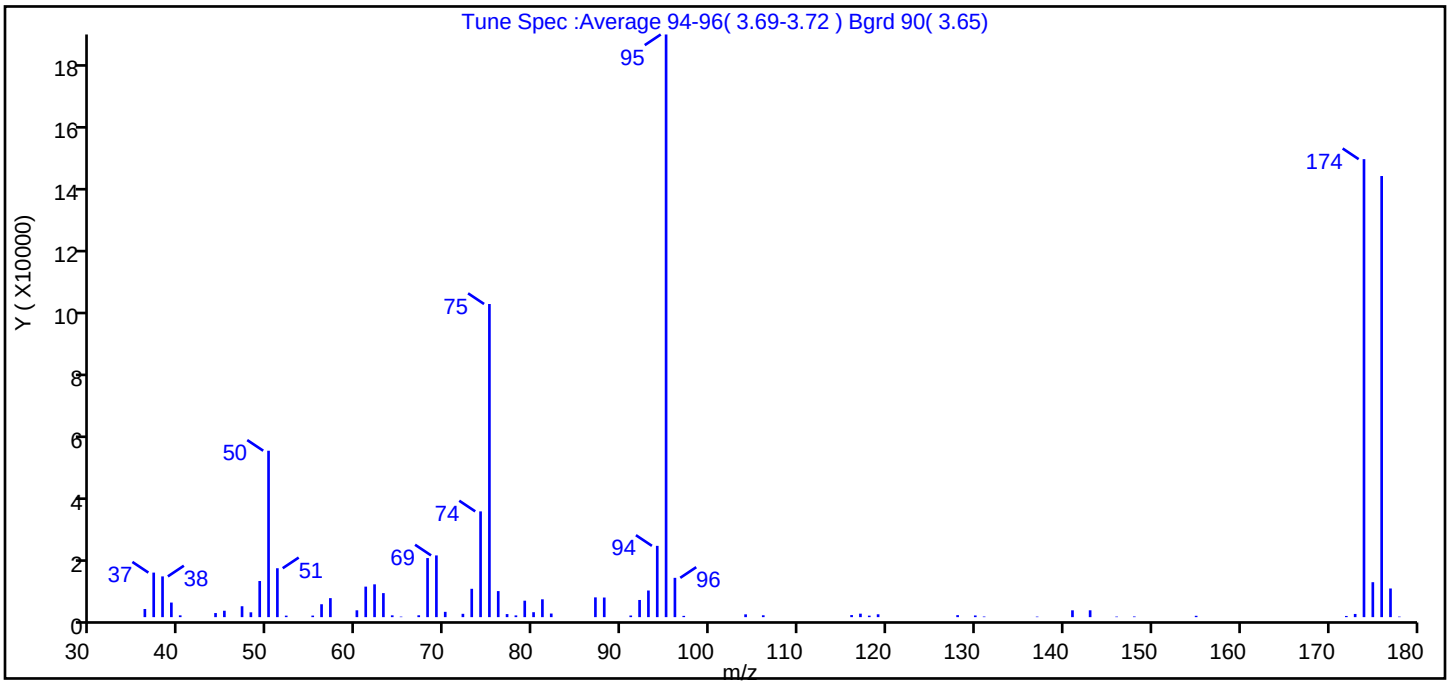
vmbfb_00021 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\BFB8848.D
Injection Date: 19-Jan-2019 04:20:30 Instrument ID: A3UX8
Lims ID: BFB
Client ID:
Operator ID: 402279 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	28.6
75	30 to 60% of m/z 95	53.7
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.5 (0.7)
174	50 to 120% of m/z 95	78.6
175	5 to 9% of m/z 174	6.0 (7.6)
176	Greater than 95% but less than 101% of m/z 174	75.7 (96.3)
177	5 to 9% of m/z 176	4.9 (6.5)

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\BFB8848.D\8260_8.rslt\spectra.d
Injection Date: 19-Jan-2019 04:20:30
Spectrum: Tune Spec :Average 94-96(3.69-3.72) Bgrd 90(3.65)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 68

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2628	61.00	9838	80.00	1593	119.00	921
37.00	14359	62.00	10579	81.00	5754	128.00	646
38.00	13135	63.00	7746	82.00	1167	130.00	538
39.00	4703	64.00	583	87.00	6374	131.00	195
40.00	580	65.00	167	88.00	6326	137.00	173
44.00	1320	67.00	596	91.00	524	141.00	2201
45.00	2066	68.00	19048	92.00	5536	143.00	2207
47.00	3517	69.00	19904	93.00	8585	146.00	180
48.00	1559	70.00	1711	94.00	22984	148.00	214
49.00	11648	72.00	1076	95.00	187840	155.00	436
50.00	53648	73.00	9139	96.00	12672	172.00	382
51.00	15770	74.00	34096	97.00	411	173.00	1031
52.00	487	75.00	100952	104.00	904	174.00	147648
55.00	498	76.00	8397	106.00	603	175.00	11265
56.00	4160	77.00	986	116.00	668	176.00	142208
57.00	6131	78.00	563	117.00	1121	177.00	9241
60.00	2205	79.00	5306	118.00	487	178.00	168

Report Date: 23-Jan-2019 02:33:33 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\BFB8848.D

Injection Date:	19-Jan-2019 04:20:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\BFB8849.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 23-Jan-2019 03:08:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: 240-0083884-001
Misc. Info.: BFB
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 24-Jan-2019 05:11:11 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: latat Date: 23-Jan-2019 05:55:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 8 BFB	95	3.706	3.706	0.000	0	491599	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

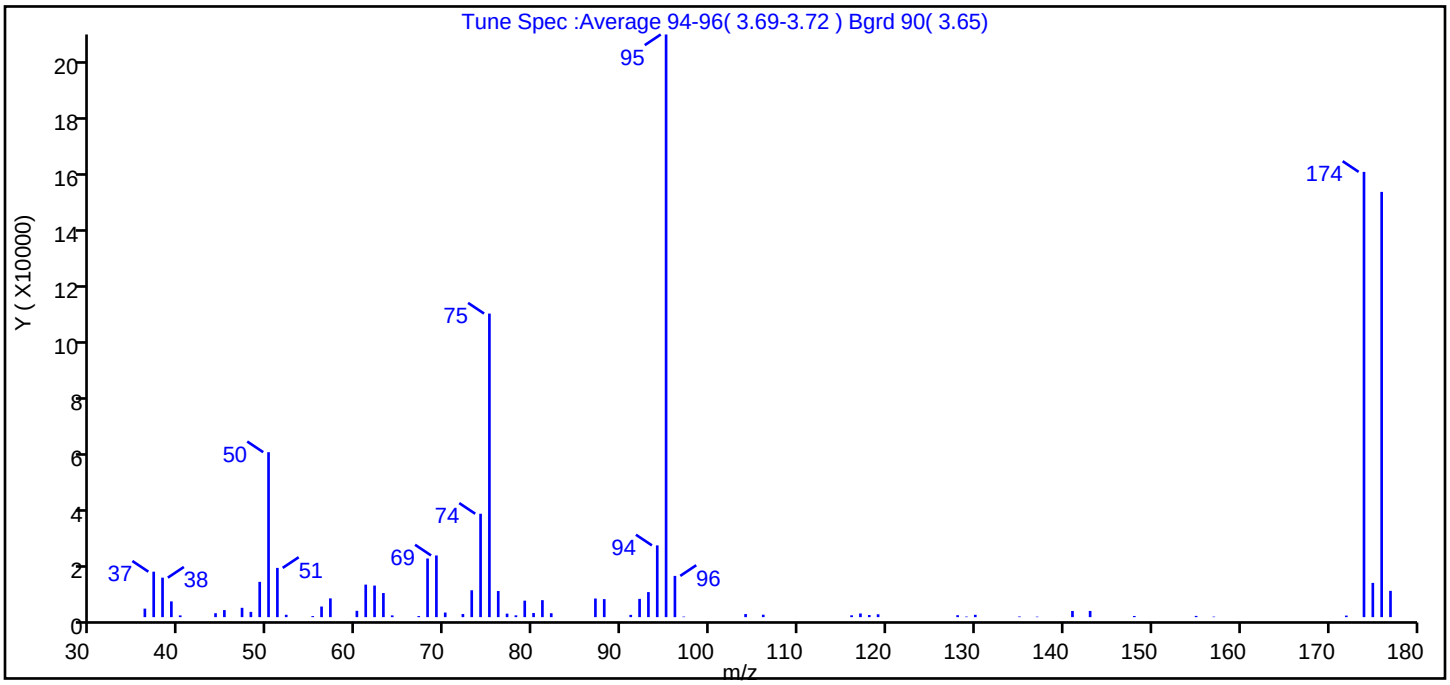
vmbfb_00021 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\BFB8849.D
Injection Date: 23-Jan-2019 03:08:30 Instrument ID: A3UX8
Lims ID: BFB
Client ID:
Operator ID: 402279 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	28.3
75	30 to 60% of m/z 95	52.1
96	5 to 9% of m/z 95	7.1
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	76.4
175	5 to 9% of m/z 174	5.9 (7.7)
176	Greater than 95% but less than 101% of m/z 174	73.0 (95.5)
177	5 to 9% of m/z 176	4.5 (6.2)

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\BFB8849.D\8260_8.rslt\spectra.d
Injection Date: 23-Jan-2019 03:08:30
Spectrum: Tune Spec :Average 94-96(3.69-3.72) Bgrd 90(3.65)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 66

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3054	61.00	11653	81.00	6081	128.00	695
37.00	16283	62.00	11307	82.00	1405	129.00	207
38.00	14145	63.00	8634	87.00	6667	130.00	837
39.00	5643	64.00	628	88.00	6459	135.00	230
40.00	624	67.00	379	91.00	816	137.00	177
44.00	1408	68.00	21008	92.00	6545	141.00	2212
45.00	2535	69.00	22104	93.00	8976	143.00	2220
47.00	3339	70.00	1643	94.00	25704	148.00	416
48.00	1890	72.00	1123	95.00	208704	155.00	446
49.00	12643	73.00	9620	96.00	14775	157.00	185
50.00	59088	74.00	37032	97.00	192	172.00	565
51.00	17640	75.00	108736	104.00	1103	174.00	159488
52.00	851	76.00	9350	106.00	874	175.00	12273
55.00	375	77.00	1252	116.00	657	176.00	152320
56.00	3798	78.00	649	117.00	1314	177.00	9416
57.00	6722	79.00	5907	118.00	754		
60.00	2264	80.00	1481	119.00	1028		

Report Date: 24-Jan-2019 05:11:11 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\BFB8849.D

Injection Date:	23-Jan-2019 03:08:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-365072/7

Matrix: Solid | Lab File ID: UX82266.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 01/23/2019 04:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.0	U	5.0	3.0
563-58-6	1,1-Dichloropropene	0.99	U	5.0	0.99
75-34-3	1,1-Dichloroethane	0.69	U	5.0	0.69
87-61-6	1,2,3-Trichlorobenzene	0.57	U	5.0	0.57
96-18-4	1,2,3-Trichloropropane	1.6	U	5.0	1.6
107-06-2	1,2-Dichloroethane	0.77	U	5.0	0.77
75-35-4	1,1-Dichloroethene	0.90	U	5.0	0.90
526-73-8	1,2,3-Trimethylbenzene	1.8	U	5.0	1.8
78-87-5	1,2-Dichloropropane	0.85	U	5.0	0.85
95-63-6	1,2,4-Trimethylbenzene	1.0	U	5.0	1.0
591-78-6	2-Hexanone	4.1	U	20	4.1
79-34-5	1,1,2,2-Tetrachloroethane	1.4	U	5.0	1.4
67-64-1	Acetone	21	U	25	21
71-43-2	Benzene	0.70	U	5.0	0.70
75-25-2	Bromoform	2.4	U	5.0	2.4
74-83-9	Bromomethane	0.99	U	5.0	0.99
75-15-0	Carbon disulfide	1.2	U	5.0	1.2
56-23-5	Carbon tetrachloride	3.3	U	5.0	3.3
71-55-6	1,1,1-Trichloroethane	0.82	U	5.0	0.82
108-90-7	Chlorobenzene	0.92	U	5.0	0.92
142-28-9	1,3-Dichloropropane	0.99	U	5.0	0.99
75-00-3	Chloroethane	1.2	U	5.0	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	3.6	U	10	3.6
67-66-3	Chloroform	0.79	U	5.0	0.79
74-87-3	Chloromethane	1.0	U	5.0	1.0
156-59-2	cis-1,2-Dichloroethene	0.65	U	5.0	0.65
10061-01-5	cis-1,3-Dichloropropene	1.4	U	5.0	1.4
75-27-4	Bromodichloromethane	0.68	U	5.0	0.68
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.3	U	5.0	1.3
75-71-8	Dichlorodifluoromethane	0.94	U	5.0	0.94
120-82-1	1,2,4-Trichlorobenzene	0.57	U	5.0	0.57
100-41-4	Ethylbenzene	1.0	U	5.0	1.0
106-93-4	1,2-Dibromoethane	0.77	U	5.0	0.77
594-20-7	2,2-Dichloropropane	1.2	U	5.0	1.2
95-50-1	1,2-Dichlorobenzene	1.1	U	5.0	1.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-365072/7

Matrix: Solid | Lab File ID: UX82266.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 01/23/2019 04:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
541-73-1	1,3-Dichlorobenzene	0.82	U	5.0	0.82
106-46-7	1,4-Dichlorobenzene	0.88	U	5.0	0.88
110-75-8	2-Chloroethyl vinyl ether	8.9	U	50	8.9
98-82-8	Isopropylbenzene	0.83	U	5.0	0.83
95-49-8	2-Chlorotoluene	0.95	U	5.0	0.95
78-93-3	2-Butanone (MEK)	3.6	U	20	3.6
108-10-1	4-Methyl-2-pentanone (MIBK)	3.7	U	20	3.7
108-86-1	Bromobenzene	1.2	U	5.0	1.2
1634-04-4	Methyl tert-butyl ether	0.82	U	5.0	0.82
74-97-5	Bromochloromethane	0.59	U	5.0	0.59
75-09-2	Methylene Chloride	12	U	25	12
106-43-4	4-Chlorotoluene	0.86	U	5.0	0.86
99-87-6	p-Isopropyltoluene	2.9	U	5.0	2.9
100-42-5	Styrene	1.2	U	5.0	1.2
179601-23-1	m-Xylene & p-Xylene	0.78	U	10	0.78
95-47-6	o-Xylene	0.86	U	5.0	0.86
87-68-3	Hexachlorobutadiene	3.7	U	5.0	3.7
127-18-4	Tetrachloroethene	0.73	U	5.0	0.73
74-95-3	Dibromomethane	0.67	U	5.0	0.67
108-88-3	Toluene	0.77	U	5.0	0.77
108-20-3	Diisopropyl ether	0.76	U	10	0.76
91-20-3	Naphthalene	2.7	U	5.0	2.7
156-60-5	trans-1,2-Dichloroethene	0.47	U	5.0	0.47
104-51-8	n-Butylbenzene	3.5	U	5.0	3.5
10061-02-6	trans-1,3-Dichloropropene	1.0	U	5.0	1.0
103-65-1	N-Propylbenzene	0.73	U	5.0	0.73
79-01-6	Trichloroethene	0.63	U	5.0	0.63
135-98-8	sec-Butylbenzene	0.86	U	5.0	0.86
75-69-4	Trichlorofluoromethane	1.1	U	5.0	1.1
994-05-8	Tert-amyl methyl ether	2.2	U	5.0	2.2
637-92-3	Ethyl tert-butyl ether	2.3	U	5.0	2.3
98-06-6	tert-Butylbenzene	0.91	U	5.0	0.91
75-01-4	Vinyl chloride	0.84	U	5.0	0.84
108-05-4	Vinyl acetate	2.1	U	10	2.1
75-65-0	tert-Butyl alcohol	17	U	200	17
1330-20-7	Xylenes, Total	1.6	U	10	1.6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-365072/7

Matrix: Solid | Lab File ID: UX82266.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 01/23/2019 04:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	2.8	U	5.0	2.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		48-123
460-00-4	4-Bromofluorobenzene (Surr)	89		49-141
2037-26-5	Toluene-d8 (Surr)	91		62-135
1868-53-7	Dibromofluoromethane (Surr)	92		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-365072/7

Matrix: Solid | Lab File ID: UX82266.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 01/23/2019 04:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

Number TICs Found: 1 | TIC Result Total: 0.949

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Tentatively Identified Compound		None		
60-29-7	Ethyl ether	2.75	0.949	J	97%

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82266.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 23-Jan-2019 04:50:30 ALS Bottle#: 5 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083884-007
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 24-Jan-2019 05:11:14 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: latat Date: 23-Jan-2019 05:55:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.159	5.156	0.003	99	845322	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.691	7.688	0.003	98	706519	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.880	9.877	0.003	95	387029	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.639	4.635	0.004	93	190274	50.0	45.8	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.899	4.896	0.003	94	258931	50.0	50.1	
$ 6 Toluene-d8 (Surr)	98	6.437	6.434	0.003	96	754773	50.0	45.4	
$ 7 4-Bromofluorobenzene (Surr	95	8.768	8.765	0.003	85	282047	50.0	44.6	
9 Dichlorodifluoromethane	85		1.594					ND	
10 Chloromethane	50		1.772					ND	
11 Vinyl chloride	62		1.890					ND	
12 Butadiene	54		1.914					ND	
13 Bromomethane	94		2.186					ND	
14 Chloroethane	64		2.281					ND	
15 Dichlorofluoromethane	67		2.458					ND	
16 Trichlorofluoromethane	101		2.505					ND	
17 Ethyl ether	59	2.745	2.742	0.003	97	4109		0.9488	
18 Acrolein	56		2.837					ND	
19 1,1-Dichloroethene	96		2.931					ND	
20 1,1,2-Trichloro-1,2,2-trif	151		2.943					ND	
21 Acetone	43	2.970	2.967	0.003	94	7784		0.9283	
22 Methylal	45		2.980					ND	
23 Iodomethane	142		3.062					ND	
24 Carbon disulfide	76		3.121					ND	
25 Acetonitrile	41		3.181					ND	
26 3-Chloro-1-propene	76		3.215					ND	
27 Methyl acetate	43		3.227					ND	
28 Methylene Chloride	84		3.310					ND	
29 2-Methyl-2-propanol	59		3.393					ND	
30 Acrylonitrile	53		3.488					ND	
32 Methyl tert-butyl ether	73		3.523					ND	
31 trans-1,2-Dichloroethene	96		3.523					ND	
33 Hexane	86		3.736					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
34 1,1-Dichloroethane	63		3.843					ND	
35 Vinyl acetate	43		3.866					ND	
36 Isopropyl ether	87		3.891					ND	
37 2-Chloro-1,3-butadiene	53		3.915					ND	
38 Tert-butyl ethyl ether	59		4.164					ND	
39 cis-1,2-Dichloroethene	96		4.280					ND	
40 2-Butanone (MEK)	43		4.280					ND	
41 2,2-Dichloropropane	77		4.292					ND	
43 Propionitrile	54		4.317					ND	
42 Ethyl acetate	43		4.317					ND	
44 Methacrylonitrile	41		4.436					ND	
45 Chlorobromomethane	128		4.458					ND	
46 Tetrahydrofuran	42		4.505					ND	
47 Chloroform	83		4.517					ND	
48 1,1,1-Trichloroethane	97		4.671					ND	
49 Cyclohexane	56		4.730					ND	
50 1,1-Dichloropropene	75		4.801					ND	
51 Carbon tetrachloride	117		4.801					ND	
52 Isobutyl alcohol	41		4.825					ND	
54 Benzene	78		4.955					ND	
53 1,2-Dichloroethane	62		4.955					ND	
55 Tert-amyl methyl ether	73		5.027					ND	
56 n-Heptane	100		5.144					ND	
57 n-Butanol	56		5.335					ND	
58 Trichloroethene	130		5.452					ND	
59 Ethyl acrylate	55		5.501					ND	
60 Methylcyclohexane	83		5.617					ND	
61 1,2-Dichloropropane	63		5.629					ND	
62 Methyl methacrylate	41		5.690					ND	
64 1,4-Dioxane	88		5.724					ND	
63 Dibromomethane	93		5.724					ND	
65 Dichlorobromomethane	83		5.830					ND	
66 2-Nitropropane	41		5.998					ND	
67 2-Chloroethyl vinyl ether	63		6.055					ND	
68 cis-1,3-Dichloropropene	75		6.197					ND	
69 4-Methyl-2-pentanone (MIBK	43		6.304					ND	
70 Toluene	91		6.493					ND	
71 trans-1,3-Dichloropropene	75		6.647					ND	
72 Ethyl methacrylate	69		6.718					ND	
73 1,1,2-Trichloroethane	97		6.813					ND	
74 1,3-Dichloropropane	76		6.966					ND	
75 Tetrachloroethene	164		6.966					ND	
76 2-Hexanone	43		7.014					ND	
77 n-Butyl acetate	43		7.122					ND	
78 Chlorodibromomethane	129		7.168					ND	
79 Tetrahydrothiophene	60		7.168					ND	
80 Ethylene Dibromide	107		7.286					ND	
81 1-Chlorohexane	91		7.678					ND	
82 Chlorobenzene	112		7.712					ND	
83 1,1,1,2-Tetrachloroethane	131		7.783					ND	
84 Ethylbenzene	106		7.807					ND	
85 m-Xylene & p-Xylene	106		7.913					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
86 o-Xylene	106		8.280					ND	
87 Styrene	104		8.292					ND	
88 Bromoform	173		8.469					ND	
89 Isopropylbenzene	105		8.623					ND	
90 1,4-Dichlorobutane	90		8.697					ND	
91 Cyclohexanone	55		8.707					ND	
92 1,1,2,2-Tetrachloroethane	83		8.883					ND	
93 Bromobenzene	156		8.919					ND	
95 trans-1,4-Dichloro-2-buten	53		8.931					ND	
94 1,2,3-Trichloropropane	110		8.931					ND	
96 N-Propylbenzene	120		9.013					ND	
97 2-Chlorotoluene	126		9.096					ND	
98 1,3,5-Trimethylbenzene	105		9.179					ND	
99 4-Chlorotoluene	126		9.203					ND	
100 tert-Butylbenzene	119		9.499					ND	
101 Pentachloroethane	167		9.512					ND	
102 1,2,4-Trimethylbenzene	105	9.549	9.534	0.015	1	2334		0.1178	
103 sec-Butylbenzene	105		9.712					ND	
104 1,3-Dichlorobenzene	146	9.821	9.818	0.003	75	1358		0.1224	
105 4-Isopropyltoluene	119		9.842					ND	
106 1,4-Dichlorobenzene	146		9.901					ND	Ua
107 1,2,3-Trimethylbenzene	105		9.950					ND	
108 Benzyl chloride	126		10.033					ND	
109 n-Butylbenzene	91	10.247	10.244	0.003	91	2444		0.1382	
110 1,2-Dichlorobenzene	146		10.268					ND	
111 1,2-Dibromo-3-Chloropropan	157		11.037					ND	
112 1,3,5-Trichlorobenzene	180		11.251					ND	
113 1,2,4-Trichlorobenzene	180	11.868	11.865	0.003	78	1728		0.2860	
114 Hexachlorobutadiene	225		12.043					ND	
115 Naphthalene	128	12.117	12.114	0.003	88	4869		0.4254	
116 1,2,3-Trichlorobenzene	180		12.362					ND	
117 2-Methylnaphthalene	142		13.441					ND	
123 1,3-Diethylbenzene TIC	1		0.000					ND	
124 Propene oxide	1		0.000					ND	
118 2-Ethyltoluene	1		0.000					ND	
120 3-Ethyltoluene	1		0.000					ND	
119 Epichlorohydrin	1		0.000					ND	
121 Ethylene oxide	1		0.000					ND	
125 Isobutylene TIC	1		0.000					ND	
S 126 1,2-Dichloroethene, Total	96		1.140					ND	
S 127 1,3-Dichloropropene, Total	75		6.760					ND	
S 128 Xylenes, Total	106		16.530					ND	
S 157 Total BTEX	1		0.000					ND	
S 129 Trihalomethanes, Total	1		0.000					ND	

QC Flag Legend

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00011	Amount Added:	0.00	Units:	Run Reagent
VMUX8SS_00030	Amount Added:	1.15	Units: uL	Run Reagent
vmDist_H2o_00135	Amount Added:	0.00	Units:	Run Reagent

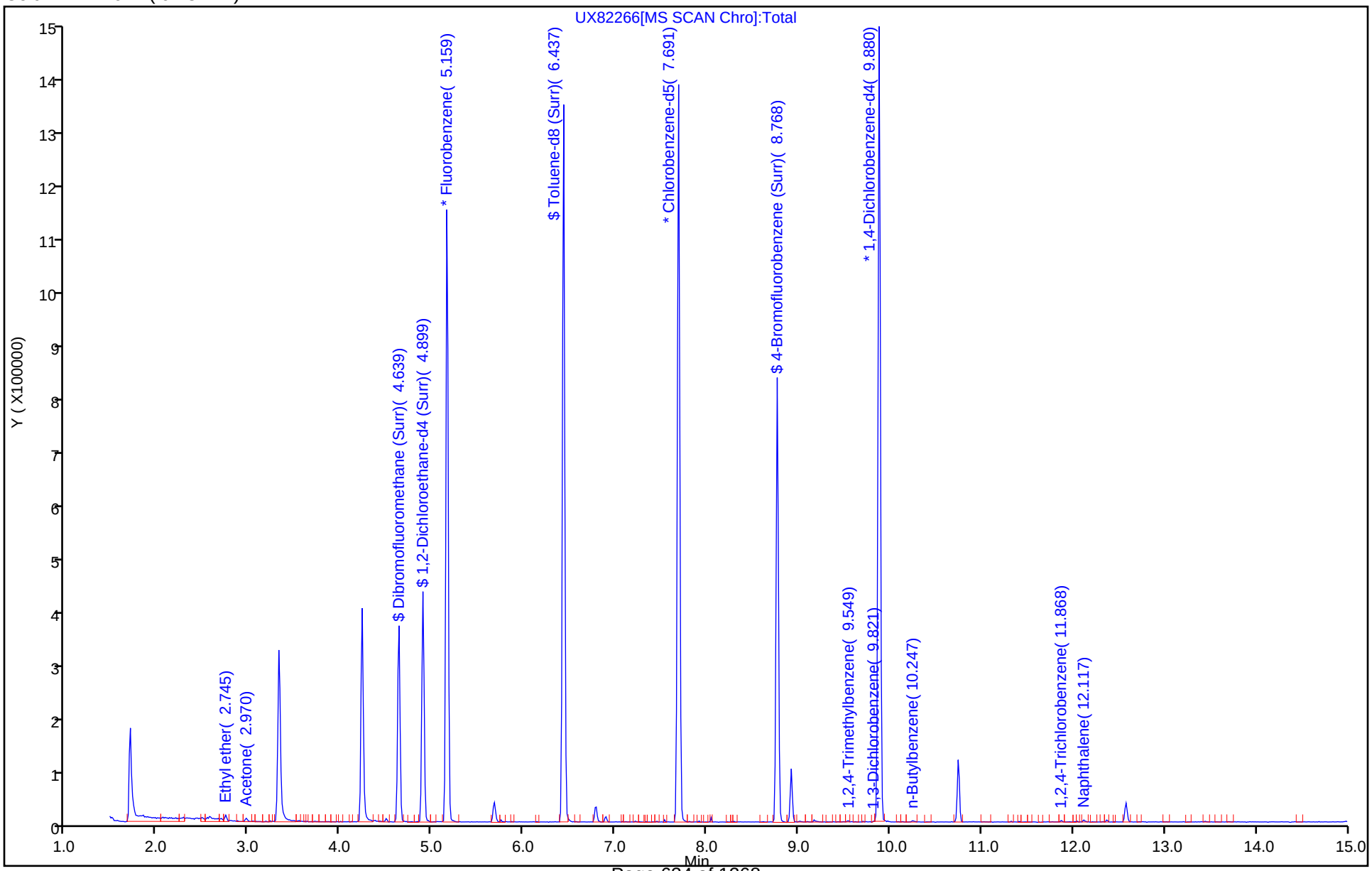
Report Date: 24-Jan-2019 05:11:18 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82266.D

Injection Date:	23-Jan-2019 04:50:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82266.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 23-Jan-2019 04:50:30 ALS Bottle#: 5 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083884-007
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 24-Jan-2019 05:11:14 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: latat Date: 23-Jan-2019 05:55:00

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	45.8	91.52
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	50.1	100.20
$ 6 Toluene-d8 (Surr)	50.0	45.4	90.75
$ 7 4-Bromofluorobenzene (Surr)	50.0	44.6	89.14

Report Date: 24-Jan-2019 05:11:18 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82266.D

Injection Date: 23-Jan-2019 04:50:30 Instrument ID: A3UX8

Lims ID: MB

Client ID:

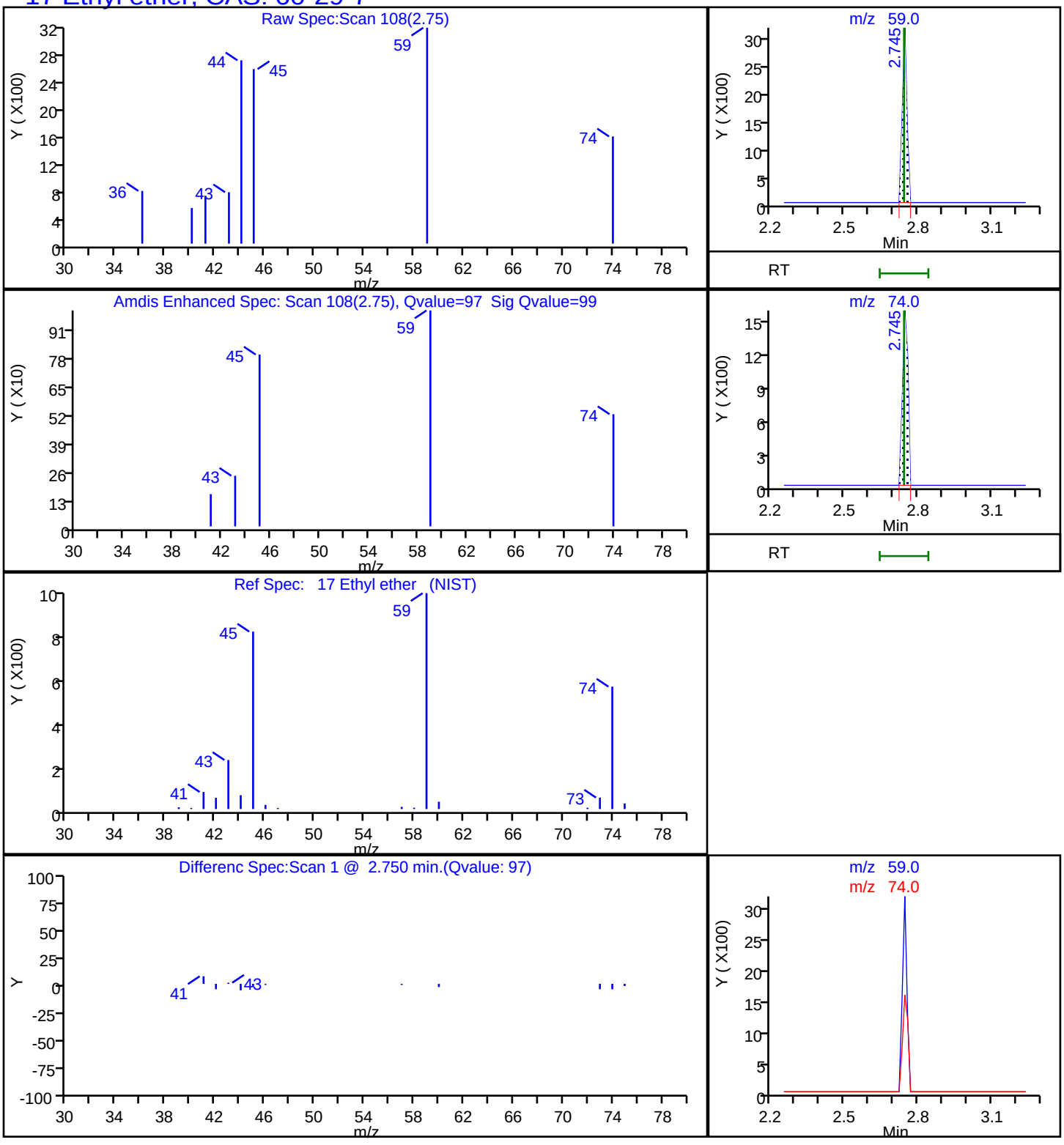
Operator ID: 402279 ALS Bottle#: 5 Worklist Smp#: 7

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: 8260_8 Limit Group: MSV 8260B ICAL

Column: DB-624 (0.18 mm) Detector MS SCAN

17 Ethyl ether, CAS: 60-29-7



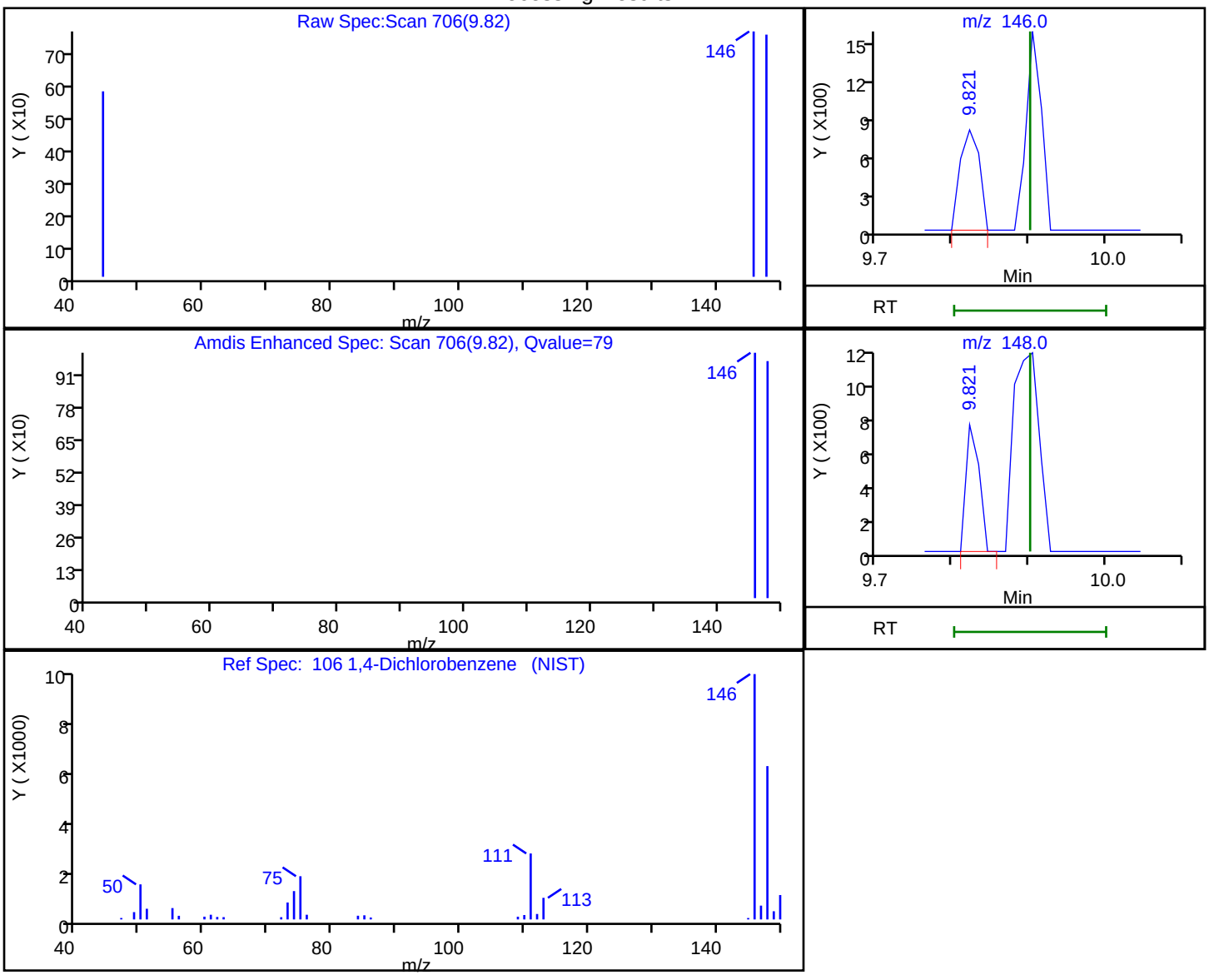
User Disabled Compound Report

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82266.D
Injection Date: 23-Jan-2019 04:50:30 Instrument ID: A3UX8
Lims ID: MB
Client ID:
Operator ID: 402279 ALS Bottle#: 5 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

106 1,4-Dichlorobenzene, CAS: 106-46-7

Processing Results



RT	Mass	Response	Amount
9.82	146.00	1358	-3.428601
9.82	148.00	911	

Reviewer: latat, 23-Jan-2019 05:31:51
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-365336/8

Matrix: Water | Lab File ID: UXX9251.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/24/2019 13:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 365336 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
591-78-6	2-Hexanone	0.54	U	10	0.54
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
75-00-3	Chloroethane	0.83	U	1.0	0.83
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
67-66-3	Chloroform	0.13	U	1.0	0.13
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-365336/8

Matrix: Water | Lab File ID: UXX9251.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/24/2019 13:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 365336 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
108-86-1	Bromobenzene	0.12	U	1.0	0.12
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
100-42-5	Styrene	0.10	U	1.0	0.10
179601-23-1	m-Xylene & p-Xylene	0.080	U	2.0	0.080
95-47-6	o-Xylene	0.090	U	1.0	0.090
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
74-95-3	Dibromomethane	0.090	U	1.0	0.090
108-88-3	Toluene	0.14	U	1.0	0.14
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
79-01-6	Trichloroethene	0.10	U	1.0	0.10
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-365336/8

Matrix: Water Lab File ID: UXX9251.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/24/2019 13:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 365336 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	101		59-120
2037-26-5	Toluene-d8 (Surr)	95		70-123
1868-53-7	Dibromofluoromethane (Surr)	96		75-128

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9251.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 24-Jan-2019 13:08:30 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083932-008
Operator ID: 001644 Instrument ID: A3UX10

Method: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 25-Jan-2019 11:16:30 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: williamsla Date: 24-Jan-2019 13:45:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.565	5.565	0.000	98	599891	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.250	8.250	0.000	90	442455	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.486	10.485	0.001	97	238368	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.986	4.985	0.001	91	150633	10.0	9.56	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.281	5.281	0.000	94	185651	10.0	9.22	
$ 6 Toluene-d8 (Surr)	98	6.937	6.937	0.000	96	529202	10.0	9.47	
$ 7 4-Bromofluorobenzene (Surr	95	9.350	9.350	0.000	78	214815	10.0	10.1	
9 Dichlorodifluoromethane	85		1.649					ND	
10 Chloromethane	50		1.827					ND	
12 Butadiene	54		1.921					ND	
11 Vinyl chloride	62		1.933					ND	
13 Bromomethane	94		2.229					ND	
14 Chloroethane	64		2.300					ND	
15 Dichlorofluoromethane	67		2.513					ND	
16 Trichlorofluoromethane	101		2.560					ND	
17 Ethyl ether	59		2.820					ND	
120 Propene oxide	58		2.856					ND	
18 Acrolein	56		2.939					ND	
19 1,1-Dichloroethene	96		3.033					ND	
23 Methylal	45		3.057					ND	
20 1,1,2-Trichloro-1,2,2-trif	151		3.057					ND	
21 Acetone	43		3.081					ND	
22 Iodomethane	142		3.175					ND	
24 Carbon disulfide	76		3.234					ND	
25 Acetonitrile	41		3.329					ND	
26 3-Chloro-1-propene	76		3.364					ND	
27 Methyl acetate	43		3.376					ND	
28 Methylene Chloride	84	3.471	3.471	0.000	90	21848		1.03	
29 2-Methyl-2-propanol	59		3.577					ND	
31 Acrylonitrile	53		3.684					ND	
30 trans-1,2-Dichloroethene	96		3.719					ND	
32 Methyl tert-butyl ether	73		3.719					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
33 Hexane	86		3.944					ND	
34 1,1-Dichloroethane	63		4.086					ND	
35 Vinyl acetate	43		4.121					ND	
36 Isopropyl ether	87		4.133					ND	
37 2-Chloro-1,3-butadiene	53		4.157					ND	
38 Tert-butyl ethyl ether	59		4.441					ND	
42 Ethyl acetate	43		4.441					ND	U
40 cis-1,2-Dichloroethene	96		4.583					ND	
39 2,2-Dichloropropane	97		4.583					ND	
41 2-Butanone (MEK)	43		4.595					ND	
43 Propionitrile	54		4.642					ND	
44 Methacrylonitrile	41		4.772					ND	
45 Chlorobromomethane	128		4.796					ND	
46 Tetrahydrofuran	42		4.831					ND	
47 Chloroform	83		4.843					ND	
48 1,1,1-Trichloroethane	97		5.020					ND	
49 Cyclohexane	56		5.068					ND	
50 1,1-Dichloropropene	75		5.151					ND	
51 Carbon tetrachloride	117		5.162					ND	
52 Isobutyl alcohol	41		5.222					ND	
53 Benzene	78		5.328					ND	
54 1,2-Dichloroethane	62		5.340					ND	
55 Tert-amyl methyl ether	73		5.411					ND	
56 n-Heptane	100		5.541					ND	
57 n-Butanol	56		5.789					ND	
58 Trichloroethene	130		5.872					ND	
59 Ethyl acrylate	55		5.943					ND	
60 Methylcyclohexane	83		6.050					ND	
61 1,2-Dichloropropane	63		6.073					ND	
62 Methyl methacrylate	41		6.144					ND	
63 Dibromomethane	93		6.168					ND	
64 1,4-Dioxane	88		6.180					ND	
65 Dichlorobromomethane	83		6.298					ND	
66 2-Nitropropane	41		6.499					ND	
67 2-Chloroethyl vinyl ether	63		6.546					ND	
68 cis-1,3-Dichloropropene	75		6.688					ND	
69 4-Methyl-2-pentanone (MIBK	43		6.818					ND	
70 Toluene	91		6.996					ND	
71 trans-1,3-Dichloropropene	75		7.173					ND	
72 Ethyl methacrylate	69		7.244					ND	
73 1,1,2-Trichloroethane	97		7.351					ND	
74 Tetrachloroethene	164		7.493					ND	
75 1,3-Dichloropropane	76		7.504					ND	
76 2-Hexanone	43		7.564					ND	
77 n-Butyl acetate	56		7.670					ND	
79 Tetrahydrothiophene	60		7.696					ND	
78 Chlorodibromomethane	129		7.706					ND	
80 Ethylene Dibromide	107		7.824					ND	
81 1-Chlorohexane	91		8.238					ND	
82 Chlorobenzene	112		8.273					ND	
83 1,1,1,2-Tetrachloroethane	131		8.344					ND	
84 Ethylbenzene	106		8.368					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
85 m-Xylene & p-Xylene	106		8.474					ND	
86 o-Xylene	106		8.853					ND	
87 Styrene	104		8.865					ND	
88 Bromoform	173		9.054					ND	
89 Isopropylbenzene	105		9.208					ND	
90 1,4-Dichlorobutane	55		9.294					ND	
91 Cyclohexanone	55		9.302					ND	
92 1,1,2,2-Tetrachloroethane	83		9.480					ND	
93 Bromobenzene	156		9.503					ND	
94 1,2,3-Trichloropropane	110		9.527					ND	
95 trans-1,4-Dichloro-2-buten	53		9.539					ND	
96 N-Propylbenzene	120		9.598					ND	
126 3-Ethyltoluene	105		9.662					ND	
97 2-Chlorotoluene	126		9.693					ND	
98 1,3,5-Trimethylbenzene	105		9.764					ND	
99 4-Chlorotoluene	126		9.799					ND	
119 2-Ethyltoluene	105		9.946					ND	
100 tert-Butylbenzene	119		10.095					ND	
101 Pentachloroethane	167		10.118					ND	
102 1,2,4-Trimethylbenzene	105		10.130					ND	
103 sec-Butylbenzene	105		10.308					ND	
104 1,3-Dichlorobenzene	146		10.426					ND	
105 4-Isopropyltoluene	119		10.450					ND	
106 1,4-Dichlorobenzene	146		10.509					ND	
107 1,2,3-Trimethylbenzene	105		10.556					ND	
108 Benzyl chloride	126		10.639					ND	
109 n-Butylbenzene	91		10.852					ND	
110 1,2-Dichlorobenzene	146		10.876					ND	
111 1,2-Dibromo-3-Chloropropan	157		11.656					ND	
112 1,3,5-Trichlorobenzene	180		11.857					ND	
113 1,2,4-Trichlorobenzene	180		12.484					ND	
114 Hexachlorobutadiene	225	12.650	12.650	0.000	74	3111		0.1822	
115 Naphthalene	128		12.733					ND	
116 1,2,3-Trichlorobenzene	180		12.981					ND	
117 2-Methylnaphthalene	142		14.045					ND	
118 1,3-Diethylbenzene TIC	1		0.000					ND	
124 Ethylene oxide	1		0.000					ND	
122 Epichlorohydrin	1		0.000					ND	
S 128 1,2-Dichloroethene, Total	96		1.140					ND	
S 129 1,3-Dichloropropene, Total	75		6.760					ND	
S 130 Xylenes, Total	106		16.530					ND	
S 131 Trihalomethanes, Total	1		0.000					ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

vm50ss_stk_00079	Amount Added:	1.00	Units: uL	Run Reagent
VM50IS_00074	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00009	Amount Added:	0.00	Units:	Run Reagent
vmDist_H2o_00137	Amount Added:	0.00	Units:	Run Reagent

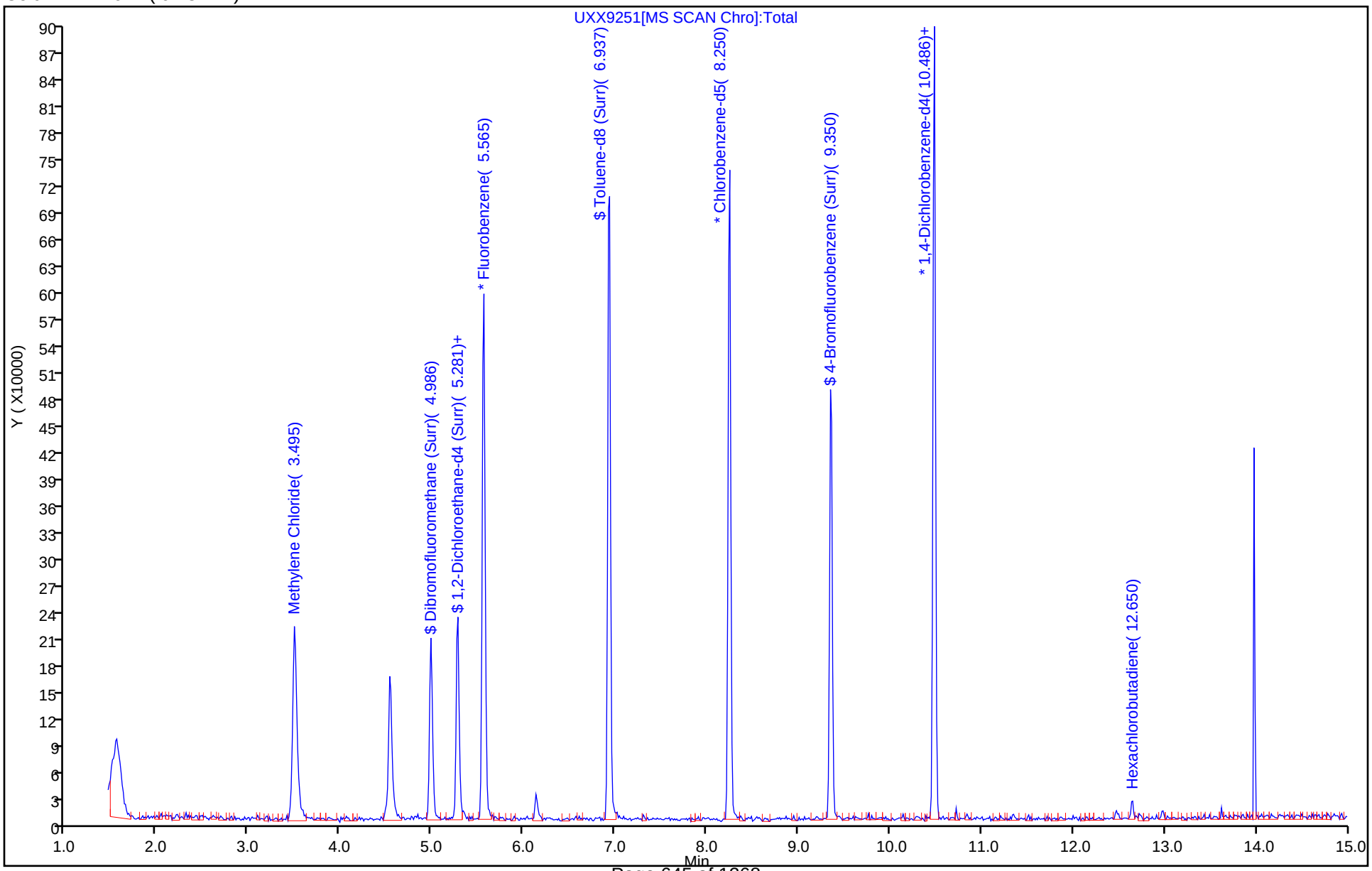
Report Date: 25-Jan-2019 11:16:40 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9251.D

Injection Date:	24-Jan-2019 13:08:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	MB			Worklist Smp#:	8
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9251.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 24-Jan-2019 13:08:30 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083932-008
Operator ID: 001644 Instrument ID: A3UX10

Method: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 25-Jan-2019 11:16:30 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: williamsla Date: 24-Jan-2019 13:45:43

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	10.0	9.56	95.59
$ 5 1,2-Dichloroethane-d4 (Surr)	10.0	9.22	92.20
$ 6 Toluene-d8 (Surr)	10.0	9.47	94.74
$ 7 4-Bromofluorobenzene (Surr)	10.0	10.1	101.00

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-365072/6

Matrix: Solid | Lab File ID: UX82265.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 01/23/2019 04:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	23.9		5.0	3.0
563-58-6	1,1-Dichloropropene	25.6		5.0	0.99
75-34-3	1,1-Dichloroethane	24.5		5.0	0.69
87-61-6	1,2,3-Trichlorobenzene	18.8		5.0	0.57
96-18-4	1,2,3-Trichloropropane	21.4		5.0	1.6
107-06-2	1,2-Dichloroethane	24.2		5.0	0.77
75-35-4	1,1-Dichloroethene	26.1		5.0	0.90
78-87-5	1,2-Dichloropropane	25.3		5.0	0.85
95-63-6	1,2,4-Trimethylbenzene	21.6		5.0	1.0
591-78-6	2-Hexanone	48.0		20	4.1
79-34-5	1,1,2,2-Tetrachloroethane	19.8		5.0	1.4
67-64-1	Acetone	53.6		25	21
71-43-2	Benzene	24.9		5.0	0.70
75-25-2	Bromoform	20.6		5.0	2.4
74-83-9	Bromomethane	24.4		5.0	0.99
75-15-0	Carbon disulfide	26.0		5.0	1.2
56-23-5	Carbon tetrachloride	26.7		5.0	3.3
71-55-6	1,1,1-Trichloroethane	26.5		5.0	0.82
108-90-7	Chlorobenzene	22.1		5.0	0.92
142-28-9	1,3-Dichloropropane	22.9		5.0	0.99
75-00-3	Chloroethane	23.3		5.0	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	20.1		10	3.6
67-66-3	Chloroform	24.4		5.0	0.79
74-87-3	Chloromethane	22.7		5.0	1.0
156-59-2	cis-1,2-Dichloroethene	24.9		5.0	0.65
10061-01-5	cis-1,3-Dichloropropene	24.1		5.0	1.4
75-27-4	Bromodichloromethane	24.8		5.0	0.68
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	25.9		5.0	1.3
75-71-8	Dichlorodifluoromethane	22.6		5.0	0.94
120-82-1	1,2,4-Trichlorobenzene	17.2		5.0	0.57
100-41-4	Ethylbenzene	25.0		5.0	1.0
106-93-4	1,2-Dibromoethane	23.8		5.0	0.77
594-20-7	2,2-Dichloropropane	22.7		5.0	1.2
95-50-1	1,2-Dichlorobenzene	21.1		5.0	1.1
541-73-1	1,3-Dichlorobenzene	20.5		5.0	0.82

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-365072/6

Matrix: Solid | Lab File ID: UX82265.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 01/23/2019 04:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
106-46-7	1,4-Dichlorobenzene	20.3		5.0	0.88
110-75-8	2-Chloroethyl vinyl ether	21.2	J	50	8.9
98-82-8	Isopropylbenzene	25.0		5.0	0.83
95-49-8	2-Chlorotoluene	21.0		5.0	0.95
78-93-3	2-Butanone (MEK)	53.9		20	3.6
108-10-1	4-Methyl-2-pentanone (MIBK)	49.3		20	3.7
108-86-1	Bromobenzene	21.0		5.0	1.2
1634-04-4	Methyl tert-butyl ether	23.3		5.0	0.82
74-97-5	Bromochloromethane	24.0		5.0	0.59
75-09-2	Methylene Chloride	25.4		25	12
106-43-4	4-Chlorotoluene	21.7		5.0	0.86
99-87-6	p-Isopropyltoluene	22.5		5.0	2.9
100-42-5	Styrene	23.2		5.0	1.2
179601-23-1	m-Xylene & p-Xylene	24.9		10	0.78
95-47-6	o-Xylene	25.3		5.0	0.86
87-68-3	Hexachlorobutadiene	21.0		5.0	3.7
127-18-4	Tetrachloroethene	24.1		5.0	0.73
74-95-3	Dibromomethane	25.0		5.0	0.67
108-88-3	Toluene	24.6		5.0	0.77
91-20-3	Naphthalene	17.2		5.0	2.7
156-60-5	trans-1,2-Dichloroethene	25.7		5.0	0.47
104-51-8	n-Butylbenzene	22.0		5.0	3.5
10061-02-6	trans-1,3-Dichloropropene	20.9		5.0	1.0
103-65-1	N-Propylbenzene	22.7		5.0	0.73
79-01-6	Trichloroethene	25.9		5.0	0.63
135-98-8	sec-Butylbenzene	22.4		5.0	0.86
75-69-4	Trichlorofluoromethane	24.5		5.0	1.1
98-06-6	tert-Butylbenzene	23.1		5.0	0.91
75-01-4	Vinyl chloride	24.7		5.0	0.84
108-05-4	Vinyl acetate	21.9		10	2.1
75-65-0	tert-Butyl alcohol	190	J	200	17
1330-20-7	Xylenes, Total	50.2		10	1.6
124-48-1	Dibromochloromethane	23.1		5.0	2.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 240-365072/6

Matrix: Solid Lab File ID: UX82265.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(g) Date Analyzed: 01/23/2019 04:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 365072 Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		48-123
460-00-4	4-Bromofluorobenzene (Surr)	96		49-141
2037-26-5	Toluene-d8 (Surr)	93		62-135
1868-53-7	Dibromofluoromethane (Surr)	89		49-132

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82265.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 23-Jan-2019 04:28:30 ALS Bottle#: 4 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083884-006
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 24-Jan-2019 05:11:14 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: latat Date: 23-Jan-2019 05:31:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.159	5.156	0.003	99	947337	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.691	7.688	0.003	97	769949	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.880	9.877	0.003	97	455086	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.638	4.635	0.003	93	206786	50.0	44.4	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.898	4.896	0.002	99	267444	50.0	45.9	
$ 6 Toluene-d8 (Surr)	98	6.436	6.434	0.002	96	839886	50.0	46.4	
$ 7 4-Bromofluorobenzene (Surr	95	8.768	8.765	0.003	85	330220	50.0	48.1	
9 Dichlorodifluoromethane	85	1.597	1.594	0.003	98	136008	25.0	22.6	
10 Chloromethane	50	1.774	1.772	0.002	100	168040	25.0	22.7	
11 Vinyl chloride	62	1.893	1.890	0.003	97	122740	25.0	24.7	
12 Butadiene	54	1.916	1.914	0.002	0	137375	25.0	21.3	
13 Bromomethane	94	2.189	2.186	0.003	94	71548	25.0	24.4	
14 Chloroethane	64	2.283	2.281	0.002	96	76863	25.0	23.3	
15 Dichlorofluoromethane	67	2.461	2.458	0.003	99	188673	25.0	24.9	
16 Trichlorofluoromethane	101	2.508	2.505	0.003	99	179220	25.0	24.5	
17 Ethyl ether	59	2.745	2.742	0.003	94	118317	25.0	24.4	
18 Acrolein	56	2.851	2.837	0.014	98	38833	125.0	80.2	
19 1,1-Dichloroethene	96	2.934	2.931	0.003	94	120582	25.0	26.1	
20 1,1,2-Trichloro-1,2,2-trif	151	2.946	2.943	0.003	93	99183	25.0	25.9	
21 Acetone	43	2.969	2.967	0.002	97	87346	50.0	53.6	
23 Iodomethane	142	3.064	3.062	0.002	100	194471	25.0	24.6	
24 Carbon disulfide	76	3.123	3.121	0.002	99	342196	25.0	26.0	
26 3-Chloro-1-propene	76	3.218	3.215	0.003	84	69838	25.0	26.8	
27 Methyl acetate	43	3.230	3.227	0.003	100	193282	50.0	47.1	
28 Methylene Chloride	84	3.313	3.310	0.003	93	136328	25.0	25.4	
29 2-Methyl-2-propanol	59	3.395	3.393	0.002	87	73740	250.0	189.8	
30 Acrylonitrile	53	3.490	3.488	0.002	97	425276	250.0	236.3	
32 Methyl tert-butyl ether	73	3.526	3.523	0.003	95	274204	25.0	23.3	
31 trans-1,2-Dichloroethene	96	3.526	3.523	0.003	93	142376	25.0	25.7	
33 Hexane	86	3.739	3.736	0.003	92	38669	25.0	26.6	
34 1,1-Dichloroethane	63	3.845	3.843	0.002	98	258221	25.0	24.5	
35 Vinyl acetate	43	3.869	3.866	0.003	98	218025	25.0	21.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 cis-1,2-Dichloroethene	96	4.283	4.280	0.003	88	151072	25.0	24.9	
40 2-Butanone (MEK)	43	4.283	4.280	0.003	62	132789	50.0	53.9	
41 2,2-Dichloropropane	77	4.295	4.292	0.003	75	124647	25.0	22.7	
45 Chlorobromomethane	128	4.460	4.458	0.002	91	63113	25.0	24.0	
46 Tetrahydrofuran	42	4.508	4.505	0.003	87	70379	50.0	46.6	
47 Chloroform	83	4.520	4.517	0.003	99	237797	25.0	24.4	
48 1,1,1-Trichloroethane	97	4.673	4.671	0.002	96	201234	25.0	26.5	
49 Cyclohexane	56	4.733	4.730	0.003	97	279347	25.0	26.1	
50 1,1-Dichloropropene	75	4.792	4.801	-0.009	87	188318	25.0	25.6	
51 Carbon tetrachloride	117	4.804	4.801	0.003	93	170521	25.0	26.7	
52 Isobutyl alcohol	41	4.827	4.825	0.002	89	98131	625.0	520.8	
54 Benzene	78	4.957	4.955	0.002	96	549918	25.0	24.9	
53 1,2-Dichloroethane	62	4.957	4.955	0.002	61	207261	25.0	24.2	
56 n-Heptane	100	5.147	5.144	0.003	95	41088	25.0	27.4	
58 Trichloroethene	130	5.454	5.452	0.002	96	139899	25.0	25.9	
60 Methylcyclohexane	83	5.620	5.617	0.003	91	236080	25.0	26.0	
61 1,2-Dichloropropane	63	5.632	5.629	0.003	89	135930	25.0	25.3	
64 1,4-Dioxane	88	5.715	5.724	-0.009	42	15864	500.0	386.9	
63 Dibromomethane	93	5.715	5.724	-0.009	96	67192	25.0	25.0	
65 Dichlorobromomethane	83	5.833	5.830	0.003	97	146640	25.0	24.8	
67 2-Chloroethyl vinyl ether	63	6.058	6.055	0.003	89	37844	25.0	21.2	
68 cis-1,3-Dichloropropene	75	6.200	6.197	0.003	86	150536	25.0	24.1	
69 4-Methyl-2-pentanone (MIBK	43	6.306	6.304	0.002	98	226116	50.0	49.3	
70 Toluene	91	6.496	6.493	0.003	97	552372	25.0	24.6	
71 trans-1,3-Dichloropropene	75	6.649	6.647	0.002	94	110756	25.0	20.9	
72 Ethyl methacrylate	69	6.720	6.718	0.002	91	95751	25.0	20.9	
73 1,1,2-Trichloroethane	97	6.815	6.813	0.002	97	89867	25.0	22.8	
74 1,3-Dichloropropane	76	6.969	6.966	0.003	93	159524	25.0	22.9	
75 Tetrachloroethene	164	6.969	6.966	0.003	95	109762	25.0	24.1	
76 2-Hexanone	43	7.016	7.014	0.002	97	157168	50.0	48.0	
78 Chlorodibromomethane	129	7.170	7.168	0.002	89	85794	25.0	23.1	
80 Ethylene Dibromide	107	7.277	7.286	-0.009	99	84501	25.0	23.8	
82 Chlorobenzene	112	7.714	7.712	0.002	90	334358	25.0	22.1	
83 1,1,1,2-Tetrachloroethane	131	7.785	7.783	0.002	91	110356	25.0	23.9	
84 Ethylbenzene	106	7.809	7.807	0.002	99	191109	25.0	25.0	
85 m-Xylene & p-Xylene	106	7.916	7.913	0.003	98	229691	25.0	24.9	
86 o-Xylene	106	8.282	8.280	0.002	97	221762	25.0	25.3	
87 Styrene	104	8.294	8.292	0.002	94	325606	25.0	23.2	
88 Bromoform	173	8.472	8.469	0.003	94	39783	25.0	20.6	
89 Isopropylbenzene	105	8.626	8.623	0.003	97	584681	25.0	25.0	
92 1,1,2,2-Tetrachloroethane	83	8.886	8.883	0.003	97	97908	25.0	19.8	
93 Bromobenzene	156	8.921	8.919	0.002	96	135063	25.0	21.0	
95 trans-1,4-Dichloro-2-buten	53	8.933	8.931	0.002	69	33500	25.0	20.3	
94 1,2,3-Trichloropropane	110	8.933	8.931	0.002	91	35511	25.0	21.4	
96 N-Propylbenzene	120	9.016	9.013	0.003	99	159171	25.0	22.7	
97 2-Chlorotoluene	126	9.099	9.096	0.003	95	132045	25.0	21.0	
98 1,3,5-Trimethylbenzene	105	9.182	9.179	0.003	94	499696	25.0	22.8	
99 4-Chlorotoluene	126	9.205	9.203	0.002	99	139886	25.0	21.7	
100 tert-Butylbenzene	119	9.501	9.499	0.002	94	434848	25.0	23.1	
102 1,2,4-Trimethylbenzene	105	9.537	9.534	0.003	98	503971	25.0	21.6	
103 sec-Butylbenzene	105	9.714	9.712	0.002	95	636649	25.0	22.4	
104 1,3-Dichlorobenzene	146	9.821	9.818	0.003	96	266720	25.0	20.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 4-Isopropyltoluene	119	9.844	9.842	0.002	97	537534	25.0	22.5	
106 1,4-Dichlorobenzene	146	9.904	9.901	0.003	93	266463	25.0	20.3	
109 n-Butylbenzene	91	10.247	10.244	0.003	98	458201	25.0	22.0	
110 1,2-Dichlorobenzene	146	10.270	10.268	0.002	95	250745	25.0	21.1	
111 1,2-Dibromo-3-Chloropropan	157	11.028	11.037	-0.009	72	12319	25.0	20.1	
113 1,2,4-Trichlorobenzene	180	11.868	11.865	0.003	94	122283	25.0	17.2	
114 Hexachlorobutadiene	225	12.045	12.043	0.002	94	83940	25.0	21.0	
115 Naphthalene	128	12.116	12.114	0.002	98	231020	25.0	17.2	
116 1,2,3-Trichlorobenzene	180	12.365	12.362	0.003	95	122758	25.0	18.8	
S 128 Xylenes, Total	106				0		50.0	50.1	
S 157 Total BTEX	1				0		125.0	124.7	
S 129 Trihalomethanes, Total	1				0		100.0	93.0	

Reagents:

VMFASPW_00285	Amount Added:	2.50	Units: uL	
VMFASAW_00264	Amount Added:	2.50	Units: uL	
VMFASGW_00293	Amount Added:	2.50	Units: uL	
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00011	Amount Added:	0.00	Units:	Run Reagent
VMUX8SS_00030	Amount Added:	1.15	Units: uL	Run Reagent
vmDist_H2o_00135	Amount Added:	0.00	Units:	Run Reagent

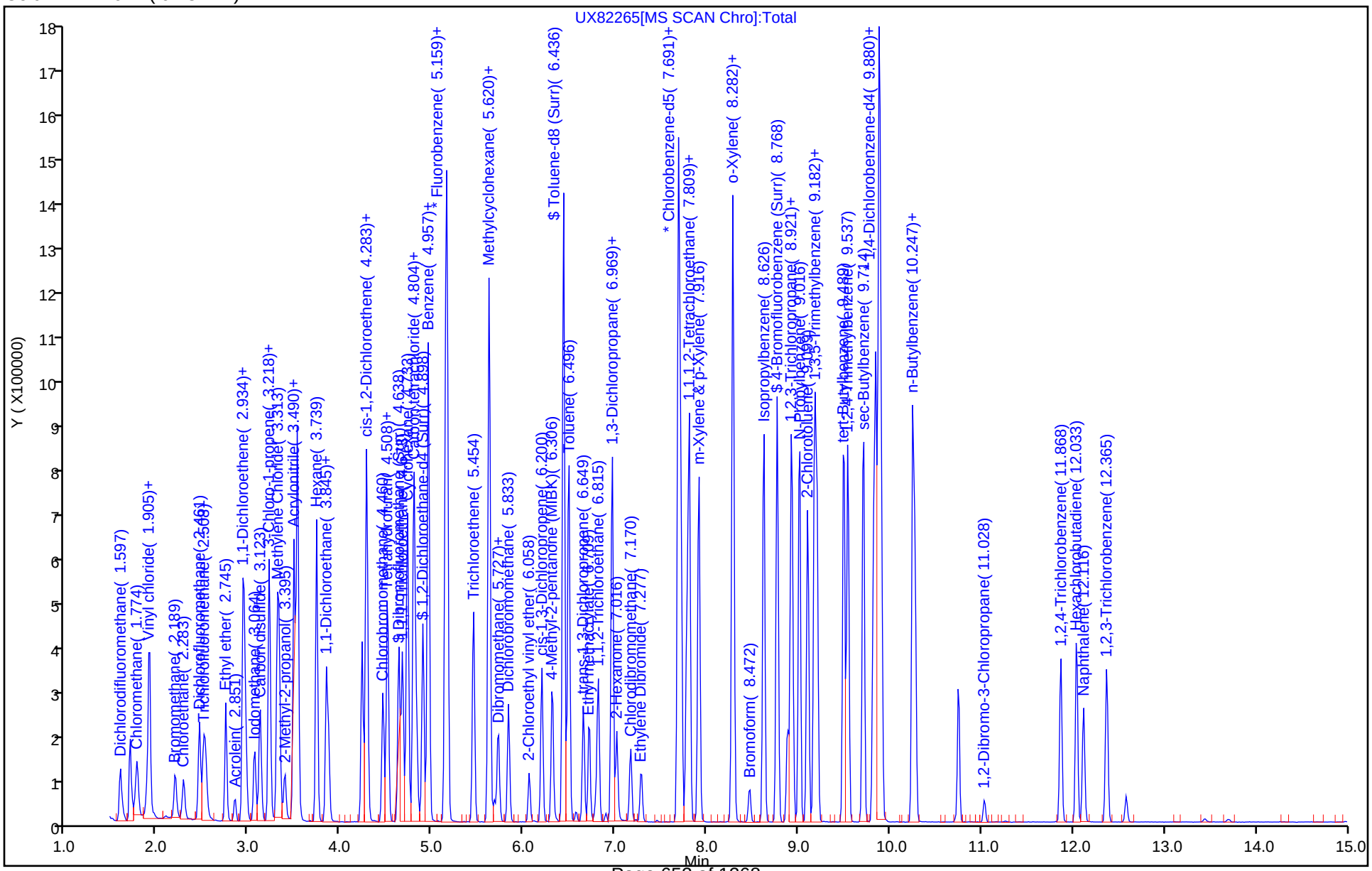
Report Date: 24-Jan-2019 05:11:16 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82265.D

Injection Date:	23-Jan-2019 04:28:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	LCS			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82265.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 23-Jan-2019 04:28:30 ALS Bottle#: 4 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083884-006
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 24-Jan-2019 05:11:14 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: latat Date: 23-Jan-2019 05:31:09

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	44.4	88.76
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	45.9	91.86
$ 6 Toluene-d8 (Surr)	50.0	46.4	92.79
$ 7 4-Bromofluorobenzene (Surr)	50.0	48.1	96.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-365336/6

Matrix: Water | Lab File ID: UXX9249.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/24/2019 12:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 365336 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	11.0		1.0	0.14
563-58-6	1,1-Dichloropropene	11.3		1.0	0.14
75-34-3	1,1-Dichloroethane	13.8		1.0	0.17
87-61-6	1,2,3-Trichlorobenzene	7.75		1.0	0.54
96-18-4	1,2,3-Trichloropropane	9.42		1.0	0.24
107-06-2	1,2-Dichloroethane	10.3		1.0	0.21
75-35-4	1,1-Dichloroethene	13.4		1.0	0.19
78-87-5	1,2-Dichloropropane	11.5		1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	12.0		1.0	0.070
591-78-6	2-Hexanone	24.3		10	0.54
79-34-5	1,1,2,2-Tetrachloroethane	11.0		1.0	0.13
67-64-1	Acetone	22.7		10	5.4
71-43-2	Benzene	11.3		1.0	0.13
75-25-2	Bromoform	8.01		1.0	0.76
74-83-9	Bromomethane	12.0		1.0	0.42
75-15-0	Carbon disulfide	13.5		1.0	0.28
56-23-5	Carbon tetrachloride	11.7		1.0	0.26
71-55-6	1,1,1-Trichloroethane	11.8		1.0	0.24
108-90-7	Chlorobenzene	10.7		1.0	0.14
142-28-9	1,3-Dichloropropane	10.0		1.0	0.21
75-00-3	Chloroethane	13.1		1.0	0.83
96-12-8	1,2-Dibromo-3-Chloropropane	8.46		2.0	0.91
67-66-3	Chloroform	12.0		1.0	0.13
74-87-3	Chloromethane	13.4		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	12.1		1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	9.70		1.0	0.61
75-27-4	Bromodichloromethane	10.2		1.0	0.17
76-13-1	1,1,2-Trichlorotrifluoroethane	11.9		1.0	0.41
75-71-8	Dichlorodifluoromethane	10.7		1.0	0.35
120-82-1	1,2,4-Trichlorobenzene	8.53		1.0	0.26
100-41-4	Ethylbenzene	10.3		1.0	0.11
106-93-4	1,2-Dibromoethane	9.71		1.0	0.12
594-20-7	2,2-Dichloropropane	11.4		1.0	0.31
95-50-1	1,2-Dichlorobenzene	10.4		1.0	0.15
541-73-1	1,3-Dichlorobenzene	10.1		1.0	0.15
106-46-7	1,4-Dichlorobenzene	10.4		1.0	0.16

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-365336/6

Matrix: Water | Lab File ID: UXX9249.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/24/2019 12:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 365336 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	6.08	J	10	0.26
98-82-8	Isopropylbenzene	11.3		1.0	0.090
95-49-8	2-Chlorotoluene	10.8		1.0	0.15
78-93-3	2-Butanone (MEK)	20.3		10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	21.7		10	0.42
108-86-1	Bromobenzene	9.35		1.0	0.12
1634-04-4	Methyl tert-butyl ether	12.0		1.0	0.070
74-97-5	Bromochloromethane	9.87		1.0	0.14
75-09-2	Methylene Chloride	13.5		5.0	2.6
106-43-4	4-Chlorotoluene	11.8		1.0	0.090
99-87-6	4-Isopropyltoluene	11.4		1.0	0.13
100-42-5	Styrene	10.2		1.0	0.10
179601-23-1	m-Xylene & p-Xylene	10.2		2.0	0.080
95-47-6	o-Xylene	10.8		1.0	0.090
87-68-3	Hexachlorobutadiene	7.27		1.0	0.83
127-18-4	Tetrachloroethene	8.61		1.0	0.15
74-95-3	Dibromomethane	9.55		1.0	0.090
108-88-3	Toluene	11.2		1.0	0.14
91-20-3	Naphthalene	8.61		1.0	0.32
156-60-5	trans-1,2-Dichloroethene	13.5		1.0	0.19
104-51-8	n-Butylbenzene	12.6		1.0	0.14
10061-02-6	trans-1,3-Dichloropropene	10.0		1.0	0.67
103-65-1	N-Propylbenzene	10.8		1.0	0.15
79-01-6	Trichloroethene	9.42		1.0	0.10
135-98-8	sec-Butylbenzene	11.5		1.0	0.13
75-69-4	Trichlorofluoromethane	11.6		1.0	0.45
98-06-6	tert-Butylbenzene	10.8		1.0	0.14
75-01-4	Vinyl chloride	14.1		1.0	0.20
108-05-4	Vinyl acetate	9.54		2.0	0.19
75-65-0	tert-Butyl alcohol	112		50	1.7
1330-20-7	Xylenes, Total	21.0		2.0	0.15
124-48-1	Chlorodibromomethane	9.14		1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 240-365336/6

Matrix: Water Lab File ID: UXX9249.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/24/2019 12:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 365336 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		70-121
460-00-4	4-Bromofluorobenzene (Surr)	106		59-120
2037-26-5	Toluene-d8 (Surr)	96		70-123
1868-53-7	Dibromofluoromethane (Surr)	92		75-128

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9249.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 24-Jan-2019 12:18:30 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083932-006
Operator ID: 001644 Instrument ID: A3UX10

Method: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 25-Jan-2019 11:16:30 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: williamsla Date: 24-Jan-2019 13:09:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.567	5.565	0.002	98	596724	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.252	8.250	0.002	89	431871	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.488	10.485	0.003	94	242607	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.987	4.985	0.002	90	144631	10.0	9.23	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.271	5.281	-0.010	97	187149	10.0	9.34	
$ 6 Toluene-d8 (Surr)	98	6.927	6.937	-0.010	94	521058	10.0	9.56	
$ 7 4-Bromofluorobenzene (Surr	95	9.352	9.350	0.002	79	220136	10.0	10.6	
9 Dichlorodifluoromethane	85	1.640	1.649	-0.009	98	220647	10.0	10.7	
10 Chloromethane	50	1.829	1.827	0.002	99	321066	10.0	13.4	
12 Butadiene	54	1.924	1.921	0.003	87	300369	10.0	13.3	
11 Vinyl chloride	62	1.936	1.933	0.003	89	302828	10.0	14.1	
13 Bromomethane	94	2.231	2.229	0.002	92	151703	10.0	12.0	
14 Chloroethane	64	2.302	2.300	0.002	97	175052	10.0	13.1	
15 Dichlorofluoromethane	67	2.515	2.513	0.002	98	416065	10.0	13.6	
16 Trichlorofluoromethane	101	2.551	2.560	-0.009	97	277500	10.0	11.6	
17 Ethyl ether	59	2.823	2.820	0.003	96	206750	10.0	14.7	
18 Acrolein	56	2.953	2.939	0.014	98	84409	50.0	37.2	
19 1,1-Dichloroethene	96	3.036	3.033	0.003	93	230152	10.0	13.4	
20 1,1,2-Trichloro-1,2,2-trif	151	3.047	3.057	-0.010	69	147677	10.0	11.9	
21 Acetone	43	3.083	3.081	0.002	98	96551	20.0	22.7	
22 Iodomethane	142	3.178	3.175	0.003	100	364530	10.0	11.7	
24 Carbon disulfide	76	3.237	3.234	0.003	100	777432	10.0	13.5	
26 3-Chloro-1-propene	76	3.367	3.364	0.003	86	172313	10.0	13.6	
27 Methyl acetate	43	3.379	3.376	0.003	99	232310	20.0	24.3	
28 Methylene Chloride	84	3.473	3.471	0.002	96	284431	10.0	13.5	
29 2-Methyl-2-propanol	59	3.580	3.577	0.003	96	186574	100.0	112.4	
31 Acrylonitrile	53	3.686	3.684	0.002	100	701897	100.0	122.8	
30 trans-1,2-Dichloroethene	96	3.722	3.719	0.003	75	257697	10.0	13.5	
32 Methyl tert-butyl ether	73	3.722	3.719	0.003	98	631556	10.0	12.0	
33 Hexane	86	3.958	3.944	0.014	90	31336	10.0	9.73	
34 1,1-Dichloroethane	63	4.088	4.086	0.002	97	468782	10.0	13.8	
35 Vinyl acetate	43	4.124	4.121	0.003	98	256635	10.0	9.54	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
40 cis-1,2-Dichloroethene	96	4.585	4.583	0.002	88	241318	10.0	12.1	
39 2,2-Dichloropropane	97	4.585	4.583	0.002	70	64782	10.0	11.4	
41 2-Butanone (MEK)	43	4.597	4.595	0.002	48	112113	20.0	20.3	
45 Chlorobromomethane	128	4.786	4.796	-0.010	89	88085	10.0	9.87	
46 Tetrahydrofuran	42	4.834	4.831	0.003	96	80560	20.0	20.3	
47 Chloroform	83	4.845	4.843	0.002	98	354811	10.0	12.0	
48 1,1,1-Trichloroethane	97	5.023	5.020	0.003	96	339538	10.0	11.8	
49 Cyclohexane	56	5.070	5.068	0.002	93	461041	10.0	14.4	
50 1,1-Dichloropropene	75	5.153	5.151	0.002	90	235007	10.0	11.3	
51 Carbon tetrachloride	117	5.153	5.162	-0.009	96	274169	10.0	11.7	
52 Isobutyl alcohol	41	5.224	5.222	0.002	95	119331	250.0	302.5	
53 Benzene	78	5.330	5.328	0.002	97	772802	10.0	11.3	
54 1,2-Dichloroethane	62	5.342	5.340	0.002	95	257138	10.0	10.3	
56 n-Heptane	100	5.531	5.541	-0.010	90	23048	10.0	8.75	
58 Trichloroethene	130	5.874	5.872	0.002	93	160612	10.0	9.42	
60 Methylcyclohexane	83	6.052	6.050	0.002	97	255396	10.0	10.6	
61 1,2-Dichloropropane	63	6.076	6.073	0.003	95	205112	10.0	11.5	
63 Dibromomethane	93	6.170	6.168	0.002	86	96281	10.0	9.55	
64 1,4-Dioxane	88	6.182	6.180	0.002	41	19013	200.0	110.3	
65 Dichlorobromomethane	83	6.300	6.298	0.002	97	228526	10.0	10.2	
67 2-Chloroethyl vinyl ether	63	6.549	6.546	0.003	94	56986	10.0	6.08	
68 cis-1,3-Dichloropropene	75	6.691	6.688	0.003	90	239601	10.0	9.70	
69 4-Methyl-2-pentanone (MIBK	43	6.821	6.818	0.003	98	297634	20.0	21.7	
70 Toluene	91	6.986	6.996	-0.010	97	739457	10.0	11.2	
71 trans-1,3-Dichloropropene	75	7.176	7.173	0.003	98	195181	10.0	10.0	
72 Ethyl methacrylate	69	7.247	7.244	0.003	89	158808	10.0	9.93	
73 1,1,2-Trichloroethane	97	7.341	7.351	-0.010	94	119642	10.0	9.77	
74 Tetrachloroethene	164	7.483	7.493	-0.010	86	98719	10.0	8.61	
75 1,3-Dichloropropane	76	7.495	7.504	-0.009	97	210739	10.0	10.0	
76 2-Hexanone	43	7.566	7.564	0.002	95	195935	20.0	24.3	
78 Chlorodibromomethane	129	7.708	7.706	0.002	89	124860	10.0	9.14	
80 Ethylene Dibromide	107	7.826	7.824	0.002	98	117141	10.0	9.71	
82 Chlorobenzene	112	8.276	8.273	0.003	91	461562	10.0	10.7	
83 1,1,1,2-Tetrachloroethane	131	8.347	8.344	0.003	91	178729	10.0	11.0	
84 Ethylbenzene	106	8.370	8.368	0.002	99	246273	10.0	10.3	
85 m-Xylene & p-Xylene	106	8.477	8.474	0.003	99	302726	10.0	10.2	
86 o-Xylene	106	8.855	8.853	0.002	98	334944	10.0	10.8	
87 Styrene	104	8.867	8.865	0.002	93	502004	10.0	10.2	
88 Bromoform	173	9.045	9.054	-0.010	91	67150	10.0	8.01	
89 Isopropylbenzene	105	9.198	9.208	-0.010	97	853929	10.0	11.3	
92 1,1,2,2-Tetrachloroethane	83	9.482	9.480	0.002	96	180507	10.0	11.0	
93 Bromobenzene	156	9.506	9.503	0.003	95	174184	10.0	9.35	
94 1,2,3-Trichloropropane	110	9.529	9.527	0.002	89	48461	10.0	9.42	
95 trans-1,4-Dichloro-2-buten	53	9.541	9.539	0.002	68	55392	10.0	16.6	
96 N-Propylbenzene	120	9.600	9.598	0.002	99	208649	10.0	10.8	
97 2-Chlorotoluene	126	9.695	9.693	0.002	94	195888	10.0	10.8	
98 1,3,5-Trimethylbenzene	105	9.766	9.764	0.002	94	732603	10.0	12.0	
99 4-Chlorotoluene	126	9.790	9.799	-0.009	99	212846	10.0	11.8	
100 tert-Butylbenzene	119	10.085	10.095	-0.010	93	537689	10.0	10.8	
102 1,2,4-Trimethylbenzene	105	10.133	10.130	0.003	95	801693	10.0	12.0	
103 sec-Butylbenzene	105	10.310	10.308	0.002	95	769003	10.0	11.5	
104 1,3-Dichlorobenzene	146	10.428	10.426	0.002	94	370062	10.0	10.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
105 4-Isopropyltoluene	119	10.440	10.450	-0.010	96	663849	10.0	11.4	
106 1,4-Dichlorobenzene	146	10.511	10.509	0.002	90	387756	10.0	10.4	
109 n-Butylbenzene	91	10.854	10.852	0.002	98	591447	10.0	12.6	
110 1,2-Dichlorobenzene	146	10.878	10.876	0.002	93	386640	10.0	10.4	
111 1,2-Dibromo-3-Chloropropan	157	11.647	11.656	-0.009	72	31587	10.0	8.46	
113 1,2,4-Trichlorobenzene	180	12.487	12.484	0.003	93	192790	10.0	8.53	
114 Hexachlorobutadiene	225	12.652	12.650	0.002	85	52793	10.0	7.27	
115 Naphthalene	128	12.723	12.733	-0.010	98	506556	10.0	8.61	
116 1,2,3-Trichlorobenzene	180	12.983	12.981	0.002	91	170660	10.0	7.75	
S 130 Xylenes, Total	106				0		20.0	21.0	
S 131 Trihalomethanes, Total	1				0		40.0	39.4	

Reagents:

VMFASPW_00285	Amount Added:	8.00	Units: uL	
VMFASAW_00265	Amount Added:	8.00	Units: uL	
VMFASGW_00293	Amount Added:	8.00	Units: uL	
vm50ss_stk_00079	Amount Added:	1.00	Units: uL	Run Reagent
VM50IS_00074	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00009	Amount Added:	0.00	Units:	Run Reagent
vmDist_H2o_00137	Amount Added:	0.00	Units:	Run Reagent

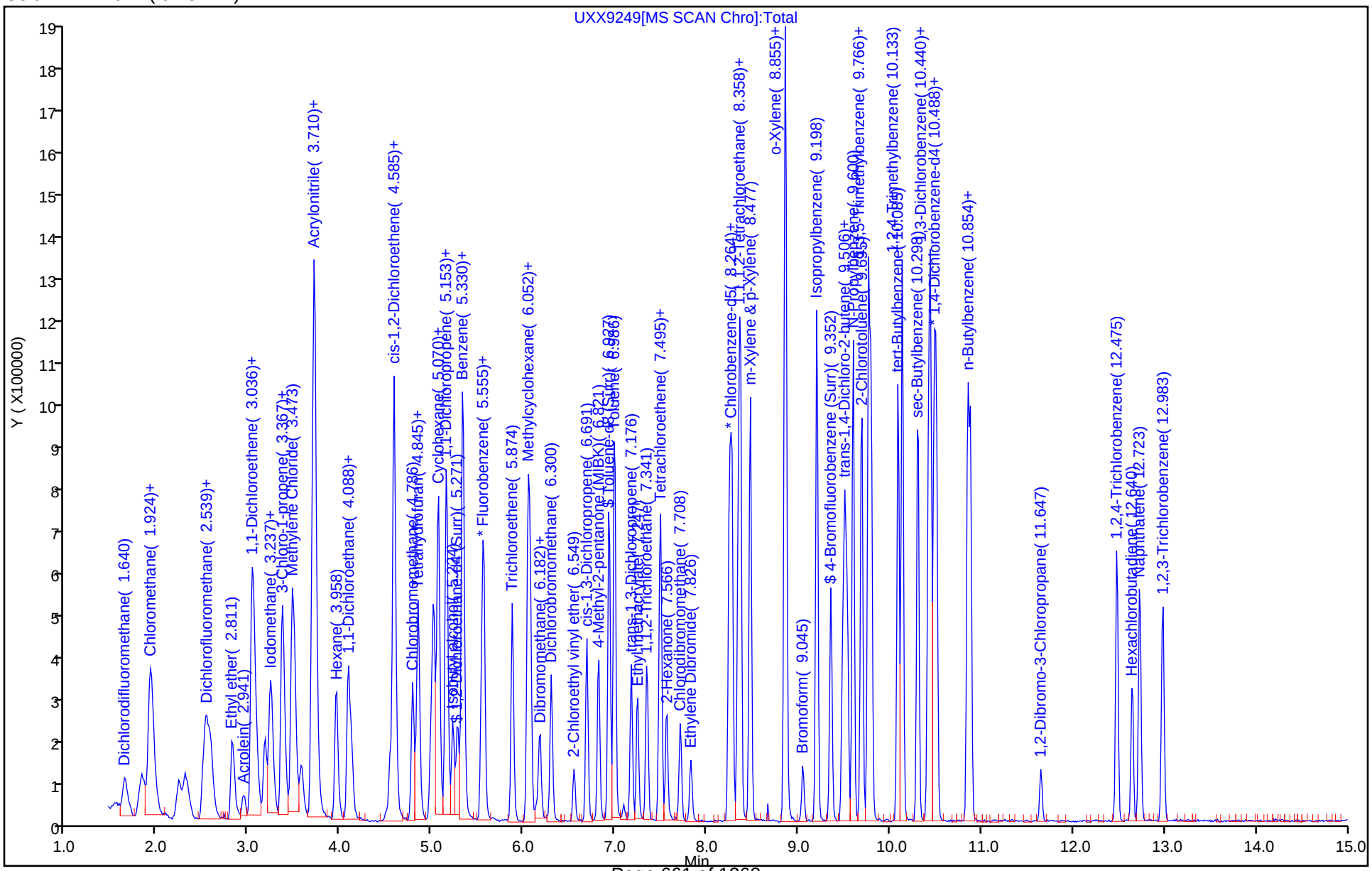
Report Date: 25-Jan-2019 11:16:35 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9249.D

Injection Date:	24-Jan-2019 12:18:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	LCS			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9249.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 24-Jan-2019 12:18:30 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083932-006
Operator ID: 001644 Instrument ID: A3UX10

Method: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 25-Jan-2019 11:16:30 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

First Level Reviewer: williamsla Date: 24-Jan-2019 13:09:23

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	10.0	9.23	92.27
$ 5 1,2-Dichloroethane-d4 (Surr)	10.0	9.34	93.43
$ 6 Toluene-d8 (Surr)	10.0	9.56	95.57
$ 7 4-Bromofluorobenzene (Surr)	10.0	10.6	106.04

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: WC-EFSOIL-011819 MS | Lab Sample ID: 240-107194-2 MS

Matrix: Solid | Lab File ID: UX82288.D

Analysis Method: 8260B | Date Collected: 01/18/2019 09:30

Sample wt/vol: 5.19(g) | Date Analyzed: 01/23/2019 13:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.7 | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	28.0		5.6	3.4
563-58-6	1,1-Dichloropropene	30.1		5.6	1.1
75-34-3	1,1-Dichloroethane	29.5		5.6	0.78
87-61-6	1,2,3-Trichlorobenzene	20.6		5.6	0.65
96-18-4	1,2,3-Trichloropropane	29.9		5.6	1.8
107-06-2	1,2-Dichloroethane	28.0		5.6	0.87
75-35-4	1,1-Dichloroethene	31.9		5.6	1.0
526-73-8	1,2,3-Trimethylbenzene	2.1	U	5.6	2.1
78-87-5	1,2-Dichloropropane	30.1		5.6	0.96
95-63-6	1,2,4-Trimethylbenzene	27.0		5.6	1.1
591-78-6	2-Hexanone	60.8		23	4.6
79-34-5	1,1,2,2-Tetrachloroethane	27.1		5.6	1.6
67-64-1	Acetone	76.0		28	24
71-43-2	Benzene	29.7		5.6	0.79
75-25-2	Bromoform	24.3		5.6	2.7
74-83-9	Bromomethane	28.9		5.6	1.1
75-15-0	Carbon disulfide	32.4		5.6	1.3
56-23-5	Carbon tetrachloride	30.2		5.6	3.7
71-55-6	1,1,1-Trichloroethane	31.5		5.6	0.93
108-90-7	Chlorobenzene	26.1		5.6	1.0
142-28-9	1,3-Dichloropropane	28.0		5.6	1.1
75-00-3	Chloroethane	29.2		5.6	1.4
96-12-8	1,2-Dibromo-3-Chloropropane	23.2		11	4.1
67-66-3	Chloroform	29.1		5.6	0.89
74-87-3	Chloromethane	28.6		5.6	1.2
156-59-2	cis-1,2-Dichloroethene	29.3		5.6	0.74
10061-01-5	cis-1,3-Dichloropropene	29.0		5.6	1.6
75-27-4	Bromodichloromethane	29.5		5.6	0.77
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	29.7		5.6	1.4
75-71-8	Dichlorodifluoromethane	27.0		5.6	1.1
120-82-1	1,2,4-Trichlorobenzene	19.1		5.6	0.65
100-41-4	Ethylbenzene	28.1		5.6	1.2
106-93-4	1,2-Dibromoethane	28.3		5.6	0.87
594-20-7	2,2-Dichloropropane	25.7		5.6	1.3
95-50-1	1,2-Dichlorobenzene	26.0		5.6	1.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: WC-EFSOIL-011819 MS | Lab Sample ID: 240-107194-2 MS

Matrix: Solid | Lab File ID: UX82288.D

Analysis Method: 8260B | Date Collected: 01/18/2019 09:30

Sample wt/vol: 5.19(g) | Date Analyzed: 01/23/2019 13:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.7 | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
541-73-1	1,3-Dichlorobenzene	24.5		5.6	0.92
106-46-7	1,4-Dichlorobenzene	25.1		5.6	1.0
110-75-8	2-Chloroethyl vinyl ether	24.3	J	56	10
98-82-8	Isopropylbenzene	29.3		5.6	0.94
95-49-8	2-Chlorotoluene	27.3		5.6	1.1
78-93-3	2-Butanone (MEK)	63.1		23	4.0
108-10-1	4-Methyl-2-pentanone (MIBK)	61.8		23	4.2
108-86-1	Bromobenzene	27.2		5.6	1.3
1634-04-4	Methyl tert-butyl ether	29.1		5.6	0.93
74-97-5	Bromochloromethane	27.5		5.6	0.67
75-09-2	Methylene Chloride	32.0		28	14
106-43-4	4-Chlorotoluene	27.2		5.6	0.97
99-87-6	p-Isopropyltoluene	27.3		5.6	3.3
100-42-5	Styrene	26.7		5.6	1.3
179601-23-1	m-Xylene & p-Xylene	28.2		11	0.88
95-47-6	o-Xylene	29.4		5.6	0.97
87-68-3	Hexachlorobutadiene	22.4		5.6	4.2
127-18-4	Tetrachloroethene	26.8		5.6	0.82
74-95-3	Dibromomethane	29.1		5.6	0.76
108-88-3	Toluene	29.0		5.6	0.87
108-20-3	Diisopropyl ether	0.85	U	11	0.85
91-20-3	Naphthalene	22.4		5.6	3.0
156-60-5	trans-1,2-Dichloroethene	29.5		5.6	0.53
104-51-8	n-Butylbenzene	24.9		5.6	3.9
10061-02-6	trans-1,3-Dichloropropene	24.7		5.6	1.2
103-65-1	N-Propylbenzene	29.1		5.6	0.83
79-01-6	Trichloroethene	30.1		5.6	0.71
135-98-8	sec-Butylbenzene	27.9		5.6	0.98
75-69-4	Trichlorofluoromethane	27.9		5.6	1.2
994-05-8	Tert-amyl methyl ether	2.5	U	5.6	2.5
637-92-3	Ethyl tert-butyl ether	2.5	U	5.6	2.5
98-06-6	tert-Butylbenzene	29.5		5.6	1.0
75-01-4	Vinyl chloride	30.0		5.6	0.95
108-05-4	Vinyl acetate	23.4		11	2.4
75-65-0	tert-Butyl alcohol	263		230	19
1330-20-7	Xylenes, Total	57.6		11	1.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: WC-EFSOIL-011819 MS | Lab Sample ID: 240-107194-2 MS

Matrix: Solid | Lab File ID: UX82288.D

Analysis Method: 8260B | Date Collected: 01/18/2019 09:30

Sample wt/vol: 5.19(g) | Date Analyzed: 01/23/2019 13:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.7 | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	26.8		5.6	3.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		48-123
460-00-4	4-Bromofluorobenzene (Surr)	104		49-141
2037-26-5	Toluene-d8 (Surr)	102		62-135
1868-53-7	Dibromofluoromethane (Surr)	94		49-132

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82288.D
Lims ID: 240-107194-B-2-B MS
Client ID:
Sample Type: MS
Inject. Date: 23-Jan-2019 13:06:30 ALS Bottle#: 27 Worklist Smp#: 29
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083884-029
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 24-Jan-2019 05:11:14 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: latat Date: 24-Jan-2019 02:28:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.157	5.156	0.001	99	920085	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.689	7.688	0.001	97	731284	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.878	9.877	0.001	97	393067	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.636	4.635	0.001	93	211649	50.0	46.8	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.897	4.896	0.001	99	276803	50.0	49.1	
$ 6 Toluene-d8 (Surr)	98	6.435	6.434	0.001	95	871212	50.0	50.9	
$ 7 4-Bromofluorobenzene (Surr	95	8.766	8.765	0.001	84	335794	50.0	51.8	
9 Dichlorodifluoromethane	85	1.595	1.594	0.001	98	139716	25.0	23.9	
10 Chloromethane	50	1.773	1.772	0.001	99	182327	25.0	25.3	
11 Vinyl chloride	62	1.891	1.890	0.001	99	128252	25.0	26.6	
13 Bromomethane	94	2.187	2.186	0.001	93	72901	25.0	25.6	
14 Chloroethane	64	2.282	2.281	0.001	96	82864	25.0	25.8	
16 Trichlorofluoromethane	101	2.506	2.505	0.001	100	175406	25.0	24.7	
19 1,1-Dichloroethene	96	2.932	2.931	0.001	94	126755	25.0	28.3	
20 1,1,2-Trichloro-1,2,2-trif	151	2.944	2.943	0.001	94	97749	25.0	26.3	
21 Acetone	43	2.968	2.967	0.001	97	104769	50.0	67.3	
24 Carbon disulfide	76	3.122	3.121	0.001	98	366983	25.0	28.7	
28 Methylene Chloride	84	3.311	3.310	0.001	94	145706	25.0	28.3	
29 2-Methyl-2-propanol	59	3.394	3.393	0.001	90	87988	250.0	233.1	
32 Methyl tert-butyl ether	73	3.524	3.523	0.001	95	294350	25.0	25.7	
31 trans-1,2-Dichloroethene	96	3.524	3.523	0.001	93	140814	25.0	26.1	
34 1,1-Dichloroethane	63	3.843	3.843	0.000	98	266658	25.0	26.1	
35 Vinyl acetate	43	3.867	3.866	0.001	97	200364	25.0	20.7	
36 Isopropyl ether	87		3.891					ND	
38 Tert-butyl ethyl ether	59		4.164					ND	
39 cis-1,2-Dichloroethene	96	4.281	4.280	0.001	89	152710	25.0	25.9	
40 2-Butanone (MEK)	43	4.281	4.280	0.001	57	133131	50.0	55.9	
41 2,2-Dichloropropane	77	4.293	4.292	0.001	75	121498	25.0	22.7	
45 Chlorobromomethane	128	4.459	4.458	0.001	90	62258	25.0	24.4	
47 Chloroform	83	4.518	4.517	0.001	98	244023	25.0	25.8	
48 1,1,1-Trichloroethane	97	4.672	4.671	0.001	96	205654	25.0	27.9	
50 1,1-Dichloropropene	75	4.802	4.801	0.001	88	190271	25.0	26.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
51 Carbon tetrachloride	117	4.802	4.801	0.001	93	165740	25.0	26.7	
54 Benzene	78	4.956	4.955	0.001	96	563871	25.0	26.3	
53 1,2-Dichloroethane	62	4.956	4.955	0.001	60	206680	25.0	24.8	
55 Tert-amyl methyl ether	73		5.027					ND	
58 Trichloroethene	130	5.453	5.452	0.001	96	140016	25.0	26.7	
61 1,2-Dichloropropane	63	5.630	5.629	0.001	86	139190	25.0	26.6	
63 Dibromomethane	93	5.725	5.724	0.001	95	67150	25.0	25.8	
65 Dichlorobromomethane	83	5.831	5.830	0.001	97	149662	25.0	26.1	
67 2-Chloroethyl vinyl ether	63	6.056	6.055	0.001	90	37347	25.0	21.6	
68 cis-1,3-Dichloropropene	75	6.198	6.197	0.001	86	155464	25.0	25.7	
69 4-Methyl-2-pentanone (MIBK	43	6.305	6.304	0.001	98	243874	50.0	54.7	
70 Toluene	91	6.494	6.493	0.001	97	548327	25.0	25.7	
71 trans-1,3-Dichloropropene	75	6.648	6.647	0.001	92	109868	25.0	21.9	
74 1,3-Dichloropropane	76	6.967	6.966	0.001	96	164310	25.0	24.8	
75 Tetrachloroethene	164	6.967	6.966	0.001	90	102638	25.0	23.7	
76 2-Hexanone	43	7.015	7.014	0.001	95	167326	50.0	53.8	
78 Chlorodibromomethane	129	7.168	7.168	0.000	90	83666	25.0	23.7	
80 Ethylene Dibromide	107	7.287	7.286	0.001	98	84703	25.0	25.1	
82 Chlorobenzene	112	7.713	7.712	0.001	91	331681	25.0	23.1	
83 1,1,1,2-Tetrachloroethane	131	7.784	7.783	0.001	90	108729	25.0	24.8	
84 Ethylbenzene	106	7.807	7.807	0.000	99	180526	25.0	24.9	
85 m-Xylene & p-Xylene	106	7.914	7.913	0.001	98	219007	25.0	25.0	
86 o-Xylene	106	8.281	8.280	0.001	98	216564	25.0	26.0	
87 Styrene	104	8.293	8.292	0.001	93	315459	25.0	23.6	
88 Bromoform	173	8.470	8.469	0.001	95	39360	25.0	21.5	
89 Isopropylbenzene	105	8.624	8.623	0.001	97	577937	25.0	26.0	
92 1,1,2,2-Tetrachloroethane	83	8.884	8.883	0.001	98	102153	25.0	24.0	
93 Bromobenzene	156	8.920	8.919	0.001	96	133730	25.0	24.1	
94 1,2,3-Trichloropropane	110	8.932	8.931	0.001	90	36669	25.0	26.4	
96 N-Propylbenzene	120	9.014	9.013	0.001	99	156302	25.0	25.8	
97 2-Chlorotoluene	126	9.097	9.096	0.001	95	131254	25.0	24.1	
99 4-Chlorotoluene	126	9.204	9.203	0.001	99	134355	25.0	24.1	
100 tert-Butylbenzene	119	9.500	9.499	0.001	93	425440	25.0	26.1	
102 1,2,4-Trimethylbenzene	105	9.535	9.534	0.001	98	481788	25.0	23.9	
103 sec-Butylbenzene	105	9.713	9.712	0.000	95	607298	25.0	24.7	
104 1,3-Dichlorobenzene	146	9.819	9.818	0.001	95	244484	25.0	21.7	
105 4-Isopropyltoluene	119	9.843	9.842	0.001	97	497479	25.0	24.1	
106 1,4-Dichlorobenzene	146	9.902	9.901	0.001	94	248163	25.0	22.2	
107 1,2,3-Trimethylbenzene	105		9.950					ND	
109 n-Butylbenzene	91	10.245	10.244	0.001	98	396814	25.0	22.1	
110 1,2-Dichlorobenzene	146	10.269	10.268	0.001	95	234107	25.0	23.1	
111 1,2-Dibromo-3-Chloropropan	157	11.038	11.037	0.001	70	10899	25.0	20.5	
113 1,2,4-Trichlorobenzene	180	11.866	11.865	0.001	95	103916	25.0	16.9	
114 Hexachlorobutadiene	225	12.044	12.043	0.001	95	68986	25.0	19.8	
115 Naphthalene	128	12.115	12.114	0.001	98	230674	25.0	19.8	
116 1,2,3-Trichlorobenzene	180	12.363	12.362	0.001	93	103314	25.0	18.3	
S 128 Xylenes, Total	106				0		50.0	50.9	

Reagents:

VMFASPW_00285	Amount Added:	2.50	Units: uL	
VMFASAW_00264	Amount Added:	2.50	Units: uL	
VMFASGW_00293	Amount Added:	2.50	Units: uL	
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00011	Amount Added:	0.00	Units:	Run Reagent
VMUX8SS_00030	Amount Added:	1.15	Units: uL	Run Reagent
vmDist_H2o_00135	Amount Added:	0.00	Units:	Run Reagent

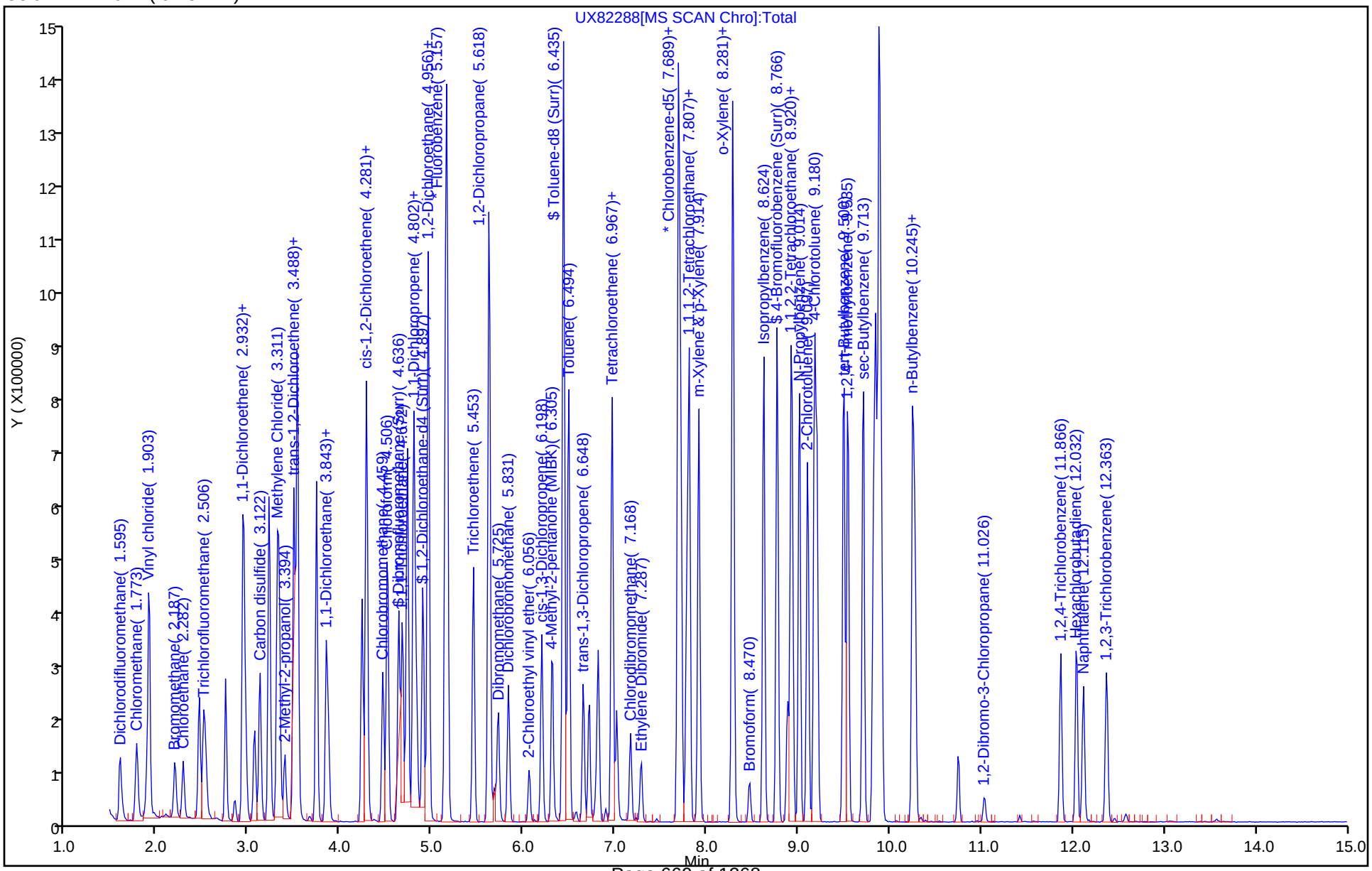
Report Date: 24-Jan-2019 05:11:32 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82288.D

Injection Date:	23-Jan-2019 13:06:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	240-107194-B-2-B MS			Worklist Smp#:	29
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82288.D
Lims ID: 240-107194-B-2-B MS
Client ID:
Sample Type: MS
Inject. Date: 23-Jan-2019 13:06:30 ALS Bottle#: 27 Worklist Smp#: 29
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083884-029
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 24-Jan-2019 05:11:14 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: latat Date: 24-Jan-2019 02:28:45

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	46.8	93.53
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	49.1	98.30
$ 6 Toluene-d8 (Surr)	50.0	50.9	101.88
$ 7 4-Bromofluorobenzene (Surr)	50.0	51.8	103.60

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: | Lab Sample ID: 240-107188-B-1 MS

Matrix: Water | Lab File ID: UXX9268.D

Analysis Method: 8260B | Date Collected: 01/18/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 01/24/2019 20:52

Soil Aliquot Vol: | Dilution Factor: 3.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 365336 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
156-59-2	cis-1,2-Dichloroethene	63.7		3.3	0.53
127-18-4	Tetrachloroethene	68.2		3.3	0.50
156-60-5	trans-1,2-Dichloroethene	41.6		3.3	0.63
79-01-6	Trichloroethene	62.9		3.3	0.33
75-01-4	Vinyl chloride	48.5		3.3	0.67

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	82		70-121
460-00-4	4-Bromofluorobenzene (Surr)	108		59-120
2037-26-5	Toluene-d8 (Surr)	98		70-123
1868-53-7	Dibromofluoromethane (Surr)	90		75-128

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9268.D
Lims ID: 240-107188-B-1 MS
Client ID:
Sample Type: MS
Inject. Date: 24-Jan-2019 20:52:30 ALS Bottle#: 25 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 3.3300
Sample Info: 240-0083932-025
Operator ID: 001644 Instrument ID: A3UX10

Method: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 25-Jan-2019 11:16:30 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.553	5.565	-0.012	98	609777	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.250	8.250	0.000	90	468946	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.486	10.485	0.001	96	255166	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.985	4.985	0.000	91	144061	10.0	8.99	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.269	5.281	-0.012	97	168215	10.0	8.22	
$ 6 Toluene-d8 (Surr)	98	6.925	6.937	-0.012	95	582074	10.0	9.83	
$ 7 4-Bromofluorobenzene (Surr	95	9.350	9.350	0.000	78	243907	10.0	10.8	
11 Vinyl chloride	62	1.898	1.933	-0.035	92	318769	10.0	14.6	
30 trans-1,2-Dichloroethene	96	3.708	3.719	-0.011	89	243128	10.0	12.5	
40 cis-1,2-Dichloroethene	96	4.571	4.583	-0.012	88	390576	10.0	19.1	
58 Trichloroethene	130	5.872	5.872	0.000	92	329240	10.0	18.9	
74 Tetrachloroethene	164	7.481	7.493	-0.012	86	255117	10.0	20.5	

Reagents:

VMFASPW_00285	Amount Added:	8.00	Units: uL	
VMFASAW_00265	Amount Added:	8.00	Units: uL	
VMFASGW_00293	Amount Added:	8.00	Units: uL	
vm50ss_stk_00079	Amount Added:	1.00	Units: uL	Run Reagent
VM50IS_00074	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00009	Amount Added:	0.00	Units:	Run Reagent
vmDist_H2o_00137	Amount Added:	0.00	Units:	Run Reagent

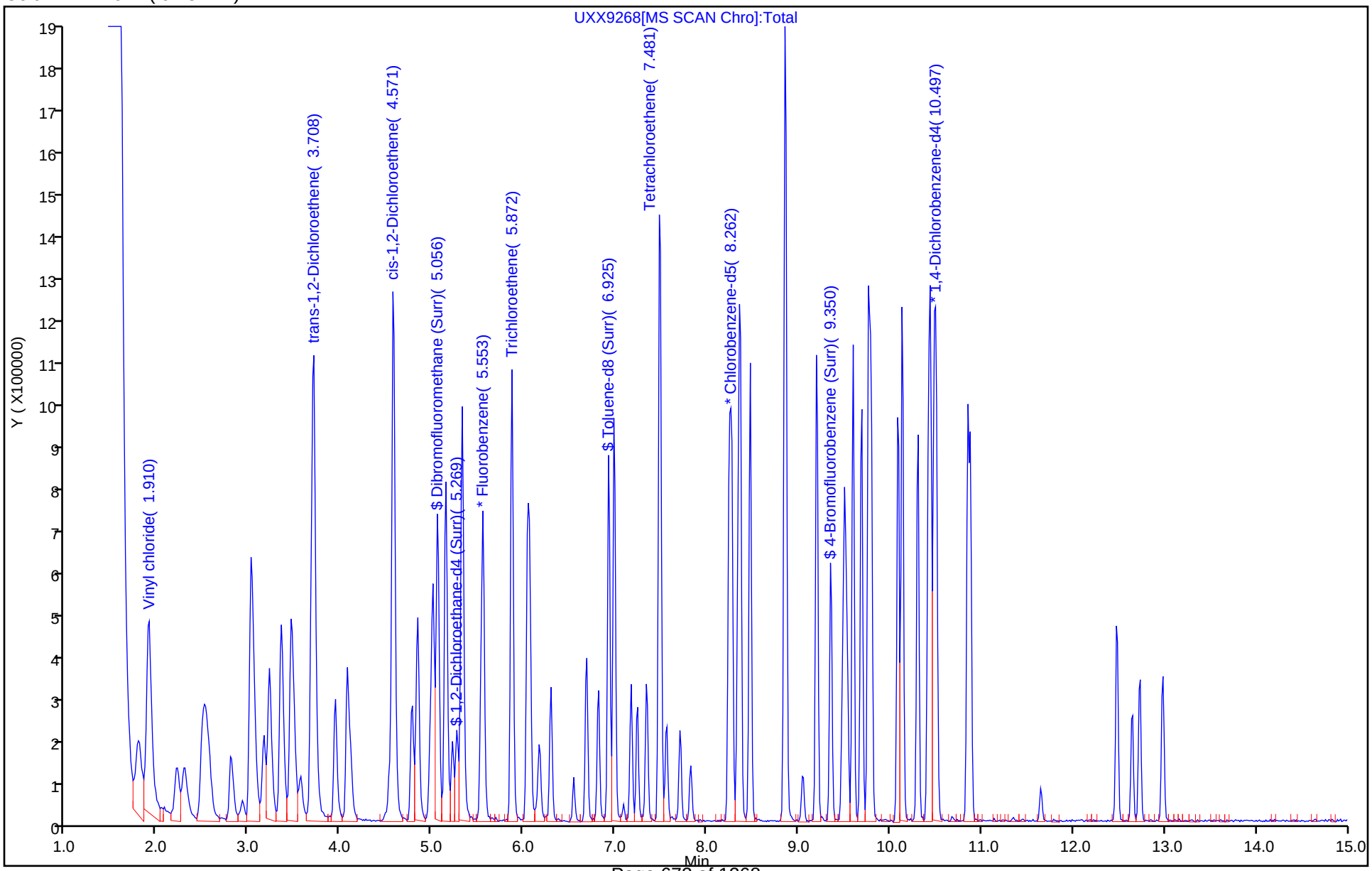
Report Date: 25-Jan-2019 11:17:32 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9268.D

Injection Date:	24-Jan-2019 20:52:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	240-107188-B-1 MS			Worklist Smp#:	25
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	3.3300	ALS Bottle#:	25
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9268.D
Lims ID: 240-107188-B-1 MS
Client ID:
Sample Type: MS
Inject. Date: 24-Jan-2019 20:52:30 ALS Bottle#: 25 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 3.3300
Sample Info: 240-0083932-025
Operator ID: 001644 Instrument ID: A3UX10

Method: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 25-Jan-2019 11:16:30 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	10.0	8.99	89.94
$ 5 1,2-Dichloroethane-d4 (Surr)	10.0	8.22	82.18
$ 6 Toluene-d8 (Surr)	10.0	9.83	98.32
$ 7 4-Bromofluorobenzene (Surr)	10.0	10.8	108.20

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: WC-EFSOIL-011819 MSD | Lab Sample ID: 240-107194-2 MSD

Matrix: Solid | Lab File ID: UX82289.D

Analysis Method: 8260B | Date Collected: 01/18/2019 09:30

Sample wt/vol: 5.11(g) | Date Analyzed: 01/23/2019 13:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.7 | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	29.4		5.7	3.4
563-58-6	1,1-Dichloropropene	31.3		5.7	1.1
75-34-3	1,1-Dichloroethane	31.7		5.7	0.79
87-61-6	1,2,3-Trichlorobenzene	21.3		5.7	0.66
96-18-4	1,2,3-Trichloropropane	28.4		5.7	1.8
107-06-2	1,2-Dichloroethane	29.0		5.7	0.89
75-35-4	1,1-Dichloroethene	34.7		5.7	1.0
526-73-8	1,2,3-Trimethylbenzene	2.1	U	5.7	2.1
78-87-5	1,2-Dichloropropane	30.6		5.7	0.98
95-63-6	1,2,4-Trimethylbenzene	27.7		5.7	1.2
591-78-6	2-Hexanone	58.3		23	4.7
79-34-5	1,1,2,2-Tetrachloroethane	26.5		5.7	1.6
67-64-1	Acetone	85.5		29	24
71-43-2	Benzene	30.7		5.7	0.80
75-25-2	Bromoform	25.7		5.7	2.8
74-83-9	Bromomethane	30.5		5.7	1.1
75-15-0	Carbon disulfide	35.6		5.7	1.3
56-23-5	Carbon tetrachloride	32.2		5.7	3.7
71-55-6	1,1,1-Trichloroethane	33.7		5.7	0.94
108-90-7	Chlorobenzene	26.3		5.7	1.1
142-28-9	1,3-Dichloropropane	27.4		5.7	1.1
75-00-3	Chloroethane	32.9		5.7	1.4
96-12-8	1,2-Dibromo-3-Chloropropane	26.5		11	4.1
67-66-3	Chloroform	31.5		5.7	0.90
74-87-3	Chloromethane	30.6		5.7	1.2
156-59-2	cis-1,2-Dichloroethene	31.5		5.7	0.75
10061-01-5	cis-1,3-Dichloropropene	28.0		5.7	1.6
75-27-4	Bromodichloromethane	30.4		5.7	0.78
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	32.1		5.7	1.5
75-71-8	Dichlorodifluoromethane	30.2		5.7	1.1
120-82-1	1,2,4-Trichlorobenzene	20.5		5.7	0.66
100-41-4	Ethylbenzene	28.0		5.7	1.2
106-93-4	1,2-Dibromoethane	27.6		5.7	0.88
594-20-7	2,2-Dichloropropane	28.8		5.7	1.4
95-50-1	1,2-Dichlorobenzene	26.1		5.7	1.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: WC-EFSOIL-011819 MSD | Lab Sample ID: 240-107194-2 MSD

Matrix: Solid | Lab File ID: UX82289.D

Analysis Method: 8260B | Date Collected: 01/18/2019 09:30

Sample wt/vol: 5.11(g) | Date Analyzed: 01/23/2019 13:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.7 | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
541-73-1	1,3-Dichlorobenzene	24.6		5.7	0.94
106-46-7	1,4-Dichlorobenzene	25.5		5.7	1.0
110-75-8	2-Chloroethyl vinyl ether	20.2	J	57	10
98-82-8	Isopropylbenzene	31.3		5.7	0.95
95-49-8	2-Chlorotoluene	27.8		5.7	1.1
78-93-3	2-Butanone (MEK)	62.7		23	4.1
108-10-1	4-Methyl-2-pentanone (MIBK)	59.9		23	4.3
108-86-1	Bromobenzene	26.3		5.7	1.3
1634-04-4	Methyl tert-butyl ether	31.3		5.7	0.94
74-97-5	Bromochloromethane	30.9		5.7	0.68
75-09-2	Methylene Chloride	35.0		29	14
106-43-4	4-Chlorotoluene	26.9		5.7	0.99
99-87-6	p-Isopropyltoluene	28.6		5.7	3.4
100-42-5	Styrene	26.6		5.7	1.3
179601-23-1	m-Xylene & p-Xylene	28.9		11	0.90
95-47-6	o-Xylene	30.9		5.7	0.99
87-68-3	Hexachlorobutadiene	24.4		5.7	4.3
127-18-4	Tetrachloroethene	28.6		5.7	0.84
74-95-3	Dibromomethane	28.8		5.7	0.77
108-88-3	Toluene	29.6		5.7	0.89
108-20-3	Diisopropyl ether	0.87	U	11	0.87
91-20-3	Naphthalene	23.0		5.7	3.1
156-60-5	trans-1,2-Dichloroethene	32.7		5.7	0.53
104-51-8	n-Butylbenzene	26.7		5.7	4.0
10061-02-6	trans-1,3-Dichloropropene	24.4		5.7	1.2
103-65-1	N-Propylbenzene	28.8		5.7	0.84
79-01-6	Trichloroethene	30.1		5.7	0.73
135-98-8	sec-Butylbenzene	29.0		5.7	0.99
75-69-4	Trichlorofluoromethane	31.2		5.7	1.2
994-05-8	Tert-amyl methyl ether	2.6	U	5.7	2.6
637-92-3	Ethyl tert-butyl ether	2.6	U	5.7	2.6
98-06-6	tert-Butylbenzene	30.4		5.7	1.0
75-01-4	Vinyl chloride	34.0		5.7	0.96
108-05-4	Vinyl acetate	22.1		11	2.4
75-65-0	tert-Butyl alcohol	271		230	19
1330-20-7	Xylenes, Total	59.8		11	1.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: WC-EFSOIL-011819 MSD | Lab Sample ID: 240-107194-2 MSD

Matrix: Solid | Lab File ID: UX82289.D

Analysis Method: 8260B | Date Collected: 01/18/2019 09:30

Sample wt/vol: 5.11(g) | Date Analyzed: 01/23/2019 13:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.7 | Level: (low/med) Low

Analysis Batch No.: 365072 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	27.0		5.7	3.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		48-123
460-00-4	4-Bromofluorobenzene (Surr)	107		49-141
2037-26-5	Toluene-d8 (Surr)	104		62-135
1868-53-7	Dibromofluoromethane (Surr)	101		49-132

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82289.D
Lims ID: 240-107194-B-2-C MSD
Client ID:
Sample Type: MSD
Inject. Date: 23-Jan-2019 13:29:30 ALS Bottle#: 28 Worklist Smp#: 30
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083884-030
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 24-Jan-2019 05:11:14 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: latat Date: 24-Jan-2019 02:30:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.168	5.156	0.012	99	839142	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.689	7.688	0.001	97	657603	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.878	9.877	0.001	96	368560	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.636	4.635	0.001	93	207868	50.0	50.4	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.896	4.896	0.000	99	264713	50.0	51.7	
$ 6 Toluene-d8 (Surr)	98	6.434	6.434	0.000	96	796575	50.0	51.8	
$ 7 4-Bromofluorobenzene (Surr	95	8.766	8.765	0.001	85	310682	50.0	53.4	
9 Dichlorodifluoromethane	85	1.595	1.594	0.001	98	140591	25.0	26.3	
10 Chloromethane	50	1.772	1.772	0.000	100	175100	25.0	26.6	
11 Vinyl chloride	62	1.891	1.890	0.001	99	130588	25.0	29.7	
13 Bromomethane	94	2.186	2.186	0.000	92	69150	25.0	26.6	
14 Chloroethane	64	2.281	2.281	0.000	96	83958	25.0	28.7	
16 Trichlorofluoromethane	101	2.506	2.505	0.001	99	176316	25.0	27.2	
19 1,1-Dichloroethene	96	2.932	2.931	0.001	95	123631	25.0	30.2	
20 1,1,2-Trichloro-1,2,2-trif	151	2.944	2.943	0.001	95	94799	25.0	28.0	
21 Acetone	43	2.967	2.967	0.000	96	105107	50.0	74.5	
24 Carbon disulfide	76	3.121	3.121	0.000	98	362826	25.0	31.1	
28 Methylene Chloride	84	3.311	3.310	0.001	93	141964	25.0	30.5	
29 2-Methyl-2-propanol	59	3.393	3.393	0.000	90	81350	250.0	236.3	
32 Methyl tert-butyl ether	73	3.535	3.523	0.012	96	284670	25.0	27.3	
31 trans-1,2-Dichloroethene	96	3.524	3.523	0.001	89	140281	25.0	28.5	
34 1,1-Dichloroethane	63	3.843	3.843	0.000	98	257736	25.0	27.6	
35 Vinyl acetate	43	3.867	3.866	0.001	97	169860	25.0	19.2	
36 Isopropyl ether	87		3.891					ND	
38 Tert-butyl ethyl ether	59		4.164					ND	
39 cis-1,2-Dichloroethene	96	4.281	4.280	0.001	89	147580	25.0	27.5	
40 2-Butanone (MEK)	43	4.281	4.280	0.001	56	119126	50.0	54.7	
41 2,2-Dichloropropane	77	4.293	4.292	0.001	75	122272	25.0	25.1	
45 Chlorobromomethane	128	4.458	4.458	0.000	91	62805	25.0	27.0	
47 Chloroform	83	4.518	4.517	0.001	99	237234	25.0	27.5	
48 1,1,1-Trichloroethane	97	4.671	4.671	0.000	97	197319	25.0	29.4	
50 1,1-Dichloropropene	75	4.802	4.801	0.001	88	177592	25.0	27.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
51 Carbon tetrachloride	117	4.813	4.801	0.012	95	159137	25.0	28.1	
54 Benzene	78	4.955	4.955	0.000	95	522446	25.0	26.7	
53 1,2-Dichloroethane	62	4.955	4.955	0.000	61	191789	25.0	25.3	
55 Tert-amyl methyl ether	73		5.027					ND	
58 Trichloroethene	130	5.452	5.452	0.000	94	125859	25.0	26.3	
61 1,2-Dichloropropane	63	5.630	5.629	0.001	92	127224	25.0	26.7	
63 Dibromomethane	93	5.724	5.724	0.000	95	59783	25.0	25.1	
65 Dichlorobromomethane	83	5.831	5.830	0.001	97	138334	25.0	26.5	
67 2-Chloroethyl vinyl ether	63	6.056	6.055	0.001	88	27771	25.0	17.6	
68 cis-1,3-Dichloropropene	75	6.198	6.197	0.001	85	135125	25.0	24.5	
69 4-Methyl-2-pentanone (MIBK	43	6.316	6.304	0.012	98	212103	50.0	52.2	
70 Toluene	91	6.494	6.493	0.001	97	494629	25.0	25.8	
71 trans-1,3-Dichloropropene	75	6.647	6.647	0.000	94	96209	25.0	21.3	
74 1,3-Dichloropropane	76	6.967	6.966	0.001	93	142170	25.0	23.9	
75 Tetrachloroethene	164	6.967	6.966	0.001	89	97001	25.0	24.9	
76 2-Hexanone	43	7.014	7.014	0.000	95	142251	50.0	50.9	
78 Chlorodibromomethane	129	7.168	7.168	0.000	90	74680	25.0	23.5	
80 Ethylene Dibromide	107	7.286	7.286	0.000	99	73111	25.0	24.1	
82 Chlorobenzene	112	7.712	7.712	0.000	90	296083	25.0	22.9	
83 1,1,1,2-Tetrachloroethane	131	7.783	7.783	0.000	90	101102	25.0	25.6	
84 Ethylbenzene	106	7.807	7.807	0.000	99	159213	25.0	24.4	
85 m-Xylene & p-Xylene	106	7.914	7.913	0.001	98	199127	25.0	25.2	
86 o-Xylene	106	8.280	8.280	0.000	98	202050	25.0	27.0	
87 Styrene	104	8.292	8.292	0.000	94	278365	25.0	23.2	
88 Bromoform	173	8.470	8.469	0.001	95	36823	25.0	22.4	
89 Isopropylbenzene	105	8.624	8.623	0.001	97	546312	25.0	27.3	
92 1,1,2,2-Tetrachloroethane	83	8.884	8.883	0.001	98	92225	25.0	23.1	
93 Bromobenzene	156	8.919	8.919	0.000	95	119588	25.0	23.0	
94 1,2,3-Trichloropropane	110	8.931	8.931	0.000	93	32478	25.0	24.7	
96 N-Propylbenzene	120	9.014	9.013	0.001	99	142877	25.0	25.1	
97 2-Chlorotoluene	126	9.097	9.096	0.001	95	123624	25.0	24.3	
99 4-Chlorotoluene	126	9.203	9.203	0.000	99	122442	25.0	23.4	
100 tert-Butylbenzene	119	9.499	9.499	0.000	94	404473	25.0	26.5	
102 1,2,4-Trimethylbenzene	105	9.535	9.534	0.001	97	456052	25.0	24.2	
103 sec-Butylbenzene	105	9.712	9.712	0.000	95	583832	25.0	25.3	
104 1,3-Dichlorobenzene	146	9.819	9.818	0.001	96	226670	25.0	21.5	
105 4-Isopropyltoluene	119	9.842	9.842	0.000	98	480815	25.0	24.9	
106 1,4-Dichlorobenzene	146	9.901	9.901	0.000	93	232849	25.0	22.2	
107 1,2,3-Trimethylbenzene	105		9.950					ND	
109 n-Butylbenzene	91	10.245	10.244	0.001	98	391601	25.0	23.3	
110 1,2-Dichlorobenzene	146	10.268	10.268	0.000	95	216769	25.0	22.7	
111 1,2-Dibromo-3-Chloropropan	157	11.037	11.037	0.000	68	11514	25.0	23.1	
113 1,2,4-Trichlorobenzene	180	11.866	11.865	0.001	93	102601	25.0	17.8	
114 Hexachlorobutadiene	225	12.043	12.043	0.000	96	68570	25.0	21.3	
115 Naphthalene	128	12.114	12.114	0.000	98	218511	25.0	20.0	
116 1,2,3-Trichlorobenzene	180	12.363	12.362	0.001	94	98150	25.0	18.5	
S 128 Xylenes, Total	106				0		50.0	52.2	

Reagents:

VMFASPW_00285	Amount Added:	2.50	Units: uL	
VMFASAW_00264	Amount Added:	2.50	Units: uL	
VMFASGW_00293	Amount Added:	2.50	Units: uL	
VM568718_00013	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00011	Amount Added:	0.00	Units:	Run Reagent
VMUX8SS_00030	Amount Added:	1.15	Units: uL	Run Reagent
vmDist_H2o_00135	Amount Added:	0.00	Units:	Run Reagent

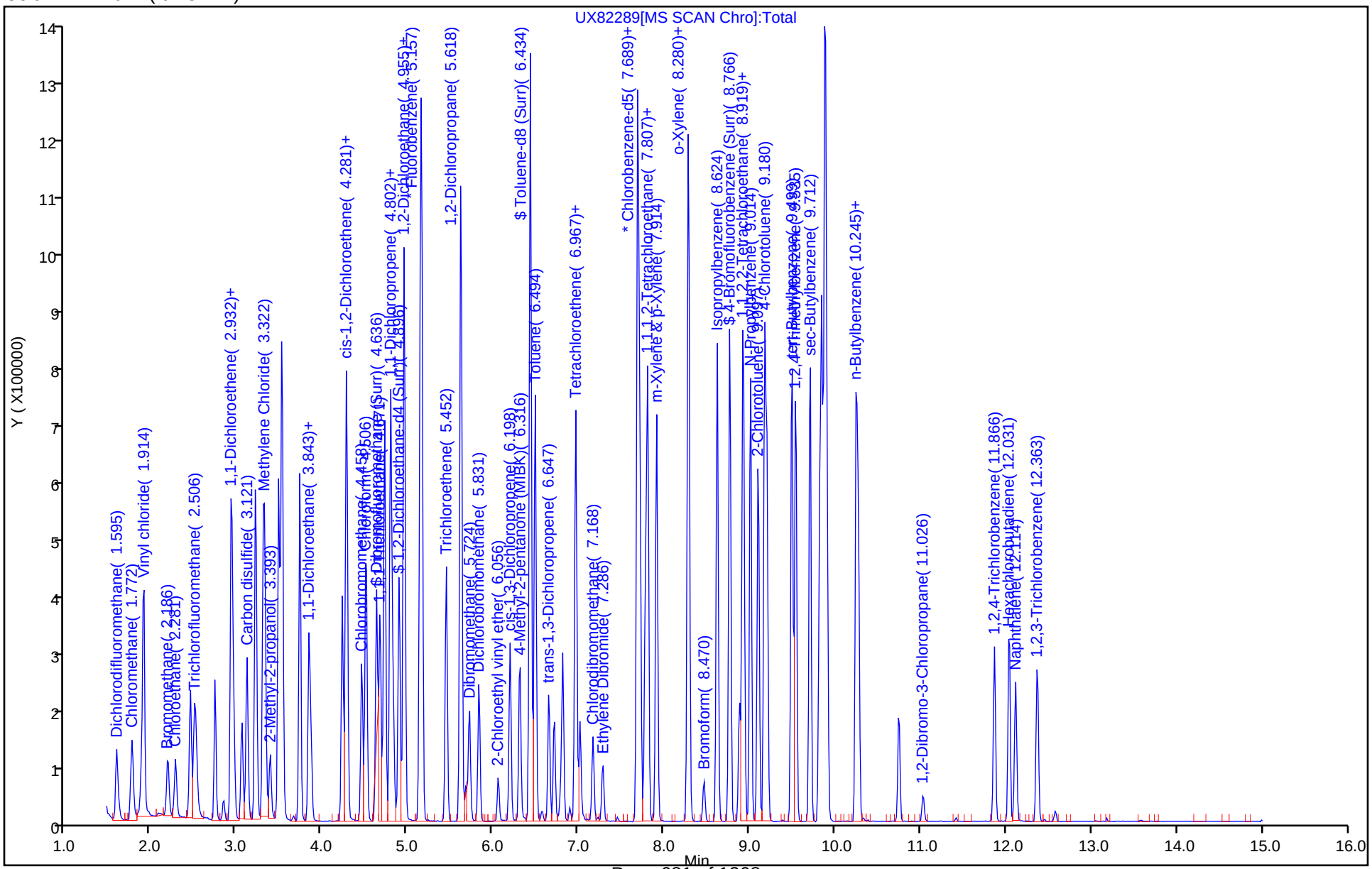
Report Date: 24-Jan-2019 05:11:33 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82289.D

Injection Date:	23-Jan-2019 13:29:30	Instrument ID:	A3UX8	Operator ID:	402279
Lims ID:	240-107194-B-2-C MSD			Worklist Smp#:	30
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8260_8	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\UX82289.D
Lims ID: 240-107194-B-2-C MSD
Client ID:
Sample Type: MSD
Inject. Date: 23-Jan-2019 13:29:30 ALS Bottle#: 28 Worklist Smp#: 30
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083884-030
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190123-83884.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 24-Jan-2019 05:11:14 Calib Date: 19-Jan-2019 08:12:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX8\20190119-83802.b\UX82256.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0328

First Level Reviewer: latat Date: 24-Jan-2019 02:30:20

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	50.4	100.72
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	51.7	103.38
$ 6 Toluene-d8 (Surr)	50.0	51.8	103.68
$ 7 4-Bromofluorobenzene (Surr)	50.0	53.4	106.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: | Lab Sample ID: 240-107188-C-1 MSD

Matrix: Water | Lab File ID: UXX9269.D

Analysis Method: 8260B | Date Collected: 01/18/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 01/24/2019 21:17

Soil Aliquot Vol: | Dilution Factor: 3.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 365336 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
156-59-2	cis-1,2-Dichloroethene	60.5		3.3	0.53
127-18-4	Tetrachloroethene	68.7		3.3	0.50
156-60-5	trans-1,2-Dichloroethene	39.6		3.3	0.63
79-01-6	Trichloroethene	62.8		3.3	0.33
75-01-4	Vinyl chloride	47.0		3.3	0.67

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	68	X	70-121
460-00-4	4-Bromofluorobenzene (Surr)	95		59-120
2037-26-5	Toluene-d8 (Surr)	96		70-123
1868-53-7	Dibromofluoromethane (Surr)	82		75-128

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9269.D
Lims ID: 240-107188-C-1 MSD
Client ID:
Sample Type: MSD
Inject. Date: 24-Jan-2019 21:17:30 ALS Bottle#: 26 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 3.3300
Sample Info: 240-0083932-026
Operator ID: 001644 Instrument ID: A3UX10

Method: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 25-Jan-2019 11:16:30 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.552	5.565	-0.013	98	614786	10.0	10.0	
* 2 Chlorobenzene-d5	117	8.249	8.250	-0.001	89	521824	10.0	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.485	10.485	-0.001	95	235304	10.0	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.984	4.985	-0.001	90	132608	10.0	8.21	
$ 5 1,2-Dichloroethane-d4 (Sur	65	5.268	5.281	-0.013	96	140421	10.0	6.80	
$ 6 Toluene-d8 (Surr)	98	6.924	6.937	-0.013	95	630299	10.0	9.57	
$ 7 4-Bromofluorobenzene (Surr	95	9.349	9.350	-0.001	78	239372	10.0	9.54	
11 Vinyl chloride	62	1.885	1.933	-0.048	86	311901	10.0	14.1	
30 trans-1,2-Dichloroethene	96	3.707	3.719	-0.012	93	233301	10.0	11.9	
40 cis-1,2-Dichloroethene	96	4.570	4.583	-0.013	93	374363	10.0	18.2	
58 Trichloroethene	130	5.871	5.872	-0.001	93	331188	10.0	18.9	
74 Tetrachloroethene	164	7.492	7.493	-0.001	90	285872	10.0	20.6	

Reagents:

VMFASAW_00265	Amount Added:	8.00	Units: uL	
VMFASGW_00293	Amount Added:	8.00	Units: uL	
VMFASPW_00285	Amount Added:	8.00	Units: uL	
vm50ss_stk_00079	Amount Added:	1.00	Units: uL	Run Reagent
VM50IS_00074	Amount Added:	1.00	Units: uL	Run Reagent
vm40ml_vials_00009	Amount Added:	0.00	Units:	Run Reagent
vmDist_H2o_00137	Amount Added:	0.00	Units:	Run Reagent

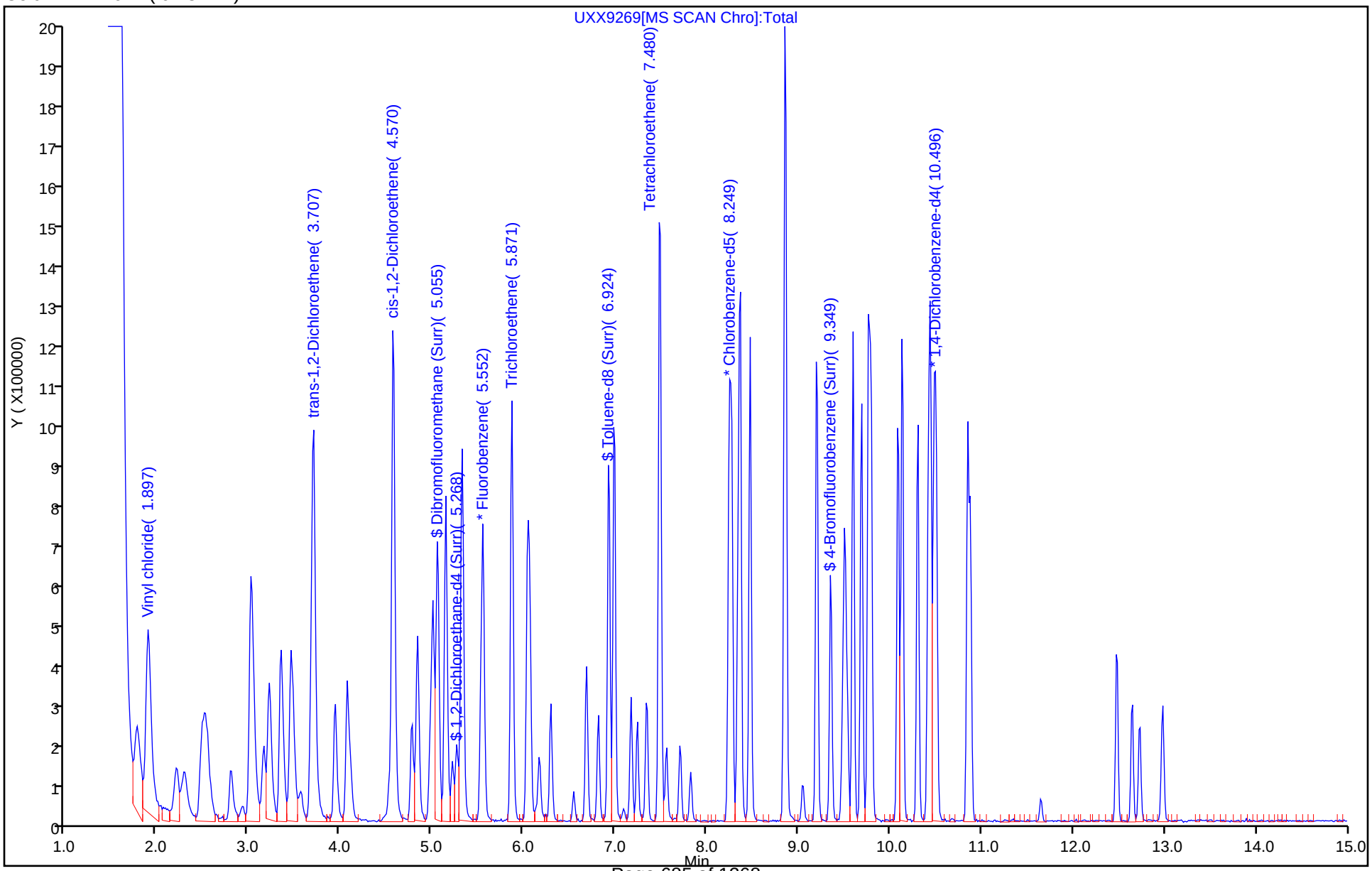
Report Date: 25-Jan-2019 11:17:35 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9269.D

Injection Date:	24-Jan-2019 21:17:30	Instrument ID:	A3UX10	Operator ID:	001644
Lims ID:	240-107188-C-1 MSD			Worklist Smp#:	26
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	3.3300	ALS Bottle#:	26
Method:	8260_10	Limit Group:	MSV 8260B ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\UXX9269.D
Lims ID: 240-107188-C-1 MSD
Client ID:
Sample Type: MSD
Inject. Date: 24-Jan-2019 21:17:30 ALS Bottle#: 26 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 3.3300
Sample Info: 240-0083932-026
Operator ID: 001644 Instrument ID: A3UX10

Method: \\chromna\Canton\ChromData\A3UX10\20190124-83932.b\8260_10.m
Limit Group: MSV 8260B ICAL
Last Update: 25-Jan-2019 11:16:30 Calib Date: 02-Oct-2018 21:14:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A3UX10\20181002-80450.b\UXX5953.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0316

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	10.0	8.21	82.11
$ 5 1,2-Dichloroethane-d4 (Surr)	10.0	6.80	68.04
$ 6 Toluene-d8 (Surr)	10.0	9.57	95.68
$ 7 4-Bromofluorobenzene (Surr)	10.0	9.54	95.43

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A3UX10 Start Date: 10/02/2018 14:58

Analysis Batch Number: 348190 End Date: 10/02/2018 21:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-348190/1		10/02/2018 14:58	1	BFB1940.D	DB-624 0.18(mm)
STD8260 240-348190/2 IC		10/02/2018 15:27	1	UXX5939.D	DB-624 0.18(mm)
STD8260 240-348190/3 IC		10/02/2018 15:52	1	UXX5940.D	DB-624 0.18(mm)
STD8260 240-348190/4 ICIS		10/02/2018 16:17	1	UXX5941.D	DB-624 0.18(mm)
STD8260 240-348190/5 IC		10/02/2018 16:42	1	UXX5942.D	DB-624 0.18(mm)
STD8260 240-348190/6 IC		10/02/2018 17:06	1	UXX5943.D	DB-624 0.18(mm)
STD8260 240-348190/7 IC		10/02/2018 17:31	1	UXX5944.D	DB-624 0.18(mm)
STD8260 240-348190/8 IC		10/02/2018 17:56	1	UXX5945.D	DB-624 0.18(mm)
ICV 240-348190/9		10/02/2018 18:21	1	UXX5946.D	DB-624 0.18(mm)
STDA9 240-348190/10 IC		10/02/2018 18:46	1	UXX5947.D	DB-624 0.18(mm)
STDA9 240-348190/11 IC		10/02/2018 19:11	1	UXX5948.D	DB-624 0.18(mm)
STDA9 240-348190/12 IC		10/02/2018 19:36	1	UXX5949.D	DB-624 0.18(mm)
STDA9 240-348190/13 IC		10/02/2018 20:01	1	UXX5950.D	DB-624 0.18(mm)
STDA9 240-348190/14 IC		10/02/2018 20:25	1	UXX5951.D	DB-624 0.18(mm)
STDA9 240-348190/15 IC		10/02/2018 20:50	1	UXX5952.D	DB-624 0.18(mm)
STDA9 240-348190/16 IC		10/02/2018 21:14	1	UXX5953.D	DB-624 0.18(mm)
ICV 240-348190/17		10/02/2018 21:39	1	UXX5954.D	DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A3UX8 Start Date: 11/30/2018 03:22

Analysis Batch Number: 357692 End Date: 11/30/2018 14:40

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-357692/1		11/30/2018 03:22	1	BFB8814.D	DB-624 0.18(mm)
STD8260 240-357692/3 IC		11/30/2018 03:55	1		DB-624 0.18(mm)
STD8260 240-357692/4 IC		11/30/2018 04:18	1		DB-624 0.18(mm)
STD8260 240-357692/5 IC		11/30/2018 04:40	1		DB-624 0.18(mm)
STD8260 240-357692/6 IC		11/30/2018 05:01	1		DB-624 0.18(mm)
ICIS 240-357692/7		11/30/2018 05:24	1		DB-624 0.18(mm)
STD8260 240-357692/8 IC		11/30/2018 05:47	1		DB-624 0.18(mm)
STD8260 240-357692/9 IC		11/30/2018 06:09	1		DB-624 0.18(mm)
STD8260 240-357692/10 IC		11/30/2018 06:31	1		DB-624 0.18(mm)
STD8260 240-357692/11 IC		11/30/2018 06:53	1		DB-624 0.18(mm)
STDA9 240-357692/12 IC		11/30/2018 07:16	1	UX81322.D	DB-624 0.18(mm)
STDA9 240-357692/13 IC		11/30/2018 07:38	1	UX81323.D	DB-624 0.18(mm)
STDA9 240-357692/14 IC		11/30/2018 08:00	1	UX81324.D	DB-624 0.18(mm)
STDA9 240-357692/15 IC		11/30/2018 08:23	1	UX81325.D	DB-624 0.18(mm)
STDA9 240-357692/16 IC		11/30/2018 08:45	1	UX81326.D	DB-624 0.18(mm)
STDA9 240-357692/17 IC		11/30/2018 09:08	1	UX81327.D	DB-624 0.18(mm)
STDA9 240-357692/18 IC		11/30/2018 09:30	1	UX81328.D	DB-624 0.18(mm)
STDA9 240-357692/19 IC		11/30/2018 09:52	1	UX81329.D	DB-624 0.18(mm)
STDA9 240-357692/20 IC		11/30/2018 10:15	1	UX81330.D	DB-624 0.18(mm)
ICV 240-357692/21		11/30/2018 10:37	1		DB-624 0.18(mm)
ICV 240-357692/22		11/30/2018 11:00	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 12:06	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 12:28	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 13:12	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 13:34	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 13:57	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 14:19	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 14:40	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A3UX8 Start Date: 01/19/2019 04:20

Analysis Batch Number: 364686 End Date: 01/19/2019 09:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-364686/1		01/19/2019 04:20	1	BFB8848.D	DB-624 0.18(mm)
STD8260 240-364686/3 IC		01/19/2019 05:07	1	UX82248.D	DB-624 0.18(mm)
STD8260 240-364686/4 IC		01/19/2019 05:31	1	UX82249.D	DB-624 0.18(mm)
STD8260 240-364686/5 IC		01/19/2019 05:54	1	UX82250.D	DB-624 0.18(mm)
STD8260 240-364686/6 IC		01/19/2019 06:17	1	UX82251.D	DB-624 0.18(mm)
ICIS 240-364686/7		01/19/2019 06:39	1	UX82252.D	DB-624 0.18(mm)
STD8260 240-364686/8 IC		01/19/2019 07:03	1	UX82253.D	DB-624 0.18(mm)
STD8260 240-364686/9 IC		01/19/2019 07:26	1	UX82254.D	DB-624 0.18(mm)
STD8260 240-364686/10 IC		01/19/2019 07:49	1	UX82255.D	DB-624 0.18(mm)
STD8260 240-364686/11 IC		01/19/2019 08:12	1	UX82256.D	DB-624 0.18(mm)
ICV 240-364686/13		01/19/2019 09:00	1	UX82258.D	DB-624 0.18(mm)
ZZZZZ		01/19/2019 09:45	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A3UX8 Start Date: 01/23/2019 03:08

Analysis Batch Number: 365072 End Date: 01/23/2019 14:57

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-365072/1		01/23/2019 03:08	1	BFB8849.D	DB-624 0.18(mm)
CCVIS 240-365072/4		01/23/2019 03:41	1	UX82263.D	DB-624 0.18(mm)
CCV 240-365072/5		01/23/2019 04:05	1	UX82264.D	DB-624 0.18(mm)
LCS 240-365072/6		01/23/2019 04:28	1	UX82265.D	DB-624 0.18(mm)
MB 240-365072/7		01/23/2019 04:50	1	UX82266.D	DB-624 0.18(mm)
ZZZZZ		01/23/2019 05:13	1		DB-624 0.18(mm)
ZZZZZ		01/23/2019 07:29	1		DB-624 0.18(mm)
ZZZZZ		01/23/2019 07:52	1		DB-624 0.18(mm)
ZZZZZ		01/23/2019 08:15	1		DB-624 0.18(mm)
ZZZZZ		01/23/2019 08:37	1		DB-624 0.18(mm)
ZZZZZ		01/23/2019 08:59	1		DB-624 0.18(mm)
ZZZZZ		01/23/2019 09:22	1		DB-624 0.18(mm)
ZZZZZ		01/23/2019 09:44	1		DB-624 0.18(mm)
ZZZZZ		01/23/2019 10:06	1		DB-624 0.18(mm)
ZZZZZ		01/23/2019 10:29	1		DB-624 0.18(mm)
ZZZZZ		01/23/2019 10:51	1		DB-624 0.18(mm)
ZZZZZ		01/23/2019 11:14	1		DB-624 0.18(mm)
240-107194-2		01/23/2019 12:42	1	UX82287.D	DB-624 0.18(mm)
240-107194-2 MS		01/23/2019 13:06	1	UX82288.D	DB-624 0.18(mm)
240-107194-2 MSD		01/23/2019 13:29	1	UX82289.D	DB-624 0.18(mm)
ZZZZZ		01/23/2019 13:51	1		DB-624 0.18(mm)
ZZZZZ		01/23/2019 14:57	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A3UX10 Start Date: 01/24/2019 09:41

Analysis Batch Number: 365336 End Date: 01/24/2019 21:17

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-365336/1		01/24/2019 09:41	1	BFB2132.D	DB-624 0.18(mm)
CCV 240-365336/3		01/24/2019 10:39	1	UXX9245.D	DB-624 0.18(mm)
CCVIS 240-365336/2		01/24/2019 11:03	1	UXX9246.D	DB-624 0.18(mm)
LCS 240-365336/6		01/24/2019 12:18	1	UXX9249.D	DB-624 0.18(mm)
MB 240-365336/8		01/24/2019 13:08	1	UXX9251.D	DB-624 0.18(mm)
ZZZZZ		01/24/2019 13:39	1		DB-624 0.18(mm)
ZZZZZ		01/24/2019 14:04	1		DB-624 0.18(mm)
ZZZZZ		01/24/2019 14:30	1		DB-624 0.18(mm)
ZZZZZ		01/24/2019 15:01	3.33		DB-624 0.18(mm)
240-107194-1		01/24/2019 15:25	1	UXX9256.D	DB-624 0.18(mm)
ZZZZZ		01/24/2019 15:54	1		DB-624 0.18(mm)
ZZZZZ		01/24/2019 16:21	1		DB-624 0.18(mm)
ZZZZZ		01/24/2019 16:50	1		DB-624 0.18(mm)
ZZZZZ		01/24/2019 17:15	1		DB-624 0.18(mm)
ZZZZZ		01/24/2019 17:43	1		DB-624 0.18(mm)
ZZZZZ		01/24/2019 18:11	1		DB-624 0.18(mm)
ZZZZZ		01/24/2019 18:39	1		DB-624 0.18(mm)
ZZZZZ		01/24/2019 19:08	1		DB-624 0.18(mm)
ZZZZZ		01/24/2019 19:33	1		DB-624 0.18(mm)
ZZZZZ		01/24/2019 19:59	1		DB-624 0.18(mm)
ZZZZZ		01/24/2019 20:24	1		DB-624 0.18(mm)
240-107188-B-1 MS		01/24/2019 20:52	3.33	UXX9268.D	DB-624 0.18(mm)
240-107188-C-1 MSD		01/24/2019 21:17	3.33	UXX9269.D	DB-624 0.18(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 348190 Batch Start Date: 10/02/18 14:58 Batch Analyst: Williams, Larry

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM50IS 00071	vm50ss 00337	VMAROLISTDW 00267	vmbfb 00020
BFB 240-348190/1		8260B		5 mL	5 mL				1 uL
STD8260 240-348190/2 IC		8260B		5 mL	5 mL	1 uL	32 uL	32 uL	
STD8260 240-348190/3 IC		8260B		5 mL	5 mL	1 uL	16 uL	16 uL	
STD8260 240-348190/4 ICIS		8260B		5 mL	5 mL	1 uL	8 uL	8 uL	
STD8260 240-348190/5 IC		8260B		5 mL	5 mL	1 uL	4 uL	4 uL	
STD8260 240-348190/6 IC		8260B		5 mL	5 mL	1 uL	3.2 uL	3.2 uL	
STD8260 240-348190/7 IC		8260B		5 mL	5 mL	1 uL	1.6 uL	1.6 uL	
STD8260 240-348190/8 IC		8260B		5 mL	5 mL	1 uL	0.8 uL	0.8 uL	
ICV 240-348190/9		8260B		5 mL	5 mL	1 uL	8 uL		
STDA9 240-348190/10 IC		8260B		5 mL	5 mL	1 uL			
STDA9 240-348190/11 IC		8260B		5 mL	5 mL	1 uL			
STDA9 240-348190/12 IC		8260B		5 mL	5 mL	1 uL			
STDA9 240-348190/13 IC		8260B		5 mL	5 mL	1 uL			
STDA9 240-348190/14 IC		8260B		5 mL	5 mL	1 uL			
STDA9 240-348190/15 IC		8260B		5 mL	5 mL	1 uL			
STDA9 240-348190/16 IC		8260B		5 mL	5 mL	1 uL			
ICV 240-348190/17		8260B		5 mL	5 mL	1 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 348190 Batch Start Date: 10/02/18 14:58 Batch Analyst: Williams, Larry

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00203	VMFASAW 00250	VMFASGW 00276	VMFASPW 00269	VMRA9W 00267	VMRGAS 00263
BFB 240-348190/1		8260B							
STD8260 240-348190/2 IC		8260B							32 uL
STD8260 240-348190/3 IC		8260B							16 uL
STD8260 240-348190/4 ICIS		8260B							8 uL
STD8260 240-348190/5 IC		8260B							4 uL
STD8260 240-348190/6 IC		8260B							3.2 uL
STD8260 240-348190/7 IC		8260B							1.6 uL
STD8260 240-348190/8 IC		8260B							0.8 uL
ICV 240-348190/9		8260B			8 uL	8 uL	8 uL		
STDA9 240-348190/10 IC		8260B						32 uL	
STDA9 240-348190/11 IC		8260B						16 uL	
STDA9 240-348190/12 IC		8260B						8 uL	
STDA9 240-348190/13 IC		8260B						4 uL	
STDA9 240-348190/14 IC		8260B						3.2 uL	
STDA9 240-348190/15 IC		8260B						1.6 uL	
STDA9 240-348190/16 IC		8260B						0.8 uL	
ICV 240-348190/17		8260B		8 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 348190 Batch Start Date: 10/02/18 14:58 Batch Analyst: Williams, Larry

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00303					
BFB 240-348190/1		8260B							
STD8260 240-348190/2 IC		8260B		32 uL					
STD8260 240-348190/3 IC		8260B		16 uL					
STD8260 240-348190/4 ICIS		8260B		8 uL					
STD8260 240-348190/5 IC		8260B		4 uL					
STD8260 240-348190/6 IC		8260B		3.2 uL					
STD8260 240-348190/7 IC		8260B		1.6 uL					
STD8260 240-348190/8 IC		8260B		0.8 uL					
ICV 240-348190/9		8260B							
STDA9 240-348190/10 IC		8260B							
STDA9 240-348190/11 IC		8260B							
STDA9 240-348190/12 IC		8260B							
STDA9 240-348190/13 IC		8260B							
STDA9 240-348190/14 IC		8260B							
STDA9 240-348190/15 IC		8260B							
STDA9 240-348190/16 IC		8260B							
ICV 240-348190/17		8260B							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 348190 Batch Start Date: 10/02/18 14:58 Batch Analyst: Williams, Larry

Batch Method: 8260B Batch End Date:

Batch Notes	
pH Indicator ID	hc746949

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365072 Batch Start Date: 01/23/19 03:08 Batch Analyst: Lata, Todd

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM568718 00013	VMAROLISTDW 00281	vmbfb 00021	VMFASAW 00264
BFB 240-365072/1		8260B		5 mL	5 mL			1 uL	
CCVIS 240-365072/4		8260B		5 mL	5 mL	1 uL	2 uL		
CCV 240-365072/5		8260B		5 mL	5 mL	1 uL			
LCS 240-365072/6		8260B		5 g	5 mL	1 uL			2.5 uL
MB 240-365072/7		8260B		5 g	5 mL	1 uL			
240-107194-B-2-A	WC-EFSOIL-011819	8260B	T	5 g	5 mL	1 uL			
240-107194-B-2-B MS	WC-EFSOIL-011819	8260B	T	5 g	5 mL	1 uL			2.5 uL
240-107194-B-2-C MSD	WC-EFSOIL-011819	8260B	T	5 g	5 mL	1 uL			2.5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00279	VMRPRIMW 00318	VMUX8SS 00030
BFB 240-365072/1		8260B							
CCVIS 240-365072/4		8260B					2 uL	2 uL	1.1547 uL
CCV 240-365072/5		8260B				2 uL			
LCS 240-365072/6		8260B		2.5 uL	2.5 uL				1.1547 uL
MB 240-365072/7		8260B							1.1547 uL
240-107194-B-2-A	WC-EFSOIL-011819	8260B	T						1.1547 uL
240-107194-B-2-B MS	WC-EFSOIL-011819	8260B	T	2.5 uL	2.5 uL				1.1547 uL
240-107194-B-2-C MSD	WC-EFSOIL-011819	8260B	T	2.5 uL	2.5 uL				1.1547 uL

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365072 Batch Start Date: 01/23/19 03:08 Batch Analyst: Lata, Todd

Batch Method: 8260B Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365103 Batch Start Date: 01/23/19 04:28 Batch Analyst: Lata, Todd

Batch Method: 5030A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount				
240-107194-B-2	WC-EFSOIL-011819	5030A, 8260B	T	5.35 g	5 mL				
240-107194-B-2 MS	WC-EFSOIL-011819	5030A, 8260B	T	5.19 g	5 mL				
240-107194-B-2 MSD	WC-EFSOIL-011819	5030A, 8260B	T	5.11 g	5 mL				

Batch Notes	
Balance ID	B035
Blank Matrix ID	178797

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365336 Batch Start Date: 01/24/19 09:41 Batch Analyst: Williams, Larry

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00074	vm50ss_stk 00079	VMAROLISTDW 00281
BFB 240-365336/1		8260B		5 mL	5 mL				
CCVIS 240-365336/2		8260B		5 mL	5 mL		1 uL	1 uL	8 uL
CCV 240-365336/3		8260B		5 mL	5 mL		1 uL		
LCS 240-365336/6		8260B		5 mL	5 mL		1 uL	1 uL	
MB 240-365336/8		8260B		5 mL	5 mL		1 uL	1 uL	
240-107194-B-1	TB-011819	8260B	T	5 mL	5 mL	<2 SU	1 uL	1 uL	
240-107188-B-1 MS		8260B	T	5 mL	5 mL	6 SU	1 uL	1 uL	
240-107188-C-1 MSD		8260B	T	5 mL	5 mL	6 SU	1 uL	1 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMBFB 00021	VMFASAW 00265	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00279
BFB 240-365336/1		8260B		1 uL					
CCVIS 240-365336/2		8260B							8 uL
CCV 240-365336/3		8260B						8 uL	
LCS 240-365336/6		8260B			8 uL	8 uL	8 uL		
MB 240-365336/8		8260B							
240-107194-B-1	TB-011819	8260B	T						
240-107188-B-1 MS		8260B	T		8 uL	8 uL	8 uL		
240-107188-C-1 MSD		8260B	T		8 uL	8 uL	8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
BFB 240-365336/1		8260B							
CCVIS 240-365336/2		8260B		8 uL					
CCV 240-365336/3		8260B							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365336 Batch Start Date: 01/24/19 09:41 Batch Analyst: Williams, Larry

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
LCS 240-365336/6		8260B							
MB 240-365336/8		8260B							
240-107194-B-1	TB-011819	8260B	T						
240-107188-B-1 MS		8260B	T						
240-107188-C-1 MSD		8260B	T						

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 8082A

Polychlorinated Biphenyls (PCBs) (GC) by Method 8082A

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Solid Level: Low

GC Column (2): CLP-1 (0.53 ID: 0.53(mm)

Client Sample ID	Lab Sample ID	TCX2 #	DCBP2 #
WC-EFSOIL-011819	240-107194-2	70	99
	MB 240-365105/23-A	68	87
	LCS 240-365105/24-A	72	94

	QC LIMITS
TCX = Tetrachloro-m-xylene	14-128
DCBP = DCB Decachlorobiphenyl	10-132

Column to be used to flag recovery values

FORM II 8082A

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: P13012444.D

Lab ID: LCS 240-365105/24-A Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Aroclor-1016	1000	620	62	47-120	
Aroclor-1260	1000	785	78	46-120	

Column to be used to flag recovery and RPD values

FORM III 8082A

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: MB 240-365105/23-A

Matrix: Solid Date Extracted: 01/23/2019 06:41

Lab File ID:(1) P13012443.D Lab File ID:(2) P13012443.D

Date Analyzed:(1) 01/24/2019 17:53 Date Analyzed:(2) 01/24/2019 17:53

Instrument ID:(1) A2HP13 Instrument ID:(2) A2HP13

GC Column:(1) CLP-2 (0.53m ID: 0.53(mm) GC Column:(2) CLP-1 (0.53m ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-365105/24-A	01/24/2019 18:11	01/24/2019 18:11
WC-EFSOIL-011819	240-107194-2	01/25/2019 00:18	01/25/2019 00:18

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Sample No.: STD05 240-356910/31 Date Analyzed: 11/26/2018 23:01

Instrument ID: A2HP13 GC Column: CLP-1 (0.53mm) ID: 0.53(mm)

Lab File ID (Standard): P13112631.D Heated Purge: (Y/N) N

Calibration ID: 48135

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		48709486	1.96				
UPPER LIMIT		97418972	2.46				
LOWER LIMIT		24354743	1.46				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-356910/34		50098480	1.96				
ICV 240-356910/35		48125490	1.95				
ICV 240-356910/36		54516689	1.96				
ICV 240-356910/37		52243481	1.96				
ICV 240-356910/38		50625982	1.95				
ICV 240-356910/40		49677450	1.95				
ICV 240-356910/41		47398136	1.95				
ICV 240-356910/43		46242433	1.95				
CCV 240-365410/3 CCVIS		68222589	1.92				
CCVIS 240-365410/28		71873209	1.92				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Sample No.: STD05 240-356910/31 Date Analyzed: 11/26/2018 23:01

Instrument ID: A2HP13 GC Column: CLP-2 (0.53mm) ID: 0.53(mm)

Lab File ID (Standard): P13112631.D Heated Purge: (Y/N) N

Calibration ID: 48136

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		40910703	2.40				
UPPER LIMIT		81821406	2.90				
LOWER LIMIT		20455352	1.90				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-356910/34		42130883	2.40				
ICV 240-356910/35		40380921	2.40				
ICV 240-356910/36		45620153	2.40				
ICV 240-356910/37		43738269	2.40				
ICV 240-356910/38		43079588	2.40				
ICV 240-356910/40		41958703	2.40				
ICV 240-356910/41		40025066	2.40				
ICV 240-356910/43		39241406	2.40				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Sample No.: CCV 240-365410/3 Date Analyzed: 01/24/2019 16:03

Instrument ID: A2HP13 GC Column: CLP-1 (0.53mm) ID: 0.53(mm)

Lab File ID (Standard): P13012437.D Heated Purge: (Y/N) N

Calibration ID: 48135

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		68222589	1.92				
UPPER LIMIT		136445178	2.42				
LOWER LIMIT		34111295	1.42				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-365410/4		70519718	1.92				
CCV 240-365410/5		68213725	1.92				
CCV 240-365410/6		70214866	1.92				
CCV 240-365410/7		70998505	1.92				
MB 240-365105/23-A		79384562	1.92				
LCS 240-365105/24-A		79553805	1.92				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Sample No.: CCVIS 240-365410/28 Date Analyzed: 01/24/2019 23:42

Instrument ID: A2HP13 GC Column: CLP-1 (0.53mm) ID: 0.53(mm)

Lab File ID (Standard): P13012462.D Heated Purge: (Y/N) N

Calibration ID: 48135

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		71873209	1.92				
UPPER LIMIT		143746418	2.42				
LOWER LIMIT		35936605	1.42				
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-107194-2	WC-EFSOIL-011819	79026300	1.92				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 240-365105/24-A

Instrument ID (1): A2HP13 Instrument ID (2): A2HP13

Date Analyzed (1): 01/24/2019 18:11 Date Analyzed (2): 01/24/2019 18:11

GC Column (1): CLP-2 (0.53mm ID: 0.53(mm) GC Column (2): CLP-1 (0.53mm ID: 0.53(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Aroclor-1016	1	1	4.57	4.55	4.59	584	632	1.8
		2	5.17	5.15	5.19	608		
		3	5.81	5.79	5.83	671		
		4	5.99	5.97	6.01	642		
		5	6.32	6.30	6.34	652		
	2	1	3.52	3.50	3.54	579	620	
		2	4.04	4.02	4.06	609		
		3	4.69	4.67	4.71	591		
		4	4.87	4.85	4.89	650		
		5	5.21	5.19	5.23	671		
Aroclor-1260	1	1	8.20	8.18	8.22	741	765	2.5
		2	8.46	8.44	8.48	750		
		3	9.30	9.28	9.32	744		
		4	9.57	9.55	9.58	808		
		5	9.93	9.91	9.95	782		
	2	1	6.97	6.95	6.99	741	785	
		2	7.31	7.29	7.33	754		
		3	7.65	7.62	7.66	779		
		4	8.45	8.43	8.47	830		
		5	8.77	8.75	8.79	819		

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: WC-EFSOIL-011819 | Lab Sample ID: 240-107194-2

Matrix: Solid | Lab File ID: P13012464.D

Analysis Method: 8082A | Date Collected: 01/18/2019 09:30

Extraction Method: 3540C | Date Extracted: 01/23/2019 06:41

Sample wt/vol: 10.02(g) | Date Analyzed: 01/25/2019 00:18

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-1 (0.53mm) ID: 0.53(mm)

% Moisture: 14.7 | GPC Cleanup:(Y/N) N

Analysis Batch No.: 365410 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor-1016	26	U	58	26
11104-28-2	Aroclor-1221	28	U	58	28
11141-16-5	Aroclor-1232	27	U	58	27
53469-21-9	Aroclor-1242	22	U	58	22
12672-29-6	Aroclor-1248	28	U	58	28
11097-69-1	Aroclor-1254	27	U	58	27
11096-82-5	Aroclor-1260	26	U	58	26
37324-23-5	Aroclor-1262	36	U	58	36
11100-14-4	Aroclor-1268	27	U	58	27

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	70		14-128
2051-24-3	DCB Decachlorobiphenyl	99		10-132

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012464.D
Lims ID: 240-107194-C-2-A
Client ID: WC-EFSOIL-011819
Sample Type: Client
Inject. Date: 25-Jan-2019 00:18:39 ALS Bottle#: 64 Worklist Smp#: 30
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0083947-030
Operator ID: Instrument ID: A2HP13

Method: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 25-Jan-2019 10:01:40 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0327

First Level Reviewer: coastc Date: 25-Jan-2019 09:58:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
S 1 Polychlorinated biphenyls, Total						
1		1.000			ND	
* 14 1-Bromo-2-nitrobenzene						
1	1.922	1.923	0.000	79026300	0.0500	
2	2.352	2.353	0.000	49949228	0.0500	
$ 2 Tetrachloro-m-xylene						
1	2.948	2.949	-0.001	21829894	0.0140	
2	3.775	3.775	0.000	13826109	0.0135	
					RPD = 3.24	
3 PCB-1221						
1		3.241			ND	
1		3.459				
1		3.518				
2		4.263				
2		4.479				
2		4.570				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
5 PCB-1242						
1		3.517			ND	
1		4.037				
1		4.691				
1		4.869				
1		5.206				
2		4.568				
2		5.169				
2		5.811				
2		5.991				
2		6.322				
6 PCB-1016						
1		3.517			ND	
1		4.036				
1		4.692				
1		4.869				
1		5.206				
2		4.569				
2		5.169				
2		5.810				
2		5.990				
2		6.321				
4 PCB-1232						
1		3.518			ND	
1		4.038				
1		4.692				
1		4.870				
1		5.206				
2		4.569				
2		5.170				
2		5.812				
2		5.992				
2		6.322				
7 PCB-1248						
1		4.036			ND	
1		5.136				
1		5.973				
1		6.252				
1		6.744				
2		5.170				
2		6.270				
2		6.613				
2		7.158				
2		7.962				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ul	Flags
8 PCB-1254						
1		5.920			ND	
1		6.255				
1		6.744				
1		7.086				
1		7.647				
2		7.151				
2		7.398				
2		7.961				
2		8.241				
2		8.880				
10 PCB-1260						
1		6.971			ND	
1		7.312				
1		7.643				
1		8.449				
1		8.769				
2		8.199				
2		8.462				
2		9.299				
2		9.564				
2		9.928				
9 PCB-1262						
1		7.313			ND	
1		7.788				
1		8.077				
1		8.452				
1		8.817				
2		8.464				
2		8.983				
2		9.302				
2		9.566				
2		9.928				
11 PCB-1268						
1		8.815			ND	
1		8.857				
1		9.066				
1		9.438				
1		9.722				
2		9.923				
2		9.969				
2		10.213				
2		10.478				
2		10.777				
$ 12 DCB Decachlorobiphenyl						
1	9.902	9.903	-0.001	25328746	0.0197	
2	11.017	11.018	-0.001	16919622	0.0209	
					RPD = 6.01	

Reagents:

SGPCBISTD_00017 Amount Added: 5.00 Units: uL Run Reagent

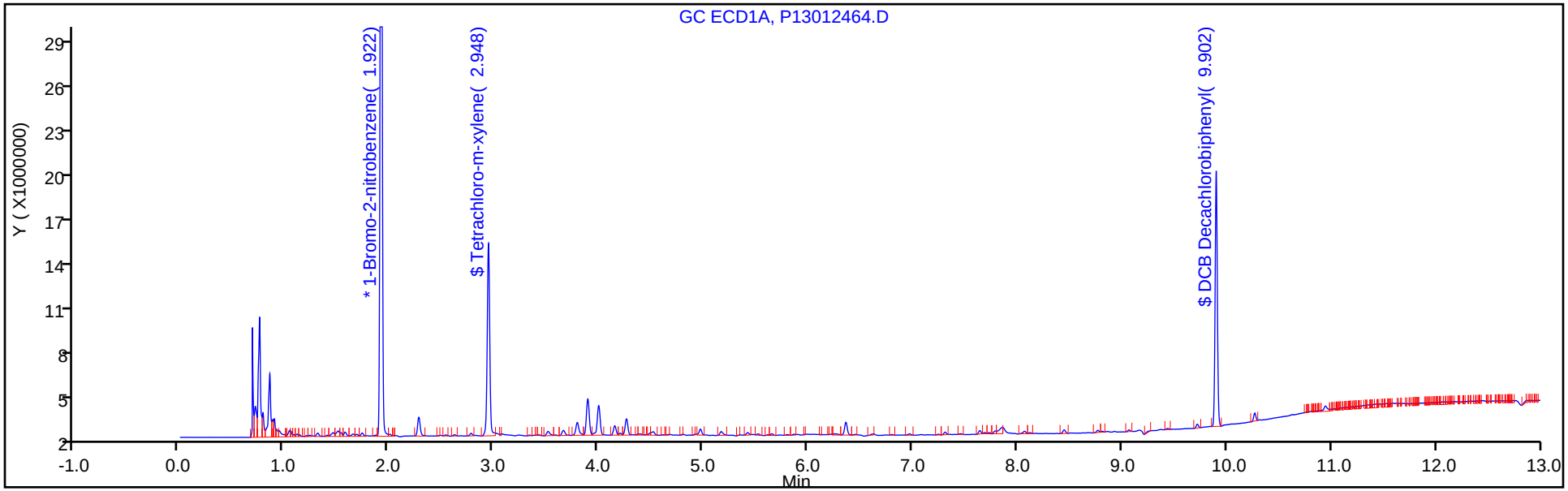
Report Date: 25-Jan-2019 10:01:49 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

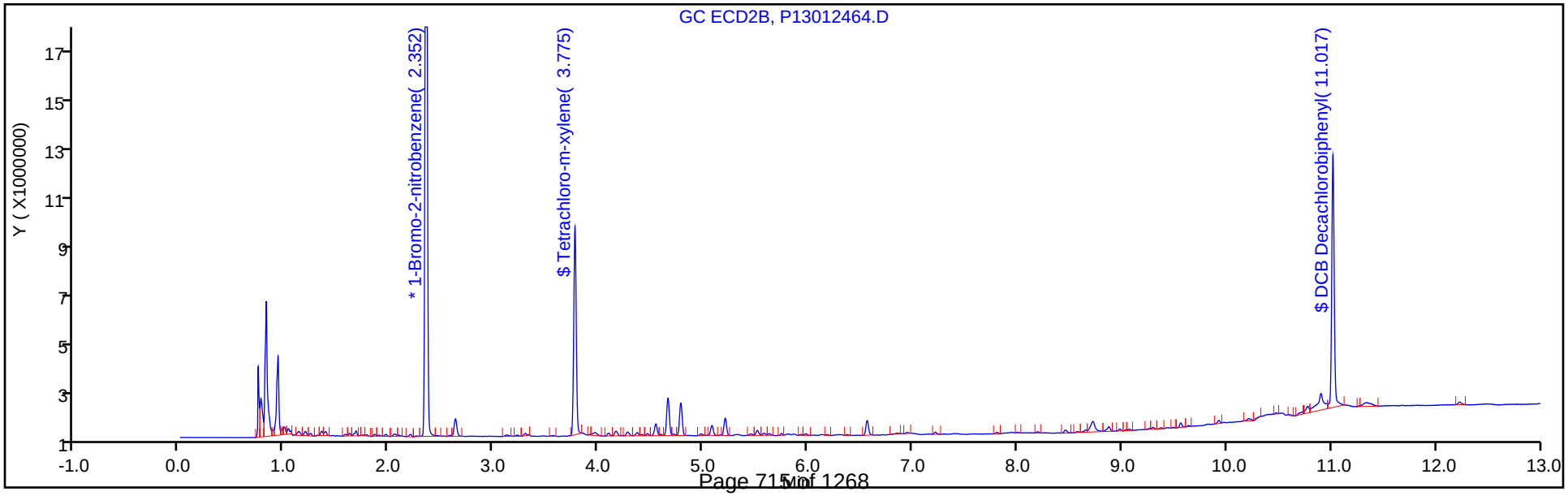
Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012464.D

Injection Date:	25-Jan-2019 00:18:39	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	240-107194-C-2-A	Lab Sample ID:	240-107194-2	Worklist Smp#:	30
Client ID:	WC-EFSOIL-011819				
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	64
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Recovery Report

Data File:	\\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012464.D				
Lims ID:	240-107194-C-2-A				
Client ID:	WC-EFSOIL-011819				
Sample Type:	Client				
Inject. Date:	25-Jan-2019 00:18:39	ALS Bottle#:	64	Worklist Smp#:	30
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	240-0083947-030				
Operator ID:		Instrument ID:	A2HP13		
Method:	\\chromna\Canton\ChromData\A2HP13\20190124-83947.b\PCB13 IS.m				
Limit Group:	GC 8082A IS				
Last Update:	25-Jan-2019 10:01:40	Calib Date:	26-Nov-2018 23:37:52		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D				
Column 1 :			Det: GC ECD1A		
Column 2 :			Det: GC ecd2b		
Process Host:	CTX0327				
First Level Reviewer: coastc		Date:	25-Jan-2019 09:58:59		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0140	69.84
$ 12 DCB Decachlorobiphenyl	0.0200	0.0197	98.55

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0135	67.62
$ 12 DCB Decachlorobiphenyl	0.0200	0.0209	104.66

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 14:45 Calibration End Date: 11/26/2018 16:16 Calibration ID: 48159

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/4	P13112604.D
Level 2	STD01 240-356910/5	P13112605.D
Level 3	STD02 240-356910/6	P13112606.D
Level 4	STD05 240-356910/7	P13112607.D
Level 5	STD1 240-356910/8	P13112608.D
Level 6	STD15 240-356910/9	P13112609.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1232 Peak 1	0.0240 0.0174	0.0228	0.0220	0.0188	0.0190	Ave		0.0207				12.7		20.0			
PCB-1232 Peak 2	0.0192 0.0137	0.0194	0.0179	0.0153	0.0153	Ave		0.0168				14.0		20.0			
PCB-1232 Peak 3	0.0372 0.0293	0.0369	0.0353	0.0309	0.0324	Ave		0.0337				9.7		20.0			
PCB-1232 Peak 4	0.0158 0.0125	0.0161	0.0159	0.0136	0.0139	Ave		0.0146				10.3		20.0			
PCB-1232 Peak 5	0.0055 0.0046	0.0060	0.0058	0.0051	0.0052	Ave		0.0054				9.5		20.0			
PCB-1262 Peak 1	0.0489 0.0398	0.0506	0.0458	0.0429	0.0457	Ave		0.0456				8.6		20.0			
PCB-1262 Peak 2	0.1089 0.0531	0.1004	0.0740	0.0607	0.0624	Lin1	0.0035	0.0543							0.9910		0.9900
PCB-1262 Peak 3	0.0741 0.0459	0.0663	0.0563	0.0503	0.0543	Ave		0.0579				18.1		20.0			
PCB-1262 Peak 4	0.1067 0.0982	0.1157	0.1066	0.1047	0.1160	Ave		0.1080				6.4		20.0			
PCB-1262 Peak 5	0.0461 0.0381	0.0496	0.0446	0.0420	0.0458	Ave		0.0444				8.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 14:45 Calibration End Date: 11/26/2018 16:16 Calibration ID: 48159

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/4	P13112604.D
Level 2	STD01 240-356910/5	P13112605.D
Level 3	STD02 240-356910/6	P13112606.D
Level 4	STD05 240-356910/7	P13112607.D
Level 5	STD1 240-356910/8	P13112608.D
Level 6	STD15 240-356910/9	P13112609.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1232 Peak 1	BNB	Ave	1167022 26280698	2483328	4504224	10216317	19448890	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 2	BNB	Ave	935530 20746797	2106966	3671634	8311953	15676944	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 3	BNB	Ave	1810828 44296187	4009308	7222151	16821898	33189786	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 4	BNB	Ave	767537 18850798	1751659	3249416	7366495	14240122	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 5	BNB	Ave	266274 6954238	651477	1195223	2772317	5331996	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 1	BNB	Ave	2379968 60178777	5501955	9384614	23301615	46822569	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 2	BNB	Lin1	5299052 80183069	10916755	15158193	32998348	63857970	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 3	BNB	Ave	3606381 69358745	7213425	11537281	27332442	55545694	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 4	BNB	Ave	5193519 148312217	12580010	21820453	56927101	118788338	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 5	BNB	Ave	2242228 57615560	5396003	9136358	22838479	46912701	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112604.D
Lims ID: std005 1232 1262
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 26-Nov-2018 14:45:03 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-004
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub1

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:42 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:23:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	48680526	0.0500	0.0500	
2	2.405	2.403	0.003	40530499	0.0500	0.0500	
4 PCB-1232							M
1	3.569	3.569	0.000	1167022	0.0500	0.0580	
1	4.092	4.092	0.000	935530	0.0500	0.0572	
1	4.746	4.746	0.000	1810828	0.0500	0.0552	M
1	4.925	4.925	0.000	767537	0.0500	0.0539	
1	5.259	5.259	0.000	266274	0.0500	0.0509	
		Average of Peak Amounts =				0.0551	
2	4.643	4.643	0.000	1109759	0.0500	0.0600	
2	5.244	5.244	0.000	902984	0.0500	0.0581	
2	5.885	5.885	0.000	1718372	0.0500	0.0586	
2	6.066	6.066	0.000	653033	0.0500	0.0545	
2	6.395	6.395	0.000	342154	0.0500	0.0541	
		Average of Peak Amounts =				0.0571	
						RPD = 3.55	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	7.366	7.366	0.000	2379968	0.0500	0.0536	
1	7.846	7.846	0.000	5299052	0.0500	0.0366	
1	8.128	8.128	0.000	3606381	0.0500	0.0640	
1	8.502	8.502	0.000	5193519	0.0500	0.0494	
1	8.866	8.866	0.000	2242228	0.0500	0.0519	
		Average of Peak Amounts =				0.0511	
2	8.534	8.534	0.000	1845748	0.0500	0.0577	
2	9.051	9.051	0.000	2903770	0.0500	0.0625	
2	9.370	9.370	0.000	2398320	0.0500	0.0579	
2	9.631	9.631	0.000	4477571	0.0500	0.0539	
2	9.993	9.993	0.000	3291400	0.0500	0.0547	
		Average of Peak Amounts =				0.0574	
						RPD = 11.56	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@.05PPM_00013 Amount Added: 1.00 Units: mL

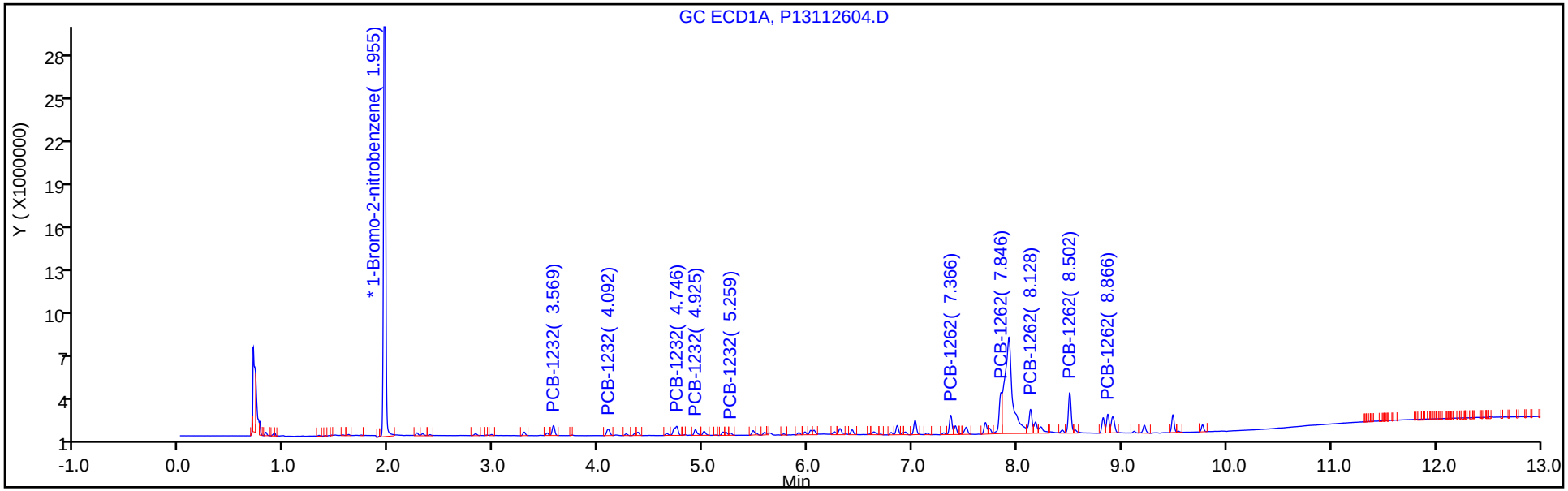
Report Date: 27-Nov-2018 10:37:44 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

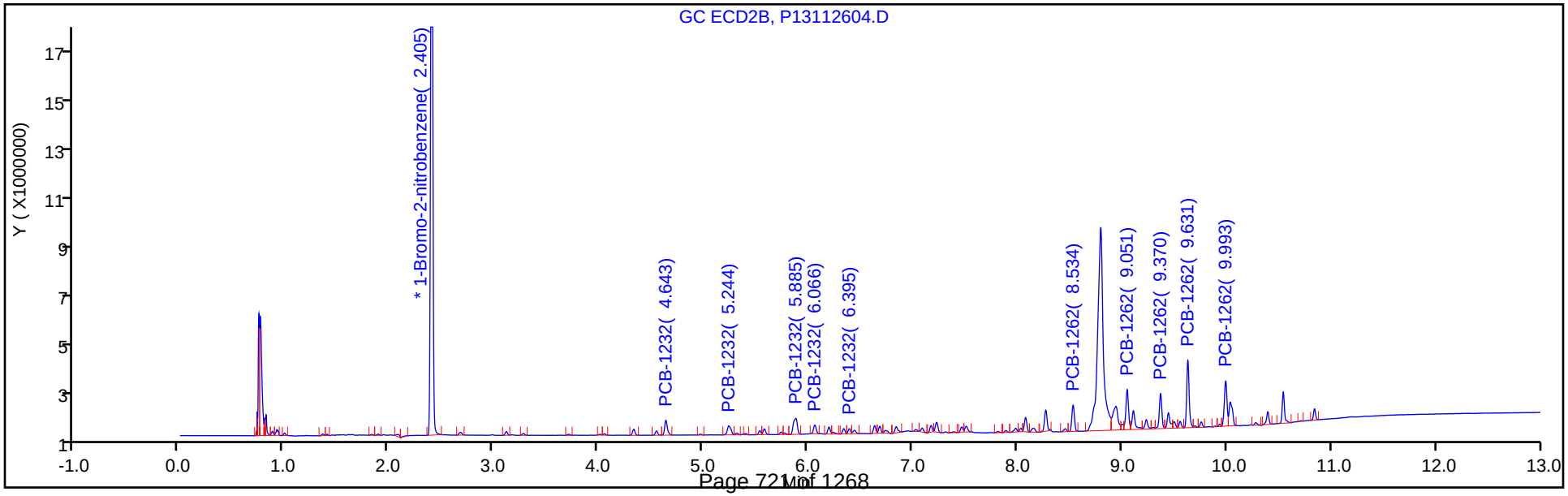
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112604.D

Injection Date:	26-Nov-2018 14:45:03	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std005 1232 1262			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



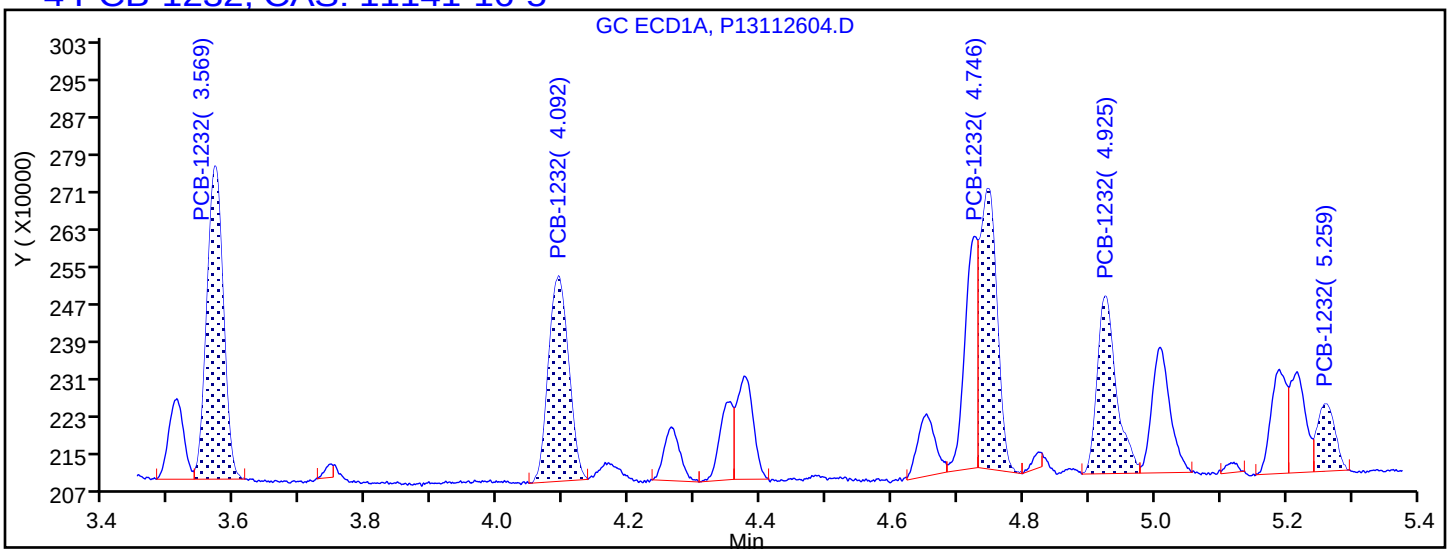
Report Date: 27-Nov-2018 10:37:44 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112604.D

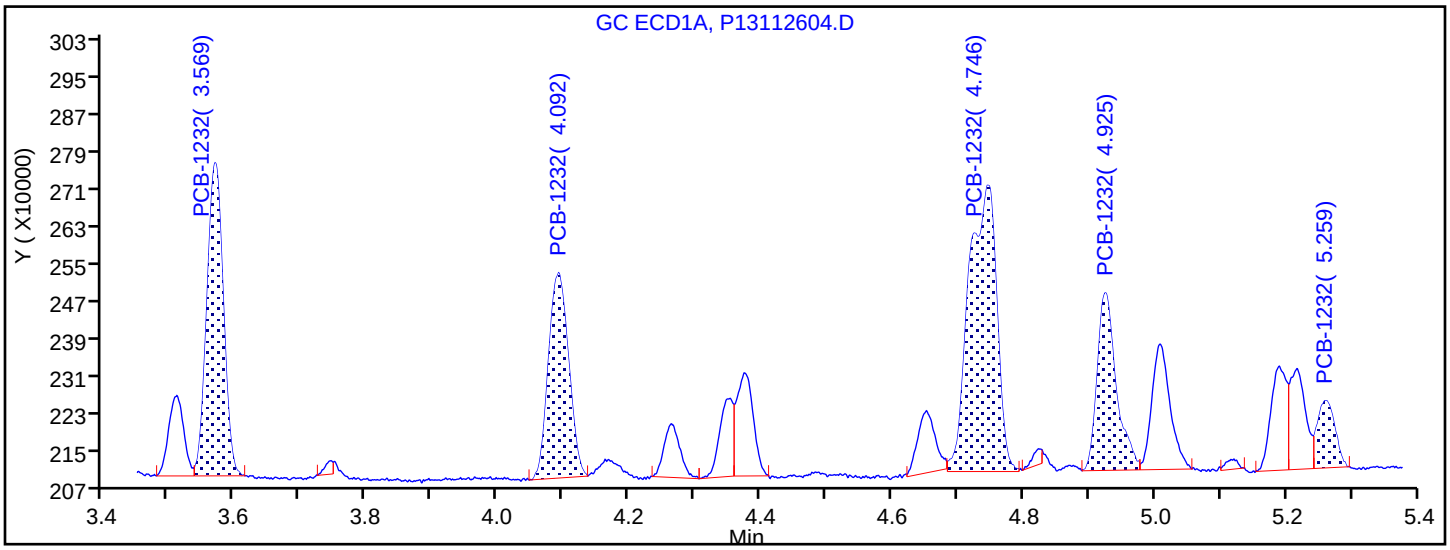
Injection Date:	26-Nov-2018 14:45:03	Instrument ID:	A2HP13
Lims ID:	std005 1232 1262		
Client ID:			
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	PCB13 IS	Limit Group:	GC 8082A IS
Column:		Detector	GC ECD1A

4 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.569	Response = 1167022
4.092	Response = 935530
4.746	Response = 1079973
4.925	Response = 767537
5.259	Response = 266274



Manual Integration Results

3.569	Response = 1167022	
4.092	Response = 935530	
4.746	Response = 1810828	M
4.925	Response = 767537	
5.259	Response = 266274	

Reviewer: hassl, 27-Nov-2018 06:23:28

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112605.D
Lims ID: std01 1232 1262
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Nov-2018 15:03:32 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-005
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub1

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:35 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:24:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.956	1.955	0.001	54375656	0.0500	0.0500	
2	2.406	2.403	0.003	45447118	0.0500	0.0500	
4 PCB-1232							M
1	3.569	3.569	0.000	2483328	0.1000	0.1105	
1	4.091	4.092	-0.001	2106966	0.1000	0.1153	
1	4.748	4.746	0.002	4009308	0.1000	0.1095	M
1	4.926	4.925	0.001	1751659	0.1000	0.1102	
1	5.263	5.259	0.004	651477	0.1000	0.1116	
		Average of Peak Amounts =				0.1114	
2	4.644	4.643	0.001	2349316	0.1000	0.1132	
2	5.244	5.244	0.000	2004753	0.1000	0.1150	
2	5.886	5.885	0.001	3701415	0.1000	0.1126	
2	6.066	6.066	0.000	1459200	0.1000	0.1085	
2	6.396	6.395	0.001	821208	0.1000	0.1159	
		Average of Peak Amounts =				0.1130	
						RPD = 1.45	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	7.366	7.366	0.000	5501955	0.1000	0.1109	
1	7.841	7.846	-0.005	10916755	0.1000	0.1212	
1	8.128	8.128	0.000	7213425	0.1000	0.1146	
1	8.502	8.502	0.000	12580010	0.1000	0.1071	
1	8.866	8.866	0.000	5396003	0.1000	0.1118	
		Average of Peak Amounts =				0.1131	
2	8.535	8.534	0.001	4152583	0.1000	0.1158	
2	9.051	9.051	0.000	6074895	0.1000	0.1166	
2	9.370	9.370	0.000	5415447	0.1000	0.1166	
2	9.631	9.631	0.000	10395527	0.1000	0.1116	
2	9.992	9.993	-0.001	7656908	0.1000	0.1136	
		Average of Peak Amounts =				0.1149	
						RPD = 1.51	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@0.1PPM_00014 Amount Added: 1.00 Units: mL

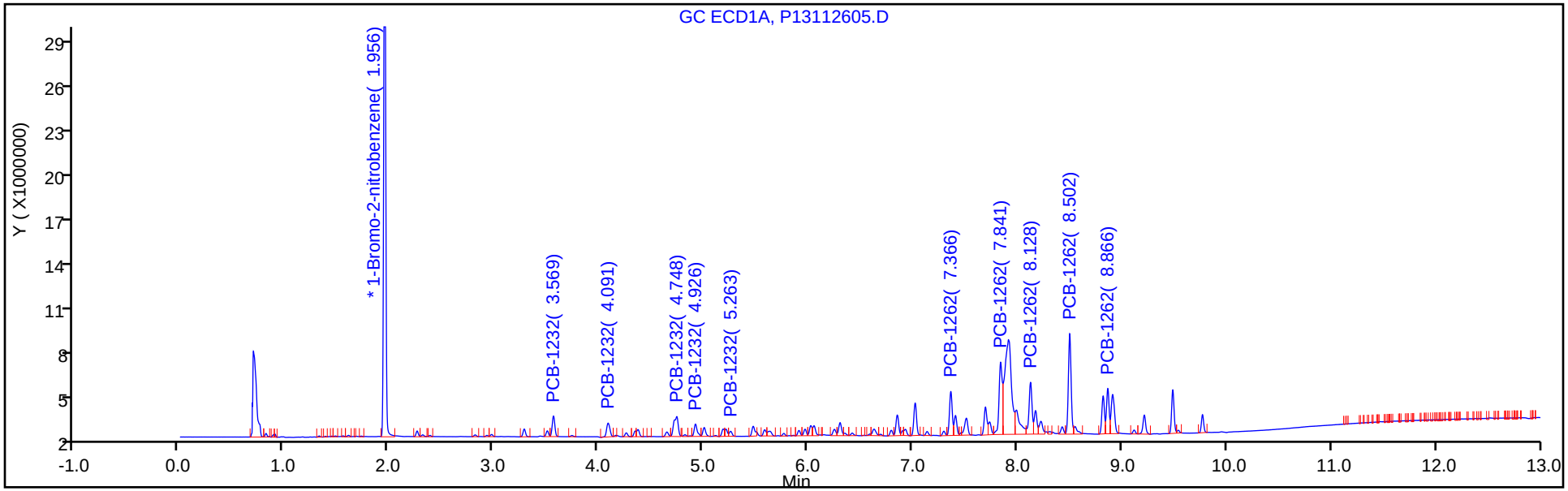
Report Date: 27-Nov-2018 10:37:37 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

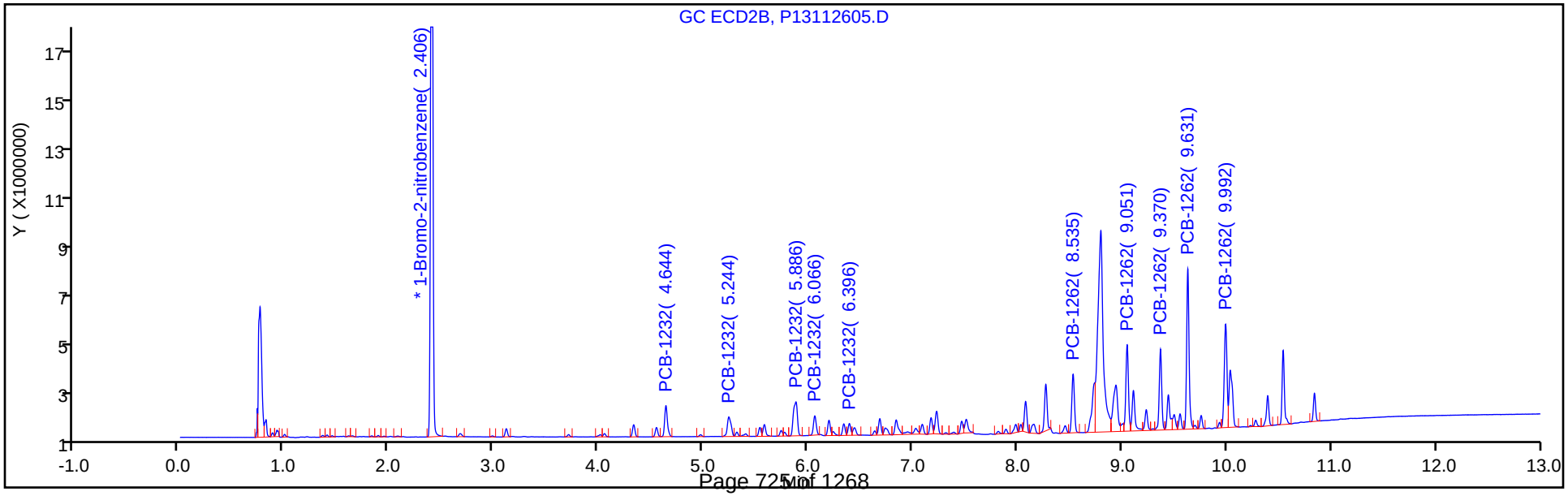
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112605.D

Injection Date:	26-Nov-2018 15:03:32	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std01 1232 1262			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:37:37 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112605.D

Injection Date: 26-Nov-2018 15:03:32 Instrument ID: A2HP13

Lims ID: std01 1232 1262

Client ID:

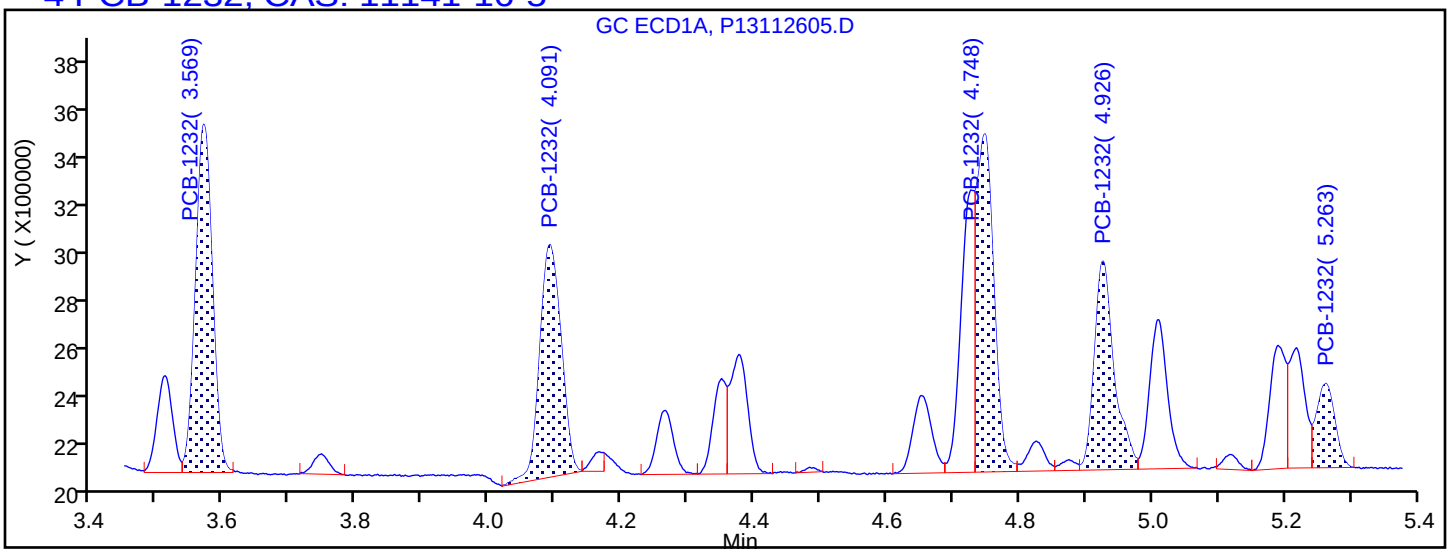
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

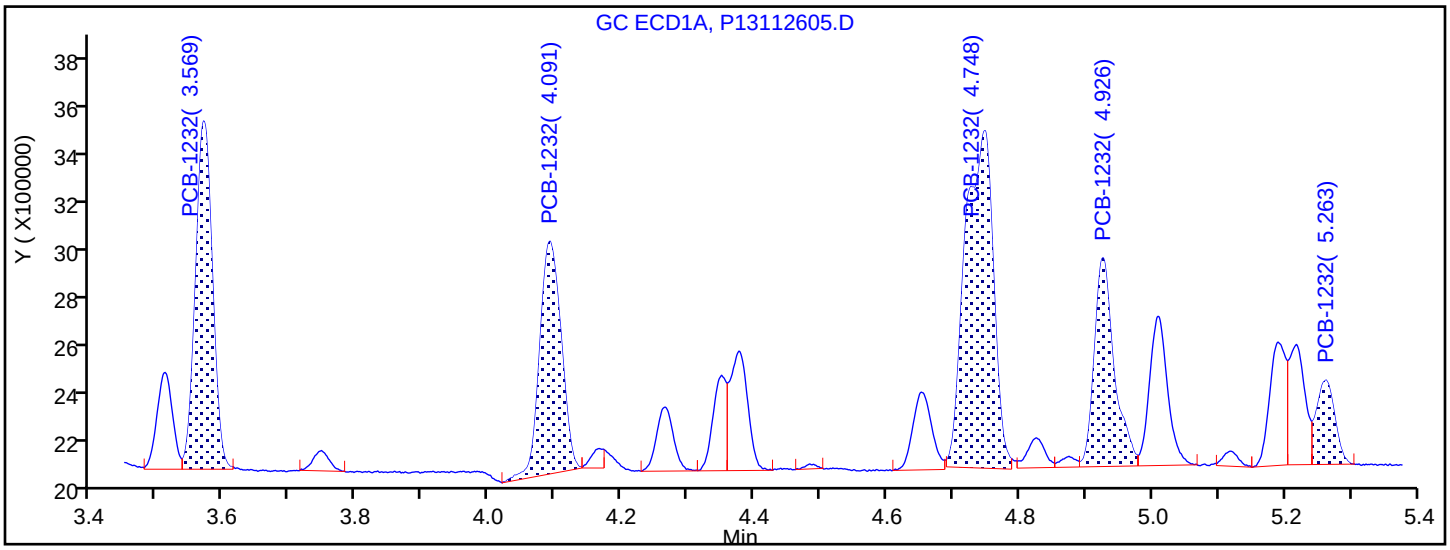
Column: Detector GC ECD1A

4 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.569	Response = 2483328
4.091	Response = 2106966
4.748	Response = 2434168
4.926	Response = 1751659
5.263	Response = 651477



Manual Integration Results

3.569	Response = 2483328	
4.091	Response = 2106966	
4.748	Response = 4009308	M
4.926	Response = 1751659	
5.263	Response = 651477	

Reviewer: hassl, 27-Nov-2018 06:24:20

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112606.D
Lims ID: std02 1232 1262
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Nov-2018 15:21:52 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-006
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub1

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:28 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:25:43

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	51188723	0.0500	0.0500	
2	2.405	2.403	0.002	42742430	0.0500	0.0500	
4 PCB-1232							M
1	3.569	3.569	0.000	4504224	0.2000	0.2129	
1	4.091	4.092	-0.001	3671634	0.2000	0.2133	
1	4.747	4.746	0.001	7222151	0.2000	0.2095	M
1	4.926	4.925	0.001	3249416	0.2000	0.2172	M
1	5.261	5.259	0.002	1195223	0.2000	0.2175	
		Average of Peak Amounts =				0.2141	
2	4.644	4.643	0.001	4194538	0.2000	0.2149	
2	5.244	5.244	0.000	3542116	0.2000	0.2161	
2	5.886	5.885	0.001	6466635	0.2000	0.2091	
2	6.067	6.066	0.001	2765136	0.2000	0.2187	
2	6.397	6.395	0.002	1452870	0.2000	0.2179	
		Average of Peak Amounts =				0.2154	
					RPD =	0.59	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	7.366	7.366	0.000	9384614	0.2000	0.2009	
1	7.840	7.846	-0.006	15158193	0.2000	0.2090	
1	8.127	8.128	-0.001	11537281	0.2000	0.1947	
1	8.502	8.502	0.000	21820453	0.2000	0.1974	
1	8.866	8.866	0.000	9136358	0.2000	0.2011	
		Average of Peak Amounts =				0.2006	
2	8.535	8.534	0.001	6919881	0.2000	0.2053	
2	9.051	9.051	0.000	9672951	0.2000	0.1974	
2	9.370	9.370	0.000	8707033	0.2000	0.1993	
2	9.631	9.631	0.000	17382218	0.2000	0.1985	
2	9.993	9.993	0.000	12727725	0.2000	0.2007	
		Average of Peak Amounts =				0.2002	
						RPD = 0.20	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@.2PPM_00016 Amount Added: 1.00 Units: mL

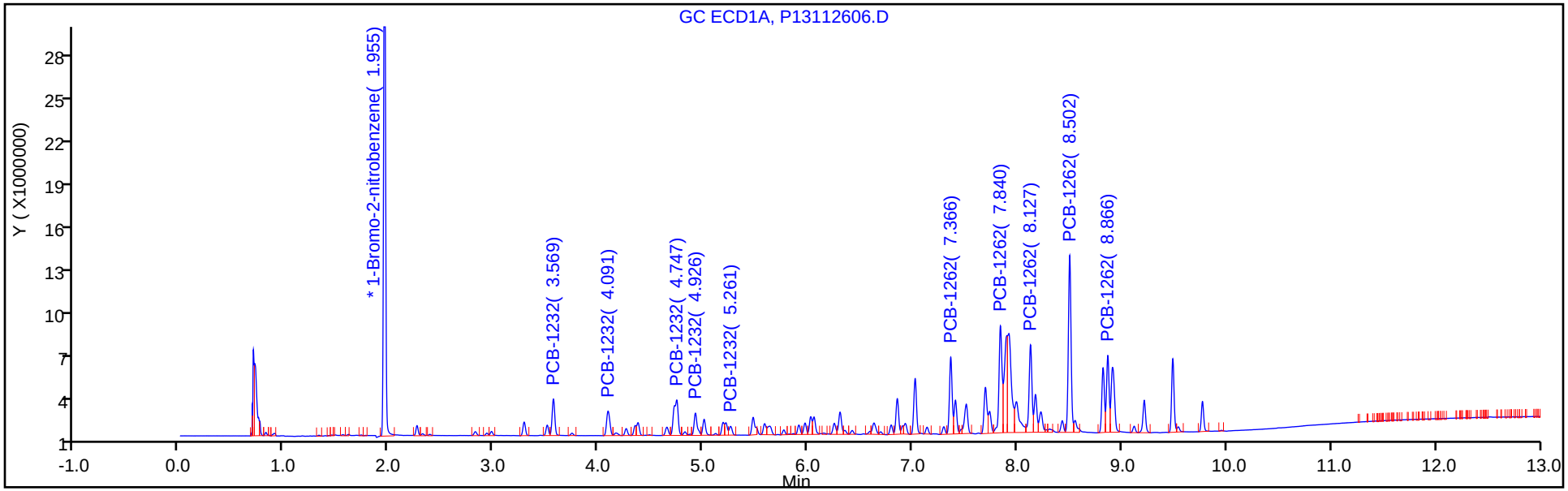
Report Date: 27-Nov-2018 10:37:30 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

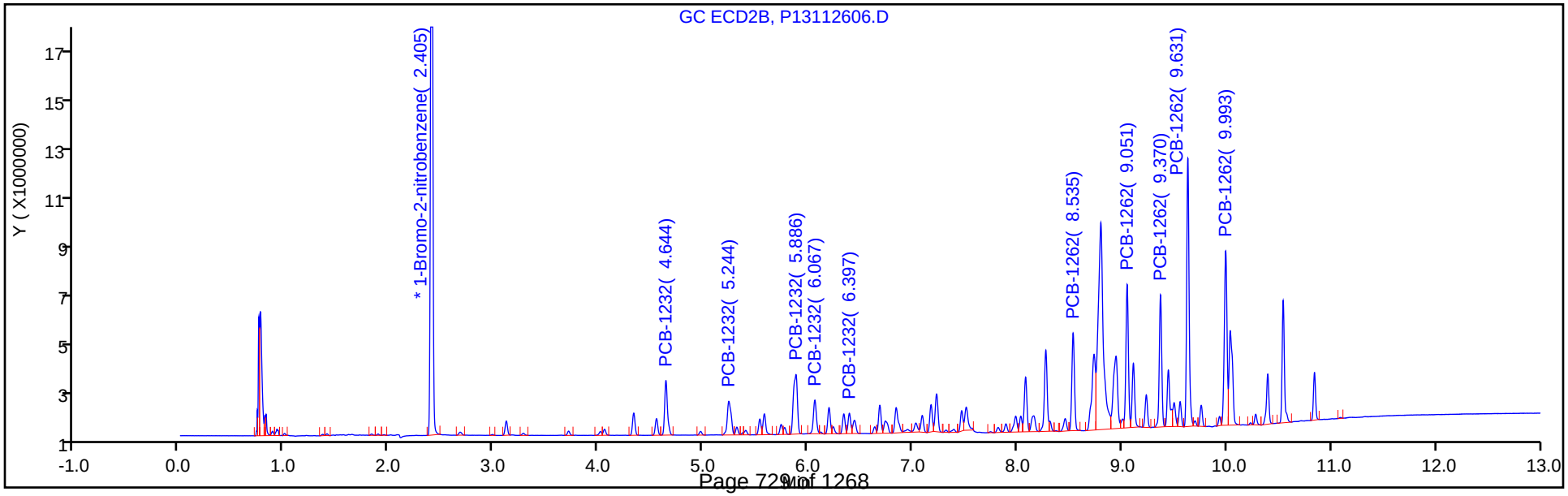
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112606.D

Injection Date:	26-Nov-2018 15:21:52	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std02 1232 1262			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:37:30 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112606.D

Injection Date: 26-Nov-2018 15:21:52 Instrument ID: A2HP13

Lims ID: std02 1232 1262

Client ID:

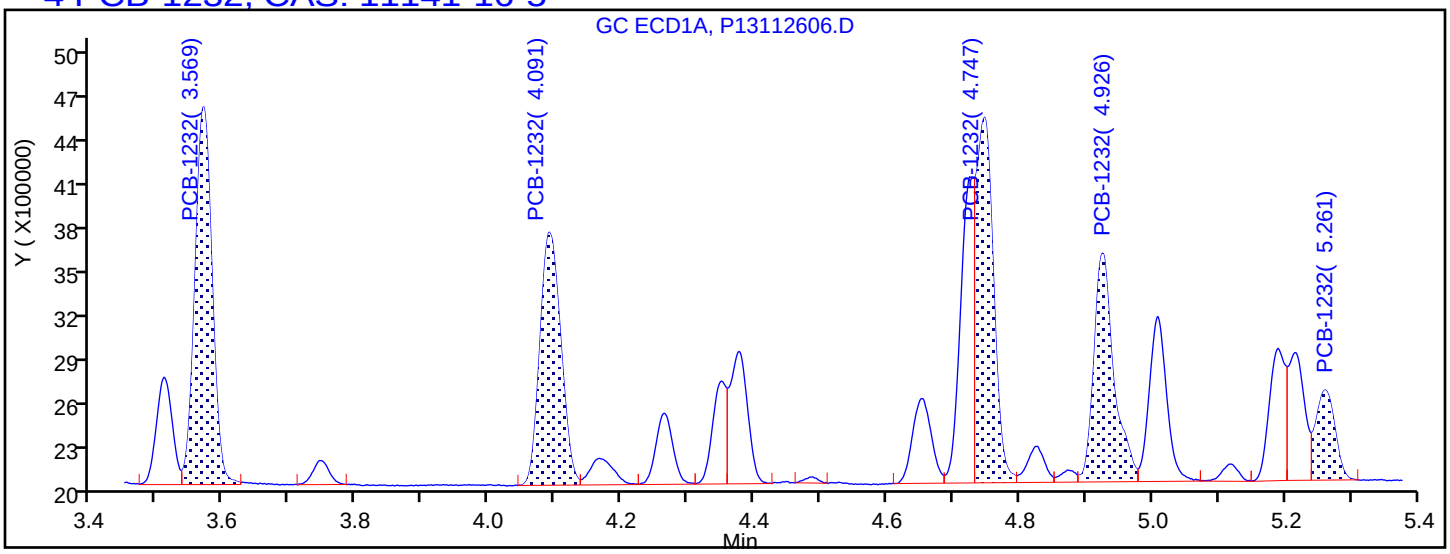
Operator ID: ALS Bottle#: 6 Worklist Smp#: 6

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

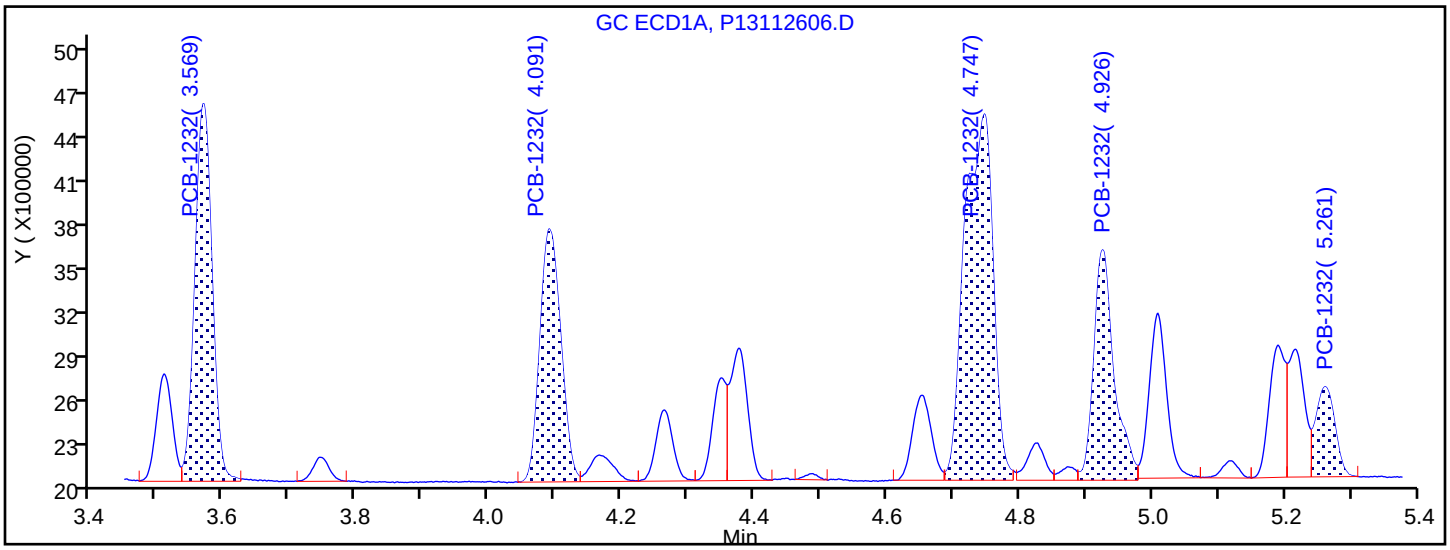
Column: Detector GC ECD1A

4 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.569	Response = 4504224
4.091	Response = 3671634
4.747	Response = 4367168
4.926	Response = 3188371
5.261	Response = 1195223



Manual Integration Results

3.569	Response = 4504224	
4.091	Response = 3671634	
4.747	Response = 7222151	M
4.926	Response = 3249416	M
5.261	Response = 1195223	

Reviewer: hassl, 27-Nov-2018 06:25:25

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112607.D
Lims ID: std05 1232 1262
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Nov-2018 15:40:11 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-007
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub1

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:21 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:26:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	54361774	0.0500	0.0500	
2	2.404	2.403	0.002	45270944	0.0500	0.0500	
4 PCB-1232							M
1	3.568	3.569	-0.001	10216317	0.5000	0.4547	
1	4.090	4.092	-0.002	8311953	0.5000	0.4548	
1	4.747	4.746	0.001	16821898	0.5000	0.4595	M
1	4.925	4.925	0.000	7366495	0.5000	0.4636	
1	5.260	5.259	0.001	2772317	0.5000	0.4750	
		Average of Peak Amounts =				0.4615	
2	4.643	4.643	0.000	9233170	0.5000	0.4466	
2	5.244	5.244	0.000	7888327	0.5000	0.4544	
2	5.884	5.885	-0.001	14722121	0.5000	0.4495	
2	6.065	6.066	-0.001	6284114	0.5000	0.4692	
2	6.396	6.395	0.001	3297429	0.5000	0.4670	
		Average of Peak Amounts =				0.4574	
						RPD = 0.91	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	7.364	7.366	-0.002	23301615	0.5000	0.4697	
1	7.839	7.846	-0.007	32998348	0.5000	0.4953	
1	8.127	8.128	-0.001	27332442	0.5000	0.4344	
1	8.499	8.502	-0.003	56927101	0.5000	0.4849	
1	8.865	8.866	-0.001	22838479	0.5000	0.4733	
		Average of Peak Amounts =				0.4716	
2	8.533	8.534	-0.001	16276404	0.5000	0.4558	
2	9.049	9.051	-0.002	22927880	0.5000	0.4417	
2	9.369	9.370	-0.001	20978989	0.5000	0.4534	
2	9.629	9.631	-0.002	43353511	0.5000	0.4674	
2	9.991	9.993	-0.002	31340177	0.5000	0.4667	
		Average of Peak Amounts =				0.4570	
						RPD = 3.13	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@0.5PPM_00030 Amount Added: 1.00 Units: mL

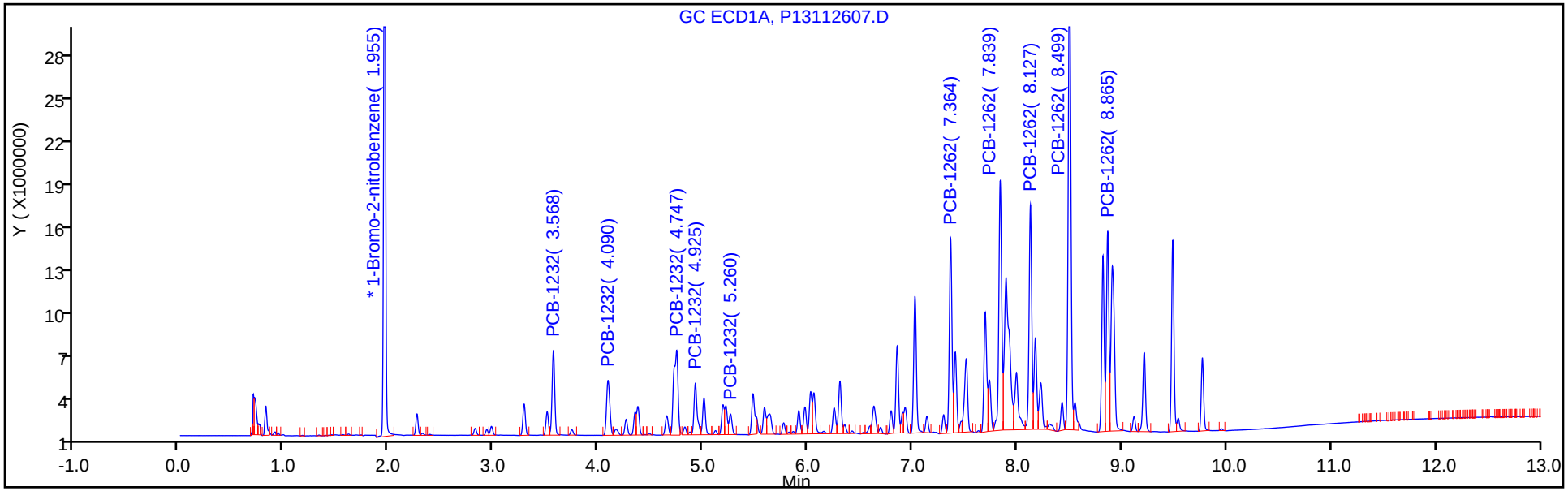
Report Date: 27-Nov-2018 10:37:23 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

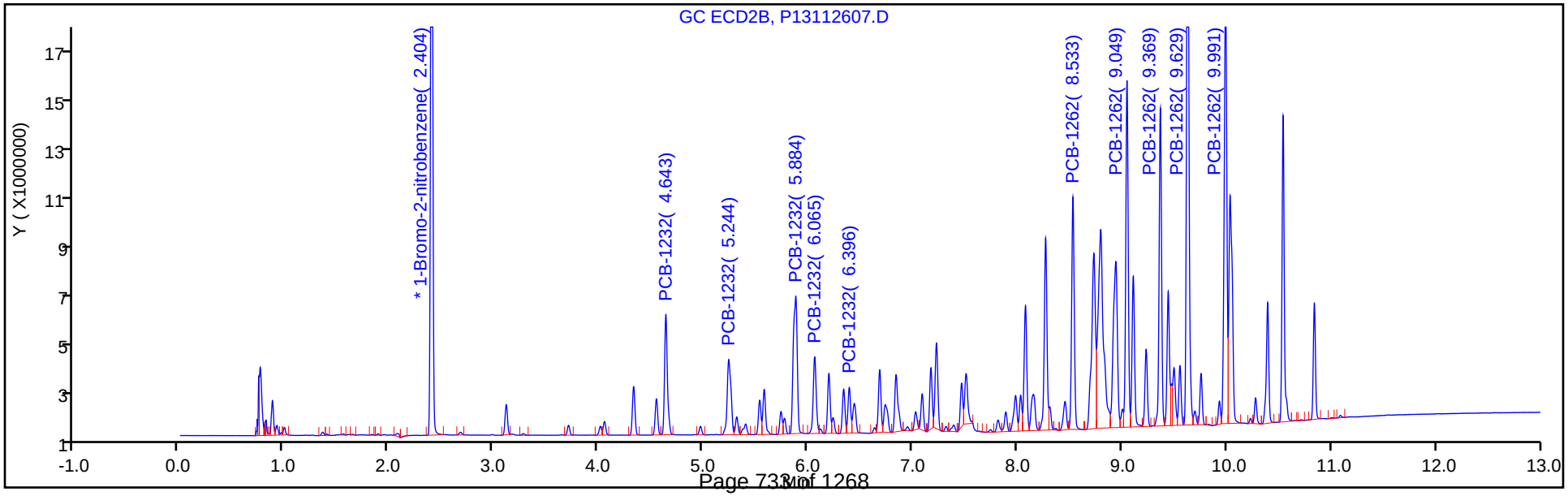
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112607.D

Injection Date:	26-Nov-2018 15:40:11	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std05 1232 1262			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:37:23 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112607.D

Injection Date: 26-Nov-2018 15:40:11 Instrument ID: A2HP13

Lims ID: std05 1232 1262

Client ID:

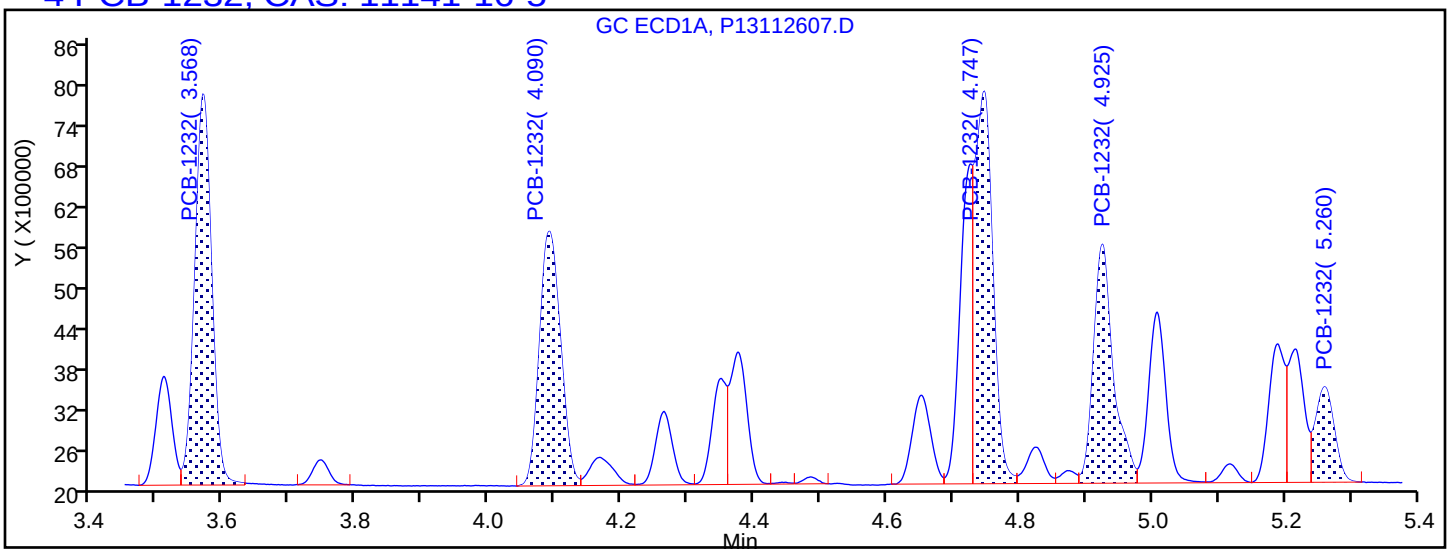
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

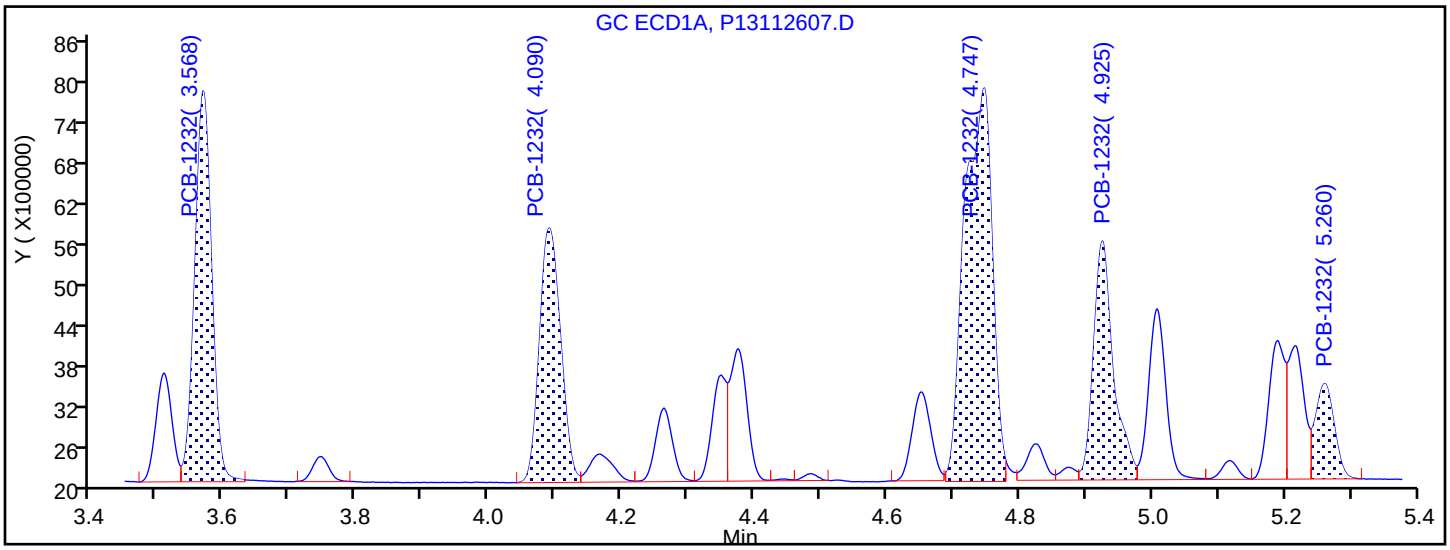
Column: Detector GC ECD1A

4 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.568	Response = 10216317
4.090	Response = 8311953
4.747	Response = 10881790
4.925	Response = 7366495
5.260	Response = 2772317



Manual Integration Results

3.568	Response = 10216317	
4.090	Response = 8311953	
4.747	Response = 16821898	M
4.925	Response = 7366495	
5.260	Response = 2772317	

Reviewer: hassl, 27-Nov-2018 06:26:07

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112608.D
Lims ID: std1 1232 1262
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Nov-2018 15:58:29 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-008
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub1

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:14 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:26:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.956	1.955	0.001	51181324	0.0500	0.0500	
2	2.405	2.403	0.003	42570131	0.0500	0.0500	
4 PCB-1232							M
1	3.569	3.569	0.000	19448890	1.00	0.9194	
1	4.091	4.092	-0.001	15676944	1.00	0.9111	
1	4.747	4.746	0.001	33189786	1.00	0.9630	M
1	4.925	4.925	0.000	14240122	1.00	0.9519	M
1	5.262	5.259	0.003	5331996	1.00	0.9703	
		Average of Peak Amounts =				0.9432	
2	4.643	4.643	0.000	17439317	1.00	0.8971	
2	5.244	5.244	0.000	14764909	1.00	0.9044	
2	5.885	5.885	0.000	28865158	1.00	0.9373	
2	6.065	6.066	-0.001	12009123	1.00	0.9536	
2	6.396	6.395	0.001	6200801	1.00	0.9339	
		Average of Peak Amounts =				0.9253	
						RPD = 1.91	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	7.364	7.366	-0.002	46822569	1.00	1.00	
1	7.837	7.846	-0.009	63857970	1.00	1.09	
1	8.126	8.128	-0.002	55545694	1.00	0.9377	
1	8.500	8.502	-0.002	118788338	1.00	1.07	
1	8.864	8.866	-0.002	46912701	1.00	1.03	
		Average of Peak Amounts =				1.03	
2	8.534	8.534	0.000	31808638	1.00	0.9474	
2	9.049	9.051	-0.002	45434271	1.00	0.9309	
2	9.369	9.370	-0.001	41899424	1.00	0.9630	
2	9.629	9.631	-0.002	88833064	1.00	1.02	
2	9.991	9.993	-0.002	63048012	1.00	1.00	
		Average of Peak Amounts =				0.9717	
						RPD = 5.50	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@1.0PPM_00019 Amount Added: 1.00 Units: mL

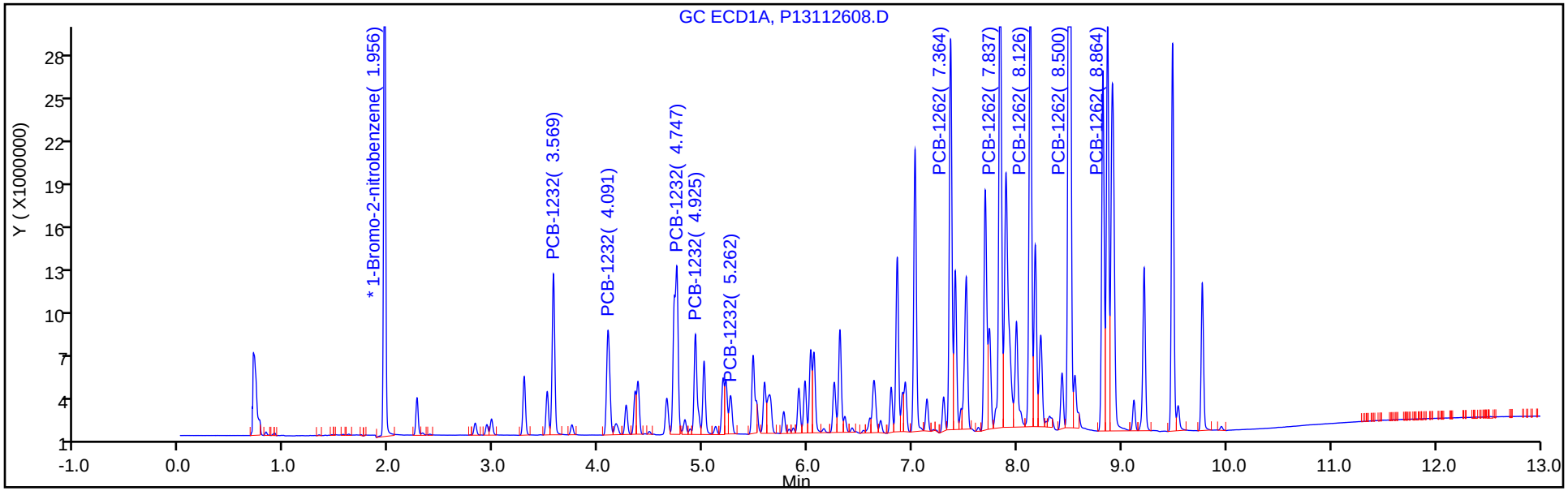
Report Date: 27-Nov-2018 10:37:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

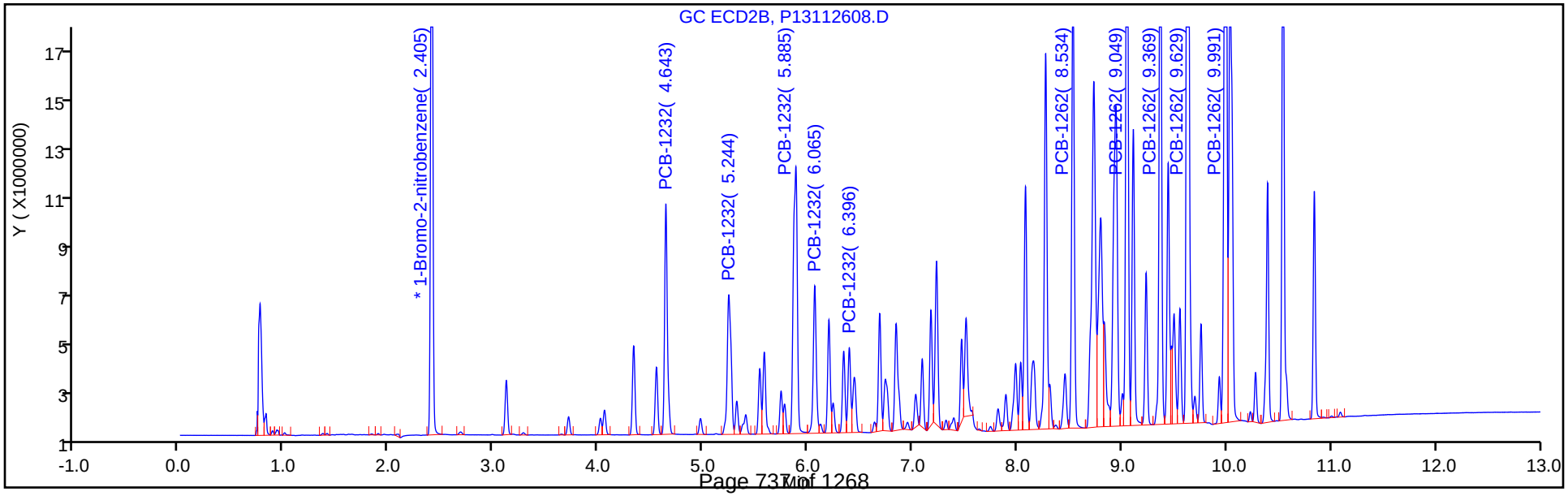
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112608.D

Injection Date:	26-Nov-2018 15:58:29	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std1 1232 1262			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:37:17 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112608.D

Injection Date: 26-Nov-2018 15:58:29 Instrument ID: A2HP13

Lims ID: std1 1232 1262

Client ID:

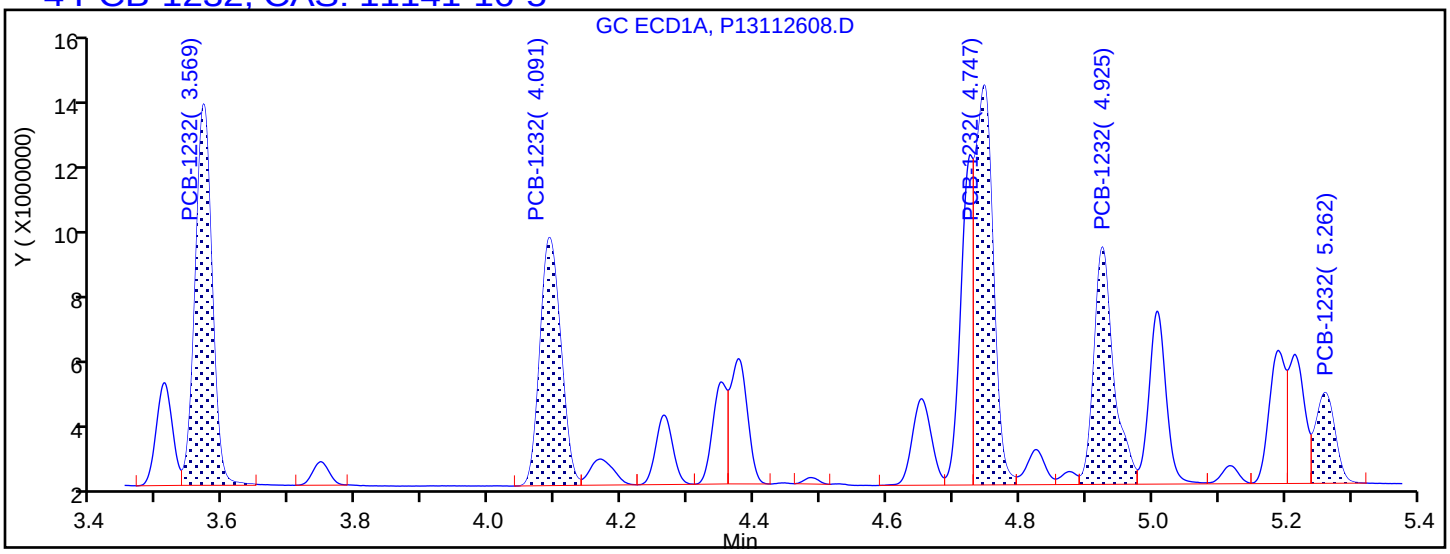
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

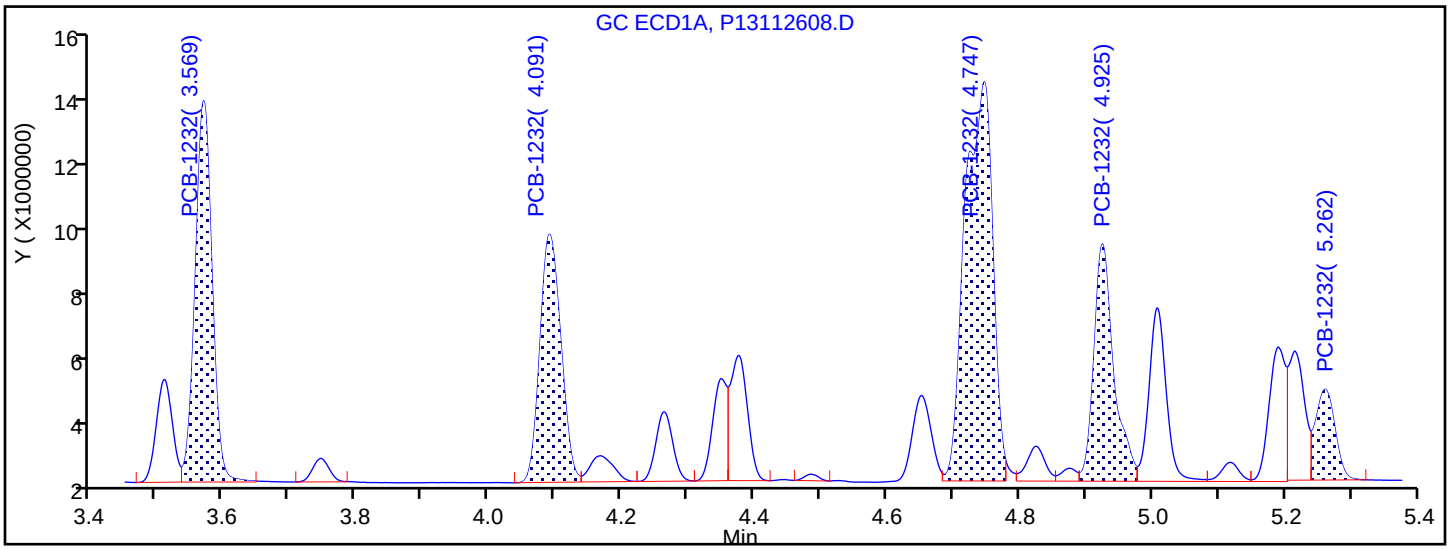
Column: Detector GC ECD1A

4 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.569	Response = 19448890
4.091	Response = 15676944
4.747	Response = 21631815
4.925	Response = 14213612
5.262	Response = 5331996



Manual Integration Results

3.569	Response = 19448890	
4.091	Response = 15676944	
4.747	Response = 33189786	M
4.925	Response = 14240122	M
5.262	Response = 5331996	

Reviewer: hassl, 27-Nov-2018 06:26:51

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112609.D
Lims ID: std15 1232 1262
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Nov-2018 16:16:58 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-009
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub1

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:07 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:28:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	50365897	0.0500	0.0500	
2	2.404	2.403	0.002	42293901	0.0500	0.0500	
4 PCB-1232							M
1	3.569	3.569	0.000	26280698	1.50	1.26	
1	4.090	4.092	-0.002	20746797	1.50	1.23	
1	4.746	4.746	0.000	44296187	1.50	1.31	M
1	4.924	4.925	-0.001	18850798	1.50	1.28	M
1	5.260	5.259	0.001	6954238	1.50	1.29	
		Average of Peak Amounts =				1.27	
2	4.643	4.643	0.000	23281705	1.50	1.21	
2	5.243	5.244	-0.001	19323392	1.50	1.19	
2	5.884	5.885	-0.001	37636304	1.50	1.23	
2	6.065	6.066	-0.001	15764638	1.50	1.26	
2	6.395	6.395	0.000	7927861	1.50	1.20	
		Average of Peak Amounts =				1.22	
						RPD = 4.36	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	7.364	7.366	-0.002	60178777	1.50	1.31	
1	7.838	7.846	-0.008	80183069	1.50	1.40	
1	8.126	8.128	-0.002	69358745	1.50	1.19	
1	8.500	8.502	-0.002	148312217	1.50	1.36	
1	8.865	8.866	-0.001	57615560	1.50	1.29	
		Average of Peak Amounts =				1.31	
2	8.533	8.534	-0.001	40095683	1.50	1.20	
2	9.049	9.051	-0.002	56949144	1.50	1.17	
2	9.369	9.370	-0.001	52507529	1.50	1.21	
2	9.630	9.631	-0.001	111660201	1.50	1.29	
2	9.992	9.993	-0.001	78461932	1.50	1.25	
		Average of Peak Amounts =				1.23	
						RPD = 6.68	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@1.5PPM_00004 Amount Added: 1.00 Units: mL

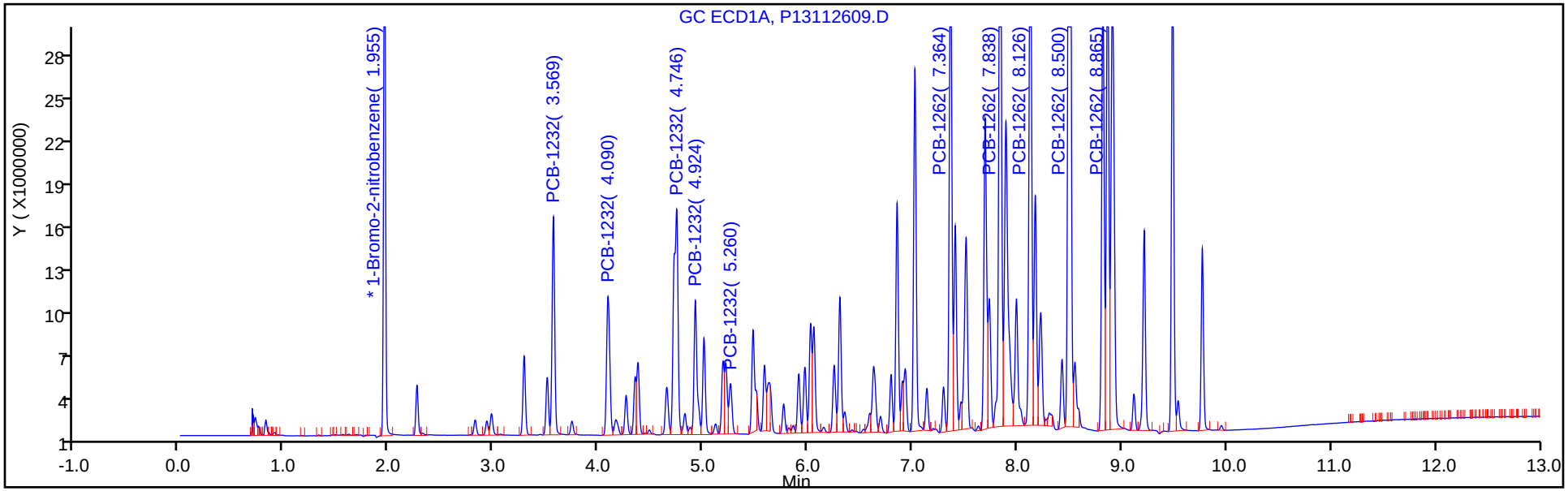
Report Date: 27-Nov-2018 10:37:09 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

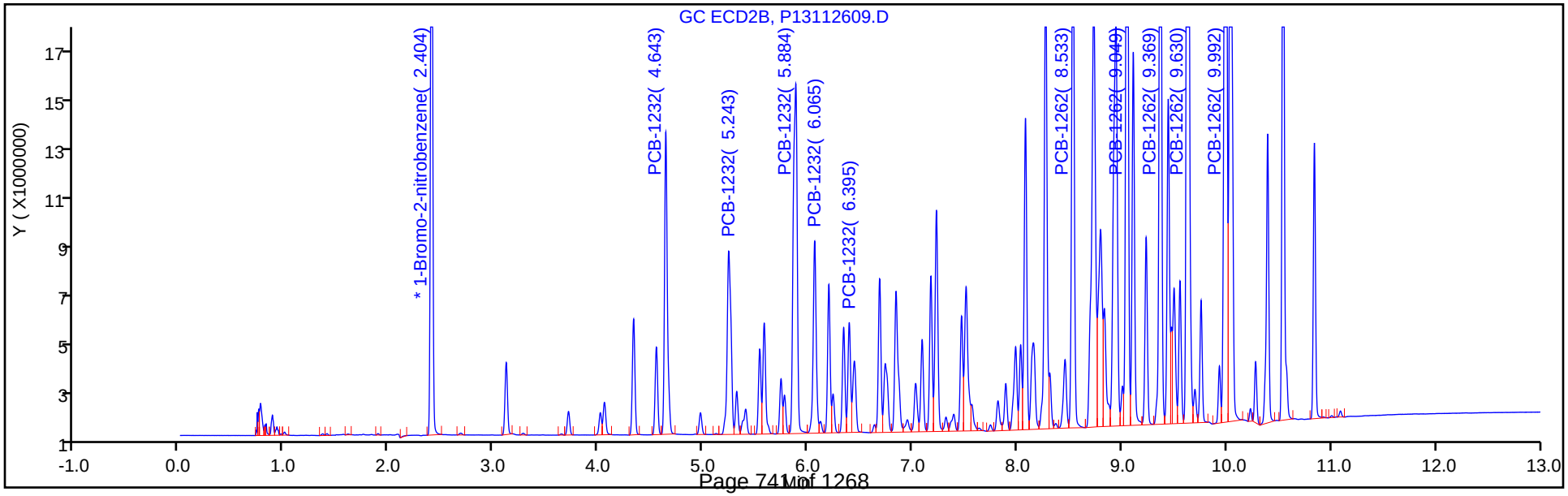
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112609.D

Injection Date:	26-Nov-2018 16:16:58	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std15 1232 1262			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:37:09 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112609.D

Injection Date: 26-Nov-2018 16:16:58 Instrument ID: A2HP13

Lims ID: std15 1232 1262

Client ID:

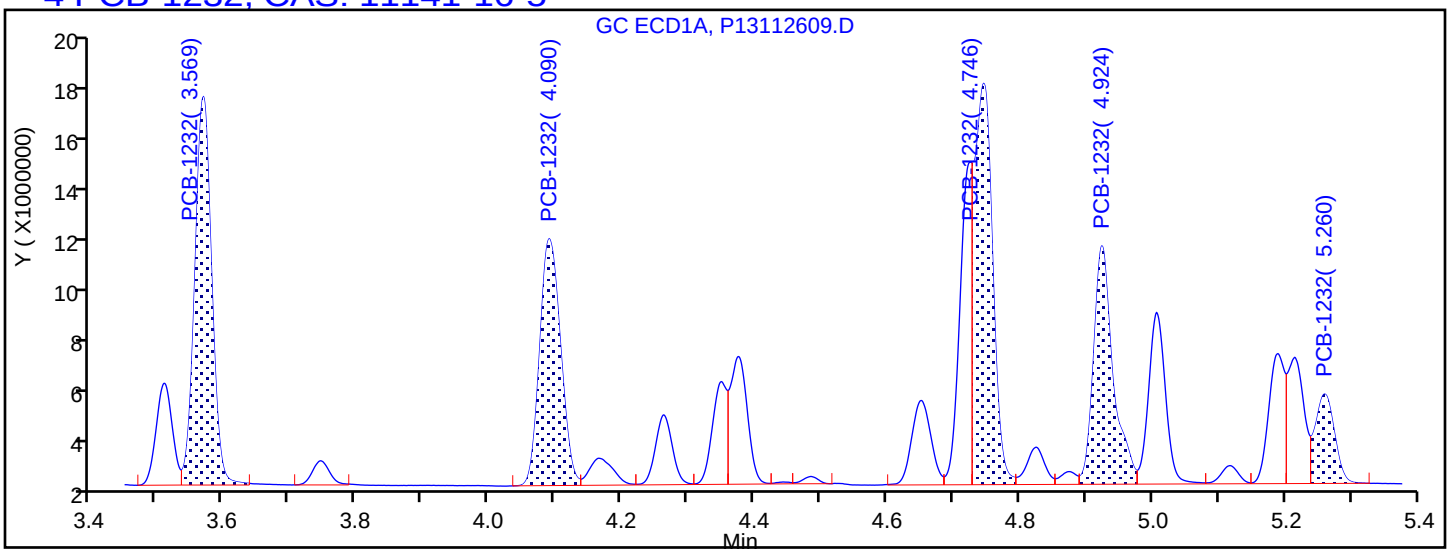
Operator ID: ALS Bottle#: 9 Worklist Smp#: 9

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

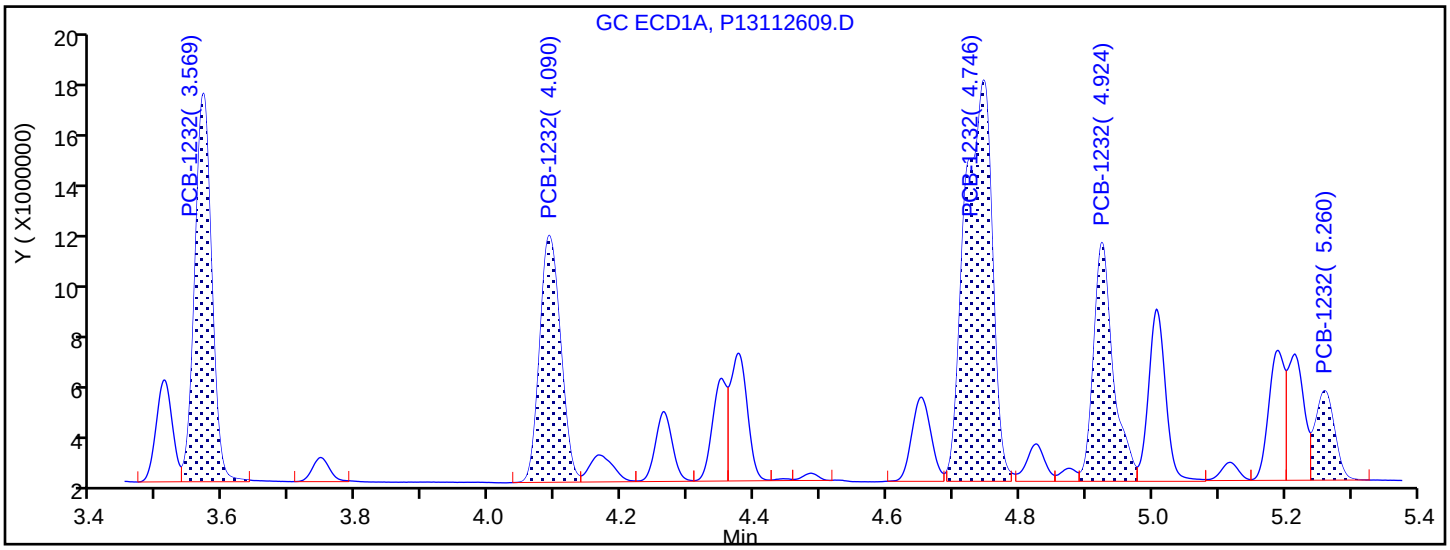
Column: Detector GC ECD1A

4 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.569	Response = 26280698
4.090	Response = 20746797
4.746	Response = 29302026
4.924	Response = 18774298
5.260	Response = 6954238



Manual Integration Results

3.569	Response = 26280698	
4.090	Response = 20746797	
4.746	Response = 44296187	M
4.924	Response = 18850798	M
5.260	Response = 6954238	

Reviewer: hassl, 27-Nov-2018 06:28:15

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 14:45 Calibration End Date: 11/26/2018 16:16 Calibration ID: 48160

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/4	P13112604.D
Level 2	STD01 240-356910/5	P13112605.D
Level 3	STD02 240-356910/6	P13112606.D
Level 4	STD05 240-356910/7	P13112607.D
Level 5	STD1 240-356910/8	P13112608.D
Level 6	STD15 240-356910/9	P13112609.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1232 Peak 1	0.0274 0.0183	0.0258	0.0245	0.0204	0.0205	Ave		0.0228				15.7		20.0			
PCB-1232 Peak 2	0.0223 0.0152	0.0221	0.0207	0.0174	0.0173	Ave		0.0192				15.2		20.0			
PCB-1232 Peak 3	0.0424 0.0297	0.0407	0.0378	0.0325	0.0339	Ave		0.0362				13.7		20.0			
PCB-1232 Peak 4	0.0161 0.0124	0.0161	0.0162	0.0139	0.0141	Ave		0.0148				10.5		20.0			
PCB-1232 Peak 5	0.0084 0.0062	0.0090	0.0085	0.0073	0.0073	Ave		0.0078				13.3		20.0			
PCB-1262 Peak 1	0.0455 0.0316	0.0457	0.0405	0.0360	0.0374	Ave		0.0394				14.1		20.0			
PCB-1262 Peak 2	0.0716 0.0449	0.0668	0.0566	0.0506	0.0534	Ave		0.0573				17.6		20.0			
PCB-1262 Peak 3	0.0592 0.0414	0.0596	0.0509	0.0463	0.0492	Ave		0.0511				14.0		20.0			
PCB-1262 Peak 4	0.1105 0.0880	0.1144	0.1017	0.0958	0.1043	Ave		0.1024				9.4		20.0			
PCB-1262 Peak 5	0.0812 0.0618	0.0842	0.0744	0.0692	0.0741	Ave		0.0742				10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 14:45 Calibration End Date: 11/26/2018 16:16 Calibration ID: 48160

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/4	P13112604.D
Level 2	STD01 240-356910/5	P13112605.D
Level 3	STD02 240-356910/6	P13112606.D
Level 4	STD05 240-356910/7	P13112607.D
Level 5	STD1 240-356910/8	P13112608.D
Level 6	STD15 240-356910/9	P13112609.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1232 Peak 1	BNB	Ave	1109759 23281705	2349316	4194538	9233170	17439317	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 2	BNB	Ave	902984 19323392	2004753	3542116	7888327	14764909	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 3	BNB	Ave	1718372 37636304	3701415	6466635	14722121	28865158	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 4	BNB	Ave	653033 15764638	1459200	2765136	6284114	12009123	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1232 Peak 5	BNB	Ave	342154 7927861	821208	1452870	3297429	6200801	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 1	BNB	Ave	1845748 40095683	4152583	6919881	16276404	31808638	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 2	BNB	Ave	2903770 56949144	6074895	9672951	22927880	45434271	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 3	BNB	Ave	2398320 52507529	5415447	8707033	20978989	41899424	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 4	BNB	Ave	4477571 111660201	10395527	17382218	43353511	88833064	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1262 Peak 5	BNB	Ave	3291400 78461932	7656908	12727725	31340177	63048012	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112604.D
Lims ID: std005 1232 1262
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 26-Nov-2018 14:45:03 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-004
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub1

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:42 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:23:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	48680526	0.0500	0.0500	
2	2.405	2.403	0.003	40530499	0.0500	0.0500	
4 PCB-1232							M
1	3.569	3.569	0.000	1167022	0.0500	0.0580	
1	4.092	4.092	0.000	935530	0.0500	0.0572	
1	4.746	4.746	0.000	1810828	0.0500	0.0552	M
1	4.925	4.925	0.000	767537	0.0500	0.0539	
1	5.259	5.259	0.000	266274	0.0500	0.0509	
		Average of Peak Amounts =				0.0551	
2	4.643	4.643	0.000	1109759	0.0500	0.0600	
2	5.244	5.244	0.000	902984	0.0500	0.0581	
2	5.885	5.885	0.000	1718372	0.0500	0.0586	
2	6.066	6.066	0.000	653033	0.0500	0.0545	
2	6.395	6.395	0.000	342154	0.0500	0.0541	
		Average of Peak Amounts =				0.0571	
						RPD = 3.55	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	7.366	7.366	0.000	2379968	0.0500	0.0536	
1	7.846	7.846	0.000	5299052	0.0500	0.0366	
1	8.128	8.128	0.000	3606381	0.0500	0.0640	
1	8.502	8.502	0.000	5193519	0.0500	0.0494	
1	8.866	8.866	0.000	2242228	0.0500	0.0519	
		Average of Peak Amounts =				0.0511	
2	8.534	8.534	0.000	1845748	0.0500	0.0577	
2	9.051	9.051	0.000	2903770	0.0500	0.0625	
2	9.370	9.370	0.000	2398320	0.0500	0.0579	
2	9.631	9.631	0.000	4477571	0.0500	0.0539	
2	9.993	9.993	0.000	3291400	0.0500	0.0547	
		Average of Peak Amounts =				0.0574	
						RPD = 11.56	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@.05PPM_00013 Amount Added: 1.00 Units: mL

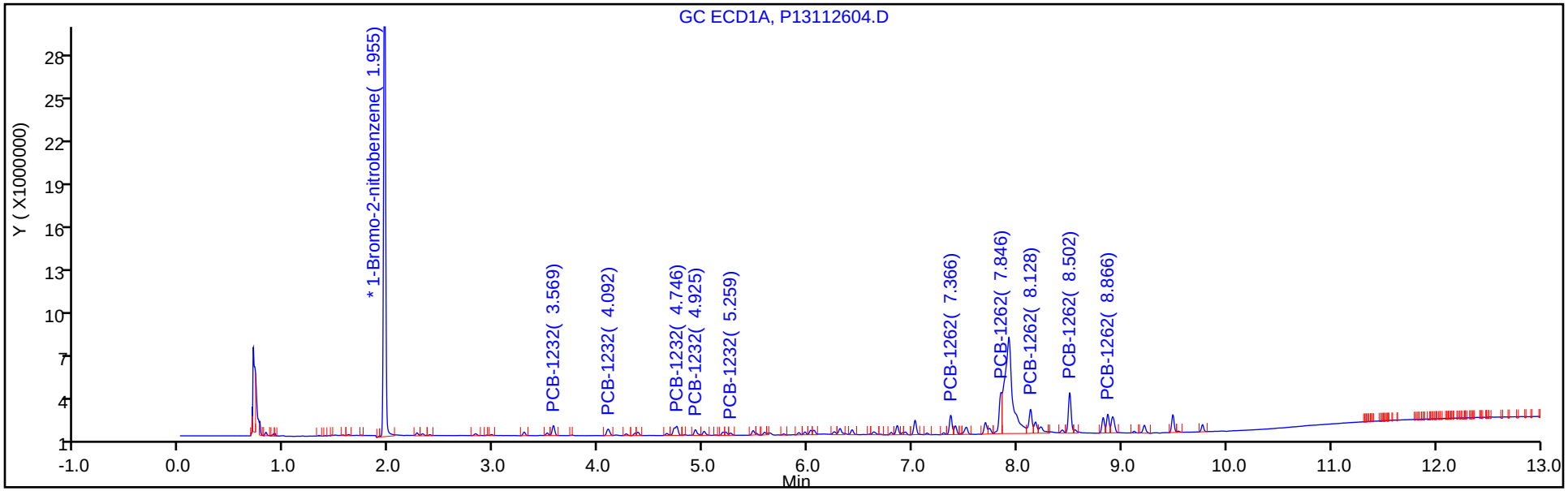
Report Date: 27-Nov-2018 10:37:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

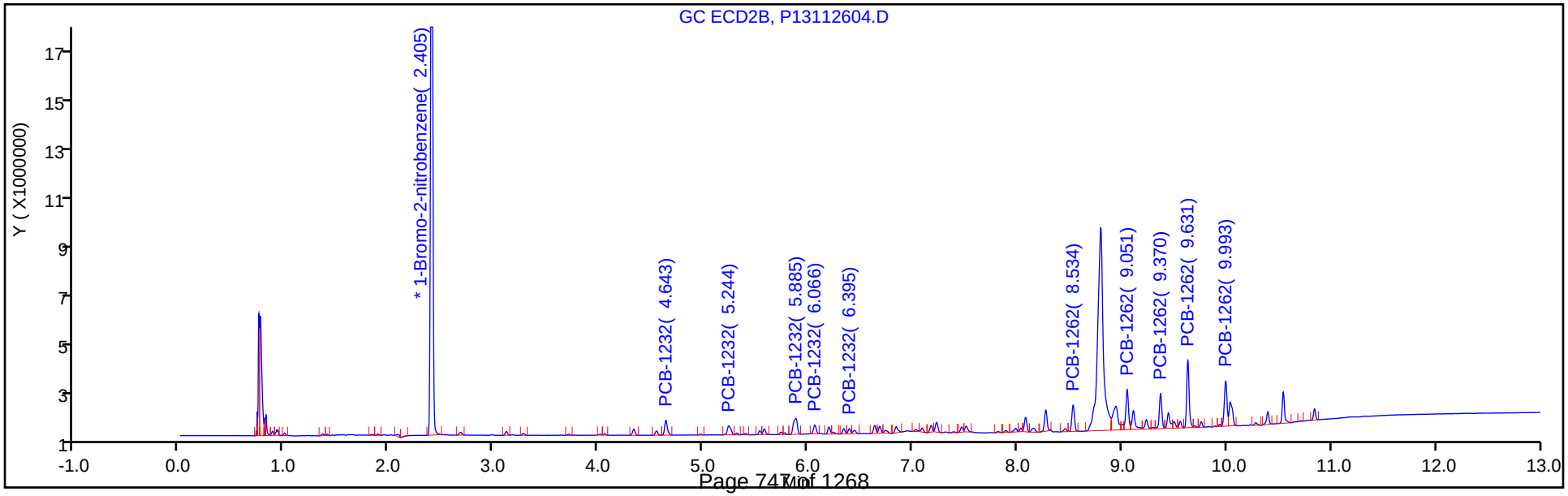
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112604.D

Injection Date:	26-Nov-2018 14:45:03	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std005 1232 1262			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112605.D
Lims ID: std01 1232 1262
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Nov-2018 15:03:32 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-005
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub1

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:35 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:24:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.956	1.955	0.001	54375656	0.0500	0.0500	
2	2.406	2.403	0.003	45447118	0.0500	0.0500	
4 PCB-1232							M
1	3.569	3.569	0.000	2483328	0.1000	0.1105	
1	4.091	4.092	-0.001	2106966	0.1000	0.1153	
1	4.748	4.746	0.002	4009308	0.1000	0.1095	M
1	4.926	4.925	0.001	1751659	0.1000	0.1102	
1	5.263	5.259	0.004	651477	0.1000	0.1116	
		Average of Peak Amounts =				0.1114	
2	4.644	4.643	0.001	2349316	0.1000	0.1132	
2	5.244	5.244	0.000	2004753	0.1000	0.1150	
2	5.886	5.885	0.001	3701415	0.1000	0.1126	
2	6.066	6.066	0.000	1459200	0.1000	0.1085	
2	6.396	6.395	0.001	821208	0.1000	0.1159	
		Average of Peak Amounts =				0.1130	
						RPD = 1.45	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	7.366	7.366	0.000	5501955	0.1000	0.1109	
1	7.841	7.846	-0.005	10916755	0.1000	0.1212	
1	8.128	8.128	0.000	7213425	0.1000	0.1146	
1	8.502	8.502	0.000	12580010	0.1000	0.1071	
1	8.866	8.866	0.000	5396003	0.1000	0.1118	
		Average of Peak Amounts =				0.1131	
2	8.535	8.534	0.001	4152583	0.1000	0.1158	
2	9.051	9.051	0.000	6074895	0.1000	0.1166	
2	9.370	9.370	0.000	5415447	0.1000	0.1166	
2	9.631	9.631	0.000	10395527	0.1000	0.1116	
2	9.992	9.993	-0.001	7656908	0.1000	0.1136	
		Average of Peak Amounts =				0.1149	
						RPD = 1.51	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@0.1PPM_00014 Amount Added: 1.00 Units: mL

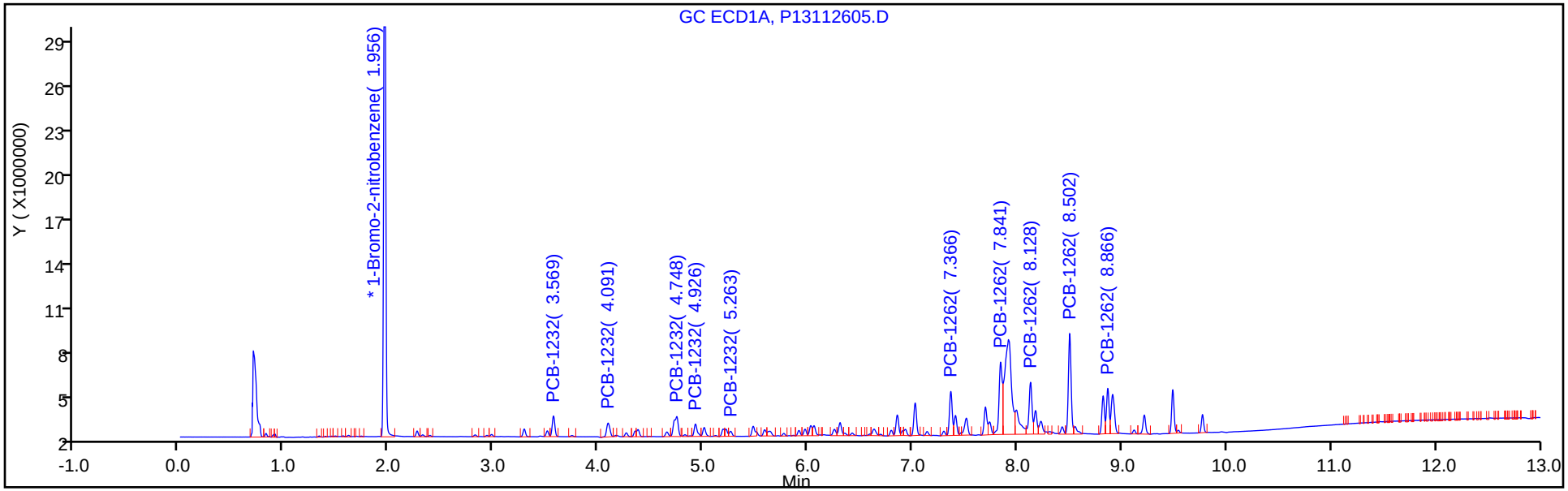
Report Date: 27-Nov-2018 10:37:37 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

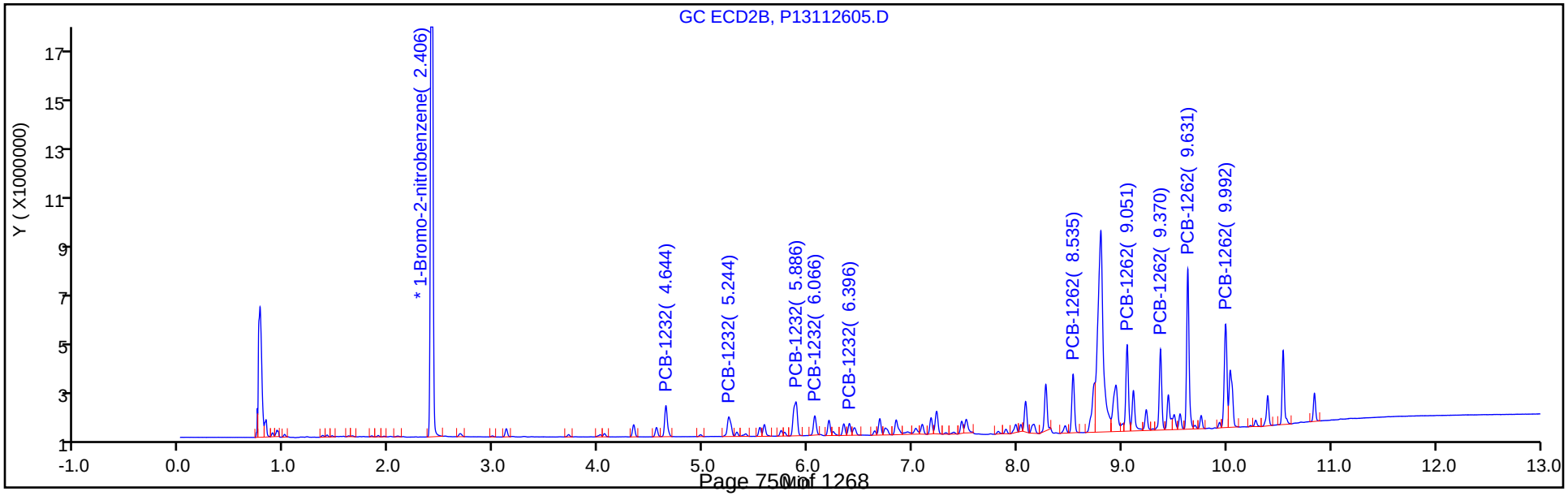
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112605.D

Injection Date:	26-Nov-2018 15:03:32	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std01 1232 1262			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112606.D
Lims ID: std02 1232 1262
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Nov-2018 15:21:52 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-006
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub1

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:28 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:25:43

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	51188723	0.0500	0.0500	
2	2.405	2.403	0.002	42742430	0.0500	0.0500	
4 PCB-1232							M
1	3.569	3.569	0.000	4504224	0.2000	0.2129	
1	4.091	4.092	-0.001	3671634	0.2000	0.2133	
1	4.747	4.746	0.001	7222151	0.2000	0.2095	M
1	4.926	4.925	0.001	3249416	0.2000	0.2172	M
1	5.261	5.259	0.002	1195223	0.2000	0.2175	
		Average of Peak Amounts =				0.2141	
2	4.644	4.643	0.001	4194538	0.2000	0.2149	
2	5.244	5.244	0.000	3542116	0.2000	0.2161	
2	5.886	5.885	0.001	6466635	0.2000	0.2091	
2	6.067	6.066	0.001	2765136	0.2000	0.2187	
2	6.397	6.395	0.002	1452870	0.2000	0.2179	
		Average of Peak Amounts =				0.2154	
					RPD =	0.59	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	7.366	7.366	0.000	9384614	0.2000	0.2009	
1	7.840	7.846	-0.006	15158193	0.2000	0.2090	
1	8.127	8.128	-0.001	11537281	0.2000	0.1947	
1	8.502	8.502	0.000	21820453	0.2000	0.1974	
1	8.866	8.866	0.000	9136358	0.2000	0.2011	
		Average of Peak Amounts =				0.2006	
2	8.535	8.534	0.001	6919881	0.2000	0.2053	
2	9.051	9.051	0.000	9672951	0.2000	0.1974	
2	9.370	9.370	0.000	8707033	0.2000	0.1993	
2	9.631	9.631	0.000	17382218	0.2000	0.1985	
2	9.993	9.993	0.000	12727725	0.2000	0.2007	
		Average of Peak Amounts =				0.2002	
						RPD = 0.20	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@.2PPM_00016 Amount Added: 1.00 Units: mL

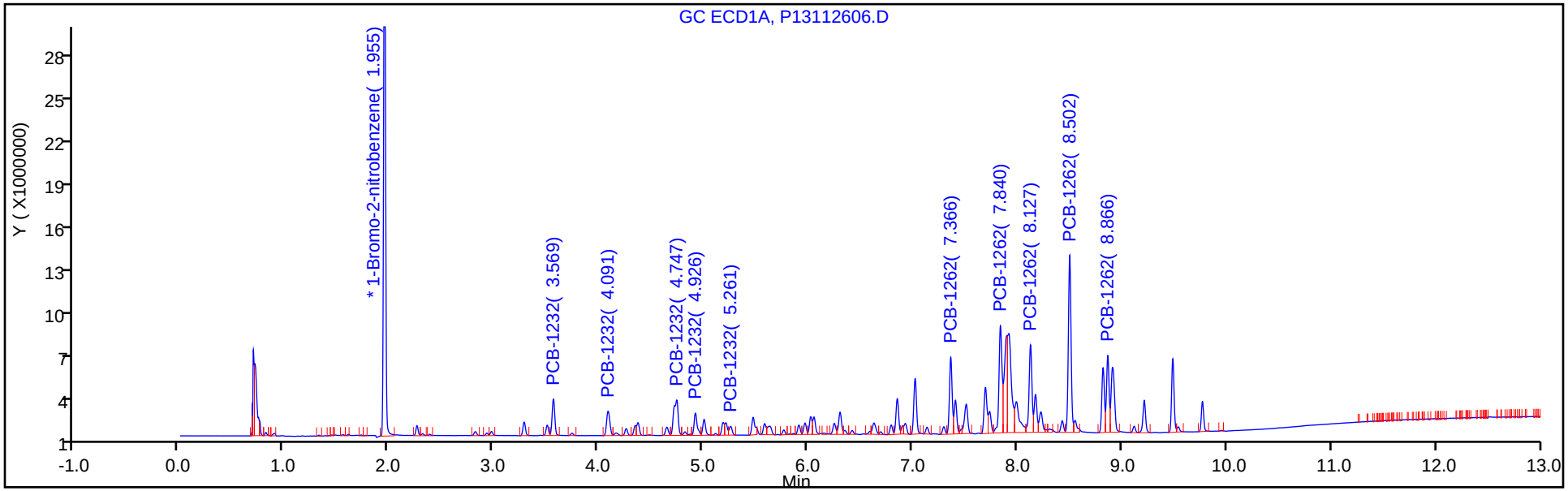
Report Date: 27-Nov-2018 10:37:30 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

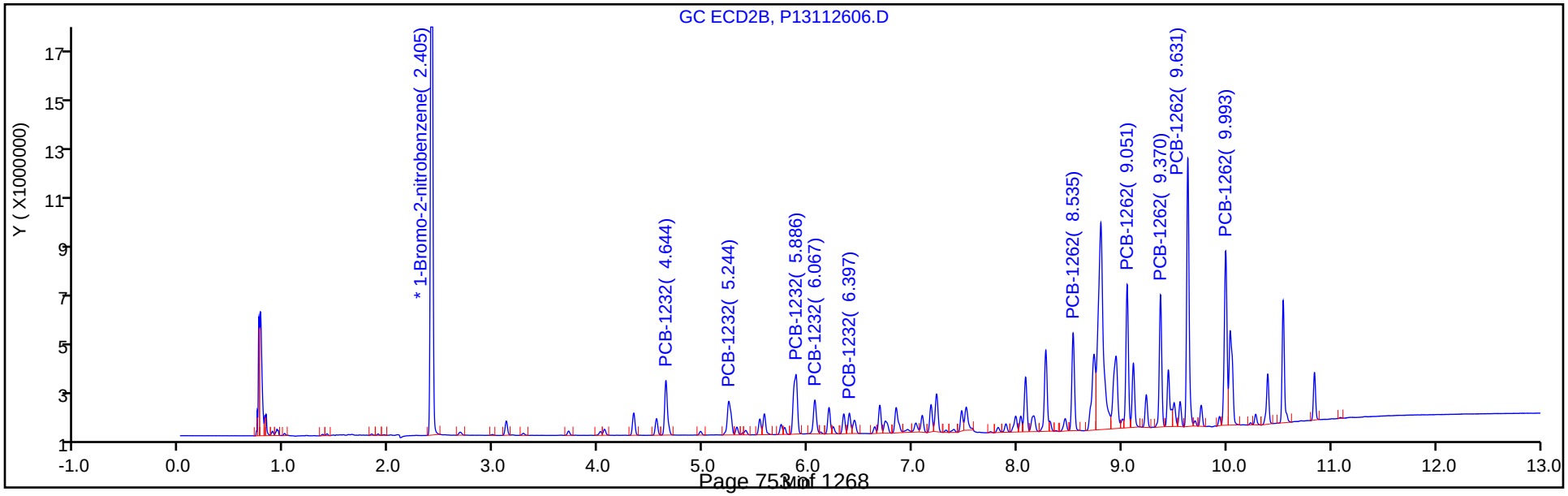
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112606.D

Injection Date:	26-Nov-2018 15:21:52	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std02 1232 1262			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112607.D
Lims ID: std05 1232 1262
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Nov-2018 15:40:11 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-007
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub1

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:21 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:26:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	54361774	0.0500	0.0500	
2	2.404	2.403	0.002	45270944	0.0500	0.0500	
4 PCB-1232							M
1	3.568	3.569	-0.001	10216317	0.5000	0.4547	
1	4.090	4.092	-0.002	8311953	0.5000	0.4548	
1	4.747	4.746	0.001	16821898	0.5000	0.4595	M
1	4.925	4.925	0.000	7366495	0.5000	0.4636	
1	5.260	5.259	0.001	2772317	0.5000	0.4750	
		Average of Peak Amounts =				0.4615	
2	4.643	4.643	0.000	9233170	0.5000	0.4466	
2	5.244	5.244	0.000	7888327	0.5000	0.4544	
2	5.884	5.885	-0.001	14722121	0.5000	0.4495	
2	6.065	6.066	-0.001	6284114	0.5000	0.4692	
2	6.396	6.395	0.001	3297429	0.5000	0.4670	
		Average of Peak Amounts =				0.4574	
						RPD = 0.91	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	7.364	7.366	-0.002	23301615	0.5000	0.4697	
1	7.839	7.846	-0.007	32998348	0.5000	0.4953	
1	8.127	8.128	-0.001	27332442	0.5000	0.4344	
1	8.499	8.502	-0.003	56927101	0.5000	0.4849	
1	8.865	8.866	-0.001	22838479	0.5000	0.4733	
		Average of Peak Amounts =				0.4716	
2	8.533	8.534	-0.001	16276404	0.5000	0.4558	
2	9.049	9.051	-0.002	22927880	0.5000	0.4417	
2	9.369	9.370	-0.001	20978989	0.5000	0.4534	
2	9.629	9.631	-0.002	43353511	0.5000	0.4674	
2	9.991	9.993	-0.002	31340177	0.5000	0.4667	
		Average of Peak Amounts =				0.4570	
						RPD = 3.13	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@0.5PPM_00030 Amount Added: 1.00 Units: mL

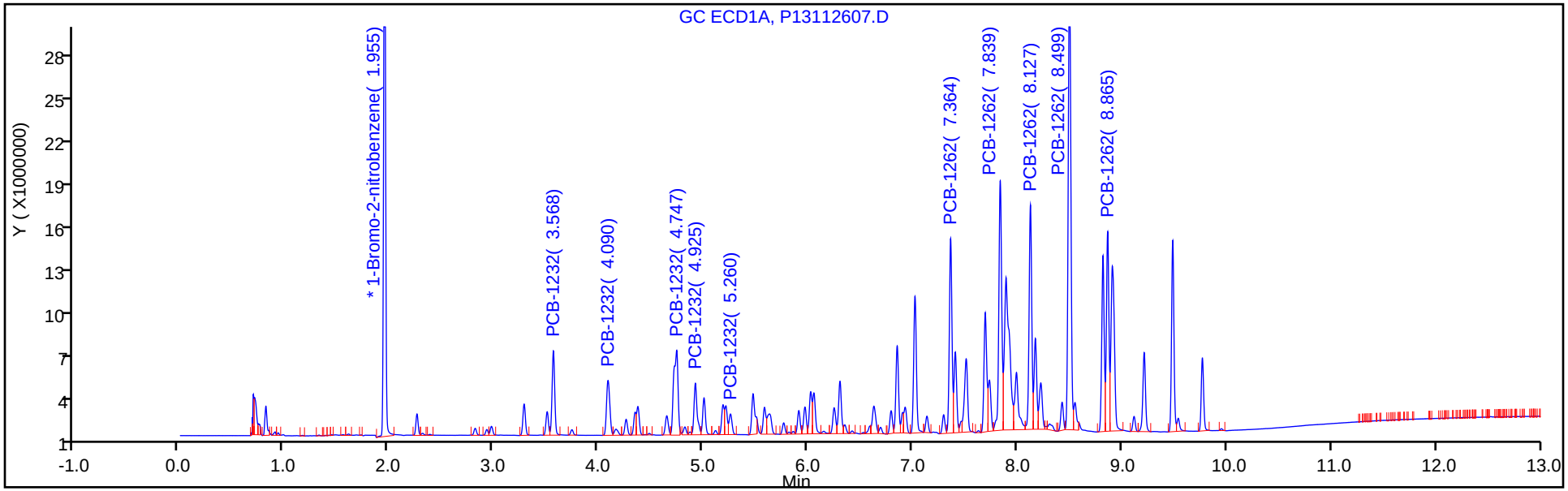
Report Date: 27-Nov-2018 10:37:23 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

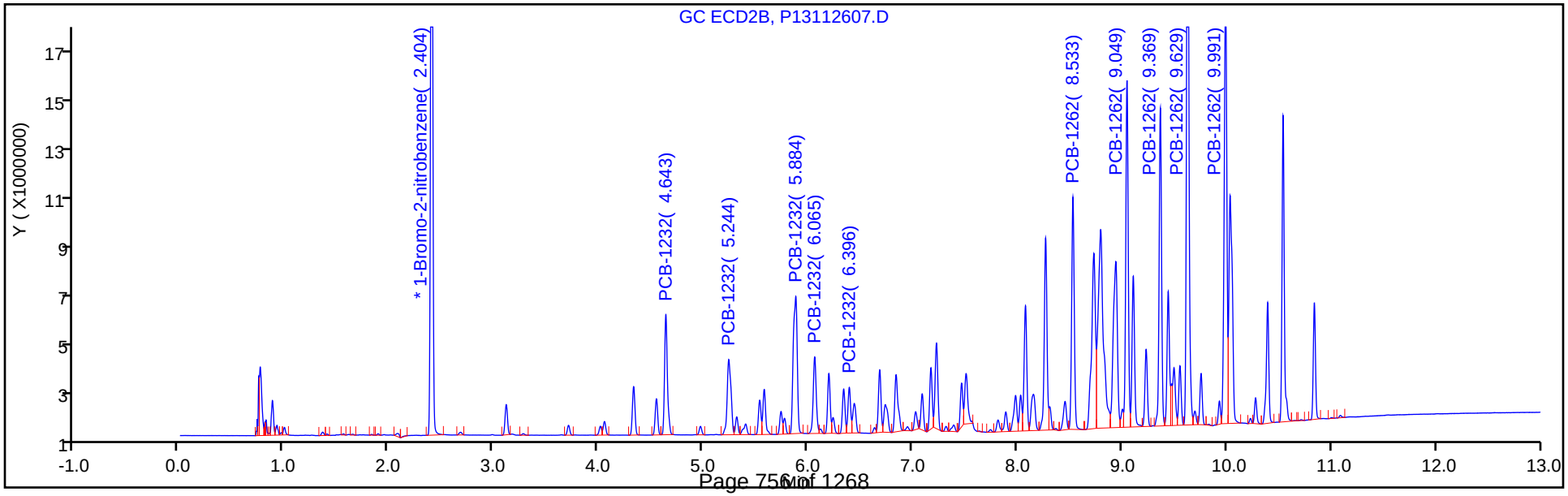
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112607.D

Injection Date:	26-Nov-2018 15:40:11	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std05 1232 1262			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112608.D
Lims ID: std1 1232 1262
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Nov-2018 15:58:29 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-008
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub1

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:14 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:26:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.956	1.955	0.001	51181324	0.0500	0.0500	
2	2.405	2.403	0.003	42570131	0.0500	0.0500	
4 PCB-1232							M
1	3.569	3.569	0.000	19448890	1.00	0.9194	
1	4.091	4.092	-0.001	15676944	1.00	0.9111	
1	4.747	4.746	0.001	33189786	1.00	0.9630	M
1	4.925	4.925	0.000	14240122	1.00	0.9519	M
1	5.262	5.259	0.003	5331996	1.00	0.9703	
		Average of Peak Amounts =				0.9432	
2	4.643	4.643	0.000	17439317	1.00	0.8971	
2	5.244	5.244	0.000	14764909	1.00	0.9044	
2	5.885	5.885	0.000	28865158	1.00	0.9373	
2	6.065	6.066	-0.001	12009123	1.00	0.9536	
2	6.396	6.395	0.001	6200801	1.00	0.9339	
		Average of Peak Amounts =				0.9253	
						RPD = 1.91	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	7.364	7.366	-0.002	46822569	1.00	1.00	
1	7.837	7.846	-0.009	63857970	1.00	1.09	
1	8.126	8.128	-0.002	55545694	1.00	0.9377	
1	8.500	8.502	-0.002	118788338	1.00	1.07	
1	8.864	8.866	-0.002	46912701	1.00	1.03	
		Average of Peak Amounts =				1.03	
2	8.534	8.534	0.000	31808638	1.00	0.9474	
2	9.049	9.051	-0.002	45434271	1.00	0.9309	
2	9.369	9.370	-0.001	41899424	1.00	0.9630	
2	9.629	9.631	-0.002	88833064	1.00	1.02	
2	9.991	9.993	-0.002	63048012	1.00	1.00	
		Average of Peak Amounts =				0.9717	
						RPD = 5.50	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@1.0PPM_00019 Amount Added: 1.00 Units: mL

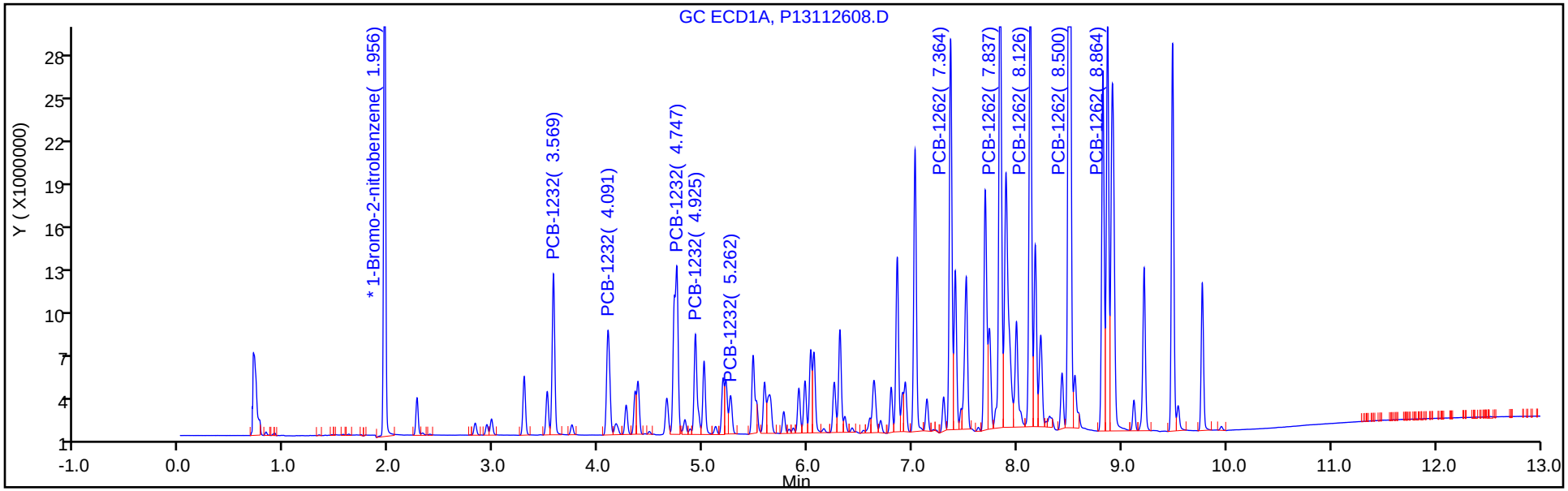
Report Date: 27-Nov-2018 10:37:17 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

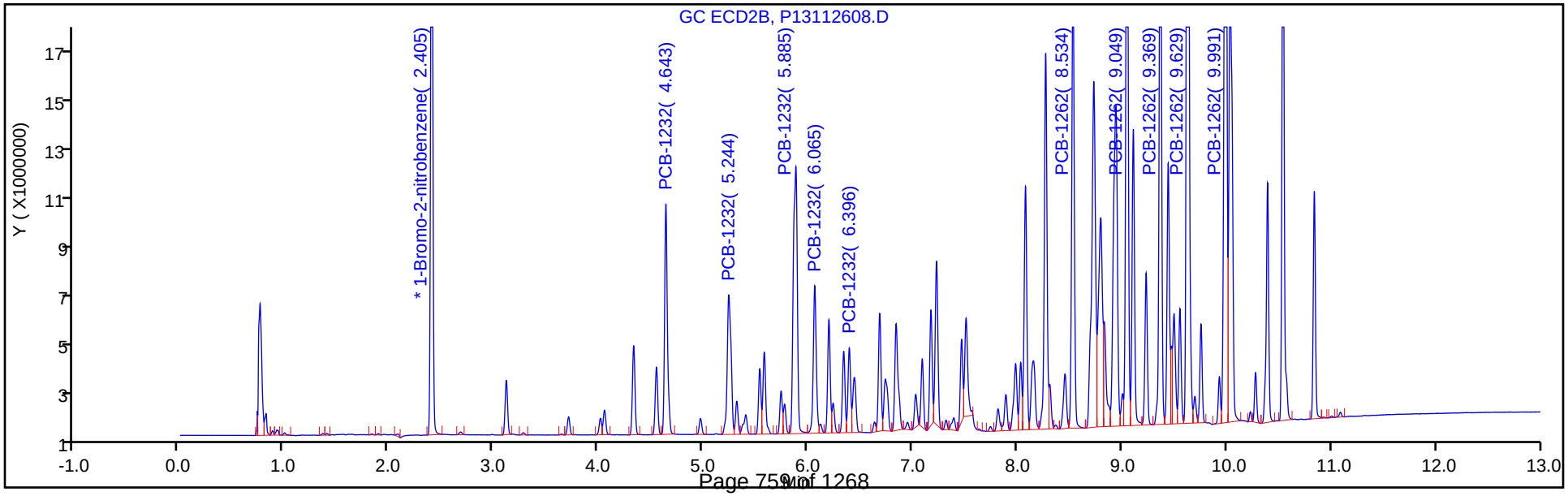
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112608.D

Injection Date:	26-Nov-2018 15:58:29	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std1 1232 1262			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112609.D
Lims ID: std15 1232 1262
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Nov-2018 16:16:58 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-009
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub1

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:07 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:28:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	50365897	0.0500	0.0500	
2	2.404	2.403	0.002	42293901	0.0500	0.0500	
4 PCB-1232							M
1	3.569	3.569	0.000	26280698	1.50	1.26	
1	4.090	4.092	-0.002	20746797	1.50	1.23	
1	4.746	4.746	0.000	44296187	1.50	1.31	M
1	4.924	4.925	-0.001	18850798	1.50	1.28	M
1	5.260	5.259	0.001	6954238	1.50	1.29	
		Average of Peak Amounts =				1.27	
2	4.643	4.643	0.000	23281705	1.50	1.21	
2	5.243	5.244	-0.001	19323392	1.50	1.19	
2	5.884	5.885	-0.001	37636304	1.50	1.23	
2	6.065	6.066	-0.001	15764638	1.50	1.26	
2	6.395	6.395	0.000	7927861	1.50	1.20	
		Average of Peak Amounts =				1.22	
						RPD = 4.36	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	7.364	7.366	-0.002	60178777	1.50	1.31	
1	7.838	7.846	-0.008	80183069	1.50	1.40	
1	8.126	8.128	-0.002	69358745	1.50	1.19	
1	8.500	8.502	-0.002	148312217	1.50	1.36	
1	8.865	8.866	-0.001	57615560	1.50	1.29	
		Average of Peak Amounts =				1.31	
2	8.533	8.534	-0.001	40095683	1.50	1.20	
2	9.049	9.051	-0.002	56949144	1.50	1.17	
2	9.369	9.370	-0.001	52507529	1.50	1.21	
2	9.630	9.631	-0.001	111660201	1.50	1.29	
2	9.992	9.993	-0.001	78461932	1.50	1.25	
		Average of Peak Amounts =				1.23	
						RPD = 6.68	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG3262@1.5PPM_00004 Amount Added: 1.00 Units: mL

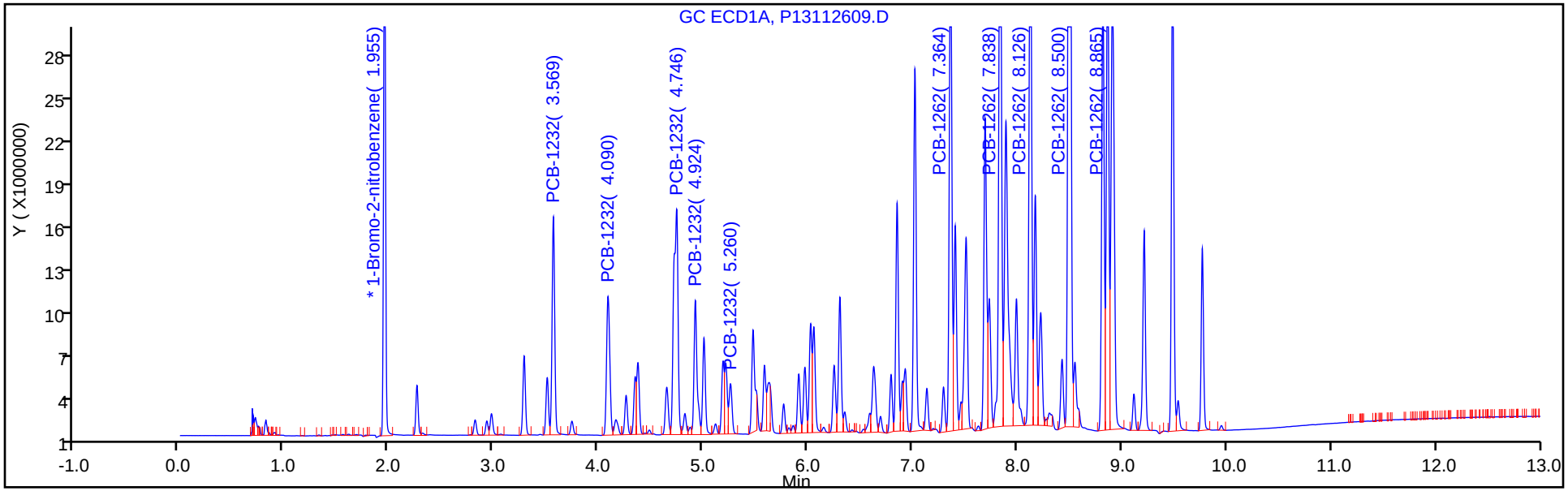
Report Date: 27-Nov-2018 10:37:10 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

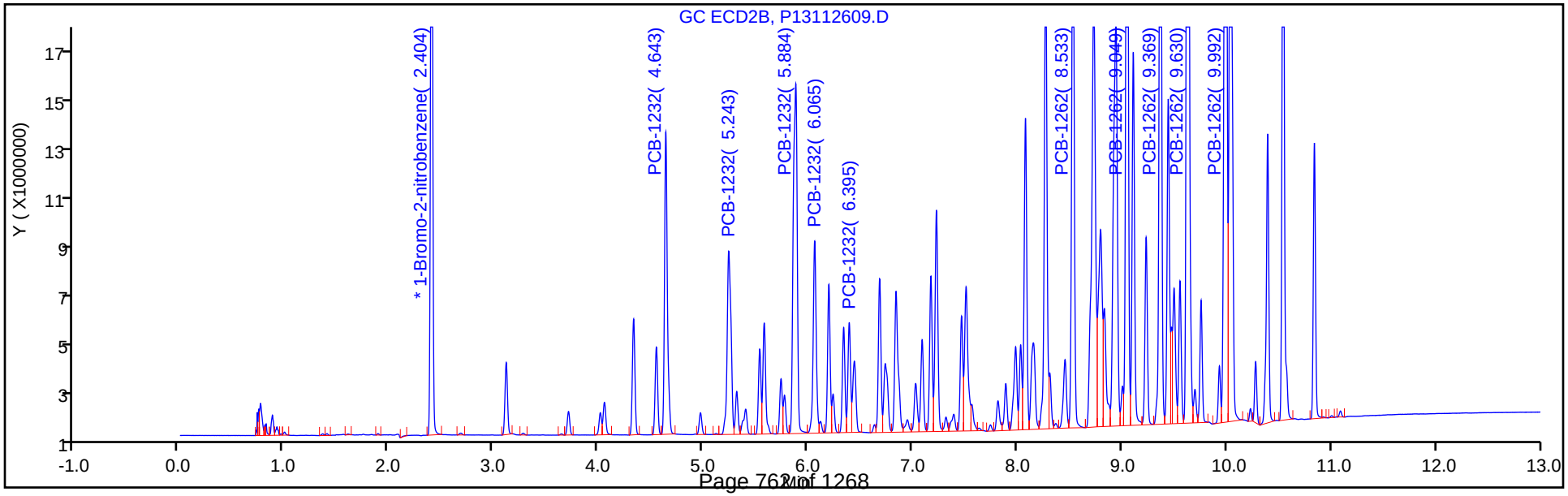
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112609.D

Injection Date:	26-Nov-2018 16:16:58	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std15 1232 1262			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-107194-1 | Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 | GC Column: CLP-1 (0.53 ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 16:35 | Calibration End Date: 11/26/2018 18:07 | Calibration ID: 48167

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/10	P13112610.D
Level 2	STD01 240-356910/11	P13112611.D
Level 3	STD02 240-356910/12	P13112612.D
Level 4	STD05 240-356910/13	P13112613.D
Level 5	STD1 240-356910/14	P13112614.D
Level 6	STD15 240-356910/15	P13112615.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1242 Peak 1	0.0172 0.0121	0.0164	0.0148	0.0139	0.0130	Ave		0.0146				13.4		20.0			
PCB-1242 Peak 2	0.0332 0.0233	0.0313	0.0285	0.0271	0.0249	Ave		0.0281				13.5		20.0			
PCB-1242 Peak 3	0.0652 0.0522	0.0606	0.0566	0.0551	0.0539	Ave		0.0573				8.4		20.0			
PCB-1242 Peak 4	0.0285 0.0215	0.0272	0.0254	0.0237	0.0228	Ave		0.0248				10.8		20.0			
PCB-1242 Peak 5	0.0120 0.0088	0.0115	0.0108	0.0100	0.0093	Ave		0.0104				12.0		20.0			
PCB-1268 Peak 1	0.1226 0.1164	0.1235	0.1229	0.1153	0.1112	Ave		0.1186				4.3		20.0			
PCB-1268 Peak 2	0.1212 0.1139	0.1233	0.1240	0.1138	0.1101	Ave		0.1177				5.0		20.0			
PCB-1268 Peak 3	0.1052 0.0965	0.1042	0.1038	0.0955	0.0917	Ave		0.0995				5.7		20.0			
PCB-1268 Peak 4	0.0441 0.0408	0.0442	0.0459	0.0406	0.0385	Ave		0.0423				6.6		20.0			
PCB-1268 Peak 5	0.3167 0.3219	0.3240	0.3357	0.3090	0.2952	Ave		0.3171				4.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 16:35 Calibration End Date: 11/26/2018 18:07 Calibration ID: 48167

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/10	P13112610.D
Level 2	STD01 240-356910/11	P13112611.D
Level 3	STD02 240-356910/12	P13112612.D
Level 4	STD05 240-356910/13	P13112613.D
Level 5	STD1 240-356910/14	P13112614.D
Level 6	STD15 240-356910/15	P13112615.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1242 Peak 1	BNB	Ave	847964 19025972	1701900	3246657	6868954	12474611	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 2	BNB	Ave	1636076 36535508	3258363	6248843	13361011	23883559	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 3	BNB	Ave	3208758 82014787	6303949	12407671	27175551	51732336	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 4	BNB	Ave	1403469 33725539	2829266	5559316	11698749	21854494	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 5	BNB	Ave	591567 13854621	1193714	2369664	4907305	8946011	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 1	BNB	Ave	6035640 182847908	12836655	26941094	56836757	106711674	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 2	BNB	Ave	5969349 178843258	12819841	27193547	56074697	105632651	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 3	BNB	Ave	5183382 151475666	10836045	22758082	47053678	87938120	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 4	BNB	Ave	2171474 64022662	4596402	10054452	19993310	36965799	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 5	BNB	Ave	15597425 505436952	33685339	73607782	152298328	283204671	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112610.D
Lims ID: std005 1242 1268
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 26-Nov-2018 16:35:19 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-010
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:58 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:30:05

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	49248595	0.0500	0.0500	
2	2.404	2.403	0.002	41469391	0.0500	0.0500	
5 PCB-1242							M
1	3.568	3.568	0.000	847964	0.0500	0.0591	
1	4.090	4.090	0.000	1636076	0.0500	0.0592	
1	4.746	4.746	0.000	3208758	0.0500	0.0569	M
1	4.924	4.924	0.000	1403469	0.0500	0.0574	
1	5.260	5.260	0.000	591567	0.0500	0.0577	
		Average of Peak Amounts =				0.0581	
2	4.643	4.643	0.000	780417	0.0500	0.0589	
2	5.243	5.243	0.000	1520898	0.0500	0.0609	
2	5.884	5.884	0.000	2963055	0.0500	0.0593	
2	6.063	6.063	0.000	1141783	0.0500	0.0558	
2	6.394	6.394	0.000	706007	0.0500	0.0584	
		Average of Peak Amounts =				0.0587	
						RPD = 1.06	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	8.865	8.865	0.000	6035640	0.0500	0.0516	
1	8.908	8.908	0.000	5969349	0.0500	0.0515	
1	9.116	9.116	0.000	5183382	0.0500	0.0529	
1	9.487	9.487	0.000	2171474	0.0500	0.0521	
1	9.769	9.769	0.000	15597425	0.0500	0.0499	
		Average of Peak Amounts =				0.0516	
2	9.989	9.989	0.000	5196842	0.0500	0.0555	
2	10.033	10.033	0.000	5214547	0.0500	0.0551	
2	10.278	10.278	0.000	4543663	0.0500	0.0556	
2	10.542	10.542	0.000	1981445	0.0500	0.0553	
2	10.840	10.840	0.000	13227836	0.0500	0.0505	
		Average of Peak Amounts =				0.0544	
						RPD = 5.29	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@.05PPM_00014 Amount Added: 1.00 Units: mL

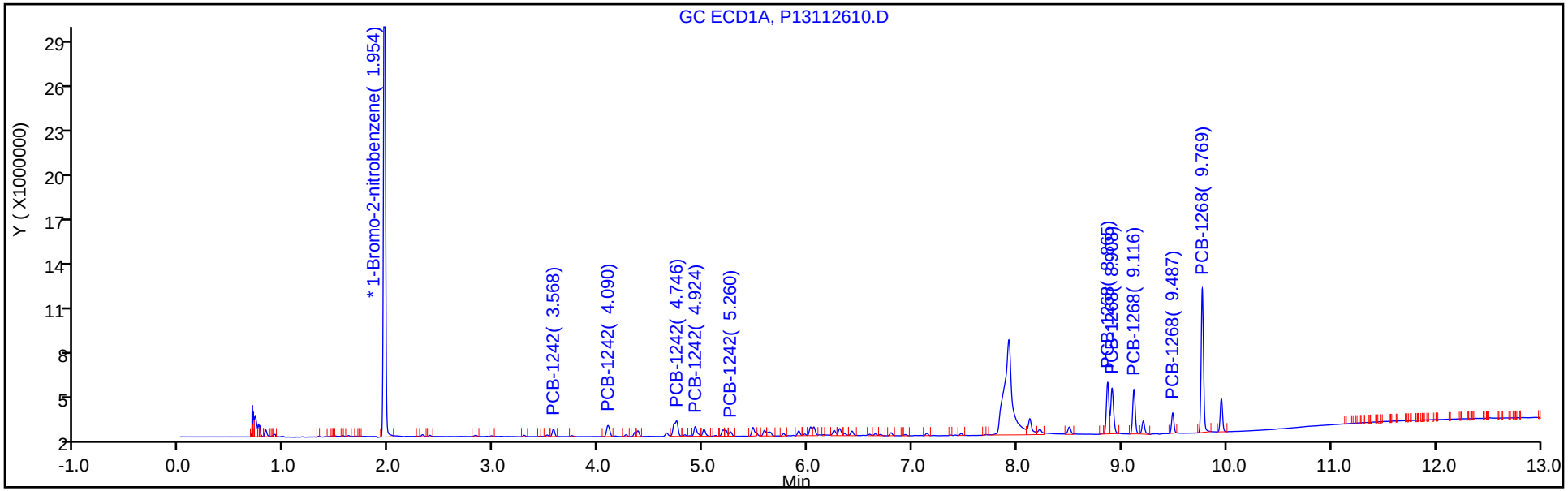
Report Date: 27-Nov-2018 10:37:00 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

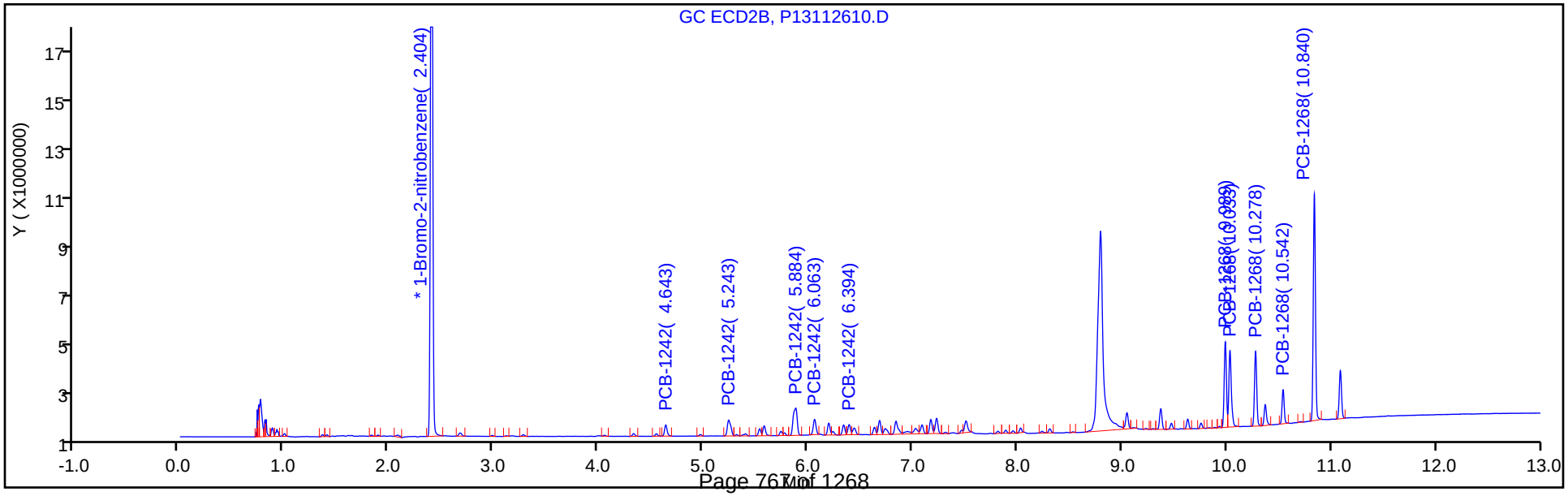
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112610.D

Injection Date:	26-Nov-2018 16:35:19	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std005 1242 1268			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:37:00 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112610.D

Injection Date: 26-Nov-2018 16:35:19 Instrument ID: A2HP13

Lims ID: std005 1242 1268

Client ID:

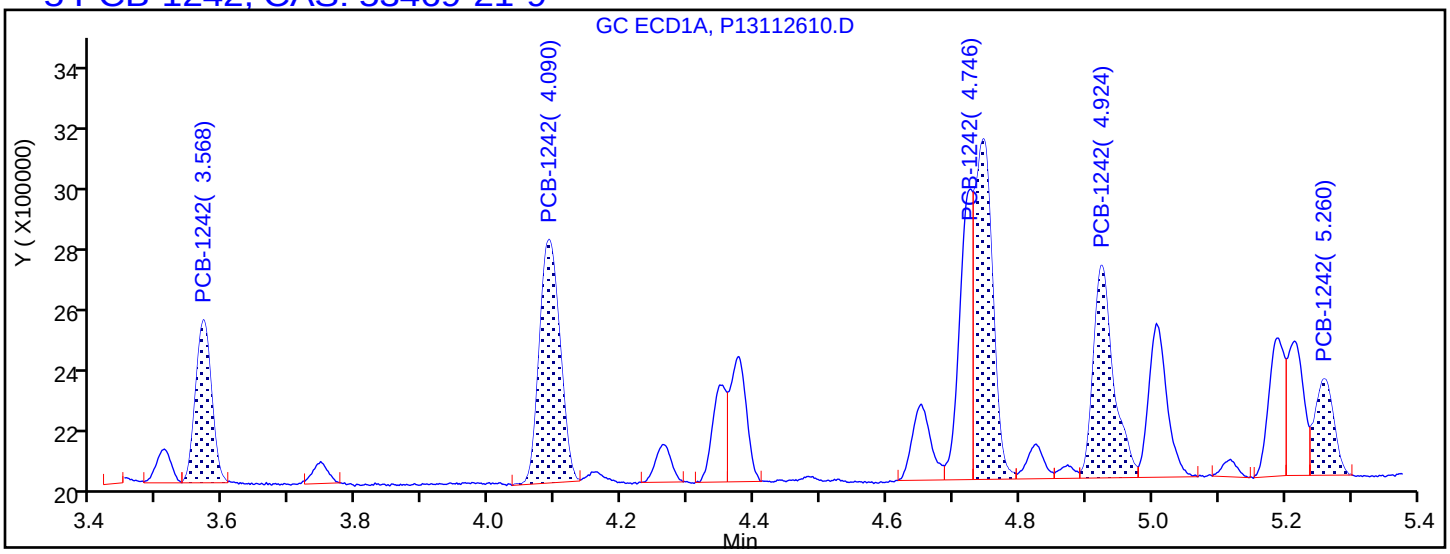
Operator ID: ALS Bottle#: 10 Worklist Smp#: 10

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

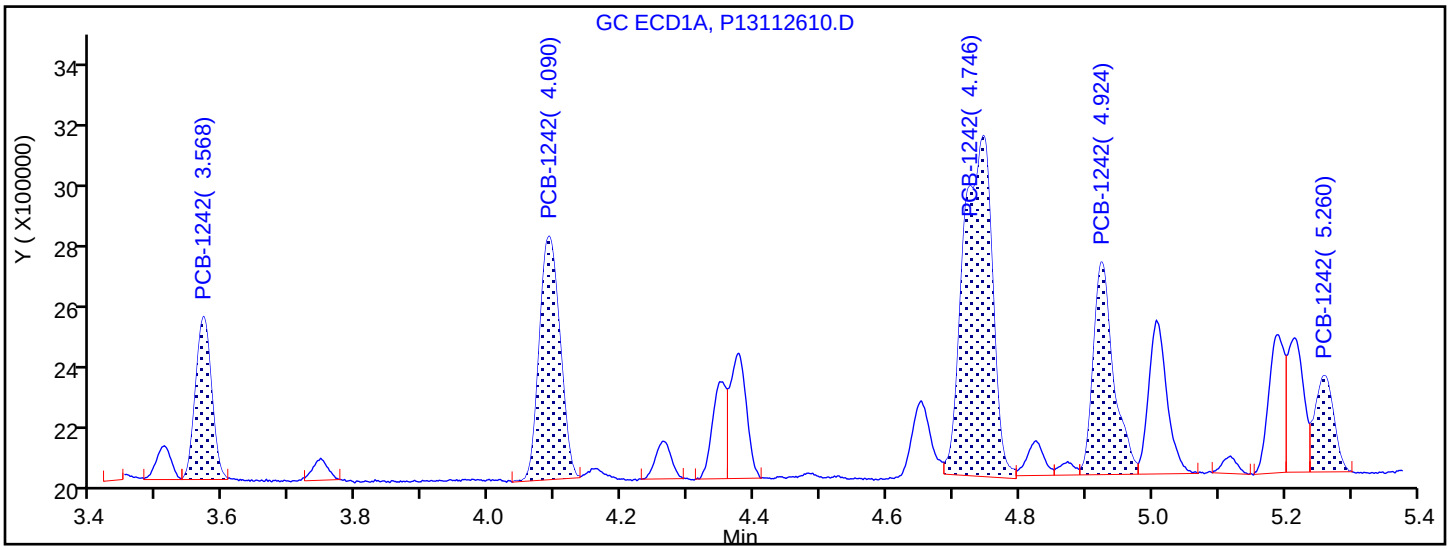
Column: Detector GC ECD1A

5 PCB-1242, CAS: 53469-21-9



Processing Integration Results

3.568	Response = 847964
4.090	Response = 1636076
4.746	Response = 1974857
4.924	Response = 1403469
5.260	Response = 591567



Manual Integration Results

3.568	Response = 847964	
4.090	Response = 1636076	
4.746	Response = 3208758	M
4.924	Response = 1403469	
5.260	Response = 591567	

Reviewer: hassl, 27-Nov-2018 06:31:28

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112611.D
Lims ID: std01 1242 1268
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Nov-2018 16:53:41 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-011
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:52 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:31:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	51976566	0.0500	0.0500	
2	2.403	2.403	0.001	43428982	0.0500	0.0500	
5 PCB-1242							M
1	3.568	3.568	0.000	1701900	0.1000	0.1123	
1	4.089	4.090	-0.001	3258363	0.1000	0.1117	
1	4.746	4.746	0.000	6303949	0.1000	0.1059	M
1	4.924	4.924	0.000	2829266	0.1000	0.1096	
1	5.260	5.260	0.000	1193714	0.1000	0.1104	
		Average of Peak Amounts =				0.1100	
2	4.641	4.643	-0.002	1586536	0.1000	0.1144	
2	5.243	5.243	0.000	2997378	0.1000	0.1145	
2	5.884	5.884	0.000	5813696	0.1000	0.1111	
2	6.064	6.063	0.001	2473431	0.1000	0.1155	
2	6.394	6.394	0.000	1456178	0.1000	0.1151	
		Average of Peak Amounts =				0.1141	
						RPD = 3.69	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	8.864	8.865	-0.001	12836655	0.1000	0.1041	
1	8.907	8.908	-0.001	12819841	0.1000	0.1048	
1	9.115	9.116	-0.001	10836045	0.1000	0.1048	
1	9.486	9.487	-0.001	4596402	0.1000	0.1044	
1	9.768	9.769	-0.001	33685339	0.1000	0.1022	
		Average of Peak Amounts =				0.1041	
2	9.988	9.989	-0.001	10569630	0.1000	0.1078	
2	10.033	10.033	0.000	10769068	0.1000	0.1087	
2	10.278	10.278	0.000	9264575	0.1000	0.1083	
2	10.541	10.542	-0.001	4249264	0.1000	0.1133	
2	10.839	10.840	-0.001	28158305	0.1000	0.1027	
		Average of Peak Amounts =				0.1081	
						RPD = 3.85	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@.1PPM_00014 Amount Added: 1.00 Units: mL

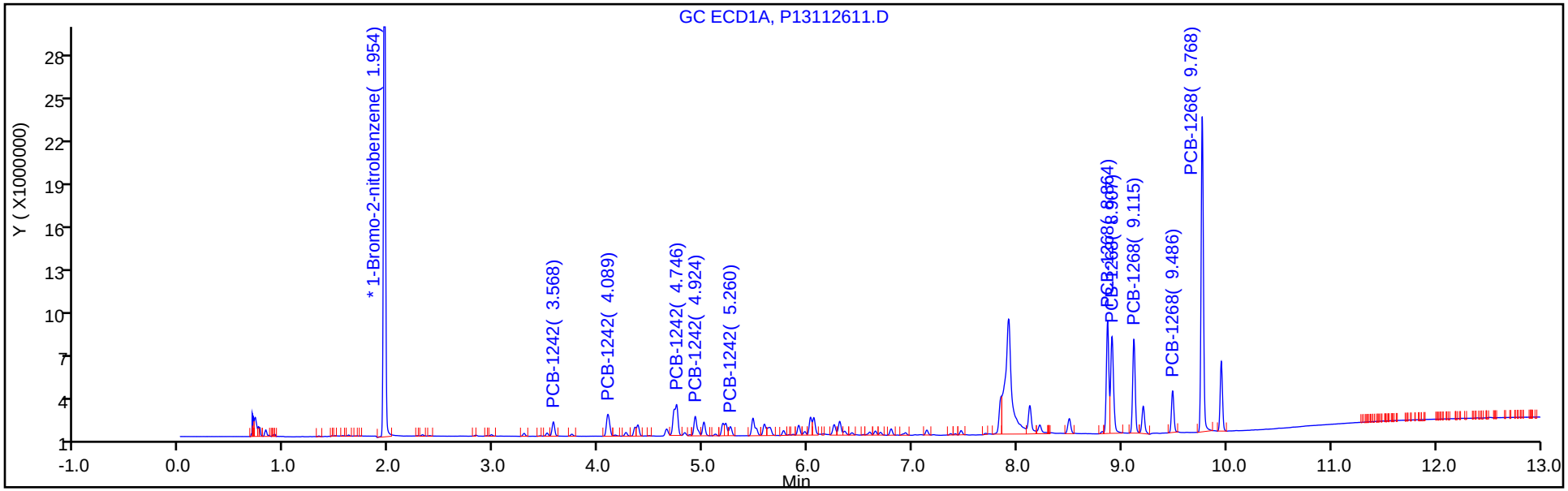
Report Date: 27-Nov-2018 10:36:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

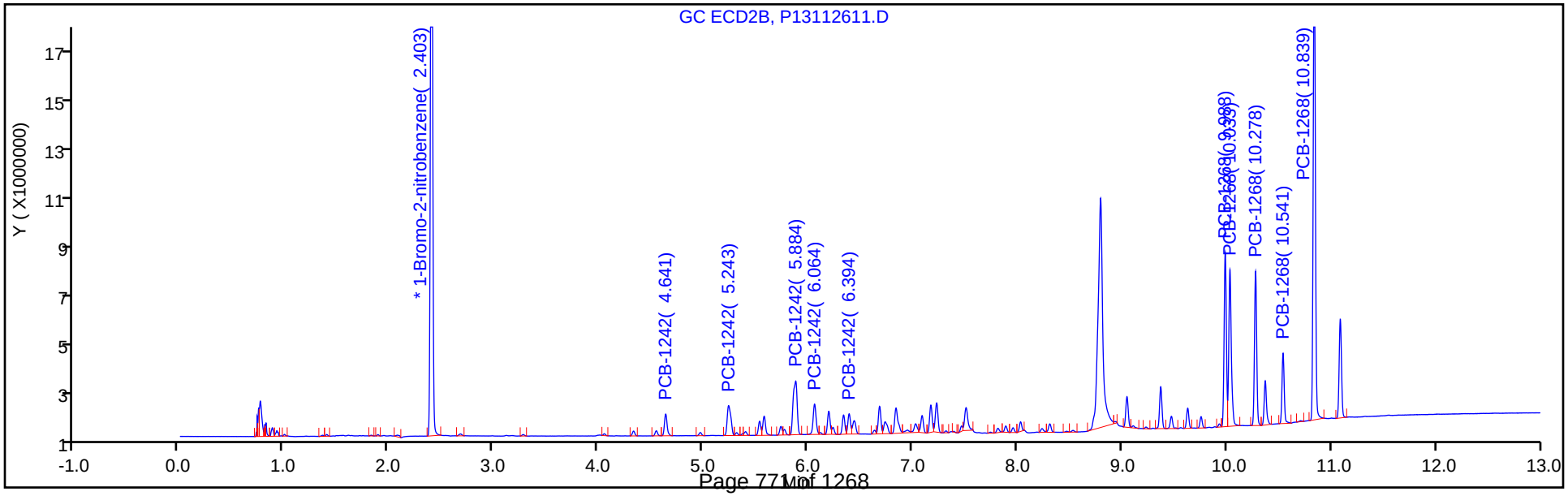
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112611.D

Injection Date:	26-Nov-2018 16:53:41	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std01 1242 1268			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



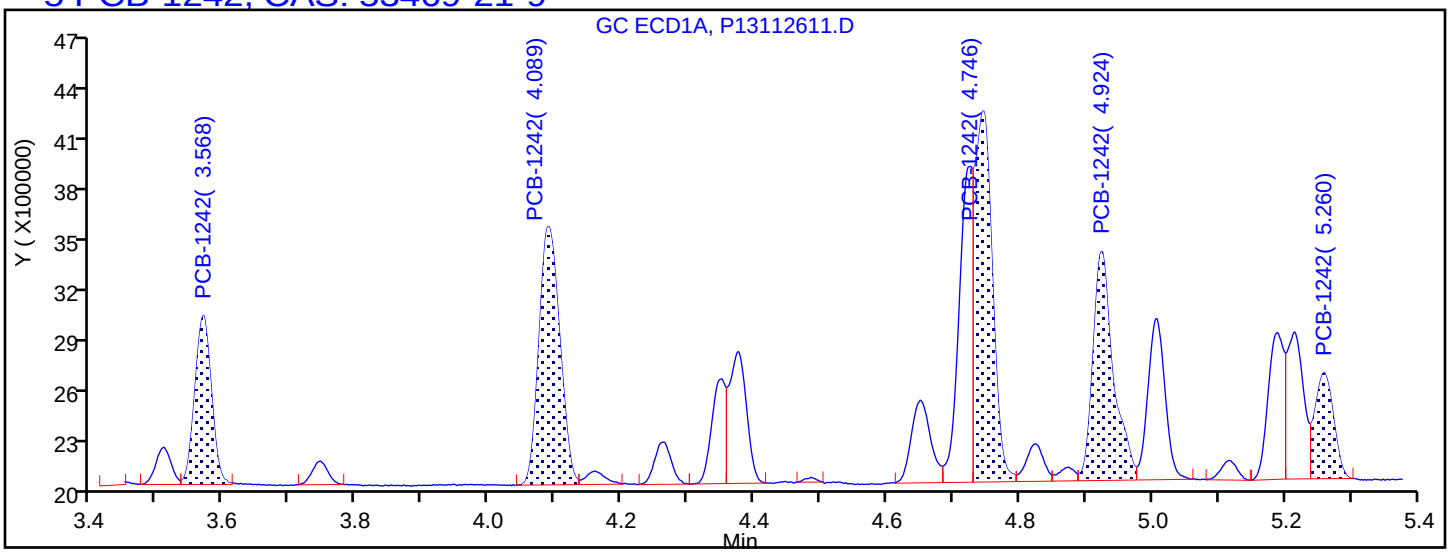
Report Date: 27-Nov-2018 10:36:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112611.D

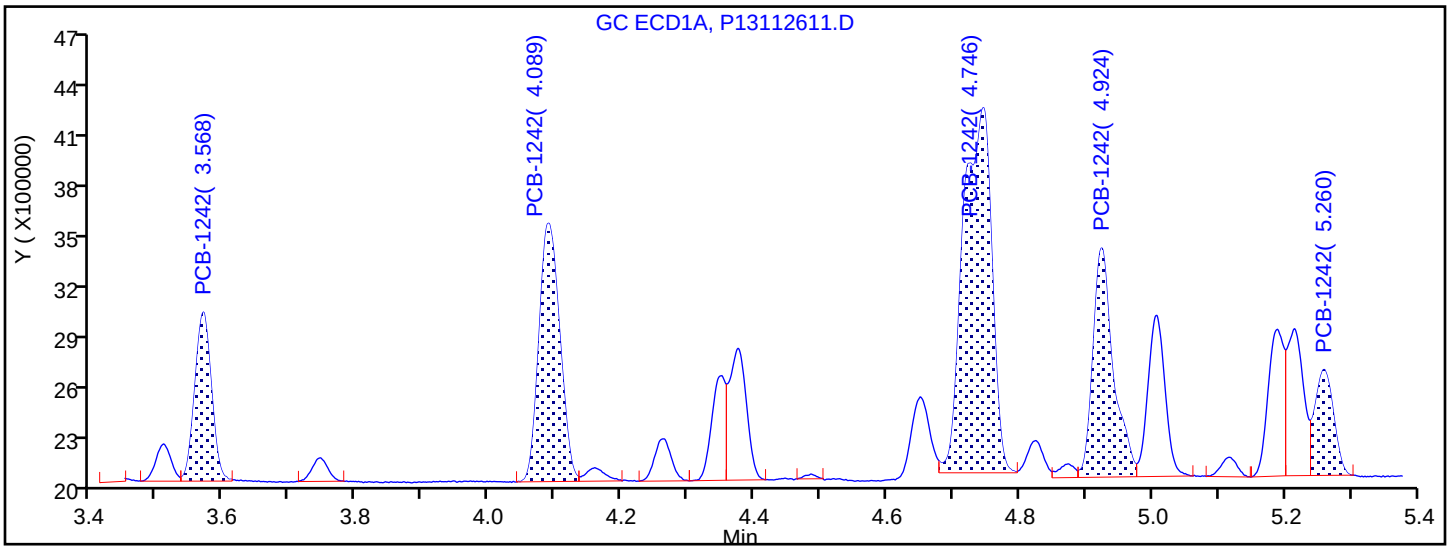
Injection Date:	26-Nov-2018 16:53:41	Instrument ID:	A2HP13		
Lims ID:	std01 1242 1268				
Client ID:					
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	PCB13 IS	Limit Group:	GC 8082A IS		
Column:		Detector	GC ECD1A		

5 PCB-1242, CAS: 53469-21-9



Processing Integration Results

3.568	Response = 1701900
4.089	Response = 3258363
4.746	Response = 3935454
4.924	Response = 2829266
5.260	Response = 1193714



Manual Integration Results

3.568	Response = 1701900	
4.089	Response = 3258363	
4.746	Response = 6303949	M
4.924	Response = 2829266	
5.260	Response = 1193714	

Reviewer: hassl, 27-Nov-2018 06:31:06

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112612.D
Lims ID: std02 1242 1268
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Nov-2018 17:12:03 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-012
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:45 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:32:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	54817396	0.0500	0.0500	
2	2.405	2.403	0.002	45560012	0.0500	0.0500	
5 PCB-1242							M
1	3.569	3.568	0.001	3246657	0.2000	0.2032	
1	4.090	4.090	0.000	6248843	0.2000	0.2032	
1	4.747	4.746	0.001	12407671	0.2000	0.1976	M
1	4.925	4.924	0.001	5559316	0.2000	0.2041	
1	5.261	5.260	0.001	2369664	0.2000	0.2078	
		Average of Peak Amounts =				0.2032	
2	4.642	4.643	-0.001	3000742	0.2000	0.2063	
2	5.243	5.243	0.000	5704234	0.2000	0.2078	
2	5.885	5.884	0.001	11194487	0.2000	0.2038	
2	6.064	6.063	0.001	4698828	0.2000	0.2092	
2	6.396	6.394	0.002	2811190	0.2000	0.2117	
		Average of Peak Amounts =				0.2078	
						RPD = 2.23	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	8.865	8.865	0.000	26941094	0.2000	0.2071	
1	8.907	8.908	-0.001	27193547	0.2000	0.2107	
1	9.115	9.116	-0.001	22758082	0.2000	0.2087	
1	9.486	9.487	-0.001	10054452	0.2000	0.2166	
1	9.769	9.769	0.000	73607782	0.2000	0.2117	
		Average of Peak Amounts =				0.2110	
2	9.987	9.989	-0.002	21550881	0.2000	0.2094	
2	10.032	10.033	-0.001	21872330	0.2000	0.2104	
2	10.276	10.278	-0.002	18862765	0.2000	0.2101	
2	10.540	10.542	-0.002	8511105	0.2000	0.2164	
2	10.838	10.840	-0.002	60572474	0.2000	0.2105	
		Average of Peak Amounts =				0.2114	
						RPD = 0.19	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@.2PPM_00014 Amount Added: 1.00 Units: mL

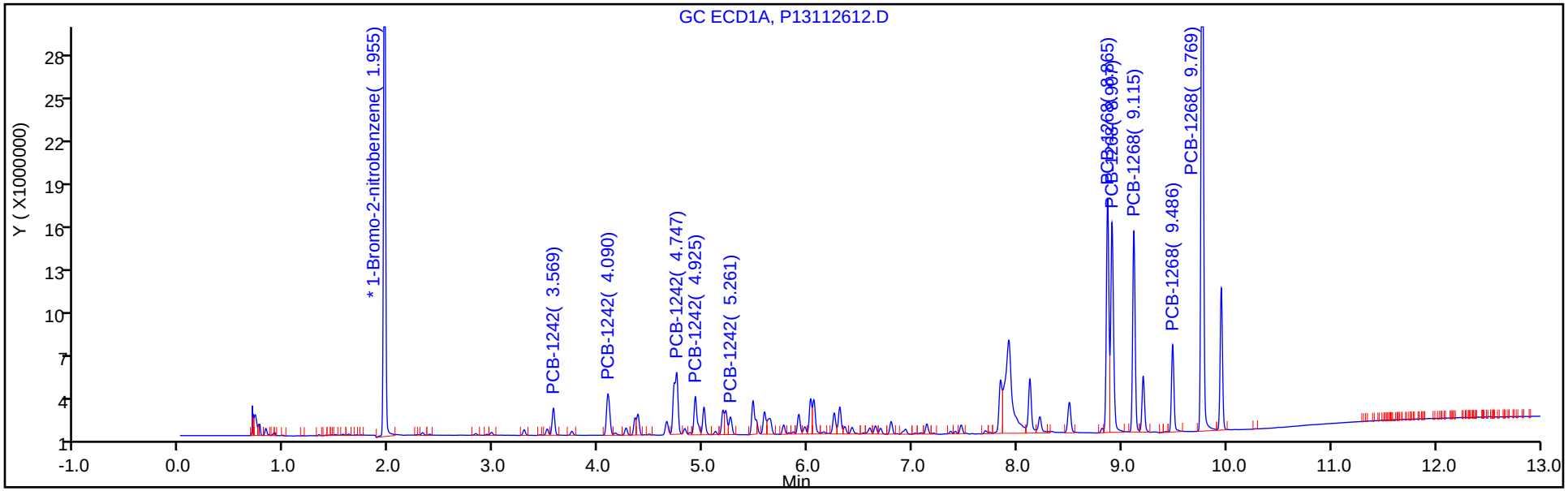
Report Date: 27-Nov-2018 10:36:47 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

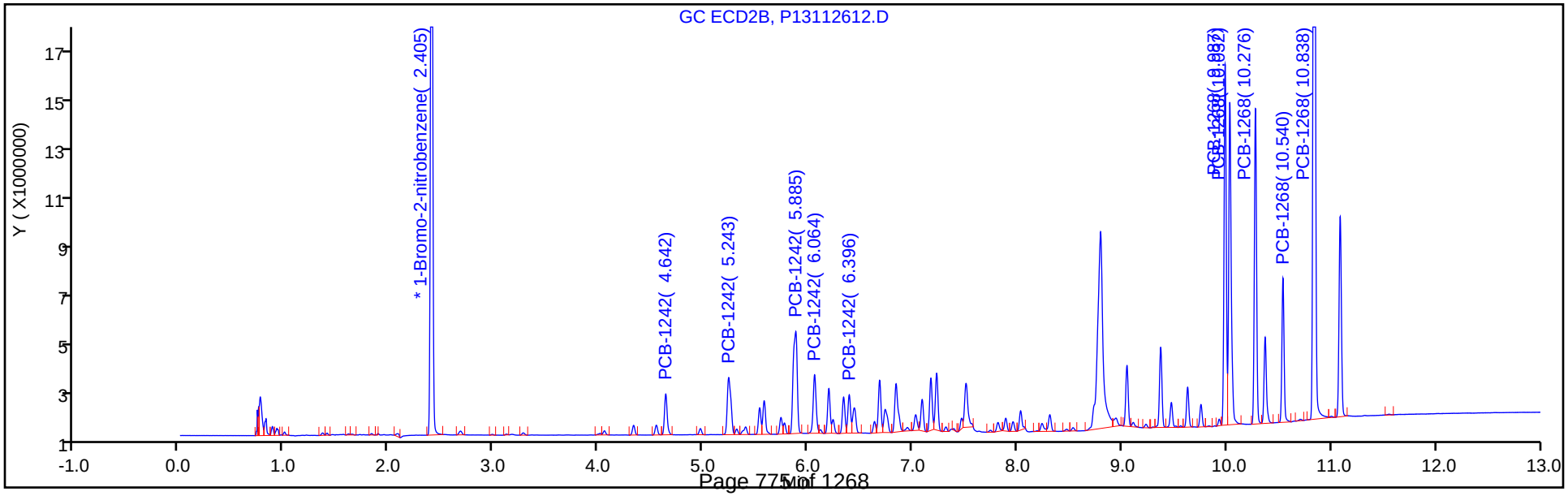
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112612.D

Injection Date:	26-Nov-2018 17:12:03	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std02 1242 1268			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:36:47 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112612.D

Injection Date: 26-Nov-2018 17:12:03 Instrument ID: A2HP13

Lims ID: std02 1242 1268

Client ID:

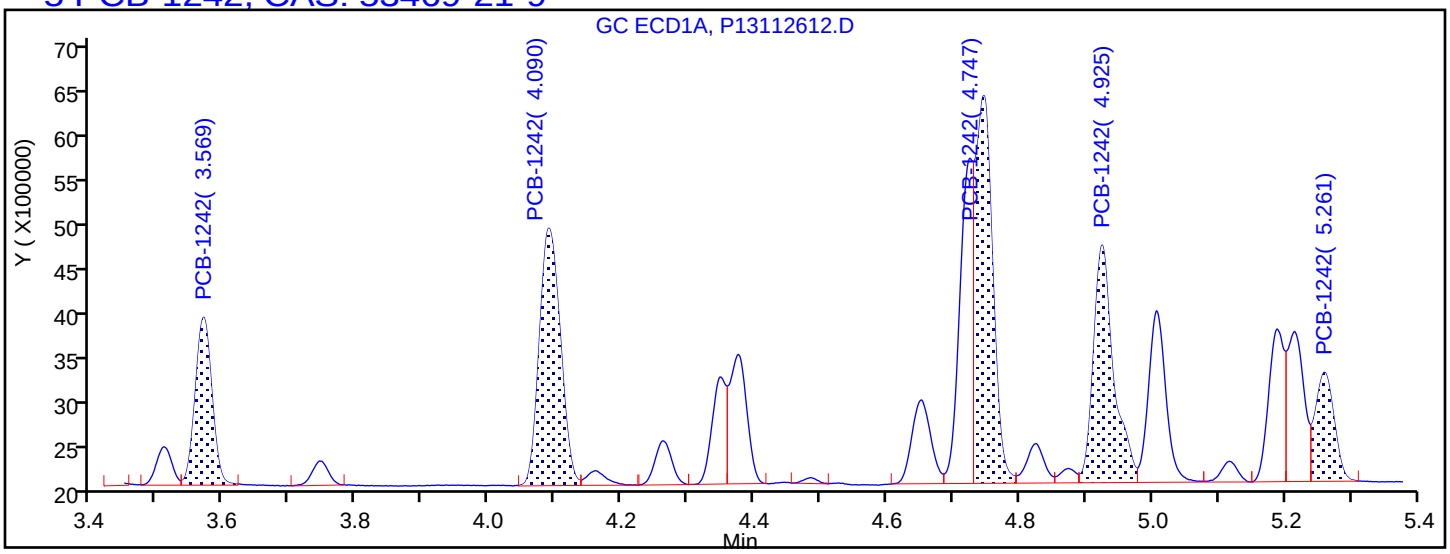
Operator ID: ALS Bottle#: 12 Worklist Smp#: 12

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

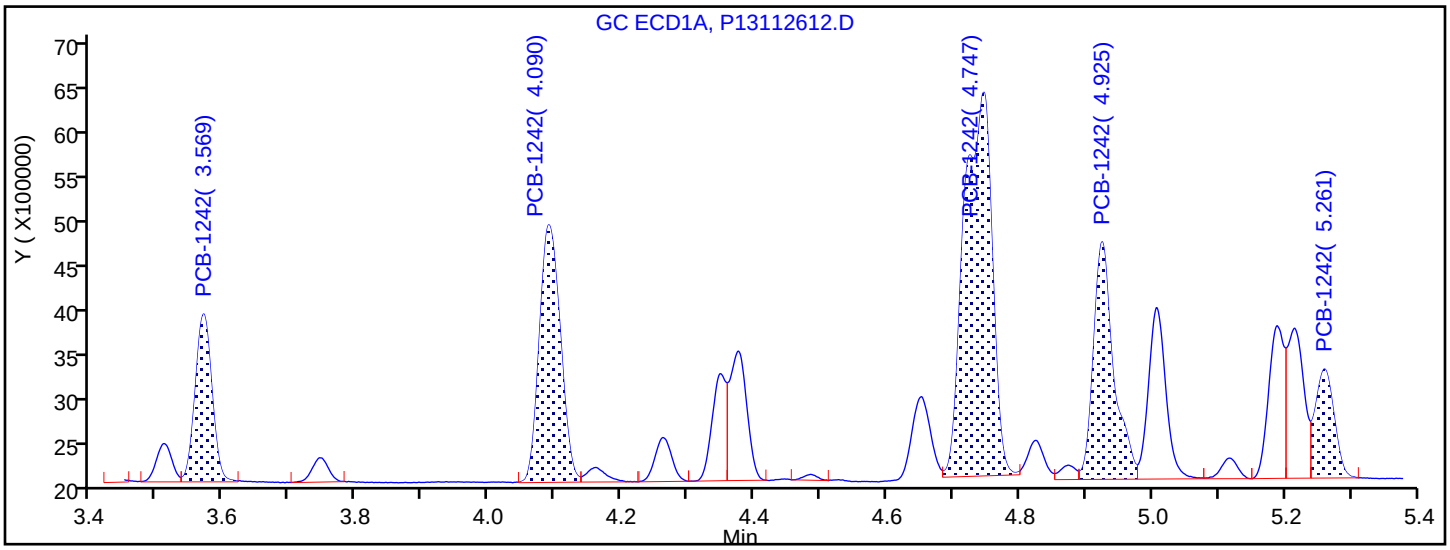
Column: Detector GC ECD1A

5 PCB-1242, CAS: 53469-21-9



Processing Integration Results

3.569	Response = 3246657
4.090	Response = 6248843
4.747	Response = 7763921
4.925	Response = 5559316
5.261	Response = 2369664



Manual Integration Results

3.569	Response = 3246657	
4.090	Response = 6248843	
4.747	Response = 12407671	M
4.925	Response = 5559316	
5.261	Response = 2369664	

Reviewer: hassl, 27-Nov-2018 06:32:04

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112613.D
Lims ID: std05 1242 1268
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Nov-2018 17:30:23 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-013
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:39 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:32:39

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	49293944	0.0500	0.0500	
2	2.405	2.403	0.002	41592052	0.0500	0.0500	
5 PCB-1242							M
1	3.568	3.568	0.000	6868954	0.5000	0.4780	
1	4.090	4.090	0.000	13361011	0.5000	0.4831	
1	4.746	4.746	0.000	27175551	0.5000	0.4813	M
1	4.925	4.924	0.001	11698749	0.5000	0.4777	
1	5.260	5.260	0.000	4907305	0.5000	0.4786	
		Average of Peak Amounts =				0.4797	
2	4.642	4.643	-0.001	6307335	0.5000	0.4749	
2	5.243	5.243	0.000	11641121	0.5000	0.4645	
2	5.884	5.884	0.000	23345379	0.5000	0.4656	
2	6.065	6.063	0.002	9734424	0.5000	0.4747	
2	6.395	6.394	0.001	5697364	0.5000	0.4700	
		Average of Peak Amounts =				0.4700	
						RPD = 2.05	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	8.864	8.865	-0.001	56836757	0.5000	0.4859	
1	8.906	8.908	-0.002	56074697	0.5000	0.4832	
1	9.116	9.116	0.000	47053678	0.5000	0.4798	
1	9.486	9.487	-0.001	19993310	0.5000	0.4790	
1	9.769	9.769	0.000	152298328	0.5000	0.4872	
		Average of Peak Amounts =				0.4830	
2	9.987	9.989	-0.002	43566605	0.5000	0.4638	
2	10.033	10.033	0.000	44139429	0.5000	0.4652	
2	10.277	10.278	-0.001	37886146	0.5000	0.4624	
2	10.540	10.542	-0.002	16511645	0.5000	0.4598	
2	10.839	10.840	-0.001	125643520	0.5000	0.4783	
		Average of Peak Amounts =				0.4659	
						RPD = 3.61	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@0.5PPM_00030 Amount Added: 1.00 Units: mL

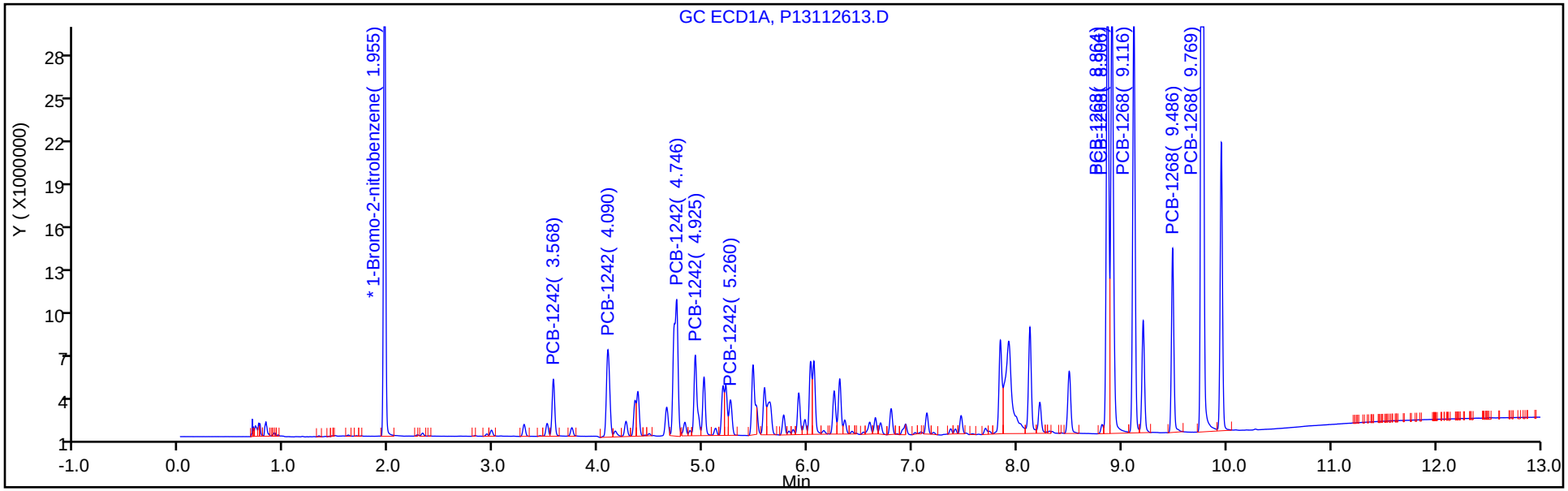
Report Date: 27-Nov-2018 10:36:40 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

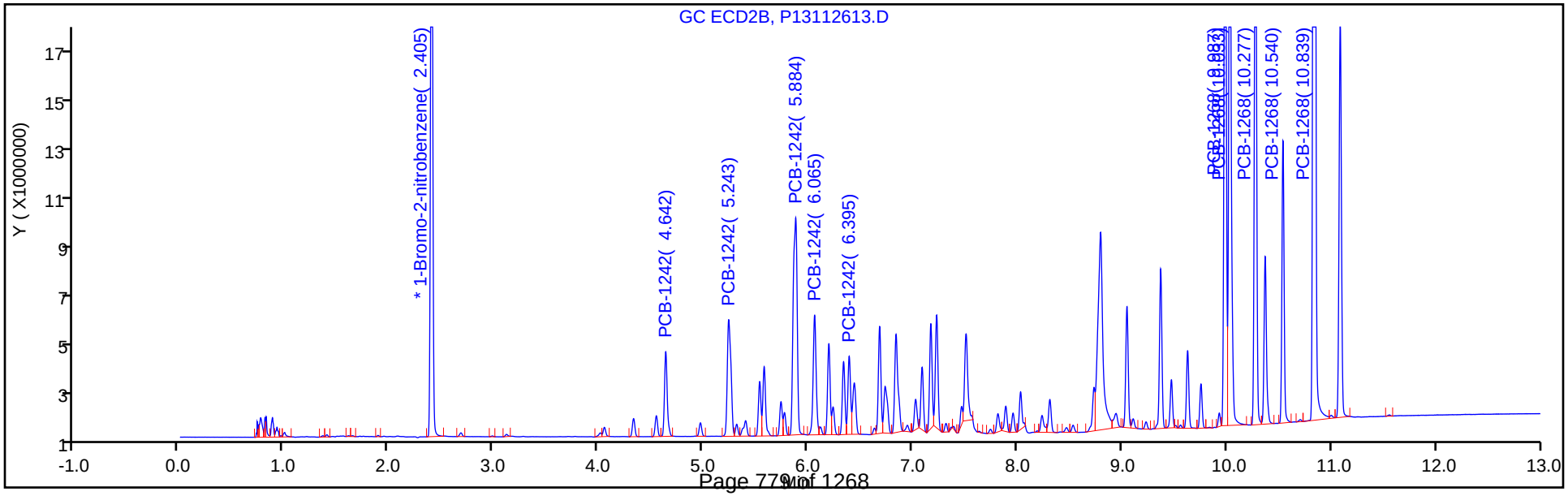
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112613.D

Injection Date:	26-Nov-2018 17:30:23	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std05 1242 1268			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:36:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112613.D

Injection Date: 26-Nov-2018 17:30:23 Instrument ID: A2HP13

Lims ID: std05 1242 1268

Client ID:

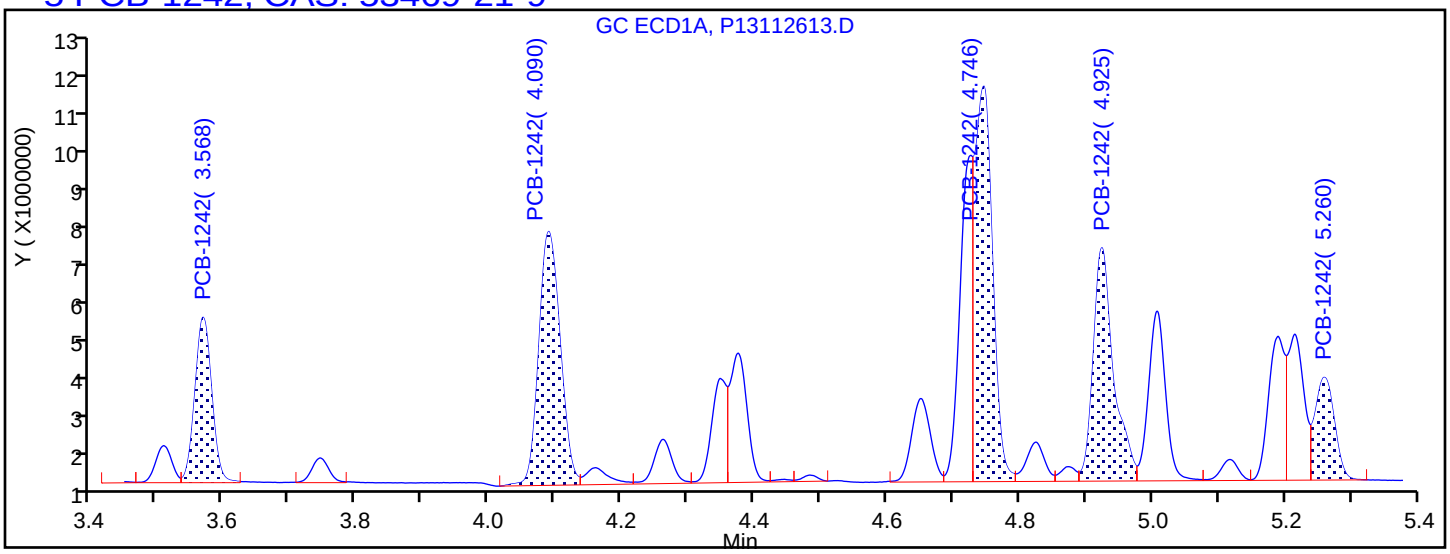
Operator ID: ALS Bottle#: 13 Worklist Smp#: 13

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

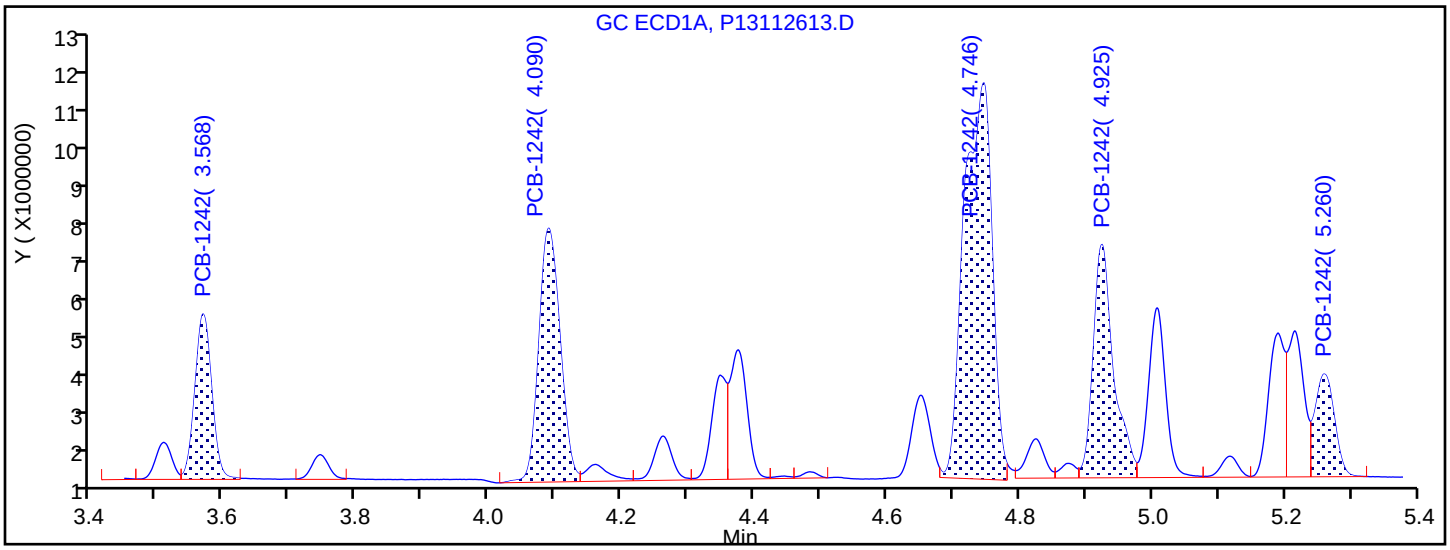
Column: Detector GC ECD1A

5 PCB-1242, CAS: 53469-21-9



Processing Integration Results

3.568	Response = 6868954
4.090	Response = 13361011
4.746	Response = 17237326
4.925	Response = 11698749
5.260	Response = 4907305



Manual Integration Results

3.568	Response = 6868954	
4.090	Response = 13361011	
4.746	Response = 27175551	M
4.925	Response = 11698749	
5.260	Response = 4907305	

Reviewer: hassl, 27-Nov-2018 06:32:33

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112614.D
Lims ID: std1 1242 1268
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Nov-2018 17:48:41 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-014
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:32 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:33:07

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	47973854	0.0500	0.0500	
2	2.404	2.403	0.001	40277969	0.0500	0.0500	
5 PCB-1242							M
1	3.568	3.568	0.000	12474611	1.00	0.8920	
1	4.090	4.090	0.000	23883559	1.00	0.8873	
1	4.745	4.746	-0.001	51732336	1.00	0.9413	M
1	4.925	4.924	0.001	21854494	1.00	0.9169	
1	5.261	5.260	0.001	8946011	1.00	0.8965	
		Average of Peak Amounts =				0.9068	
2	4.642	4.643	-0.001	11396382	1.00	0.8861	
2	5.243	5.243	0.000	21067585	1.00	0.8681	
2	5.885	5.884	0.001	43419718	1.00	0.8943	
2	6.065	6.063	0.002	17722609	1.00	0.8924	
2	6.395	6.394	0.001	10252046	1.00	0.8734	
		Average of Peak Amounts =				0.8829	
						RPD = 2.67	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	8.863	8.865	-0.002	106711674	1.00	0.9374	
1	8.906	8.908	-0.002	105632651	1.00	0.9353	
1	9.115	9.116	-0.001	87938120	1.00	0.9214	
1	9.485	9.487	-0.002	36965799	1.00	0.9100	
1	9.767	9.769	-0.002	283204671	1.00	0.9309	
		Average of Peak Amounts =				0.9270	
2	9.988	9.989	-0.001	81486587	1.00	0.8958	
2	10.033	10.033	0.000	82163783	1.00	0.8942	
2	10.278	10.278	0.000	70530206	1.00	0.8888	
2	10.540	10.542	-0.002	29854775	1.00	0.8584	
2	10.840	10.840	0.000	236947210	1.00	0.9314	
		Average of Peak Amounts =				0.8937	
						RPD = 3.65	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG42/68@1.0PP_00023 Amount Added: 1.00 Units: mL

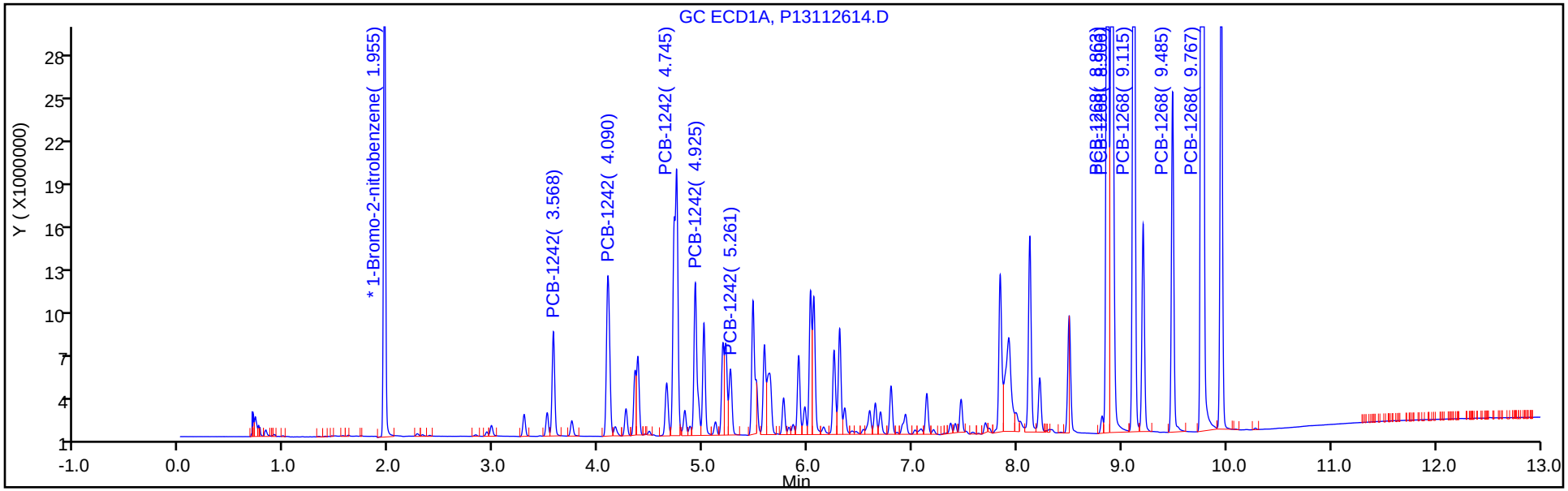
Report Date: 27-Nov-2018 10:36:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

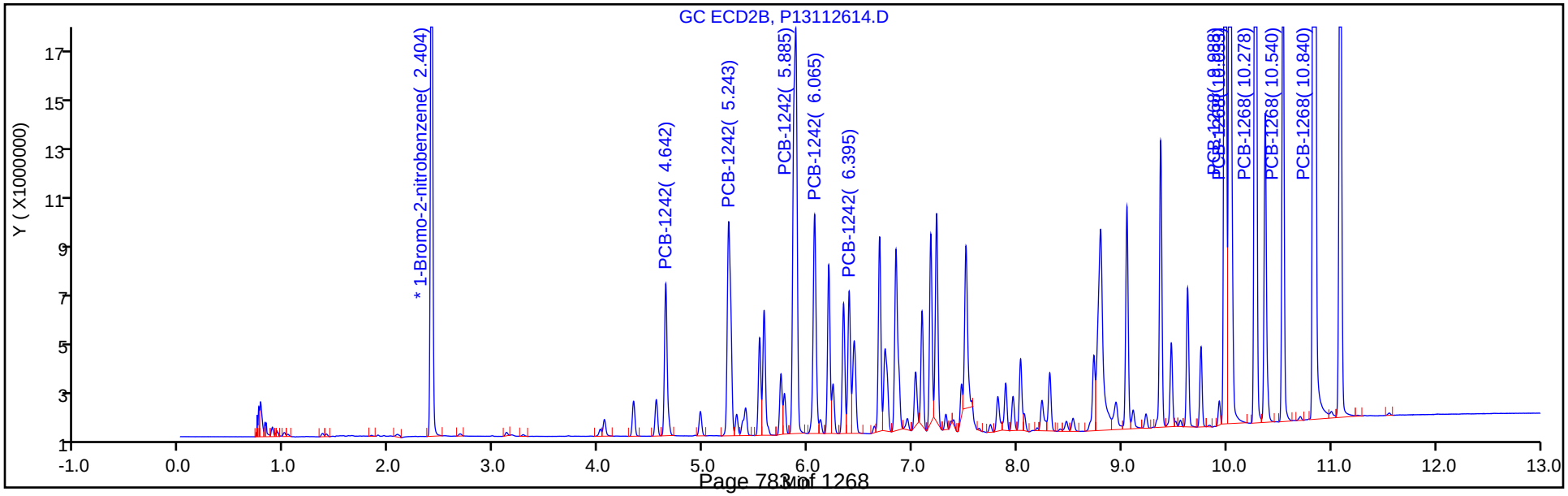
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112614.D

Injection Date:	26-Nov-2018 17:48:41	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std1 1242 1268			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:36:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112614.D

Injection Date: 26-Nov-2018 17:48:41 Instrument ID: A2HP13

Lims ID: std1 1242 1268

Client ID:

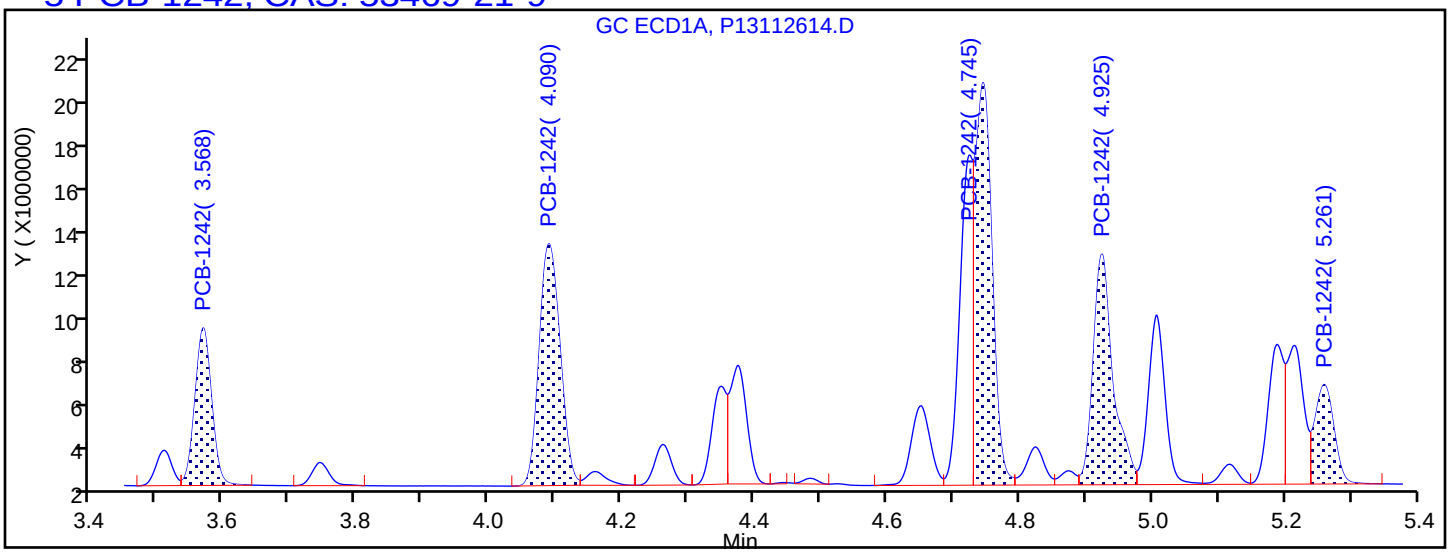
Operator ID: ALS Bottle#: 14 Worklist Smp#: 14

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

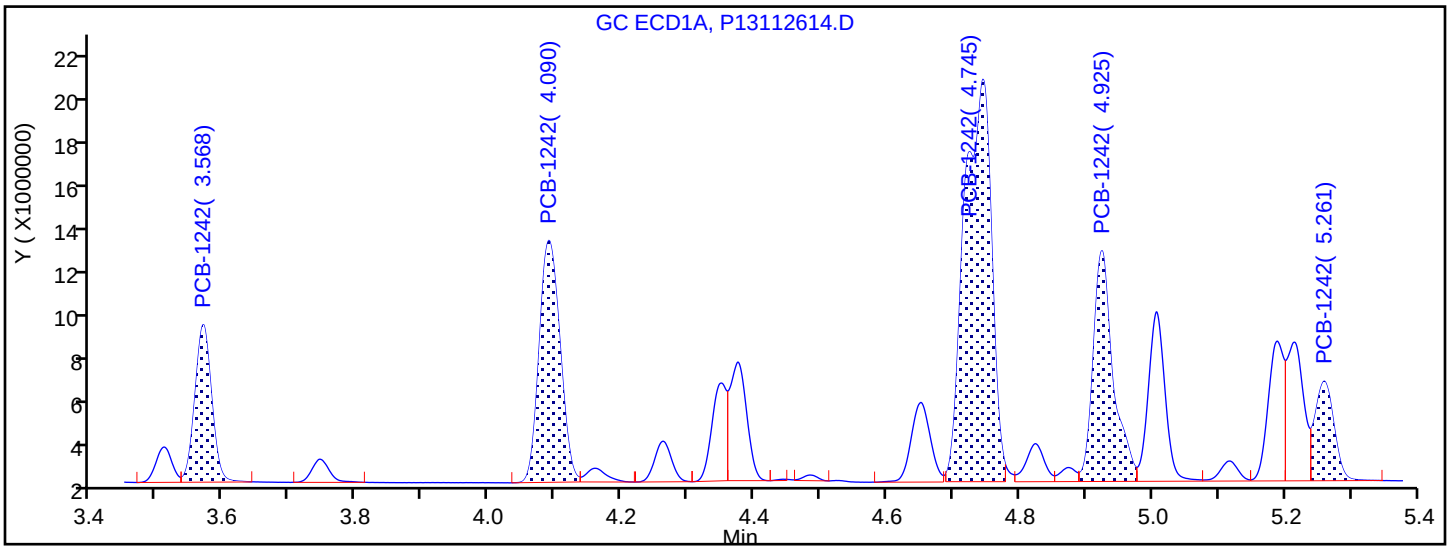
Column: Detector GC ECD1A

5 PCB-1242, CAS: 53469-21-9



Processing Integration Results

3.568	Response = 12474611
4.090	Response = 23883559
4.745	Response = 32086685
4.925	Response = 21854494
5.261	Response = 8946011



Manual Integration Results

3.568	Response = 12474611	
4.090	Response = 23883559	
4.745	Response = 51732336	M
4.925	Response = 21854494	
5.261	Response = 8946011	

Reviewer: hassl, 27-Nov-2018 06:33:00

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112615.D
Lims ID: std15 1242 1268
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Nov-2018 18:07:05 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-015
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:26 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:33:42

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	52341941	0.0500	0.0500	
2	2.404	2.403	0.001	43627936	0.0500	0.0500	
5 PCB-1242							M
1	3.568	3.568	0.000	19025972	1.50	1.25	
1	4.090	4.090	0.000	36535508	1.50	1.24	
1	4.745	4.746	-0.001	82014787	1.50	1.37	M
1	4.925	4.924	0.001	33725539	1.50	1.30	M
1	5.260	5.260	0.000	13854621	1.50	1.27	
		Average of Peak Amounts =				1.29	
2	4.641	4.643	-0.002	16921250	1.50	1.21	
2	5.243	5.243	0.000	31586533	1.50	1.20	
2	5.884	5.884	0.000	67776946	1.50	1.29	
2	6.065	6.063	0.002	27109036	1.50	1.26	
2	6.395	6.394	0.001	15432365	1.50	1.21	
		Average of Peak Amounts =				1.24	
					RPD =	3.95	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	8.862	8.865	-0.003	182847908	1.50	1.47	
1	8.906	8.908	-0.002	178843258	1.50	1.45	
1	9.115	9.116	-0.001	151475666	1.50	1.45	
1	9.484	9.487	-0.003	64022662	1.50	1.44	
1	9.767	9.769	-0.002	505436952	1.50	1.52	
		Average of Peak Amounts =				1.47	
2	9.986	9.989	-0.003	139211558	1.50	1.41	
2	10.032	10.033	-0.001	139386226	1.50	1.40	
2	10.277	10.278	-0.001	121272419	1.50	1.41	
2	10.540	10.542	-0.002	50872015	1.50	1.35	
2	10.839	10.840	-0.001	422868594	1.50	1.53	
		Average of Peak Amounts =				1.42	
						RPD = 3.27	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@1.5PPM_00005 Amount Added: 1.00 Units: mL

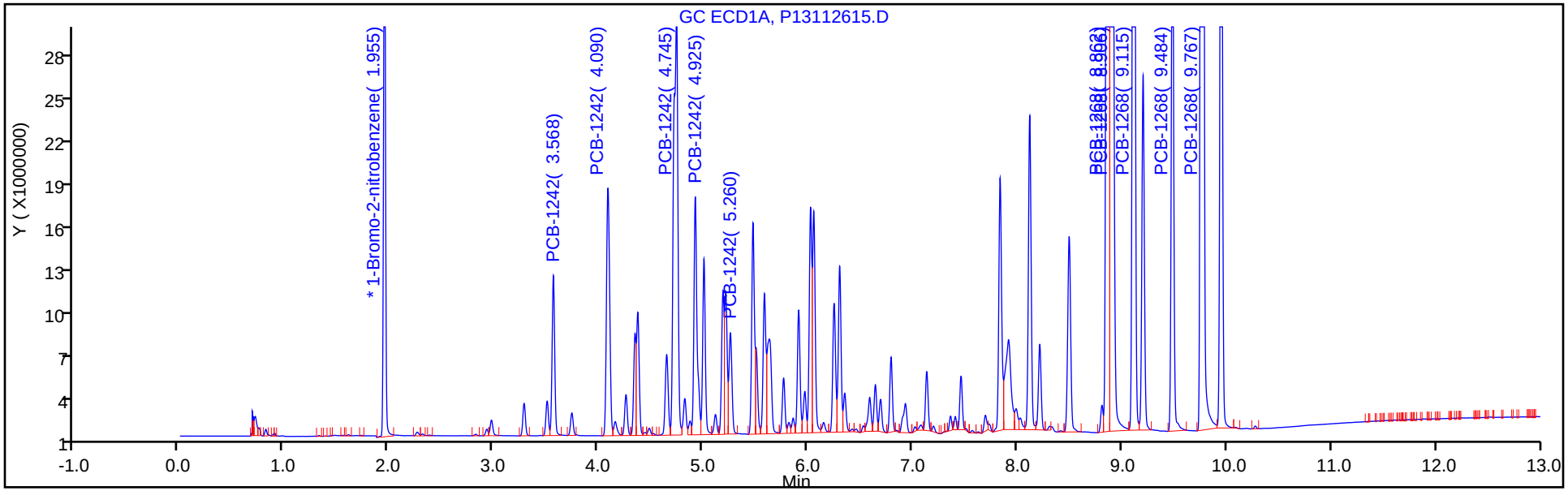
Report Date: 27-Nov-2018 10:36:28 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

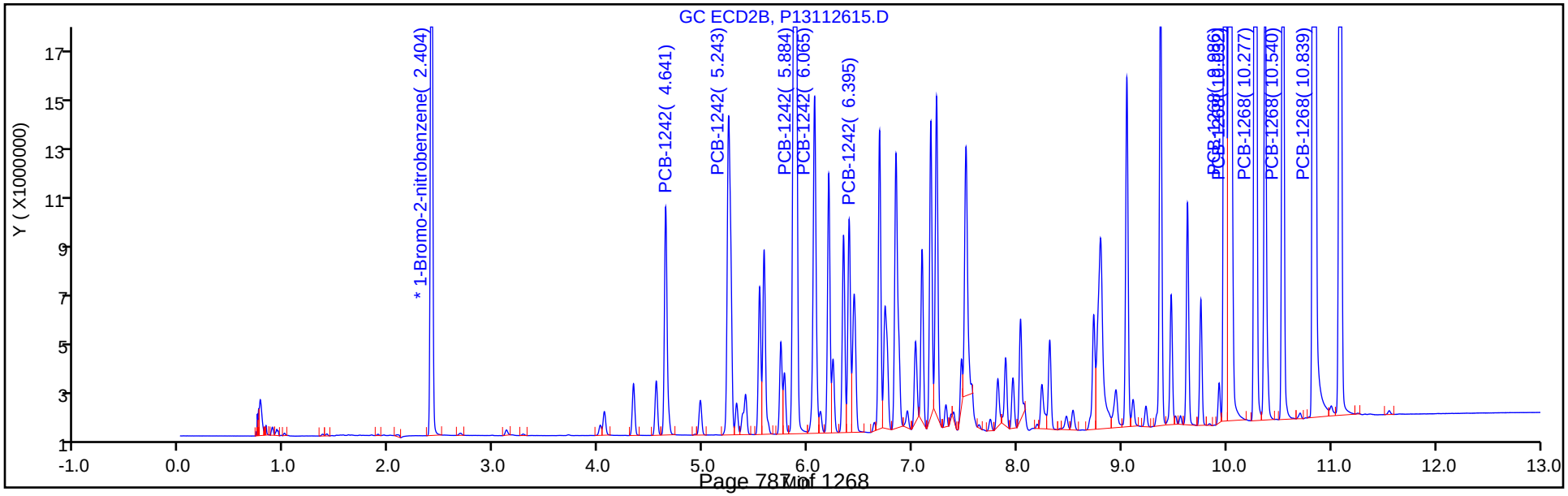
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112615.D

Injection Date:	26-Nov-2018 18:07:05	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std15 1242 1268			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:36:28 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112615.D

Injection Date: 26-Nov-2018 18:07:05 Instrument ID: A2HP13

Lims ID: std15 1242 1268

Client ID:

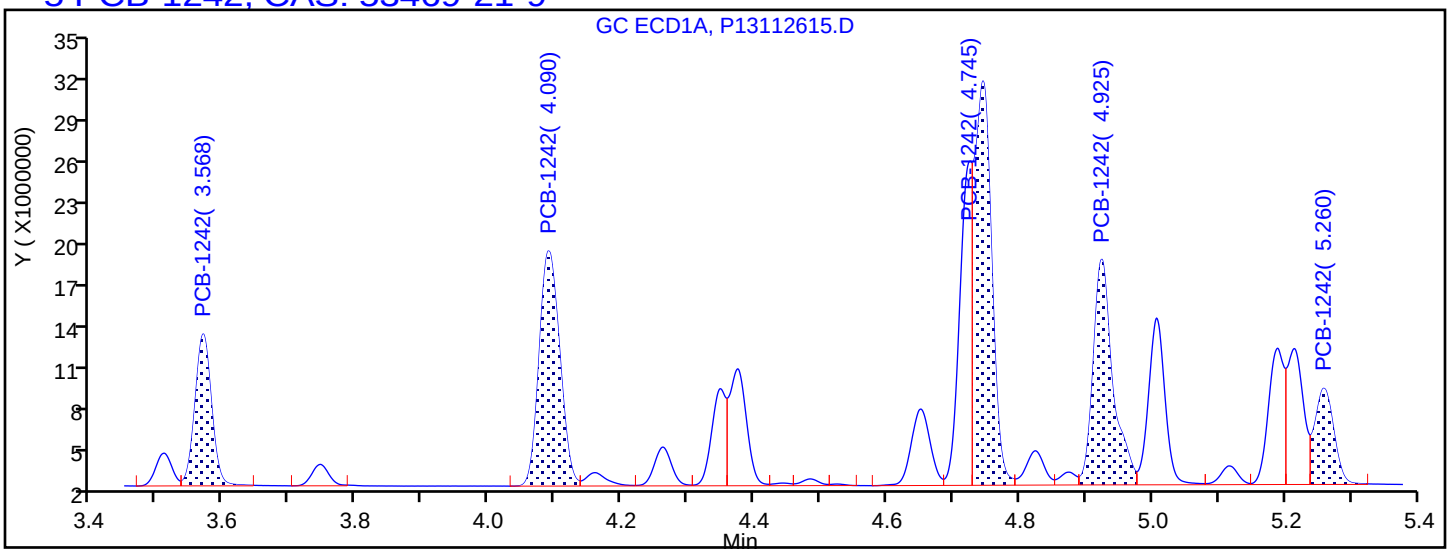
Operator ID: ALS Bottle#: 15 Worklist Smp#: 15

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

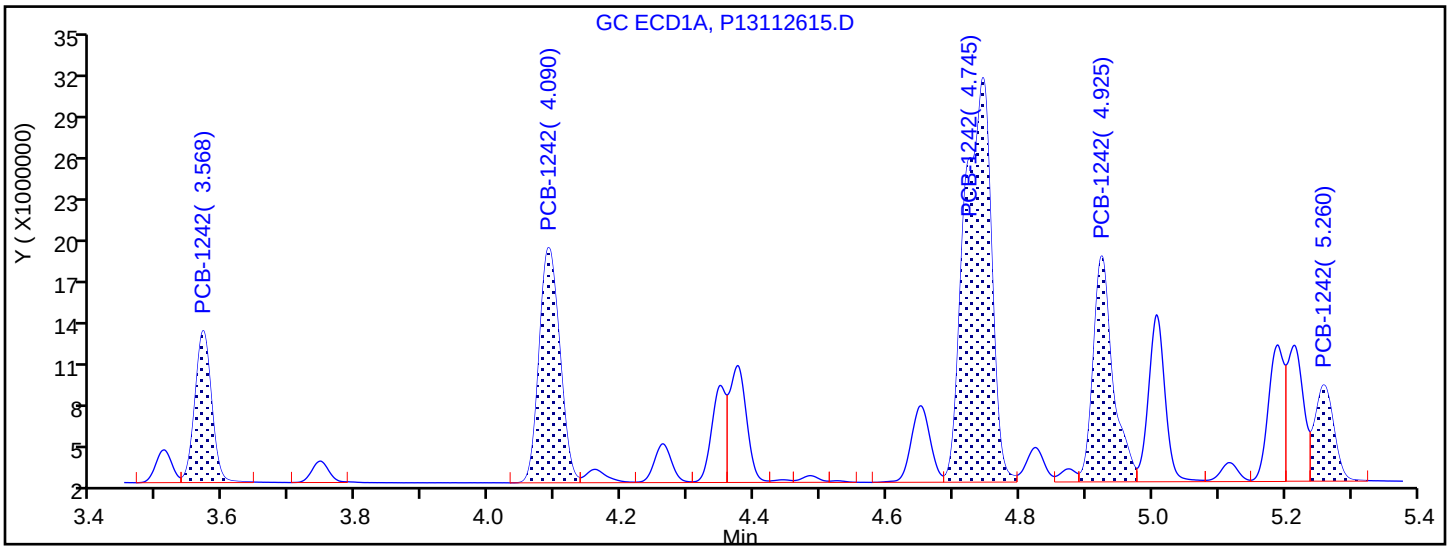
Column: Detector GC ECD1A

5 PCB-1242, CAS: 53469-21-9



Processing Integration Results

3.568	Response = 19025972	
4.090	Response = 36535508	
4.745	Response = 52617701	
4.925	Response = 33621201	
5.260	Response = 13854621	



Manual Integration Results

3.568	Response = 19025972	
4.090	Response = 36535508	
4.745	Response = 82014787	M
4.925	Response = 33725539	M
5.260	Response = 13854621	

Reviewer: hassl, 27-Nov-2018 06:33:39

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 16:35 Calibration End Date: 11/26/2018 18:07 Calibration ID: 48168

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/10	P13112610.D
Level 2	STD01 240-356910/11	P13112611.D
Level 3	STD02 240-356910/12	P13112612.D
Level 4	STD05 240-356910/13	P13112613.D
Level 5	STD1 240-356910/14	P13112614.D
Level 6	STD15 240-356910/15	P13112615.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1242 Peak 1	0.0188 0.0129	0.0183	0.0165	0.0152	0.0141	Ave		0.0160				14.5		20.0			
PCB-1242 Peak 2	0.0367 0.0241	0.0345	0.0313	0.0280	0.0262	Ave		0.0301				16.2		20.0			
PCB-1242 Peak 3	0.0715 0.0518	0.0669	0.0614	0.0561	0.0539	Ave		0.0603				12.9		20.0			
PCB-1242 Peak 4	0.0275 0.0207	0.0285	0.0258	0.0234	0.0220	Ave		0.0247				12.6		20.0			
PCB-1242 Peak 5	0.0170 0.0118	0.0168	0.0154	0.0137	0.0127	Ave		0.0146				14.9		20.0			
PCB-1268 Peak 1	0.1253 0.1064	0.1217	0.1183	0.1047	0.1012	Ave		0.1129				8.9		20.0			
PCB-1268 Peak 2	0.1257 0.1065	0.1240	0.1200	0.1061	0.1020	Ave		0.1141				9.1		20.0			
PCB-1268 Peak 3	0.1096 0.0927	0.1067	0.1035	0.0911	0.0876	Ave		0.0985				9.3		20.0			
PCB-1268 Peak 4	0.0478 0.0389	0.0489	0.0467	0.0397	0.0371	Ave		0.0432				12.0		20.0			
PCB-1268 Peak 5	0.3190 0.3231	0.3242	0.3324	0.3021	0.2941	Ave		0.3158				4.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 16:35 Calibration End Date: 11/26/2018 18:07 Calibration ID: 48168

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/10	P13112610.D
Level 2	STD01 240-356910/11	P13112611.D
Level 3	STD02 240-356910/12	P13112612.D
Level 4	STD05 240-356910/13	P13112613.D
Level 5	STD1 240-356910/14	P13112614.D
Level 6	STD15 240-356910/15	P13112615.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1242 Peak 1	BNB	Ave	780417 16921250	1586536	3000742	6307335	11396382	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 2	BNB	Ave	1520898 31586533	2997378	5704234	11641121	21067585	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 3	BNB	Ave	2963055 67776946	5813696	11194487	23345379	43419718	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 4	BNB	Ave	1141783 27109036	2473431	4698828	9734424	17722609	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1242 Peak 5	BNB	Ave	706007 15432365	1456178	2811190	5697364	10252046	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 1	BNB	Ave	5196842 139211558	10569630	21550881	43566605	81486587	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 2	BNB	Ave	5214547 139386226	10769068	21872330	44139429	82163783	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 3	BNB	Ave	4543663 121272419	9264575	18862765	37886146	70530206	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 4	BNB	Ave	1981445 50872015	4249264	8511105	16511645	29854775	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1268 Peak 5	BNB	Ave	13227836 422868594	28158305	60572474	125643520	236947210	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112610.D
Lims ID: std005 1242 1268
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 26-Nov-2018 16:35:19 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-010
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:58 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:30:05

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	49248595	0.0500	0.0500	
2	2.404	2.403	0.002	41469391	0.0500	0.0500	
5 PCB-1242							M
1	3.568	3.568	0.000	847964	0.0500	0.0591	
1	4.090	4.090	0.000	1636076	0.0500	0.0592	
1	4.746	4.746	0.000	3208758	0.0500	0.0569	M
1	4.924	4.924	0.000	1403469	0.0500	0.0574	
1	5.260	5.260	0.000	591567	0.0500	0.0577	
		Average of Peak Amounts =				0.0581	
2	4.643	4.643	0.000	780417	0.0500	0.0589	
2	5.243	5.243	0.000	1520898	0.0500	0.0609	
2	5.884	5.884	0.000	2963055	0.0500	0.0593	
2	6.063	6.063	0.000	1141783	0.0500	0.0558	
2	6.394	6.394	0.000	706007	0.0500	0.0584	
		Average of Peak Amounts =				0.0587	
						RPD = 1.06	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	8.865	8.865	0.000	6035640	0.0500	0.0516	
1	8.908	8.908	0.000	5969349	0.0500	0.0515	
1	9.116	9.116	0.000	5183382	0.0500	0.0529	
1	9.487	9.487	0.000	2171474	0.0500	0.0521	
1	9.769	9.769	0.000	15597425	0.0500	0.0499	
		Average of Peak Amounts =				0.0516	
2	9.989	9.989	0.000	5196842	0.0500	0.0555	
2	10.033	10.033	0.000	5214547	0.0500	0.0551	
2	10.278	10.278	0.000	4543663	0.0500	0.0556	
2	10.542	10.542	0.000	1981445	0.0500	0.0553	
2	10.840	10.840	0.000	13227836	0.0500	0.0505	
		Average of Peak Amounts =				0.0544	
						RPD = 5.29	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@.05PPM_00014 Amount Added: 1.00 Units: mL

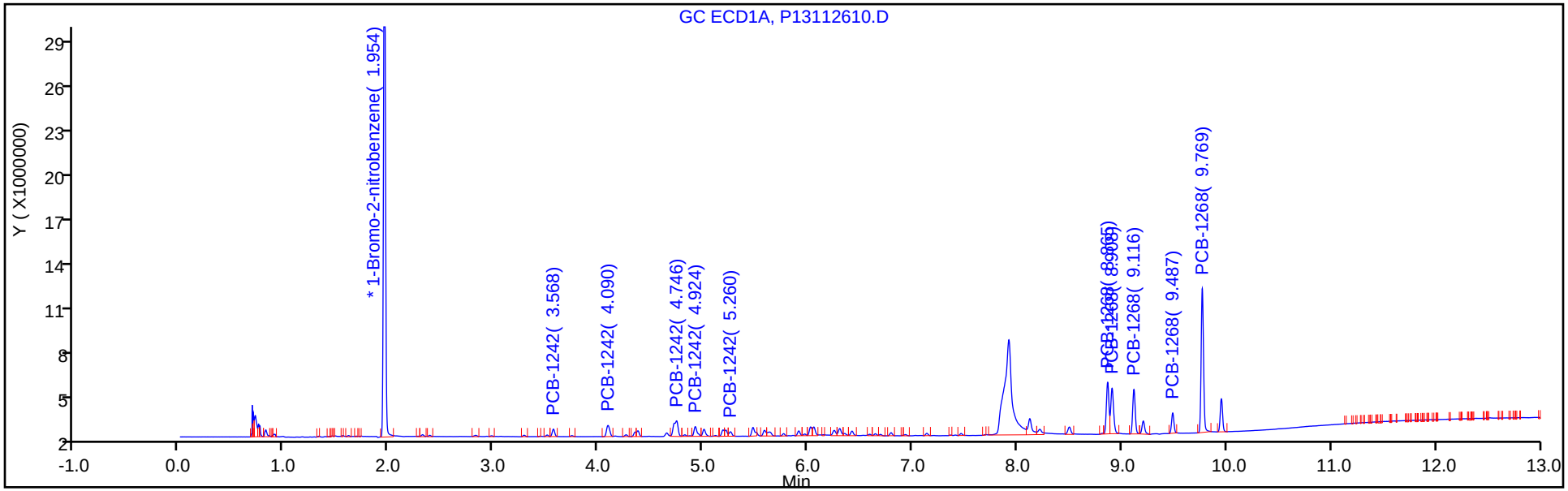
Report Date: 27-Nov-2018 10:37:00 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

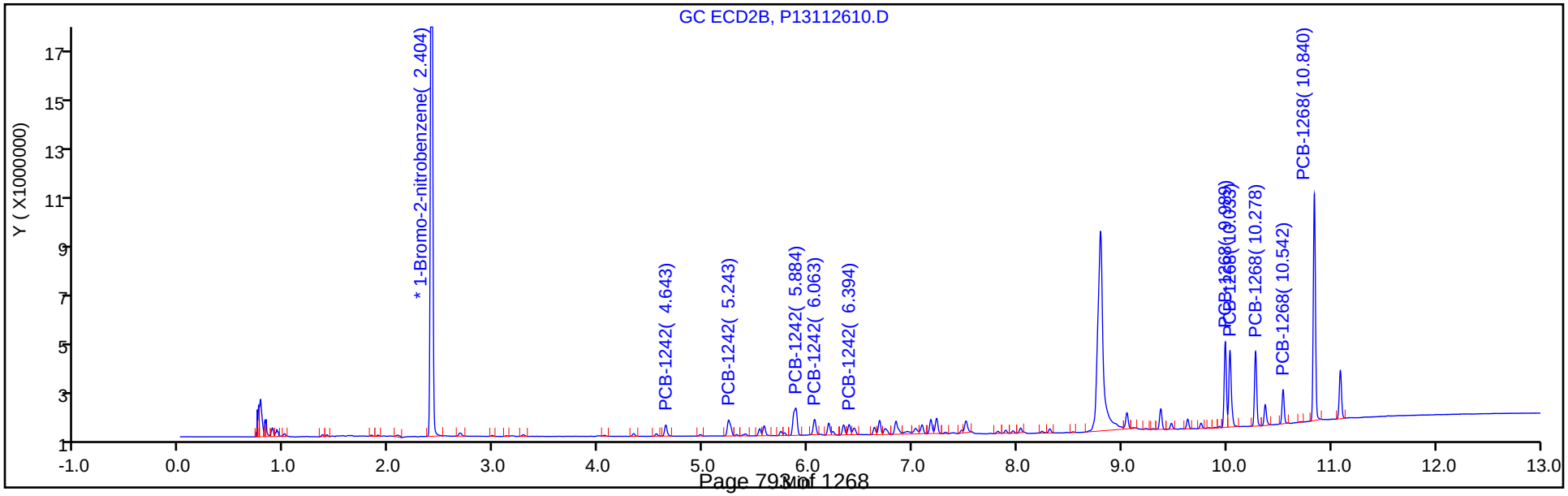
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112610.D

Injection Date:	26-Nov-2018 16:35:19	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std005 1242 1268			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112611.D
Lims ID: std01 1242 1268
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Nov-2018 16:53:41 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-011
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:52 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:31:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	51976566	0.0500	0.0500	
2	2.403	2.403	0.001	43428982	0.0500	0.0500	
5 PCB-1242							M
1	3.568	3.568	0.000	1701900	0.1000	0.1123	
1	4.089	4.090	-0.001	3258363	0.1000	0.1117	
1	4.746	4.746	0.000	6303949	0.1000	0.1059	M
1	4.924	4.924	0.000	2829266	0.1000	0.1096	
1	5.260	5.260	0.000	1193714	0.1000	0.1104	
		Average of Peak Amounts =				0.1100	
2	4.641	4.643	-0.002	1586536	0.1000	0.1144	
2	5.243	5.243	0.000	2997378	0.1000	0.1145	
2	5.884	5.884	0.000	5813696	0.1000	0.1111	
2	6.064	6.063	0.001	2473431	0.1000	0.1155	
2	6.394	6.394	0.000	1456178	0.1000	0.1151	
		Average of Peak Amounts =				0.1141	
						RPD = 3.69	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	8.864	8.865	-0.001	12836655	0.1000	0.1041	
1	8.907	8.908	-0.001	12819841	0.1000	0.1048	
1	9.115	9.116	-0.001	10836045	0.1000	0.1048	
1	9.486	9.487	-0.001	4596402	0.1000	0.1044	
1	9.768	9.769	-0.001	33685339	0.1000	0.1022	
		Average of Peak Amounts =				0.1041	
2	9.988	9.989	-0.001	10569630	0.1000	0.1078	
2	10.033	10.033	0.000	10769068	0.1000	0.1087	
2	10.278	10.278	0.000	9264575	0.1000	0.1083	
2	10.541	10.542	-0.001	4249264	0.1000	0.1133	
2	10.839	10.840	-0.001	28158305	0.1000	0.1027	
		Average of Peak Amounts =				0.1081	
						RPD = 3.85	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@.1PPM_00014 Amount Added: 1.00 Units: mL

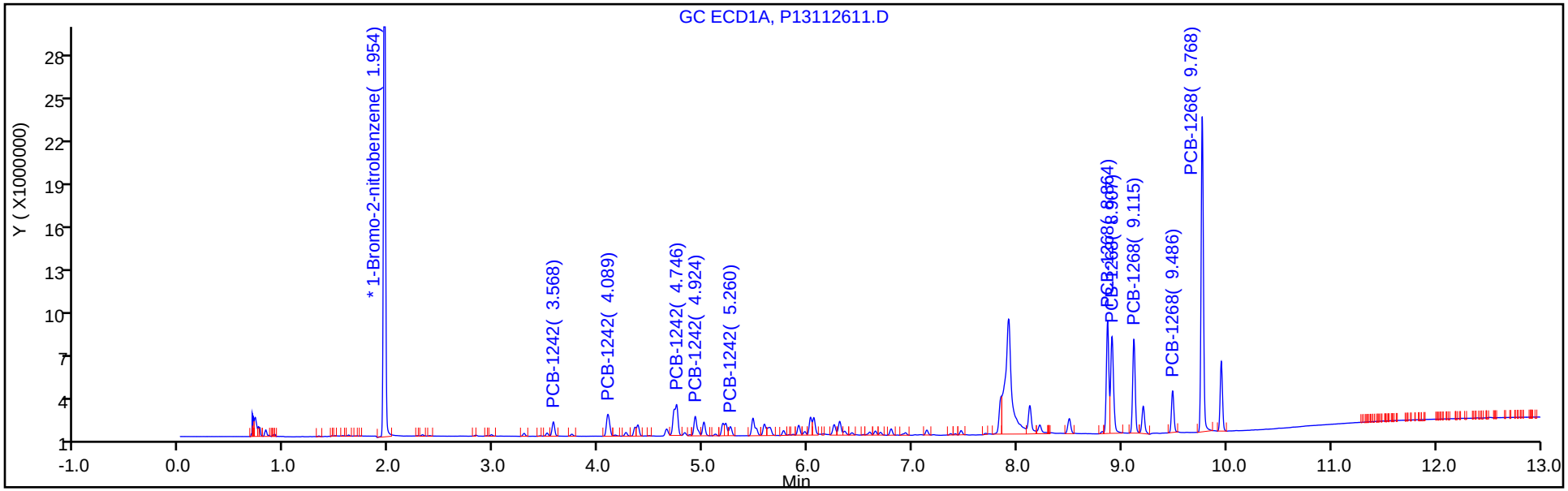
Report Date: 27-Nov-2018 10:36:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

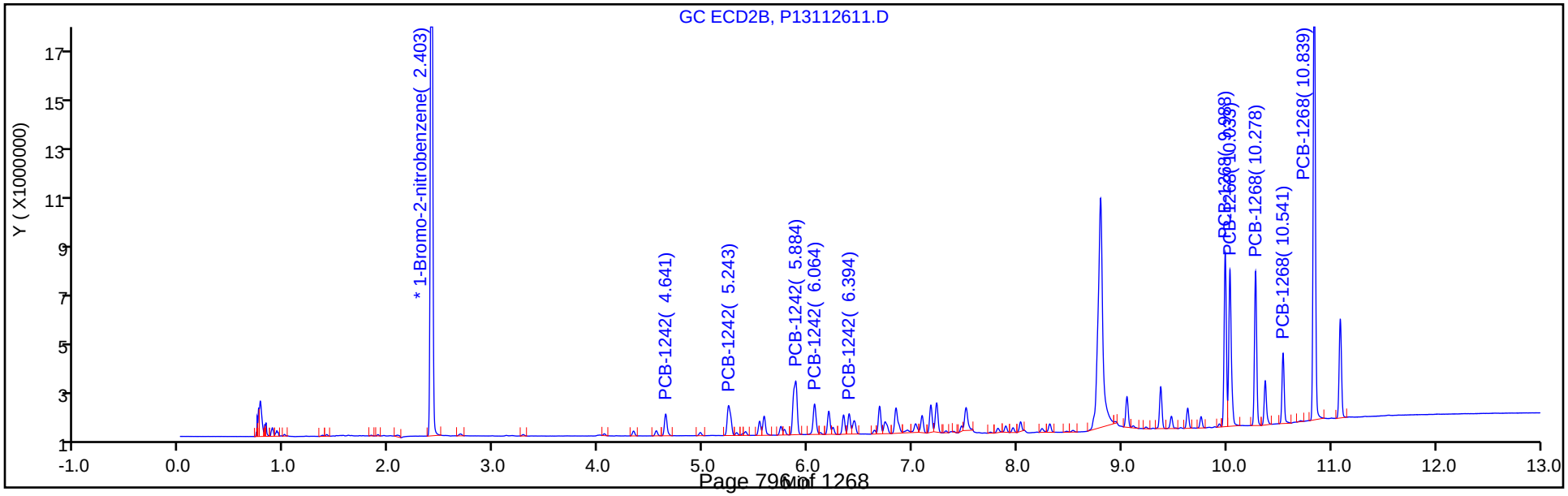
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112611.D

Injection Date:	26-Nov-2018 16:53:41	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std01 1242 1268			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112612.D
Lims ID: std02 1242 1268
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Nov-2018 17:12:03 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-012
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:45 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:32:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	54817396	0.0500	0.0500	
2	2.405	2.403	0.002	45560012	0.0500	0.0500	
5 PCB-1242							M
1	3.569	3.568	0.001	3246657	0.2000	0.2032	
1	4.090	4.090	0.000	6248843	0.2000	0.2032	
1	4.747	4.746	0.001	12407671	0.2000	0.1976	M
1	4.925	4.924	0.001	5559316	0.2000	0.2041	
1	5.261	5.260	0.001	2369664	0.2000	0.2078	
		Average of Peak Amounts =				0.2032	
2	4.642	4.643	-0.001	3000742	0.2000	0.2063	
2	5.243	5.243	0.000	5704234	0.2000	0.2078	
2	5.885	5.884	0.001	11194487	0.2000	0.2038	
2	6.064	6.063	0.001	4698828	0.2000	0.2092	
2	6.396	6.394	0.002	2811190	0.2000	0.2117	
		Average of Peak Amounts =				0.2078	
						RPD = 2.23	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	8.865	8.865	0.000	26941094	0.2000	0.2071	
1	8.907	8.908	-0.001	27193547	0.2000	0.2107	
1	9.115	9.116	-0.001	22758082	0.2000	0.2087	
1	9.486	9.487	-0.001	10054452	0.2000	0.2166	
1	9.769	9.769	0.000	73607782	0.2000	0.2117	
		Average of Peak Amounts =				0.2110	
2	9.987	9.989	-0.002	21550881	0.2000	0.2094	
2	10.032	10.033	-0.001	21872330	0.2000	0.2104	
2	10.276	10.278	-0.002	18862765	0.2000	0.2101	
2	10.540	10.542	-0.002	8511105	0.2000	0.2164	
2	10.838	10.840	-0.002	60572474	0.2000	0.2105	
		Average of Peak Amounts =				0.2114	
						RPD = 0.19	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@.2PPM_00014 Amount Added: 1.00 Units: mL

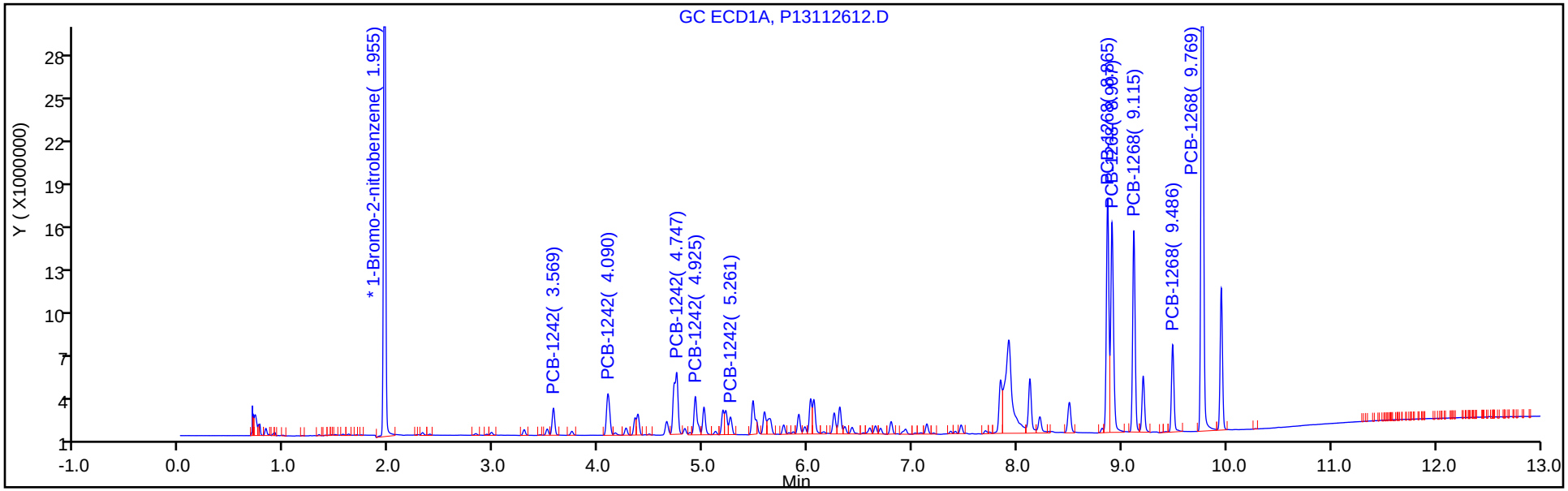
Report Date: 27-Nov-2018 10:36:48 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

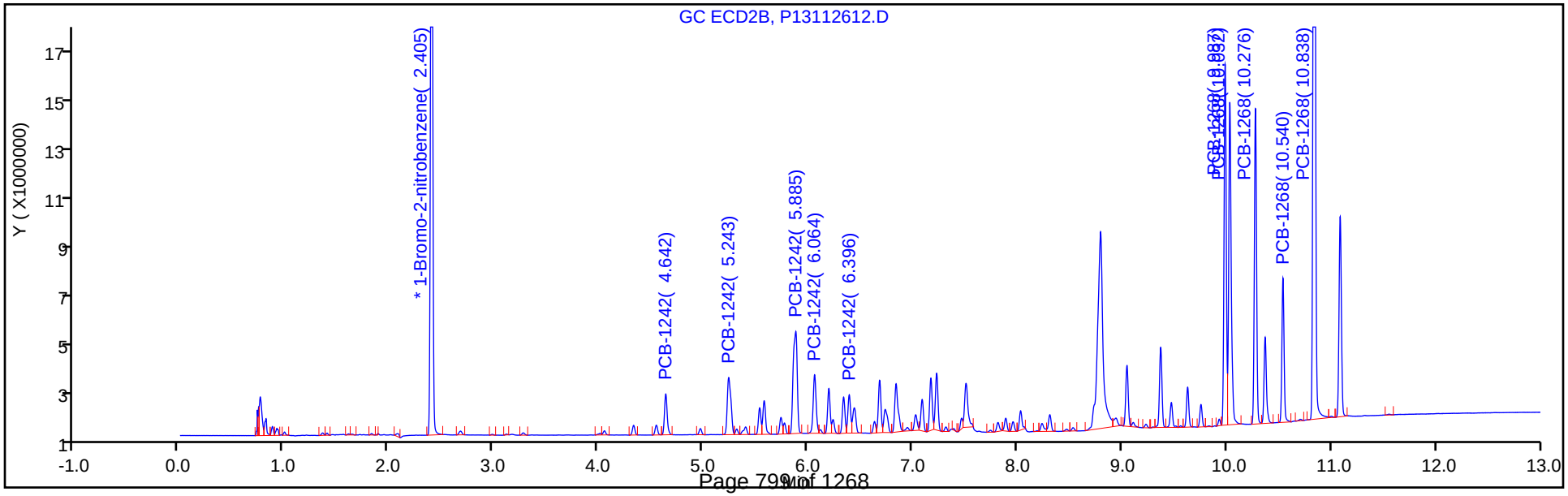
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112612.D

Injection Date:	26-Nov-2018 17:12:03	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std02 1242 1268			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112613.D
Lims ID: std05 1242 1268
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Nov-2018 17:30:23 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-013
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:39 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:32:39

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	49293944	0.0500	0.0500	
2	2.405	2.403	0.002	41592052	0.0500	0.0500	
5 PCB-1242							M
1	3.568	3.568	0.000	6868954	0.5000	0.4780	
1	4.090	4.090	0.000	13361011	0.5000	0.4831	
1	4.746	4.746	0.000	27175551	0.5000	0.4813	M
1	4.925	4.924	0.001	11698749	0.5000	0.4777	
1	5.260	5.260	0.000	4907305	0.5000	0.4786	
		Average of Peak Amounts =				0.4797	
2	4.642	4.643	-0.001	6307335	0.5000	0.4749	
2	5.243	5.243	0.000	11641121	0.5000	0.4645	
2	5.884	5.884	0.000	23345379	0.5000	0.4656	
2	6.065	6.063	0.002	9734424	0.5000	0.4747	
2	6.395	6.394	0.001	5697364	0.5000	0.4700	
		Average of Peak Amounts =				0.4700	
						RPD = 2.05	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	8.864	8.865	-0.001	56836757	0.5000	0.4859	
1	8.906	8.908	-0.002	56074697	0.5000	0.4832	
1	9.116	9.116	0.000	47053678	0.5000	0.4798	
1	9.486	9.487	-0.001	19993310	0.5000	0.4790	
1	9.769	9.769	0.000	152298328	0.5000	0.4872	
		Average of Peak Amounts =				0.4830	
2	9.987	9.989	-0.002	43566605	0.5000	0.4638	
2	10.033	10.033	0.000	44139429	0.5000	0.4652	
2	10.277	10.278	-0.001	37886146	0.5000	0.4624	
2	10.540	10.542	-0.002	16511645	0.5000	0.4598	
2	10.839	10.840	-0.001	125643520	0.5000	0.4783	
		Average of Peak Amounts =				0.4659	
						RPD = 3.61	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@0.5PPM_00030 Amount Added: 1.00 Units: mL

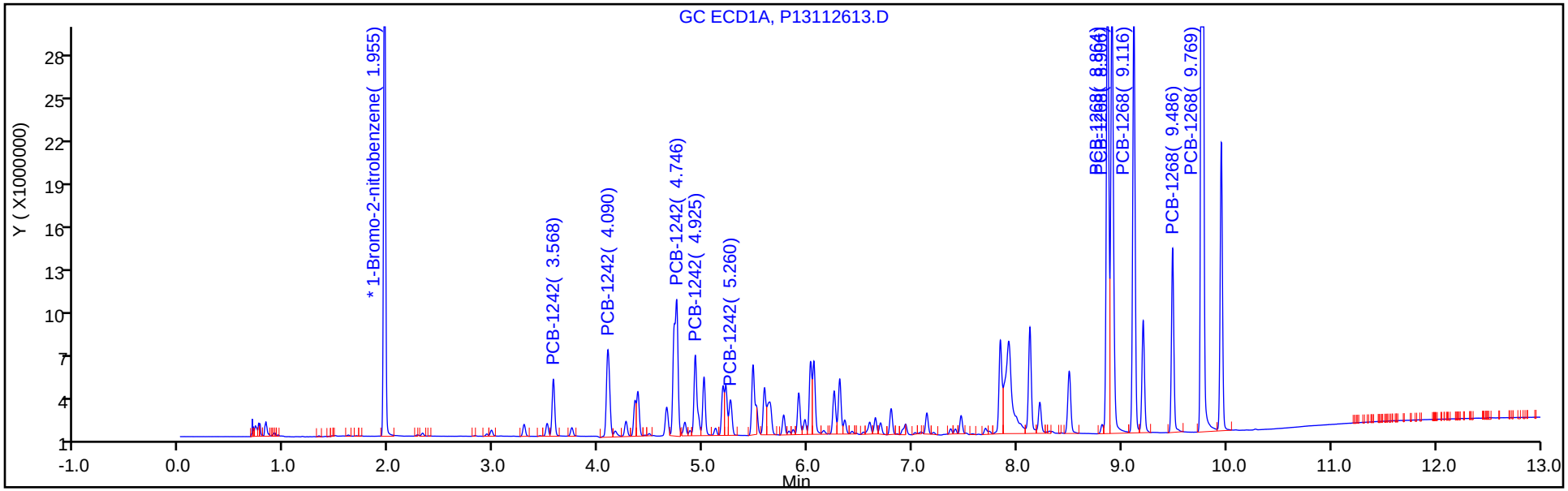
Report Date: 27-Nov-2018 10:36:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

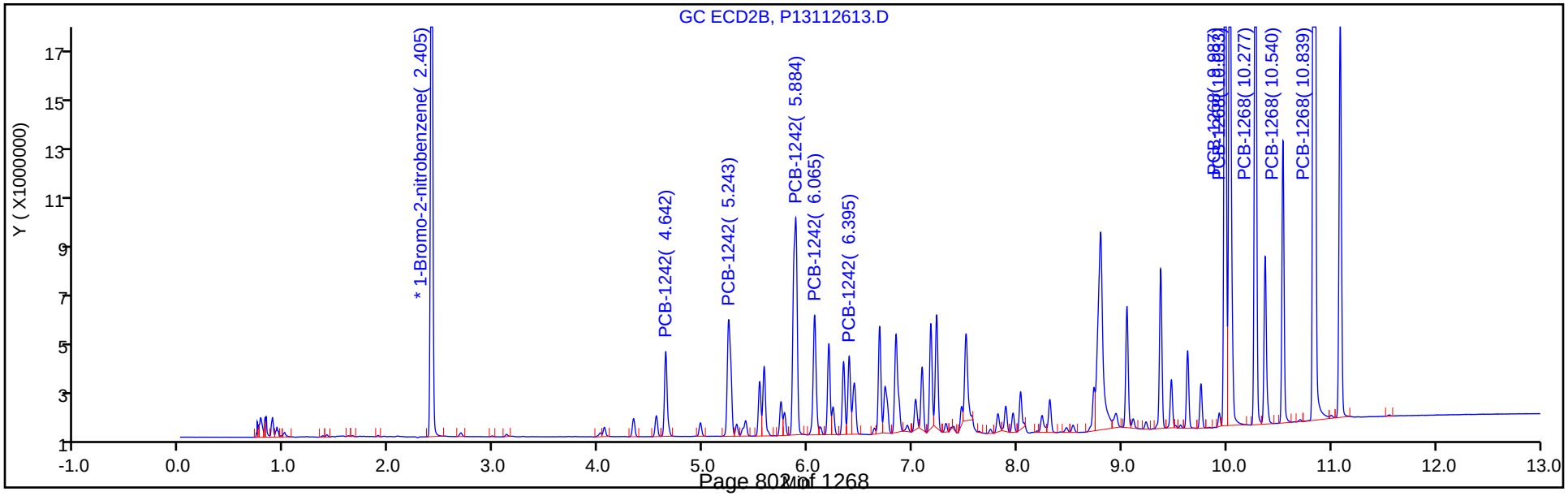
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112613.D

Injection Date:	26-Nov-2018 17:30:23	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std05 1242 1268			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112614.D
Lims ID: std1 1242 1268
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Nov-2018 17:48:41 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-014
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:32 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:33:07

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	47973854	0.0500	0.0500	
2	2.404	2.403	0.001	40277969	0.0500	0.0500	
5 PCB-1242							M
1	3.568	3.568	0.000	12474611	1.00	0.8920	
1	4.090	4.090	0.000	23883559	1.00	0.8873	
1	4.745	4.746	-0.001	51732336	1.00	0.9413	M
1	4.925	4.924	0.001	21854494	1.00	0.9169	
1	5.261	5.260	0.001	8946011	1.00	0.8965	
		Average of Peak Amounts =				0.9068	
2	4.642	4.643	-0.001	11396382	1.00	0.8861	
2	5.243	5.243	0.000	21067585	1.00	0.8681	
2	5.885	5.884	0.001	43419718	1.00	0.8943	
2	6.065	6.063	0.002	17722609	1.00	0.8924	
2	6.395	6.394	0.001	10252046	1.00	0.8734	
		Average of Peak Amounts =				0.8829	
						RPD = 2.67	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	8.863	8.865	-0.002	106711674	1.00	0.9374	
1	8.906	8.908	-0.002	105632651	1.00	0.9353	
1	9.115	9.116	-0.001	87938120	1.00	0.9214	
1	9.485	9.487	-0.002	36965799	1.00	0.9100	
1	9.767	9.769	-0.002	283204671	1.00	0.9309	
		Average of Peak Amounts =				0.9270	
2	9.988	9.989	-0.001	81486587	1.00	0.8958	
2	10.033	10.033	0.000	82163783	1.00	0.8942	
2	10.278	10.278	0.000	70530206	1.00	0.8888	
2	10.540	10.542	-0.002	29854775	1.00	0.8584	
2	10.840	10.840	0.000	236947210	1.00	0.9314	
		Average of Peak Amounts =				0.8937	
						RPD = 3.65	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG42/68@1.0PP_00023 Amount Added: 1.00 Units: mL

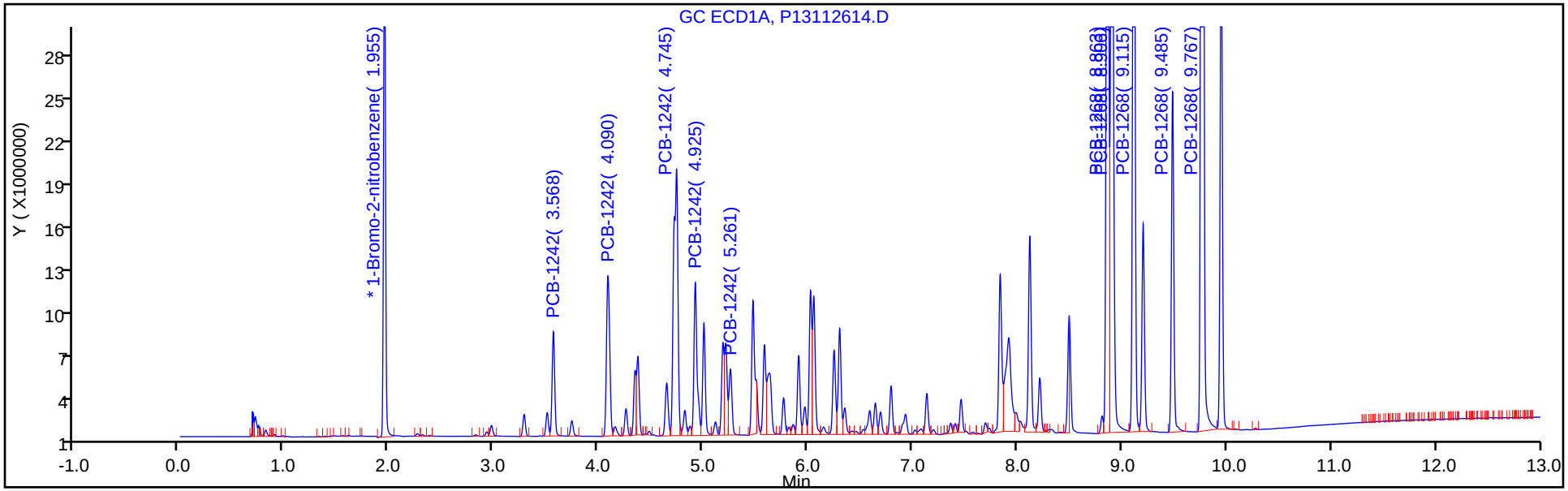
Report Date: 27-Nov-2018 10:36:35 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

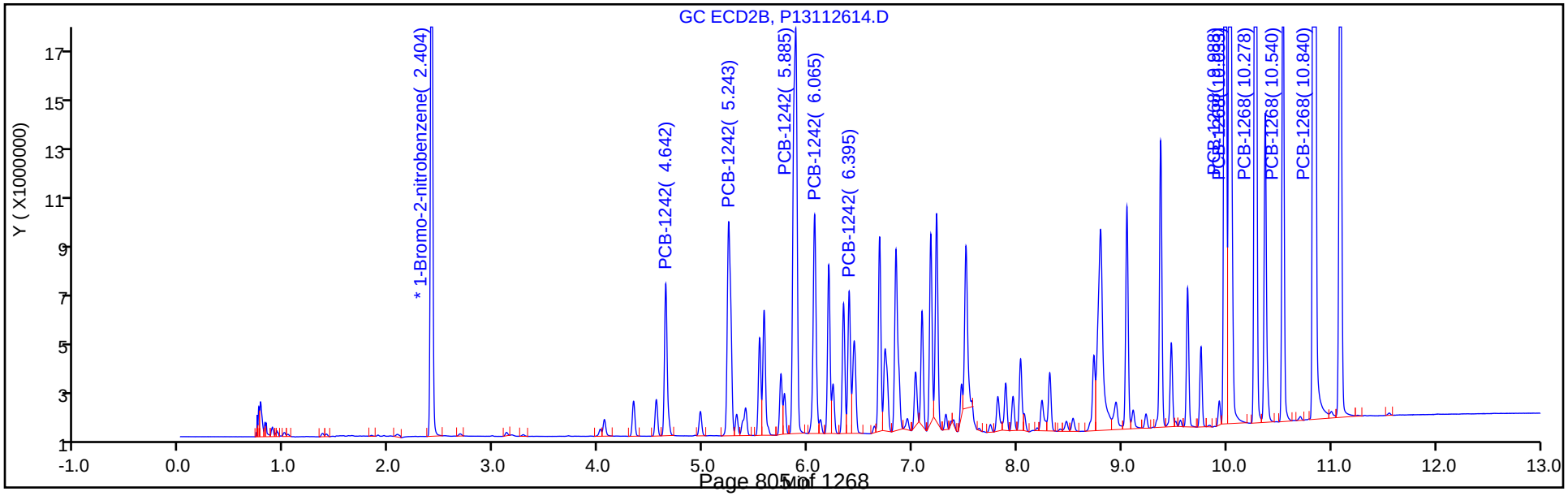
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112614.D

Injection Date:	26-Nov-2018 17:48:41	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std1 1242 1268			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112615.D
Lims ID: std15 1242 1268
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Nov-2018 18:07:05 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-015
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:26 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:33:42

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	52341941	0.0500	0.0500	
2	2.404	2.403	0.001	43627936	0.0500	0.0500	
5 PCB-1242							M
1	3.568	3.568	0.000	19025972	1.50	1.25	
1	4.090	4.090	0.000	36535508	1.50	1.24	
1	4.745	4.746	-0.001	82014787	1.50	1.37	M
1	4.925	4.924	0.001	33725539	1.50	1.30	M
1	5.260	5.260	0.000	13854621	1.50	1.27	
		Average of Peak Amounts =				1.29	
2	4.641	4.643	-0.002	16921250	1.50	1.21	
2	5.243	5.243	0.000	31586533	1.50	1.20	
2	5.884	5.884	0.000	67776946	1.50	1.29	
2	6.065	6.063	0.002	27109036	1.50	1.26	
2	6.395	6.394	0.001	15432365	1.50	1.21	
		Average of Peak Amounts =				1.24	
					RPD =	3.95	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	8.862	8.865	-0.003	182847908	1.50	1.47	
1	8.906	8.908	-0.002	178843258	1.50	1.45	
1	9.115	9.116	-0.001	151475666	1.50	1.45	
1	9.484	9.487	-0.003	64022662	1.50	1.44	
1	9.767	9.769	-0.002	505436952	1.50	1.52	
		Average of Peak Amounts =				1.47	
2	9.986	9.989	-0.003	139211558	1.50	1.41	
2	10.032	10.033	-0.001	139386226	1.50	1.40	
2	10.277	10.278	-0.001	121272419	1.50	1.41	
2	10.540	10.542	-0.002	50872015	1.50	1.35	
2	10.839	10.840	-0.001	422868594	1.50	1.53	
		Average of Peak Amounts =				1.42	
						RPD = 3.27	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@1.5PPM_00005 Amount Added: 1.00 Units: mL

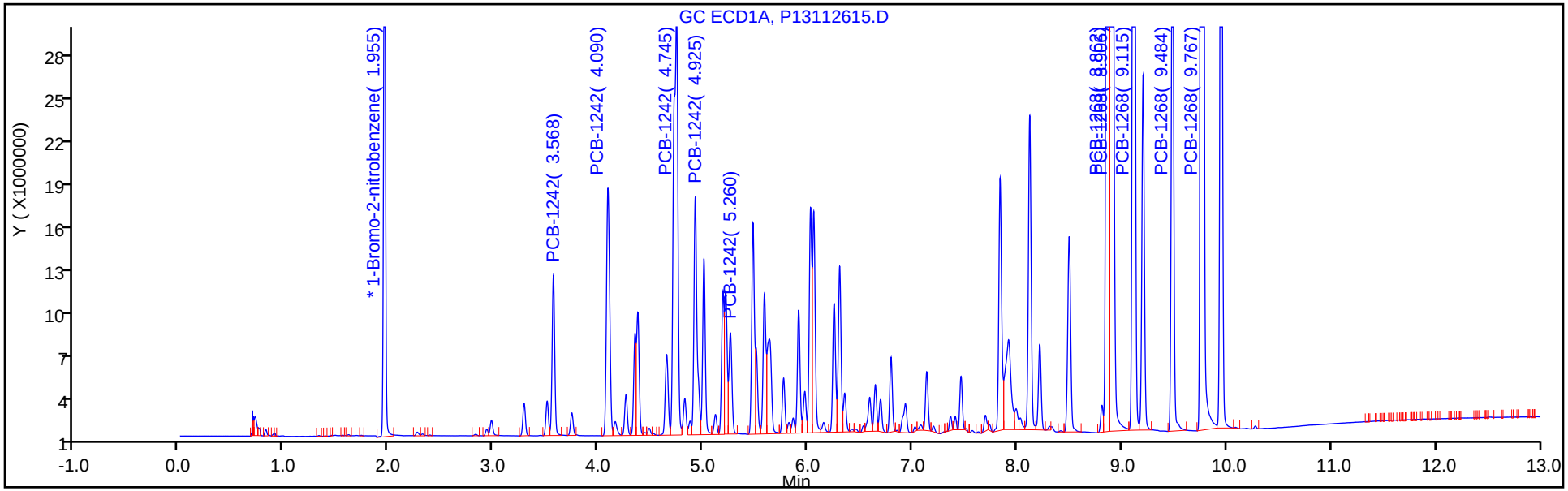
Report Date: 27-Nov-2018 10:36:28 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

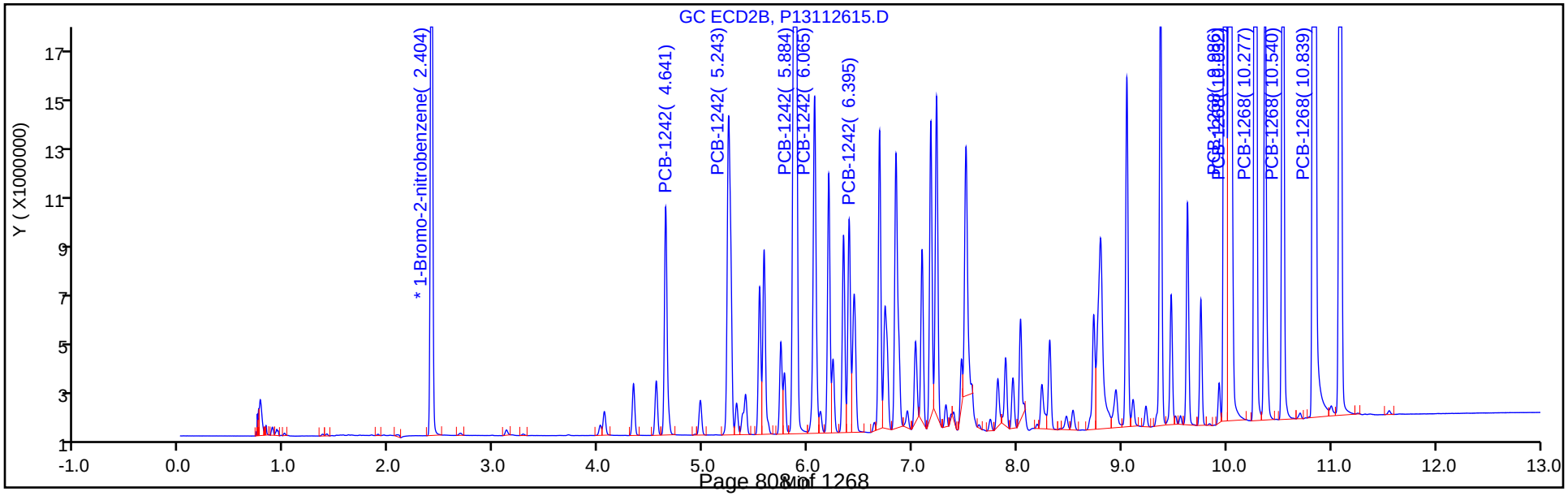
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112615.D

Injection Date:	26-Nov-2018 18:07:05	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std15 1242 1268			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 18:25 Calibration End Date: 11/26/2018 19:57 Calibration ID: 48143

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/16	P13112616.D
Level 2	STD01 240-356910/17	P13112617.D
Level 3	STD02 240-356910/18	P13112618.D
Level 4	STD05 240-356910/19	P13112619.D
Level 5	STD1 240-356910/20	P13112620.D
Level 6	STD15 240-356910/21	P13112621.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1248 Peak 1	0.0185 0.0134	0.0171	0.0155	0.0138	0.0131	Ave		0.0152				14.5		20.0			
PCB-1248 Peak 2	0.0270 0.0213	0.0251	0.0222	0.0201	0.0200	Ave		0.0226				12.6		20.0			
PCB-1248 Peak 3	0.0368 0.0337	0.0357	0.0320	0.0308	0.0298	Ave		0.0331				8.4		20.0			
PCB-1248 Peak 4	0.0327 0.0265	0.0312	0.0265	0.0245	0.0239	Ave		0.0276				13.1		20.0			
PCB-1248 Peak 5	0.0198 0.0172	0.0194	0.0168	0.0154	0.0153	Ave		0.0173				11.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton | Job No.: 240-107194-1 | Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 | GC Column: CLP-1 (0.53 ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 18:25 | Calibration End Date: 11/26/2018 19:57 | Calibration ID: 48143

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/16	P13112616.D
Level 2	STD01 240-356910/17	P13112617.D
Level 3	STD02 240-356910/18	P13112618.D
Level 4	STD05 240-356910/19	P13112619.D
Level 5	STD1 240-356910/20	P13112620.D
Level 6	STD15 240-356910/21	P13112621.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1248 Peak 1	BNB	Ave	969503 20735363	1833332	3184731	7498492	13266923	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 2	BNB	Ave	1412384 32788164	2686601	4559104	10945767	20296415	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 3	BNB	Ave	1930468 51967323	3817864	6568550	16778068	30269060	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 4	BNB	Ave	1715220 40925881	3340575	5440352	13320239	24302551	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 5	BNB	Ave	1035117 26598956	2080285	3460828	8410759	15565534	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112616.D
Lims ID: std005 1248
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 26-Nov-2018 18:25:42 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-016
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub3

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:19 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:34:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.956	1.955	0.001	52388339	0.0500	0.0500	
2	2.404	2.403	0.002	43962154	0.0500	0.0500	
7 PCB-1248							a
1	4.090	4.090	0.000	969503	0.0500	0.0607	
1	5.192	5.192	0.000	1412384	0.0500	0.0596	
1	6.027	6.027	0.000	1930468	0.0500	0.0556	
1	6.307	6.307	0.000	1715220	0.0500	0.0594	
1	6.797	6.797	0.000	1035117	0.0500	0.0570	
		Average of Peak Amounts =				0.0585	
2	5.243	5.243	0.000	868894	0.0500	0.0601	a
2	6.342	6.342	0.000	1277676	0.0500	0.0628	a
2	6.687	6.687	0.000	1556938	0.0500	0.0593	a
2	7.230	7.230	0.000	1814058	0.0500	0.0558	a
2	8.034	8.034	0.000	1178261	0.0500	0.0636	a
		Average of Peak Amounts =				0.0603	
						RPD = 3.14	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SG1248@.05ppm_00025 Amount Added: 1.00 Units: mL

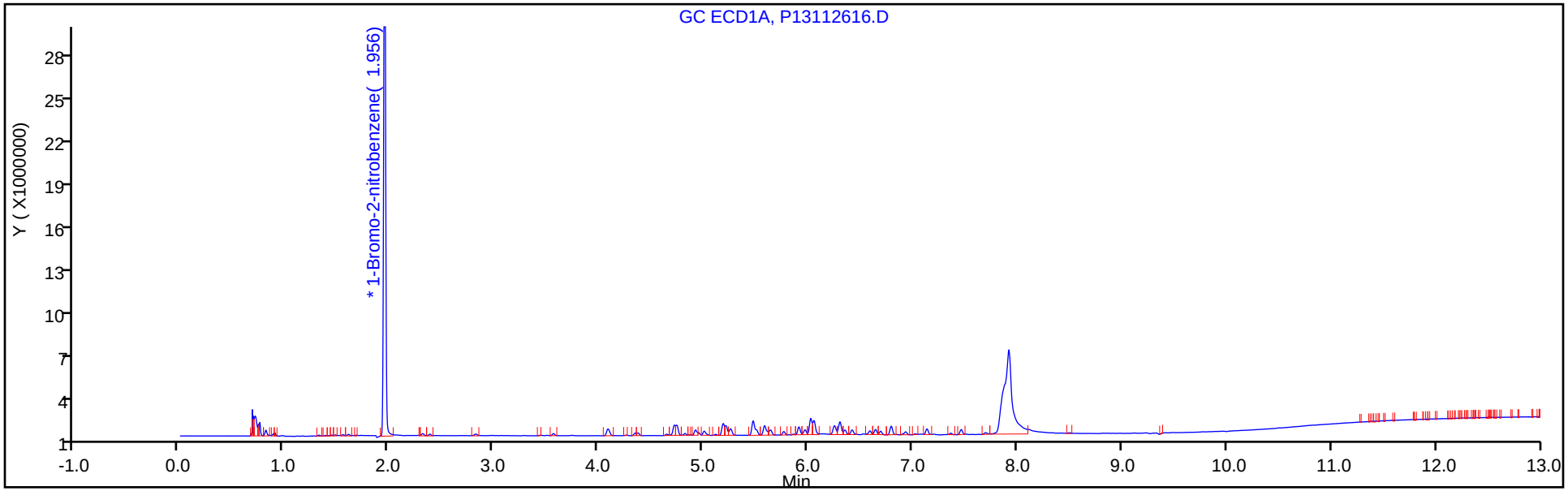
Report Date: 27-Nov-2018 10:36:20 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

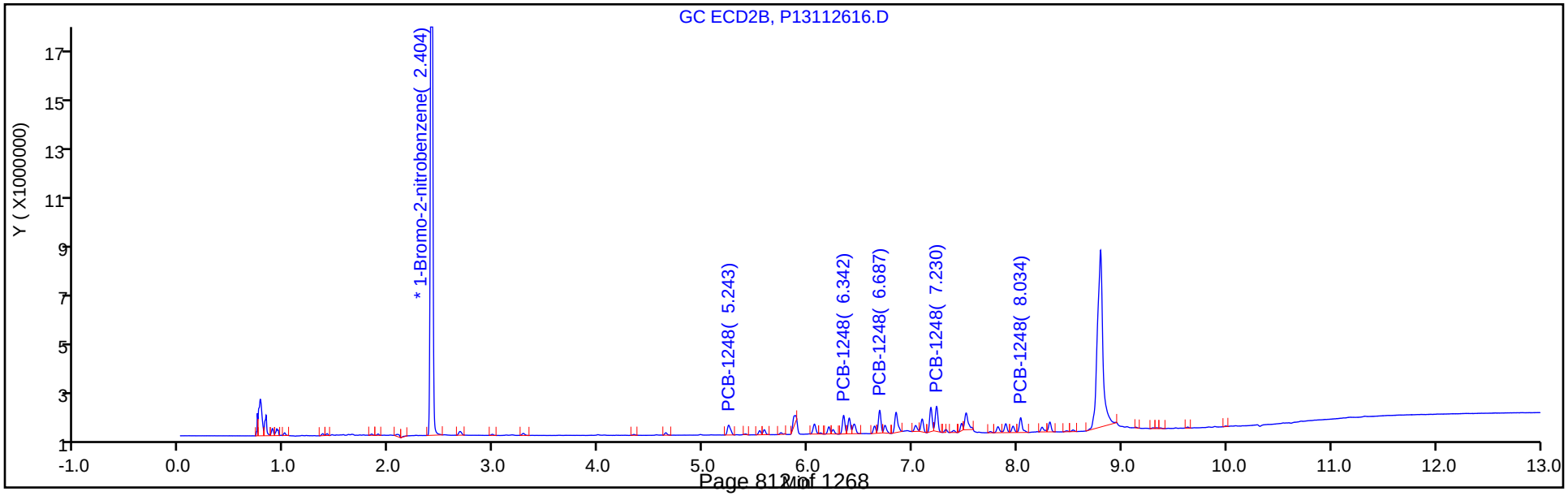
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112616.D

Injection Date:	26-Nov-2018 18:25:42	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std005 1248			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112617.D
Lims ID: std01 1248
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Nov-2018 18:44:08 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-017
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub3

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:13 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:35:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	53501332	0.0500	0.0500	
2	2.403	2.403	0.001	44684146	0.0500	0.0500	
7 PCB-1248							M
1	4.088	4.090	-0.002	1833332	0.1000	0.1125	
1	5.188	5.192	-0.004	2686601	0.1000	0.1111	
1	6.026	6.027	-0.001	3817864	0.1000	0.1077	
1	6.305	6.307	-0.002	3340575	0.1000	0.1133	
1	6.795	6.797	-0.002	2080285	0.1000	0.1121	
		Average of Peak Amounts =				0.1113	
2	5.242	5.243	-0.001	1700717	0.1000	0.1158	
2	6.341	6.342	-0.001	2404932	0.1000	0.1162	
2	6.685	6.687	-0.002	3043167	0.1000	0.1141	M
2	7.228	7.230	-0.002	3889524	0.1000	0.1177	M
2	8.032	8.034	-0.002	2221496	0.1000	0.1180	
		Average of Peak Amounts =				0.1164	
						RPD = 4.44	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

SG1248@0.1PPM_00027 Amount Added: 1.00 Units: mL

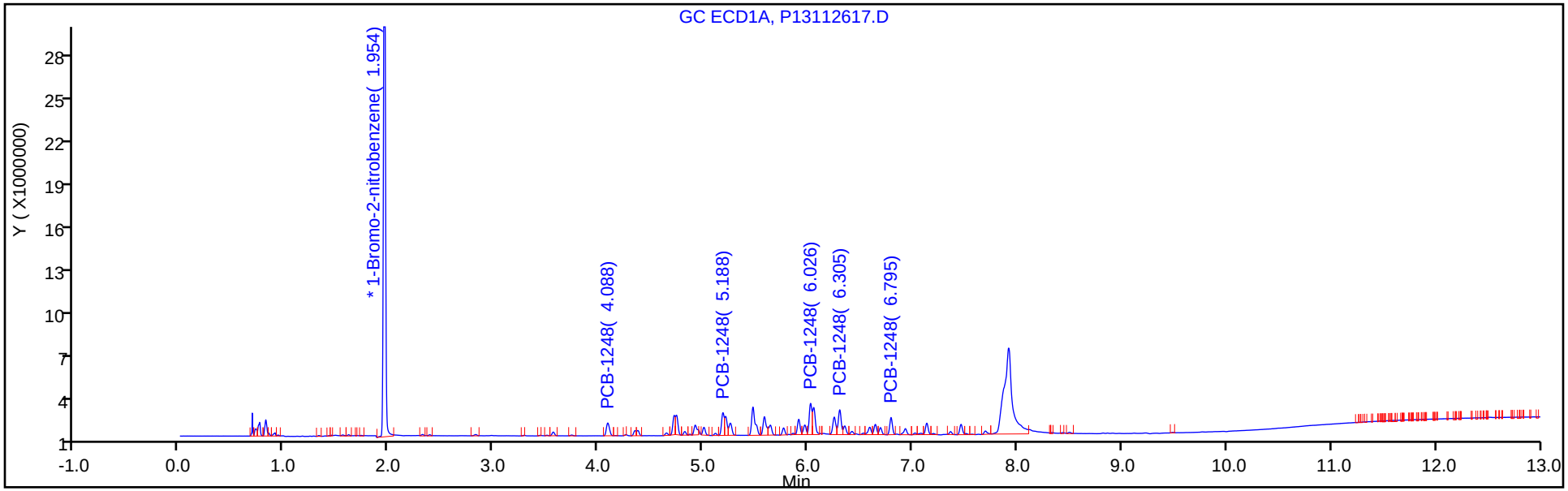
Report Date: 27-Nov-2018 10:36:15 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

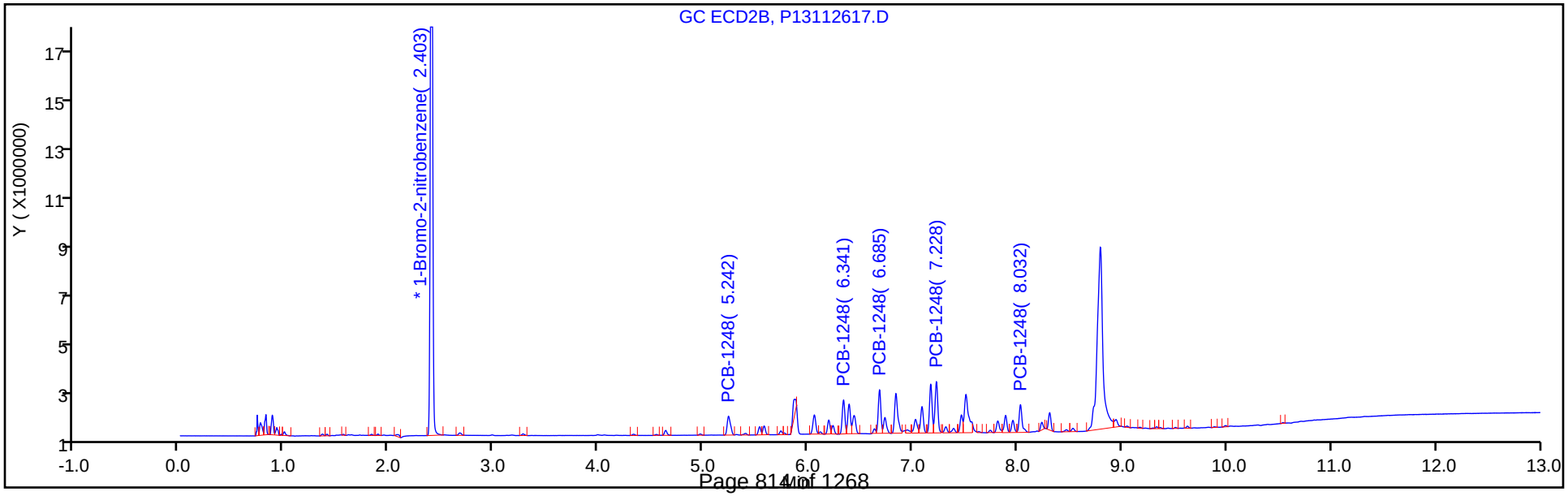
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112617.D

Injection Date:	26-Nov-2018 18:44:08	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std01 1248			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112618.D
Lims ID: std02 1248
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Nov-2018 19:02:22 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-018
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub3

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:07 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:35:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	51357692	0.0500	0.0500	
2	2.404	2.403	0.002	42903449	0.0500	0.0500	
7 PCB-1248							
1	4.088	4.090	-0.002	3184731	0.2000	0.2035	
1	5.189	5.192	-0.003	4559104	0.2000	0.1964	
1	6.026	6.027	-0.001	6568550	0.2000	0.1930	
1	6.305	6.307	-0.002	5440352	0.2000	0.1922	
1	6.796	6.797	-0.001	3460828	0.2000	0.1943	
		Average of Peak Amounts =				0.1959	
2	5.242	5.243	-0.001	2923213	0.2000	0.2073	
2	6.342	6.342	0.000	3995516	0.2000	0.2011	
2	6.685	6.687	-0.002	5186686	0.2000	0.2025	
2	7.230	7.230	0.000	6434846	0.2000	0.2028	
2	8.032	8.034	-0.002	3499908	0.2000	0.1936	
		Average of Peak Amounts =				0.2015	
						RPD = 2.83	

Reagents:

SG1248@0.2ppm_00024 Amount Added: 1.00 Units: mL

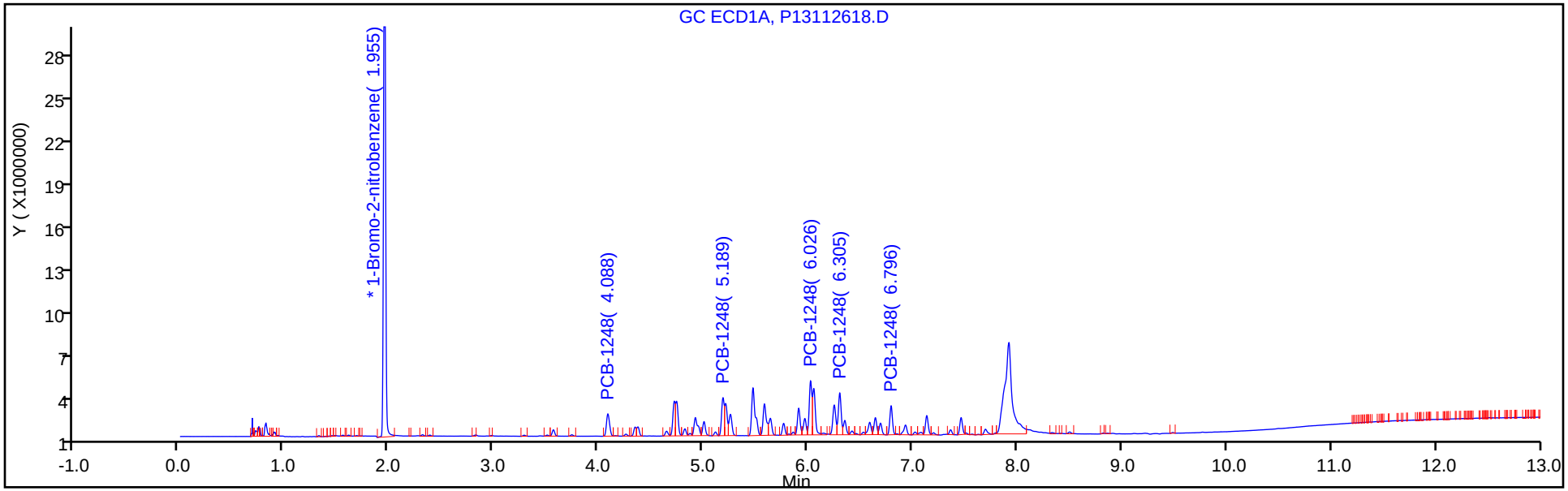
Report Date: 27-Nov-2018 10:36:08 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

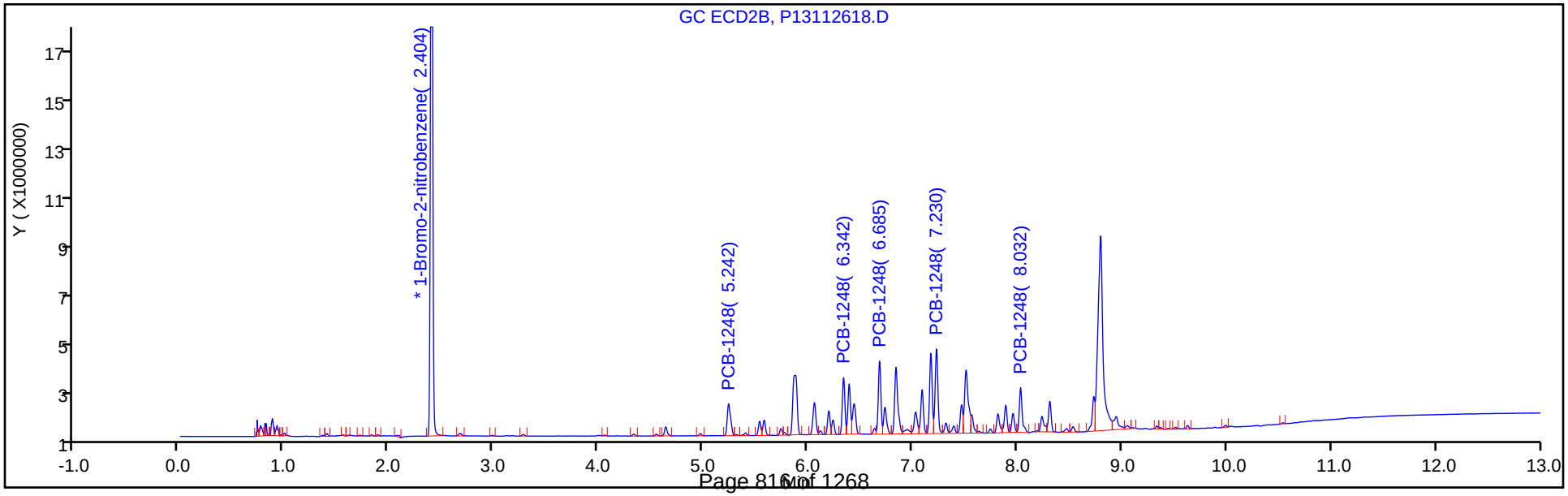
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112618.D

Injection Date:	26-Nov-2018 19:02:22	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std02 1248			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112619.D
Lims ID: std05 1248
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Nov-2018 19:20:40 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-019
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub3

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:57 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:35:50

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	54469258	0.0500	0.0500	
2	2.404	2.403	0.002	45039305	0.0500	0.0500	
7 PCB-1248							
1	4.088	4.090	-0.002	7498492	0.5000	0.4518	
1	5.189	5.192	-0.003	10945767	0.5000	0.4446	
1	6.027	6.027	0.000	16778068	0.5000	0.4648	
1	6.304	6.307	-0.003	13320239	0.5000	0.4436	
1	6.794	6.797	-0.003	8410759	0.5000	0.4452	
		Average of Peak Amounts =				0.4500	
2	5.242	5.243	-0.001	6778927	0.5000	0.4579	
2	6.341	6.342	-0.001	9335766	0.5000	0.4477	
2	6.685	6.687	-0.002	12297059	0.5000	0.4574	
2	7.229	7.230	-0.001	15284380	0.5000	0.4589	
2	8.032	8.034	-0.002	8406739	0.5000	0.4430	
		Average of Peak Amounts =				0.4530	
						RPD = 0.67	

Reagents:

SG1248@0.5ppm_00036 Amount Added: 1.00 Units: mL

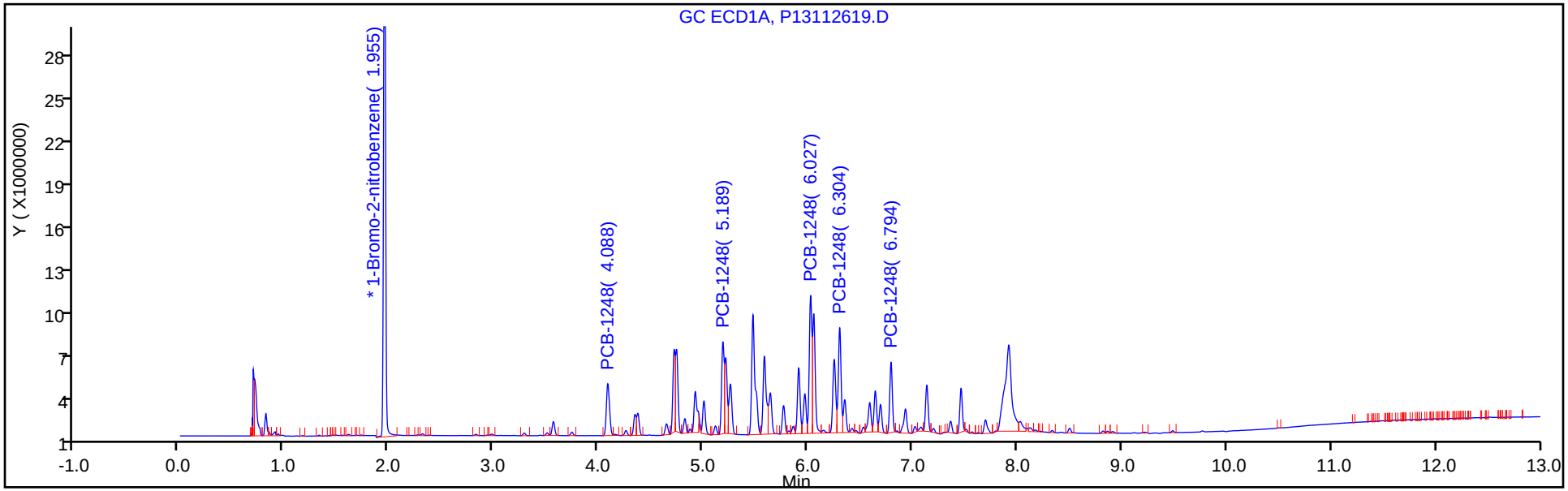
Report Date: 27-Nov-2018 10:35:59 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

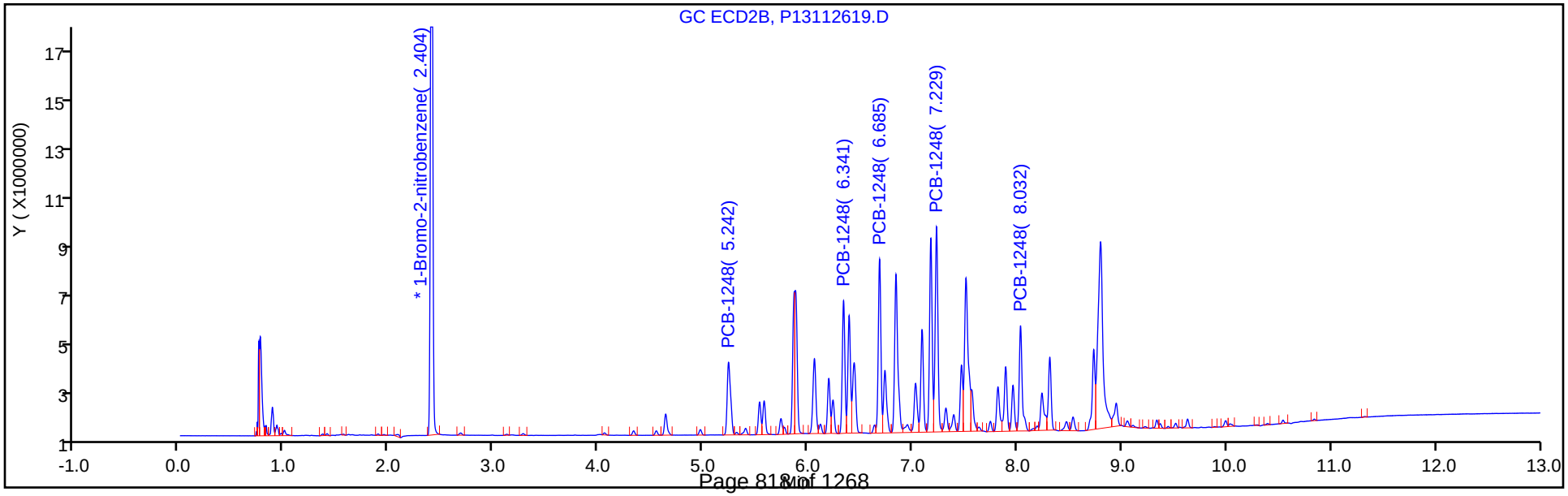
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112619.D

Injection Date:	26-Nov-2018 19:20:40	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std05 1248			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112620.D
Lims ID: std1 1248
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Nov-2018 19:39:04 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-020
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub3

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:52 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:36:13

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	50764730	0.0500	0.0500	
2	2.403	2.403	0.001	42332260	0.0500	0.0500	
7 PCB-1248							
1	4.088	4.090	-0.002	13266923	1.00	0.8576	
1	5.188	5.192	-0.004	20296415	1.00	0.8845	
1	6.026	6.027	-0.001	30269060	1.00	0.8997	
1	6.303	6.307	-0.004	24302551	1.00	0.8685	
1	6.793	6.797	-0.004	15565534	1.00	0.8839	
		Average of Peak Amounts =				0.8789	
2	5.242	5.243	-0.001	11809091	1.00	0.8488	
2	6.340	6.342	-0.002	16303029	1.00	0.8318	
2	6.685	6.687	-0.002	21607696	1.00	0.8552	
2	7.228	7.230	-0.002	26910794	1.00	0.8597	
2	8.031	8.034	-0.003	14624507	1.00	0.8199	
		Average of Peak Amounts =				0.8431	
						RPD = 4.16	

Reagents:

SG1248@1.0ppm_00027 Amount Added: 1.00 Units: mL

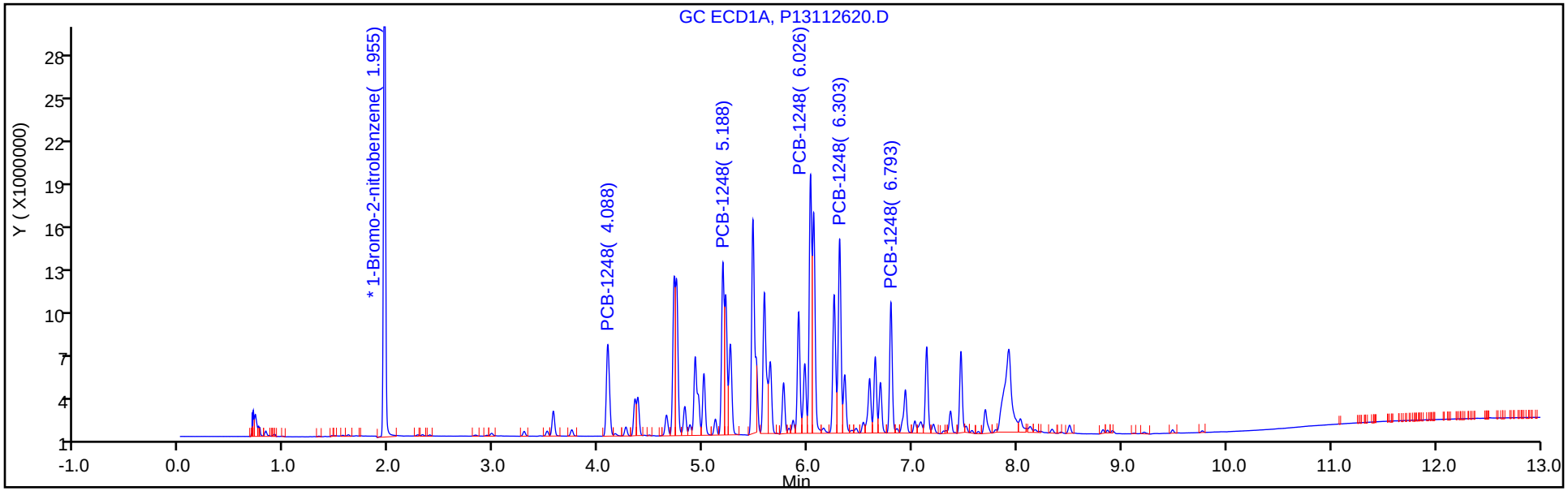
Report Date: 27-Nov-2018 10:35:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

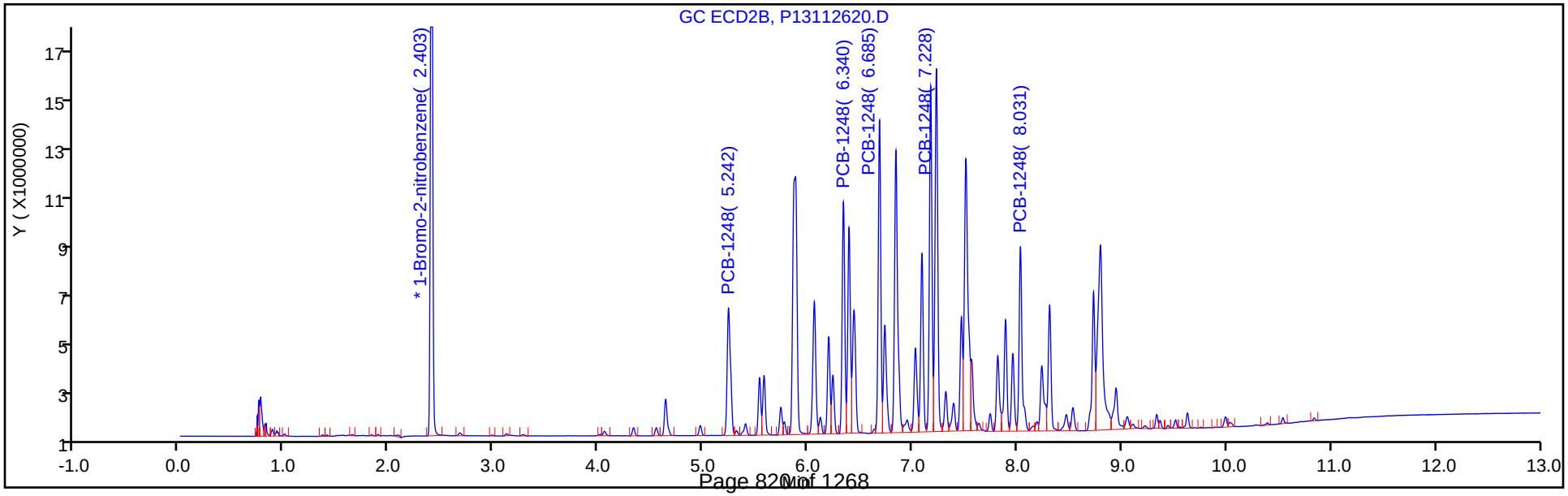
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112620.D

Injection Date:	26-Nov-2018 19:39:04	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std1 1248			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112621.D
Lims ID: std15 1248
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Nov-2018 19:57:31 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-021
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub3

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:47 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:36:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	51415726	0.0500	0.0500	
2	2.403	2.403	0.001	43431446	0.0500	0.0500	
7 PCB-1248							
1	4.088	4.090	-0.002	20735363	1.50	1.32	
1	5.188	5.192	-0.004	32788164	1.50	1.41	
1	6.025	6.027	-0.002	51967323	1.50	1.53	
1	6.303	6.307	-0.004	40925881	1.50	1.44	
1	6.793	6.797	-0.004	26598956	1.50	1.49	
		Average of Peak Amounts =				1.44	
2	5.241	5.243	-0.002	17945876	1.50	1.26	
2	6.340	6.342	-0.002	25616850	1.50	1.27	
2	6.684	6.687	-0.003	34590680	1.50	1.33	
2	7.228	7.230	-0.002	44078177	1.50	1.37	
2	8.032	8.034	-0.002	23997018	1.50	1.31	
		Average of Peak Amounts =				1.31	
						RPD = 9.39	

Reagents:

SG1248@1.5ppm_00004 Amount Added: 1.00 Units: mL

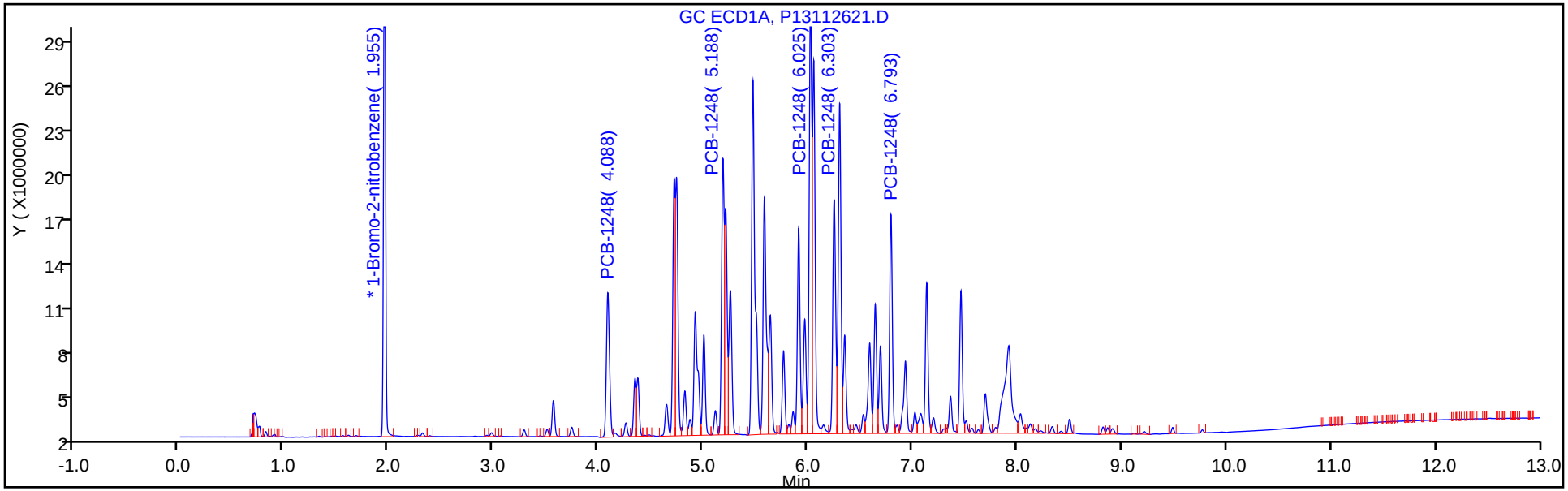
Report Date: 27-Nov-2018 10:35:49 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

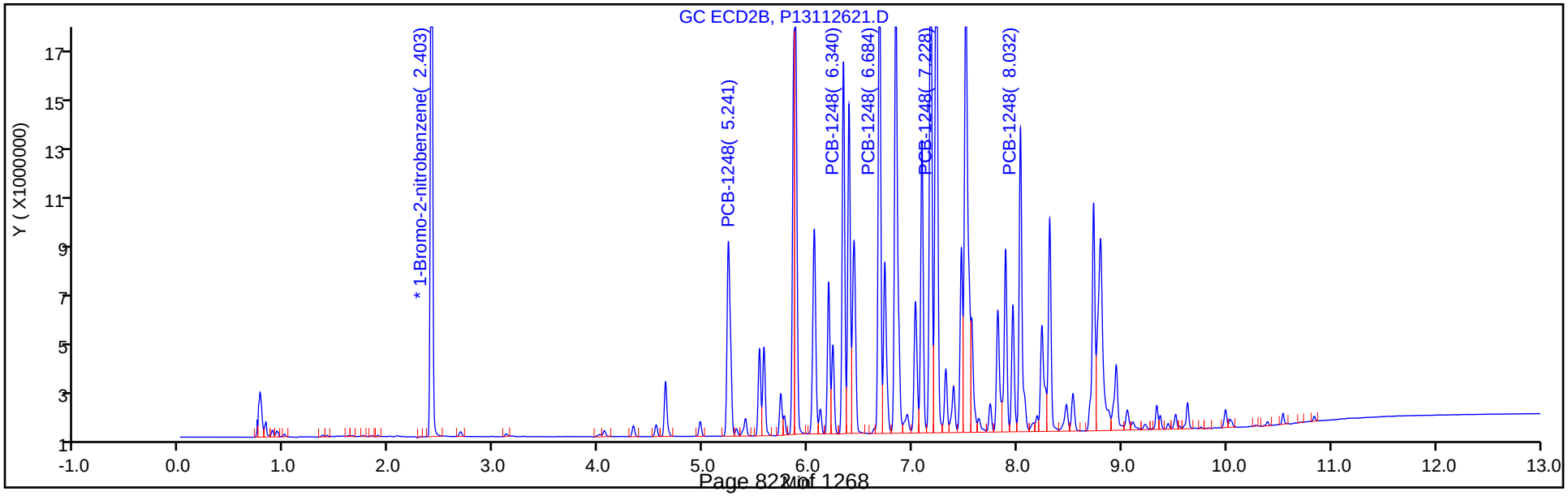
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112621.D

Injection Date:	26-Nov-2018 19:57:31	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std15 1248			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 18:25 Calibration End Date: 11/26/2018 19:57 Calibration ID: 48144

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/16	P13112616.D
Level 2	STD01 240-356910/17	P13112617.D
Level 3	STD02 240-356910/18	P13112618.D
Level 4	STD05 240-356910/19	P13112619.D
Level 5	STD1 240-356910/20	P13112620.D
Level 6	STD15 240-356910/21	P13112621.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1248 Peak 1	0.0198 0.0138	0.0190	0.0170	0.0151	0.0139	Ave		0.0164				15.7		20.0			
PCB-1248 Peak 2	0.0291 0.0197	0.0269	0.0233	0.0207	0.0193	Ave		0.0232				17.5		20.0			
PCB-1248 Peak 3	0.0354 0.0265	0.0341	0.0302	0.0273	0.0255	Ave		0.0298				13.8		20.0			
PCB-1248 Peak 4	0.0413 0.0338	0.0435	0.0375	0.0339	0.0318	Ave		0.0370				12.5		20.0			
PCB-1248 Peak 5	0.0268 0.0184	0.0249	0.0204	0.0187	0.0173	Ave		0.0211				18.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 18:25 Calibration End Date: 11/26/2018 19:57 Calibration ID: 48144

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/16	P13112616.D
Level 2	STD01 240-356910/17	P13112617.D
Level 3	STD02 240-356910/18	P13112618.D
Level 4	STD05 240-356910/19	P13112619.D
Level 5	STD1 240-356910/20	P13112620.D
Level 6	STD15 240-356910/21	P13112621.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1248 Peak 1	BNB	Ave	868894 17945876	1700717	2923213	6778927	11809091	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 2	BNB	Ave	1277676 25616850	2404932	3995516	9335766	16303029	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 3	BNB	Ave	1556938 34590680	3043167	5186686	12297059	21607696	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 4	BNB	Ave	1814058 44078177	3889524	6434846	15284380	26910794	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1248 Peak 5	BNB	Ave	1178261 23997018	2221496	3499908	8406739	14624507	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112616.D
Lims ID: std005 1248
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 26-Nov-2018 18:25:42 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-016
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub3

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:19 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:34:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.956	1.955	0.001	52388339	0.0500	0.0500	
2	2.404	2.403	0.002	43962154	0.0500	0.0500	
7 PCB-1248							a
1	4.090	4.090	0.000	969503	0.0500	0.0607	
1	5.192	5.192	0.000	1412384	0.0500	0.0596	
1	6.027	6.027	0.000	1930468	0.0500	0.0556	
1	6.307	6.307	0.000	1715220	0.0500	0.0594	
1	6.797	6.797	0.000	1035117	0.0500	0.0570	
		Average of Peak Amounts =				0.0585	
2	5.243	5.243	0.000	868894	0.0500	0.0601	a
2	6.342	6.342	0.000	1277676	0.0500	0.0628	a
2	6.687	6.687	0.000	1556938	0.0500	0.0593	a
2	7.230	7.230	0.000	1814058	0.0500	0.0558	a
2	8.034	8.034	0.000	1178261	0.0500	0.0636	a
		Average of Peak Amounts =				0.0603	
						RPD = 3.14	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SG1248@.05ppm_00025 Amount Added: 1.00 Units: mL

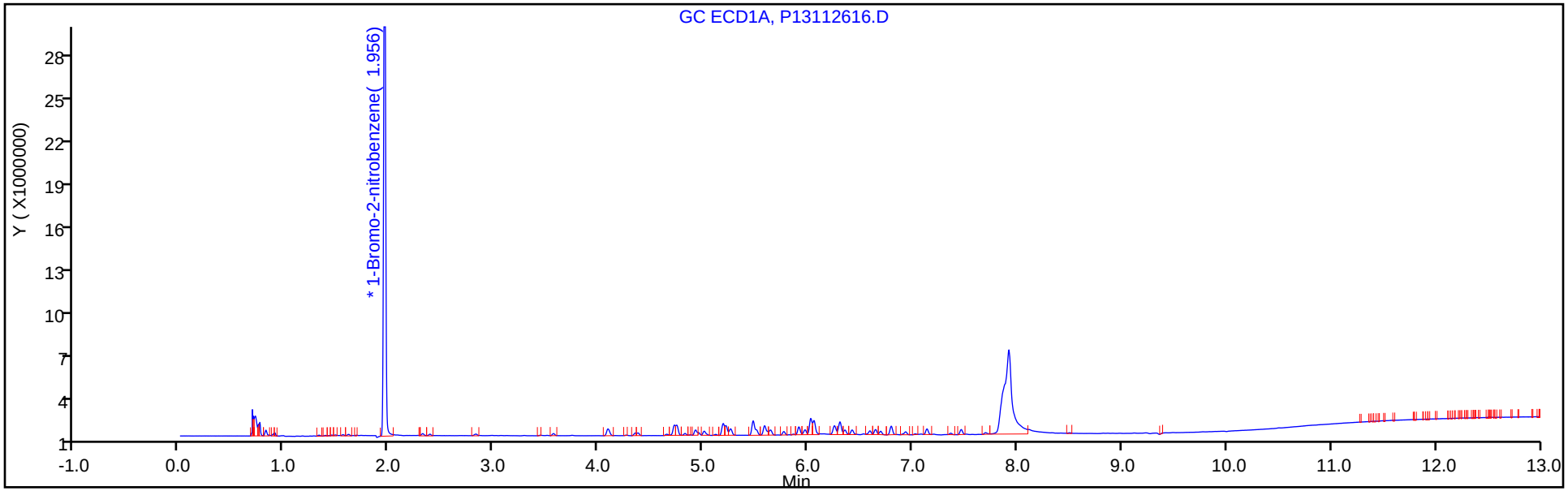
Report Date: 27-Nov-2018 10:36:21 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

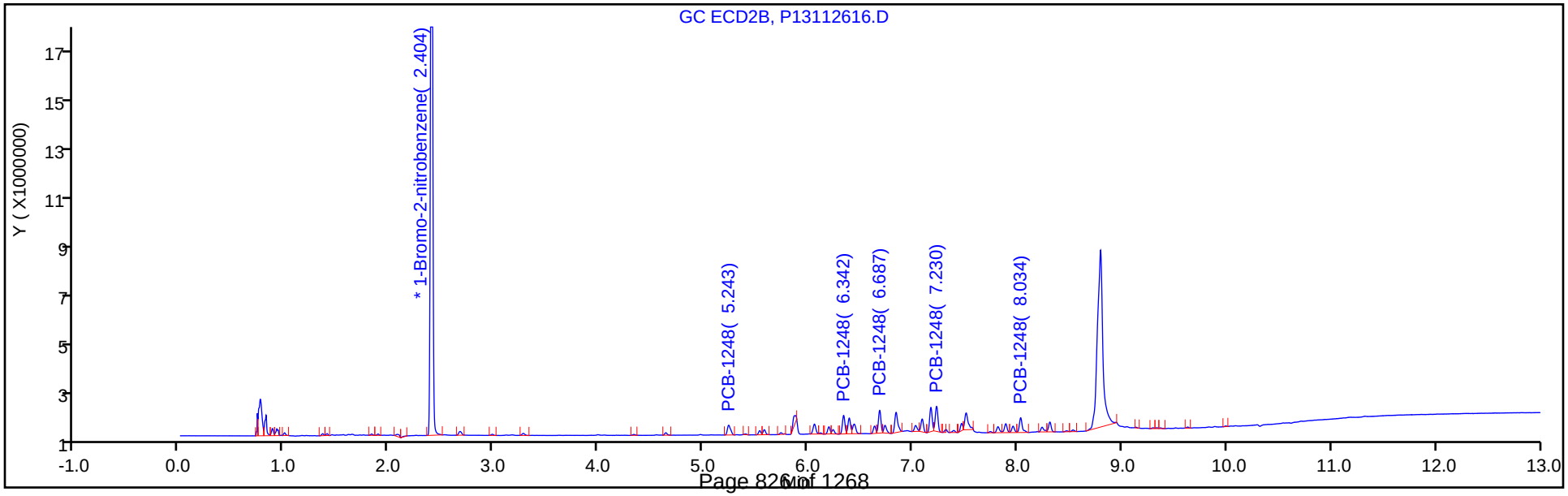
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112616.D

Injection Date:	26-Nov-2018 18:25:42	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std005 1248			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:36:21 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112616.D

Injection Date: 26-Nov-2018 18:25:42 Instrument ID: A2HP13

Lims ID: std005 1248

Client ID:

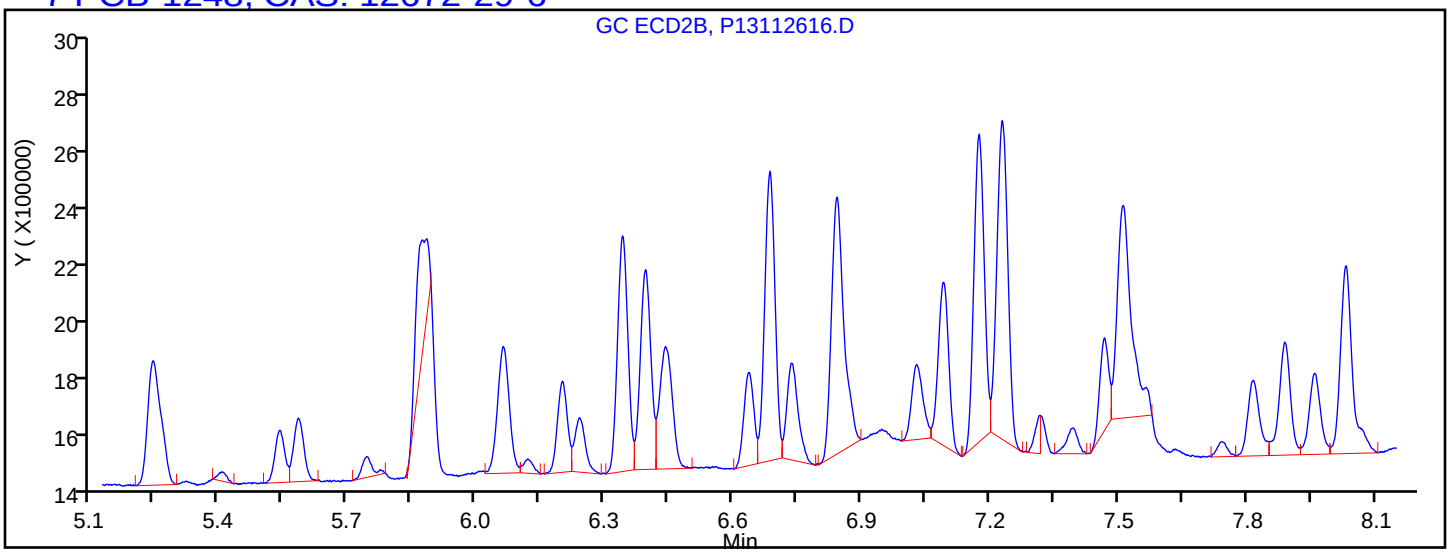
Operator ID: ALS Bottle#: 16 Worklist Smp#: 16

Injection Vol: 1.0 ul Dil. Factor: 1.0000

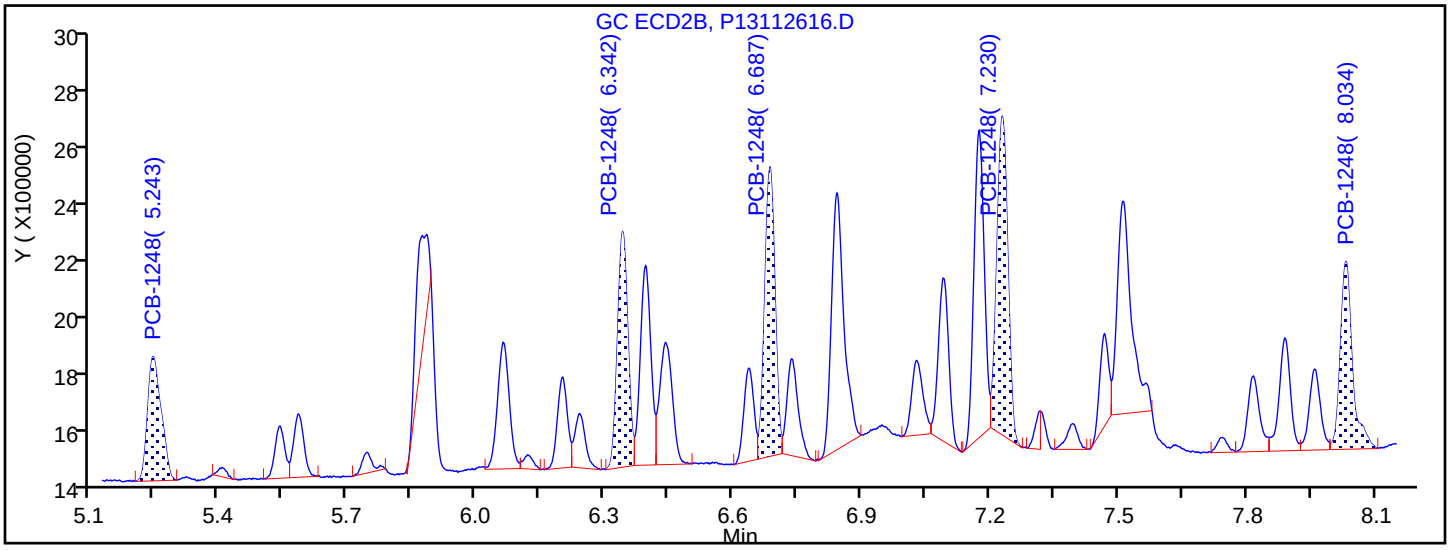
Method: PCB13 IS Limit Group: GC 8082A IS

Column: Detector GC ecd2b

7 PCB-1248, CAS: 12672-29-6



Processing Integration Results



Manual Integration Results

5.243	Response = 868894	M
6.342	Response = 1277676	M
6.687	Response = 1556938	M
7.230	Response = 1814058	M
8.034	Response = 1178261	M

Reviewer: hassl, 27-Nov-2018 06:34:10

Audit Action: Assigned Compound ID Audit Reason:

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112617.D
Lims ID: std01 1248
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Nov-2018 18:44:08 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-017
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub3

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:13 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:35:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	53501332	0.0500	0.0500	
2	2.403	2.403	0.001	44684146	0.0500	0.0500	
7 PCB-1248							M
1	4.088	4.090	-0.002	1833332	0.1000	0.1125	
1	5.188	5.192	-0.004	2686601	0.1000	0.1111	
1	6.026	6.027	-0.001	3817864	0.1000	0.1077	
1	6.305	6.307	-0.002	3340575	0.1000	0.1133	
1	6.795	6.797	-0.002	2080285	0.1000	0.1121	
		Average of Peak Amounts =				0.1113	
2	5.242	5.243	-0.001	1700717	0.1000	0.1158	
2	6.341	6.342	-0.001	2404932	0.1000	0.1162	
2	6.685	6.687	-0.002	3043167	0.1000	0.1141	M
2	7.228	7.230	-0.002	3889524	0.1000	0.1177	M
2	8.032	8.034	-0.002	2221496	0.1000	0.1180	
		Average of Peak Amounts =				0.1164	
						RPD = 4.44	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

SG1248@0.1PPM_00027 Amount Added: 1.00 Units: mL

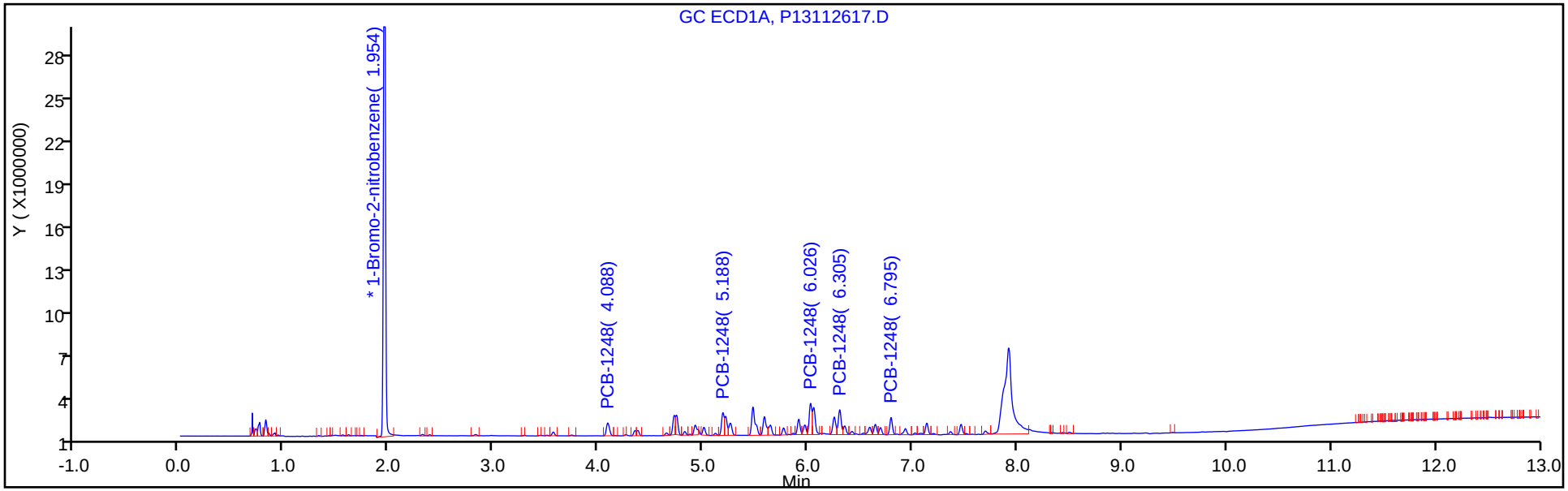
Report Date: 27-Nov-2018 10:36:15 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

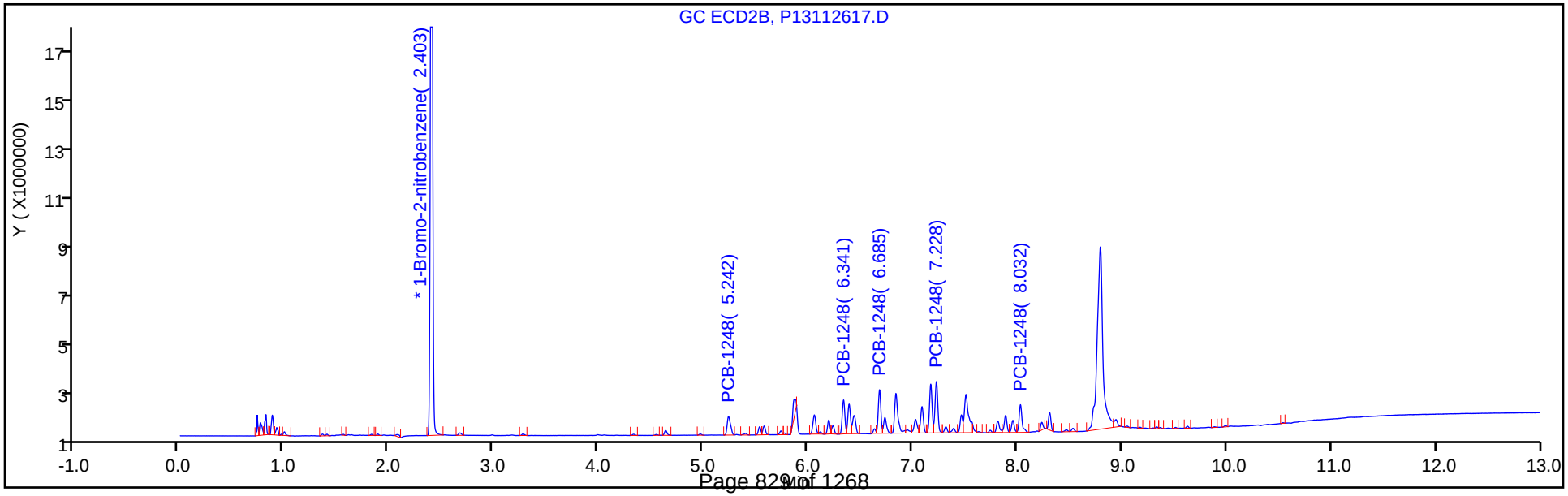
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112617.D

Injection Date:	26-Nov-2018 18:44:08	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std01 1248			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:36:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112617.D

Injection Date: 26-Nov-2018 18:44:08 Instrument ID: A2HP13

Lims ID: std01 1248

Client ID:

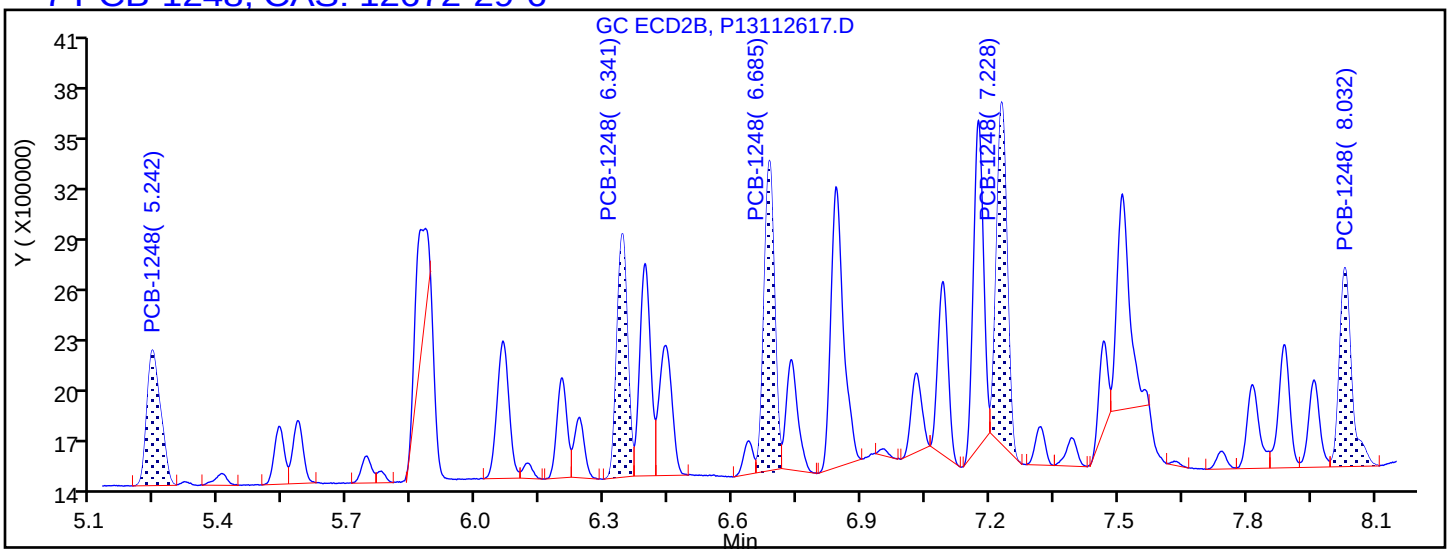
Operator ID: ALS Bottle#: 17 Worklist Smp#: 17

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

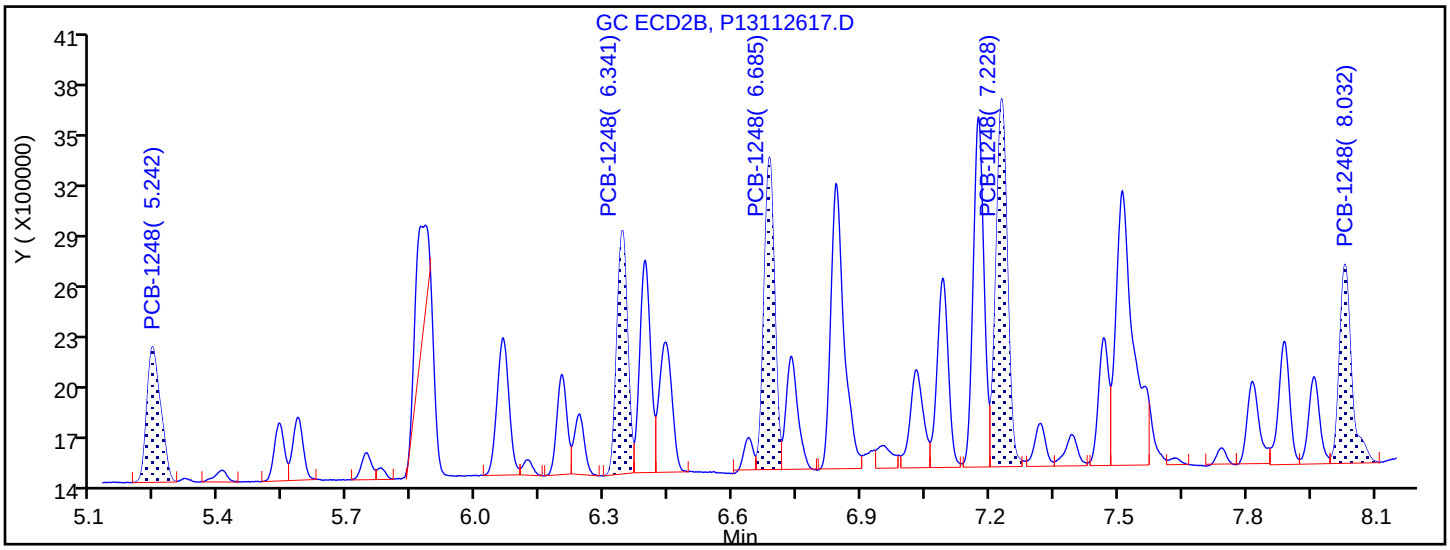
Column: Detector GC ecd2b

7 PCB-1248, CAS: 12672-29-6



Processing Integration Results

5.242	Response = 1700717
6.341	Response = 2404932
6.685	Response = 3000248
7.228	Response = 3345279
8.032	Response = 2221496



Manual Integration Results

5.242	Response = 1700717	
6.341	Response = 2404932	
6.685	Response = 3043167	M
7.228	Response = 3889524	M
8.032	Response = 2221496	

Reviewer: hassl, 27-Nov-2018 06:35:05

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112618.D
Lims ID: std02 1248
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Nov-2018 19:02:22 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-018
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub3

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:36:07 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:35:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	51357692	0.0500	0.0500	
2	2.404	2.403	0.002	42903449	0.0500	0.0500	
7 PCB-1248							
1	4.088	4.090	-0.002	3184731	0.2000	0.2035	
1	5.189	5.192	-0.003	4559104	0.2000	0.1964	
1	6.026	6.027	-0.001	6568550	0.2000	0.1930	
1	6.305	6.307	-0.002	5440352	0.2000	0.1922	
1	6.796	6.797	-0.001	3460828	0.2000	0.1943	
		Average of Peak Amounts =				0.1959	
2	5.242	5.243	-0.001	2923213	0.2000	0.2073	
2	6.342	6.342	0.000	3995516	0.2000	0.2011	
2	6.685	6.687	-0.002	5186686	0.2000	0.2025	
2	7.230	7.230	0.000	6434846	0.2000	0.2028	
2	8.032	8.034	-0.002	3499908	0.2000	0.1936	
		Average of Peak Amounts =				0.2015	
						RPD = 2.83	

Reagents:

SG1248@0.2ppm_00024 Amount Added: 1.00 Units: mL

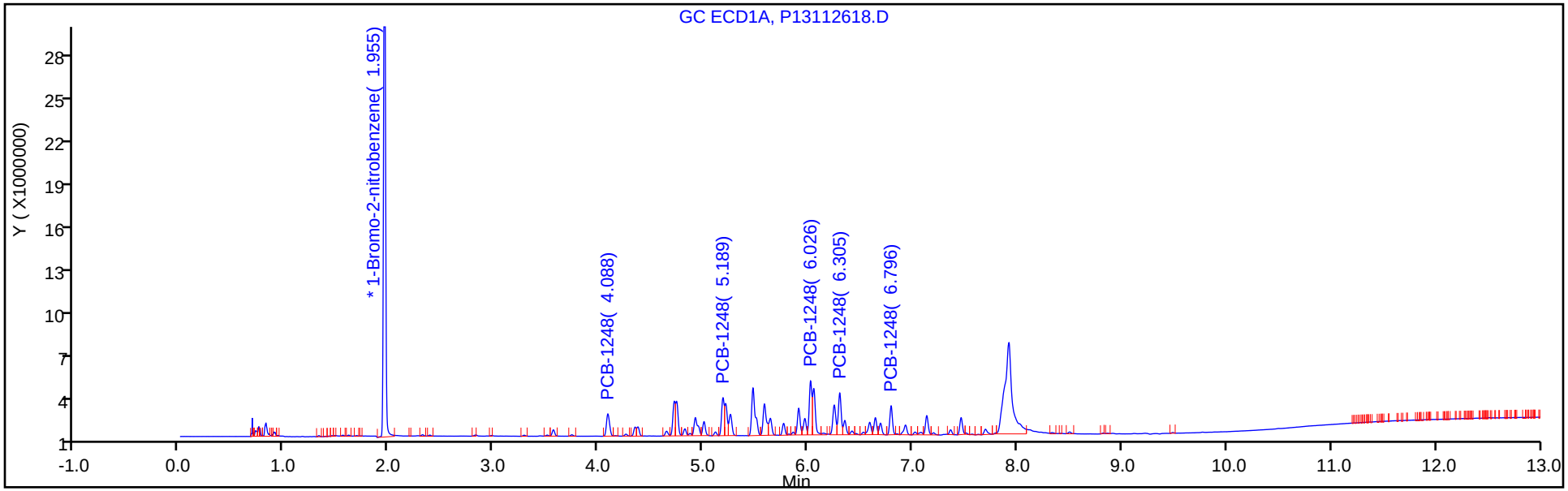
Report Date: 27-Nov-2018 10:36:09 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

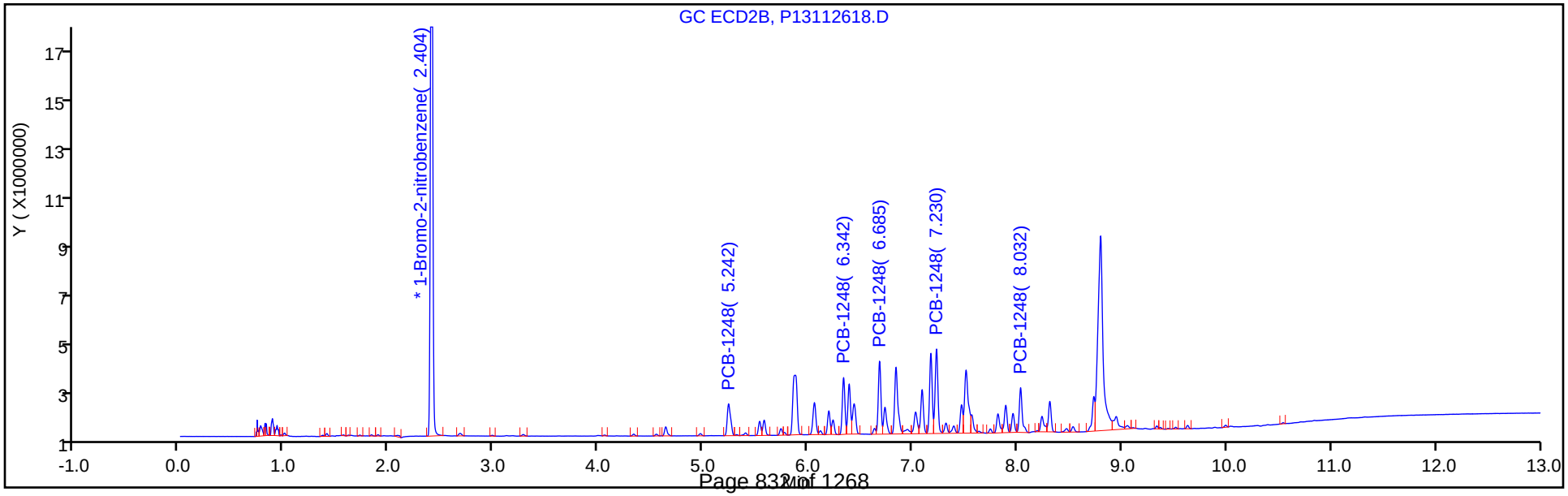
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112618.D

Injection Date:	26-Nov-2018 19:02:22	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std02 1248			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112619.D
Lims ID: std05 1248
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Nov-2018 19:20:40 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-019
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub3

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:57 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:35:50

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	54469258	0.0500	0.0500	
2	2.404	2.403	0.002	45039305	0.0500	0.0500	
7 PCB-1248							
1	4.088	4.090	-0.002	7498492	0.5000	0.4518	
1	5.189	5.192	-0.003	10945767	0.5000	0.4446	
1	6.027	6.027	0.000	16778068	0.5000	0.4648	
1	6.304	6.307	-0.003	13320239	0.5000	0.4436	
1	6.794	6.797	-0.003	8410759	0.5000	0.4452	
		Average of Peak Amounts =				0.4500	
2	5.242	5.243	-0.001	6778927	0.5000	0.4579	
2	6.341	6.342	-0.001	9335766	0.5000	0.4477	
2	6.685	6.687	-0.002	12297059	0.5000	0.4574	
2	7.229	7.230	-0.001	15284380	0.5000	0.4589	
2	8.032	8.034	-0.002	8406739	0.5000	0.4430	
		Average of Peak Amounts =				0.4530	
						RPD = 0.67	

Reagents:

SG1248@0.5ppm_00036 Amount Added: 1.00 Units: mL

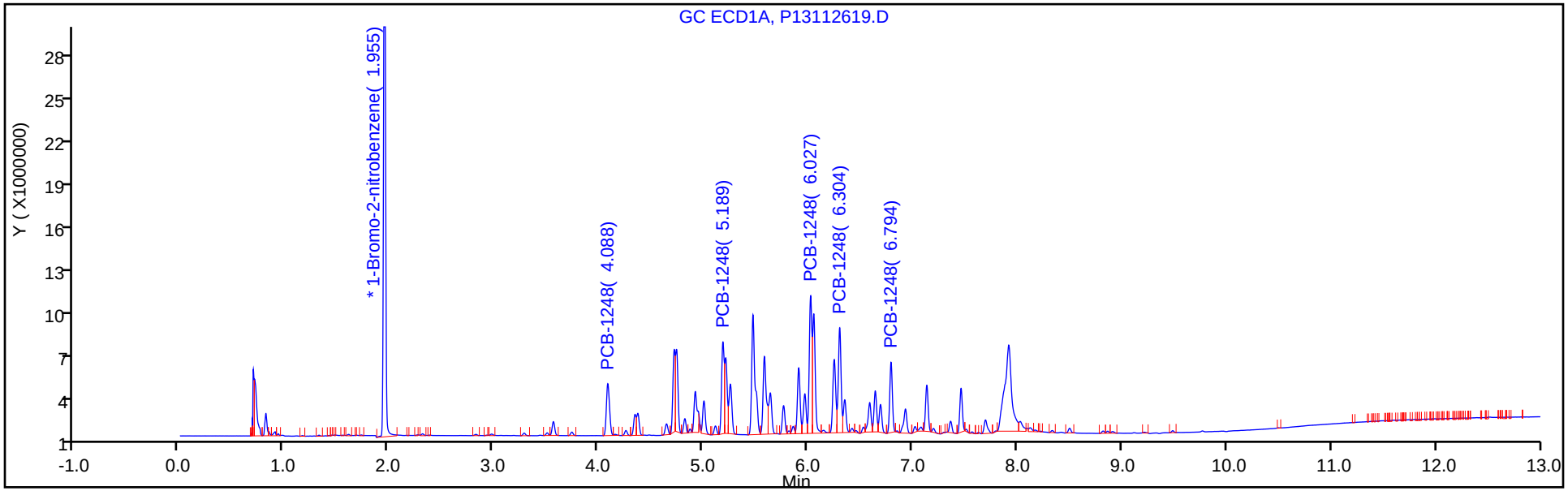
Report Date: 27-Nov-2018 10:35:59 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

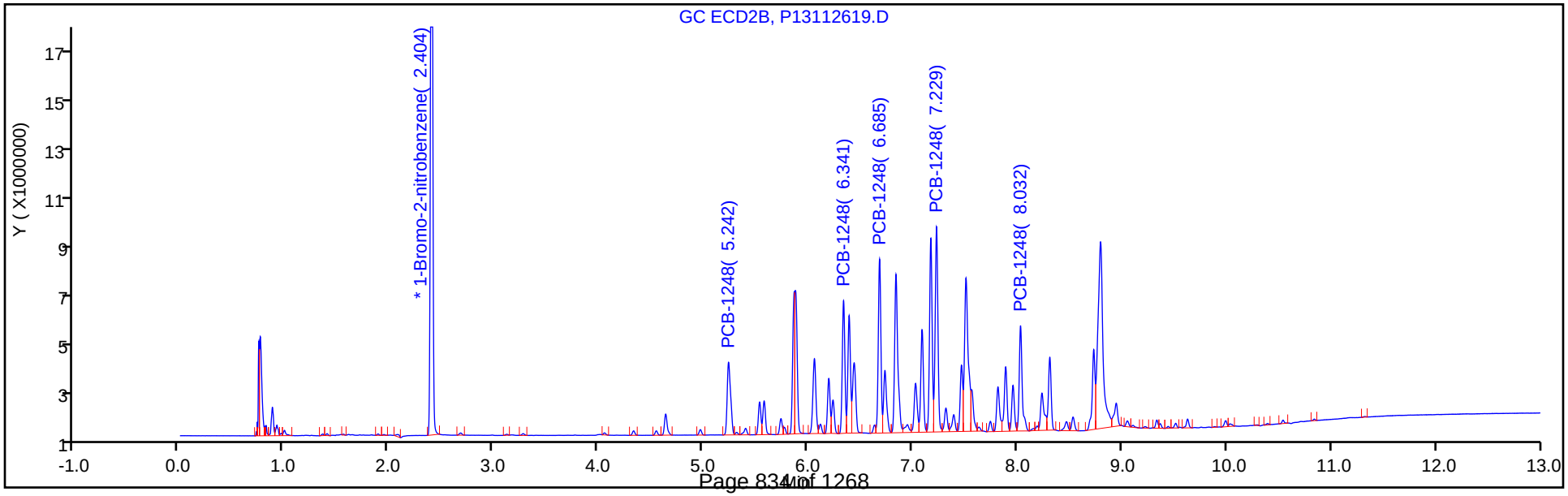
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112619.D

Injection Date:	26-Nov-2018 19:20:40	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std05 1248			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112620.D
Lims ID: std1 1248
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Nov-2018 19:39:04 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-020
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub3

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:52 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:36:13

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	50764730	0.0500	0.0500	
2	2.403	2.403	0.001	42332260	0.0500	0.0500	
7 PCB-1248							
1	4.088	4.090	-0.002	13266923	1.00	0.8576	
1	5.188	5.192	-0.004	20296415	1.00	0.8845	
1	6.026	6.027	-0.001	30269060	1.00	0.8997	
1	6.303	6.307	-0.004	24302551	1.00	0.8685	
1	6.793	6.797	-0.004	15565534	1.00	0.8839	
		Average of Peak Amounts =				0.8789	
2	5.242	5.243	-0.001	11809091	1.00	0.8488	
2	6.340	6.342	-0.002	16303029	1.00	0.8318	
2	6.685	6.687	-0.002	21607696	1.00	0.8552	
2	7.228	7.230	-0.002	26910794	1.00	0.8597	
2	8.031	8.034	-0.003	14624507	1.00	0.8199	
		Average of Peak Amounts =				0.8431	
						RPD = 4.16	

Reagents:

SG1248@1.0ppm_00027 Amount Added: 1.00 Units: mL

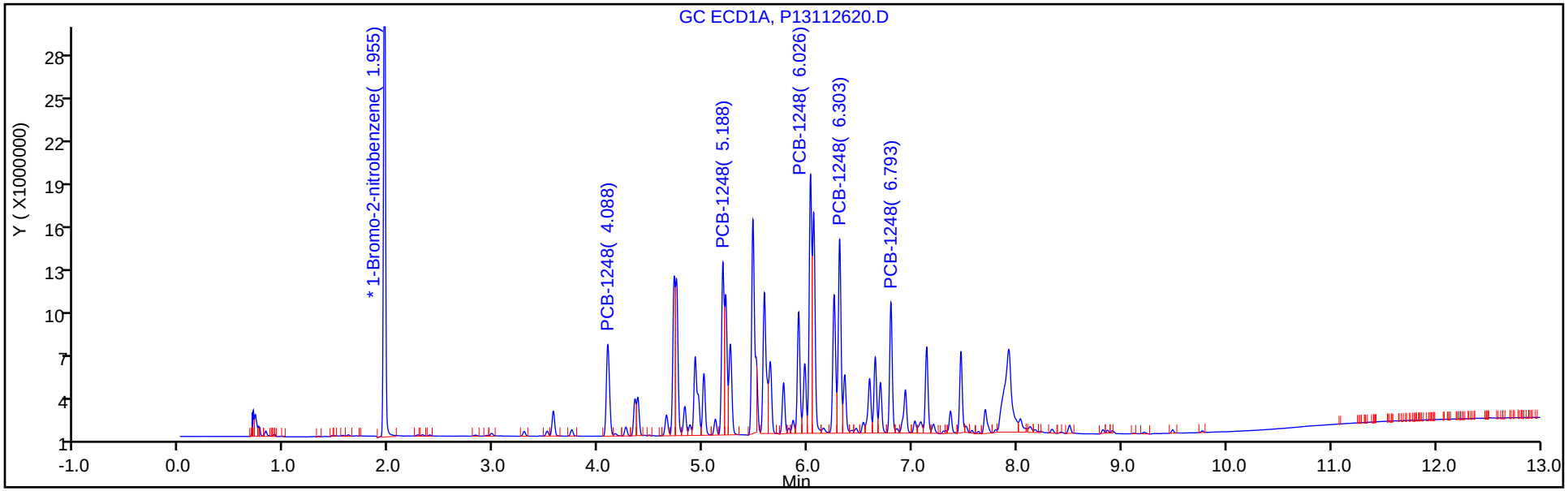
Report Date: 27-Nov-2018 10:35:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

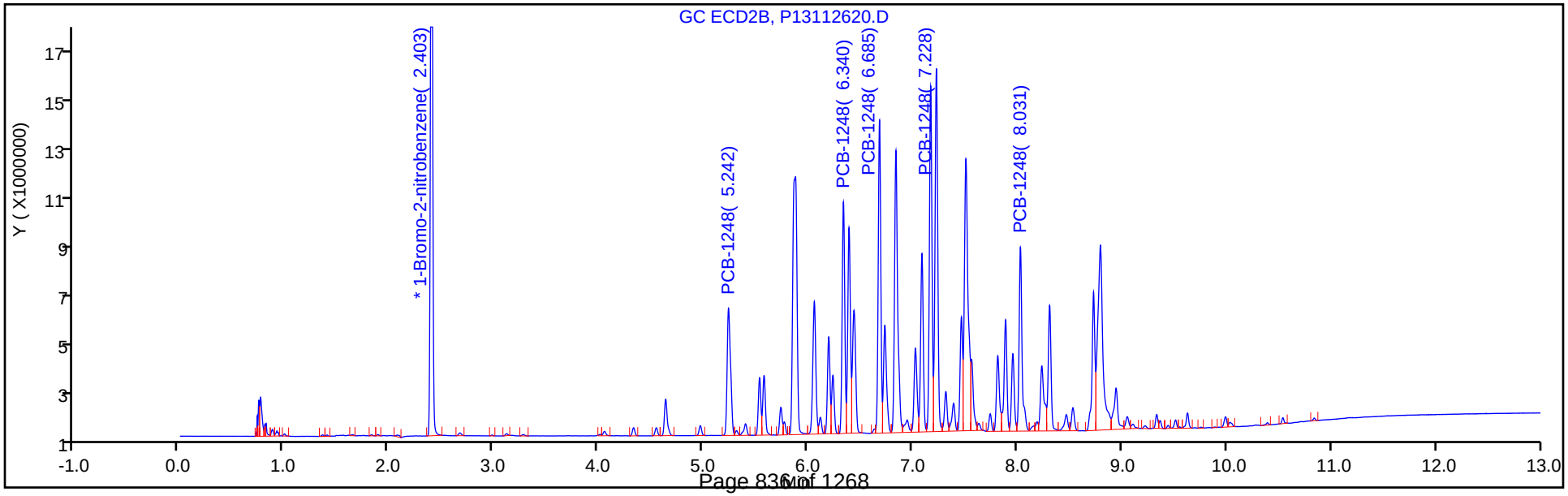
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112620.D

Injection Date:	26-Nov-2018 19:39:04	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std1 1248			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112621.D
Lims ID: std15 1248
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Nov-2018 19:57:31 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-021
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub3

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:47 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:36:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	51415726	0.0500	0.0500	
2	2.403	2.403	0.001	43431446	0.0500	0.0500	
7 PCB-1248							
1	4.088	4.090	-0.002	20735363	1.50	1.32	
1	5.188	5.192	-0.004	32788164	1.50	1.41	
1	6.025	6.027	-0.002	51967323	1.50	1.53	
1	6.303	6.307	-0.004	40925881	1.50	1.44	
1	6.793	6.797	-0.004	26598956	1.50	1.49	
		Average of Peak Amounts =				1.44	
2	5.241	5.243	-0.002	17945876	1.50	1.26	
2	6.340	6.342	-0.002	25616850	1.50	1.27	
2	6.684	6.687	-0.003	34590680	1.50	1.33	
2	7.228	7.230	-0.002	44078177	1.50	1.37	
2	8.032	8.034	-0.002	23997018	1.50	1.31	
		Average of Peak Amounts =				1.31	
						RPD = 9.39	

Reagents:

SG1248@1.5ppm_00004 Amount Added: 1.00 Units: mL

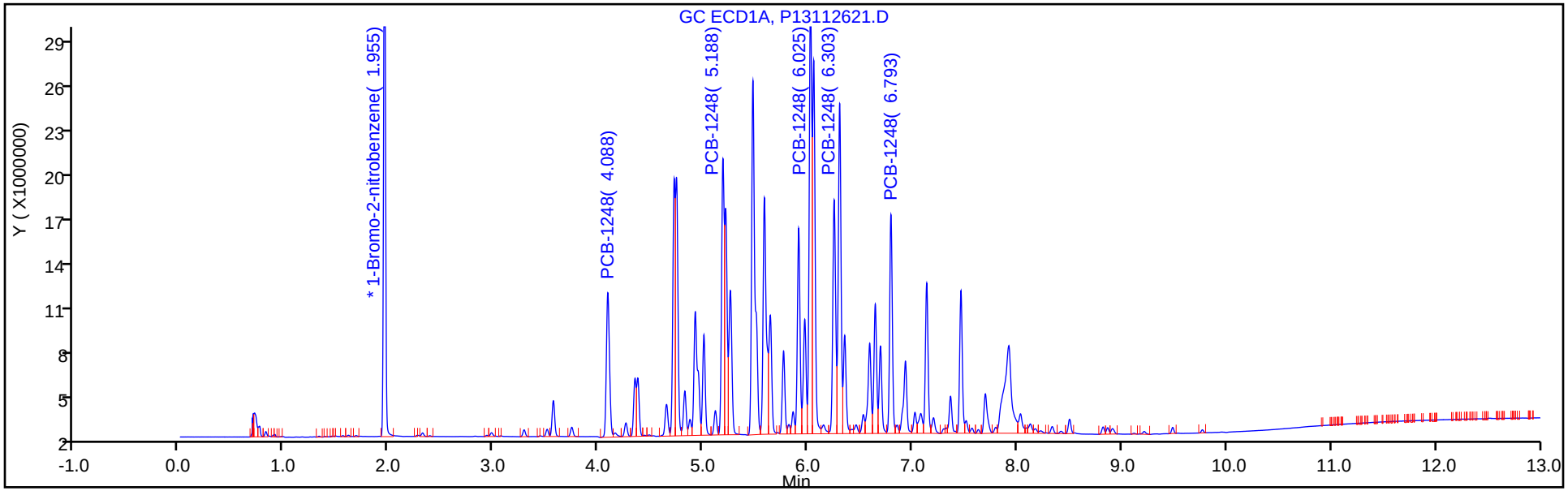
Report Date: 27-Nov-2018 10:35:50 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

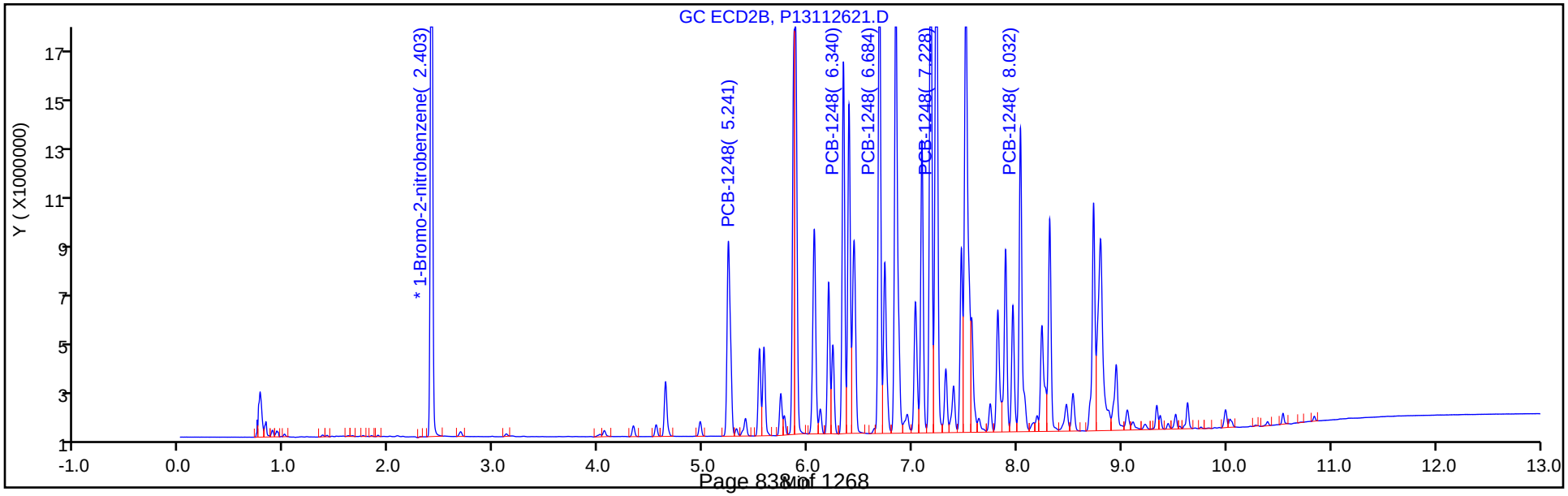
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112621.D

Injection Date:	26-Nov-2018 19:57:31	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std15 1248			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 20:15 Calibration End Date: 11/26/2018 21:47 Calibration ID: 48151

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/22	P13112622.D
Level 2	STD01 240-356910/23	P13112623.D
Level 3	STD02 240-356910/24	P13112624.D
Level 4	STD05 240-356910/25	P13112625.D
Level 5	STD1 240-356910/26	P13112626.D
Level 6	STD15 240-356910/27	P13112627.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1221 Peak 1	0.0128 0.0089	0.0120	0.0113	0.0103	0.0094	Ave		0.0108				14.1		20.0			
PCB-1221 Peak 2	0.0081 0.0058	0.0082	0.0075	0.0069	0.0062	Ave		0.0071				14.2		20.0			
PCB-1221 Peak 3	0.0295 0.0209	0.0279	0.0259	0.0238	0.0220	Ave		0.0250				13.4		20.0			
PCB-1254 Peak 1	0.0344 0.0248	0.0319	0.0306	0.0271	0.0255	Ave		0.0291				13.2		20.0			
PCB-1254 Peak 2	0.0492 0.0344	0.0443	0.0420	0.0373	0.0353	Ave		0.0404				14.3		20.0			
PCB-1254 Peak 3	0.0624 0.0486	0.0577	0.0564	0.0510	0.0491	Ave		0.0542				10.2		20.0			
PCB-1254 Peak 4	0.0454 0.0362	0.0422	0.0421	0.0380	0.0363	Ave		0.0400				9.4		20.0			
PCB-1254 Peak 5	0.0618 0.0482	0.0585	0.0575	0.0508	0.0481	Ave		0.0541				10.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton | Job No.: 240-107194-1 | Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 | GC Column: CLP-1 (0.53 ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 20:15 | Calibration End Date: 11/26/2018 21:47 | Calibration ID: 48151

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/22	P13112622.D
Level 2	STD01 240-356910/23	P13112623.D
Level 3	STD02 240-356910/24	P13112624.D
Level 4	STD05 240-356910/25	P13112625.D
Level 5	STD1 240-356910/26	P13112626.D
Level 6	STD15 240-356910/27	P13112627.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1221 Peak 1	BNB	Ave	729931 13765233	1332468	2544389	5224398	9757102	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1221 Peak 2	BNB	Ave	459977 8907635	912305	1699191	3492645	6408839	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1221 Peak 3	BNB	Ave	1682371 32319945	3085595	5828136	12122584	22739249	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 1	BNB	Ave	1960457 38320374	3531867	6885260	13792747	26410795	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 2	BNB	Ave	2800244 53047578	4899941	9448733	18970205	36457860	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 3	BNB	Ave	3554292 74988426	6384357	12698321	25945327	50727508	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 4	BNB	Ave	2582123 55895641	4669895	9484213	19313864	37510644	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 5	BNB	Ave	3518095 74342412	6470473	12938756	25845040	49693732	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112622.D
Lims ID: std005 ar2154
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 26-Nov-2018 20:15:52 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-022
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub4

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:42 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:37:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.956	1.955	0.001	56935306	0.0500	0.0500	
2	2.404	2.403	0.002	47372352	0.0500	0.0500	
3 PCB-1221							a
1	3.289	3.289	0.000	729931	0.0500	0.0594	
1	3.509	3.509	0.000	459977	0.0500	0.0567	
1	3.568	3.568	0.000	1682371	0.0500	0.0591	
		Average of Peak Amounts =				0.0584	
2	4.334	4.334	0.000	716535	0.0500	0.0630	a
2	4.551	4.551	0.000	466499	0.0500	0.0615	a
2	4.642	4.642	0.000	1636793	0.0500	0.0626	a
		Average of Peak Amounts =				0.0624	
						RPD = 6.62	
8 PCB-1254							a
1	5.973	5.973	0.000	1960457	0.0500	0.0592	
1	6.308	6.308	0.000	2800244	0.0500	0.0609	
1	6.796	6.796	0.000	3554292	0.0500	0.0576	
1	7.137	7.137	0.000	2582123	0.0500	0.0566	
1	7.698	7.698	0.000	3518095	0.0500	0.0571	
		Average of Peak Amounts =				0.0583	
2	7.223	7.223	0.000	1715548	0.0500	0.0548	a
2	7.468	7.468	0.000	2035888	0.0500	0.0581	
2	8.033	8.033	0.000	3234729	0.0500	0.0633	a
2	8.312	8.312	0.000	2352435	0.0500	0.0632	
2	8.947	8.947	0.000	4358020	0.0500	0.0451	
		Average of Peak Amounts =				0.0569	
						RPD = 2.41	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SG2154@0.05PP_00020 Amount Added: 1.00 Units: mL

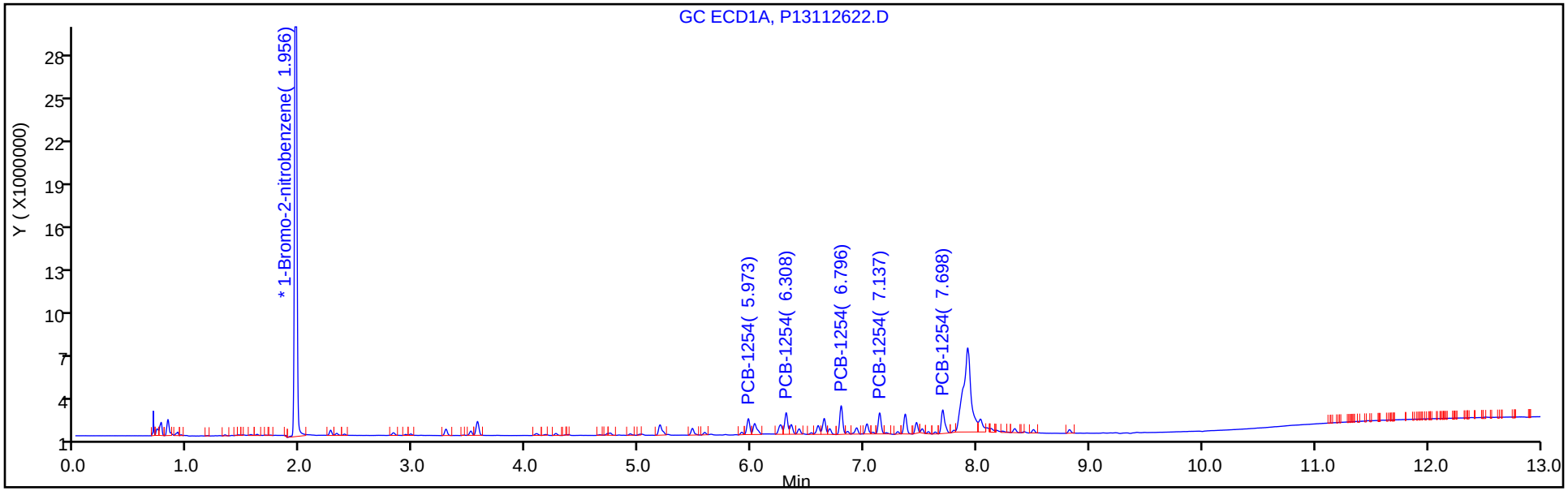
Report Date: 27-Nov-2018 10:35:44 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

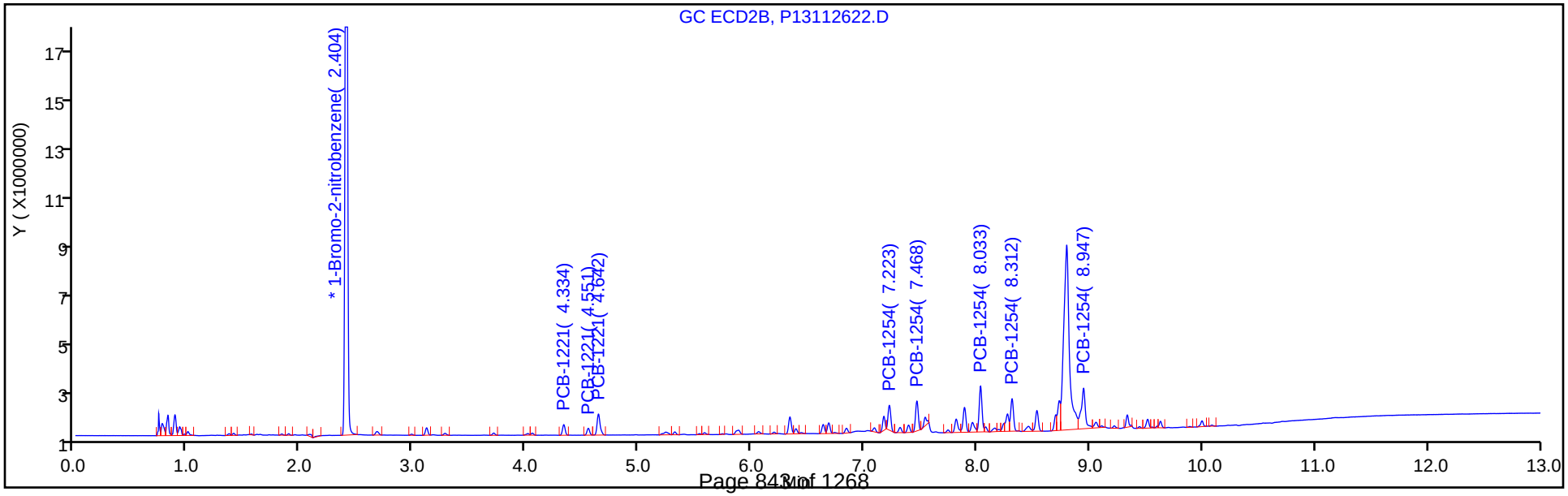
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112622.D

Injection Date:	26-Nov-2018 20:15:52	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std005 ar2154			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112623.D
Lims ID: std01 ar2154
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Nov-2018 20:34:12 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-023
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub4

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:37 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:38:41

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	55341621	0.0500	0.0500	
2	2.404	2.403	0.001	46408423	0.0500	0.0500	
3 PCB-1221							
1	3.288	3.289	-0.001	1332468	0.1000	0.1115	
1	3.508	3.509	-0.001	912305	0.1000	0.1158	
1	3.568	3.568	0.000	3085595	0.1000	0.1114	
		Average of Peak Amounts =				0.1129	
2	4.334	4.334	0.000	1268715	0.1000	0.1139	
2	4.550	4.551	-0.001	849774	0.1000	0.1143	
2	4.641	4.642	-0.001	2887116	0.1000	0.1127	
		Average of Peak Amounts =				0.1137	
						RPD = 0.69	
8 PCB-1254							M
1	5.972	5.973	-0.001	3531867	0.1000	0.1098	
1	6.306	6.308	-0.002	4899941	0.1000	0.1096	
1	6.795	6.796	-0.001	6384357	0.1000	0.1064	
1	7.136	7.137	-0.001	4669895	0.1000	0.1054	
1	7.696	7.698	-0.002	6470473	0.1000	0.1080	
		Average of Peak Amounts =				0.1078	
2	7.222	7.223	-0.001	3657732	0.1000	0.1193	M
2	7.467	7.468	-0.001	4042826	0.1000	0.1178	M
2	8.032	8.033	-0.001	5583030	0.1000	0.1115	
2	8.310	8.312	-0.002	4046732	0.1000	0.1109	
2	8.946	8.947	-0.001	6089363	0.1000	0.0897	
		Average of Peak Amounts =				0.1098	
						RPD = 1.85	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG2154@O.1PPM_00021 Amount Added: 1.00 Units: mL

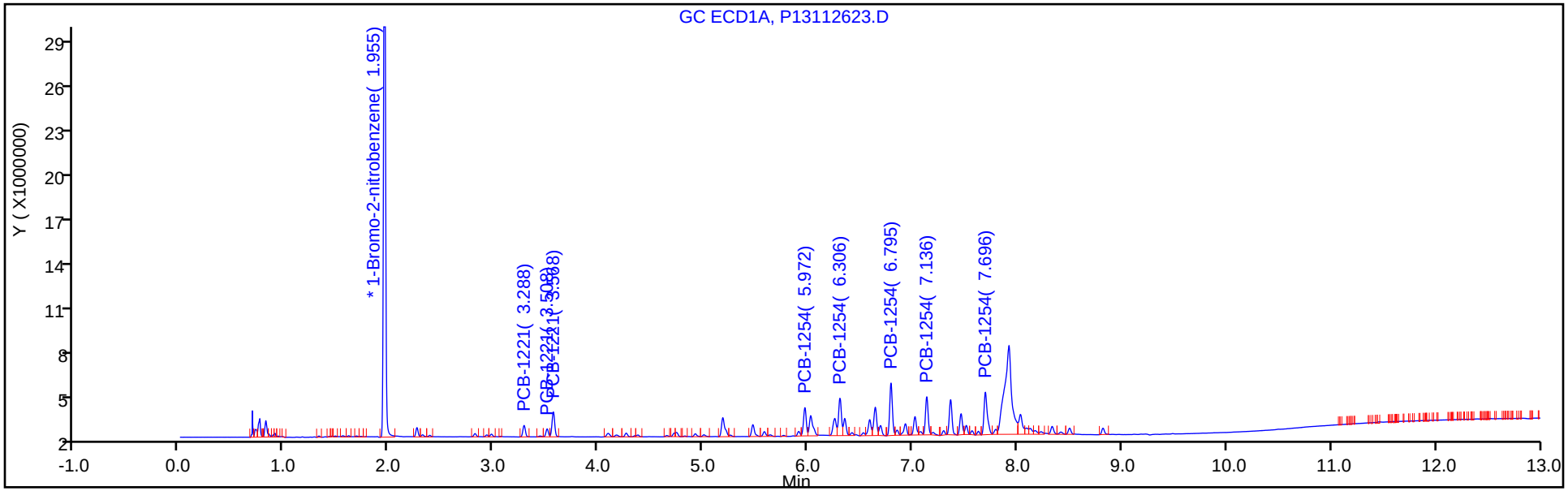
Report Date: 27-Nov-2018 10:35:38 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

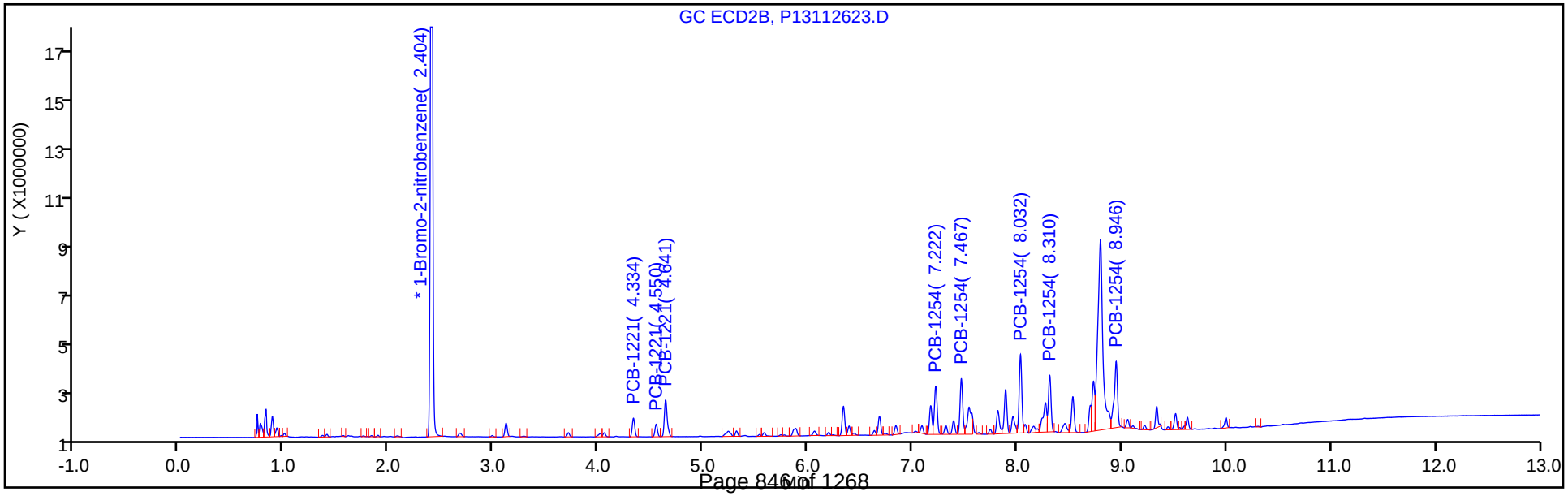
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112623.D

Injection Date:	26-Nov-2018 20:34:12	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std01 ar2154			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112624.D
Lims ID: std02 ar2154
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Nov-2018 20:52:33 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-024
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub4

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:32 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:39:06

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	56271763	0.0500	0.0500	
2	2.404	2.403	0.001	47010976	0.0500	0.0500	
3 PCB-1221							
1	3.289	3.289	0.000	2544389	0.2000	0.2093	
1	3.509	3.509	0.000	1699191	0.2000	0.2121	
1	3.568	3.568	0.000	5828136	0.2000	0.2070	
		Average of Peak Amounts =				0.2095	
2	4.334	4.334	0.000	2374807	0.2000	0.2106	
2	4.550	4.551	-0.001	1599897	0.2000	0.2125	
2	4.641	4.642	-0.001	5402303	0.2000	0.2082	
		Average of Peak Amounts =				0.2104	
						RPD = 0.46	
8 PCB-1254							
1	5.972	5.973	-0.001	6885260	0.2000	0.2104	
1	6.307	6.308	-0.001	9448733	0.2000	0.2078	
1	6.795	6.796	-0.001	12698321	0.2000	0.2082	
1	7.136	7.137	-0.001	9484213	0.2000	0.2105	
1	7.695	7.698	-0.003	12938756	0.2000	0.2124	
		Average of Peak Amounts =				0.2099	
2	7.223	7.223	0.000	6741848	0.2000	0.2170	
2	7.467	7.468	-0.001	7548724	0.2000	0.2171	
2	8.031	8.033	-0.002	10666257	0.2000	0.2103	
2	8.310	8.312	-0.002	7760283	0.2000	0.2099	
2	8.945	8.947	-0.002	12194528	0.2000	0.2357	
		Average of Peak Amounts =				0.2180	
						RPD = 3.82	

Reagents:

SG2154@0.2PPM_00020 Amount Added: 1.00 Units: mL

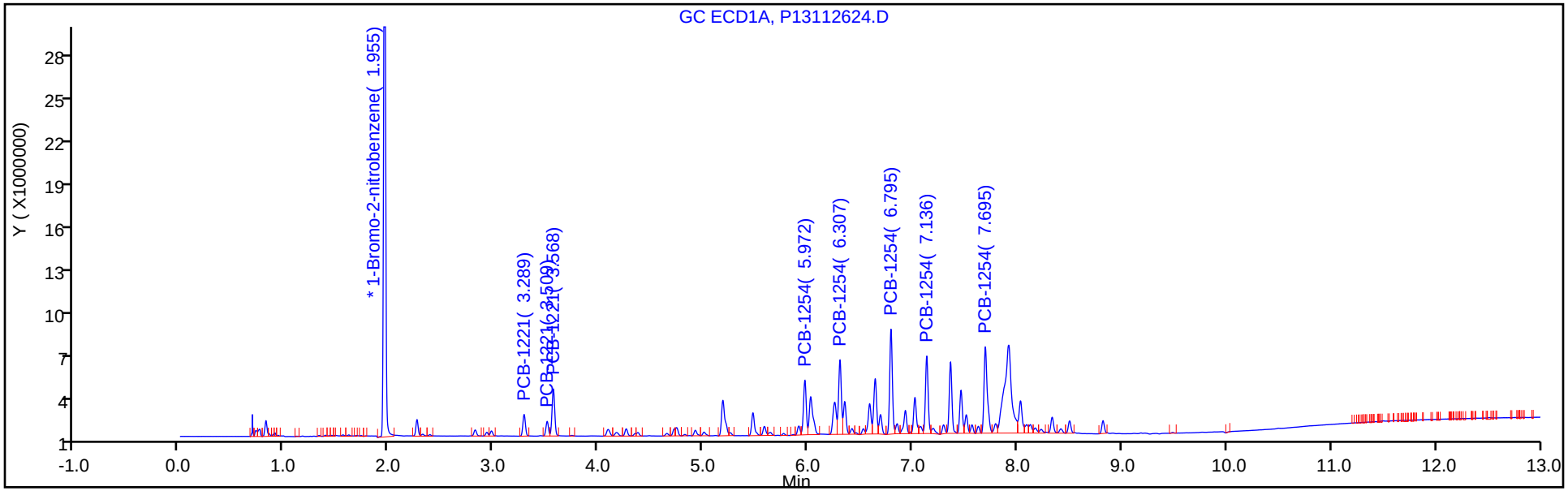
Report Date: 27-Nov-2018 10:35:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

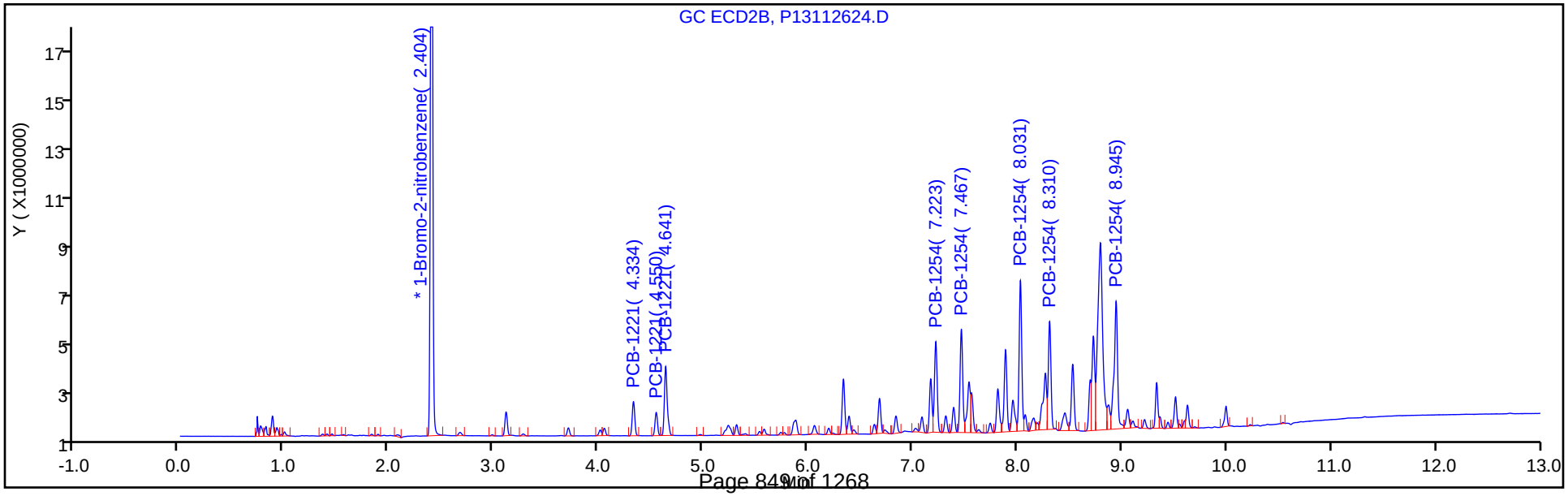
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112624.D

Injection Date:	26-Nov-2018 20:52:33	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std02 ar2154			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112625.D
Lims ID: std05 ar2154
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Nov-2018 21:11:01 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-025
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub4

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:28 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:39:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.956	1.955	0.001	50833995	0.0500	0.0500	
2	2.404	2.403	0.001	42476912	0.0500	0.0500	
3 PCB-1221							
1	3.289	3.289	0.000	5224398	0.5000	0.4758	
1	3.509	3.509	0.000	3492645	0.5000	0.4826	
1	3.568	3.568	0.000	12122584	0.5000	0.4766	
		Average of Peak Amounts =				0.4783	
2	4.333	4.334	-0.001	4752611	0.5000	0.4664	
2	4.551	4.551	0.000	3210293	0.5000	0.4720	
2	4.641	4.642	-0.001	10967403	0.5000	0.4678	
		Average of Peak Amounts =				0.4687	
						RPD = 2.03	
8 PCB-1254							
1	5.971	5.973	-0.002	13792747	0.5000	0.4666	
1	6.306	6.308	-0.002	18970205	0.5000	0.4619	
1	6.794	6.796	-0.002	25945327	0.5000	0.4708	
1	7.136	7.137	-0.001	19313864	0.5000	0.4746	
1	7.696	7.698	-0.002	25845040	0.5000	0.4696	
		Average of Peak Amounts =				0.4687	
2	7.223	7.223	0.000	13280407	0.5000	0.4731	
2	7.466	7.468	-0.002	14590182	0.5000	0.4645	
2	8.031	8.033	-0.002	20945374	0.5000	0.4571	
2	8.311	8.312	-0.001	15471889	0.5000	0.4632	
2	8.946	8.947	-0.001	21877214	0.5000	0.5268	
		Average of Peak Amounts =				0.4770	
						RPD = 1.75	

Reagents:

SG2154@0.5PPM_00040 Amount Added: 1.00 Units: mL

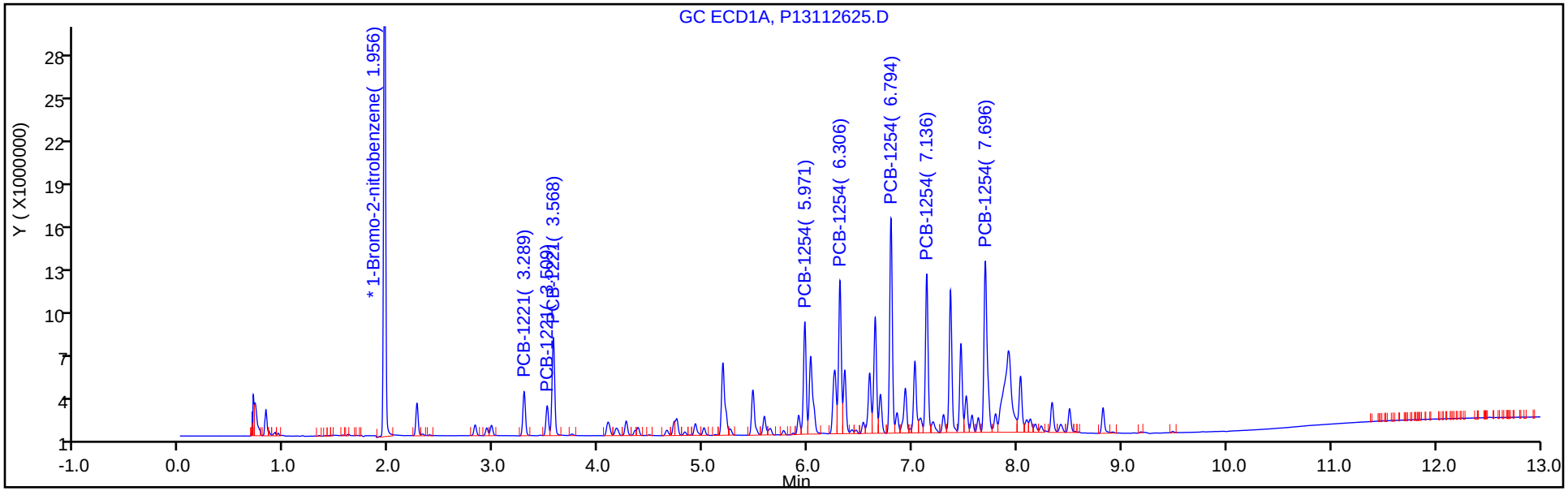
Report Date: 27-Nov-2018 10:35:29 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

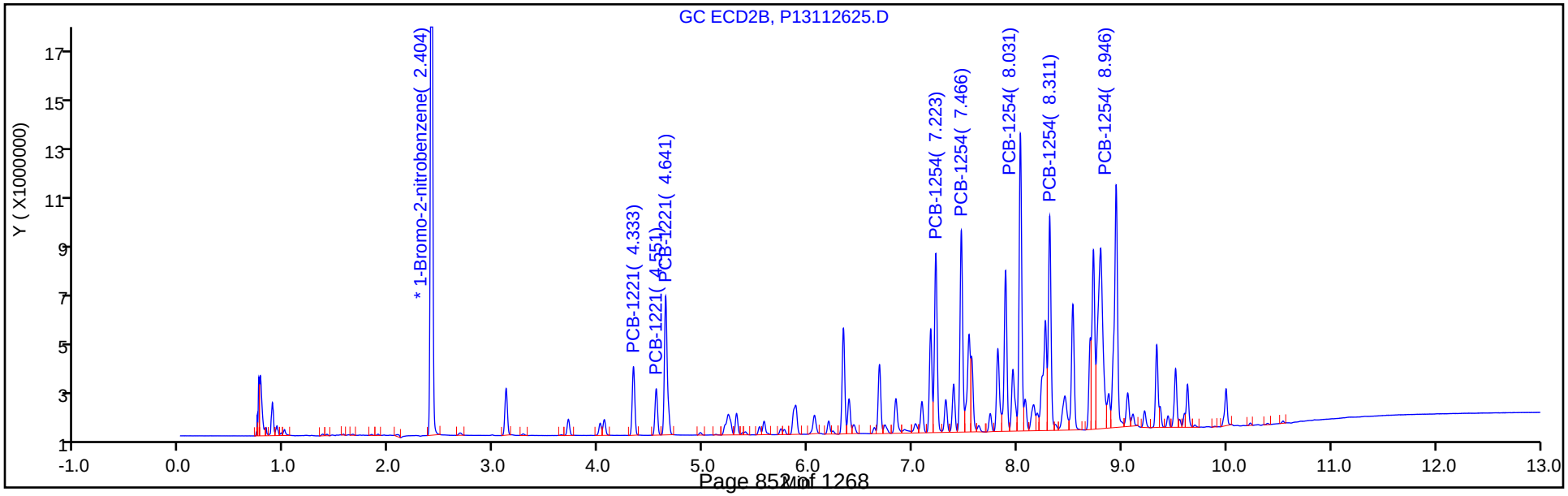
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112625.D

Injection Date:	26-Nov-2018 21:11:01	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std05 ar2154			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112626.D
Lims ID: std1 ar2154
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Nov-2018 21:29:18 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-026
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub4

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:24 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:39:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	51687845	0.0500	0.0500	
2	2.403	2.403	0.001	43247348	0.0500	0.0500	
3 PCB-1221							
1	3.288	3.289	-0.001	9757102	1.00	0.8739	
1	3.508	3.509	-0.001	6408839	1.00	0.8709	
1	3.567	3.568	-0.001	22739249	1.00	0.8792	
		Average of Peak Amounts =				0.8747	
2	4.333	4.334	-0.001	8670428	1.00	0.8357	
2	4.550	4.551	-0.001	5856160	1.00	0.8456	
2	4.641	4.642	-0.001	20400026	1.00	0.8547	
		Average of Peak Amounts =				0.8453	
						RPD = 3.41	
8 PCB-1254							
1	5.970	5.973	-0.003	26410795	1.00	0.8787	
1	6.306	6.308	-0.002	36457860	1.00	0.8730	
1	6.793	6.796	-0.003	50727508	1.00	0.9053	
1	7.135	7.137	-0.002	37510644	1.00	0.9064	
1	7.695	7.698	-0.003	49693732	1.00	0.8879	
		Average of Peak Amounts =				0.8903	
2	7.223	7.223	0.000	24659035	1.00	0.8627	
2	7.467	7.468	-0.001	26942428	1.00	0.8425	
2	8.031	8.033	-0.002	39300717	1.00	0.8424	
2	8.311	8.312	-0.001	28652754	1.00	0.8426	
2	8.946	8.947	-0.001	40298453	1.00	1.00	
		Average of Peak Amounts =				0.8783	
						RPD = 1.35	

Reagents:

SG2154@1.0PPM_00028 Amount Added: 1.00 Units: mL

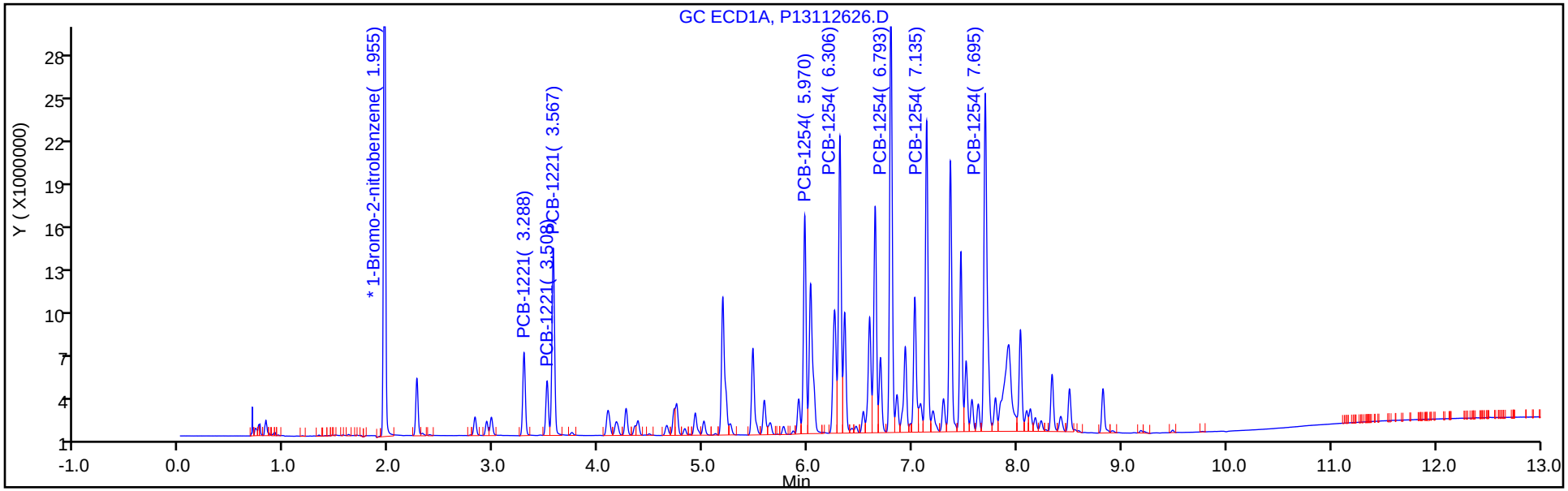
Report Date: 27-Nov-2018 10:35:25 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

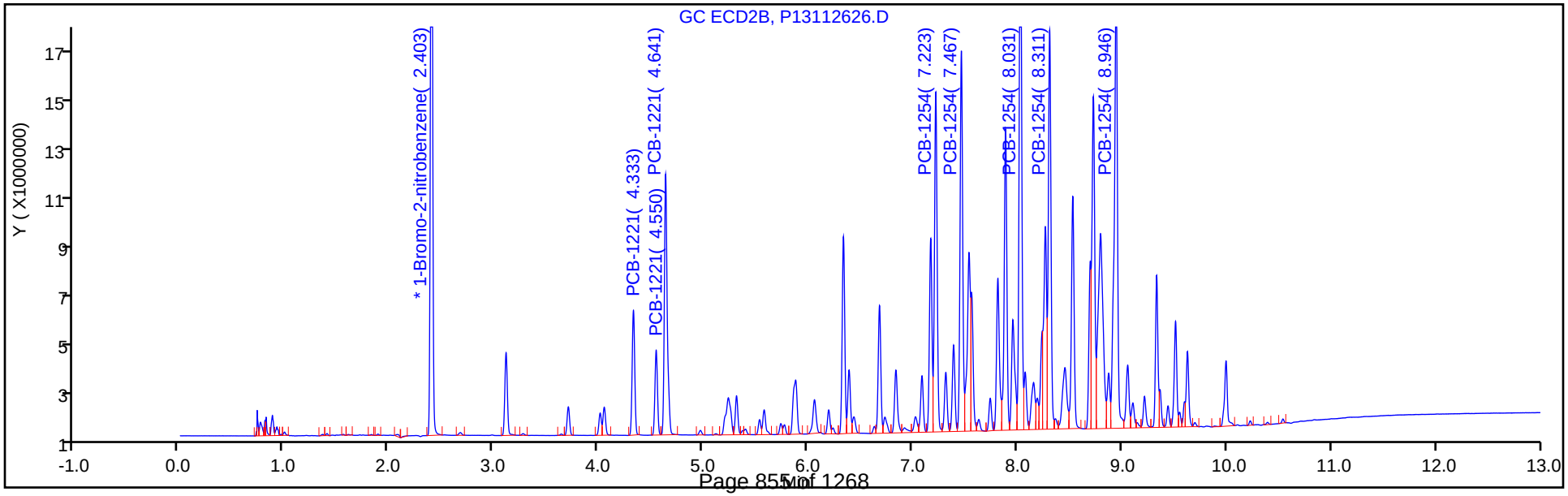
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112626.D

Injection Date:	26-Nov-2018 21:29:18	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std1 ar2154			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112627.D
Lims ID: std15 ar2154
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Nov-2018 21:47:37 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-027
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub4

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:19 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:40:15

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	51433284	0.0500	0.0500	
2	2.403	2.403	0.000	43506695	0.0500	0.0500	
3 PCB-1221							
1	3.287	3.289	-0.002	13765233	1.50	1.24	
1	3.507	3.509	-0.002	8907635	1.50	1.22	
1	3.566	3.568	-0.002	32319945	1.50	1.26	
		Average of Peak Amounts =				1.24	
2	4.332	4.334	-0.002	12187738	1.50	1.17	
2	4.550	4.551	-0.001	8094307	1.50	1.16	
2	4.639	4.642	-0.003	28422104	1.50	1.18	
		Average of Peak Amounts =				1.17	
						RPD = 5.48	
8 PCB-1254							
1	5.970	5.973	-0.003	38320374	1.50	1.28	
1	6.306	6.308	-0.002	53047578	1.50	1.28	
1	6.793	6.796	-0.003	74988426	1.50	1.34	
1	7.135	7.137	-0.002	55895641	1.50	1.36	
1	7.695	7.698	-0.003	74342412	1.50	1.33	
		Average of Peak Amounts =				1.32	
2	7.222	7.223	-0.001	35268874	1.50	1.23	
2	7.467	7.468	-0.001	38718809	1.50	1.20	
2	8.031	8.033	-0.002	57050428	1.50	1.22	
2	8.310	8.312	-0.002	41527881	1.50	1.21	
2	8.945	8.947	-0.002	57721379	1.50	1.45	
		Average of Peak Amounts =				1.26	
						RPD = 4.40	

Reagents:

SG2154@1.5PPM_00004 Amount Added: 1.00 Units: mL

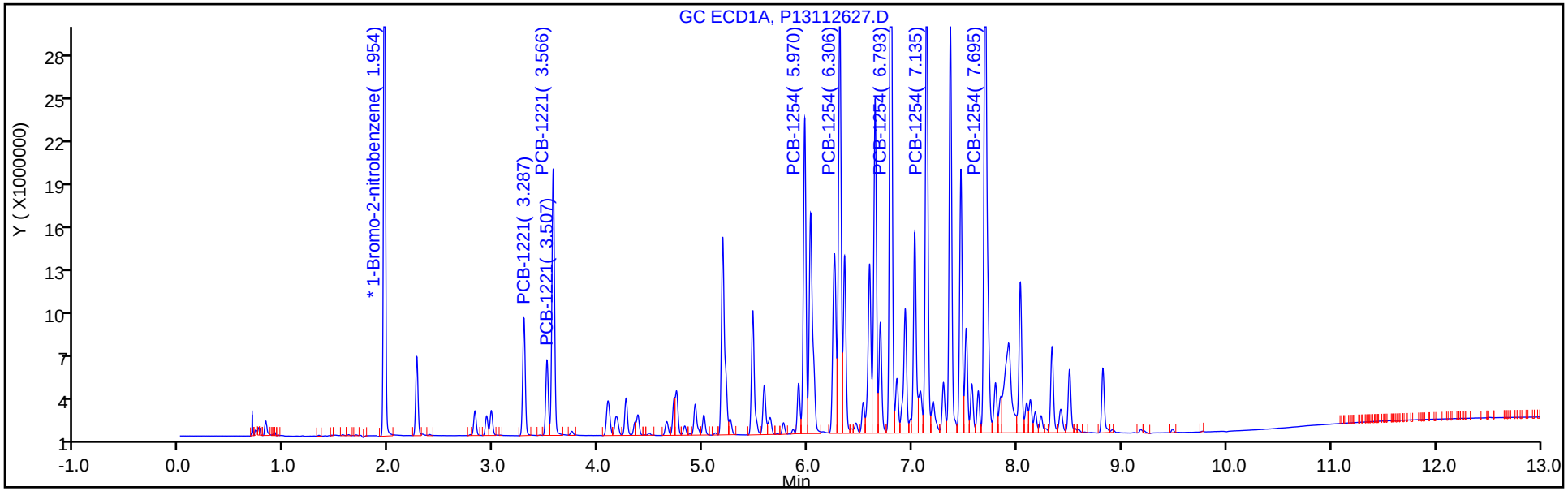
Report Date: 27-Nov-2018 10:35:21 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

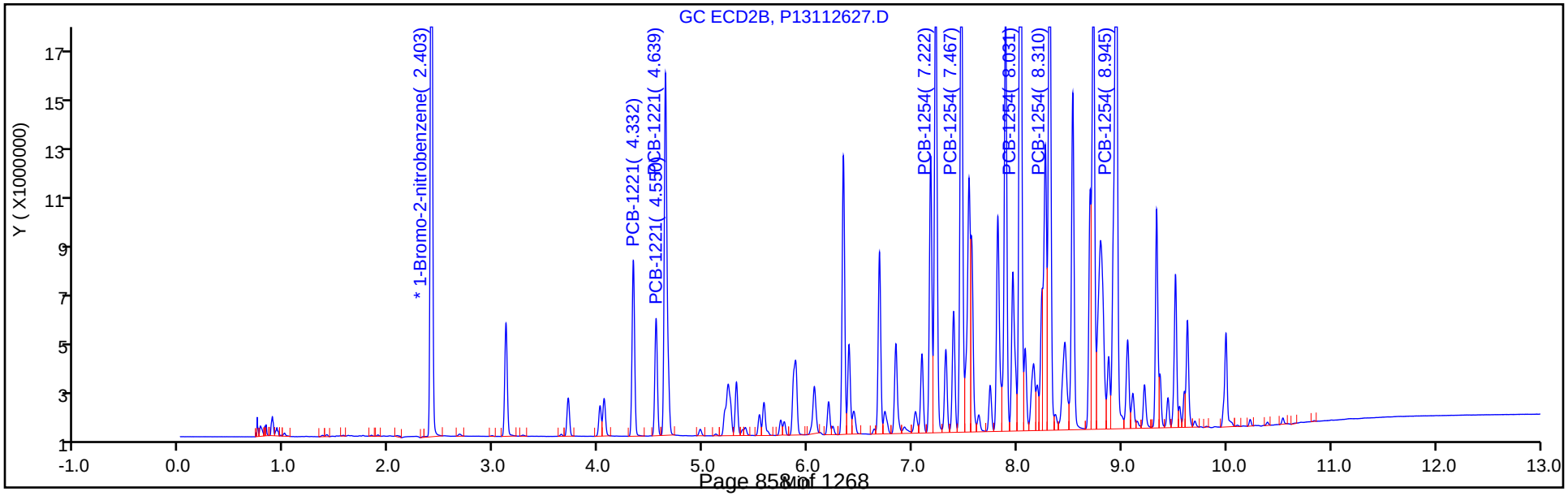
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112627.D

Injection Date:	26-Nov-2018 21:47:37	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std15 ar2154			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 20:15 Calibration End Date: 11/26/2018 21:47 Calibration ID: 48152

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/22	P13112622.D
Level 2	STD01 240-356910/23	P13112623.D
Level 3	STD02 240-356910/24	P13112624.D
Level 4	STD05 240-356910/25	P13112625.D
Level 5	STD1 240-356910/26	P13112626.D
Level 6	STD15 240-356910/27	P13112627.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1221 Peak 1	0.0151 0.0093	0.0137	0.0126	0.0112	0.0100	Ave		0.0120				18.5		20.0			
PCB-1221 Peak 2	0.0098 0.0062	0.0092	0.0085	0.0076	0.0068	Ave		0.0080				17.6		20.0			
PCB-1221 Peak 3	0.0346 0.0218	0.0311	0.0287	0.0258	0.0236	Ave		0.0276				17.4		20.0			
PCB-1254 Peak 1	0.0362 0.0270	0.0394	0.0359	0.0313	0.0285	Ave		0.0330				14.7		20.0			
PCB-1254 Peak 2	0.0430 0.0297	0.0436	0.0401	0.0343	0.0311	Ave		0.0370				16.4		20.0			
PCB-1254 Peak 3	0.0683 0.0437	0.0602	0.0567	0.0493	0.0454	Ave		0.0539				17.6		20.0			
PCB-1254 Peak 4	0.0497 0.0318	0.0436	0.0413	0.0364	0.0331	Ave		0.0393				17.3		20.0			
PCB-1254 Peak 5	0.0920 0.0442	0.0656	0.0648	0.0515	0.0466	Lin1	0.0026	0.0439							0.9950		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 20:15 Calibration End Date: 11/26/2018 21:47 Calibration ID: 48152

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/22	P13112622.D
Level 2	STD01 240-356910/23	P13112623.D
Level 3	STD02 240-356910/24	P13112624.D
Level 4	STD05 240-356910/25	P13112625.D
Level 5	STD1 240-356910/26	P13112626.D
Level 6	STD15 240-356910/27	P13112627.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1221 Peak 1	BNB	Ave	716535 12187738	1268715	2374807	4752611	8670428	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1221 Peak 2	BNB	Ave	466499 8094307	849774	1599897	3210293	5856160	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1221 Peak 3	BNB	Ave	1636793 28422104	2887116	5402303	10967403	20400026	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 1	BNB	Ave	1715548 35268874	3657732	6741848	13280407	24659035	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 2	BNB	Ave	2035888 38718809	4042826	7548724	14590182	26942428	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 3	BNB	Ave	3234729 57050428	5583030	10666257	20945374	39300717	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 4	BNB	Ave	2352435 41527881	4046732	7760283	15471889	28652754	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1254 Peak 5	BNB	Lin1	4358020 57721379	6089363	12194528	21877214	40298453	0.0500 1.50	0.100	0.200	0.500	1.00

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112622.D
Lims ID: std005 ar2154
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 26-Nov-2018 20:15:52 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-022
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub4

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:42 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:37:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.956	1.955	0.001	56935306	0.0500	0.0500	
2	2.404	2.403	0.002	47372352	0.0500	0.0500	
3 PCB-1221							a
1	3.289	3.289	0.000	729931	0.0500	0.0594	
1	3.509	3.509	0.000	459977	0.0500	0.0567	
1	3.568	3.568	0.000	1682371	0.0500	0.0591	
		Average of Peak Amounts =				0.0584	
2	4.334	4.334	0.000	716535	0.0500	0.0630	a
2	4.551	4.551	0.000	466499	0.0500	0.0615	a
2	4.642	4.642	0.000	1636793	0.0500	0.0626	a
		Average of Peak Amounts =				0.0624	
						RPD = 6.62	
8 PCB-1254							a
1	5.973	5.973	0.000	1960457	0.0500	0.0592	
1	6.308	6.308	0.000	2800244	0.0500	0.0609	
1	6.796	6.796	0.000	3554292	0.0500	0.0576	
1	7.137	7.137	0.000	2582123	0.0500	0.0566	
1	7.698	7.698	0.000	3518095	0.0500	0.0571	
		Average of Peak Amounts =				0.0583	
2	7.223	7.223	0.000	1715548	0.0500	0.0548	a
2	7.468	7.468	0.000	2035888	0.0500	0.0581	
2	8.033	8.033	0.000	3234729	0.0500	0.0633	a
2	8.312	8.312	0.000	2352435	0.0500	0.0632	
2	8.947	8.947	0.000	4358020	0.0500	0.0451	
		Average of Peak Amounts =				0.0569	
						RPD = 2.41	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SG2154@0.05PP_00020 Amount Added: 1.00 Units: mL

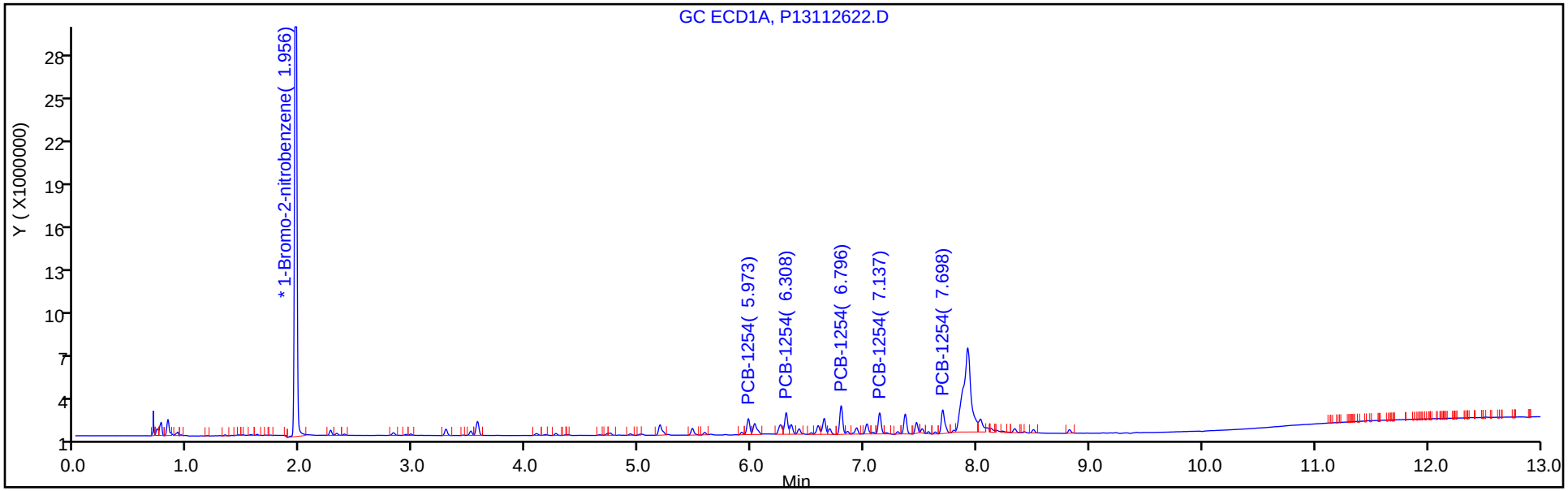
Report Date: 27-Nov-2018 10:35:44 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

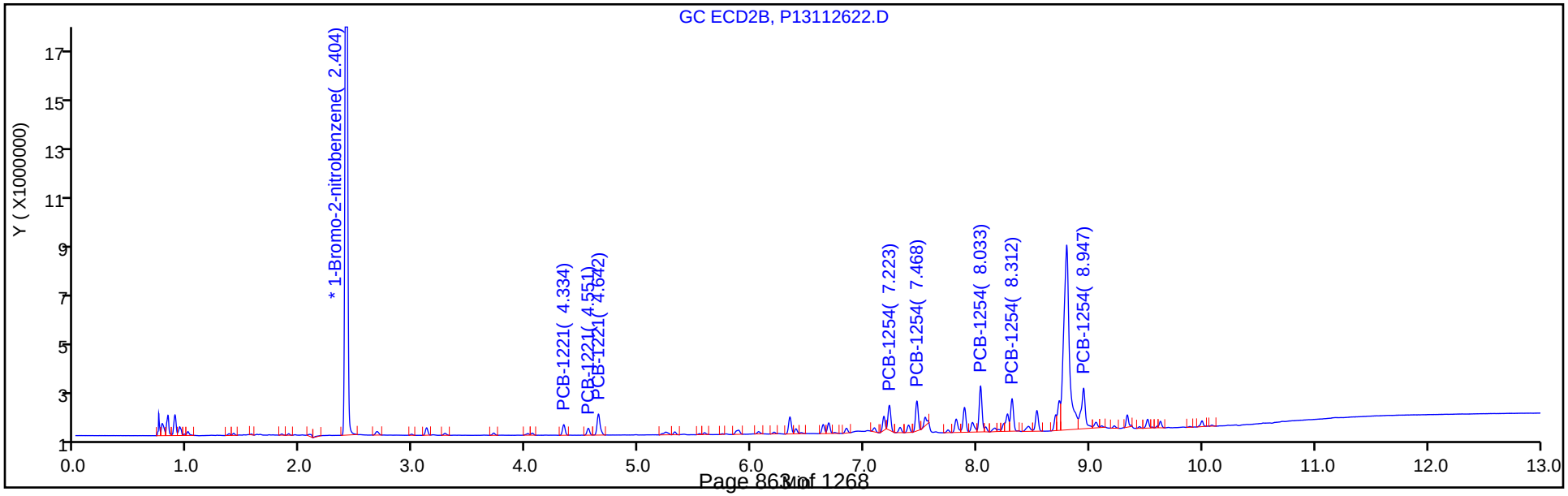
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112622.D

Injection Date:	26-Nov-2018 20:15:52	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std005 ar2154			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:35:44 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112622.D

Injection Date: 26-Nov-2018 20:15:52 Instrument ID: A2HP13

Lims ID: std005 ar2154

Client ID:

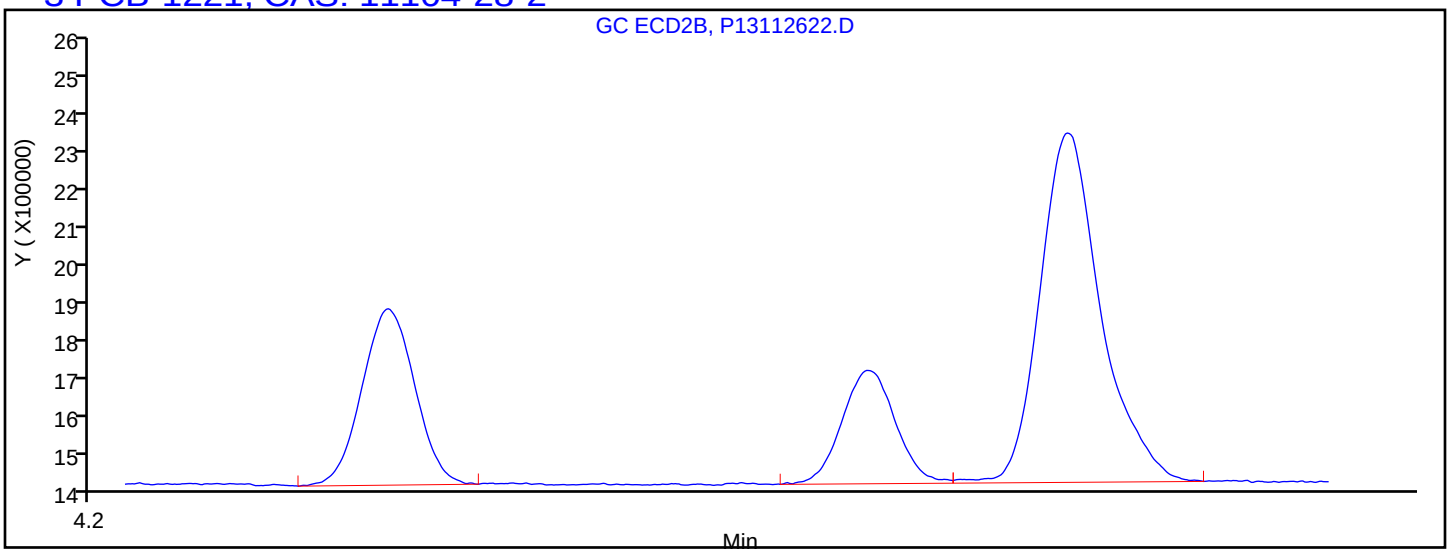
Operator ID: ALS Bottle#: 22 Worklist Smp#: 22

Injection Vol: 1.0 ul Dil. Factor: 1.0000

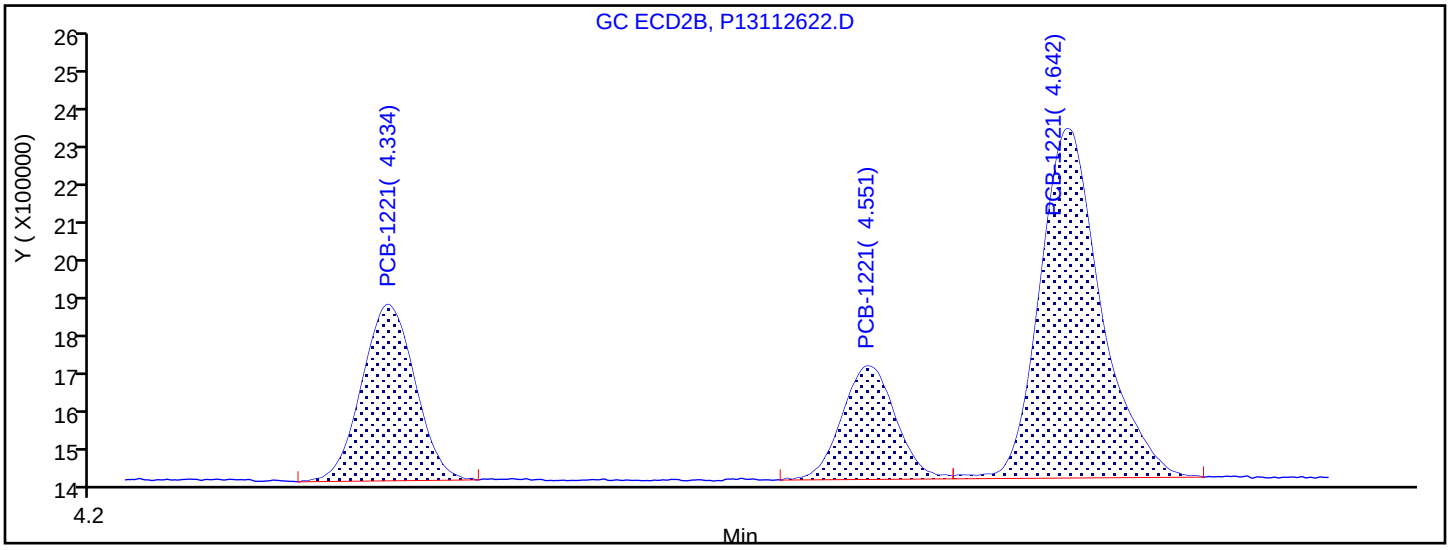
Method: PCB13 IS Limit Group: GC 8082A IS

Column: Detector GC ecd2b

3 PCB-1221, CAS: 11104-28-2



Processing Integration Results



Manual Integration Results

4.334	Response = 716535	M
4.551	Response = 466499	M
4.642	Response = 1636793	M

Reviewer: hassl, 27-Nov-2018 06:37:03

Audit Action: Assigned Compound ID Audit Reason:

Report Date: 27-Nov-2018 10:35:44 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112622.D

Injection Date: 26-Nov-2018 20:15:52 Instrument ID: A2HP13

Lims ID: std005 ar2154

Client ID:

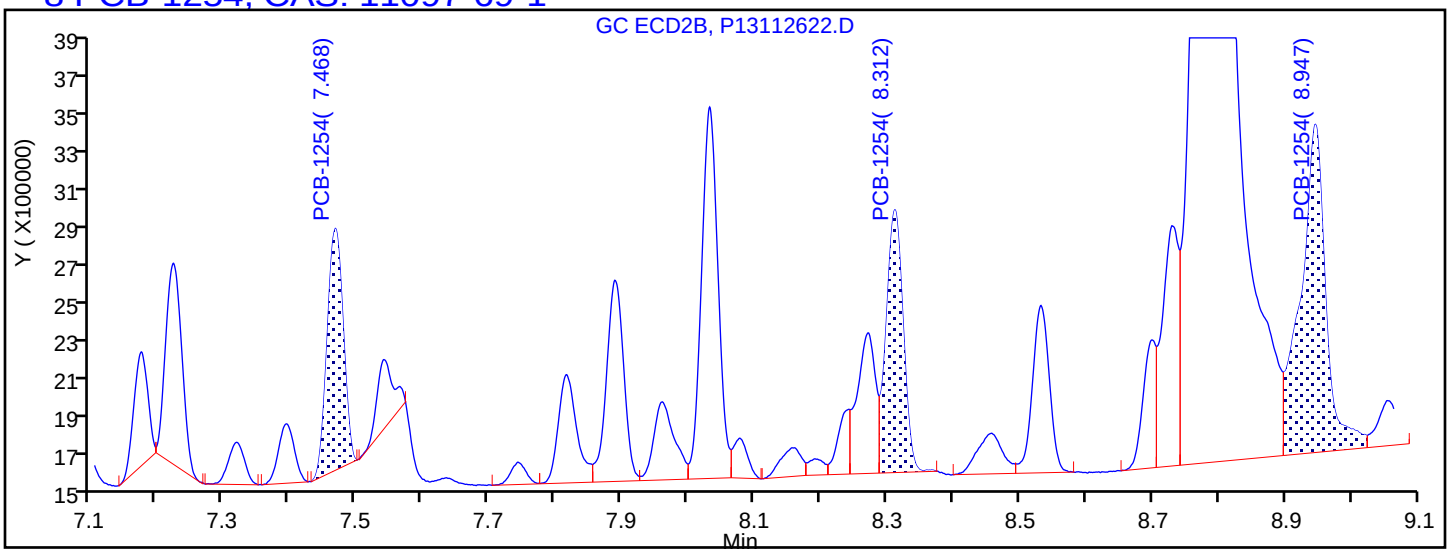
Operator ID: ALS Bottle#: 22 Worklist Smp#: 22

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

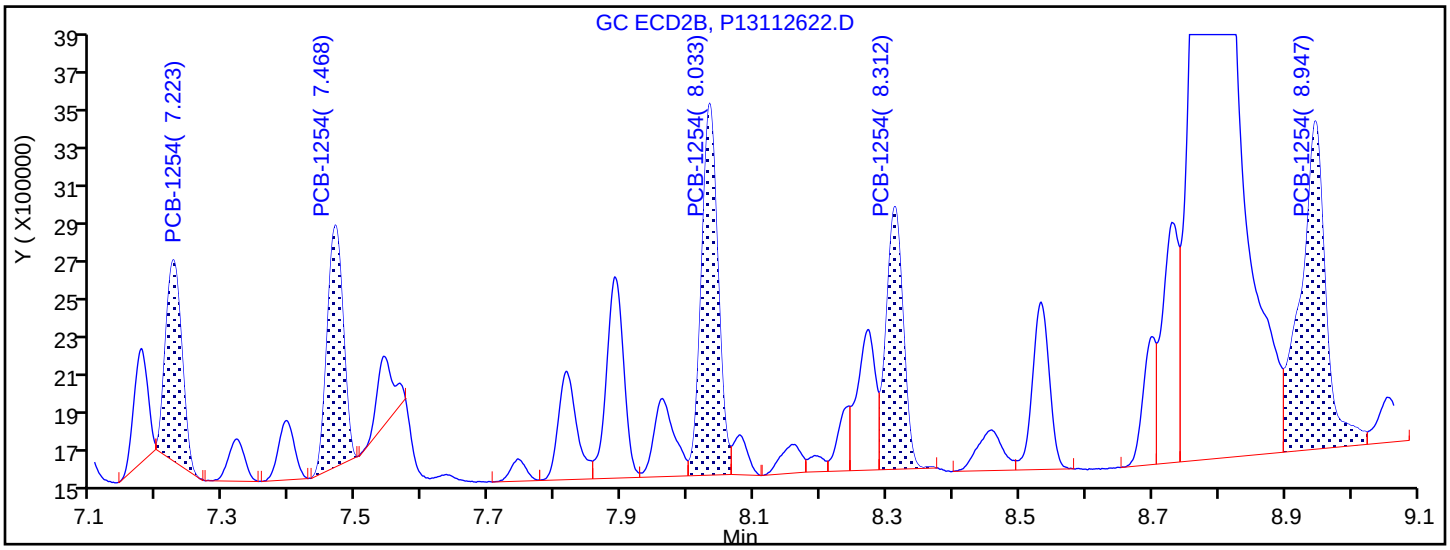
Column: Detector GC ecd2b

8 PCB-1254, CAS: 11097-69-1



Processing Integration Results

7.223	Response = 0
7.468	Response = 2035888
8.033	Response = 0
8.312	Response = 2352435
8.947	Response = 4358020



Manual Integration Results

7.223	Response = 1715548	M
7.468	Response = 2035888	
8.033	Response = 3234729	M
8.312	Response = 2352435	
8.947	Response = 4358020	

Reviewer: hassl, 27-Nov-2018 06:37:31

Audit Action: Assigned Compound ID Audit Reason:

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112623.D
Lims ID: std01 ar2154
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Nov-2018 20:34:12 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-023
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub4

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:37 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:38:41

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	55341621	0.0500	0.0500	
2	2.404	2.403	0.001	46408423	0.0500	0.0500	
3 PCB-1221							
1	3.288	3.289	-0.001	1332468	0.1000	0.1115	
1	3.508	3.509	-0.001	912305	0.1000	0.1158	
1	3.568	3.568	0.000	3085595	0.1000	0.1114	
		Average of Peak Amounts =				0.1129	
2	4.334	4.334	0.000	1268715	0.1000	0.1139	
2	4.550	4.551	-0.001	849774	0.1000	0.1143	
2	4.641	4.642	-0.001	2887116	0.1000	0.1127	
		Average of Peak Amounts =				0.1137	
						RPD = 0.69	
8 PCB-1254							M
1	5.972	5.973	-0.001	3531867	0.1000	0.1098	
1	6.306	6.308	-0.002	4899941	0.1000	0.1096	
1	6.795	6.796	-0.001	6384357	0.1000	0.1064	
1	7.136	7.137	-0.001	4669895	0.1000	0.1054	
1	7.696	7.698	-0.002	6470473	0.1000	0.1080	
		Average of Peak Amounts =				0.1078	
2	7.222	7.223	-0.001	3657732	0.1000	0.1193	M
2	7.467	7.468	-0.001	4042826	0.1000	0.1178	M
2	8.032	8.033	-0.001	5583030	0.1000	0.1115	
2	8.310	8.312	-0.002	4046732	0.1000	0.1109	
2	8.946	8.947	-0.001	6089363	0.1000	0.0897	
		Average of Peak Amounts =				0.1098	
						RPD = 1.85	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG2154@O.1PPM_00021 Amount Added: 1.00 Units: mL

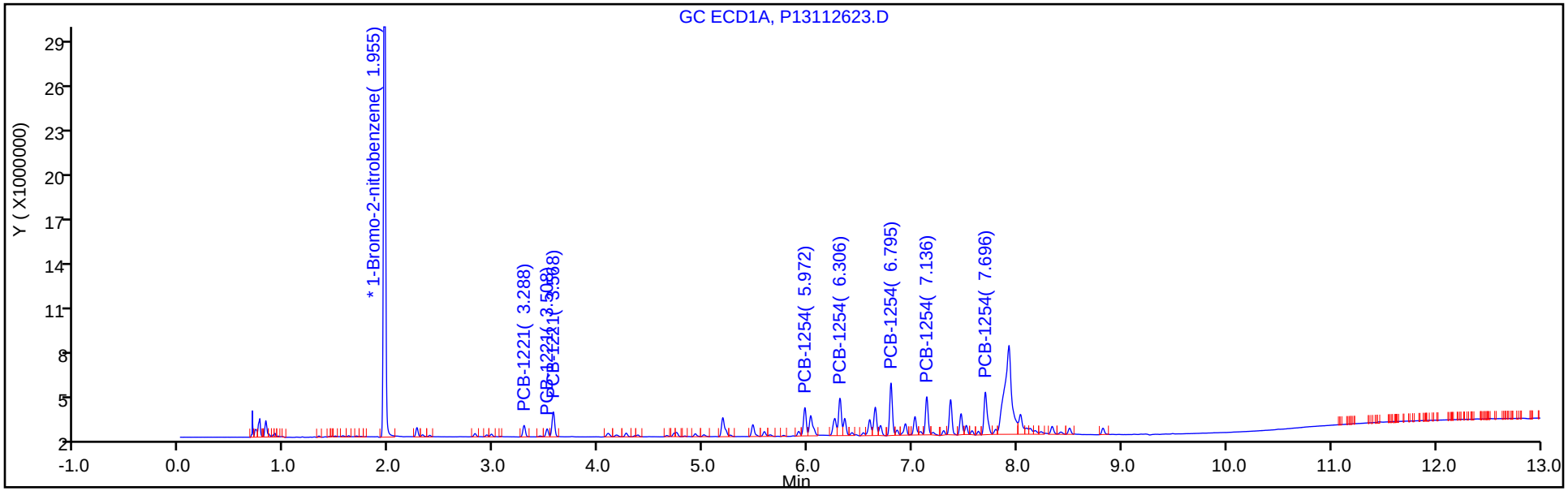
Report Date: 27-Nov-2018 10:35:38 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

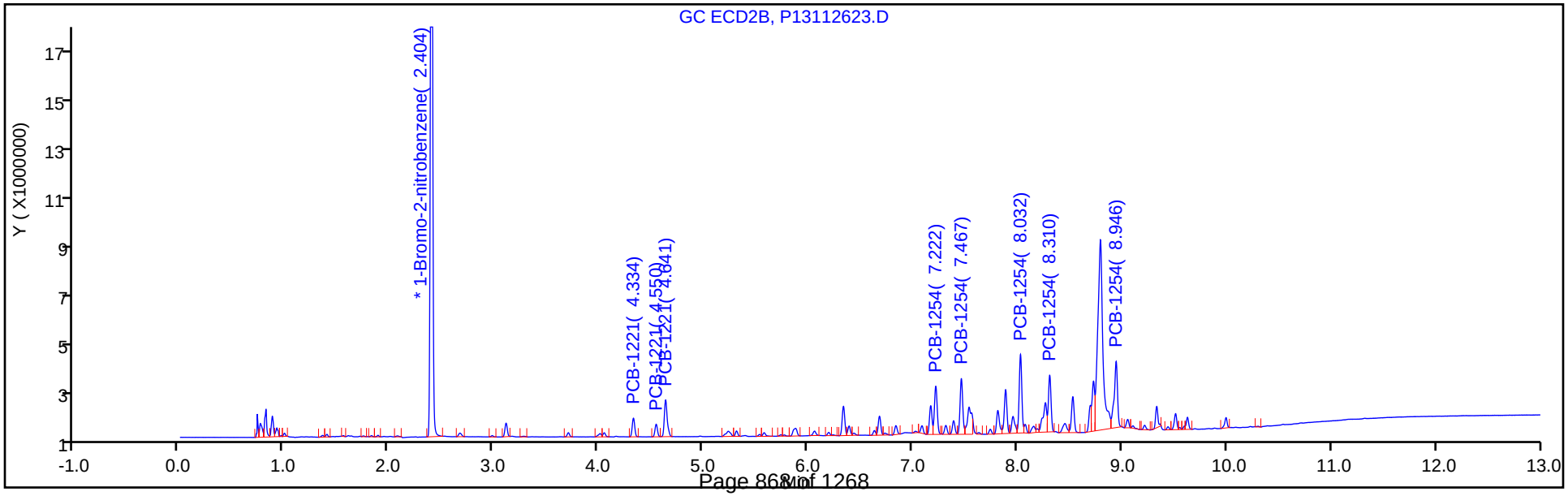
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112623.D

Injection Date:	26-Nov-2018 20:34:12	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std01 ar2154			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:35:39 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112623.D

Injection Date: 26-Nov-2018 20:34:12 Instrument ID: A2HP13

Lims ID: std01 ar2154

Client ID:

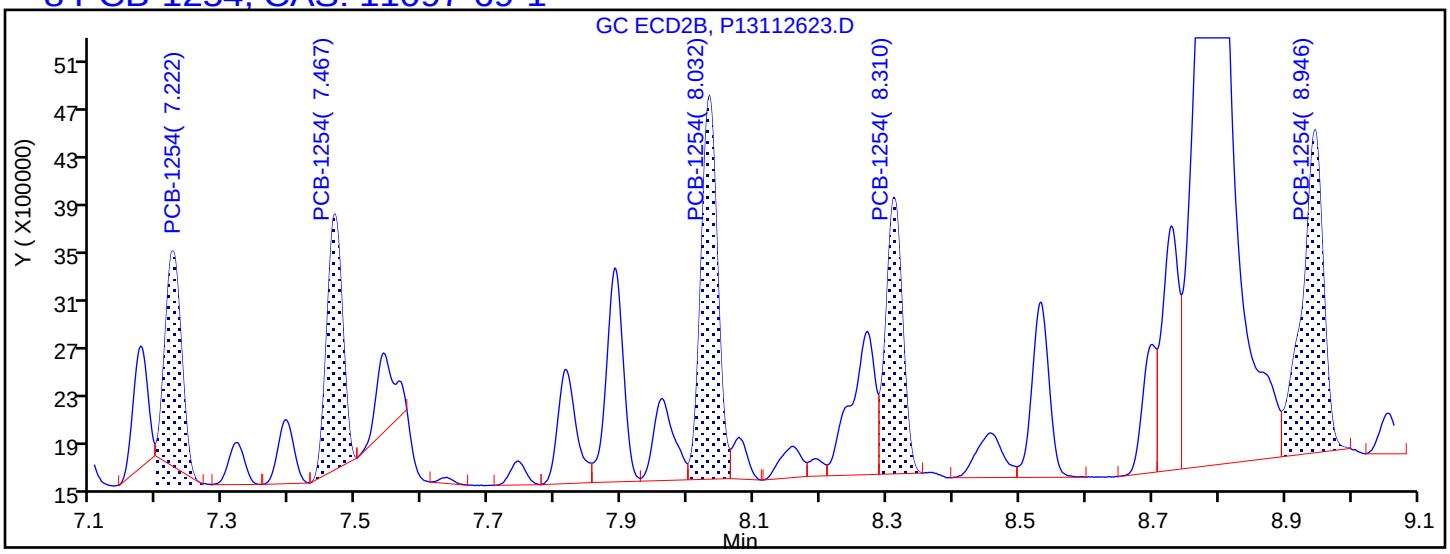
Operator ID: ALS Bottle#: 23 Worklist Smp#: 23

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

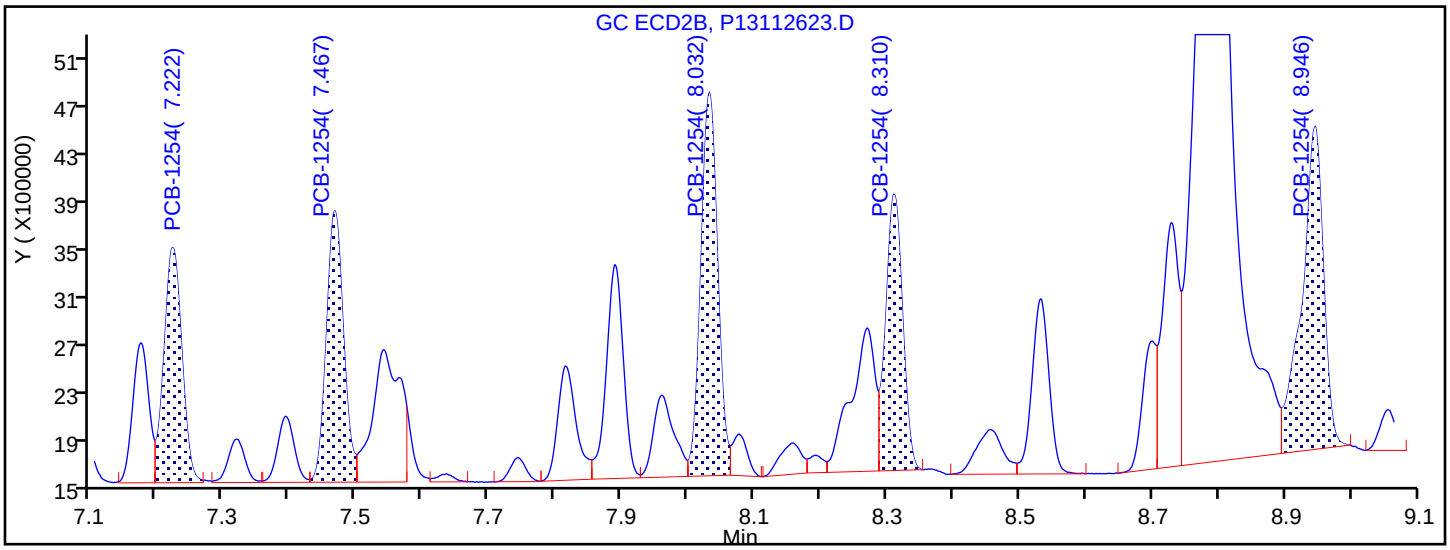
Column: Detector GC ecd2b

8 PCB-1254, CAS: 11097-69-1



Processing Integration Results

7.222	Response = 3083997
7.467	Response = 3519569
8.032	Response = 5583030
8.310	Response = 4046732
8.946	Response = 6089363



Manual Integration Results

7.222	Response = 3657732	M
7.467	Response = 4042826	M
8.032	Response = 5583030	
8.310	Response = 4046732	
8.946	Response = 6089363	

Reviewer: hassl, 27-Nov-2018 06:38:34

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112624.D
Lims ID: std02 ar2154
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Nov-2018 20:52:33 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-024
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub4

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:32 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:39:06

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	56271763	0.0500	0.0500	
2	2.404	2.403	0.001	47010976	0.0500	0.0500	
3 PCB-1221							
1	3.289	3.289	0.000	2544389	0.2000	0.2093	
1	3.509	3.509	0.000	1699191	0.2000	0.2121	
1	3.568	3.568	0.000	5828136	0.2000	0.2070	
		Average of Peak Amounts =				0.2095	
2	4.334	4.334	0.000	2374807	0.2000	0.2106	
2	4.550	4.551	-0.001	1599897	0.2000	0.2125	
2	4.641	4.642	-0.001	5402303	0.2000	0.2082	
		Average of Peak Amounts =				0.2104	
						RPD = 0.46	
8 PCB-1254							
1	5.972	5.973	-0.001	6885260	0.2000	0.2104	
1	6.307	6.308	-0.001	9448733	0.2000	0.2078	
1	6.795	6.796	-0.001	12698321	0.2000	0.2082	
1	7.136	7.137	-0.001	9484213	0.2000	0.2105	
1	7.695	7.698	-0.003	12938756	0.2000	0.2124	
		Average of Peak Amounts =				0.2099	
2	7.223	7.223	0.000	6741848	0.2000	0.2170	
2	7.467	7.468	-0.001	7548724	0.2000	0.2171	
2	8.031	8.033	-0.002	10666257	0.2000	0.2103	
2	8.310	8.312	-0.002	7760283	0.2000	0.2099	
2	8.945	8.947	-0.002	12194528	0.2000	0.2357	
		Average of Peak Amounts =				0.2180	
						RPD = 3.82	

Reagents:

SG2154@0.2PPM_00020 Amount Added: 1.00 Units: mL

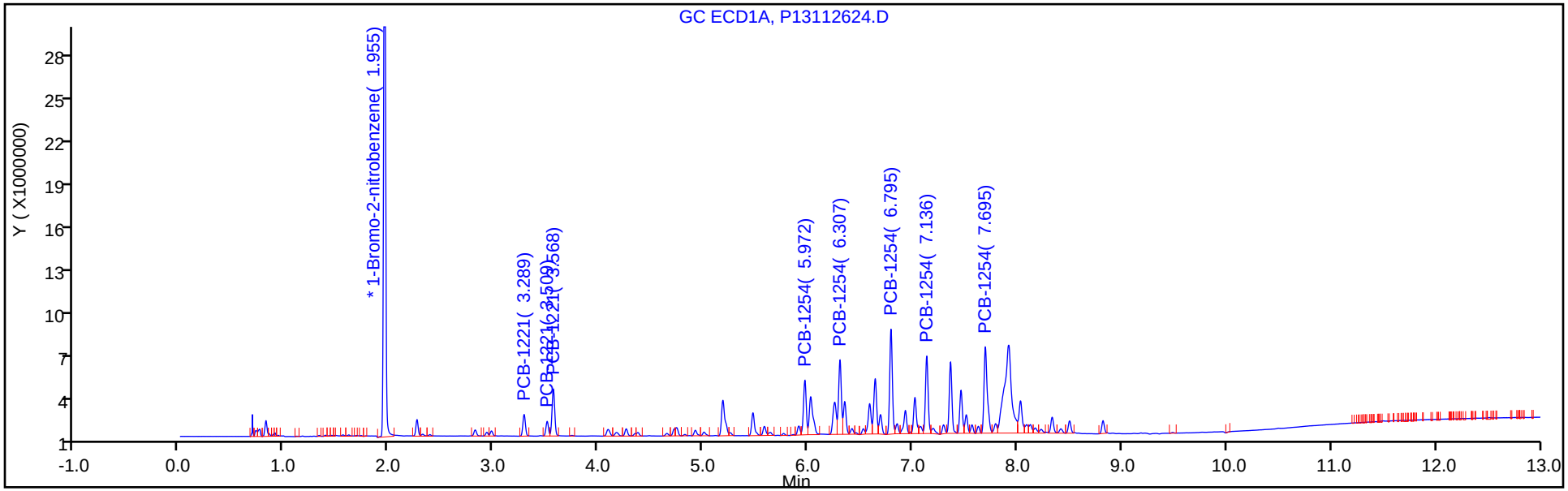
Report Date: 27-Nov-2018 10:35:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

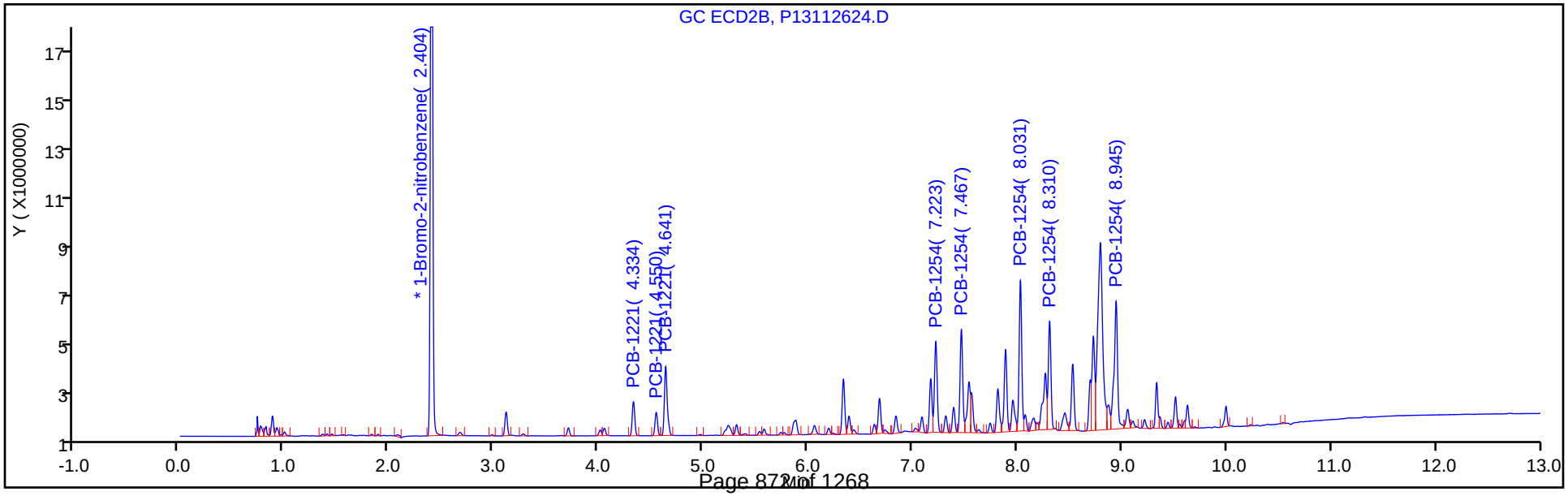
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112624.D

Injection Date:	26-Nov-2018 20:52:33	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std02 ar2154			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112625.D
Lims ID: std05 ar2154
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 26-Nov-2018 21:11:01 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-025
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub4

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:28 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:39:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.956	1.955	0.001	50833995	0.0500	0.0500	
2	2.404	2.403	0.001	42476912	0.0500	0.0500	
3 PCB-1221							
1	3.289	3.289	0.000	5224398	0.5000	0.4758	
1	3.509	3.509	0.000	3492645	0.5000	0.4826	
1	3.568	3.568	0.000	12122584	0.5000	0.4766	
		Average of Peak Amounts =				0.4783	
2	4.333	4.334	-0.001	4752611	0.5000	0.4664	
2	4.551	4.551	0.000	3210293	0.5000	0.4720	
2	4.641	4.642	-0.001	10967403	0.5000	0.4678	
		Average of Peak Amounts =				0.4687	
						RPD = 2.03	
8 PCB-1254							
1	5.971	5.973	-0.002	13792747	0.5000	0.4666	
1	6.306	6.308	-0.002	18970205	0.5000	0.4619	
1	6.794	6.796	-0.002	25945327	0.5000	0.4708	
1	7.136	7.137	-0.001	19313864	0.5000	0.4746	
1	7.696	7.698	-0.002	25845040	0.5000	0.4696	
		Average of Peak Amounts =				0.4687	
2	7.223	7.223	0.000	13280407	0.5000	0.4731	
2	7.466	7.468	-0.002	14590182	0.5000	0.4645	
2	8.031	8.033	-0.002	20945374	0.5000	0.4571	
2	8.311	8.312	-0.001	15471889	0.5000	0.4632	
2	8.946	8.947	-0.001	21877214	0.5000	0.5268	
		Average of Peak Amounts =				0.4770	
						RPD = 1.75	

Reagents:

SG2154@0.5PPM_00040 Amount Added: 1.00 Units: mL

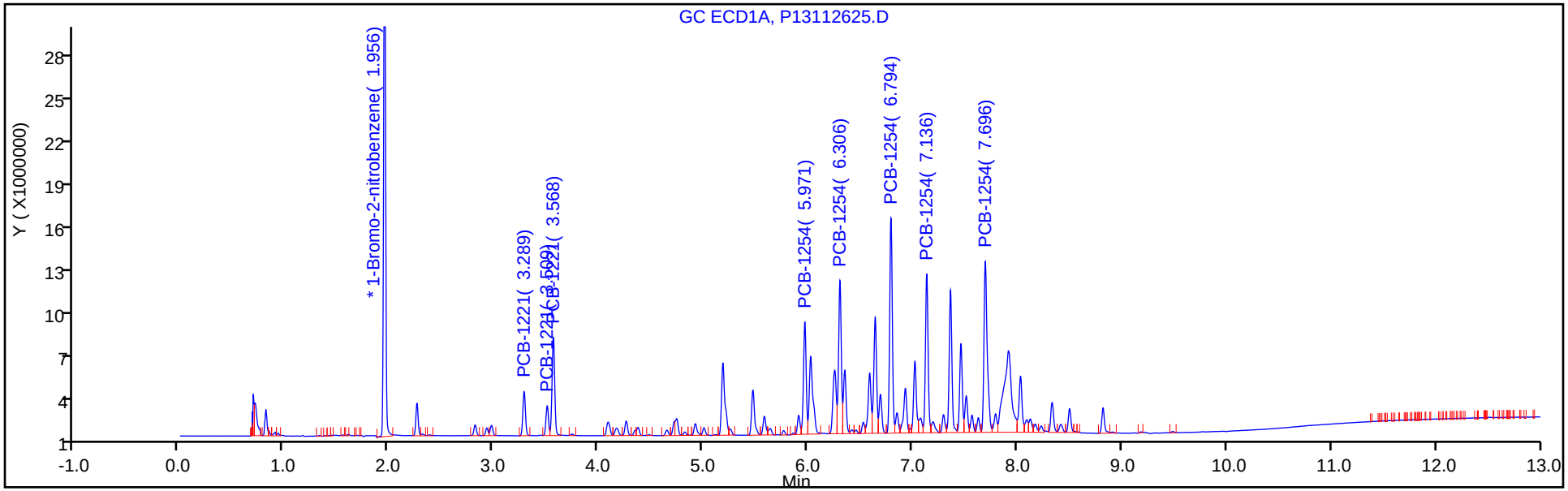
Report Date: 27-Nov-2018 10:35:30 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

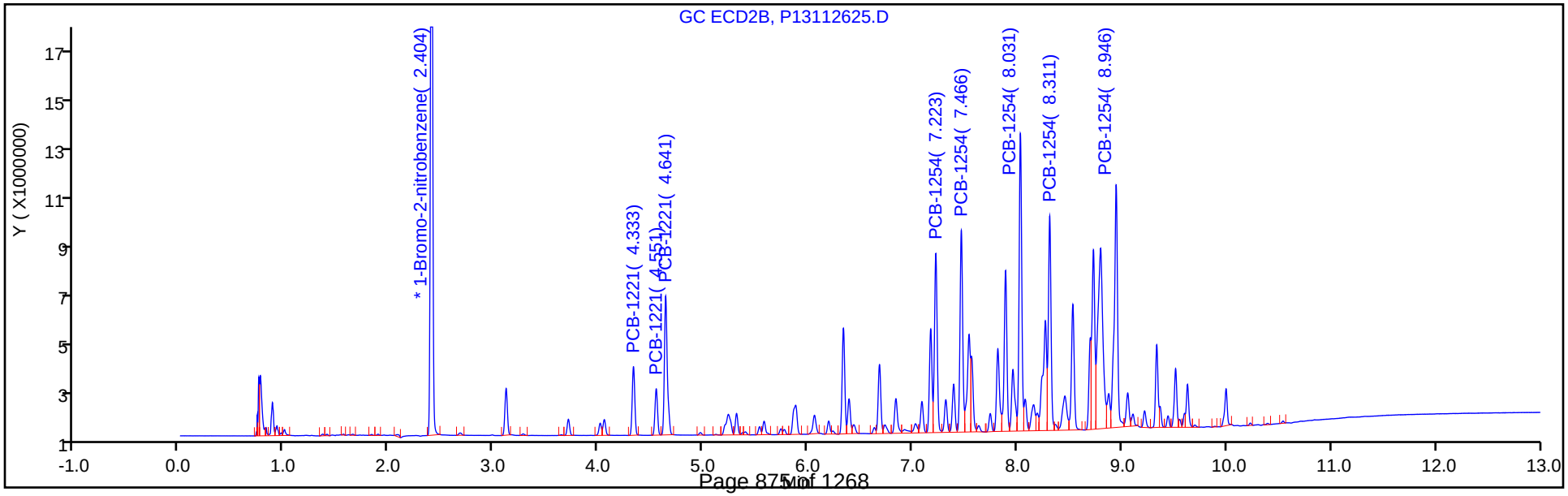
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112625.D

Injection Date:	26-Nov-2018 21:11:01	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std05 ar2154			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112626.D
Lims ID: std1 ar2154
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Nov-2018 21:29:18 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-026
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub4

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:24 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:39:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	51687845	0.0500	0.0500	
2	2.403	2.403	0.001	43247348	0.0500	0.0500	
3 PCB-1221							
1	3.288	3.289	-0.001	9757102	1.00	0.8739	
1	3.508	3.509	-0.001	6408839	1.00	0.8709	
1	3.567	3.568	-0.001	22739249	1.00	0.8792	
		Average of Peak Amounts =				0.8747	
2	4.333	4.334	-0.001	8670428	1.00	0.8357	
2	4.550	4.551	-0.001	5856160	1.00	0.8456	
2	4.641	4.642	-0.001	20400026	1.00	0.8547	
		Average of Peak Amounts =				0.8453	
						RPD = 3.41	
8 PCB-1254							
1	5.970	5.973	-0.003	26410795	1.00	0.8787	
1	6.306	6.308	-0.002	36457860	1.00	0.8730	
1	6.793	6.796	-0.003	50727508	1.00	0.9053	
1	7.135	7.137	-0.002	37510644	1.00	0.9064	
1	7.695	7.698	-0.003	49693732	1.00	0.8879	
		Average of Peak Amounts =				0.8903	
2	7.223	7.223	0.000	24659035	1.00	0.8627	
2	7.467	7.468	-0.001	26942428	1.00	0.8425	
2	8.031	8.033	-0.002	39300717	1.00	0.8424	
2	8.311	8.312	-0.001	28652754	1.00	0.8426	
2	8.946	8.947	-0.001	40298453	1.00	1.00	
		Average of Peak Amounts =				0.8783	
						RPD = 1.35	

Reagents:

SG2154@1.0PPM_00028 Amount Added: 1.00 Units: mL

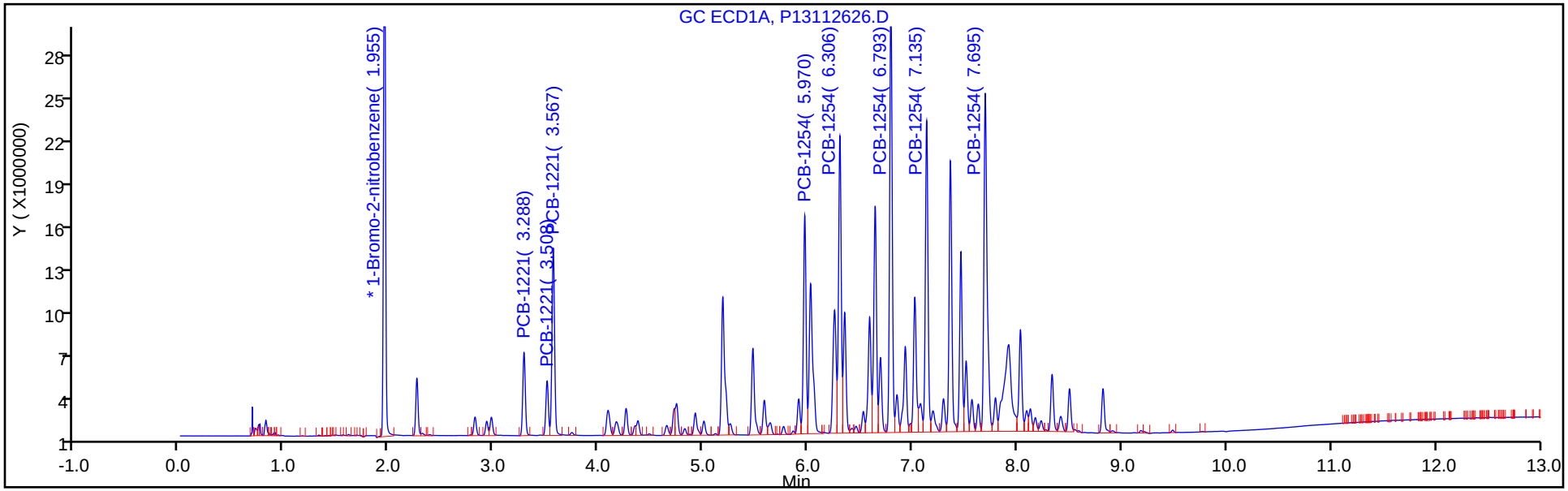
Report Date: 27-Nov-2018 10:35:25 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

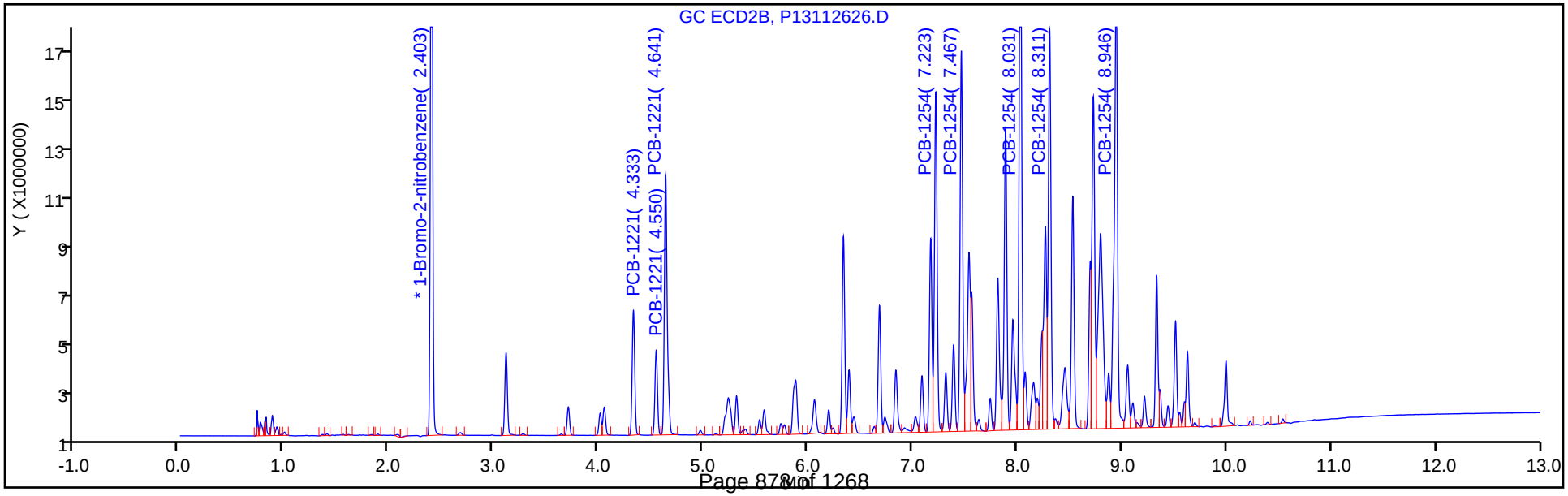
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112626.D

Injection Date:	26-Nov-2018 21:29:18	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std1 ar2154			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112627.D
Lims ID: std15 ar2154
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Nov-2018 21:47:37 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-027
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub4

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:19 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:40:15

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	51433284	0.0500	0.0500	
2	2.403	2.403	0.000	43506695	0.0500	0.0500	
3 PCB-1221							
1	3.287	3.289	-0.002	13765233	1.50	1.24	
1	3.507	3.509	-0.002	8907635	1.50	1.22	
1	3.566	3.568	-0.002	32319945	1.50	1.26	
		Average of Peak Amounts =				1.24	
2	4.332	4.334	-0.002	12187738	1.50	1.17	
2	4.550	4.551	-0.001	8094307	1.50	1.16	
2	4.639	4.642	-0.003	28422104	1.50	1.18	
		Average of Peak Amounts =				1.17	
						RPD = 5.48	
8 PCB-1254							
1	5.970	5.973	-0.003	38320374	1.50	1.28	
1	6.306	6.308	-0.002	53047578	1.50	1.28	
1	6.793	6.796	-0.003	74988426	1.50	1.34	
1	7.135	7.137	-0.002	55895641	1.50	1.36	
1	7.695	7.698	-0.003	74342412	1.50	1.33	
		Average of Peak Amounts =				1.32	
2	7.222	7.223	-0.001	35268874	1.50	1.23	
2	7.467	7.468	-0.001	38718809	1.50	1.20	
2	8.031	8.033	-0.002	57050428	1.50	1.22	
2	8.310	8.312	-0.002	41527881	1.50	1.21	
2	8.945	8.947	-0.002	57721379	1.50	1.45	
		Average of Peak Amounts =				1.26	
						RPD = 4.40	

Reagents:

SG2154@1.5PPM_00004 Amount Added: 1.00 Units: mL

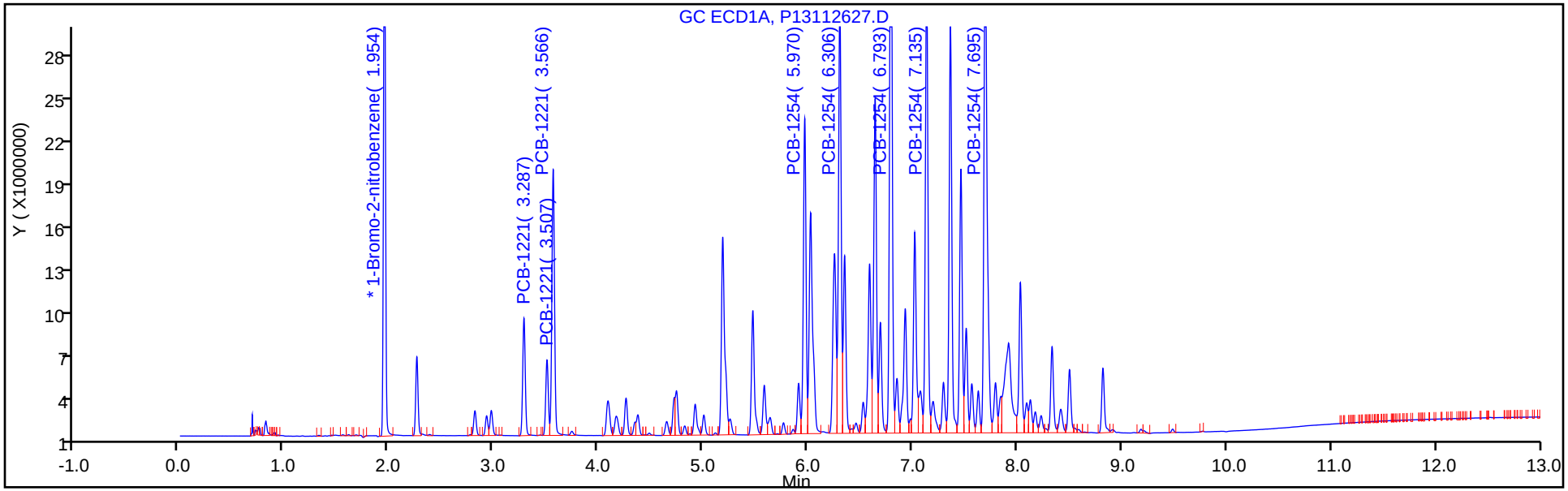
Report Date: 27-Nov-2018 10:35:21 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

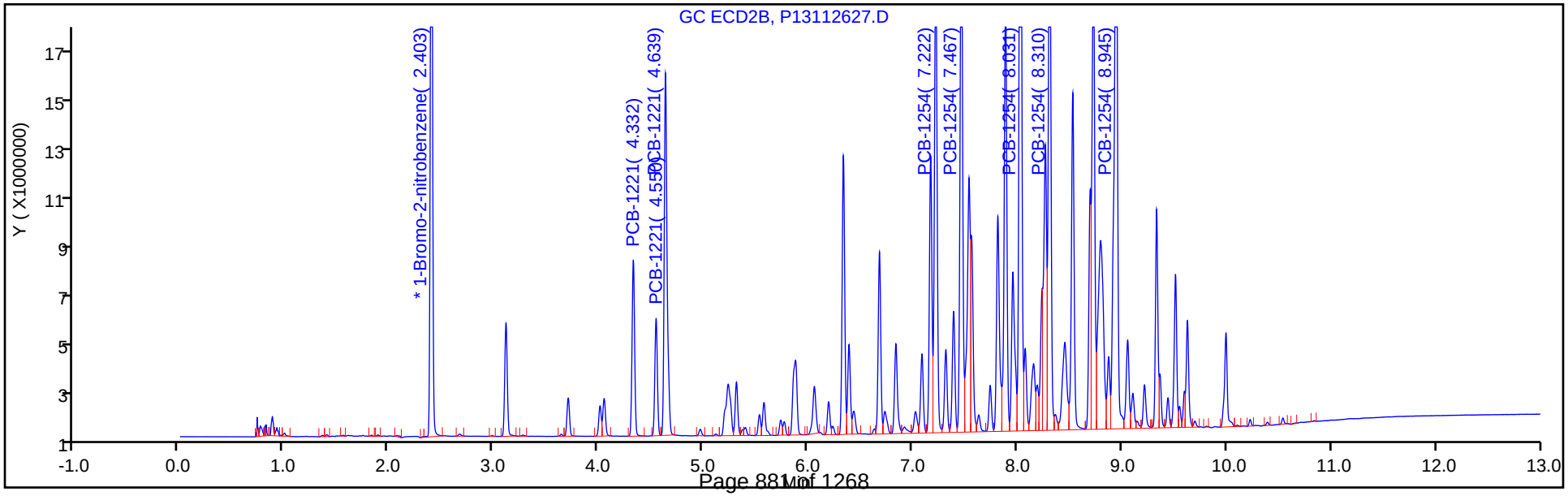
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112627.D

Injection Date:	26-Nov-2018 21:47:37	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std15 ar2154			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 22:05 Calibration End Date: 11/26/2018 23:37 Calibration ID: 48135

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/28	P13112628.D
Level 2	STD01 240-356910/29	P13112629.D
Level 3	STD02 240-356910/30	P13112630.D
Level 4	STD05 240-356910/31	P13112631.D
Level 5	STD1 240-356910/32	P13112632.D
Level 6	STD15 240-356910/33	P13112633.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1016 Peak 1	0.0218 0.0155	0.0192	0.0177	0.0163	0.0148	Ave		0.0175				15.0		20.0			
PCB-1016 Peak 2	0.0443 0.0306	0.0377	0.0356	0.0323	0.0305	Ave		0.0352				15.1		20.0			
PCB-1016 Peak 3	0.0825 0.0695	0.0747	0.0716	0.0685	0.0680	Ave		0.0725				7.6		20.0			
PCB-1016 Peak 4	0.0366 0.0284	0.0332	0.0315	0.0290	0.0280	Ave		0.0311				10.8		20.0			
PCB-1016 Peak 5	0.0155 0.0116	0.0141	0.0135	0.0121	0.0113	Ave		0.0130				12.6		20.0			
PCB-1260 Peak 1	0.0443 0.0357	0.0393	0.0390	0.0359	0.0352	Ave		0.0382				9.0		20.0			
PCB-1260 Peak 2	0.0665 0.0557	0.0598	0.0590	0.0542	0.0546	Ave		0.0583				8.0		20.0			
PCB-1260 Peak 3	0.0727 0.0621	0.0656	0.0657	0.0605	0.0612	Ave		0.0646				7.0		20.0			
PCB-1260 Peak 4	0.0919 0.0831	0.0828	0.0858	0.0793	0.0824	Ave		0.0842				5.1		20.0			
PCB-1260 Peak 5	0.0467 0.0411	0.0431	0.0446	0.0395	0.0411	Ave		0.0427				6.2		20.0			
Tetrachloro-m-xylene	1.1294 0.9241	1.0287	0.9681	0.9429	0.9393	Ave		0.9888				7.9		20.0			
DCB Decachlorobiphenyl	0.9503 0.6779	0.8783	0.8987	0.7234	0.7497	Ave		0.8131				13.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-1 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 22:05 Calibration End Date: 11/26/2018 23:37 Calibration ID: 48135

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/28	P13112628.D
Level 2	STD01 240-356910/29	P13112629.D
Level 3	STD02 240-356910/30	P13112630.D
Level 4	STD05 240-356910/31	P13112631.D
Level 5	STD1 240-356910/32	P13112632.D
Level 6	STD15 240-356910/33	P13112633.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 1	BNB	Ave	1032664 23320594	1980695	3762795	7917028	15412183	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 2	BNB	Ave	2096687 46020140	3894054	7554695	15729611	31783187	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 3	BNB	Ave	3901028 104647257	7722370	15181063	33344163	70936608	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 4	BNB	Ave	1732403 42743836	3432128	6682093	14147990	29184930	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 5	BNB	Ave	733884 17411796	1455466	2869161	5897274	11818167	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 1	BNB	Ave	2093379 53826568	4059696	8275463	17484826	36674804	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 2	BNB	Ave	3146861 83927181	6182864	12524189	26414177	56916352	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 3	BNB	Ave	3440715 93475363	6781371	13932275	29479286	63806332	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 4	BNB	Ave	4348911 125204670	8557668	18207838	38623436	85961998	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 5	BNB	Ave	2209290 61888653	4452059	9461954	19247085	42846978	0.0500 1.50	0.100	0.200	0.500	1.00
Tetrachloro-m-xylene	BNB	Ave	2671446 92776275	5315181	10268033	22963690	48980089	0.00250 0.100	0.00500	0.0100	0.0250	0.0500
DCB Decachlorobiphenyl	BNB	Ave	2247935 68064975	4538017	9532016	17617139	39094650	0.00250 0.100	0.00500	0.0100	0.0250	0.0500

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112628.D
Lims ID: std005 1660
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 26-Nov-2018 22:05:58 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-028
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:13 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:41:35

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	47307523	0.0500	0.0500	
2	2.403	2.403	0.000	39913165	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.994	2.993	0.001	2671446	0.002500	0.002856	
2	3.841	3.840	0.001	2416665	0.002500	0.002958	
						RPD = 3.53	
6 PCB-1016							M
1	3.568	3.568	0.000	1032664	0.0500	0.0622	
1	4.089	4.089	0.000	2096687	0.0500	0.0630	
1	4.746	4.744	0.002	3901028	0.0500	0.0569	M
1	4.923	4.923	0.000	1732403	0.0500	0.0588	
1	5.259	5.259	0.000	733884	0.0500	0.0596	
		Average of Peak Amounts =				0.0601	
2	4.640	4.640	0.000	921145	0.0500	0.0616	
2	5.241	5.241	0.000	1854933	0.0500	0.0627	
2	5.882	5.881	0.001	3610392	0.0500	0.0602	
2	6.063	6.062	0.001	1522736	0.0500	0.0615	
2	6.393	6.393	0.000	898474	0.0500	0.0621	
		Average of Peak Amounts =				0.0616	
						RPD = 2.44	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							a
1	7.022	7.022	0.000	2093379	0.0500	0.0579	
1	7.364	7.363	0.001	3146861	0.0500	0.0570	
1	7.695	7.694	0.001	3440715	0.0500	0.0563	a
1	8.500	8.500	0.000	4348911	0.0500	0.0546	
1	8.819	8.820	-0.001	2209290	0.0500	0.0547	
		Average of Peak Amounts =				0.0561	
2	8.269	8.270	-0.001	1714573	0.0500	0.0575	
2	8.530	8.531	-0.001	2230752	0.0500	0.0618	
2	9.365	9.366	-0.001	1736093	0.0500	0.0578	
2	9.627	9.628	-0.001	3842283	0.0500	0.0580	
2	9.991	9.992	-0.001	2794717	0.0500	0.0592	
		Average of Peak Amounts =				0.0588	
						RPD = 4.80	
$ 12 DCB Decachlorobiphenyl							
1	9.950	9.950	0.000	2247935	0.002500	0.002922	
2	11.085	11.087	-0.002	1830839	0.002500	0.002834	
						RPD = 3.05	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SG1660@.05PPM_00024 Amount Added: 1.00 Units: mL

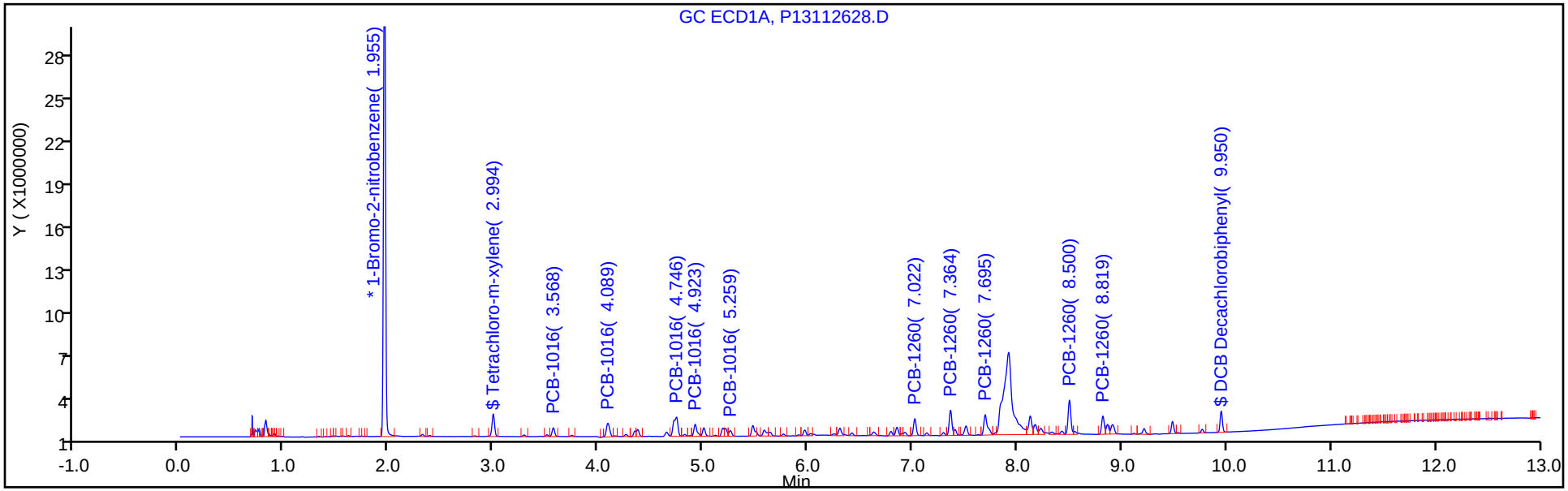
Report Date: 27-Nov-2018 10:35:15 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

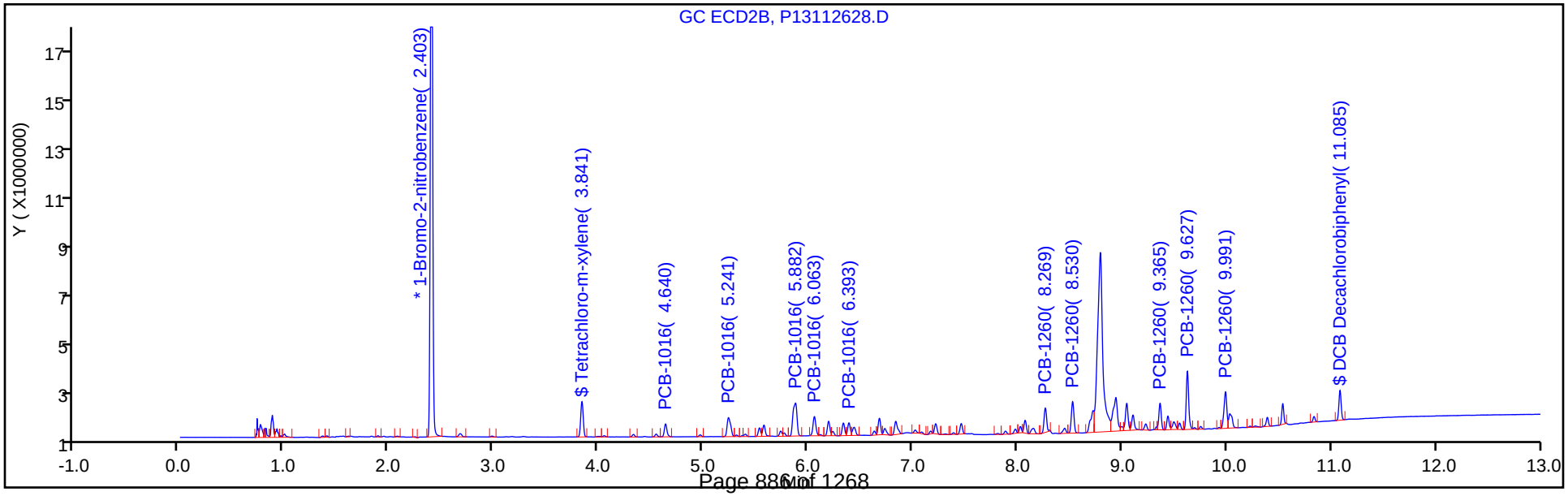
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112628.D

Injection Date:	26-Nov-2018 22:05:58	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std005 1660			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:35:15 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112628.D

Injection Date: 26-Nov-2018 22:05:58 Instrument ID: A2HP13

Lims ID: std005 1660

Client ID:

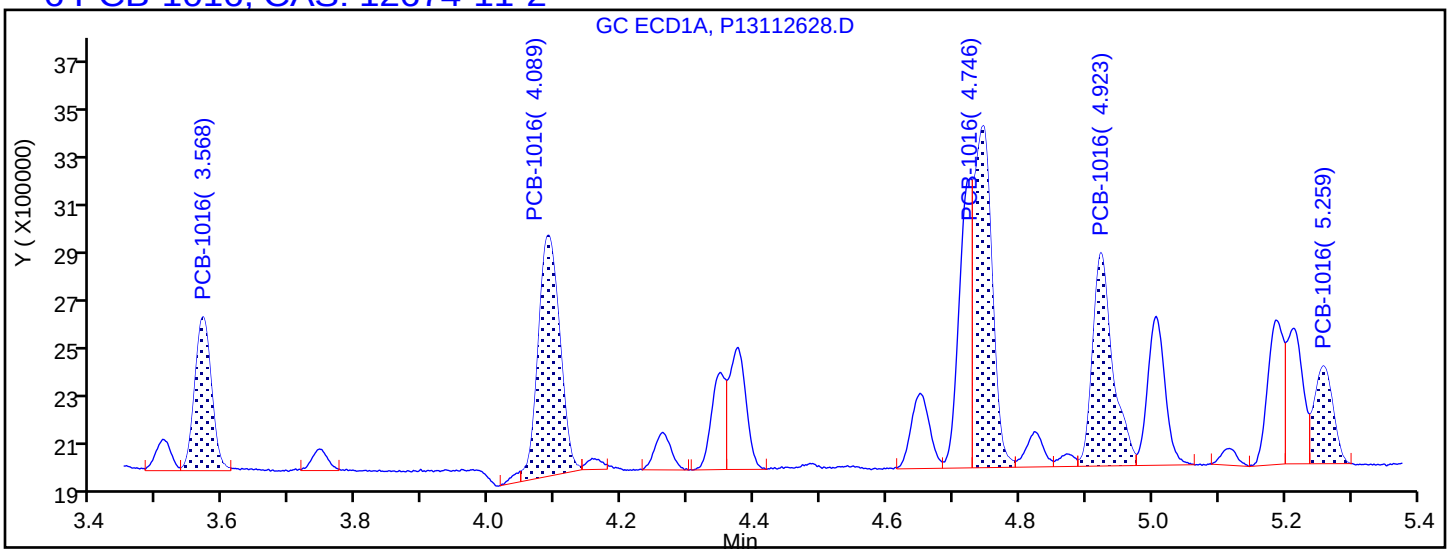
Operator ID: ALS Bottle#: 28 Worklist Smp#: 28

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

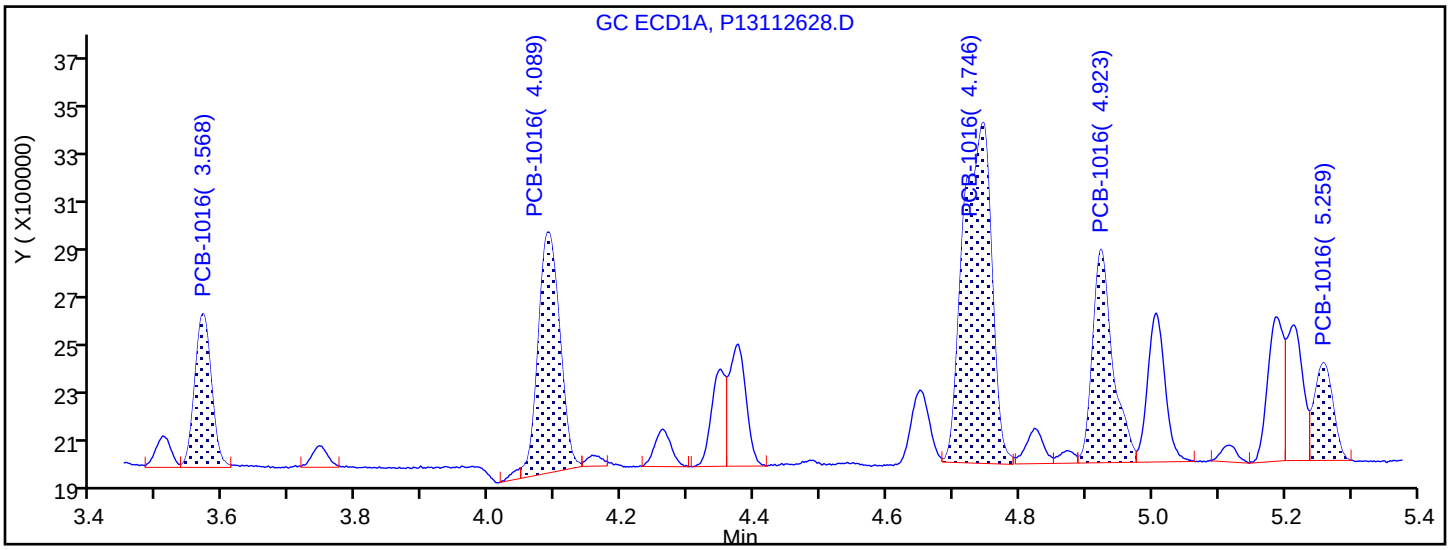
Column: Detector GC ECD1A

6 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.568	Response = 1032664
4.089	Response = 2096687
4.746	Response = 2462526
4.923	Response = 1732403
5.259	Response = 733884



Manual Integration Results

3.568	Response = 1032664	
4.089	Response = 2096687	
4.746	Response = 3901028	M
4.923	Response = 1732403	
5.259	Response = 733884	

Reviewer: hassl, 27-Nov-2018 06:40:40

Audit Action: Manually Integrated Audit Reason: Split Peak

Report Date: 27-Nov-2018 10:35:15 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112628.D

Injection Date: 26-Nov-2018 22:05:58 Instrument ID: A2HP13

Lims ID: std005 1660

Client ID:

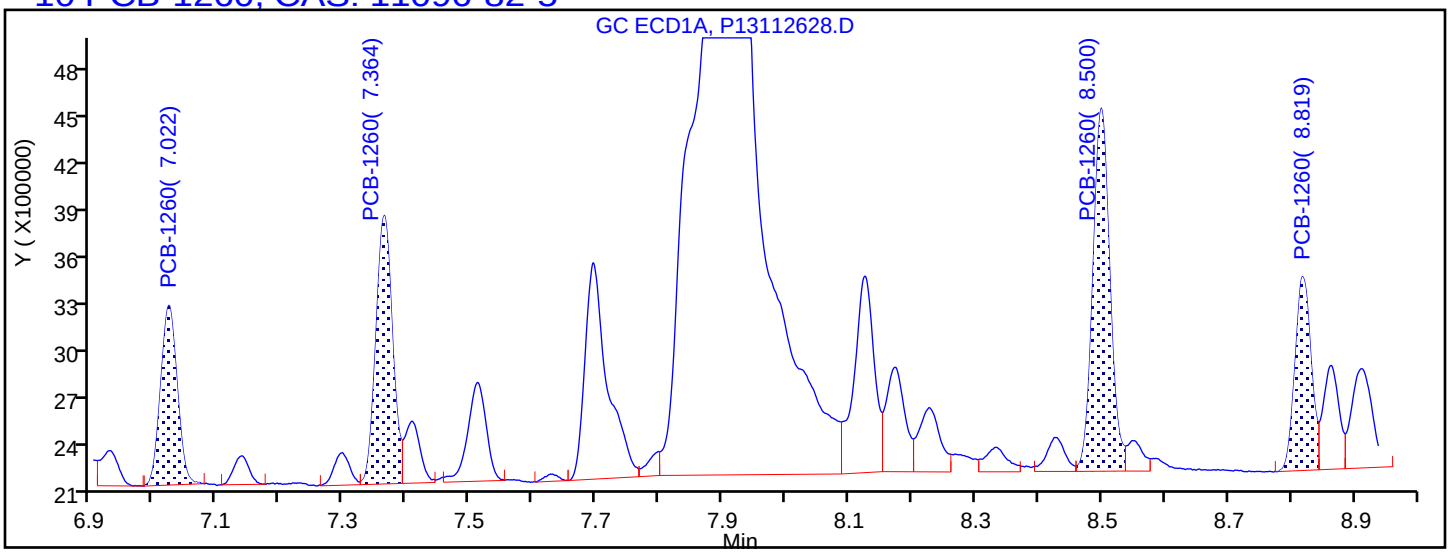
Operator ID: ALS Bottle#: 28 Worklist Smp#: 28

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

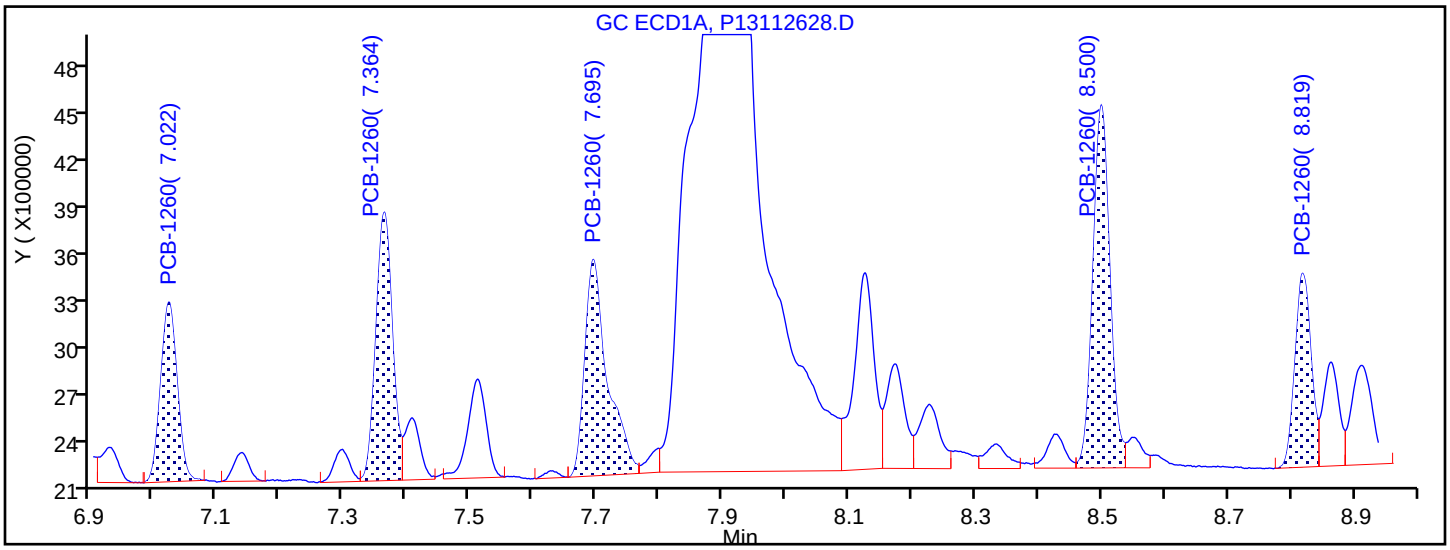
Column: Detector GC ECD1A

10 PCB-1260, CAS: 11096-82-5



Processing Integration Results

7.022	Response = 2093379
7.364	Response = 3146861
7.694	Response = 0
8.500	Response = 4348911
8.819	Response = 2209290



Manual Integration Results

7.022	Response = 2093379	
7.364	Response = 3146861	
7.695	Response = 3440715	M
8.500	Response = 4348911	
8.819	Response = 2209290	

Reviewer: hassl, 27-Nov-2018 06:41:07

Audit Action: Assigned Compound ID Audit Reason: Split Peak

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112629.D
Lims ID: std01 1660
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Nov-2018 22:24:24 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-029
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:07 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:42:27

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.956	1.955	0.001	51666807	0.0500	0.0500	
2	2.403	2.403	0.001	43371510	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.995	2.993	0.002	5315181	0.005000	0.005202	
2	3.842	3.840	0.002	4761094	0.005000	0.005363	
						RPD = 3.05	
6 PCB-1016							M
1	3.568	3.568	0.000	1980695	0.1000	0.1093	
1	4.089	4.089	0.000	3894054	0.1000	0.1072	
1	4.745	4.744	0.001	7722370	0.1000	0.1031	M
1	4.923	4.923	0.000	3432128	0.1000	0.1067	M
1	5.260	5.259	0.001	1455466	0.1000	0.1082	
		Average of Peak Amounts =				0.1069	
2	4.641	4.640	0.001	1832300	0.1000	0.1127	
2	5.242	5.241	0.001	3555355	0.1000	0.1106	
2	5.882	5.881	0.001	6997910	0.1000	0.1073	
2	6.062	6.062	0.000	2926837	0.1000	0.1087	
2	6.393	6.393	0.000	1747455	0.1000	0.1111	
		Average of Peak Amounts =				0.1101	
						RPD = 2.94	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	7.022	7.022	0.000	4059696	0.1000	0.1028	
1	7.364	7.363	0.001	6182864	0.1000	0.1026	
1	7.695	7.694	0.001	6781371	0.1000	0.1015	
1	8.501	8.500	0.001	8557668	0.1000	0.0983	
1	8.821	8.820	0.001	4452059	0.1000	0.1009	
		Average of Peak Amounts =				0.1012	
2	8.270	8.270	0.000	3582598	0.1000	0.1106	
2	8.531	8.531	0.000	4227547	0.1000	0.1077	
2	9.367	9.366	0.001	3392920	0.1000	0.1040	
2	9.627	9.628	-0.001	7489712	0.1000	0.1040	
2	9.992	9.992	0.000	5451638	0.1000	0.1062	
		Average of Peak Amounts =				0.1065	
						RPD = 5.07	
$ 12 DCB Decachlorobiphenyl							
1	9.950	9.950	0.000	4538017	0.005000	0.005401	
2	11.086	11.087	-0.001	3776896	0.005000	0.005381	
						RPD = 0.38	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660STD@0.1_00024 Amount Added: 1.00 Units: mL

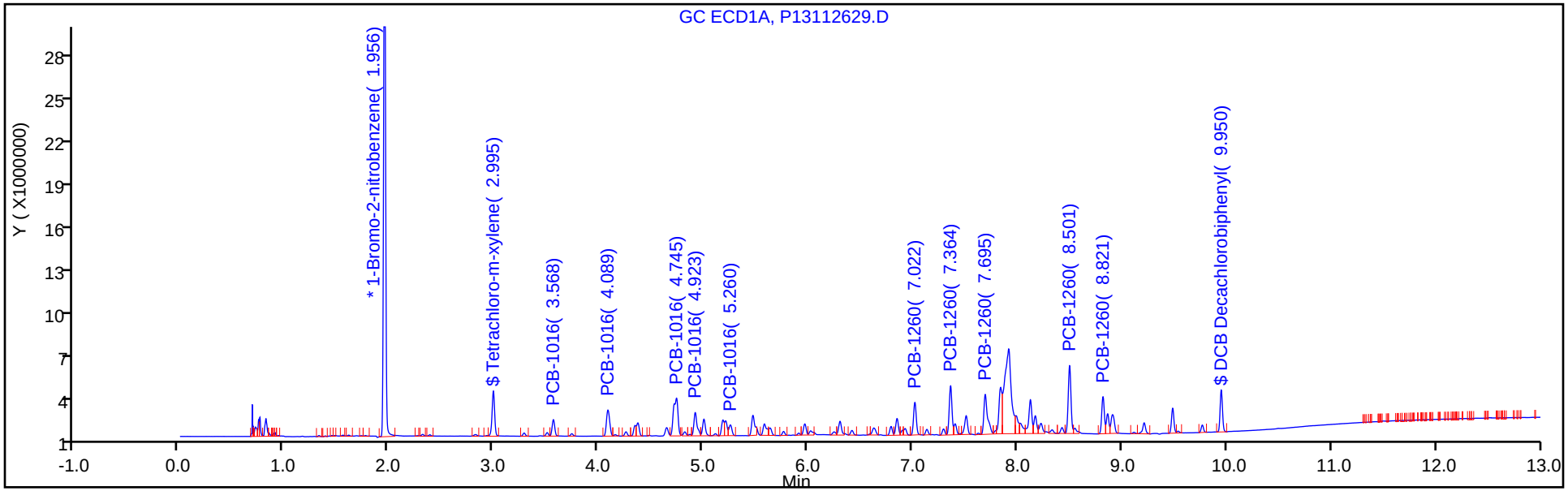
Report Date: 27-Nov-2018 10:35:08 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

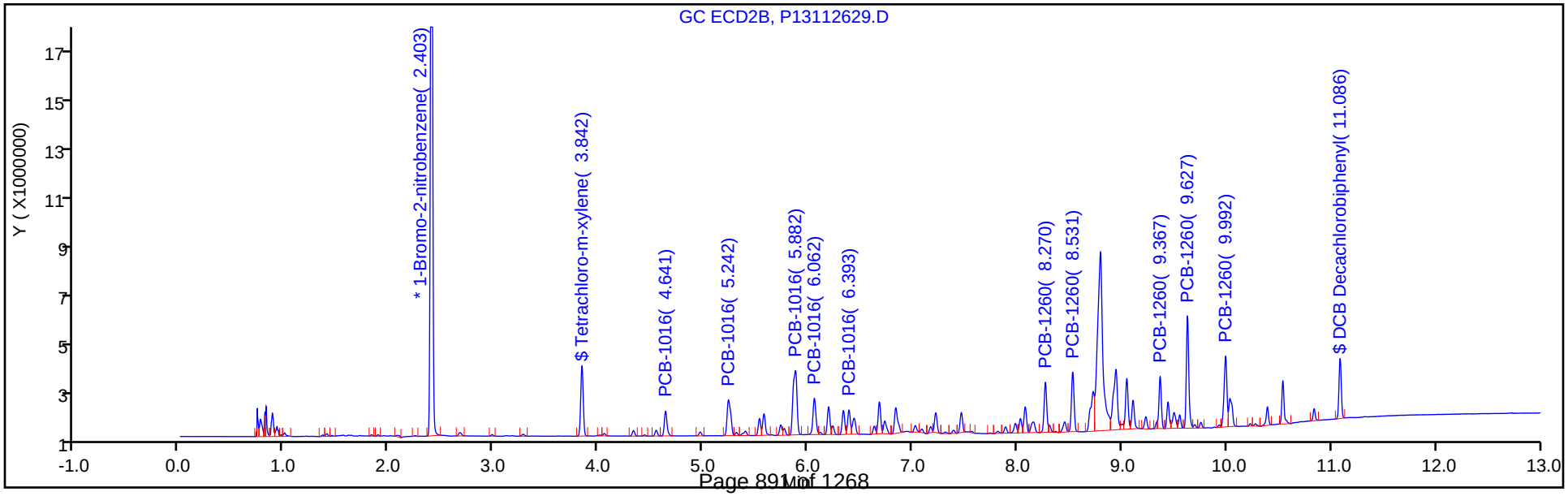
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112629.D

Injection Date:	26-Nov-2018 22:24:24	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std01 1660			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:35:08 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112629.D

Injection Date: 26-Nov-2018 22:24:24 Instrument ID: A2HP13

Lims ID: std01 1660

Client ID:

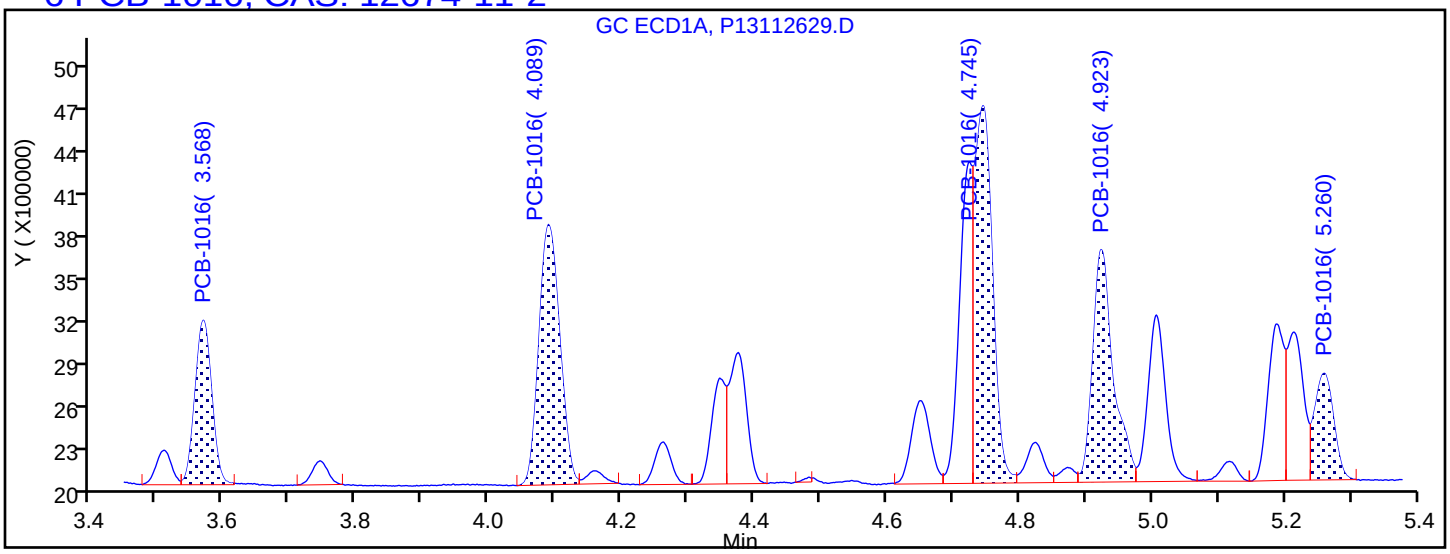
Operator ID: ALS Bottle#: 29 Worklist Smp#: 29

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

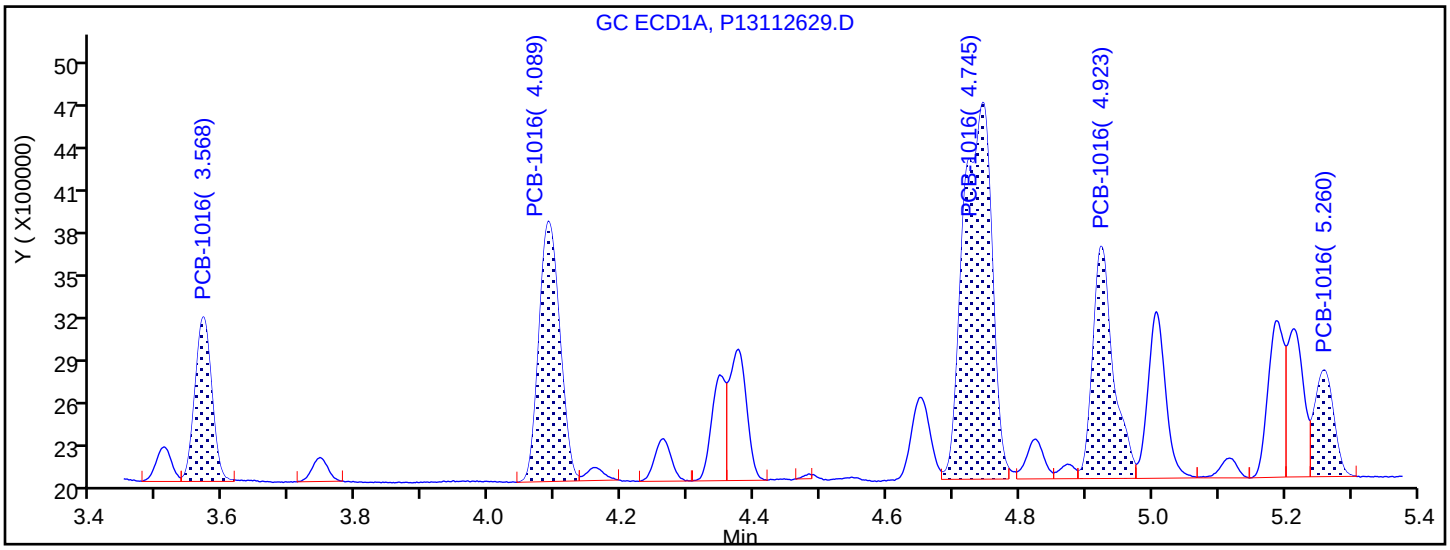
Column: Detector GC ECD1A

6 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.568	Response = 1980695
4.089	Response = 3894054
4.745	Response = 4818378
4.923	Response = 3441108
5.260	Response = 1455466



Manual Integration Results

3.568	Response = 1980695	
4.089	Response = 3894054	
4.745	Response = 7722370	M
4.923	Response = 3432128	M
5.260	Response = 1455466	

Reviewer: hassl, 27-Nov-2018 06:42:08

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112630.D
Lims ID: std02 1660
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Nov-2018 22:42:44 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-030
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:34:57 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:43:06

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	53029624	0.0500	0.0500	
2	2.404	2.403	0.001	44520149	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.995	2.993	0.002	10268033	0.0100	0.009791	
2	3.841	3.840	0.001	9038648	0.0100	0.0099	
						RPD = 1.30	
6 PCB-1016							M
1	3.569	3.568	0.001	3762795	0.2000	0.2022	
1	4.090	4.089	0.001	7554695	0.2000	0.2026	
1	4.745	4.744	0.001	15181063	0.2000	0.1976	M
1	4.924	4.923	0.001	6682093	0.2000	0.2024	
1	5.260	5.259	0.001	2869161	0.2000	0.2078	
		Average of Peak Amounts =				0.2025	
2	4.640	4.640	0.000	3402566	0.2000	0.2039	
2	5.241	5.241	0.000	6790707	0.2000	0.2058	
2	5.882	5.881	0.001	13498557	0.2000	0.2016	
2	6.063	6.062	0.001	5658616	0.2000	0.2048	
2	6.393	6.393	0.000	3347524	0.2000	0.2073	
		Average of Peak Amounts =				0.2047	
						RPD = 1.07	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	7.024	7.022	0.002	8275463	0.2000	0.2041	
1	7.364	7.363	0.001	12524189	0.2000	0.2025	
1	7.695	7.694	0.001	13932275	0.2000	0.2032	
1	8.501	8.500	0.001	18207838	0.2000	0.2038	
1	8.821	8.820	0.001	9461954	0.2000	0.2090	
		Average of Peak Amounts =				0.2045	
2	8.271	8.270	0.001	7020726	0.2000	0.2111	
2	8.532	8.531	0.001	8317980	0.2000	0.2064	
2	9.367	9.366	0.001	7697562	0.2000	0.2298	
2	9.629	9.628	0.001	15473035	0.2000	0.2093	
2	9.994	9.992	0.002	11193096	0.2000	0.2124	
		Average of Peak Amounts =				0.2138	
						RPD = 4.45	
$ 12 DCB Decachlorobiphenyl							
1	9.950	9.950	0.000	9532016	0.0100	0.0111	
2	11.087	11.087	0.000	8095259	0.0100	0.0112	
						RPD = 1.63	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@0.2ppm_00027 Amount Added: 1.00 Units: mL

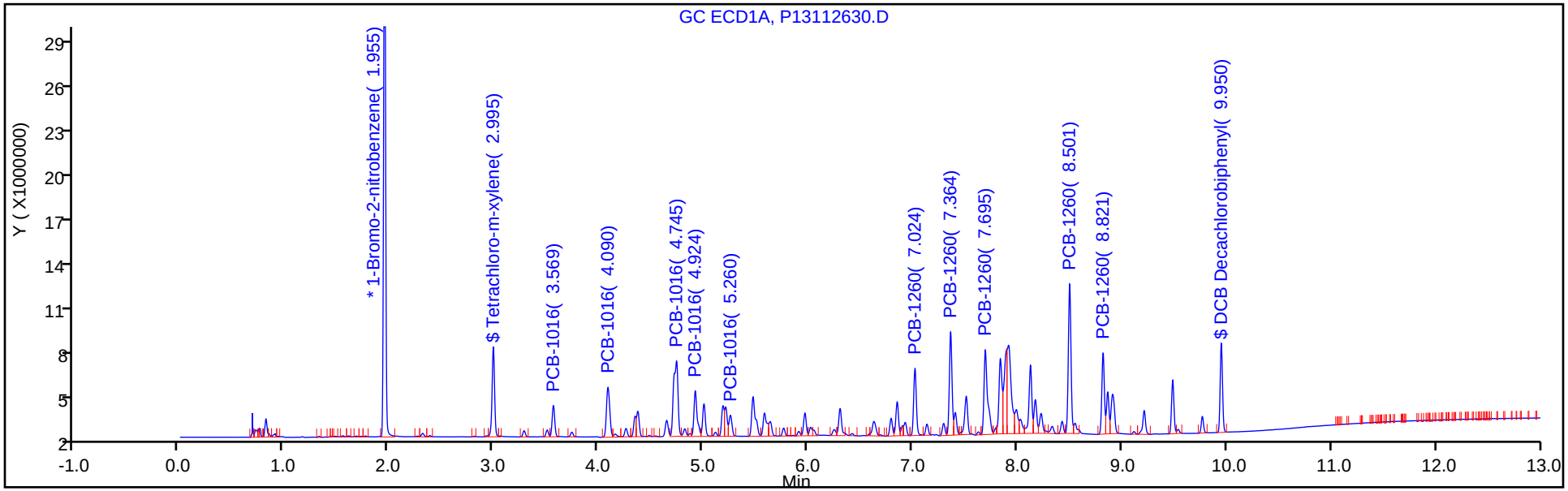
Report Date: 27-Nov-2018 10:34:58 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

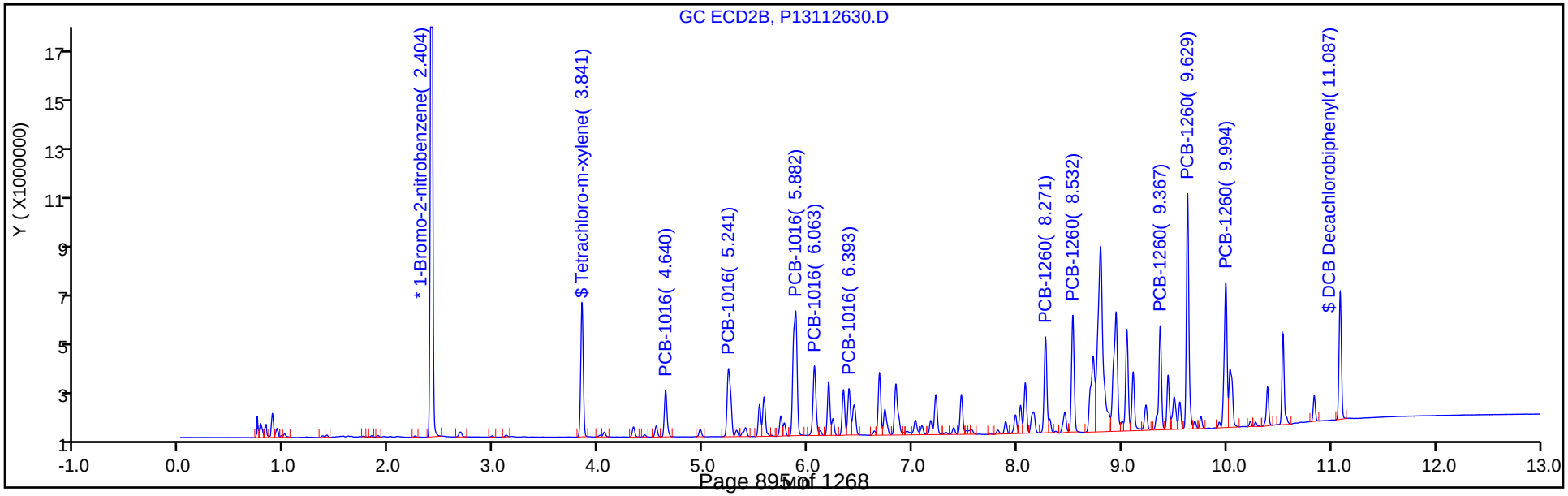
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112630.D

Injection Date:	26-Nov-2018 22:42:44	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std02 1660			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:34:58 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112630.D

Injection Date: 26-Nov-2018 22:42:44 Instrument ID: A2HP13

Lims ID: std02 1660

Client ID:

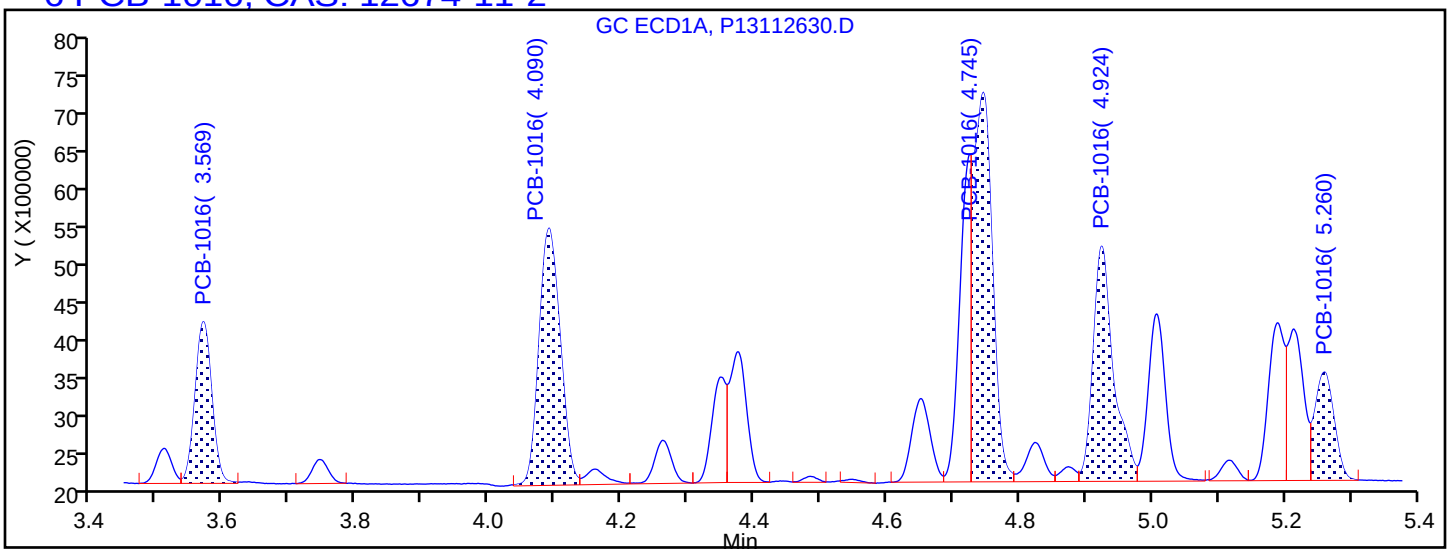
Operator ID: ALS Bottle#: 30 Worklist Smp#: 30

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

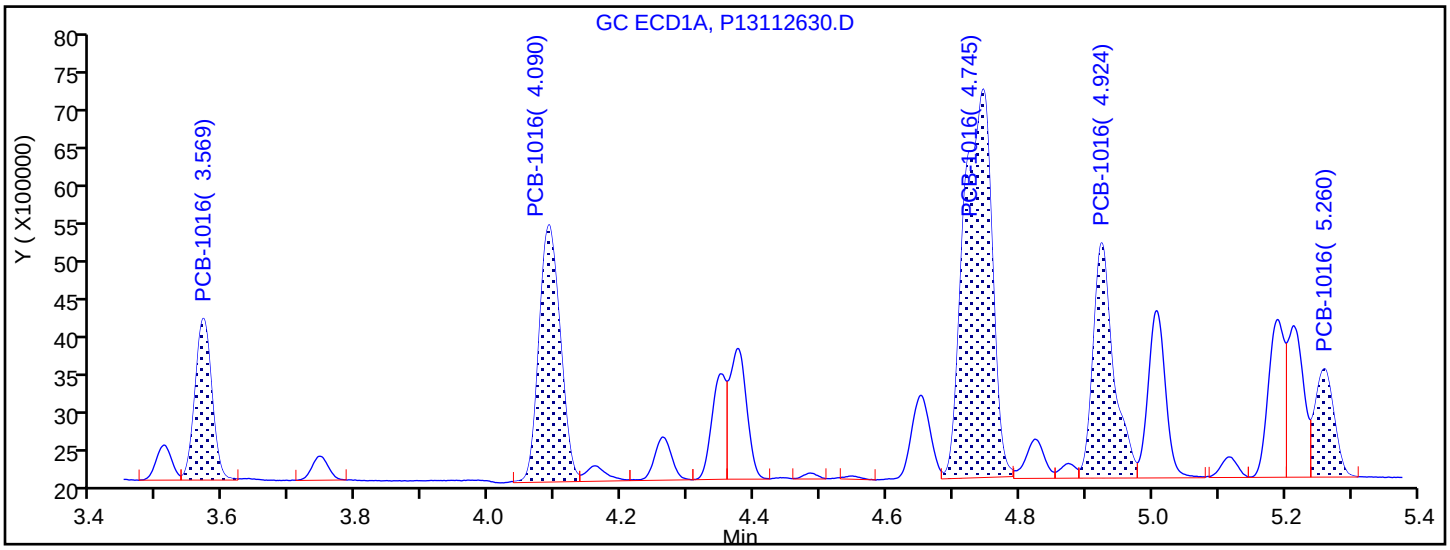
Column: Detector GC ECD1A

6 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.569	Response = 3762795
4.090	Response = 7554695
4.745	Response = 10256125
4.924	Response = 6682093
5.260	Response = 2869161



Manual Integration Results

3.569	Response = 3762795	
4.090	Response = 7554695	
4.745	Response = 15181063	M
4.924	Response = 6682093	
5.260	Response = 2869161	

Reviewer: hassl, 27-Nov-2018 06:42:52

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112631.D
Lims ID: std05 1660
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 26-Nov-2018 23:01:07 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-031
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:34:52 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:43:15

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	48709486	0.0500	0.0500	
2	2.403	2.403	0.000	40910703	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.993	2.993	0.000	22963690	0.0250	0.0238	
2	3.840	3.840	0.000	19602740	0.0250	0.0234	
						RPD = 1.82	
6 PCB-1016							M
1	3.568	3.568	0.000	7917028	0.5000	0.4633	
1	4.089	4.089	0.000	15729611	0.5000	0.4593	
1	4.744	4.744	0.000	33344163	0.5000	0.4724	M
1	4.923	4.923	0.000	14147990	0.5000	0.4666	
1	5.259	5.259	0.000	5897274	0.5000	0.4649	
		Average of Peak Amounts =				0.4653	
2	4.640	4.640	0.000	7198494	0.5000	0.4695	
2	5.241	5.241	0.000	13976605	0.5000	0.4609	
2	5.881	5.881	0.000	28388670	0.5000	0.4615	
2	6.062	6.062	0.000	11700602	0.5000	0.4608	
2	6.393	6.393	0.000	6837853	0.5000	0.4608	
		Average of Peak Amounts =				0.4627	
						RPD = 0.56	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	7.022	7.022	0.000	17484826	0.5000	0.4695	
1	7.363	7.363	0.000	26414177	0.5000	0.4649	
1	7.694	7.694	0.000	29479286	0.5000	0.4682	
1	8.500	8.500	0.000	38623436	0.5000	0.4706	
1	8.820	8.820	0.000	19247085	0.5000	0.4629	
		Average of Peak Amounts =				0.4672	
2	8.270	8.270	0.000	14179532	0.5000	0.4641	
2	8.531	8.531	0.000	16826323	0.5000	0.4544	
2	9.366	9.366	0.000	13603911	0.5000	0.4420	
2	9.628	9.628	0.000	31067603	0.5000	0.4574	
2	9.992	9.992	0.000	21955702	0.5000	0.4535	
		Average of Peak Amounts =				0.4543	
						RPD = 2.81	
$ 12 DCB Decachlorobiphenyl							
1	9.950	9.950	0.000	17617139	0.0250	0.0222	
2	11.087	11.087	0.000	14913014	0.0250	0.0225	
						RPD = 1.27	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@0.5PPM_00083 Amount Added: 1.00 Units: mL

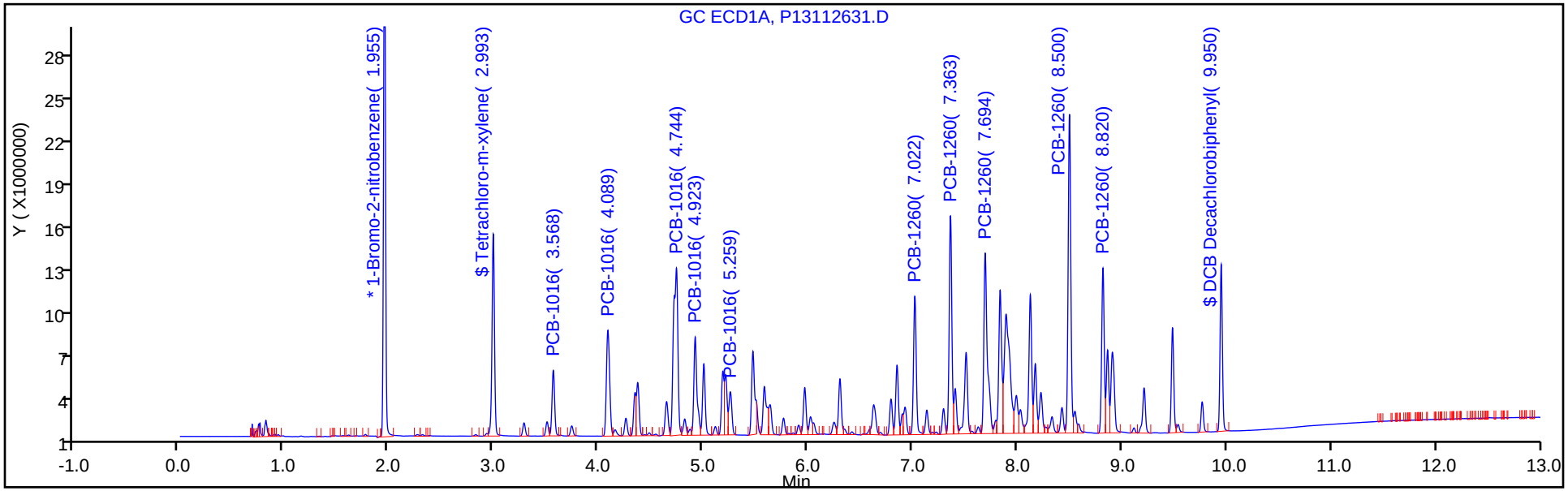
Report Date: 27-Nov-2018 10:34:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

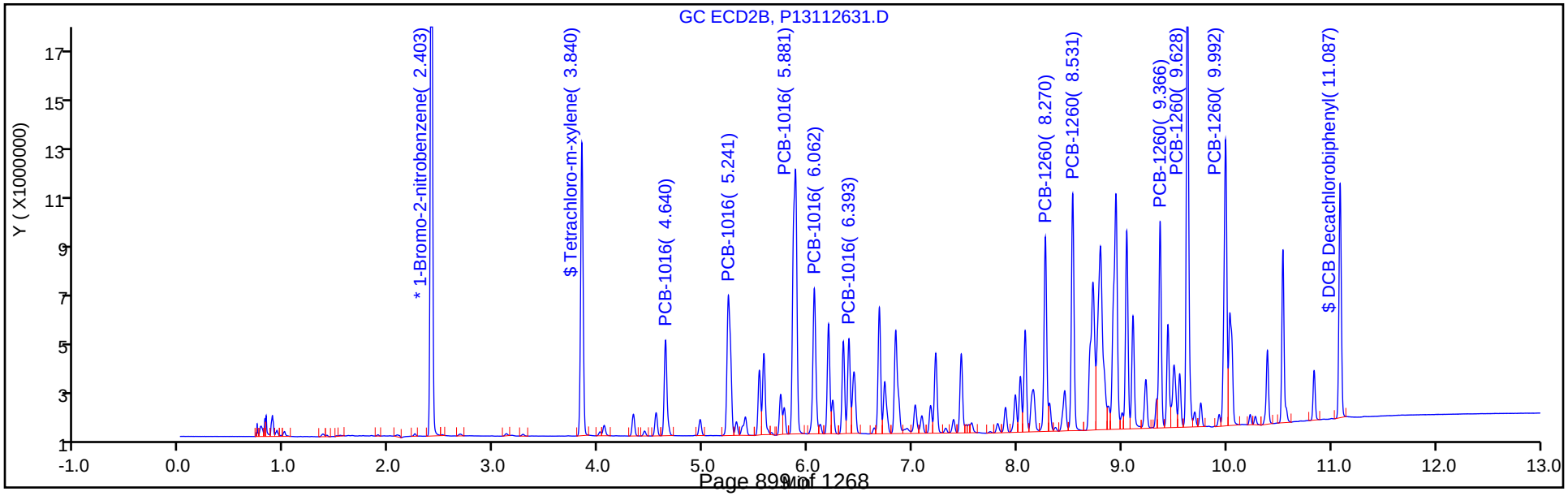
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112631.D

Injection Date:	26-Nov-2018 23:01:07	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std05 1660			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:34:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112631.D

Injection Date: 26-Nov-2018 23:01:07 Instrument ID: A2HP13

Lims ID: std05 1660

Client ID:

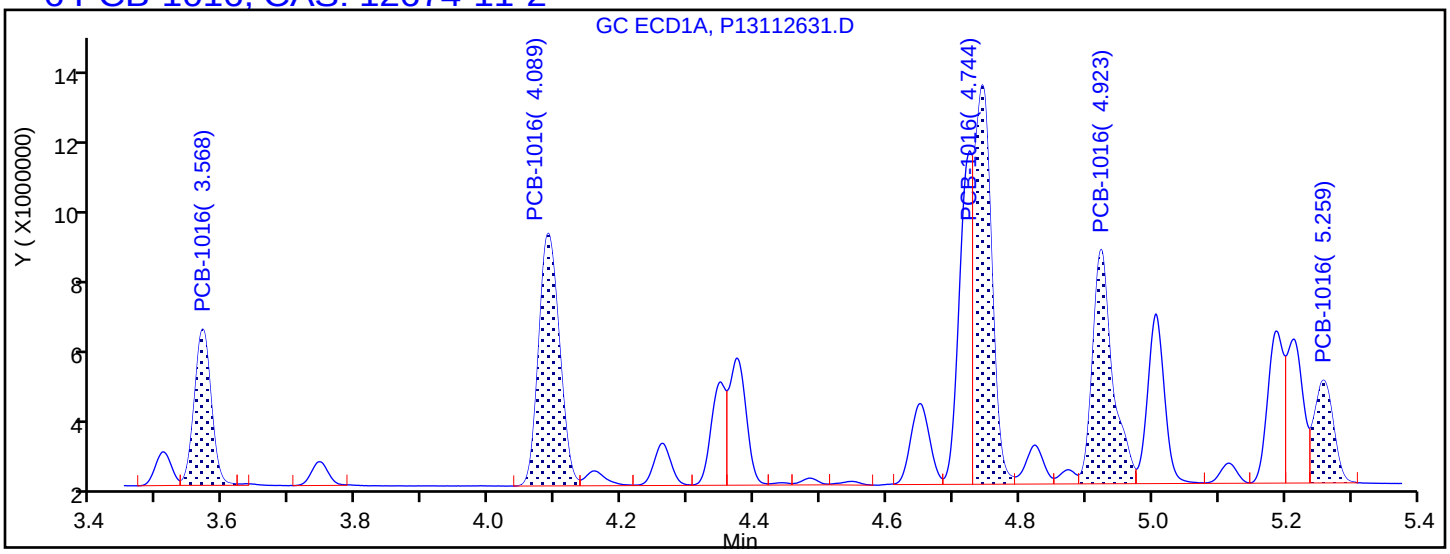
Operator ID: ALS Bottle#: 31 Worklist Smp#: 31

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

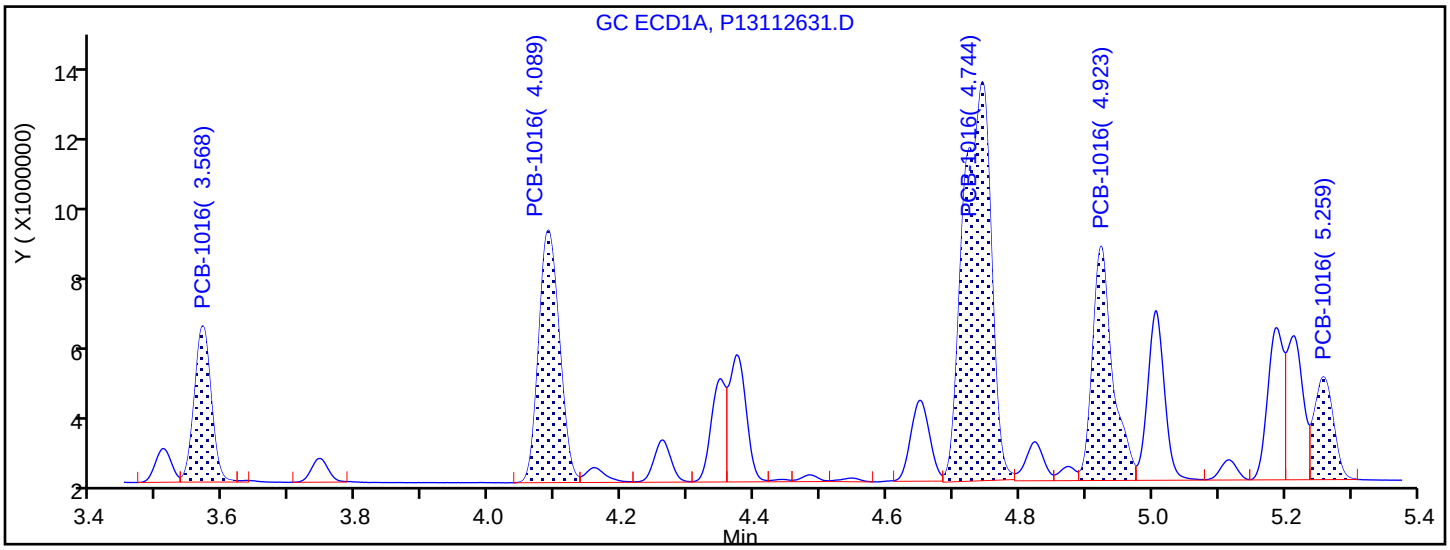
Column: Detector GC ECD1A

6 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.568	Response = 7917028
4.089	Response = 15729611
4.744	Response = 20704495
4.923	Response = 14147990
5.259	Response = 5897274



Manual Integration Results

3.568	Response = 7917028	
4.089	Response = 15729611	
4.744	Response = 33344163	M
4.923	Response = 14147990	
5.259	Response = 5897274	

Reviewer: hassl, 27-Nov-2018 06:43:48

Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112632.D
Lims ID: std1 1660
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Nov-2018 23:19:24 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-032
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:34:48 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:44:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	52144316	0.0500	0.0500	
2	2.403	2.403	0.000	44213683	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.994	2.993	0.001	48980089	0.0500	0.0475	
2	3.841	3.840	0.001	41530133	0.0500	0.0459	
						RPD = 3.44	
6 PCB-1016							M
1	3.568	3.568	0.000	15412183	1.00	0.8424	
1	4.090	4.089	0.001	31783187	1.00	0.8668	
1	4.746	4.744	0.002	70936608	1.00	0.9388	M
1	4.924	4.923	0.001	29184930	1.00	0.8991	M
1	5.260	5.259	0.001	11818167	1.00	0.8703	
		Average of Peak Amounts =				0.8835	
2	4.641	4.640	0.001	13985057	1.00	0.8440	
2	5.241	5.241	0.000	27627772	1.00	0.8431	
2	5.882	5.881	0.001	58738053	1.00	0.8835	
2	6.062	6.062	0.000	23695179	1.00	0.8636	
2	6.393	6.393	0.000	13577925	1.00	0.8466	
		Average of Peak Amounts =				0.8562	
						RPD = 3.14	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	7.022	7.022	0.000	36674804	1.00	0.9200	
1	7.363	7.363	0.000	56916352	1.00	0.9358	
1	7.695	7.694	0.001	63806332	1.00	0.9466	
1	8.501	8.500	0.001	85961998	1.00	0.9785	
1	8.820	8.820	0.000	42846978	1.00	0.9626	
		Average of Peak Amounts =				0.9487	
2	8.271	8.270	0.001	29073855	1.00	0.8805	
2	8.531	8.531	0.000	34937789	1.00	0.8731	
2	9.367	9.366	0.001	28339554	1.00	0.8519	
2	9.627	9.628	-0.001	67183403	1.00	0.9152	
2	9.992	9.992	0.000	46676643	1.00	0.8920	
		Average of Peak Amounts =				0.8825	
						RPD = 7.22	
$ 12 DCB Decachlorobiphenyl							
1	9.951	9.950	0.001	39094650	0.0500	0.0461	
2	11.086	11.087	-0.001	33354798	0.0500	0.0466	
						RPD = 1.10	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@1.0PPM_00029 Amount Added: 1.00 Units: mL

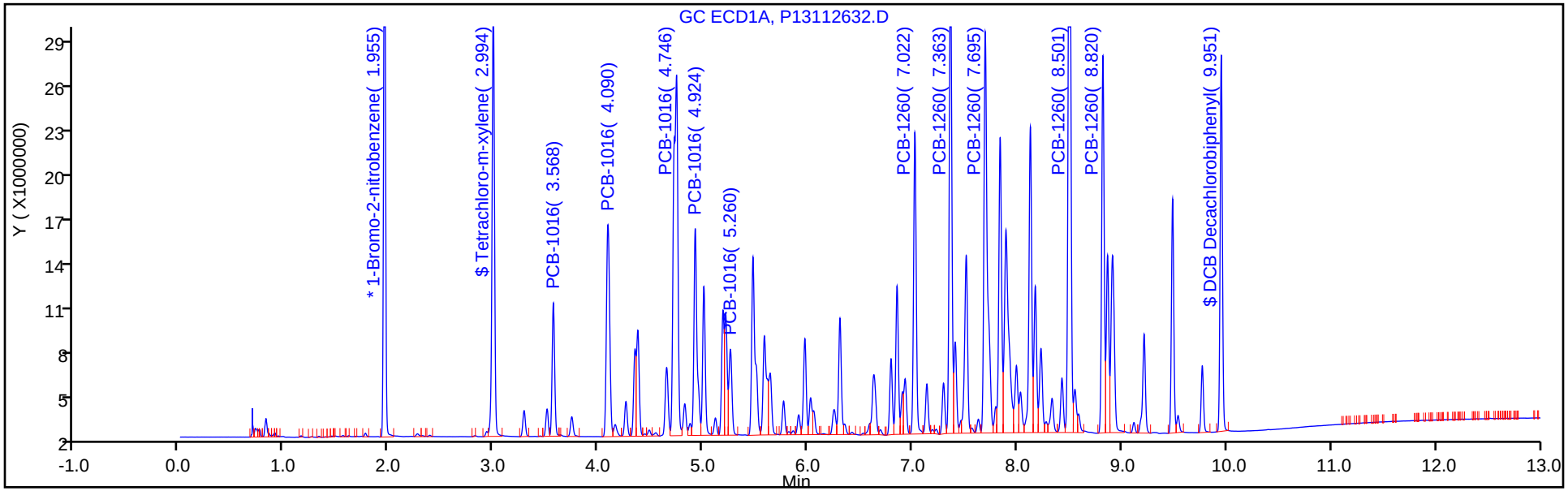
Report Date: 27-Nov-2018 10:34:49 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

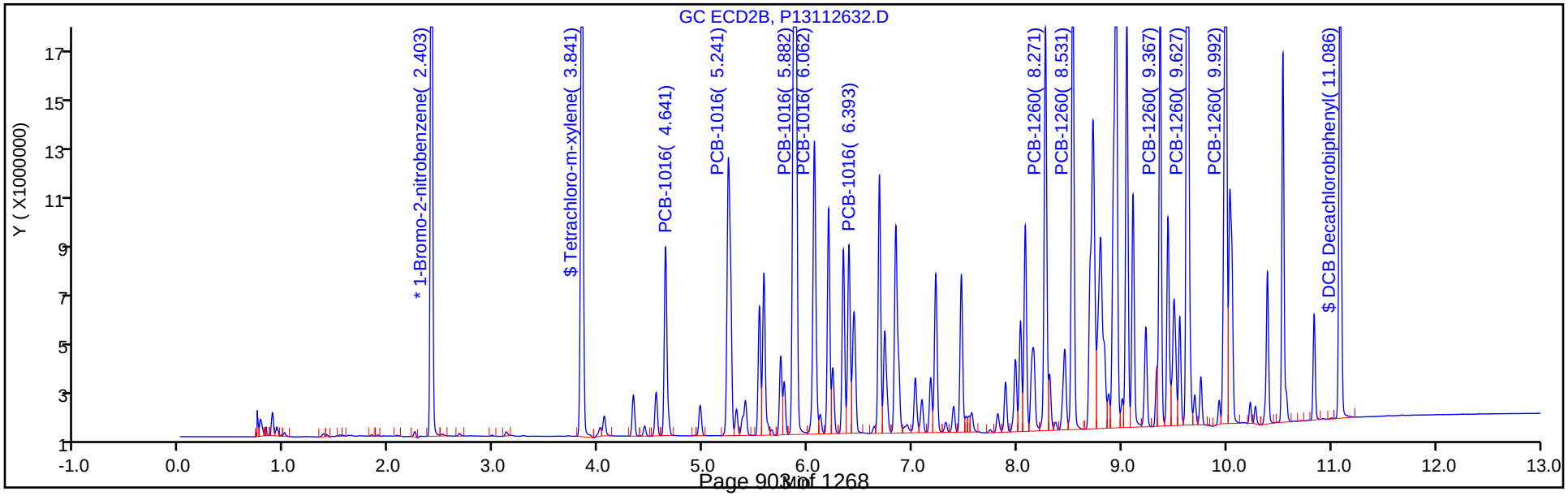
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112632.D

Injection Date:	26-Nov-2018 23:19:24	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std1 1660			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:34:49 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112632.D

Injection Date: 26-Nov-2018 23:19:24 Instrument ID: A2HP13

Lims ID: std1 1660

Client ID:

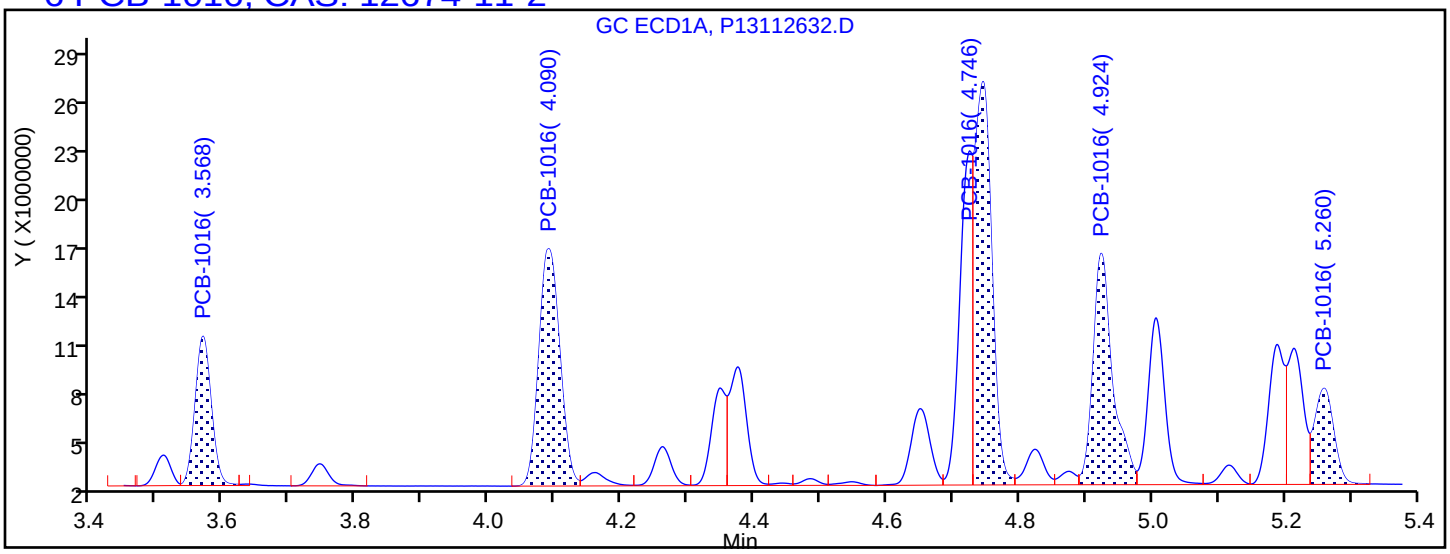
Operator ID: ALS Bottle#: 32 Worklist Smp#: 32

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

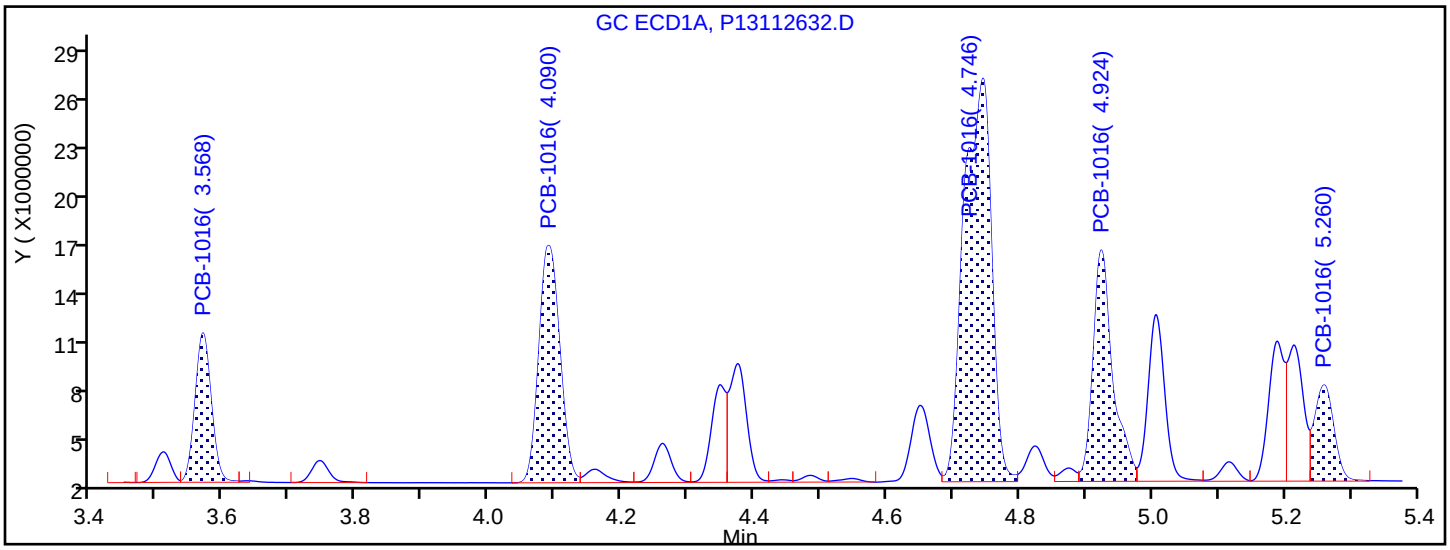
Column: Detector GC ECD1A

6 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.568	Response = 15412183
4.090	Response = 31783187
4.746	Response = 44137381
4.924	Response = 29198349
5.260	Response = 11818167



Manual Integration Results

3.568	Response = 15412183	
4.090	Response = 31783187	
4.746	Response = 70936608	M
4.924	Response = 29184930	M
5.260	Response = 11818167	

Reviewer: hassl, 27-Nov-2018 06:44:39

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D
Lims ID: std15 1660
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Nov-2018 23:37:52 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-033
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:34:43 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:45:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	50199454	0.0500	0.0500	
2	2.402	2.403	-0.001	42215310	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.994	2.993	0.001	92776275	0.1000	0.0935	
2	3.840	3.840	0.000	77585742	0.1000	0.0898	
						RPD = 4.00	
6 PCB-1016							M
1	3.567	3.568	-0.001	23320594	1.50	1.32	
1	4.089	4.089	0.000	46020140	1.50	1.30	
1	4.744	4.744	0.000	104647257	1.50	1.44	M
1	4.922	4.923	-0.001	42743836	1.50	1.37	M
1	5.259	5.259	0.000	17411796	1.50	1.33	
		Average of Peak Amounts =				1.35	
2	4.639	4.640	-0.001	19899500	1.50	1.26	
2	5.241	5.241	0.000	39699546	1.50	1.27	
2	5.881	5.881	0.000	86551988	1.50	1.36	
2	6.061	6.062	-0.001	34342202	1.50	1.31	
2	6.391	6.393	-0.002	19378641	1.50	1.27	
		Average of Peak Amounts =				1.29	
						RPD = 4.53	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							Ma
1	7.021	7.022	-0.001	53826568	1.50	1.40	
1	7.361	7.363	-0.002	83927181	1.50	1.43	
1	7.694	7.694	0.000	93475363	1.50	1.44	a
1	8.498	8.500	-0.002	125204670	1.50	1.48	
1	8.818	8.820	-0.002	61888653	1.50	1.44	
		Average of Peak Amounts =				1.44	
2	8.269	8.270	-0.001	41584996	1.50	1.32	M
2	8.529	8.531	-0.002	50072159	1.50	1.31	M
2	9.364	9.366	-0.002	43794277	1.50	1.38	M
2	9.626	9.628	-0.002	97105689	1.50	1.39	M
2	9.990	9.992	-0.002	66963138	1.50	1.34	M
		Average of Peak Amounts =				1.35	
						RPD = 6.70	
$ 12 DCB Decachlorobiphenyl							
1	9.948	9.950	-0.002	68064975	0.1000	0.0834	
2	11.083	11.087	-0.004	56919601	0.1000	0.0833	
						RPD = 0.08	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SG1660@1.5PPM_00005 Amount Added: 1.00 Units: mL

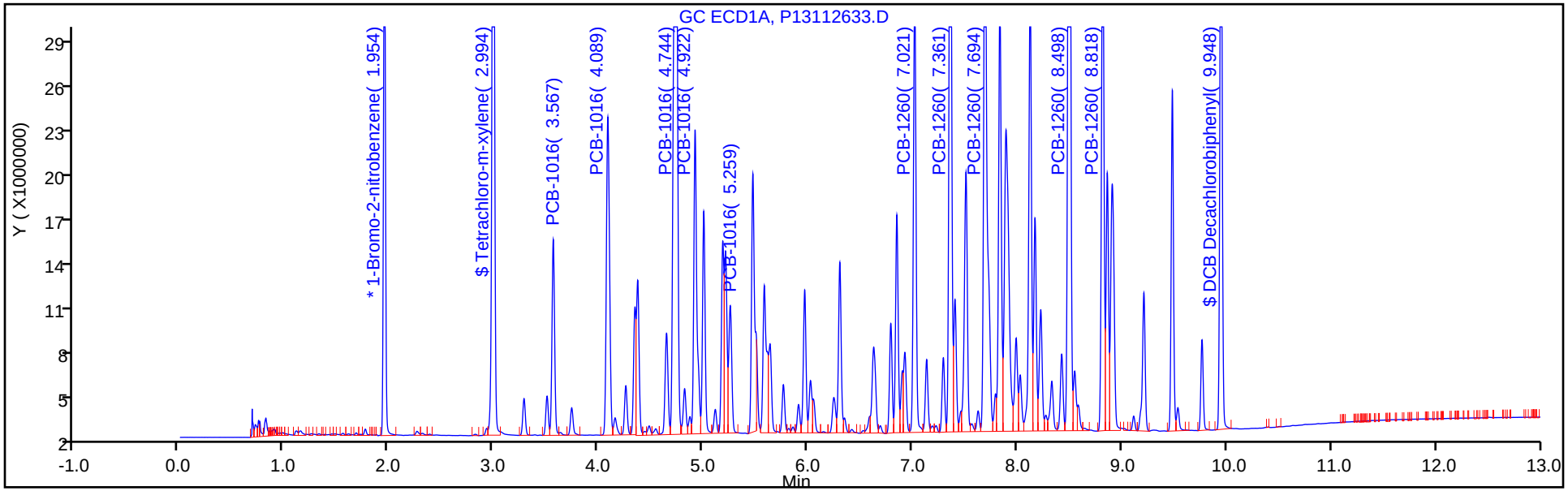
Report Date: 27-Nov-2018 10:34:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

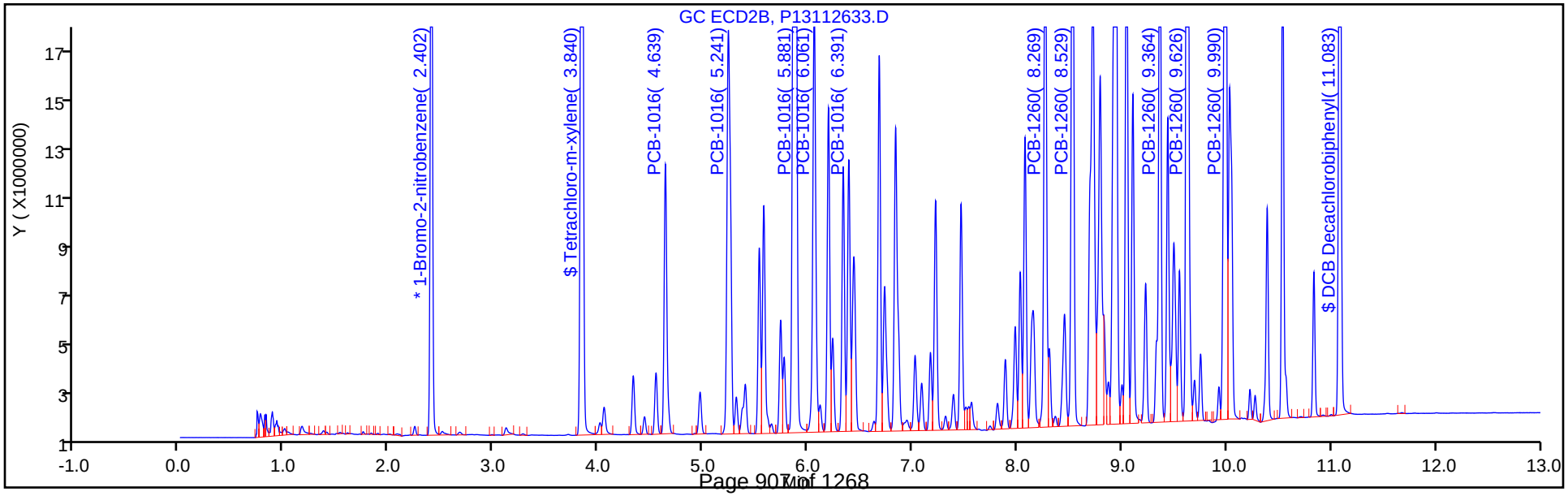
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Injection Date:	26-Nov-2018 23:37:52	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std15 1660			Worklist Smp#:	33
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:34:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Injection Date: 26-Nov-2018 23:37:52 Instrument ID: A2HP13

Lims ID: std15 1660

Client ID:

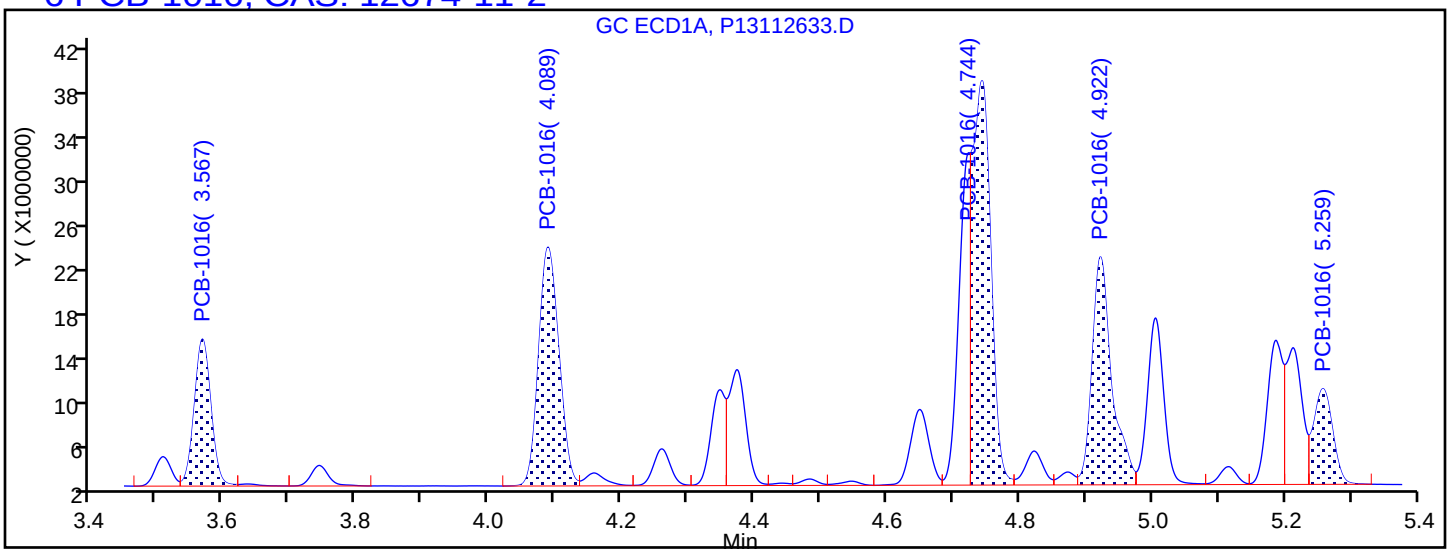
Operator ID: ALS Bottle#: 33 Worklist Smp#: 33

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

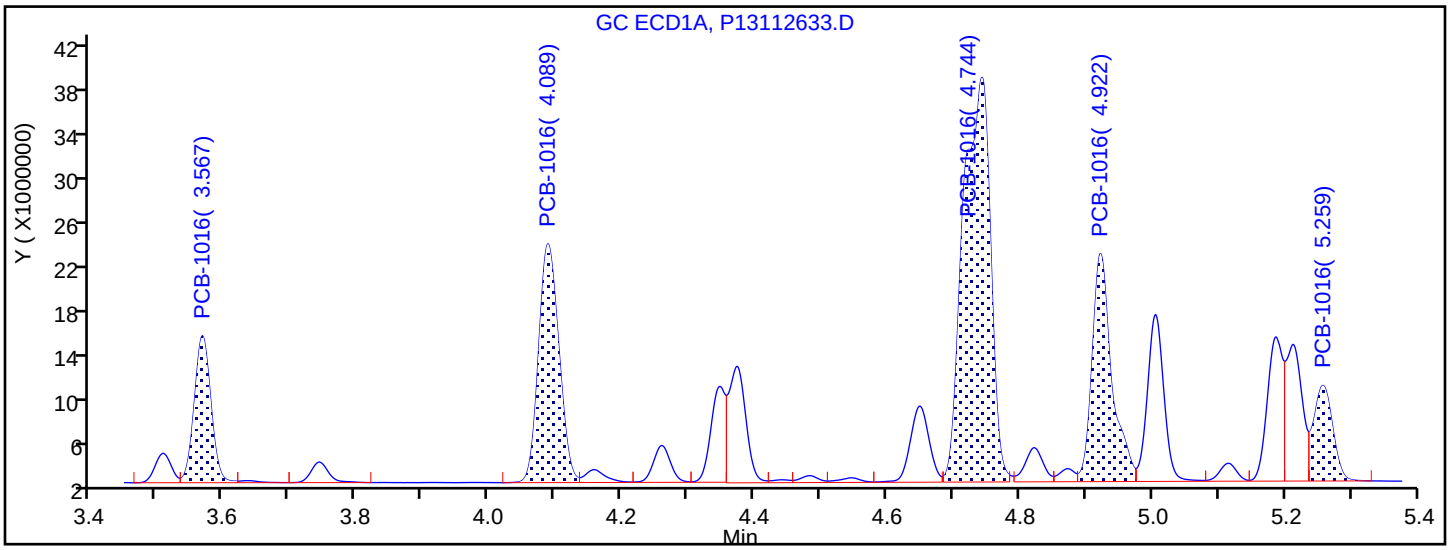
Column: Detector GC ECD1A

6 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.567	Response = 23320594
4.089	Response = 46020140
4.744	Response = 69801045
4.922	Response = 42673460
5.259	Response = 17411796



Manual Integration Results

3.567	Response = 23320594	
4.089	Response = 46020140	
4.744	Response = 104647257	M
4.922	Response = 42743836	M
5.259	Response = 17411796	

Reviewer: hassl, 27-Nov-2018 06:45:34

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 27-Nov-2018 10:34:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Injection Date: 26-Nov-2018 23:37:52 Instrument ID: A2HP13

Lims ID: std15 1660

Client ID:

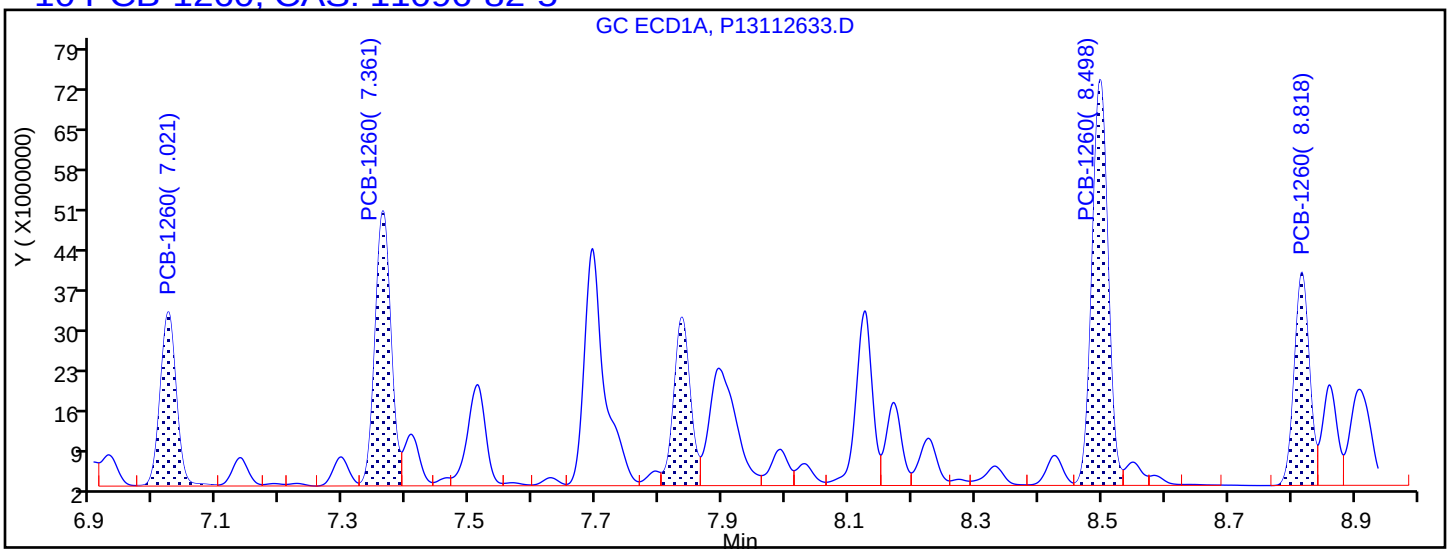
Operator ID: ALS Bottle#: 33 Worklist Smp#: 33

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

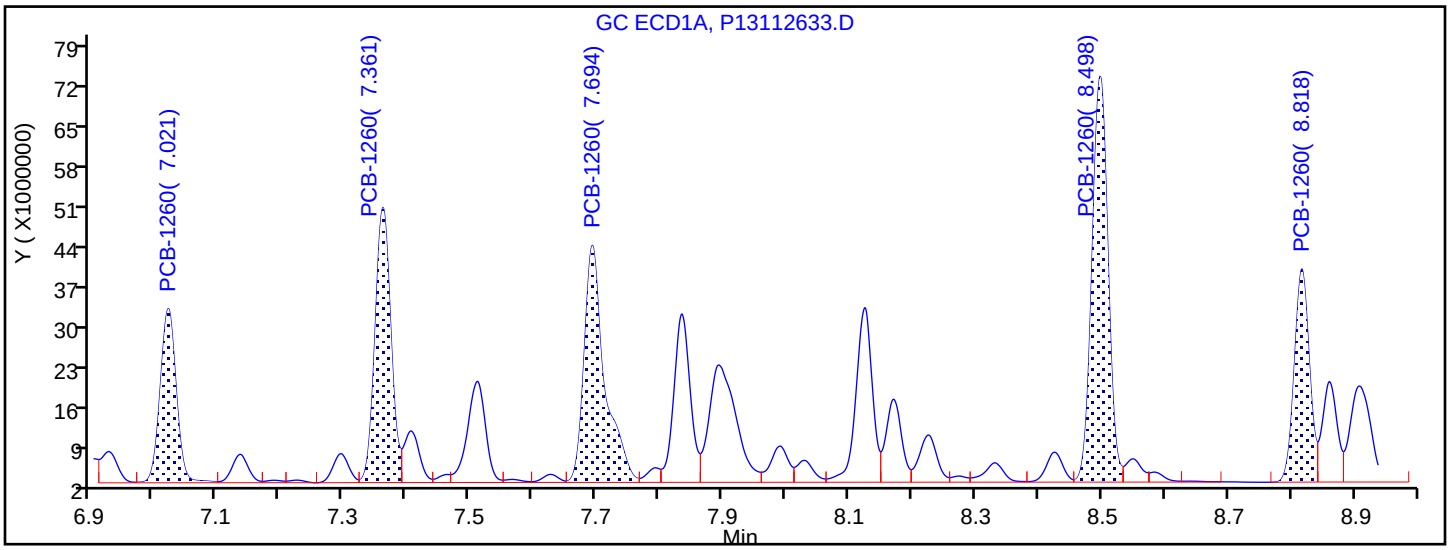
Column: Detector GC ECD1A

10 PCB-1260, CAS: 11096-82-5



Processing Integration Results

7.021	Response = 53826568
7.361	Response = 83927181
7.835	Response = 53613524
8.498	Response = 125204670
8.818	Response = 61888653



Manual Integration Results

7.021	Response = 53826568	
7.361	Response = 83927181	
7.694	Response = 93475363	M
8.498	Response = 125204670	
8.818	Response = 61888653	

Reviewer: hassl, 27-Nov-2018 06:59:19

Audit Action: Assigned Compound ID Audit Reason:

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 22:05 Calibration End Date: 11/26/2018 23:37 Calibration ID: 48136

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/28	P13112628.D
Level 2	STD01 240-356910/29	P13112629.D
Level 3	STD02 240-356910/30	P13112630.D
Level 4	STD05 240-356910/31	P13112631.D
Level 5	STD1 240-356910/32	P13112632.D
Level 6	STD15 240-356910/33	P13112633.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1016 Peak 1	0.0231 0.0157	0.0211	0.0191	0.0176	0.0158	Ave		0.0187				15.8		20.0			
PCB-1016 Peak 2	0.0465 0.0313	0.0410	0.0381	0.0342	0.0312	Ave		0.0371				16.2		20.0			
PCB-1016 Peak 3	0.0905 0.0683	0.0807	0.0758	0.0694	0.0664	Ave		0.0752				12.2		20.0			
PCB-1016 Peak 4	0.0382 0.0271	0.0337	0.0318	0.0286	0.0268	Ave		0.0310				14.2		20.0			
PCB-1016 Peak 5	0.0225 0.0153	0.0201	0.0188	0.0167	0.0154	Ave		0.0181				15.9		20.0			
PCB-1260 Peak 1	0.0430 0.0328	0.0413	0.0394	0.0347	0.0329	Ave		0.0373				11.9		20.0			
PCB-1260 Peak 2	0.0559 0.0395	0.0487	0.0467	0.0411	0.0395	Ave		0.0453				14.3		20.0			
PCB-1260 Peak 3	0.0435 0.0346	0.0391	0.0432	0.0333	0.0320	Ave		0.0376				13.4		20.0			
PCB-1260 Peak 4	0.0963 0.0767	0.0863	0.0869	0.0759	0.0760	Ave		0.0830				10.0		20.0			
PCB-1260 Peak 5	0.0700 0.0529	0.0628	0.0629	0.0537	0.0528	Ave		0.0592				12.1		20.0			
Tetrachloro-m-xylene	1.2110 0.9189	1.0977	1.0151	0.9583	0.9393	Ave		1.0234				11.0		20.0			
DCB Decachlorobiphenyl	0.9174 0.6742	0.8708	0.9092	0.7291	0.7544	Ave		0.8092				12.7		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107194-1 Analy Batch No.: 356910

SDG No.:

Instrument ID: A2HP13 GC Column: CLP-2 (0.53 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/26/2018 22:05 Calibration End Date: 11/26/2018 23:37 Calibration ID: 48136

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-356910/28	P13112628.D
Level 2	STD01 240-356910/29	P13112629.D
Level 3	STD02 240-356910/30	P13112630.D
Level 4	STD05 240-356910/31	P13112631.D
Level 5	STD1 240-356910/32	P13112632.D
Level 6	STD15 240-356910/33	P13112633.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 1	BNB	Ave	921145 19899500	1832300	3402566	7198494	13985057	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 2	BNB	Ave	1854933 39699546	3555355	6790707	13976605	27627772	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 3	BNB	Ave	3610392 86551988	6997910	13498557	28388670	58738053	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 4	BNB	Ave	1522736 34342202	2926837	5658616	11700602	23695179	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1016 Peak 5	BNB	Ave	898474 19378641	1747455	3347524	6837853	13577925	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 1	BNB	Ave	1714573 41584996	3582598	7020726	14179532	29073855	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 2	BNB	Ave	2230752 50072159	4227547	8317980	16826323	34937789	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 3	BNB	Ave	1736093 43794277	3392920	7697562	13603911	28339554	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 4	BNB	Ave	3842283 97105689	7489712	15473035	31067603	67183403	0.0500 1.50	0.100	0.200	0.500	1.00
PCB-1260 Peak 5	BNB	Ave	2794717 66963138	5451638	11193096	21955702	46676643	0.0500 1.50	0.100	0.200	0.500	1.00
Tetrachloro-m-xylene	BNB	Ave	2416665 77585742	4761094	9038648	19602740	41530133	0.00250 0.100	0.00500	0.0100	0.0250	0.0500
DCB Decachlorobiphenyl	BNB	Ave	1830839 56919601	3776896	8095259	14913014	33354798	0.00250 0.100	0.00500	0.0100	0.0250	0.0500

Curve Type Legend:
Ave = Average ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112628.D
Lims ID: std005 1660
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 26-Nov-2018 22:05:58 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-028
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:13 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:41:35

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	47307523	0.0500	0.0500	
2	2.403	2.403	0.000	39913165	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.994	2.993	0.001	2671446	0.002500	0.002856	
2	3.841	3.840	0.001	2416665	0.002500	0.002958	
						RPD = 3.53	
6 PCB-1016							M
1	3.568	3.568	0.000	1032664	0.0500	0.0622	
1	4.089	4.089	0.000	2096687	0.0500	0.0630	
1	4.746	4.744	0.002	3901028	0.0500	0.0569	M
1	4.923	4.923	0.000	1732403	0.0500	0.0588	
1	5.259	5.259	0.000	733884	0.0500	0.0596	
		Average of Peak Amounts =				0.0601	
2	4.640	4.640	0.000	921145	0.0500	0.0616	
2	5.241	5.241	0.000	1854933	0.0500	0.0627	
2	5.882	5.881	0.001	3610392	0.0500	0.0602	
2	6.063	6.062	0.001	1522736	0.0500	0.0615	
2	6.393	6.393	0.000	898474	0.0500	0.0621	
		Average of Peak Amounts =				0.0616	
						RPD = 2.44	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							a
1	7.022	7.022	0.000	2093379	0.0500	0.0579	
1	7.364	7.363	0.001	3146861	0.0500	0.0570	
1	7.695	7.694	0.001	3440715	0.0500	0.0563	a
1	8.500	8.500	0.000	4348911	0.0500	0.0546	
1	8.819	8.820	-0.001	2209290	0.0500	0.0547	
		Average of Peak Amounts =				0.0561	
2	8.269	8.270	-0.001	1714573	0.0500	0.0575	
2	8.530	8.531	-0.001	2230752	0.0500	0.0618	
2	9.365	9.366	-0.001	1736093	0.0500	0.0578	
2	9.627	9.628	-0.001	3842283	0.0500	0.0580	
2	9.991	9.992	-0.001	2794717	0.0500	0.0592	
		Average of Peak Amounts =				0.0588	
						RPD = 4.80	
$ 12 DCB Decachlorobiphenyl							
1	9.950	9.950	0.000	2247935	0.002500	0.002922	
2	11.085	11.087	-0.002	1830839	0.002500	0.002834	
						RPD = 3.05	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SG1660@.05PPM_00024 Amount Added: 1.00 Units: mL

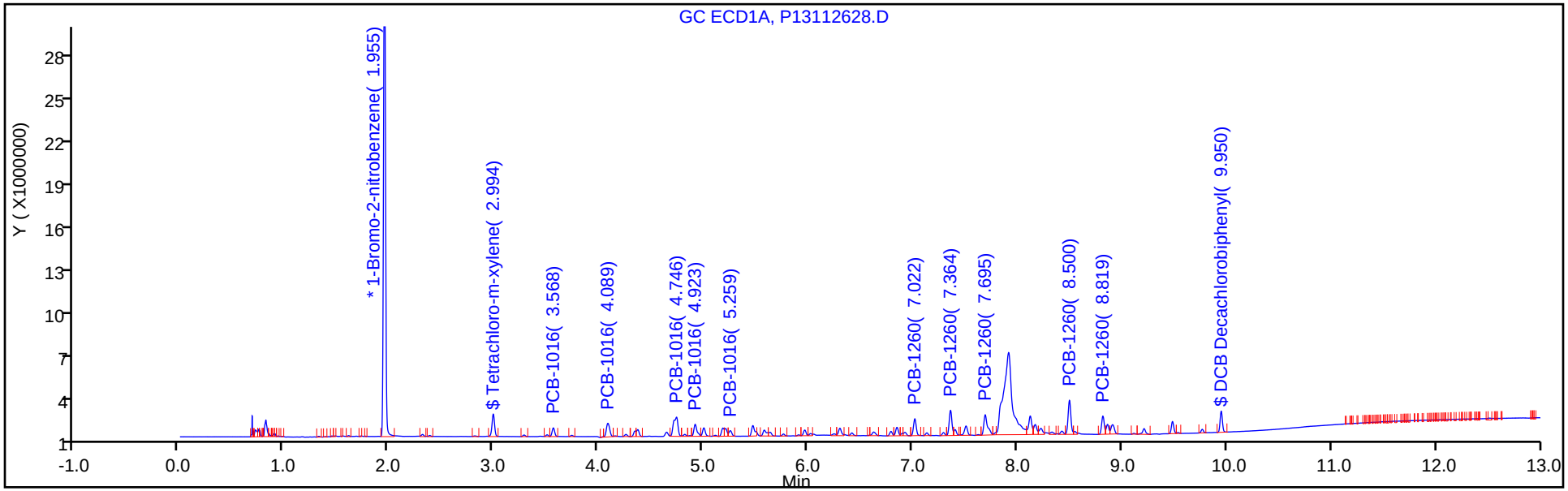
Report Date: 27-Nov-2018 10:35:15 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

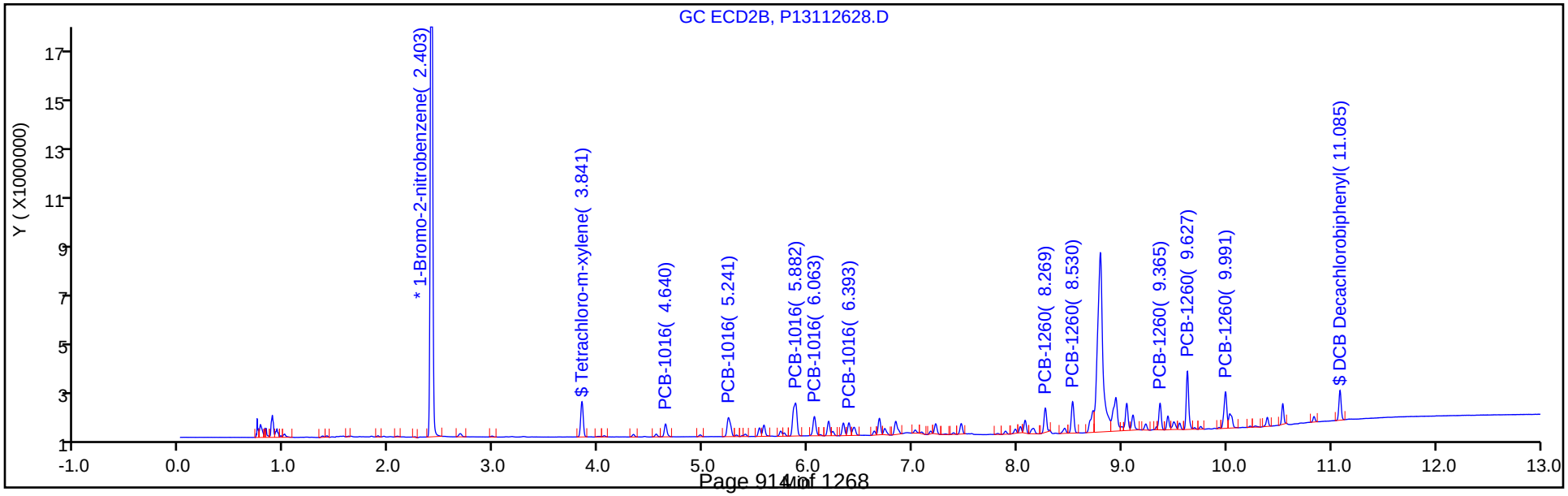
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112628.D

Injection Date:	26-Nov-2018 22:05:58	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std005 1660			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112629.D
Lims ID: std01 1660
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 26-Nov-2018 22:24:24 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-029
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:35:07 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:42:27

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.956	1.955	0.001	51666807	0.0500	0.0500	
2	2.403	2.403	0.001	43371510	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.995	2.993	0.002	5315181	0.005000	0.005202	
2	3.842	3.840	0.002	4761094	0.005000	0.005363	
						RPD = 3.05	
6 PCB-1016							M
1	3.568	3.568	0.000	1980695	0.1000	0.1093	
1	4.089	4.089	0.000	3894054	0.1000	0.1072	
1	4.745	4.744	0.001	7722370	0.1000	0.1031	M
1	4.923	4.923	0.000	3432128	0.1000	0.1067	M
1	5.260	5.259	0.001	1455466	0.1000	0.1082	
		Average of Peak Amounts =				0.1069	
2	4.641	4.640	0.001	1832300	0.1000	0.1127	
2	5.242	5.241	0.001	3555355	0.1000	0.1106	
2	5.882	5.881	0.001	6997910	0.1000	0.1073	
2	6.062	6.062	0.000	2926837	0.1000	0.1087	
2	6.393	6.393	0.000	1747455	0.1000	0.1111	
		Average of Peak Amounts =				0.1101	
						RPD = 2.94	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	7.022	7.022	0.000	4059696	0.1000	0.1028	
1	7.364	7.363	0.001	6182864	0.1000	0.1026	
1	7.695	7.694	0.001	6781371	0.1000	0.1015	
1	8.501	8.500	0.001	8557668	0.1000	0.0983	
1	8.821	8.820	0.001	4452059	0.1000	0.1009	
		Average of Peak Amounts =				0.1012	
2	8.270	8.270	0.000	3582598	0.1000	0.1106	
2	8.531	8.531	0.000	4227547	0.1000	0.1077	
2	9.367	9.366	0.001	3392920	0.1000	0.1040	
2	9.627	9.628	-0.001	7489712	0.1000	0.1040	
2	9.992	9.992	0.000	5451638	0.1000	0.1062	
		Average of Peak Amounts =				0.1065	
						RPD = 5.07	
$ 12 DCB Decachlorobiphenyl							
1	9.950	9.950	0.000	4538017	0.005000	0.005401	
2	11.086	11.087	-0.001	3776896	0.005000	0.005381	
						RPD = 0.38	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660STD@0.1_00024 Amount Added: 1.00 Units: mL

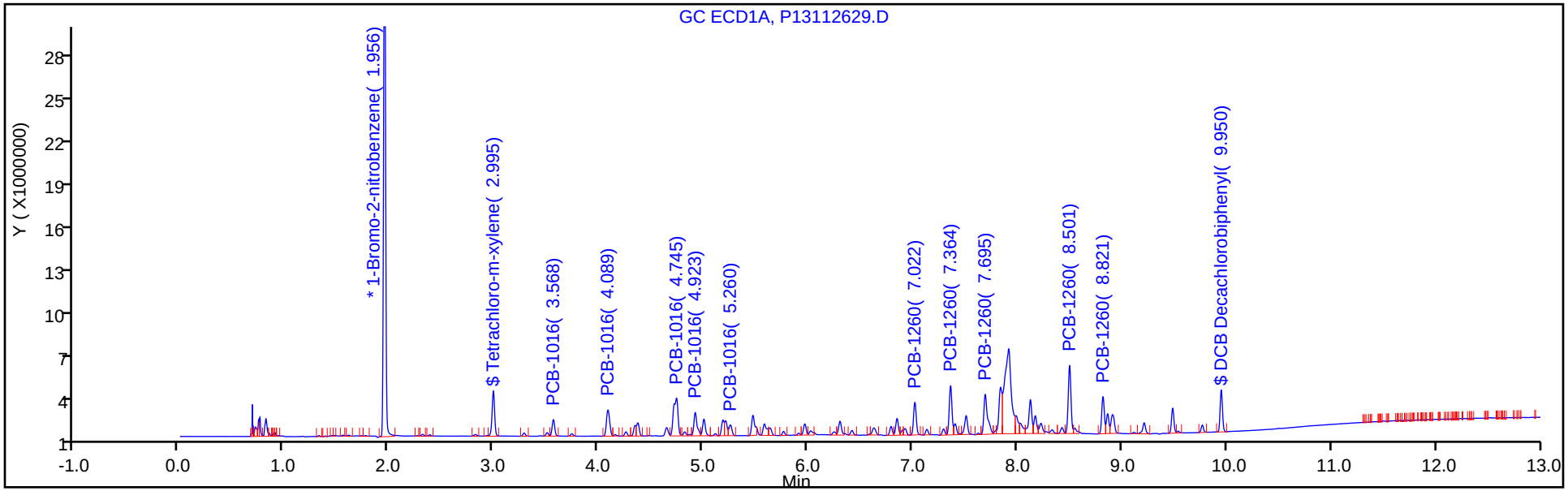
Report Date: 27-Nov-2018 10:35:08 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

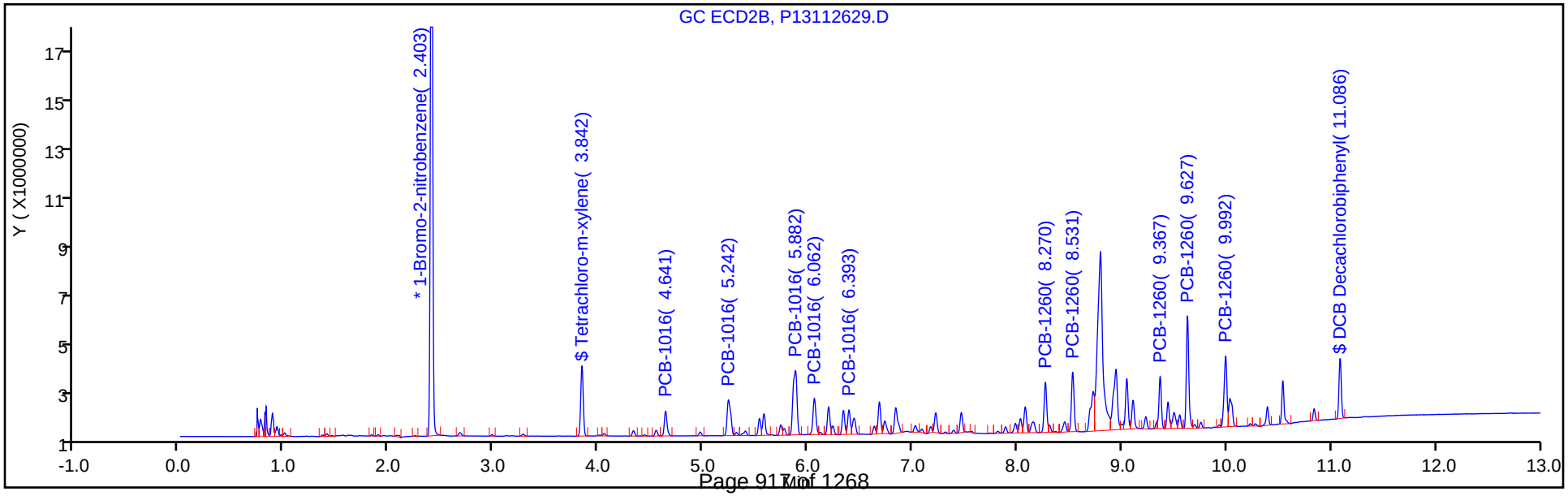
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112629.D

Injection Date:	26-Nov-2018 22:24:24	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std01 1660			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112630.D
Lims ID: std02 1660
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 26-Nov-2018 22:42:44 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-030
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:34:57 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:43:06

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	53029624	0.0500	0.0500	
2	2.404	2.403	0.001	44520149	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.995	2.993	0.002	10268033	0.0100	0.009791	
2	3.841	3.840	0.001	9038648	0.0100	0.0099	
						RPD = 1.30	
6 PCB-1016							M
1	3.569	3.568	0.001	3762795	0.2000	0.2022	
1	4.090	4.089	0.001	7554695	0.2000	0.2026	
1	4.745	4.744	0.001	15181063	0.2000	0.1976	M
1	4.924	4.923	0.001	6682093	0.2000	0.2024	
1	5.260	5.259	0.001	2869161	0.2000	0.2078	
		Average of Peak Amounts =				0.2025	
2	4.640	4.640	0.000	3402566	0.2000	0.2039	
2	5.241	5.241	0.000	6790707	0.2000	0.2058	
2	5.882	5.881	0.001	13498557	0.2000	0.2016	
2	6.063	6.062	0.001	5658616	0.2000	0.2048	
2	6.393	6.393	0.000	3347524	0.2000	0.2073	
		Average of Peak Amounts =				0.2047	
						RPD = 1.07	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	7.024	7.022	0.002	8275463	0.2000	0.2041	
1	7.364	7.363	0.001	12524189	0.2000	0.2025	
1	7.695	7.694	0.001	13932275	0.2000	0.2032	
1	8.501	8.500	0.001	18207838	0.2000	0.2038	
1	8.821	8.820	0.001	9461954	0.2000	0.2090	
		Average of Peak Amounts =				0.2045	
2	8.271	8.270	0.001	7020726	0.2000	0.2111	
2	8.532	8.531	0.001	8317980	0.2000	0.2064	
2	9.367	9.366	0.001	7697562	0.2000	0.2298	
2	9.629	9.628	0.001	15473035	0.2000	0.2093	
2	9.994	9.992	0.002	11193096	0.2000	0.2124	
		Average of Peak Amounts =				0.2138	
						RPD = 4.45	
$ 12 DCB Decachlorobiphenyl							
1	9.950	9.950	0.000	9532016	0.0100	0.0111	
2	11.087	11.087	0.000	8095259	0.0100	0.0112	
						RPD = 1.63	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@0.2ppm_00027 Amount Added: 1.00 Units: mL

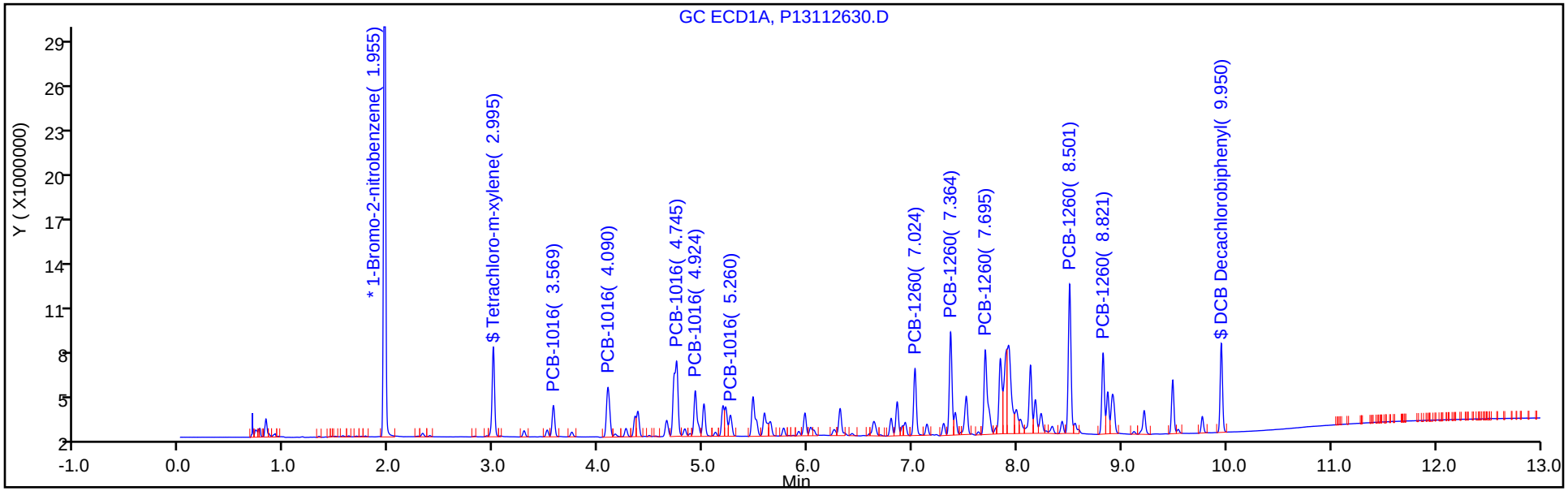
Report Date: 27-Nov-2018 10:34:59 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

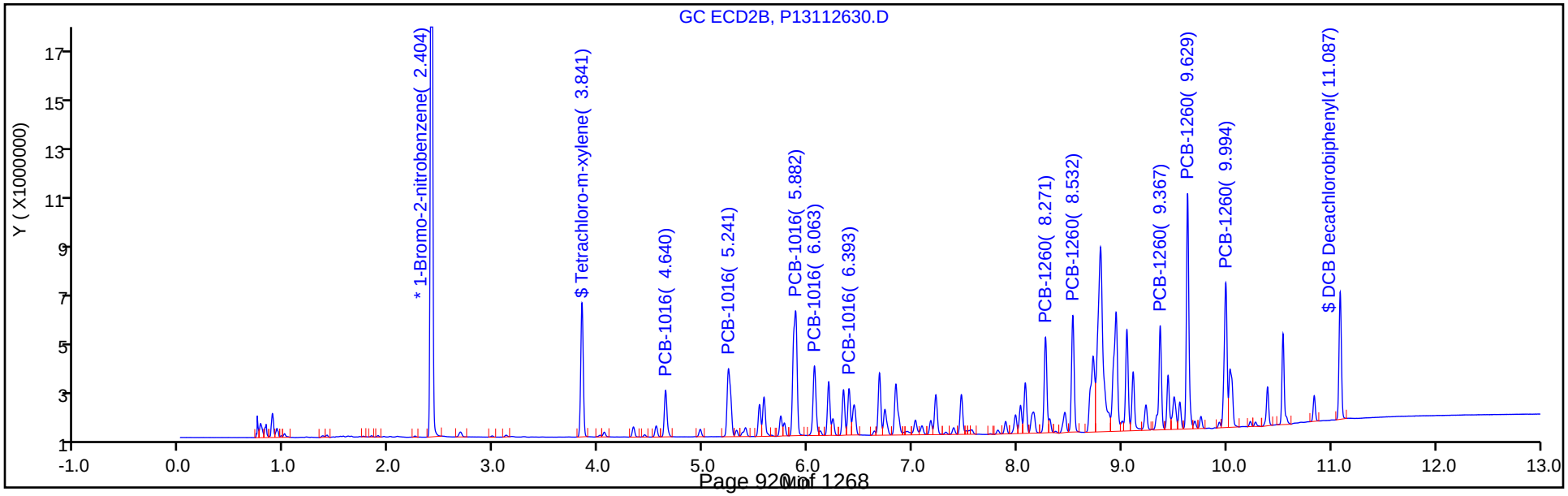
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112630.D

Injection Date:	26-Nov-2018 22:42:44	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std02 1660			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112631.D
Lims ID: std05 1660
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 26-Nov-2018 23:01:07 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-031
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:34:52 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:43:15

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	48709486	0.0500	0.0500	
2	2.403	2.403	0.000	40910703	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.993	2.993	0.000	22963690	0.0250	0.0238	
2	3.840	3.840	0.000	19602740	0.0250	0.0234	
						RPD = 1.82	
6 PCB-1016							M
1	3.568	3.568	0.000	7917028	0.5000	0.4633	
1	4.089	4.089	0.000	15729611	0.5000	0.4593	
1	4.744	4.744	0.000	33344163	0.5000	0.4724	M
1	4.923	4.923	0.000	14147990	0.5000	0.4666	
1	5.259	5.259	0.000	5897274	0.5000	0.4649	
		Average of Peak Amounts =				0.4653	
2	4.640	4.640	0.000	7198494	0.5000	0.4695	
2	5.241	5.241	0.000	13976605	0.5000	0.4609	
2	5.881	5.881	0.000	28388670	0.5000	0.4615	
2	6.062	6.062	0.000	11700602	0.5000	0.4608	
2	6.393	6.393	0.000	6837853	0.5000	0.4608	
		Average of Peak Amounts =				0.4627	
						RPD = 0.56	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	7.022	7.022	0.000	17484826	0.5000	0.4695	
1	7.363	7.363	0.000	26414177	0.5000	0.4649	
1	7.694	7.694	0.000	29479286	0.5000	0.4682	
1	8.500	8.500	0.000	38623436	0.5000	0.4706	
1	8.820	8.820	0.000	19247085	0.5000	0.4629	
		Average of Peak Amounts =				0.4672	
2	8.270	8.270	0.000	14179532	0.5000	0.4641	
2	8.531	8.531	0.000	16826323	0.5000	0.4544	
2	9.366	9.366	0.000	13603911	0.5000	0.4420	
2	9.628	9.628	0.000	31067603	0.5000	0.4574	
2	9.992	9.992	0.000	21955702	0.5000	0.4535	
		Average of Peak Amounts =				0.4543	
						RPD = 2.81	
$ 12 DCB Decachlorobiphenyl							
1	9.950	9.950	0.000	17617139	0.0250	0.0222	
2	11.087	11.087	0.000	14913014	0.0250	0.0225	
						RPD = 1.27	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@0.5PPM_00083 Amount Added: 1.00 Units: mL

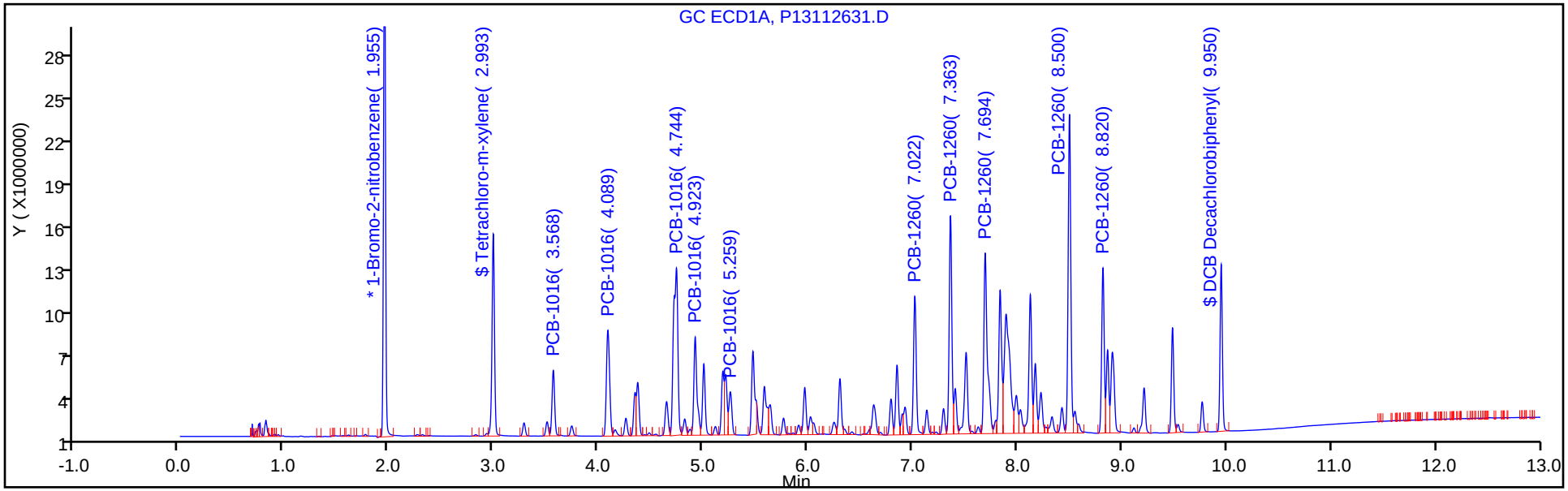
Report Date: 27-Nov-2018 10:34:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

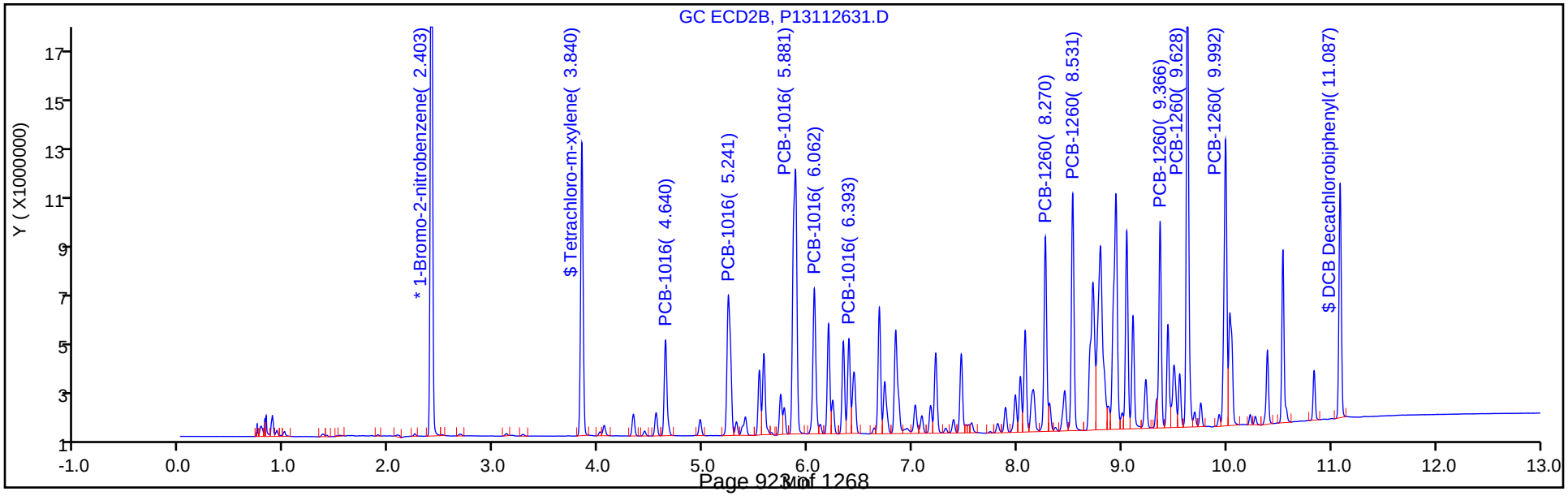
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112631.D

Injection Date:	26-Nov-2018 23:01:07	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std05 1660			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112632.D
Lims ID: std1 1660
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 26-Nov-2018 23:19:24 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-032
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:34:48 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:44:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	52144316	0.0500	0.0500	
2	2.403	2.403	0.000	44213683	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.994	2.993	0.001	48980089	0.0500	0.0475	
2	3.841	3.840	0.001	41530133	0.0500	0.0459	
						RPD = 3.44	
6 PCB-1016							M
1	3.568	3.568	0.000	15412183	1.00	0.8424	
1	4.090	4.089	0.001	31783187	1.00	0.8668	
1	4.746	4.744	0.002	70936608	1.00	0.9388	M
1	4.924	4.923	0.001	29184930	1.00	0.8991	M
1	5.260	5.259	0.001	11818167	1.00	0.8703	
		Average of Peak Amounts =				0.8835	
2	4.641	4.640	0.001	13985057	1.00	0.8440	
2	5.241	5.241	0.000	27627772	1.00	0.8431	
2	5.882	5.881	0.001	58738053	1.00	0.8835	
2	6.062	6.062	0.000	23695179	1.00	0.8636	
2	6.393	6.393	0.000	13577925	1.00	0.8466	
		Average of Peak Amounts =				0.8562	
						RPD = 3.14	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	7.022	7.022	0.000	36674804	1.00	0.9200	
1	7.363	7.363	0.000	56916352	1.00	0.9358	
1	7.695	7.694	0.001	63806332	1.00	0.9466	
1	8.501	8.500	0.001	85961998	1.00	0.9785	
1	8.820	8.820	0.000	42846978	1.00	0.9626	
		Average of Peak Amounts =				0.9487	
2	8.271	8.270	0.001	29073855	1.00	0.8805	
2	8.531	8.531	0.000	34937789	1.00	0.8731	
2	9.367	9.366	0.001	28339554	1.00	0.8519	
2	9.627	9.628	-0.001	67183403	1.00	0.9152	
2	9.992	9.992	0.000	46676643	1.00	0.8920	
		Average of Peak Amounts =				0.8825	
						RPD = 7.22	
$ 12 DCB Decachlorobiphenyl							
1	9.951	9.950	0.001	39094650	0.0500	0.0461	
2	11.086	11.087	-0.001	33354798	0.0500	0.0466	
						RPD = 1.10	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG1660@1.0PPM_00029 Amount Added: 1.00 Units: mL

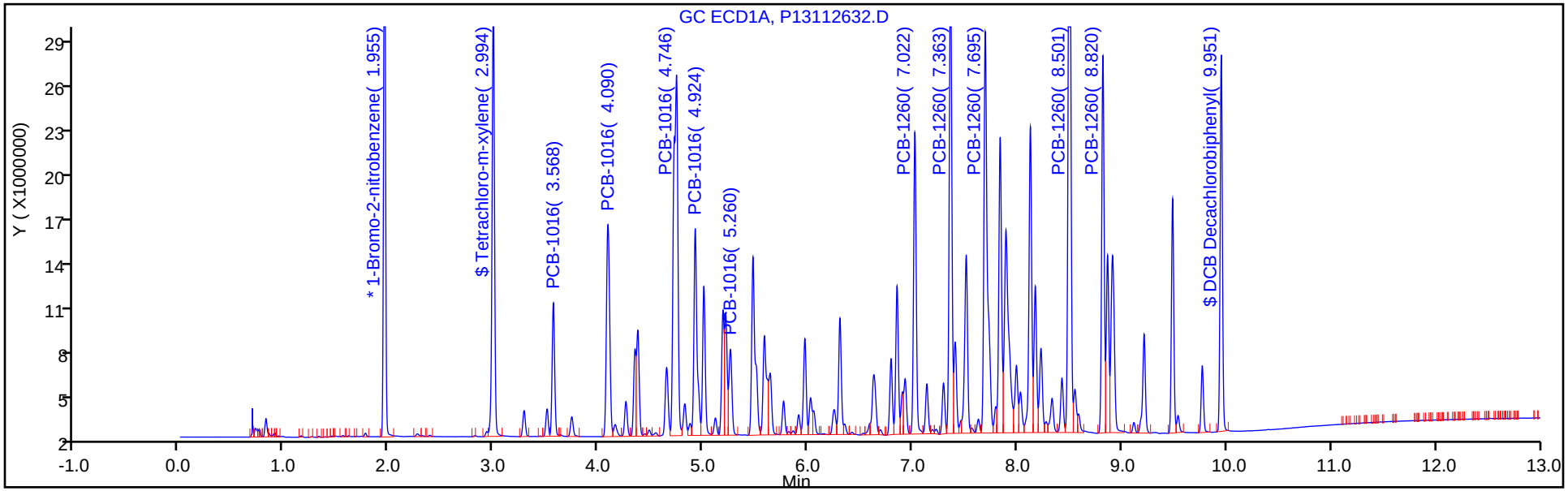
Report Date: 27-Nov-2018 10:34:49 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

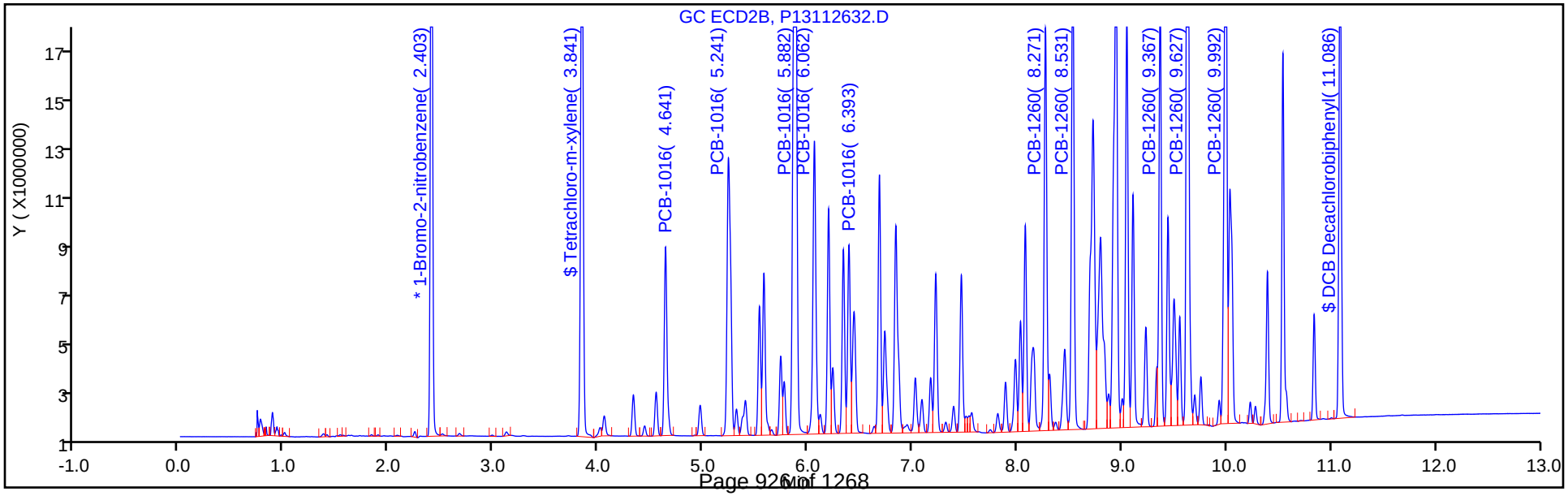
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112632.D

Injection Date:	26-Nov-2018 23:19:24	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std1 1660			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D
Lims ID: std15 1660
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 26-Nov-2018 23:37:52 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-033
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:34:43 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:45:45

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	50199454	0.0500	0.0500	
2	2.402	2.403	-0.001	42215310	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.994	2.993	0.001	92776275	0.1000	0.0935	
2	3.840	3.840	0.000	77585742	0.1000	0.0898	
						RPD = 4.00	
6 PCB-1016							M
1	3.567	3.568	-0.001	23320594	1.50	1.32	
1	4.089	4.089	0.000	46020140	1.50	1.30	
1	4.744	4.744	0.000	104647257	1.50	1.44	M
1	4.922	4.923	-0.001	42743836	1.50	1.37	M
1	5.259	5.259	0.000	17411796	1.50	1.33	
		Average of Peak Amounts =				1.35	
2	4.639	4.640	-0.001	19899500	1.50	1.26	
2	5.241	5.241	0.000	39699546	1.50	1.27	
2	5.881	5.881	0.000	86551988	1.50	1.36	
2	6.061	6.062	-0.001	34342202	1.50	1.31	
2	6.391	6.393	-0.002	19378641	1.50	1.27	
		Average of Peak Amounts =				1.29	
						RPD = 4.53	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							Ma
1	7.021	7.022	-0.001	53826568	1.50	1.40	
1	7.361	7.363	-0.002	83927181	1.50	1.43	
1	7.694	7.694	0.000	93475363	1.50	1.44	a
1	8.498	8.500	-0.002	125204670	1.50	1.48	
1	8.818	8.820	-0.002	61888653	1.50	1.44	
		Average of Peak Amounts =				1.44	
2	8.269	8.270	-0.001	41584996	1.50	1.32	M
2	8.529	8.531	-0.002	50072159	1.50	1.31	M
2	9.364	9.366	-0.002	43794277	1.50	1.38	M
2	9.626	9.628	-0.002	97105689	1.50	1.39	M
2	9.990	9.992	-0.002	66963138	1.50	1.34	M
		Average of Peak Amounts =				1.35	
						RPD = 6.70	
$ 12 DCB Decachlorobiphenyl							
1	9.948	9.950	-0.002	68064975	0.1000	0.0834	
2	11.083	11.087	-0.004	56919601	0.1000	0.0833	
						RPD = 0.08	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SG1660@1.5PPM_00005 Amount Added: 1.00 Units: mL

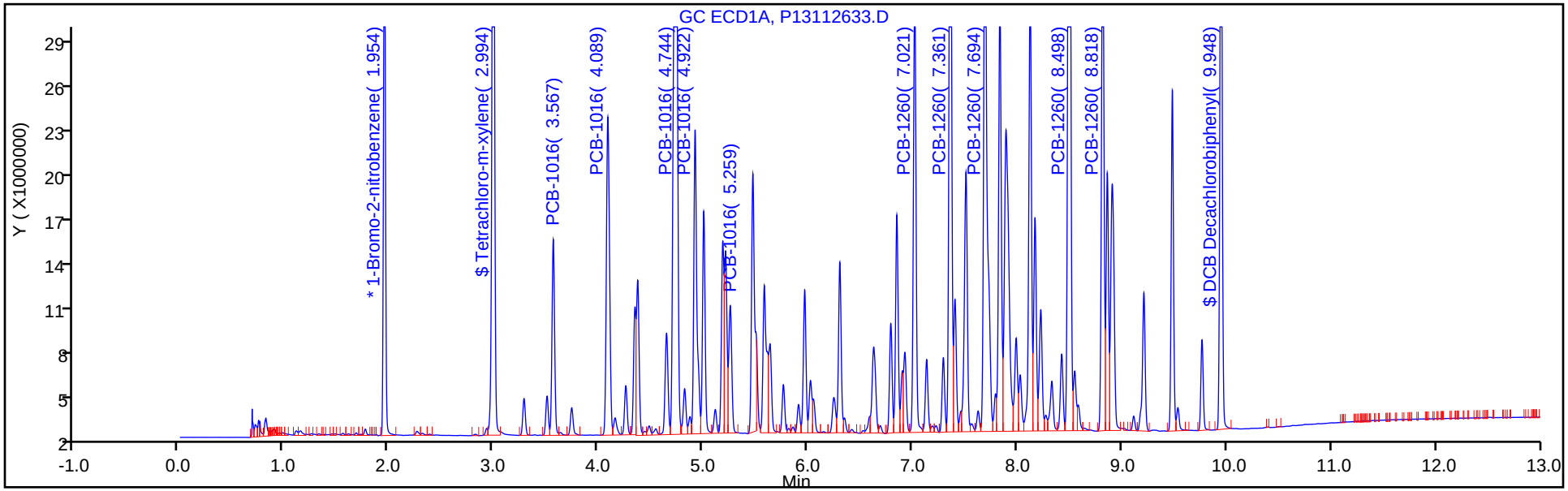
Report Date: 27-Nov-2018 10:34:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

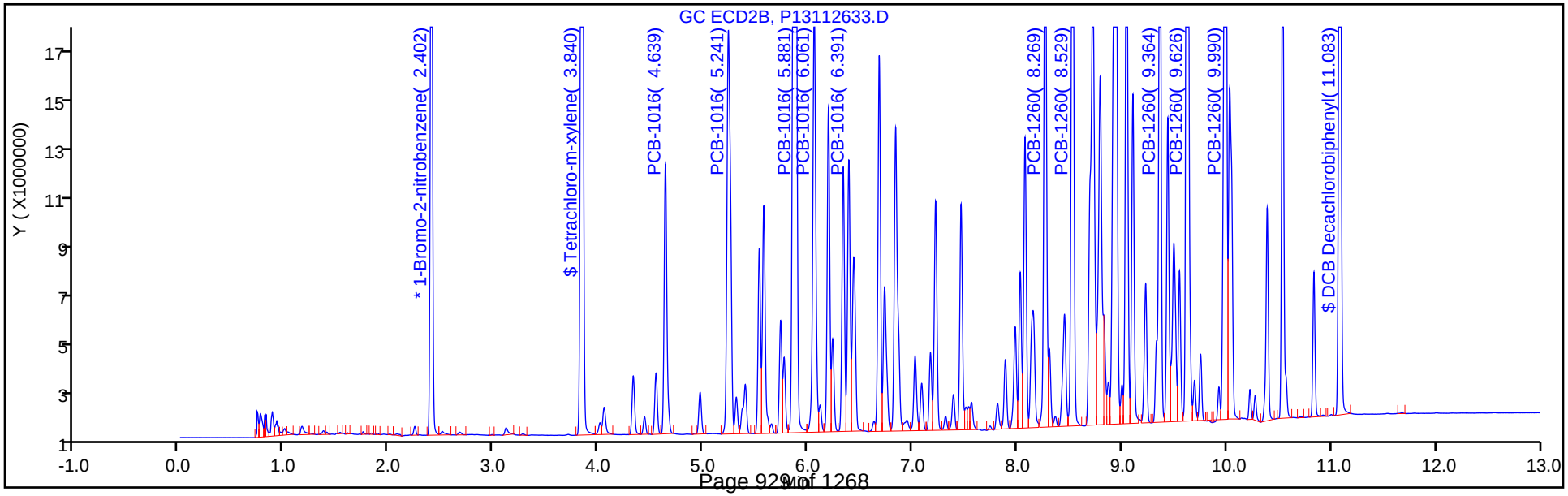
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Injection Date:	26-Nov-2018 23:37:52	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	std15 1660			Worklist Smp#:	33
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:34:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Injection Date: 26-Nov-2018 23:37:52 Instrument ID: A2HP13

Lims ID: std15 1660

Client ID:

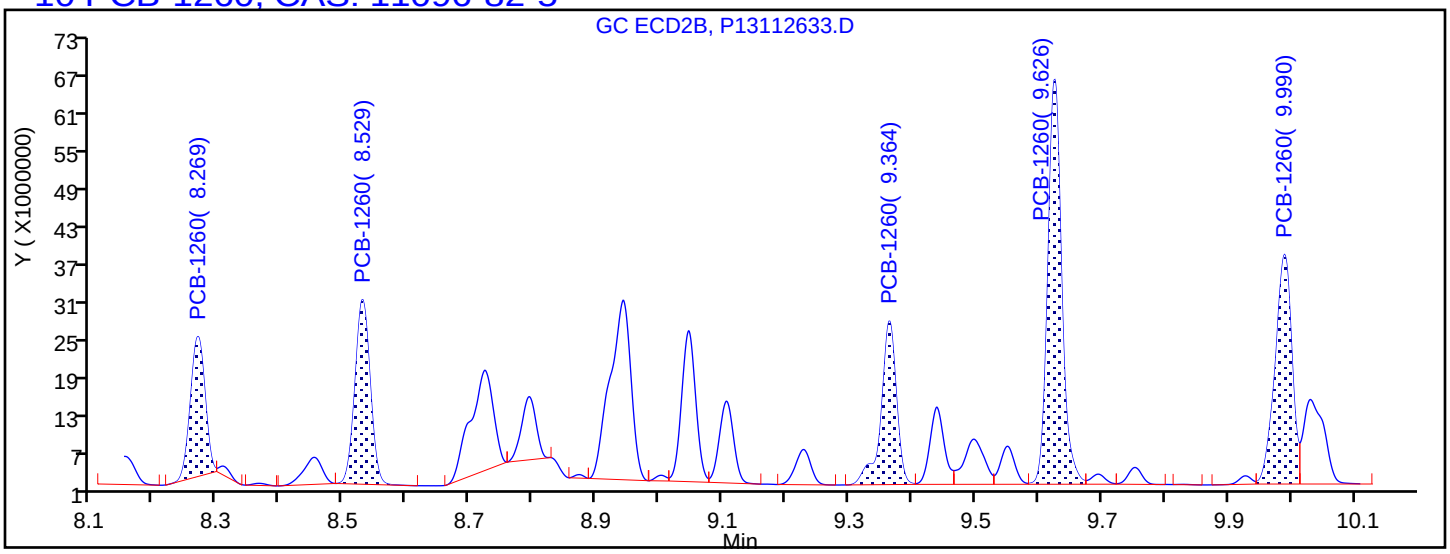
Operator ID: ALS Bottle#: 33 Worklist Smp#: 33

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

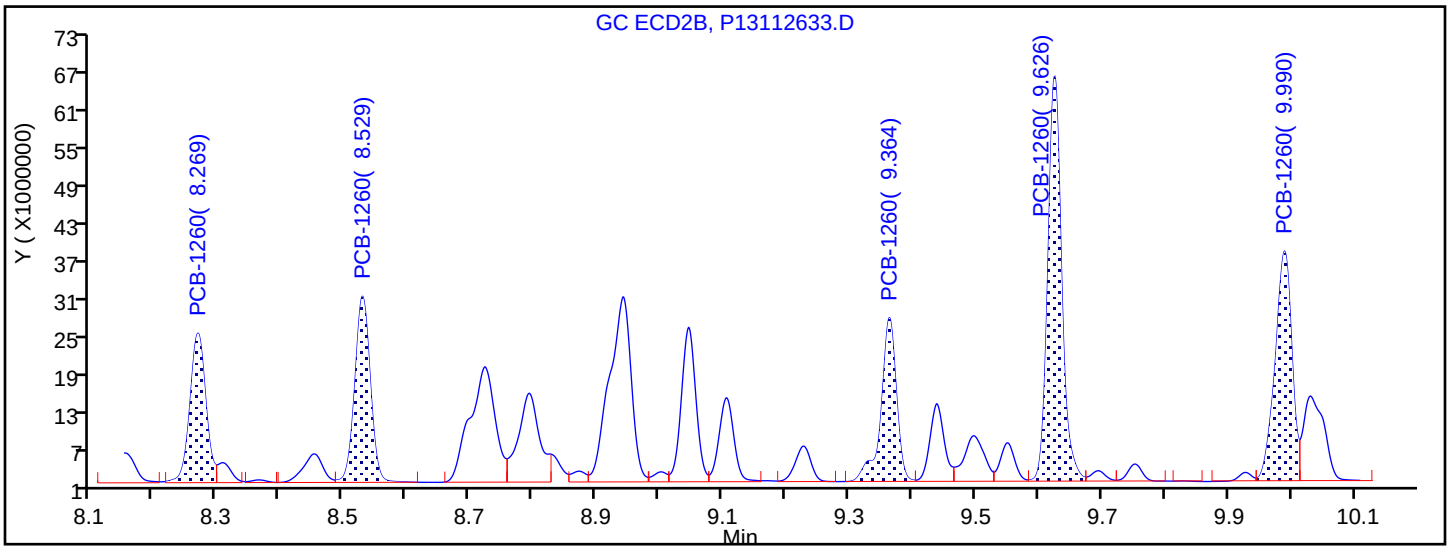
Column: Detector GC ecd2b

10 PCB-1260, CAS: 11096-82-5



Processing Integration Results

8.269	Response = 35624091
8.529	Response = 48656728
9.364	Response = 43588782
9.626	Response = 96853240
9.990	Response = 66896283



Manual Integration Results

8.269	Response = 41584996	M
8.529	Response = 50072159	M
9.364	Response = 43794277	M
9.626	Response = 97105689	M
9.990	Response = 66963138	M

Reviewer: hassl, 27-Nov-2018 06:44:59

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/34 Calibration Date: 11/26/2018 23:56

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 20:15

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 21:47

Lab File ID: P13112634.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Ave	0.0108	0.0094		0.437	0.500	-12.7	20.0
PCB-1221 Peak 2	Ave	0.0071	0.0064		0.448	0.500	-10.5	20.0
PCB-1221 Peak 3	Ave	0.0250	0.0213		0.426	0.500	-14.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/34 Calibration Date: 11/26/2018 23:56

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 20:15

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 21:47

Lab File ID: P13112634.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	3.29	3.27	3.31
PCB-1221 Peak 2	3.51	3.49	3.53
PCB-1221 Peak 3	3.57	3.55	3.59

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112634.D
Lims ID: icv 1221
Client ID:
Sample Type: ICV
Inject. Date: 26-Nov-2018 23:56:08 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-034
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:16:56 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:46:48

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	50098480	0.0500	0.0500	
2	2.404	2.403	0.001	42130883	0.0500	0.0500	
3 PCB-1221							
1	3.289	3.289	0.000	4725378	0.5000	0.4367	
1	3.508	3.509	-0.001	3192656	0.5000	0.4476	
1	3.568	3.568	0.000	10690747	0.5000	0.4265	
		Average of Peak Amounts =				0.4369	
2	4.333	4.334	-0.001	4297094	0.5000	0.4251	
2	4.551	4.551	0.000	2927253	0.5000	0.4339	
2	4.642	4.642	0.000	9895929	0.5000	0.4256	
		Average of Peak Amounts =				0.4282	
						RPD = 2.01	

Reagents:

SG1221ICV@1.0_00025 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

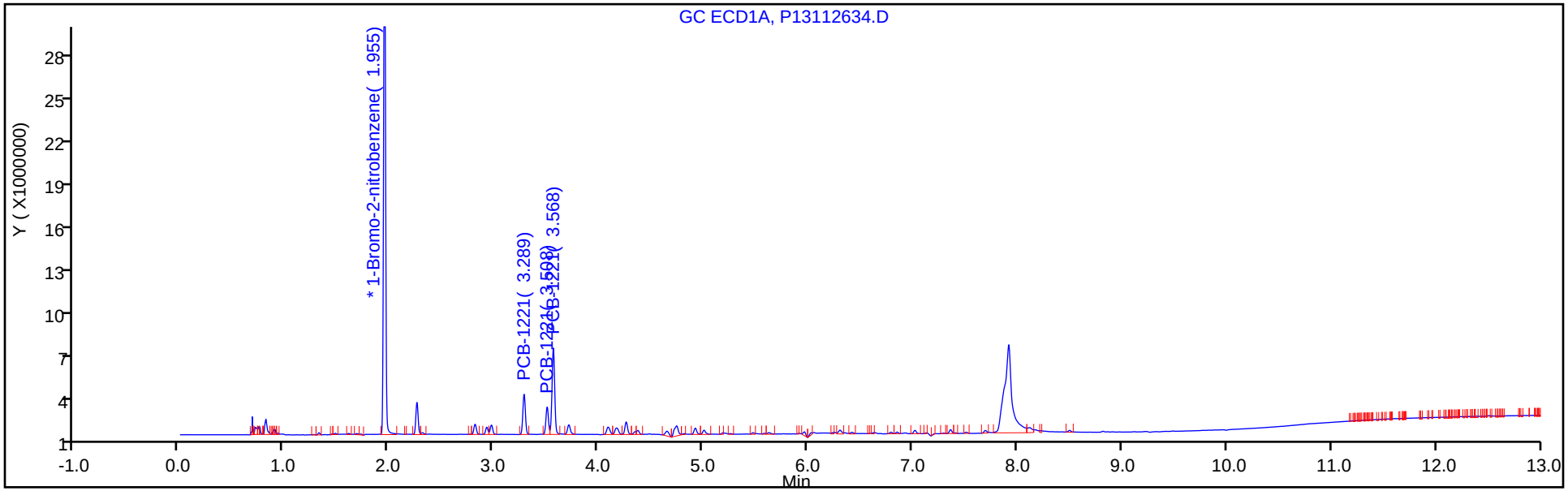
Report Date: 27-Nov-2018 10:34:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

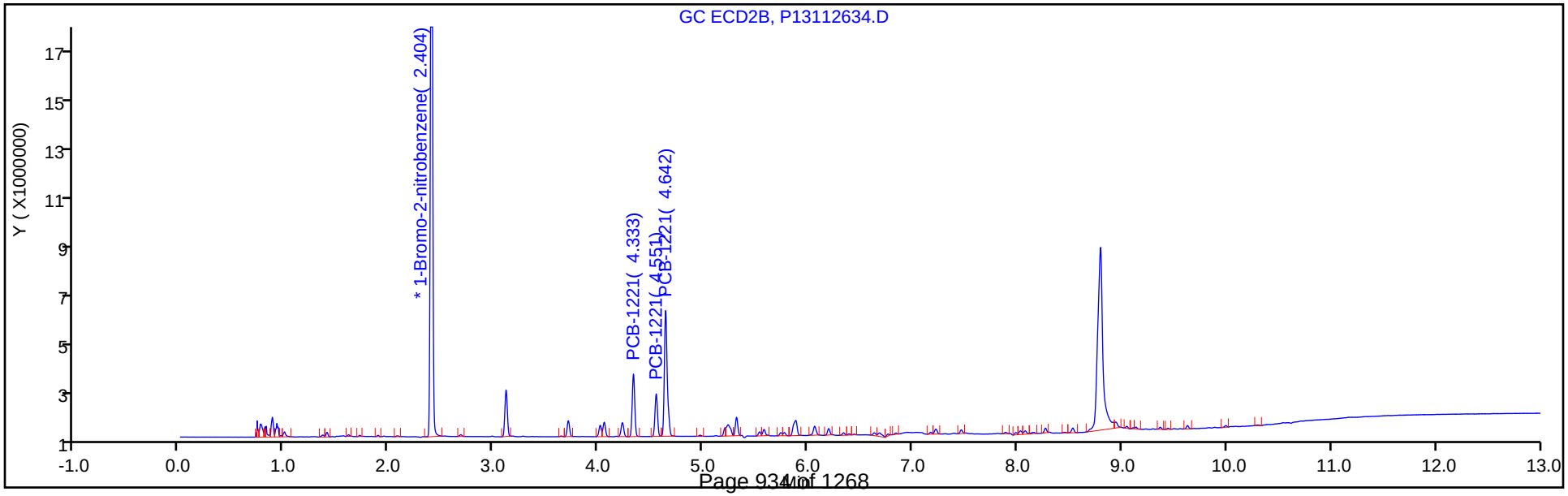
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112634.D

Injection Date:	26-Nov-2018 23:56:08	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1221			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/34 Calibration Date: 11/26/2018 23:56

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 20:15

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 21:47

Lab File ID: P13112634.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Ave	0.0120	0.0102		0.425	0.500	-15.0	20.0
PCB-1221 Peak 2	Ave	0.0080	0.0070		0.434	0.500	-13.2	20.0
PCB-1221 Peak 3	Ave	0.0276	0.0235		0.426	0.500	-14.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/34 Calibration Date: 11/26/2018 23:56

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 20:15

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 21:47

Lab File ID: P13112634.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	4.33	4.32	4.35
PCB-1221 Peak 2	4.55	4.53	4.57
PCB-1221 Peak 3	4.64	4.62	4.66

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112634.D
Lims ID: icv 1221
Client ID:
Sample Type: ICV
Inject. Date: 26-Nov-2018 23:56:08 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-034
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:16:56 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:46:48

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	50098480	0.0500	0.0500	
2	2.404	2.403	0.001	42130883	0.0500	0.0500	
3 PCB-1221							
1	3.289	3.289	0.000	4725378	0.5000	0.4367	
1	3.508	3.509	-0.001	3192656	0.5000	0.4476	
1	3.568	3.568	0.000	10690747	0.5000	0.4265	
		Average of Peak Amounts =				0.4369	
2	4.333	4.334	-0.001	4297094	0.5000	0.4251	
2	4.551	4.551	0.000	2927253	0.5000	0.4339	
2	4.642	4.642	0.000	9895929	0.5000	0.4256	
		Average of Peak Amounts =				0.4282	
						RPD = 2.01	

Reagents:

SG1221ICV@1.0_00025 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

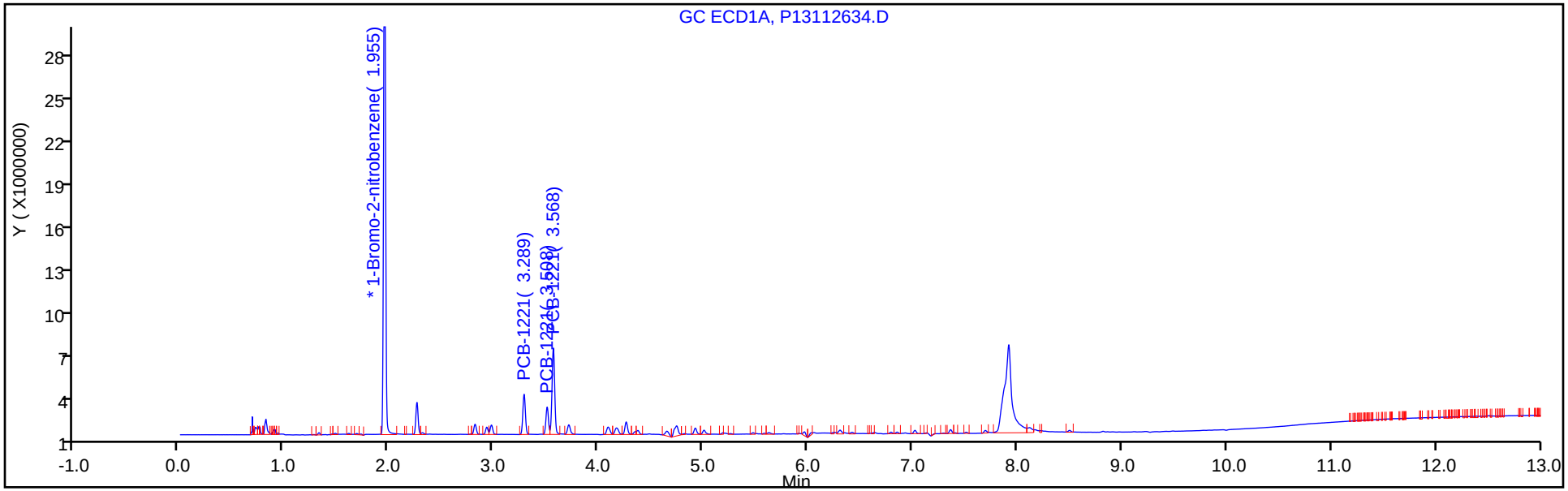
Report Date: 27-Nov-2018 10:34:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

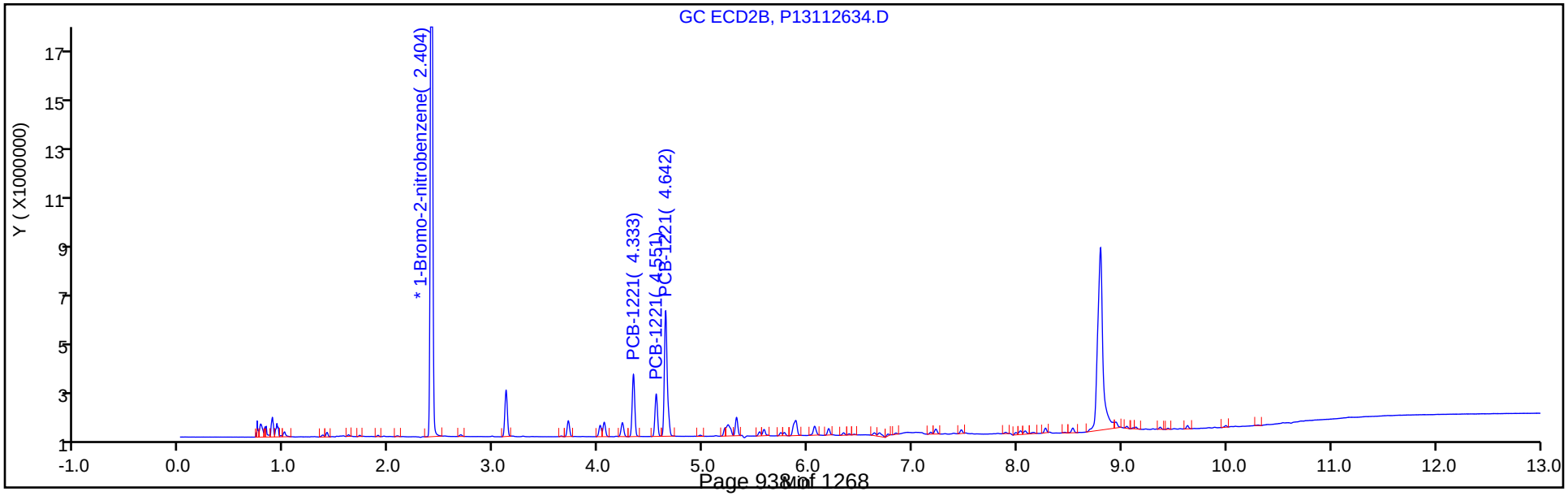
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112634.D

Injection Date:	26-Nov-2018 23:56:08	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1221			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/35 Calibration Date: 11/27/2018 00:14

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 14:45

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 16:16

Lab File ID: P13112635.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Ave	0.0207	0.0198		0.478	0.500	-4.5	20.0
PCB-1232 Peak 2	Ave	0.0168	0.0180		0.536	0.500	7.1	20.0
PCB-1232 Peak 3	Ave	0.0337	0.0359		0.533	0.500	6.6	20.0
PCB-1232 Peak 4	Ave	0.0146	0.0163		0.558	0.500	11.6	20.0
PCB-1232 Peak 5	Ave	0.0054	0.0061		0.565	0.500	12.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/35 Calibration Date: 11/27/2018 00:14

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 14:45

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 16:16

Lab File ID: P13112635.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	3.57	3.55	3.59
PCB-1232 Peak 2	4.09	4.07	4.11
PCB-1232 Peak 3	4.74	4.73	4.77
PCB-1232 Peak 4	4.92	4.91	4.94
PCB-1232 Peak 5	5.26	5.24	5.28

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112635.D
Lims ID: icv 1232
Client ID:
Sample Type: ICV
Inject. Date: 27-Nov-2018 00:14:25 ALS Bottle#: 35 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-035
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:16:56 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:47:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	48125490	0.0500	0.0500	
2	2.403	2.403	0.000	40380921	0.0500	0.0500	
4 PCB-1232							
1	3.567	3.569	-0.002	9502527	0.5000	0.4777	
1	4.089	4.092	-0.003	8666726	0.5000	0.5357	
1	4.744	4.746	-0.002	17266691	0.5000	0.5328	
1	4.922	4.925	-0.003	7846285	0.5000	0.5578	
1	5.258	5.259	-0.001	2916762	0.5000	0.5645	
		Average of Peak Amounts =				0.5337	
2	4.639	4.643	-0.004	9179968	0.5000	0.4979	
2	5.241	5.244	-0.003	8029158	0.5000	0.5185	
2	5.882	5.885	-0.003	15711815	0.5000	0.5378	
2	6.062	6.066	-0.004	6586979	0.5000	0.5514	
2	6.392	6.395	-0.003	3513144	0.5000	0.5578	
		Average of Peak Amounts =				0.5327	
						RPD = 0.19	

Reagents:

SG1232ICV@1.0_00023 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

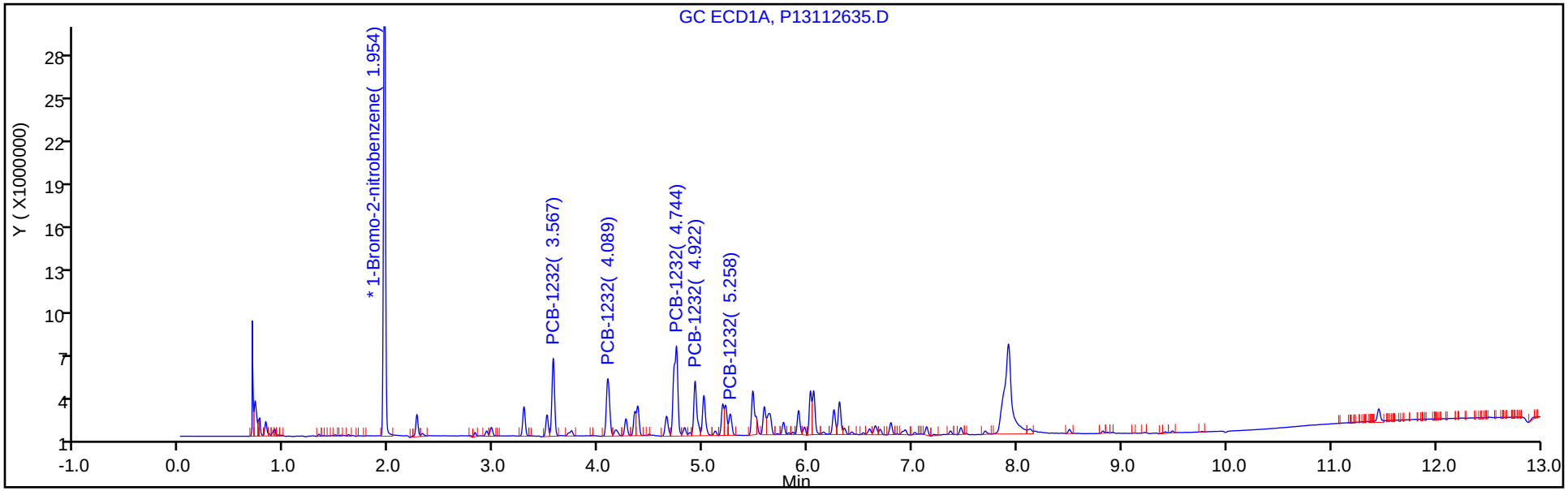
Report Date: 27-Nov-2018 10:34:36 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

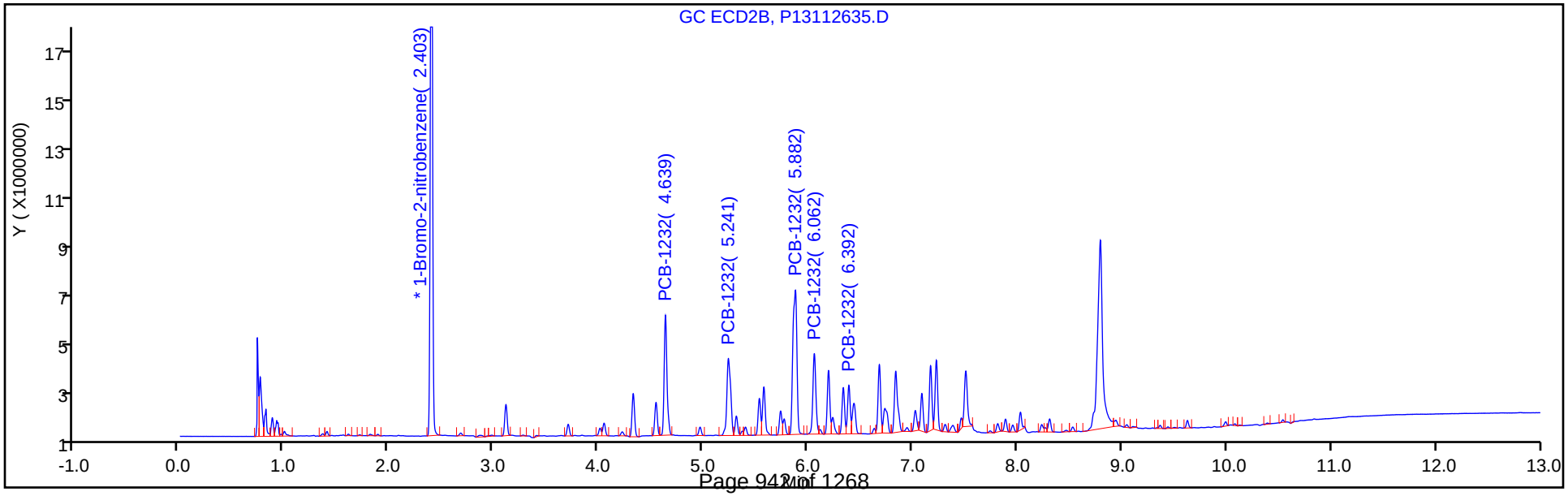
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112635.D

Injection Date:	27-Nov-2018 00:14:25	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1232			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/35 Calibration Date: 11/27/2018 00:14

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 14:45

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 16:16

Lab File ID: P13112635.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Ave	0.0228	0.0227		0.498	0.500	-0.4	20.0
PCB-1232 Peak 2	Ave	0.0192	0.0199		0.518	0.500	3.7	20.0
PCB-1232 Peak 3	Ave	0.0362	0.0389		0.538	0.500	7.6	20.0
PCB-1232 Peak 4	Ave	0.0148	0.0163		0.551	0.500	10.3	20.0
PCB-1232 Peak 5	Ave	0.0078	0.0087		0.558	0.500	11.6	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/35 Calibration Date: 11/27/2018 00:14

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 14:45

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 16:16

Lab File ID: P13112635.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	4.64	4.62	4.66
PCB-1232 Peak 2	5.24	5.23	5.26
PCB-1232 Peak 3	5.88	5.87	5.90
PCB-1232 Peak 4	6.06	6.05	6.09
PCB-1232 Peak 5	6.39	6.38	6.41

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112635.D
Lims ID: icv 1232
Client ID:
Sample Type: ICV
Inject. Date: 27-Nov-2018 00:14:25 ALS Bottle#: 35 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-035
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:16:56 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:47:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	48125490	0.0500	0.0500	
2	2.403	2.403	0.000	40380921	0.0500	0.0500	
4 PCB-1232							
1	3.567	3.569	-0.002	9502527	0.5000	0.4777	
1	4.089	4.092	-0.003	8666726	0.5000	0.5357	
1	4.744	4.746	-0.002	17266691	0.5000	0.5328	
1	4.922	4.925	-0.003	7846285	0.5000	0.5578	
1	5.258	5.259	-0.001	2916762	0.5000	0.5645	
		Average of Peak Amounts =				0.5337	
2	4.639	4.643	-0.004	9179968	0.5000	0.4979	
2	5.241	5.244	-0.003	8029158	0.5000	0.5185	
2	5.882	5.885	-0.003	15711815	0.5000	0.5378	
2	6.062	6.066	-0.004	6586979	0.5000	0.5514	
2	6.392	6.395	-0.003	3513144	0.5000	0.5578	
		Average of Peak Amounts =				0.5327	
						RPD = 0.19	

Reagents:

SG1232ICV@1.0_00023 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

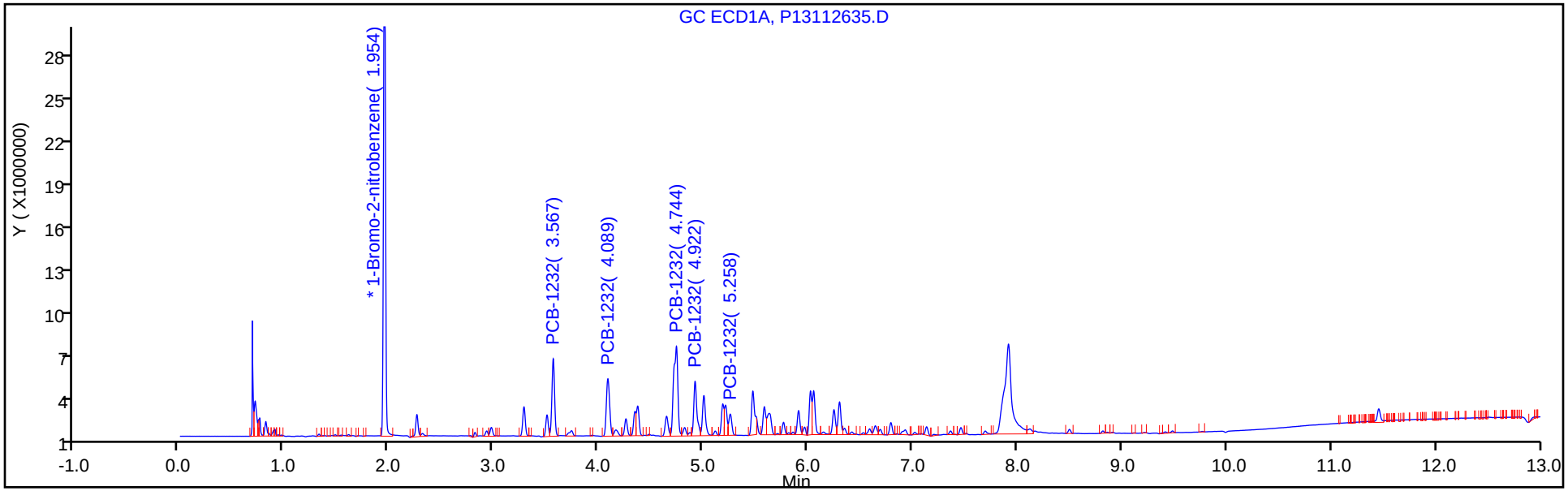
Report Date: 27-Nov-2018 10:34:37 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

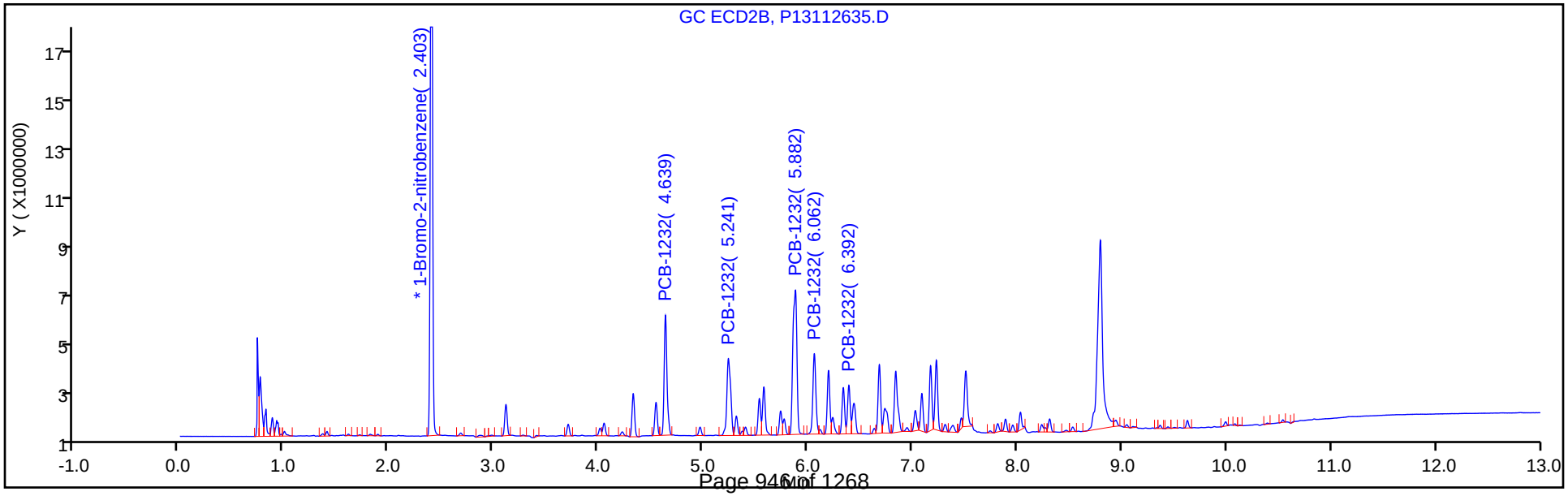
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112635.D

Injection Date:	27-Nov-2018 00:14:25	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1232			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/36 Calibration Date: 11/27/2018 00:32

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 16:35

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 18:07

Lab File ID: P13112636.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Ave	0.0146	0.0134		0.460	0.500	-8.0	20.0
PCB-1242 Peak 2	Ave	0.0281	0.0298		0.530	0.500	6.0	20.0
PCB-1242 Peak 3	Ave	0.0573	0.0610		0.532	0.500	6.4	20.0
PCB-1242 Peak 4	Ave	0.0248	0.0272		0.548	0.500	9.6	20.0
PCB-1242 Peak 5	Ave	0.0104	0.0113		0.541	0.500	8.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/36 Calibration Date: 11/27/2018 00:32

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 16:35

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 18:07

Lab File ID: P13112636.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	3.57	3.55	3.59
PCB-1242 Peak 2	4.09	4.07	4.11
PCB-1242 Peak 3	4.74	4.73	4.77
PCB-1242 Peak 4	4.92	4.91	4.94
PCB-1242 Peak 5	5.26	5.24	5.28

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112636.D
Lims ID: icv 1242
Client ID:
Sample Type: ICV
Inject. Date: 27-Nov-2018 00:32:44 ALS Bottle#: 36 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-036
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:16:56 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:47:41

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	54516689	0.0500	0.0500	
2	2.403	2.403	0.000	45620153	0.0500	0.0500	
5 PCB-1242							
1	3.567	3.568	-0.001	7309290	0.5000	0.4600	
1	4.089	4.090	-0.001	16216579	0.5000	0.5301	
1	4.744	4.746	-0.002	33238820	0.5000	0.5322	
1	4.924	4.924	0.000	14848089	0.5000	0.5482	
1	5.259	5.260	-0.001	6133500	0.5000	0.5409	
		Average of Peak Amounts =				0.5223	
2	4.639	4.643	-0.004	7530590	0.5000	0.5170	
2	5.241	5.243	-0.002	13878128	0.5000	0.5049	
2	5.882	5.884	-0.002	29907185	0.5000	0.5439	
2	6.062	6.063	-0.001	12297782	0.5000	0.5468	
2	6.393	6.394	-0.001	7286143	0.5000	0.5480	
		Average of Peak Amounts =				0.5321	
						RPD = 1.86	

Reagents:

SG1242ICV@1.0_00024 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

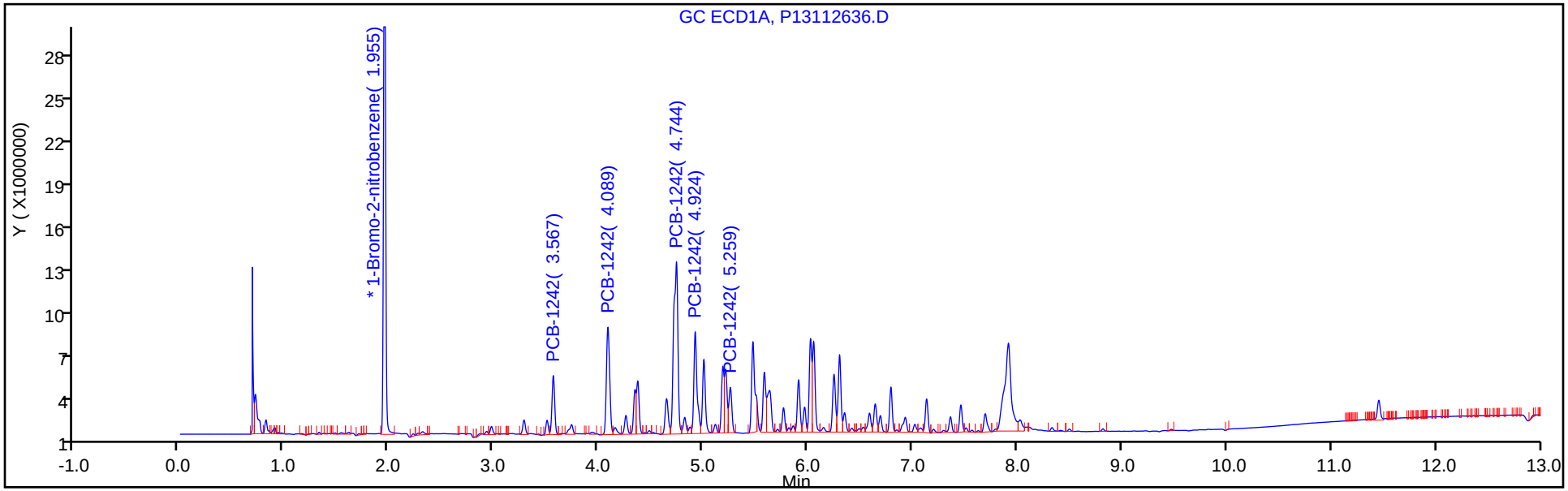
Report Date: 27-Nov-2018 10:34:32 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

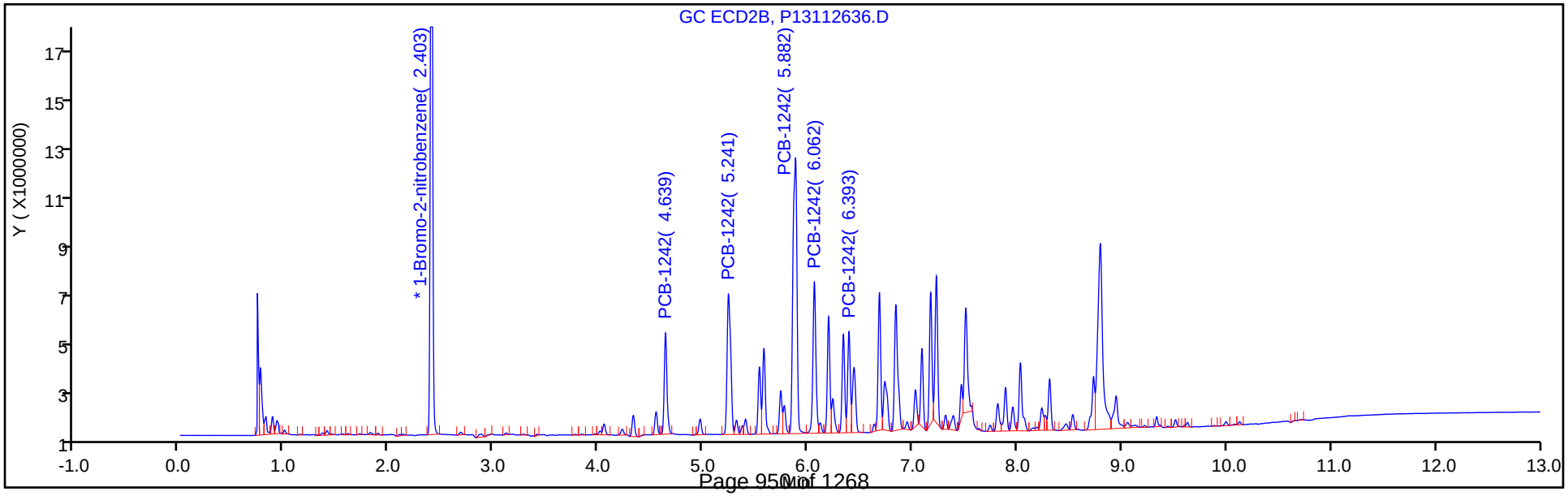
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112636.D

Injection Date:	27-Nov-2018 00:32:44	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1242			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	36
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/36 Calibration Date: 11/27/2018 00:32

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 16:35

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 18:07

Lab File ID: P13112636.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Ave	0.0160	0.0165		0.517	0.500	3.4	20.0
PCB-1242 Peak 2	Ave	0.0301	0.0304		0.505	0.500	1.0	20.0
PCB-1242 Peak 3	Ave	0.0603	0.0656		0.544	0.500	8.8	20.0
PCB-1242 Peak 4	Ave	0.0247	0.0270		0.547	0.500	9.4	20.0
PCB-1242 Peak 5	Ave	0.0146	0.0160		0.548	0.500	9.6	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/36 Calibration Date: 11/27/2018 00:32

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 16:35

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 18:07

Lab File ID: P13112636.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	4.64	4.62	4.66
PCB-1242 Peak 2	5.24	5.22	5.26
PCB-1242 Peak 3	5.88	5.87	5.90
PCB-1242 Peak 4	6.06	6.04	6.08
PCB-1242 Peak 5	6.39	6.38	6.41

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112636.D
Lims ID: icv 1242
Client ID:
Sample Type: ICV
Inject. Date: 27-Nov-2018 00:32:44 ALS Bottle#: 36 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-036
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:16:56 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:47:41

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	54516689	0.0500	0.0500	
2	2.403	2.403	0.000	45620153	0.0500	0.0500	
5 PCB-1242							
1	3.567	3.568	-0.001	7309290	0.5000	0.4600	
1	4.089	4.090	-0.001	16216579	0.5000	0.5301	
1	4.744	4.746	-0.002	33238820	0.5000	0.5322	
1	4.924	4.924	0.000	14848089	0.5000	0.5482	
1	5.259	5.260	-0.001	6133500	0.5000	0.5409	
		Average of Peak Amounts =				0.5223	
2	4.639	4.643	-0.004	7530590	0.5000	0.5170	
2	5.241	5.243	-0.002	13878128	0.5000	0.5049	
2	5.882	5.884	-0.002	29907185	0.5000	0.5439	
2	6.062	6.063	-0.001	12297782	0.5000	0.5468	
2	6.393	6.394	-0.001	7286143	0.5000	0.5480	
		Average of Peak Amounts =				0.5321	
						RPD = 1.86	

Reagents:

SG1242ICV@1.0_00024 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

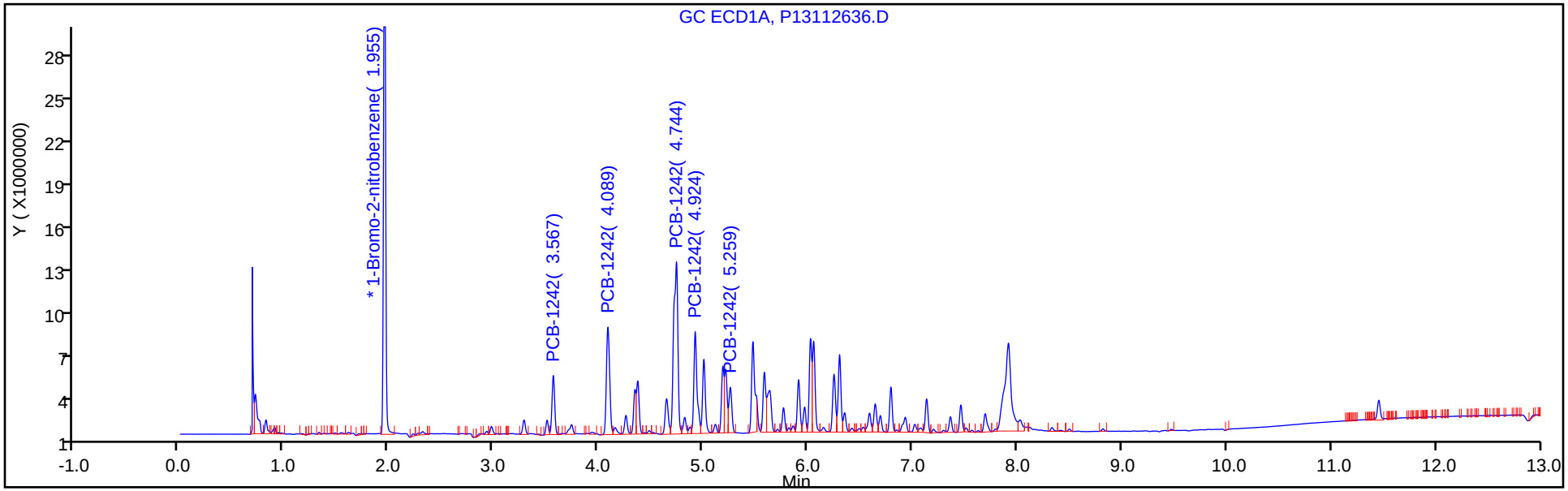
Report Date: 27-Nov-2018 10:34:32 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

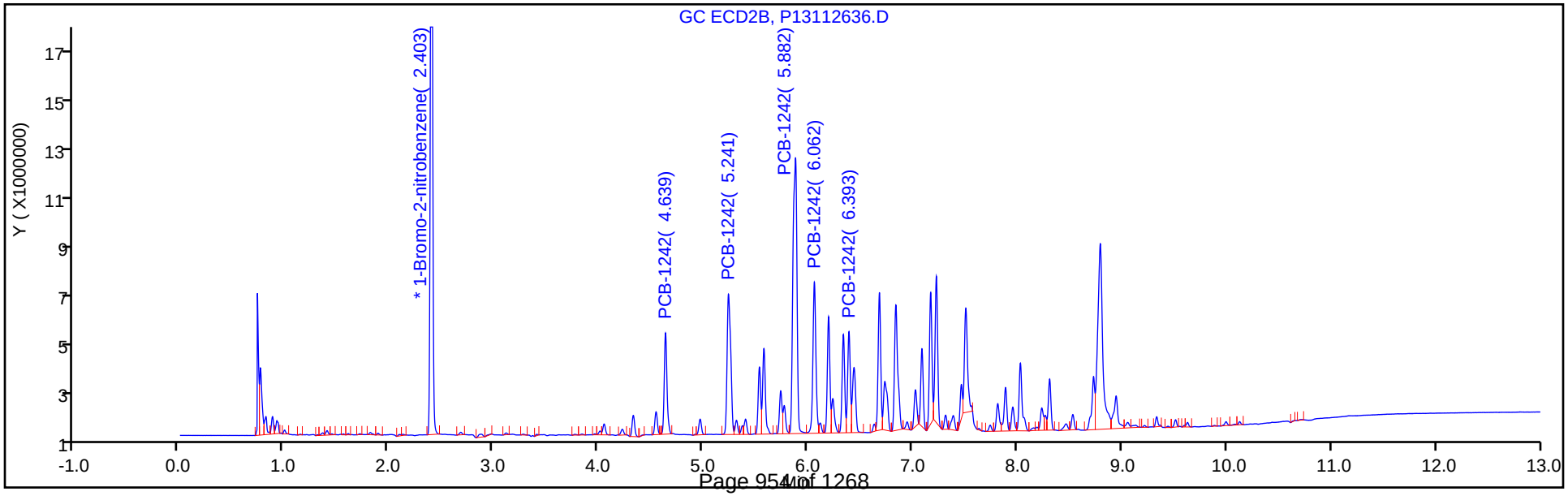
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112636.D

Injection Date:	27-Nov-2018 00:32:44	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1242			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	36
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/37 Calibration Date: 11/27/2018 00:51

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 18:25

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 19:57

Lab File ID: P13112637.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Ave	0.0152	0.0141		0.462	0.500	-7.6	20.0
PCB-1248 Peak 2	Ave	0.0226	0.0219		0.485	0.500	-3.0	20.0
PCB-1248 Peak 3	Ave	0.0331	0.0347		0.524	0.500	4.8	20.0
PCB-1248 Peak 4	Ave	0.0276	0.0291		0.528	0.500	5.7	20.0
PCB-1248 Peak 5	Ave	0.0173	0.0176		0.508	0.500	1.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/37 Calibration Date: 11/27/2018 00:51

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 18:25

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 19:57

Lab File ID: P13112637.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	4.09	4.07	4.11
PCB-1248 Peak 2	5.19	5.17	5.21
PCB-1248 Peak 3	6.03	6.01	6.05
PCB-1248 Peak 4	6.30	6.29	6.33
PCB-1248 Peak 5	6.79	6.78	6.82

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112637.D
Lims ID: icv 1248
Client ID:
Sample Type: ICV
Inject. Date: 27-Nov-2018 00:51:10 ALS Bottle#: 37 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-037
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:16:56 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:48:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	52243481	0.0500	0.0500	
2	2.403	2.403	0.000	43738269	0.0500	0.0500	
7 PCB-1248							M
1	4.088	4.090	-0.002	7351295	0.5000	0.4618	
1	5.188	5.192	-0.004	11456872	0.5000	0.4852	
1	6.025	6.027	-0.002	18141862	0.5000	0.5240	
1	6.303	6.307	-0.004	15214488	0.5000	0.5283	
1	6.794	6.797	-0.003	9214089	0.5000	0.5084	
		Average of Peak Amounts =				0.5015	
2	5.239	5.243	-0.004	6525575	0.5000	0.4539	
2	6.339	6.342	-0.003	9695645	0.5000	0.4788	
2	6.683	6.687	-0.004	13092129	0.5000	0.5015	M
2	7.227	7.230	-0.003	17980297	0.5000	0.5559	M
2	8.029	8.034	-0.005	8944233	0.5000	0.4853	
		Average of Peak Amounts =				0.4951	
						RPD = 1.29	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

SG1248ICV@1.0_00027 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

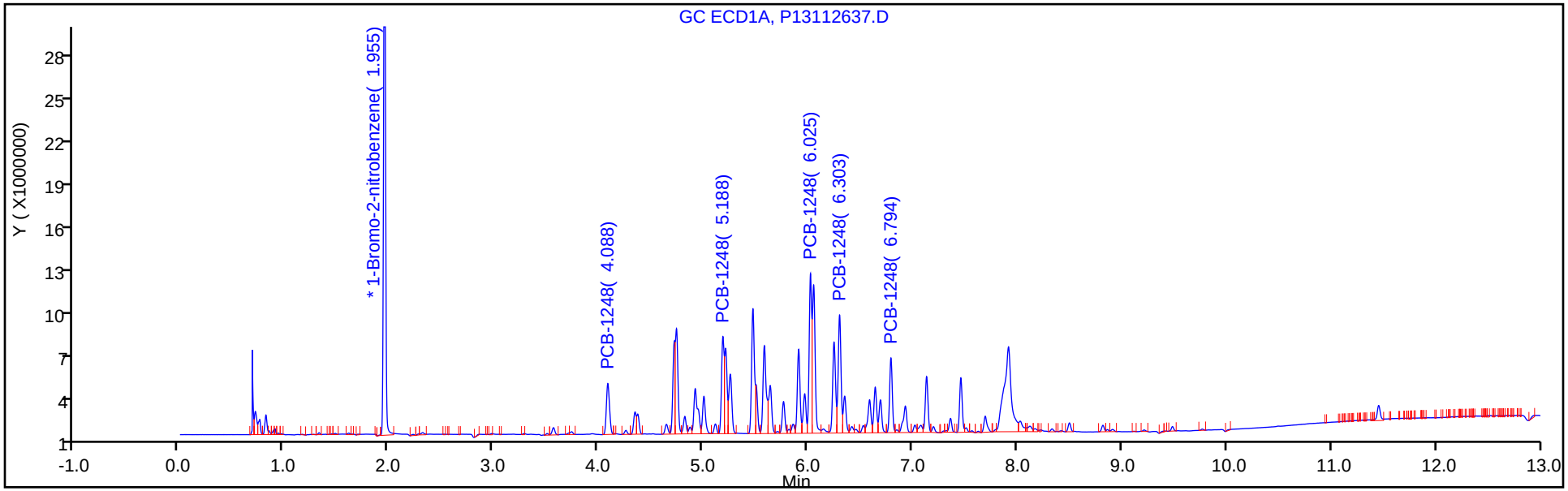
Report Date: 27-Nov-2018 10:34:27 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

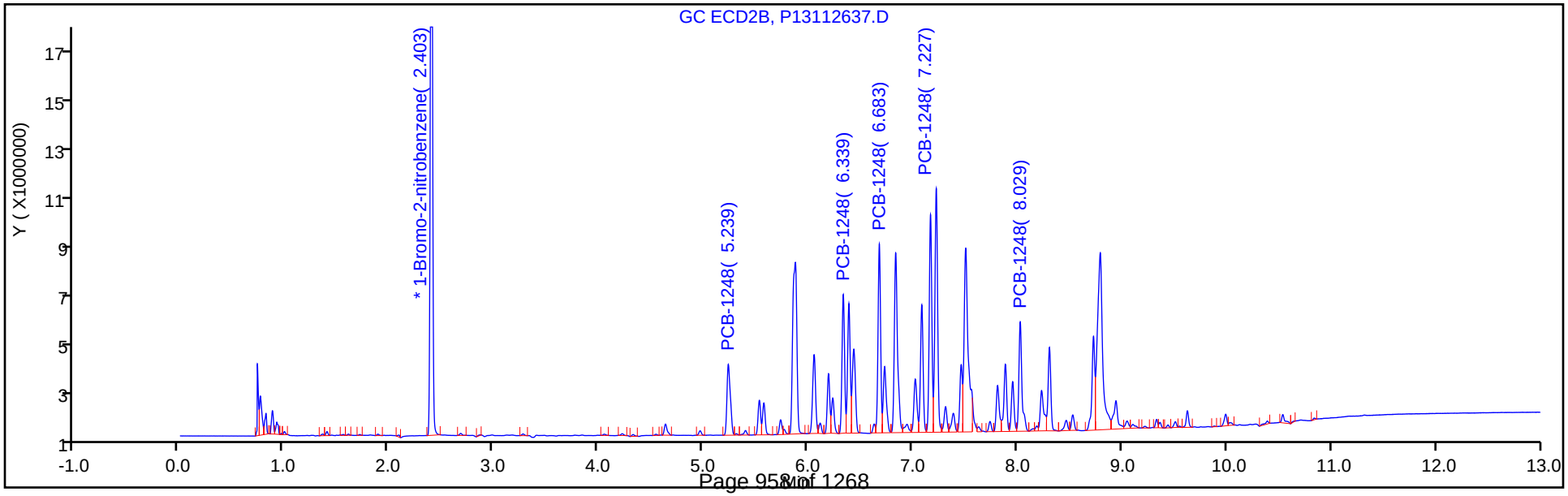
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112637.D

Injection Date:	27-Nov-2018 00:51:10	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1248			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/37 Calibration Date: 11/27/2018 00:51

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 18:25

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 19:57

Lab File ID: P13112637.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Ave	0.0164	0.0149		0.454	0.500	-9.2	20.0
PCB-1248 Peak 2	Ave	0.0232	0.0222		0.479	0.500	-4.2	20.0
PCB-1248 Peak 3	Ave	0.0298	0.0299		0.501	0.500	0.3	20.0
PCB-1248 Peak 4	Ave	0.0370	0.0411		0.556	0.500	11.2	20.0
PCB-1248 Peak 5	Ave	0.0211	0.0205		0.485	0.500	-2.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/37 Calibration Date: 11/27/2018 00:51

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 18:25

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 19:57

Lab File ID: P13112637.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	5.24	5.22	5.26
PCB-1248 Peak 2	6.34	6.32	6.36
PCB-1248 Peak 3	6.68	6.67	6.71
PCB-1248 Peak 4	7.23	7.21	7.25
PCB-1248 Peak 5	8.03	8.02	8.05

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112637.D
Lims ID: icv 1248
Client ID:
Sample Type: ICV
Inject. Date: 27-Nov-2018 00:51:10 ALS Bottle#: 37 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-037
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:16:56 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:48:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.955	1.955	0.000	52243481	0.0500	0.0500	
2	2.403	2.403	0.000	43738269	0.0500	0.0500	
7 PCB-1248							M
1	4.088	4.090	-0.002	7351295	0.5000	0.4618	
1	5.188	5.192	-0.004	11456872	0.5000	0.4852	
1	6.025	6.027	-0.002	18141862	0.5000	0.5240	
1	6.303	6.307	-0.004	15214488	0.5000	0.5283	
1	6.794	6.797	-0.003	9214089	0.5000	0.5084	
		Average of Peak Amounts =				0.5015	
2	5.239	5.243	-0.004	6525575	0.5000	0.4539	
2	6.339	6.342	-0.003	9695645	0.5000	0.4788	
2	6.683	6.687	-0.004	13092129	0.5000	0.5015	M
2	7.227	7.230	-0.003	17980297	0.5000	0.5559	M
2	8.029	8.034	-0.005	8944233	0.5000	0.4853	
		Average of Peak Amounts =				0.4951	
						RPD = 1.29	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

SG1248ICV@1.0_00027 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

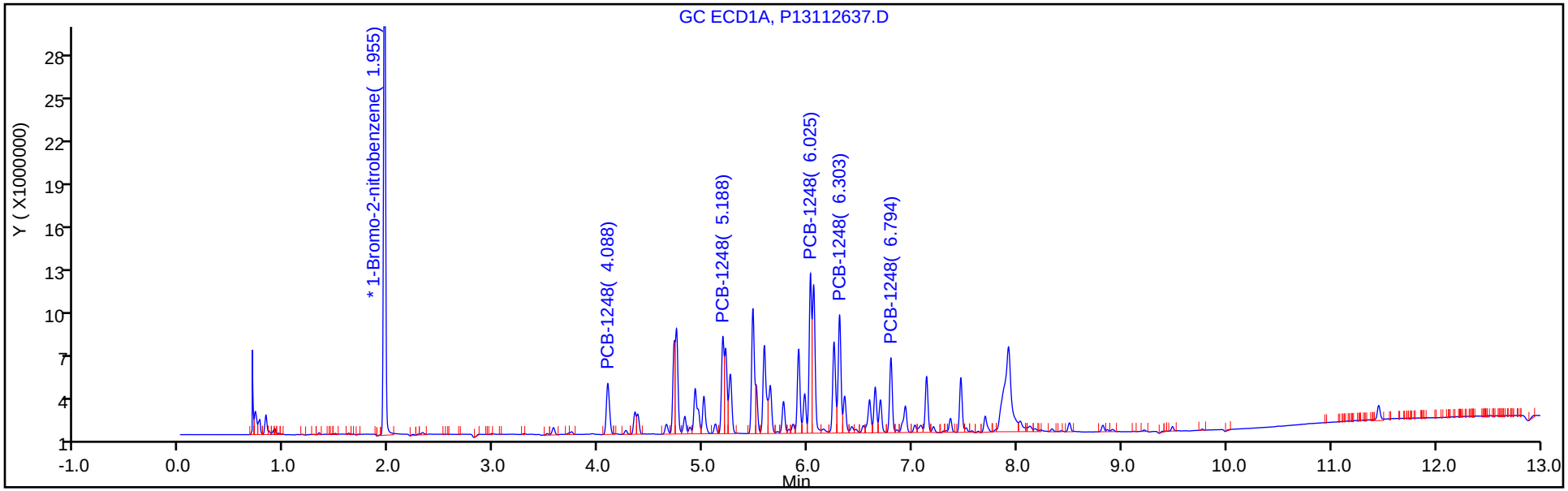
Report Date: 27-Nov-2018 10:34:27 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

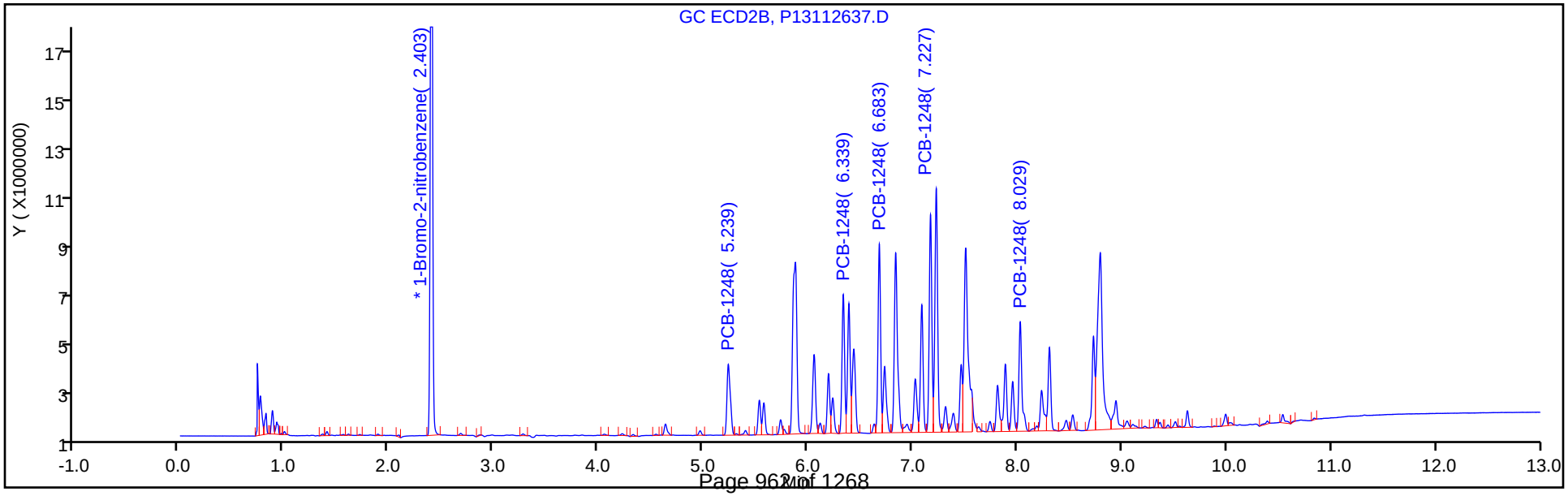
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112637.D

Injection Date:	27-Nov-2018 00:51:10	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1248			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 27-Nov-2018 10:34:28 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112637.D

Injection Date: 27-Nov-2018 00:51:10 Instrument ID: A2HP13

Lims ID: icv 1248

Client ID:

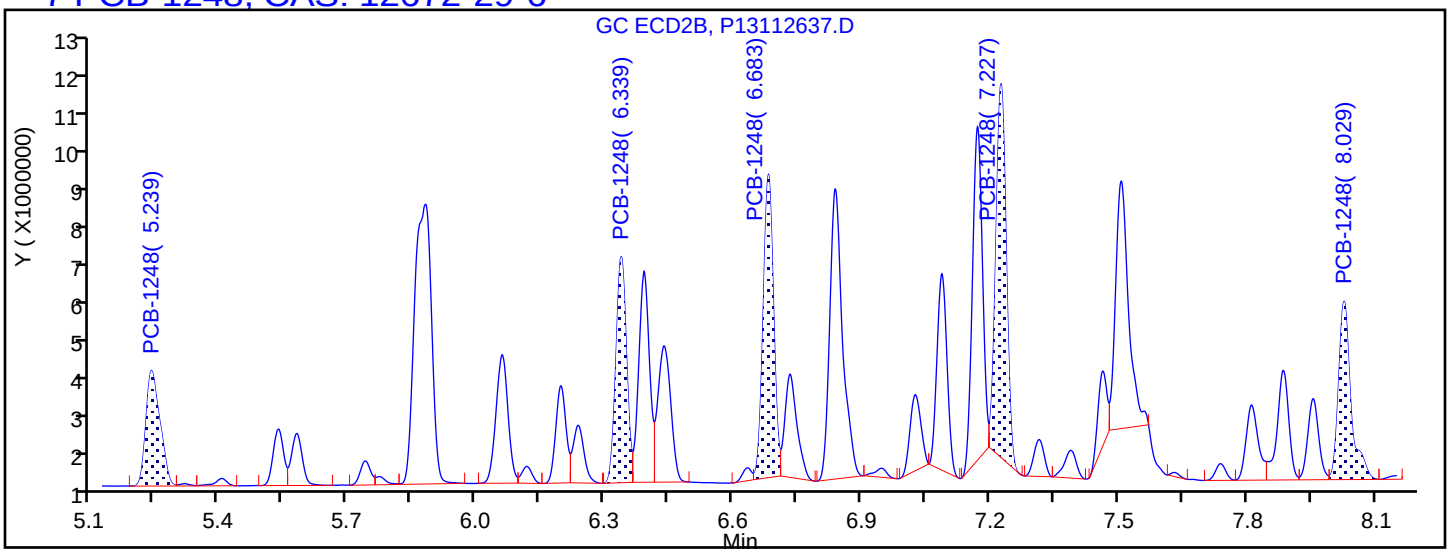
Operator ID: ALS Bottle#: 37 Worklist Smp#: 37

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

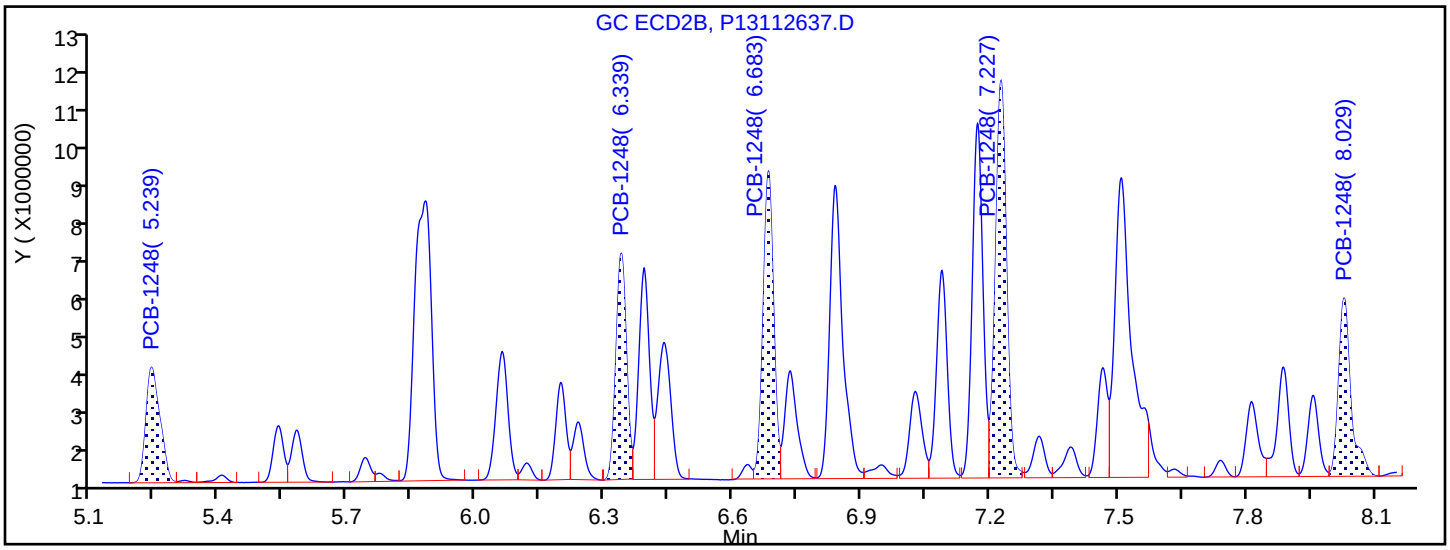
Column: Detector GC ecd2b

7 PCB-1248, CAS: 12672-29-6



Processing Integration Results

5.239	Response = 6525575
6.339	Response = 9695645
6.683	Response = 12680793
7.227	Response = 15703991
8.029	Response = 8944233



Manual Integration Results

5.239	Response = 6525575	
6.339	Response = 9695645	
6.683	Response = 13092129	M
7.227	Response = 17980297	M
8.029	Response = 8944233	

Reviewer: hassl, 27-Nov-2018 06:48:15

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/38 Calibration Date: 11/27/2018 01:09

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 20:15

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 21:47

Lab File ID: P13112638.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1254 Peak 1	Ave	0.0291	0.0270		0.464	0.500	-7.2	20.0
PCB-1254 Peak 2	Ave	0.0404	0.0376		0.465	0.500	-7.0	20.0
PCB-1254 Peak 3	Ave	0.0542	0.0511		0.471	0.500	-5.7	20.0
PCB-1254 Peak 4	Ave	0.0400	0.0393		0.491	0.500	-1.8	20.0
PCB-1254 Peak 5	Ave	0.0541	0.0563		0.520	0.500	4.0	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/38 Calibration Date: 11/27/2018 01:09

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 20:15

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 21:47

Lab File ID: P13112638.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1254 Peak 1	5.97	5.95	5.99
PCB-1254 Peak 2	6.30	6.29	6.33
PCB-1254 Peak 3	6.79	6.78	6.82
PCB-1254 Peak 4	7.13	7.12	7.16
PCB-1254 Peak 5	7.69	7.68	7.72

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112638.D
Lims ID: icv 1254
Client ID:
Sample Type: ICV
Inject. Date: 27-Nov-2018 01:09:24 ALS Bottle#: 38 Worklist Smp#: 38
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-038
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:16:56 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:48:34

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	50625982	0.0500	0.0500	
2	2.402	2.403	-0.001	43079588	0.0500	0.0500	
8 PCB-1254							
1	5.969	5.973	-0.004	13656030	0.5000	0.4639	
1	6.304	6.308	-0.004	19011048	0.5000	0.4648	
1	6.793	6.796	-0.003	25864478	0.5000	0.4713	
1	7.133	7.137	-0.004	19899695	0.5000	0.4910	
1	7.694	7.698	-0.004	28494174	0.5000	0.5198	
		Average of Peak Amounts =				0.4821	
2	7.221	7.223	-0.002	12920379	0.5000	0.4538	
2	7.465	7.468	-0.003	14852401	0.5000	0.4662	
2	8.029	8.033	-0.004	21012013	0.5000	0.4522	
2	8.309	8.312	-0.003	15759390	0.5000	0.4652	
2	8.944	8.947	-0.003	23543144	0.5000	0.5627	
		Average of Peak Amounts =				0.4800	
						RPD = 0.44	

Reagents:

SG1254ICV@1.0_00024 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

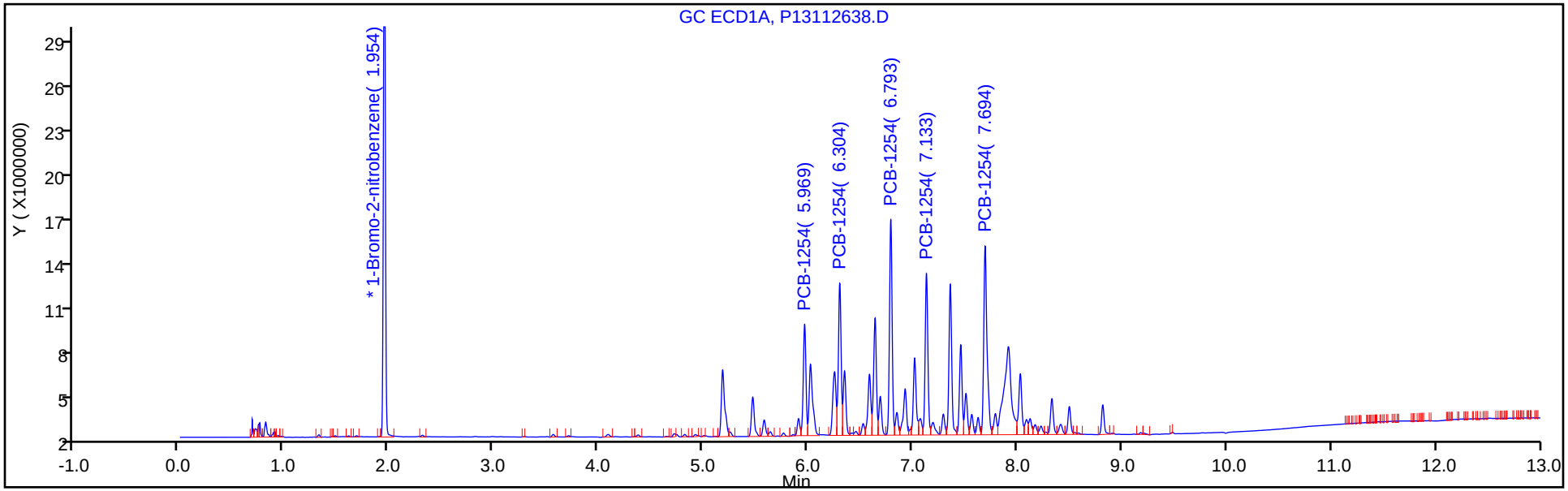
Report Date: 27-Nov-2018 10:34:23 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

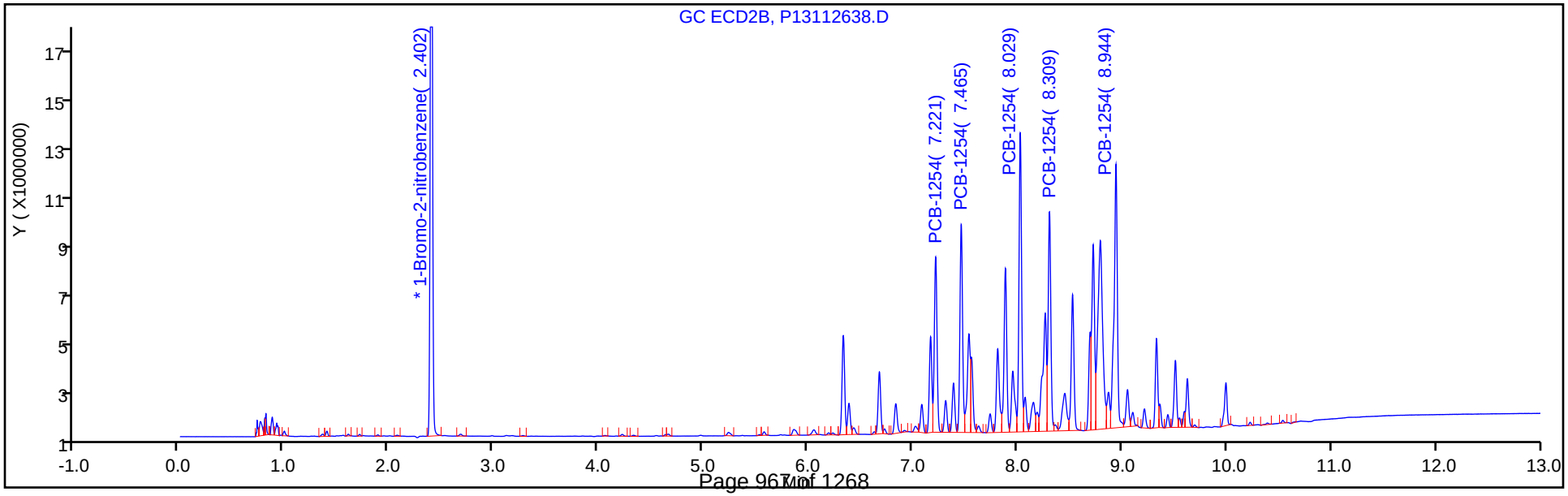
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112638.D

Injection Date:	27-Nov-2018 01:09:24	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1254			Worklist Smp#:	38
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	38
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/38 Calibration Date: 11/27/2018 01:09

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 20:15

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 21:47

Lab File ID: P13112638.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1254 Peak 1	Ave	0.0330	0.0300		0.454	0.500	-9.2	20.0
PCB-1254 Peak 2	Ave	0.0370	0.0345		0.466	0.500	-6.8	20.0
PCB-1254 Peak 3	Ave	0.0539	0.0488		0.452	0.500	-9.6	20.0
PCB-1254 Peak 4	Ave	0.0393	0.0366		0.465	0.500	-7.0	20.0
PCB-1254 Peak 5	Lin1		0.0547		0.563	0.500	12.5	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/38 Calibration Date: 11/27/2018 01:09

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 20:15

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 21:47

Lab File ID: P13112638.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1254 Peak 1	7.22	7.20	7.24
PCB-1254 Peak 2	7.47	7.45	7.49
PCB-1254 Peak 3	8.03	8.01	8.05
PCB-1254 Peak 4	8.31	8.29	8.33
PCB-1254 Peak 5	8.94	8.93	8.97

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112638.D
Lims ID: icv 1254
Client ID:
Sample Type: ICV
Inject. Date: 27-Nov-2018 01:09:24 ALS Bottle#: 38 Worklist Smp#: 38
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-038
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:16:56 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 06:48:34

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	50625982	0.0500	0.0500	
2	2.402	2.403	-0.001	43079588	0.0500	0.0500	
8 PCB-1254							
1	5.969	5.973	-0.004	13656030	0.5000	0.4639	
1	6.304	6.308	-0.004	19011048	0.5000	0.4648	
1	6.793	6.796	-0.003	25864478	0.5000	0.4713	
1	7.133	7.137	-0.004	19899695	0.5000	0.4910	
1	7.694	7.698	-0.004	28494174	0.5000	0.5198	
		Average of Peak Amounts =				0.4821	
2	7.221	7.223	-0.002	12920379	0.5000	0.4538	
2	7.465	7.468	-0.003	14852401	0.5000	0.4662	
2	8.029	8.033	-0.004	21012013	0.5000	0.4522	
2	8.309	8.312	-0.003	15759390	0.5000	0.4652	
2	8.944	8.947	-0.003	23543144	0.5000	0.5627	
		Average of Peak Amounts =				0.4800	
						RPD = 0.44	

Reagents:

SG1254ICV@1.0_00024 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

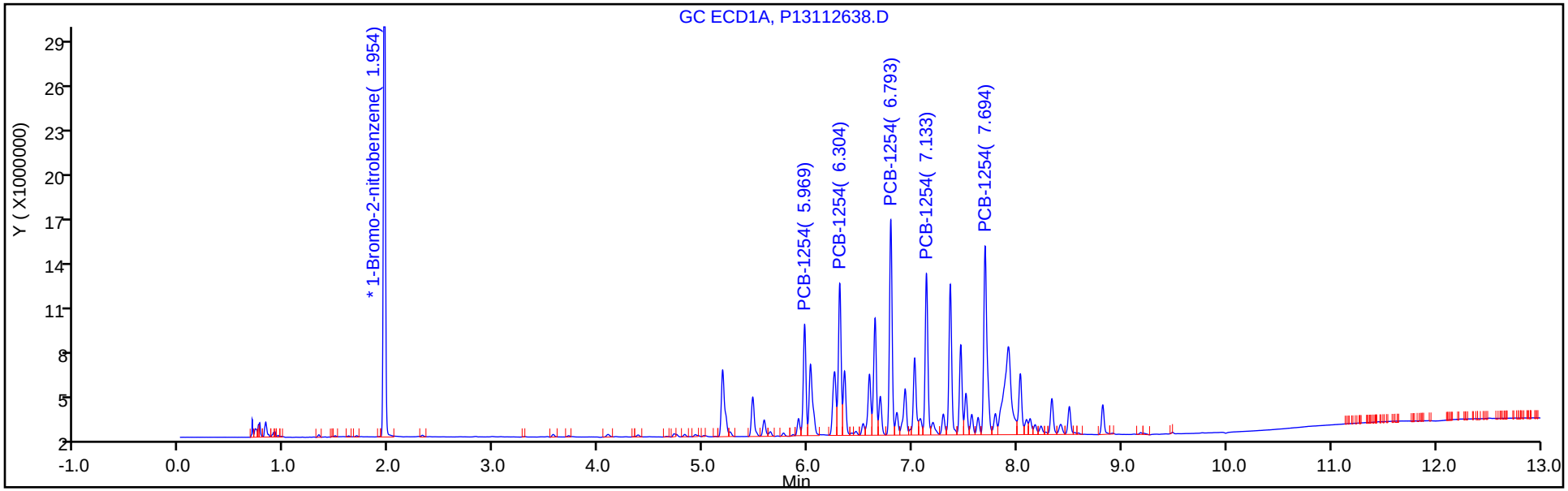
Report Date: 27-Nov-2018 10:34:24 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

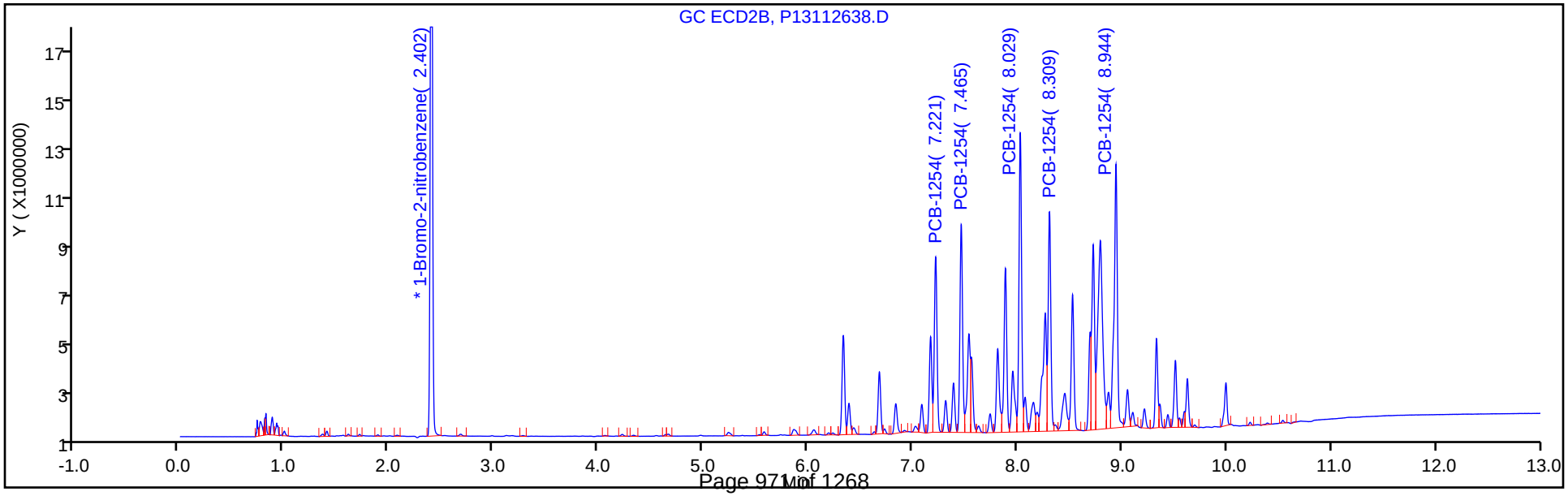
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112638.D

Injection Date:	27-Nov-2018 01:09:24	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1254			Worklist Smp#:	38
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	38
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/40 Calibration Date: 11/27/2018 01:46

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 14:45

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 16:16

Lab File ID: P13112640.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1262 Peak 1	Ave	0.0456	0.0462		0.507	0.500	1.3	20.0
PCB-1262 Peak 2	Lin1		0.0650		0.535	0.500	7.0	20.0
PCB-1262 Peak 3	Ave	0.0579	0.0539		0.466	0.500	-6.8	20.0
PCB-1262 Peak 4	Ave	0.1080	0.1114		0.516	0.500	3.1	20.0
PCB-1262 Peak 5	Ave	0.0444	0.0438		0.493	0.500	-1.4	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/40 Calibration Date: 11/27/2018 01:46

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 14:45

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 16:16

Lab File ID: P13112640.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1262 Peak 1	7.36	7.35	7.39
PCB-1262 Peak 2	7.84	7.83	7.87
PCB-1262 Peak 3	8.12	8.11	8.15
PCB-1262 Peak 4	8.50	8.48	8.52
PCB-1262 Peak 5	8.86	8.85	8.89

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112640.D
Lims ID: icv 1262
Client ID:
Sample Type: ICV
Inject. Date: 27-Nov-2018 01:46:04 ALS Bottle#: 40 Worklist Smp#: 40
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-040
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:42 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: grantk Date: 27-Nov-2018 10:26:53

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	49677450	0.0500	0.0500	
2	2.402	2.403	-0.001	41958703	0.0500	0.0500	
9 PCB-1262							
1	7.363	7.366	-0.003	22962828	0.5000	0.5066	
1	7.835	7.846	-0.011	32305944	0.5000	0.5352	
1	8.124	8.128	-0.004	26797145	0.5000	0.4661	
1	8.498	8.502	-0.004	55320756	0.5000	0.5157	
1	8.863	8.866	-0.003	21731656	0.5000	0.4929	
		Average of Peak Amounts =				0.5033	
2	8.530	8.534	-0.004	16430424	0.5000	0.4965	
2	9.046	9.051	-0.005	22935346	0.5000	0.4768	
2	9.365	9.370	-0.005	21124967	0.5000	0.4926	
2	9.627	9.631	-0.004	43364570	0.5000	0.5045	
2	9.989	9.993	-0.004	30913957	0.5000	0.4967	
		Average of Peak Amounts =				0.4934	
						RPD = 1.98	

Reagents:

SG1262ICV@1.0_00026 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

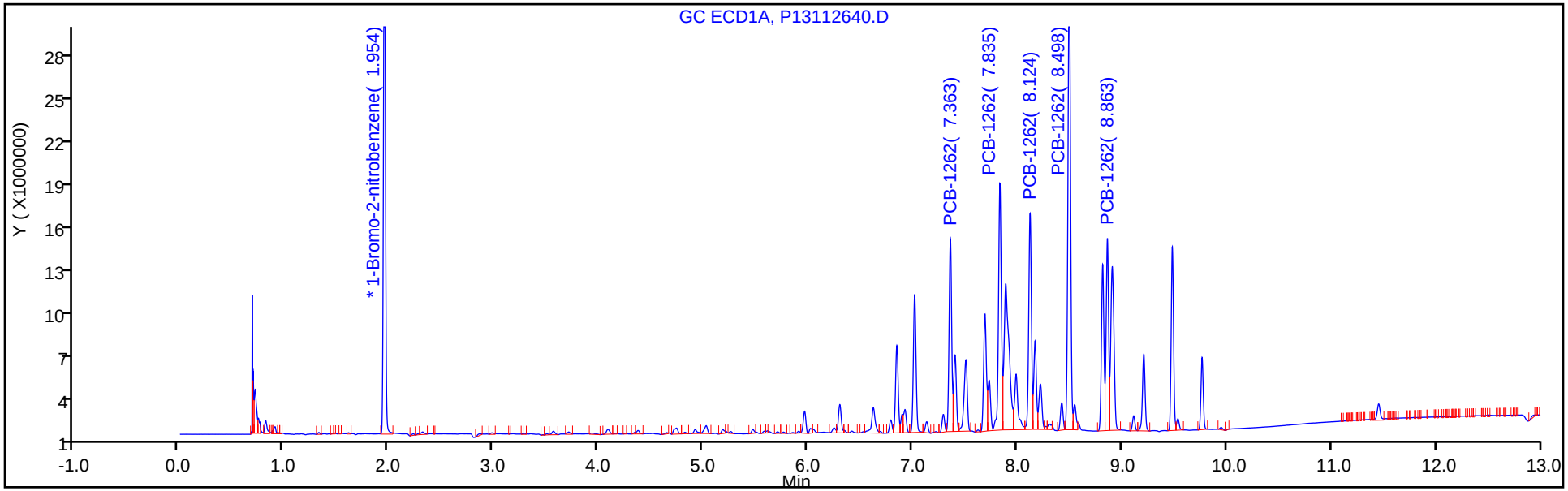
Report Date: 27-Nov-2018 10:38:02 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

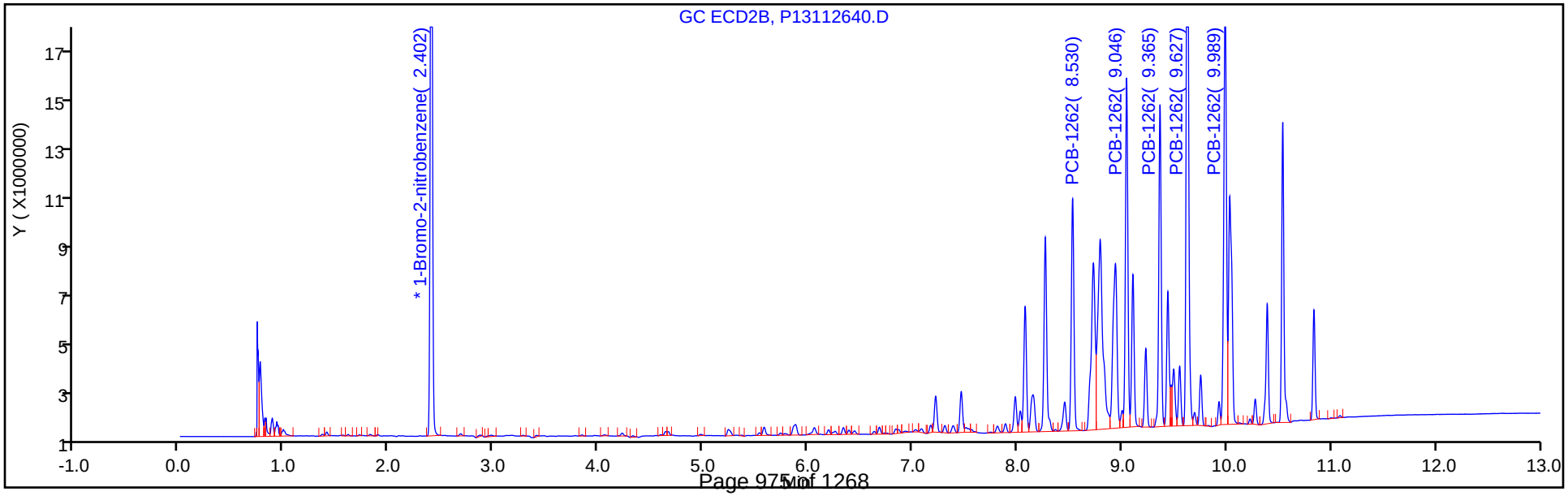
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112640.D

Injection Date:	27-Nov-2018 01:46:04	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1262			Worklist Smp#:	40
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	40
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/40 Calibration Date: 11/27/2018 01:46

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 14:45

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 16:16

Lab File ID: P13112640.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1262 Peak 1	Ave	0.0394	0.0392		0.496	0.500	-0.7	20.0
PCB-1262 Peak 2	Ave	0.0573	0.0547		0.477	0.500	-4.6	20.0
PCB-1262 Peak 3	Ave	0.0511	0.0504		0.493	0.500	-1.5	20.0
PCB-1262 Peak 4	Ave	0.1024	0.1034		0.504	0.500	0.9	20.0
PCB-1262 Peak 5	Ave	0.0742	0.0737		0.497	0.500	-0.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/40 Calibration Date: 11/27/2018 01:46

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 14:45

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 16:16

Lab File ID: P13112640.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1262 Peak 1	8.53	8.52	8.55
PCB-1262 Peak 2	9.05	9.03	9.07
PCB-1262 Peak 3	9.37	9.35	9.39
PCB-1262 Peak 4	9.63	9.61	9.65
PCB-1262 Peak 5	9.99	9.97	10.01

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112640.D
Lims ID: icv 1262
Client ID:
Sample Type: ICV
Inject. Date: 27-Nov-2018 01:46:04 ALS Bottle#: 40 Worklist Smp#: 40
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-040
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:42 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: grantk Date: 27-Nov-2018 10:26:53

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	49677450	0.0500	0.0500	
2	2.402	2.403	-0.001	41958703	0.0500	0.0500	
9 PCB-1262							
1	7.363	7.366	-0.003	22962828	0.5000	0.5066	
1	7.835	7.846	-0.011	32305944	0.5000	0.5352	
1	8.124	8.128	-0.004	26797145	0.5000	0.4661	
1	8.498	8.502	-0.004	55320756	0.5000	0.5157	
1	8.863	8.866	-0.003	21731656	0.5000	0.4929	
		Average of Peak Amounts =				0.5033	
2	8.530	8.534	-0.004	16430424	0.5000	0.4965	
2	9.046	9.051	-0.005	22935346	0.5000	0.4768	
2	9.365	9.370	-0.005	21124967	0.5000	0.4926	
2	9.627	9.631	-0.004	43364570	0.5000	0.5045	
2	9.989	9.993	-0.004	30913957	0.5000	0.4967	
		Average of Peak Amounts =				0.4934	
						RPD = 1.98	

Reagents:

SG1262ICV@1.0_00026 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

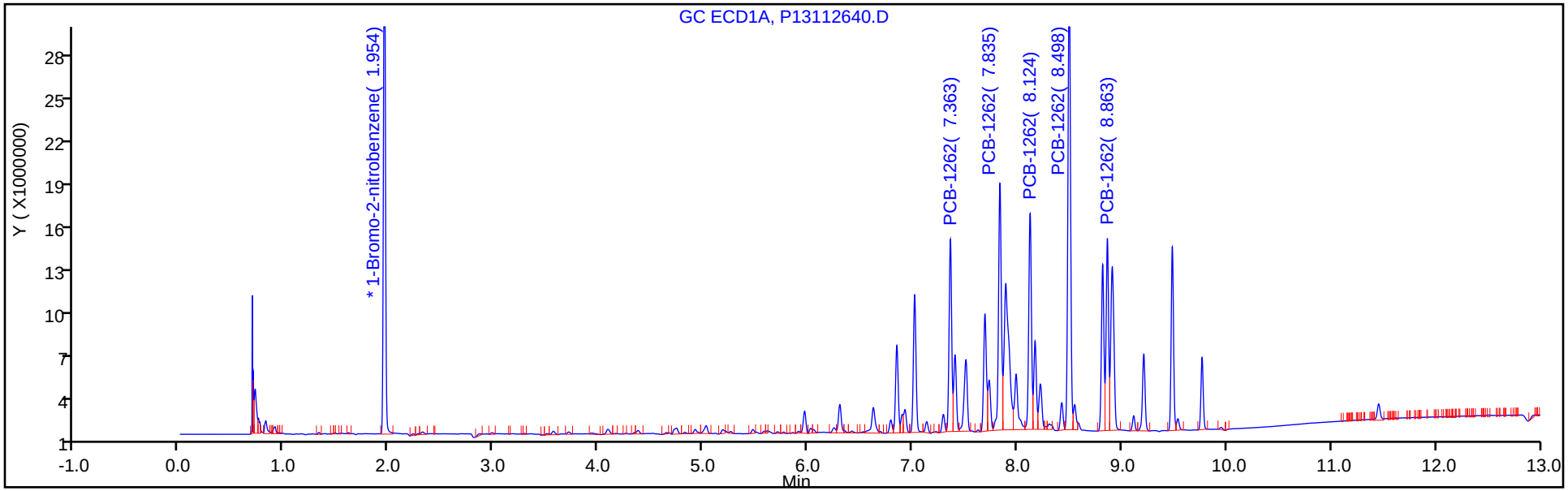
Report Date: 27-Nov-2018 10:38:02 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

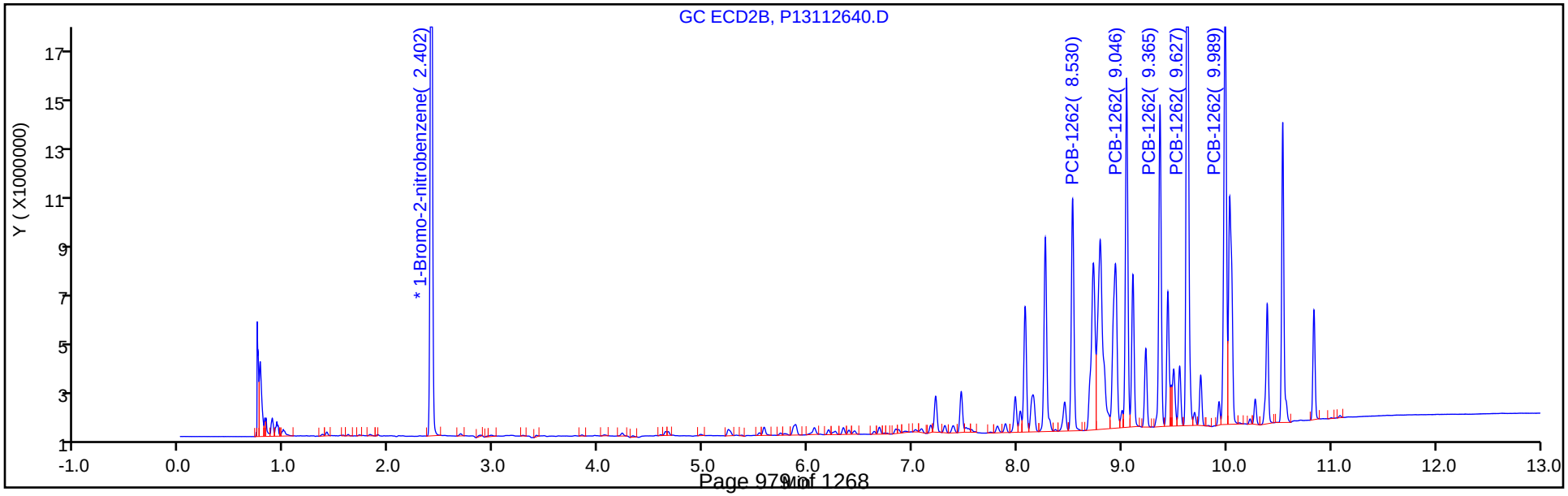
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112640.D

Injection Date:	27-Nov-2018 01:46:04	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1262			Worklist Smp#:	40
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	40
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/41 Calibration Date: 11/27/2018 02:04

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 16:35

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 18:07

Lab File ID: P13112641.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1268 Peak 1	Ave	0.1186	0.1293		0.545	0.500	9.0	20.0
PCB-1268 Peak 2	Ave	0.1177	0.1408		0.598	0.500	19.6	20.0
PCB-1268 Peak 3	Ave	0.0995	0.0944		0.474	0.500	-5.1	20.0
PCB-1268 Peak 4	Ave	0.0423	0.0459		0.543	0.500	8.5	20.0
PCB-1268 Peak 5	Ave	0.3171	0.2921		0.461	0.500	-7.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/41 Calibration Date: 11/27/2018 02:04

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 16:35

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 18:07

Lab File ID: P13112641.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1268 Peak 1	8.86	8.85	8.88
PCB-1268 Peak 2	8.90	8.89	8.93
PCB-1268 Peak 3	9.11	9.10	9.14
PCB-1268 Peak 4	9.48	9.47	9.51
PCB-1268 Peak 5	9.77	9.75	9.79

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112641.D
Lims ID: icv 1268
Client ID:
Sample Type: ICV
Inject. Date: 27-Nov-2018 02:04:30 ALS Bottle#: 41 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-041
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:42 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: grantk Date: 27-Nov-2018 10:29:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	47398136	0.0500	0.0500	
2	2.401	2.403	-0.001	40025066	0.0500	0.0500	
11 PCB-1268							
1	8.861	8.865	-0.004	61278230	0.5000	0.5448	
1	8.903	8.908	-0.005	66742700	0.5000	0.5981	
1	9.113	9.116	-0.003	44725150	0.5000	0.4743	
1	9.483	9.487	-0.004	21773982	0.5000	0.5425	
1	9.765	9.769	-0.004	138446371	0.5000	0.4606	
		Average of Peak Amounts =				0.5241	
2	9.985	9.989	-0.004	49348726	0.5000	0.5459	
2	10.030	10.033	-0.003	55341721	0.5000	0.6061	
2	10.275	10.278	-0.003	37864771	0.5000	0.4802	
2	10.539	10.542	-0.003	18586954	0.5000	0.5378	
2	10.837	10.840	-0.003	110146262	0.5000	0.4357	
		Average of Peak Amounts =				0.5212	
						RPD = 0.56	

Reagents:

SG1268ICV_00036 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

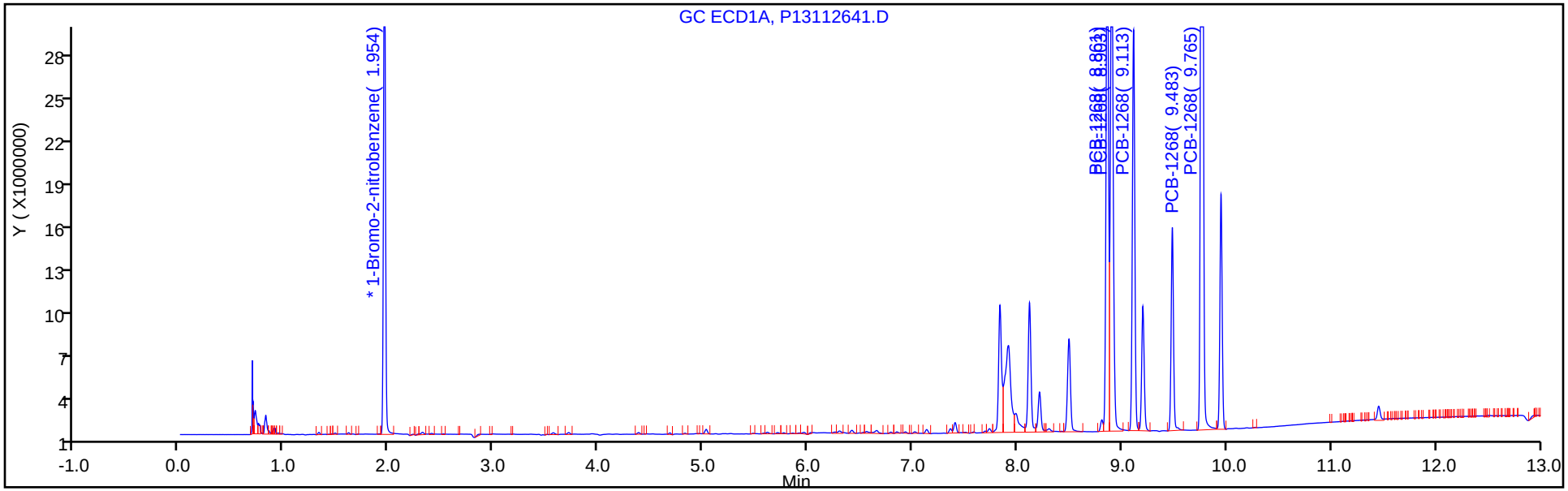
Report Date: 27-Nov-2018 10:37:52 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

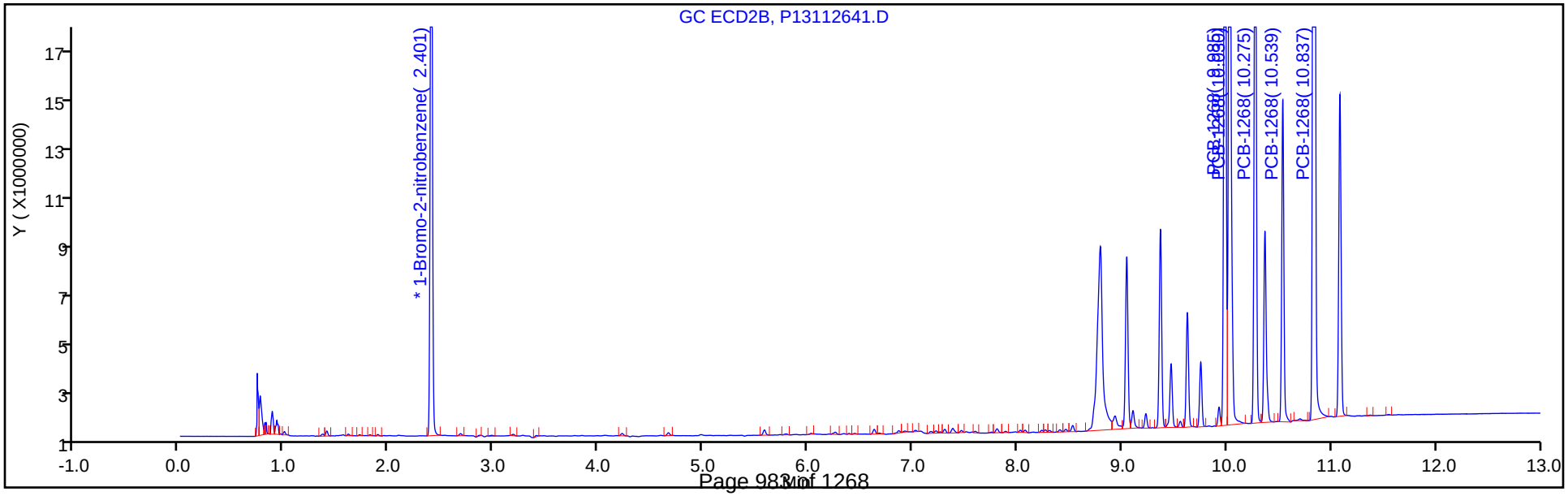
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112641.D

Injection Date:	27-Nov-2018 02:04:30	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1268			Worklist Smp#:	41
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	41
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/41 Calibration Date: 11/27/2018 02:04

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 16:35

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 18:07

Lab File ID: P13112641.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1268 Peak 1	Ave	0.1129	0.1233		0.546	0.500	9.2	20.0
PCB-1268 Peak 2	Ave	0.1141	0.1383		0.606	0.500	21.2*	20.0
PCB-1268 Peak 3	Ave	0.0985	0.0946		0.480	0.500	-4.0	20.0
PCB-1268 Peak 4	Ave	0.0432	0.0464		0.538	0.500	7.6	20.0
PCB-1268 Peak 5	Ave	0.3158	0.2752		0.436	0.500	-12.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/41 Calibration Date: 11/27/2018 02:04

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 16:35

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 18:07

Lab File ID: P13112641.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1268 Peak 1	9.99	9.97	10.01
PCB-1268 Peak 2	10.03	10.01	10.05
PCB-1268 Peak 3	10.28	10.26	10.30
PCB-1268 Peak 4	10.54	10.52	10.56
PCB-1268 Peak 5	10.84	10.82	10.86

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112641.D
Lims ID: icv 1268
Client ID:
Sample Type: ICV
Inject. Date: 27-Nov-2018 02:04:30 ALS Bottle#: 41 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-041
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:42 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: grantk Date: 27-Nov-2018 10:29:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	47398136	0.0500	0.0500	
2	2.401	2.403	-0.001	40025066	0.0500	0.0500	
11 PCB-1268							
1	8.861	8.865	-0.004	61278230	0.5000	0.5448	
1	8.903	8.908	-0.005	66742700	0.5000	0.5981	
1	9.113	9.116	-0.003	44725150	0.5000	0.4743	
1	9.483	9.487	-0.004	21773982	0.5000	0.5425	
1	9.765	9.769	-0.004	138446371	0.5000	0.4606	
		Average of Peak Amounts =				0.5241	
2	9.985	9.989	-0.004	49348726	0.5000	0.5459	
2	10.030	10.033	-0.003	55341721	0.5000	0.6061	
2	10.275	10.278	-0.003	37864771	0.5000	0.4802	
2	10.539	10.542	-0.003	18586954	0.5000	0.5378	
2	10.837	10.840	-0.003	110146262	0.5000	0.4357	
		Average of Peak Amounts =				0.5212	
						RPD = 0.56	

Reagents:

SG1268ICV_00036 Amount Added: 0.50 Units: mL
SGPCBISTD_00016 Amount Added: 5.00 Units: uL Run Reagent

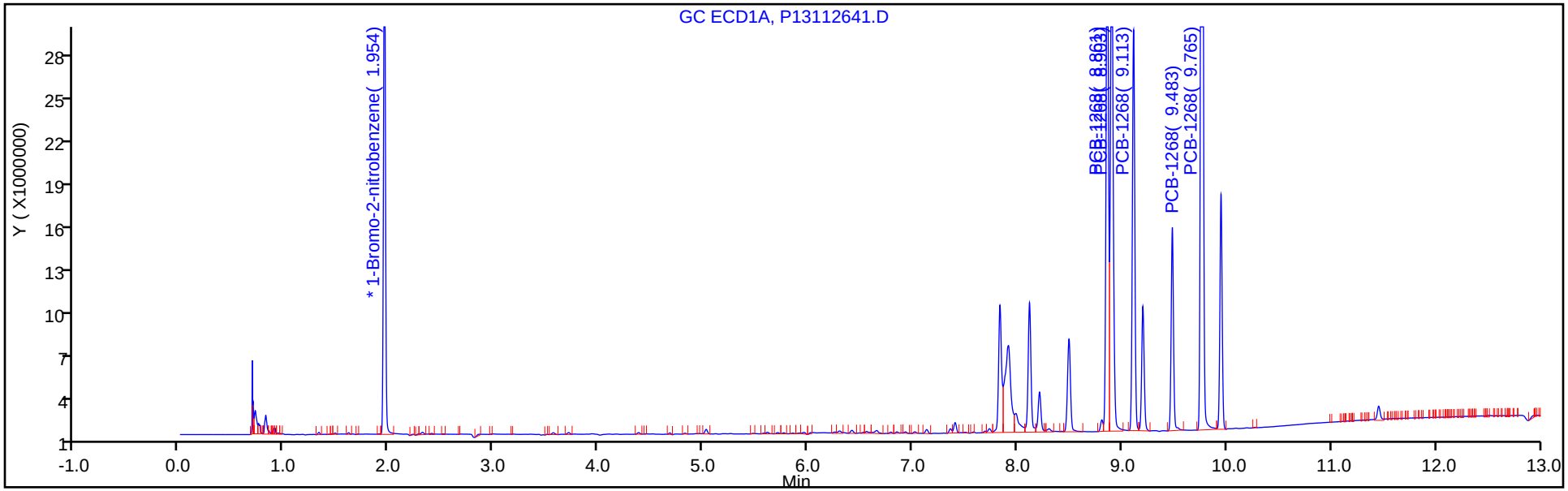
Report Date: 27-Nov-2018 10:37:53 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

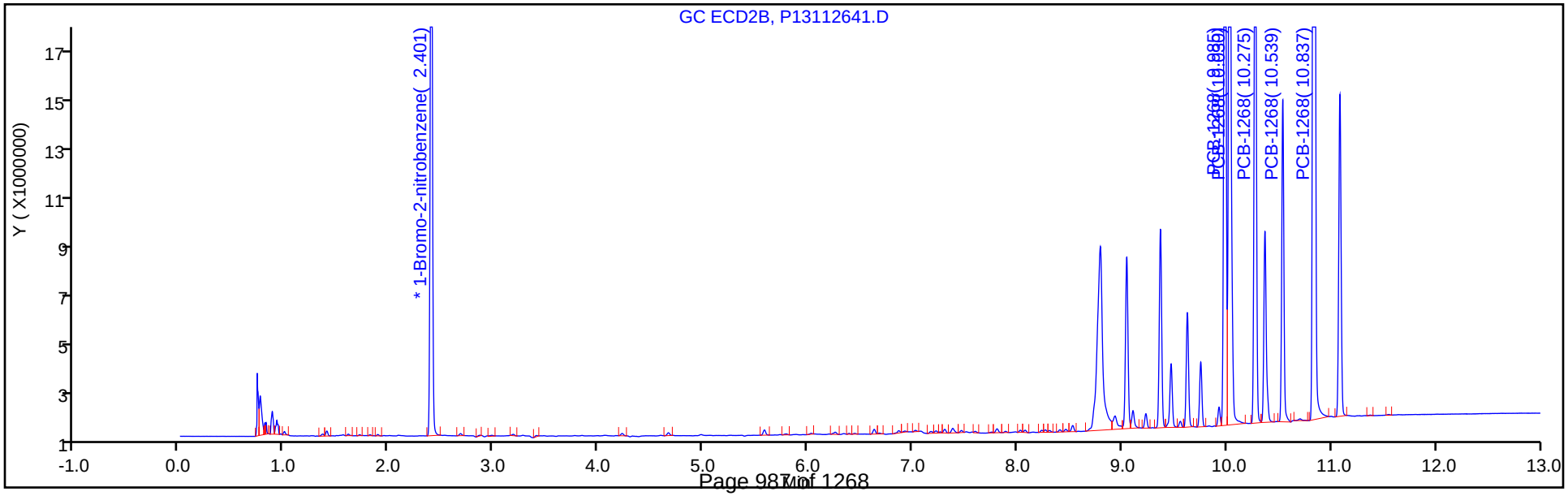
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112641.D

Injection Date:	27-Nov-2018 02:04:30	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1268			Worklist Smp#:	41
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	41
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/43 Calibration Date: 11/27/2018 07:14

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 22:05

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 23:37

Lab File ID: P13112643.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	0.0175	0.0175		0.499	0.500	-0.3	20.0
PCB-1016 Peak 2	Ave	0.0352	0.0329		0.467	0.500	-6.6	20.0
PCB-1016 Peak 3	Ave	0.0725	0.0637		0.439	0.500	-12.1	20.0
PCB-1016 Peak 4	Ave	0.0311	0.0294		0.472	0.500	-5.6	20.0
PCB-1016 Peak 5	Ave	0.0130	0.0124		0.477	0.500	-4.7	20.0
PCB-1260 Peak 1	Ave	0.0382	0.0405		0.529	0.500	5.8	20.0
PCB-1260 Peak 2	Ave	0.0583	0.0636		0.546	0.500	9.1	20.0
PCB-1260 Peak 3	Ave	0.0646	0.0731		0.565	0.500	13.1	20.0
PCB-1260 Peak 4	Ave	0.0842	0.0802		0.476	0.500	-4.8	20.0
PCB-1260 Peak 5	Ave	0.0427	0.0441		0.517	0.500	3.3	20.0
Tetrachloro-m-xylene	Ave	0.9888	0.9759		0.0247	0.0250	-1.3	20.0
DCB Decachlorobiphenyl	Ave	0.8131	0.8324		0.0256	0.0250	2.4	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/43 Calibration Date: 11/27/2018 07:14

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 22:05

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 23:37

Lab File ID: P13112643.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.57	3.55	3.59
PCB-1016 Peak 2	4.09	4.07	4.11
PCB-1016 Peak 3	4.75	4.73	4.76
PCB-1016 Peak 4	4.92	4.90	4.94
PCB-1016 Peak 5	5.26	5.24	5.28
PCB-1260 Peak 1	7.02	7.00	7.04
PCB-1260 Peak 2	7.36	7.34	7.38
PCB-1260 Peak 3	7.69	7.68	7.71
PCB-1260 Peak 4	8.50	8.48	8.52
PCB-1260 Peak 5	8.82	8.80	8.84
Tetrachloro-m-xylene	2.99	2.97	3.01
DCB Decachlorobiphenyl	9.95	9.93	9.97

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112643.D
Lims ID: icv 1660
Client ID:
Sample Type: ICV
Inject. Date: 27-Nov-2018 07:14:26 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-043
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:42 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 08:14:49

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	46242433	0.0500	0.0500	
2	2.403	2.403	0.000	39241406	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.993	2.993	0.000	22564118	0.0250	0.0247	
2	3.842	3.840	0.002	19407451	0.0250	0.0242	
						RPD = 2.10	
6 PCB-1016							
1	3.568	3.568	0.000	8088002	0.5000	0.4985	
1	4.089	4.089	0.000	15191412	0.5000	0.4672	
1	4.745	4.744	0.001	29445368	0.5000	0.4394	
1	4.923	4.923	0.000	13586604	0.5000	0.4720	
1	5.259	5.259	0.000	5739342	0.5000	0.4766	
		Average of Peak Amounts =				0.4707	
2	4.641	4.640	0.001	7481936	0.5000	0.5087	
2	5.243	5.241	0.002	13427772	0.5000	0.4617	
2	5.883	5.881	0.002	27911087	0.5000	0.4730	
2	6.063	6.062	0.001	11664559	0.5000	0.4790	
2	6.393	6.393	0.000	6703568	0.5000	0.4709	
		Average of Peak Amounts =				0.4787	
						RPD = 1.67	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	7.021	7.022	-0.001	18704799	0.5000	0.5291	
1	7.362	7.363	-0.001	29423967	0.5000	0.5455	
1	7.693	7.694	-0.001	33801013	0.5000	0.5654	
1	8.498	8.500	-0.002	37084901	0.5000	0.4760	
1	8.818	8.820	-0.002	20388051	0.5000	0.5165	
		Average of Peak Amounts =				0.5265	
2	8.271	8.270	0.001	14579470	0.5000	0.4975	
2	8.532	8.531	0.001	18694853	0.5000	0.5264	
2	9.367	9.366	0.001	13540781	0.5000	0.4586	
2	9.628	9.628	0.000	31149021	0.5000	0.4781	
2	9.994	9.992	0.002	22328013	0.5000	0.4808	
		Average of Peak Amounts =				0.4883	
						RPD = 7.54	
$ 12 DCB Decachlorobiphenyl							
1	9.948	9.950	-0.002	19245016	0.0250	0.0256	
2	11.086	11.087	-0.001	15974714	0.0250	0.0252	
						RPD = 1.73	

Reagents:

SG1660ICV@1.0_00037	Amount Added: 0.50	Units: mL	
SGPCBISTD_00016	Amount Added: 5.00	Units: uL	Run Reagent

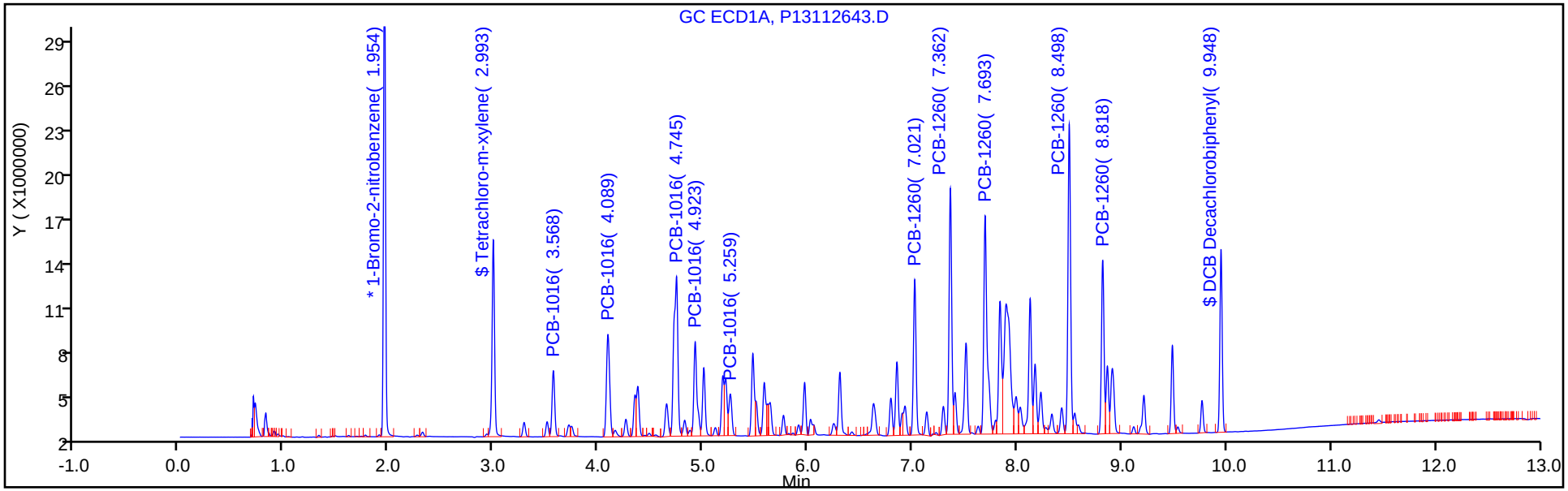
Report Date: 27-Nov-2018 10:38:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

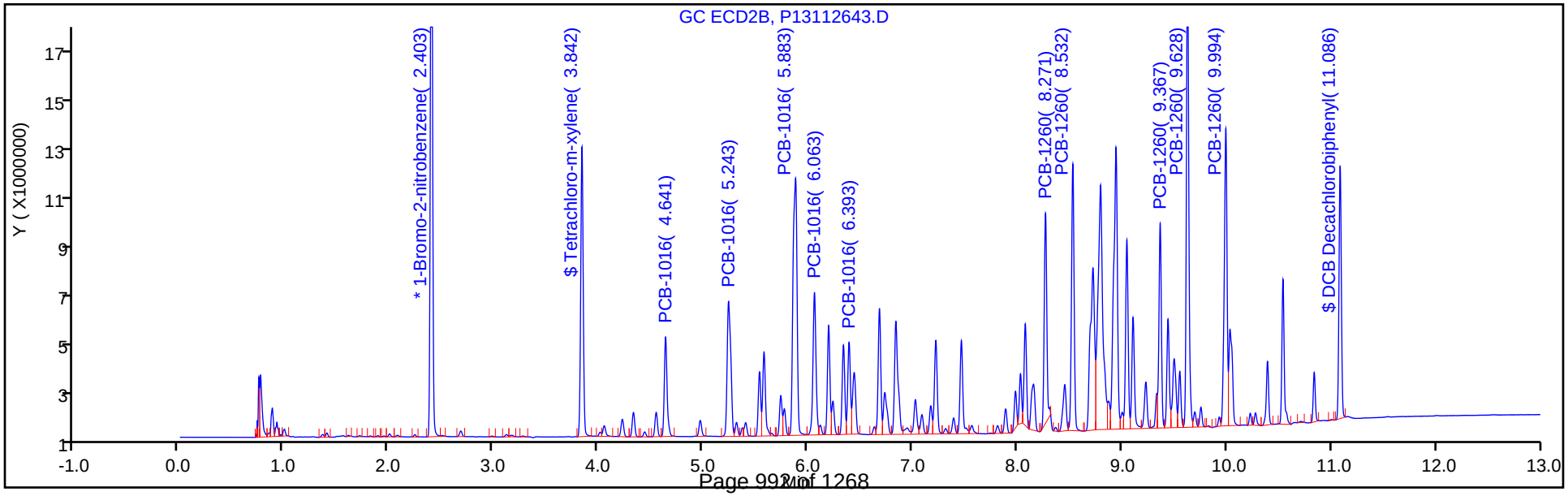
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112643.D

Injection Date:	27-Nov-2018 07:14:26	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1660			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/43 Calibration Date: 11/27/2018 07:14

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 22:05

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 23:37

Lab File ID: P13112643.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	0.0187	0.0191		0.509	0.500	1.7	20.0
PCB-1016 Peak 2	Ave	0.0371	0.0342		0.462	0.500	-7.7	20.0
PCB-1016 Peak 3	Ave	0.0752	0.0711		0.473	0.500	-5.4	20.0
PCB-1016 Peak 4	Ave	0.0310	0.0297		0.479	0.500	-4.2	20.0
PCB-1016 Peak 5	Ave	0.0181	0.0171		0.471	0.500	-5.8	20.0
PCB-1260 Peak 1	Ave	0.0373	0.0372		0.497	0.500	-0.5	20.0
PCB-1260 Peak 2	Ave	0.0453	0.0476		0.526	0.500	5.3	20.0
PCB-1260 Peak 3	Ave	0.0376	0.0345		0.459	0.500	-8.3	20.0
PCB-1260 Peak 4	Ave	0.0830	0.0794		0.478	0.500	-4.4	20.0
PCB-1260 Peak 5	Ave	0.0592	0.0569		0.481	0.500	-3.8	20.0
Tetrachloro-m-xylene	Ave	1.023	0.9891		0.0242	0.0250	-3.3	20.0
DCB Decachlorobiphenyl	Ave	0.8092	0.8142		0.0252	0.0250	0.6	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICV 240-356910/43 Calibration Date: 11/27/2018 07:14

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 22:05

GC Column: CLP-2 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 23:37

Lab File ID: P13112643.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	4.64	4.62	4.66
PCB-1016 Peak 2	5.24	5.22	5.26
PCB-1016 Peak 3	5.88	5.86	5.90
PCB-1016 Peak 4	6.06	6.04	6.08
PCB-1016 Peak 5	6.39	6.37	6.41
PCB-1260 Peak 1	8.27	8.25	8.29
PCB-1260 Peak 2	8.53	8.51	8.55
PCB-1260 Peak 3	9.37	9.35	9.39
PCB-1260 Peak 4	9.63	9.61	9.65
PCB-1260 Peak 5	9.99	9.97	10.01
Tetrachloro-m-xylene	3.84	3.82	3.86
DCB Decachlorobiphenyl	11.09	11.07	11.11

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112643.D
Lims ID: icv 1660
Client ID:
Sample Type: ICV
Inject. Date: 27-Nov-2018 07:14:26 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0082259-043
Operator ID: Instrument ID: A2HP13
Sublist:

Method: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 27-Nov-2018 10:37:42 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0315

First Level Reviewer: hassl Date: 27-Nov-2018 08:14:49

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.954	1.955	-0.001	46242433	0.0500	0.0500	
2	2.403	2.403	0.000	39241406	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.993	2.993	0.000	22564118	0.0250	0.0247	
2	3.842	3.840	0.002	19407451	0.0250	0.0242	
						RPD = 2.10	
6 PCB-1016							
1	3.568	3.568	0.000	8088002	0.5000	0.4985	
1	4.089	4.089	0.000	15191412	0.5000	0.4672	
1	4.745	4.744	0.001	29445368	0.5000	0.4394	
1	4.923	4.923	0.000	13586604	0.5000	0.4720	
1	5.259	5.259	0.000	5739342	0.5000	0.4766	
		Average of Peak Amounts =				0.4707	
2	4.641	4.640	0.001	7481936	0.5000	0.5087	
2	5.243	5.241	0.002	13427772	0.5000	0.4617	
2	5.883	5.881	0.002	27911087	0.5000	0.4730	
2	6.063	6.062	0.001	11664559	0.5000	0.4790	
2	6.393	6.393	0.000	6703568	0.5000	0.4709	
		Average of Peak Amounts =				0.4787	
						RPD = 1.67	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	7.021	7.022	-0.001	18704799	0.5000	0.5291	
1	7.362	7.363	-0.001	29423967	0.5000	0.5455	
1	7.693	7.694	-0.001	33801013	0.5000	0.5654	
1	8.498	8.500	-0.002	37084901	0.5000	0.4760	
1	8.818	8.820	-0.002	20388051	0.5000	0.5165	
		Average of Peak Amounts =				0.5265	
2	8.271	8.270	0.001	14579470	0.5000	0.4975	
2	8.532	8.531	0.001	18694853	0.5000	0.5264	
2	9.367	9.366	0.001	13540781	0.5000	0.4586	
2	9.628	9.628	0.000	31149021	0.5000	0.4781	
2	9.994	9.992	0.002	22328013	0.5000	0.4808	
		Average of Peak Amounts =				0.4883	
						RPD = 7.54	
$ 12 DCB Decachlorobiphenyl							
1	9.948	9.950	-0.002	19245016	0.0250	0.0256	
2	11.086	11.087	-0.001	15974714	0.0250	0.0252	
						RPD = 1.73	

Reagents:

SG1660ICV@1.0_00037	Amount Added: 0.50	Units: mL	
SGPCBISTD_00016	Amount Added: 5.00	Units: uL	Run Reagent

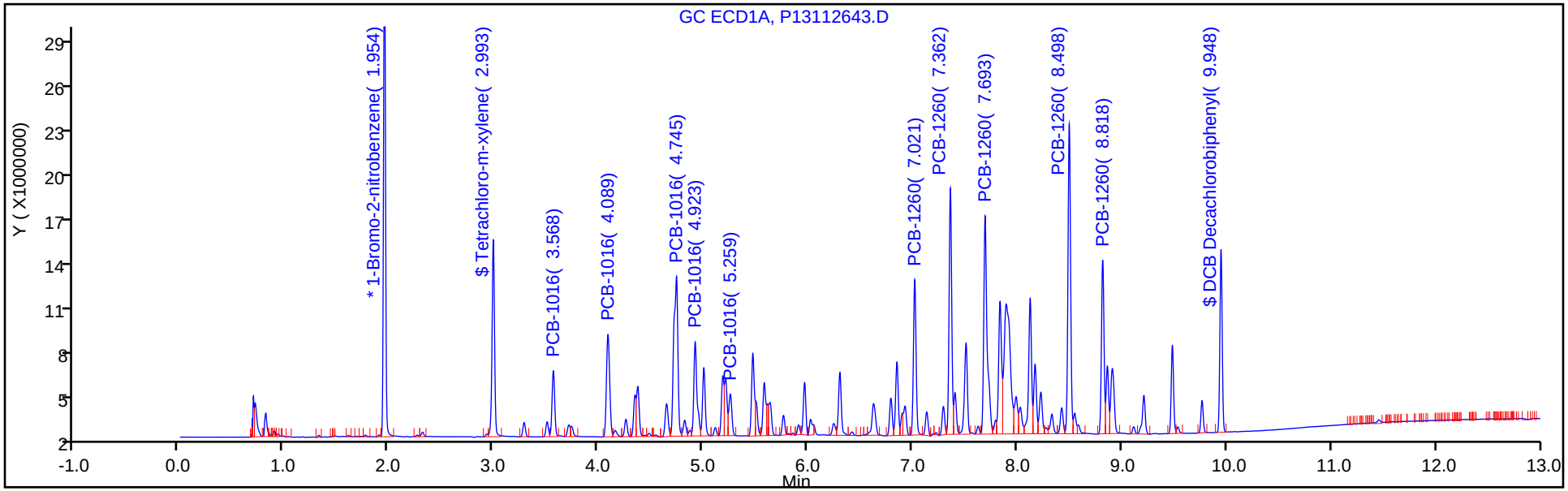
Report Date: 27-Nov-2018 10:38:18 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Canton

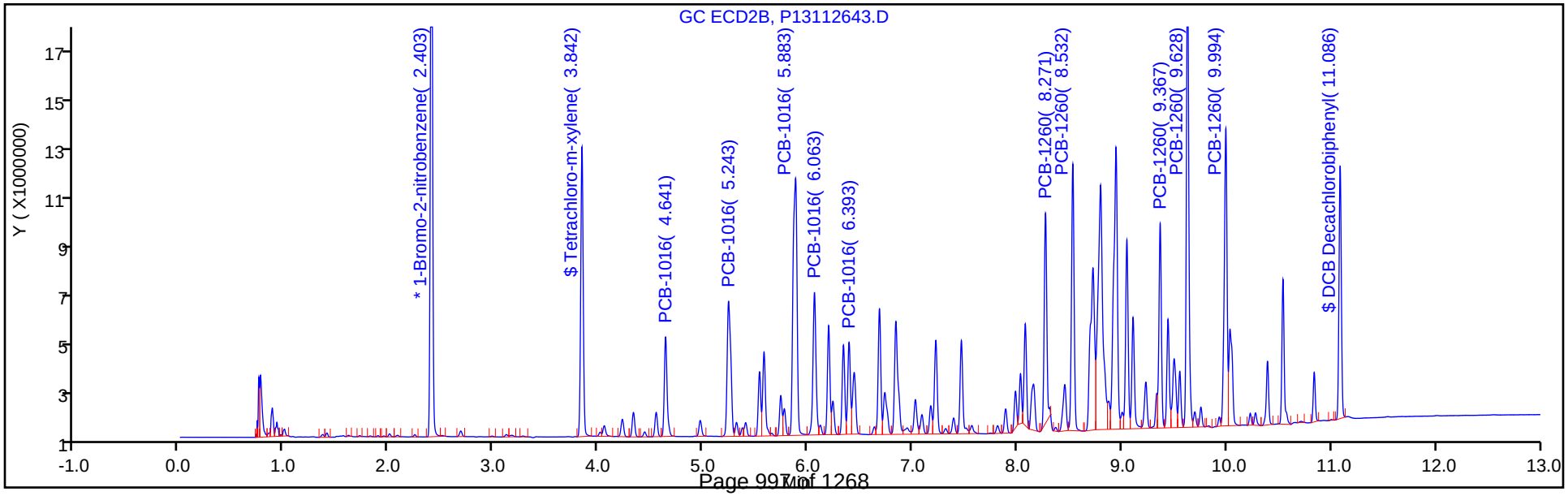
Data File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112643.D

Injection Date:	27-Nov-2018 07:14:26	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	icv 1660			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCV 240-365410/3 Calibration Date: 01/24/2019 16:03

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 22:05

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 23:37

Lab File ID: P13012437.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	0.0175	0.0159		0.452	0.500	-9.7	20.0
PCB-1016 Peak 2	Ave	0.0352	0.0327		0.465	0.500	-6.9	20.0
PCB-1016 Peak 3	Ave	0.0725	0.0719		0.496	0.500	-0.8	20.0
PCB-1016 Peak 4	Ave	0.0311	0.0303		0.487	0.500	-2.7	20.0
PCB-1016 Peak 5	Ave	0.0130	0.0135		0.517	0.500	3.4	20.0
PCB-1260 Peak 1	Ave	0.0382	0.0404		0.528	0.500	5.6	20.0
PCB-1260 Peak 2	Ave	0.0583	0.0618		0.530	0.500	5.9	20.0
PCB-1260 Peak 3	Ave	0.0646	0.0698		0.540	0.500	8.0	20.0
PCB-1260 Peak 4	Ave	0.0842	0.0953		0.566	0.500	13.1	20.0
PCB-1260 Peak 5	Ave	0.0427	0.0475		0.556	0.500	11.3	20.0
Tetrachloro-m-xylene	Ave	0.9888	0.9447		0.0239	0.0250	-4.5	20.0
DCB Decachlorobiphenyl	Ave	0.8131	0.9193		0.0283	0.0250	13.1	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCV 240-365410/3 Calibration Date: 01/24/2019 16:03

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 22:05

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 23:37

Lab File ID: P13012437.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.52	3.50	3.54
PCB-1016 Peak 2	4.04	4.02	4.06
PCB-1016 Peak 3	4.69	4.67	4.71
PCB-1016 Peak 4	4.87	4.85	4.89
PCB-1016 Peak 5	5.21	5.19	5.23
PCB-1260 Peak 1	6.97	6.95	6.99
PCB-1260 Peak 2	7.31	7.30	7.33
PCB-1260 Peak 3	7.65	7.63	7.66
PCB-1260 Peak 4	8.45	8.43	8.47
PCB-1260 Peak 5	8.77	8.76	8.79
Tetrachloro-m-xylene	2.95	2.93	2.97
DCB Decachlorobiphenyl	9.91	9.89	9.93

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012437.D
Lims ID: CCV AR1660
Client ID:
Sample Type: CCVIS
Inject. Date: 24-Jan-2019 16:03:13 ALS Bottle#: 37 Worklist Smp#: 3
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0083947-003
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 25-Jan-2019 10:02:56 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0327

First Level Reviewer: grantk Date: 25-Jan-2019 08:47:26

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.923	1.923	0.000	68222589	0.0500	0.0500	
2	2.354	2.354	0.000	42742458	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.949	2.949	0.000	32223415	0.0250	0.0239	
2	3.776	3.776	0.000	21012413	0.0250	0.0240	
						RPD = 0.56	
6 PCB-1016							M
1	3.518	3.518	0.000	10811130	0.5000	0.4517	
1	4.037	4.037	0.000	22318640	0.5000	0.4653	
1	4.692	4.692	0.000	49049250	0.5000	0.4961	M
1	4.871	4.871	0.000	20668492	0.5000	0.4867	M
1	5.207	5.207	0.000	9187666	0.5000	0.5171	
		Average of Peak Amounts =				0.4834	
2	4.569	4.569	0.000	7215416	0.5000	0.4504	
2	5.171	5.171	0.000	14958071	0.5000	0.4722	
2	5.812	5.812	0.000	32066539	0.5000	0.4989	
2	5.992	5.992	0.000	12780726	0.5000	0.4818	
2	6.323	6.323	0.000	7635230	0.5000	0.4924	
		Average of Peak Amounts =				0.4792	
						RPD = 0.88	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	6.973	6.973	0.000	27544467	0.5000	0.5281	
1	7.314	7.314	0.000	42150974	0.5000	0.5297	
1	7.645	7.645	0.000	47631181	0.5000	0.5401	
1	8.452	8.452	0.000	65006254	0.5000	0.5656	
1	8.774	8.774	0.000	32406621	0.5000	0.5565	
		Average of Peak Amounts =				0.5440	
2	8.201	8.201	0.000	17063177	0.5000	0.5345	
2	8.464	8.464	0.000	20688211	0.5000	0.5348	
2	9.302	9.302	0.000	16727808	0.5000	0.5202	
2	9.566	9.566	0.000	39460493	0.5000	0.5561	
2	9.930	9.930	0.000	27485580	0.5000	0.5433	
		Average of Peak Amounts =				0.5378	
						RPD = 1.15	
$ 12 DCB Decachlorobiphenyl							
1	9.906	9.906	0.000	31358265	0.0250	0.0283	
2	11.021	11.021	0.000	19269727	0.0250	0.0279	
						RPD = 1.45	
16 1260 Res 1							
1	8.774	8.774	0.000	32406621	NR	NR	
2	9.690	9.690	0.000	1775846	NR	NR	
13 1260 Res 2							
1	8.817	8.817	0.000	16493384	NR	NR	
2	9.566	9.566	0.000	39460493	NR	NR	
15 1260 Res 3							
1	8.865	8.865	0.000	21403529	NR	NR	
2	0.780	0.780	0.000	773157	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Review Flags

M - Manually Integrated

Reagents:

SG 1260 res_00002	Amount Added:	1.00	Units: mL
SG1660@0.5PPM_00086	Amount Added:	1.00	Units: mL

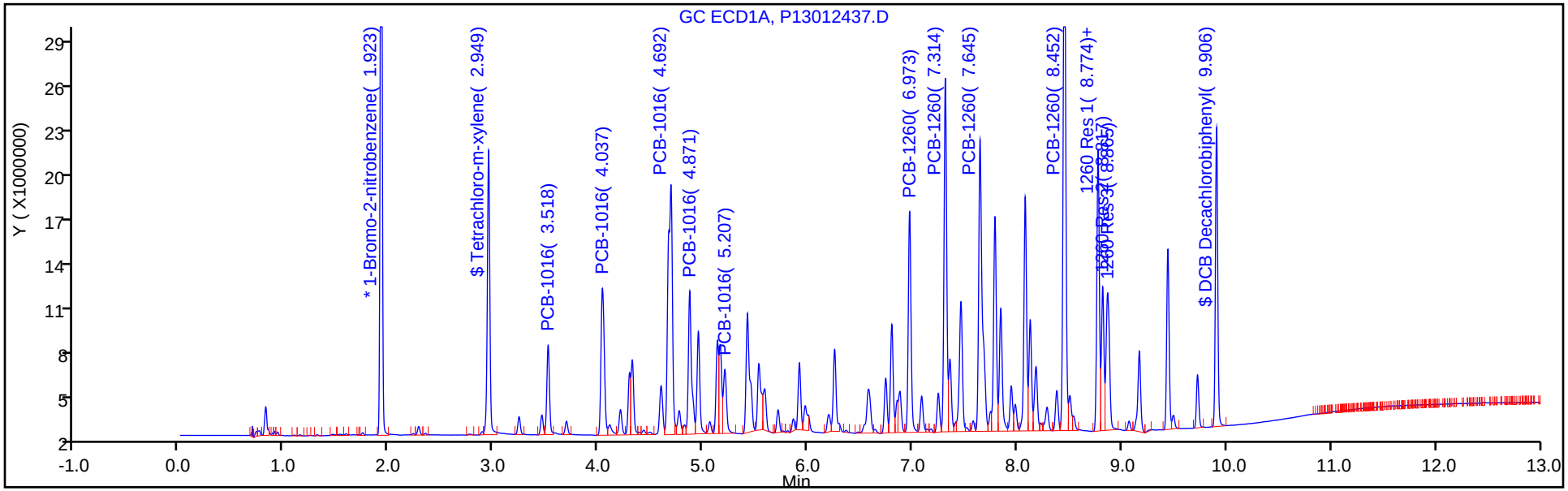
Report Date: 25-Jan-2019 10:02:56 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

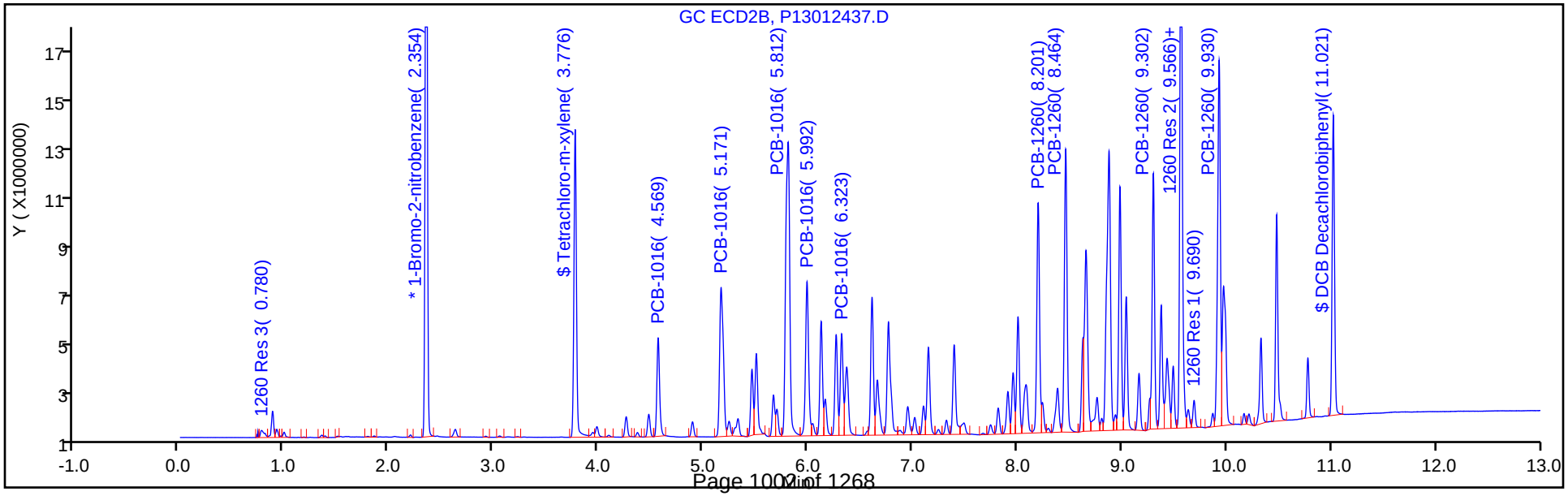
Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012437.D

Injection Date:	24-Jan-2019 16:03:13	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	CCV AR1660			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 25-Jan-2019 10:02:57 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012437.D

Injection Date: 24-Jan-2019 16:03:13 Instrument ID: A2HP13

Lims ID: CCV AR1660

Client ID:

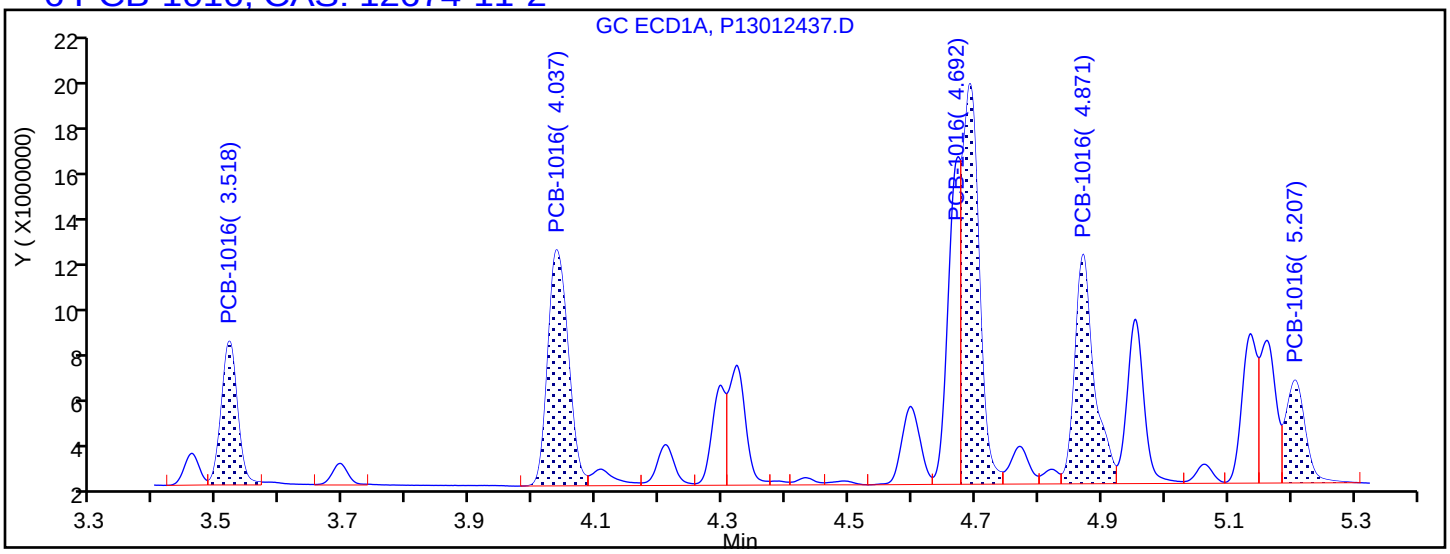
Operator ID: ALS Bottle#: 37 Worklist Smp#: 3

Injection Vol: 1.0 uL Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

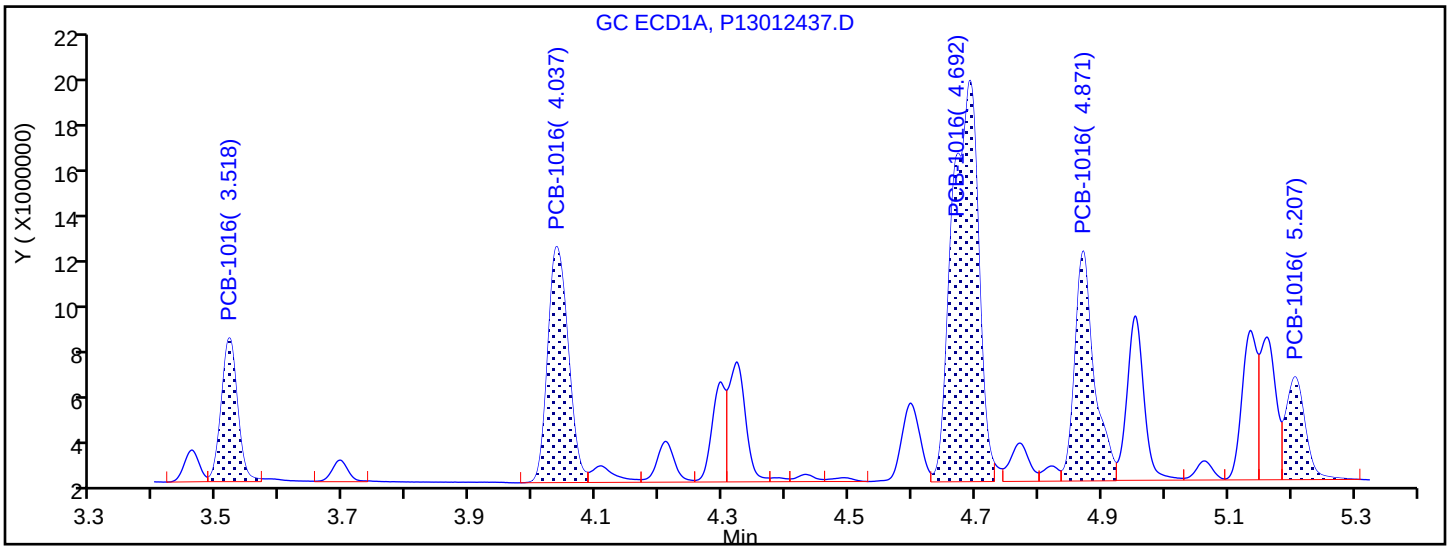
Column: Detector GC ECD1A

6 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.518	Response = 10811130
4.037	Response = 22318640
4.692	Response = 30994200
4.871	Response = 20568805
5.207	Response = 9187666



Manual Integration Results

3.518	Response = 10811130	
4.037	Response = 22318640	
4.692	Response = 49049250	M
4.871	Response = 20668492	M
5.207	Response = 9187666	

Reviewer: grantk, 25-Jan-2019 08:46:41

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCV 240-365410/4 Calibration Date: 01/24/2019 16:21

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 14:45

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 16:16

Lab File ID: P13012438.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Ave	0.0207	0.0184		0.446	0.500	-10.8	20.0
PCB-1232 Peak 2	Ave	0.0168	0.0151		0.448	0.500	-10.4	20.0
PCB-1232 Peak 3	Ave	0.0337	0.0316		0.469	0.500	-6.2	20.0
PCB-1232 Peak 4	Ave	0.0146	0.0135		0.462	0.500	-7.7	20.0
PCB-1232 Peak 5	Ave	0.0054	0.0052		0.487	0.500	-2.7	20.0
PCB-1262 Peak 1	Ave	0.0456	0.0446		0.489	0.500	-2.2	20.0
PCB-1262 Peak 2	Lin1		0.0579		0.469	0.500	-6.1	20.0
PCB-1262 Peak 3	Ave	0.0579	0.0518		0.448	0.500	-10.4	20.0
PCB-1262 Peak 4	Ave	0.1080	0.1110		0.514	0.500	2.8	20.0
PCB-1262 Peak 5	Ave	0.0444	0.0450		0.506	0.500	1.3	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCV 240-365410/4 Calibration Date: 01/24/2019 16:21

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 14:45

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 16:16

Lab File ID: P13012438.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	3.52	3.50	3.54
PCB-1232 Peak 2	4.04	4.02	4.06
PCB-1232 Peak 3	4.69	4.67	4.71
PCB-1232 Peak 4	4.87	4.85	4.89
PCB-1232 Peak 5	5.21	5.19	5.23
PCB-1262 Peak 1	7.31	7.29	7.33
PCB-1262 Peak 2	7.79	7.77	7.81
PCB-1262 Peak 3	8.08	8.06	8.10
PCB-1262 Peak 4	8.45	8.43	8.47
PCB-1262 Peak 5	8.82	8.80	8.84

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012438.D
Lims ID: CCV AR1232/1262
Client ID:
Sample Type: CCV
Inject. Date: 24-Jan-2019 16:21:30 ALS Bottle#: 38 Worklist Smp#: 4
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0083947-004
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub1

Method: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 25-Jan-2019 10:03:07 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0327

First Level Reviewer: grantk Date: 25-Jan-2019 08:48:13

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.924	1.924	0.000	70519718	0.0500	0.0500	
2	2.354	2.354	0.000	44190935	0.0500	0.0500	
4 PCB-1232							
1	3.518	3.518	0.000	13001728	0.5000	0.4461	
1	4.038	4.038	0.000	10615949	0.5000	0.4478	
1	4.692	4.692	0.000	22267853	0.5000	0.4689	
1	4.870	4.870	0.000	9516864	0.5000	0.4617	
1	5.206	5.206	0.000	3683814	0.5000	0.4866	
		Average of Peak Amounts =				0.4622	
2	4.569	4.569	0.000	8847685	0.5000	0.4385	
2	5.170	5.170	0.000	7609941	0.5000	0.4490	
2	5.812	5.812	0.000	14700642	0.5000	0.4598	
2	5.992	5.992	0.000	6119069	0.5000	0.4681	
2	6.322	6.322	0.000	3274292	0.5000	0.4751	
		Average of Peak Amounts =				0.4581	
						RPD = 0.89	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
9 PCB-1262							
1	7.313	7.313	0.000	31461224	0.5000	0.4889	
1	7.788	7.788	0.000	40812422	0.5000	0.4693	
1	8.077	8.077	0.000	36554903	0.5000	0.4479	
1	8.452	8.452	0.000	78278125	0.5000	0.5140	
1	8.817	8.817	0.000	31696080	0.5000	0.5064	
		Average of Peak Amounts =				0.4853	
2	8.464	8.464	0.000	17120564	0.5000	0.4912	
2	8.983	8.983	0.000	24196003	0.5000	0.4776	
2	9.302	9.302	0.000	22193527	0.5000	0.4914	
2	9.566	9.566	0.000	45996718	0.5000	0.5081	
2	9.928	9.928	0.000	32635943	0.5000	0.4979	
		Average of Peak Amounts =				0.4932	
						RPD = 1.62	

Reagents:

SG3262@0.5PPM_00032 Amount Added: 1.00 Units: mL

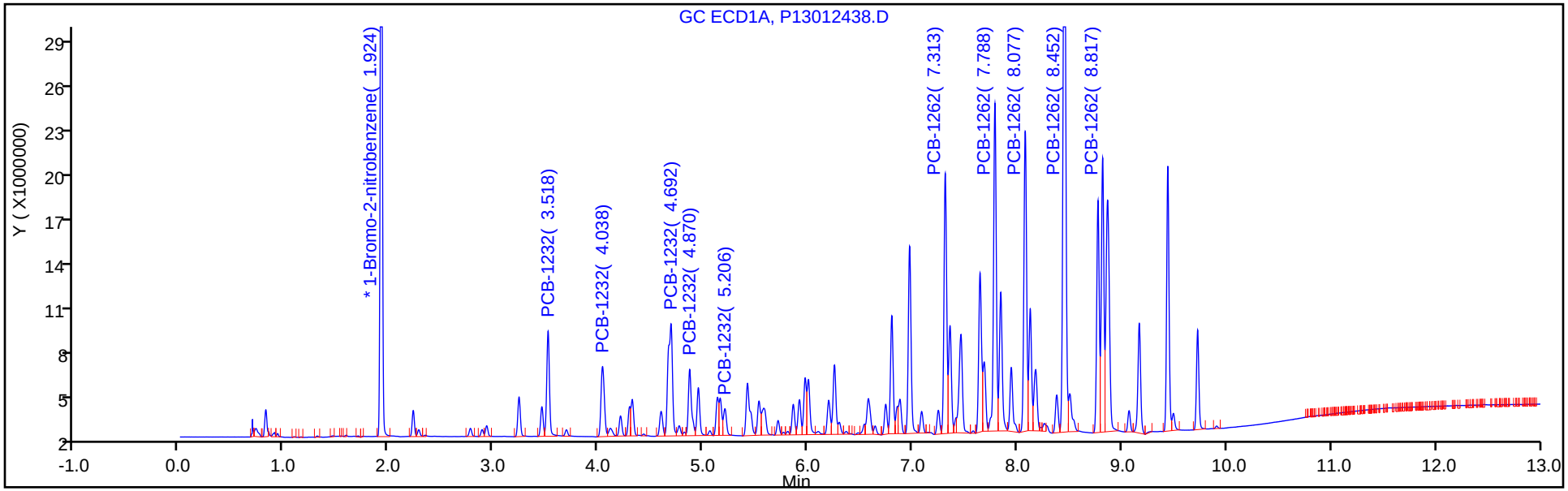
Report Date: 25-Jan-2019 10:03:07 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

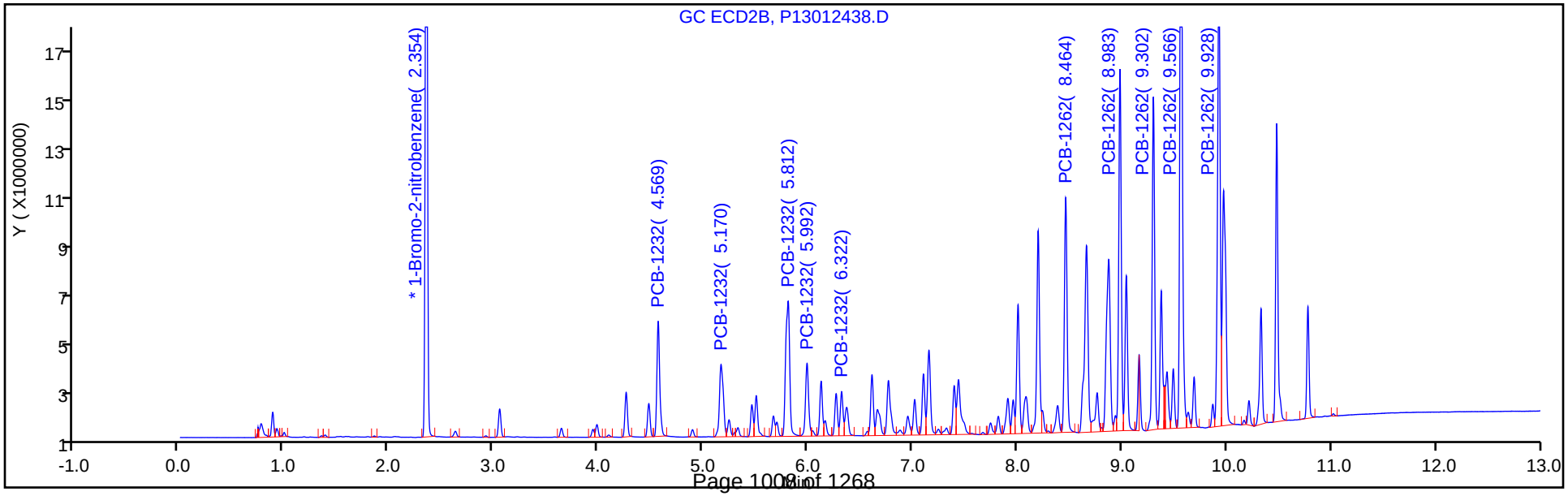
Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012438.D

Injection Date:	24-Jan-2019 16:21:30	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	CCV AR1232/1262			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	38
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCV 240-365410/5 Calibration Date: 01/24/2019 16:39

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 16:35

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 18:07

Lab File ID: P13012439.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Ave	0.0146	0.0136		0.466	0.500	-6.8	20.0
PCB-1242 Peak 2	Ave	0.0281	0.0267		0.476	0.500	-4.7	20.0
PCB-1242 Peak 3	Ave	0.0573	0.0584		0.510	0.500	1.9	20.0
PCB-1242 Peak 4	Ave	0.0248	0.0245		0.493	0.500	-1.5	20.0
PCB-1242 Peak 5	Ave	0.0104	0.0109		0.523	0.500	4.6	20.0
PCB-1268 Peak 1	Ave	0.1186	0.1330		0.560	0.500	12.1	20.0
PCB-1268 Peak 2	Ave	0.1177	0.1318		0.560	0.500	11.9	20.0
PCB-1268 Peak 3	Ave	0.0995	0.1110		0.558	0.500	11.6	20.0
PCB-1268 Peak 4	Ave	0.0423	0.0466		0.551	0.500	10.2	20.0
PCB-1268 Peak 5	Ave	0.3171	0.3586		0.565	0.500	13.1	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCV 240-365410/5 Calibration Date: 01/24/2019 16:39

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 16:35

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 18:07

Lab File ID: P13012439.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	3.52	3.50	3.54
PCB-1242 Peak 2	4.04	4.02	4.06
PCB-1242 Peak 3	4.69	4.67	4.71
PCB-1242 Peak 4	4.87	4.85	4.89
PCB-1242 Peak 5	5.21	5.19	5.23
PCB-1268 Peak 1	8.82	8.80	8.83
PCB-1268 Peak 2	8.86	8.84	8.88
PCB-1268 Peak 3	9.07	9.05	9.09
PCB-1268 Peak 4	9.44	9.42	9.46
PCB-1268 Peak 5	9.72	9.70	9.74

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012439.D
Lims ID: CCV AR1242/1268
Client ID:
Sample Type: CCV
Inject. Date: 24-Jan-2019 16:39:51 ALS Bottle#: 39 Worklist Smp#: 5
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0083947-005
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub2

Method: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 25-Jan-2019 10:03:14 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0327

First Level Reviewer: grantk Date: 25-Jan-2019 08:50:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.922	1.922	0.000	68213725	0.0500	0.0500	
2	2.353	2.353	0.000	42669886	0.0500	0.0500	
5 PCB-1242							M
1	3.517	3.517	0.000	9268693	0.5000	0.4661	
1	4.037	4.037	0.000	18229849	0.5000	0.4763	
1	4.691	4.691	0.000	39827664	0.5000	0.5097	M
1	4.869	4.869	0.000	16698513	0.5000	0.4927	M
1	5.206	5.206	0.000	7419884	0.5000	0.5229	
		Average of Peak Amounts =				0.4935	
2	4.568	4.568	0.000	6270084	0.5000	0.4602	
2	5.169	5.169	0.000	12296658	0.5000	0.4783	
2	5.811	5.811	0.000	25672867	0.5000	0.4991	
2	5.991	5.991	0.000	10418630	0.5000	0.4952	
2	6.322	6.322	0.000	6197128	0.5000	0.4983	
		Average of Peak Amounts =				0.4862	
						RPD = 1.49	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
11 PCB-1268							
1	8.815	8.815	0.000	90696324	0.5000	0.5603	
1	8.857	8.857	0.000	89889155	0.5000	0.5597	
1	9.066	9.066	0.000	75735222	0.5000	0.5581	
1	9.438	9.438	0.000	31812623	0.5000	0.5508	
1	9.722	9.722	0.000	244607069	0.5000	0.5655	
		Average of Peak Amounts =				0.5589	
2	9.923	9.923	0.000	53358216	0.5000	0.5537	
2	9.969	9.969	0.000	54036963	0.5000	0.5551	
2	10.213	10.213	0.000	45344375	0.5000	0.5394	
2	10.478	10.478	0.000	19268799	0.5000	0.5230	
2	10.777	10.777	0.000	148203658	0.5000	0.5499	
		Average of Peak Amounts =				0.5442	
						RPD = 2.65	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

SG4268@0.5PPM_00031 Amount Added: 1.00 Units: mL

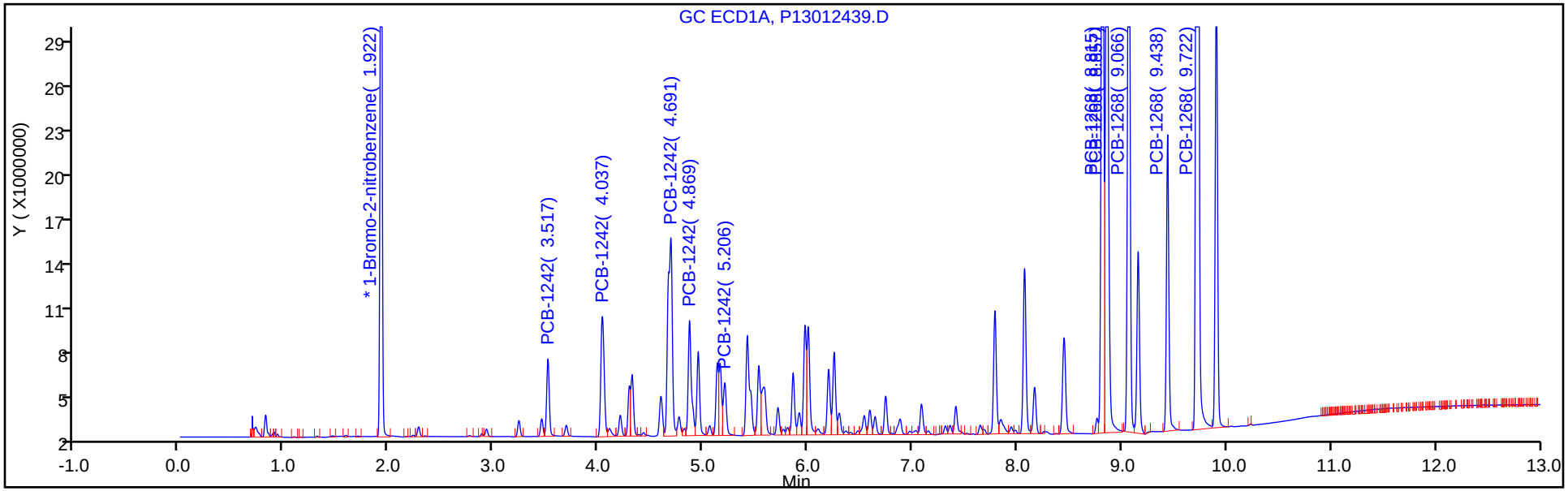
Report Date: 25-Jan-2019 10:03:15 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

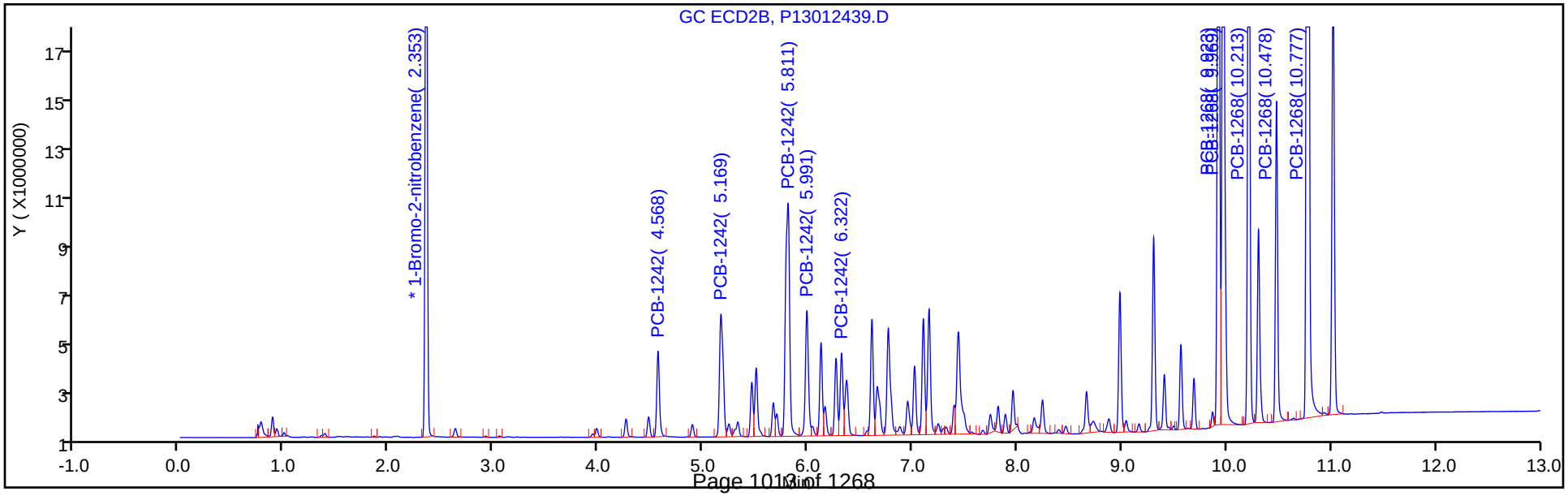
Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012439.D

Injection Date:	24-Jan-2019 16:39:51	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	CCV AR1242/1268			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	39
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 25-Jan-2019 10:03:15 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012439.D

Injection Date: 24-Jan-2019 16:39:51 Instrument ID: A2HP13

Lims ID: CCV AR1242/1268

Client ID:

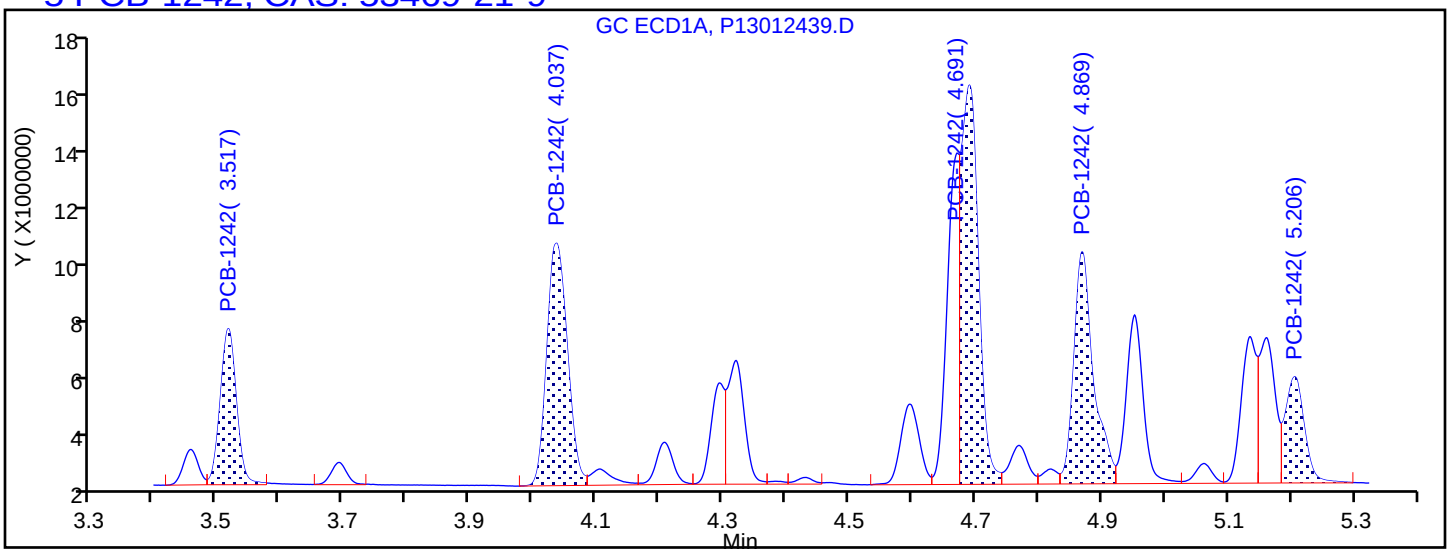
Operator ID: ALS Bottle#: 39 Worklist Smp#: 5

Injection Vol: 1.0 uL Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

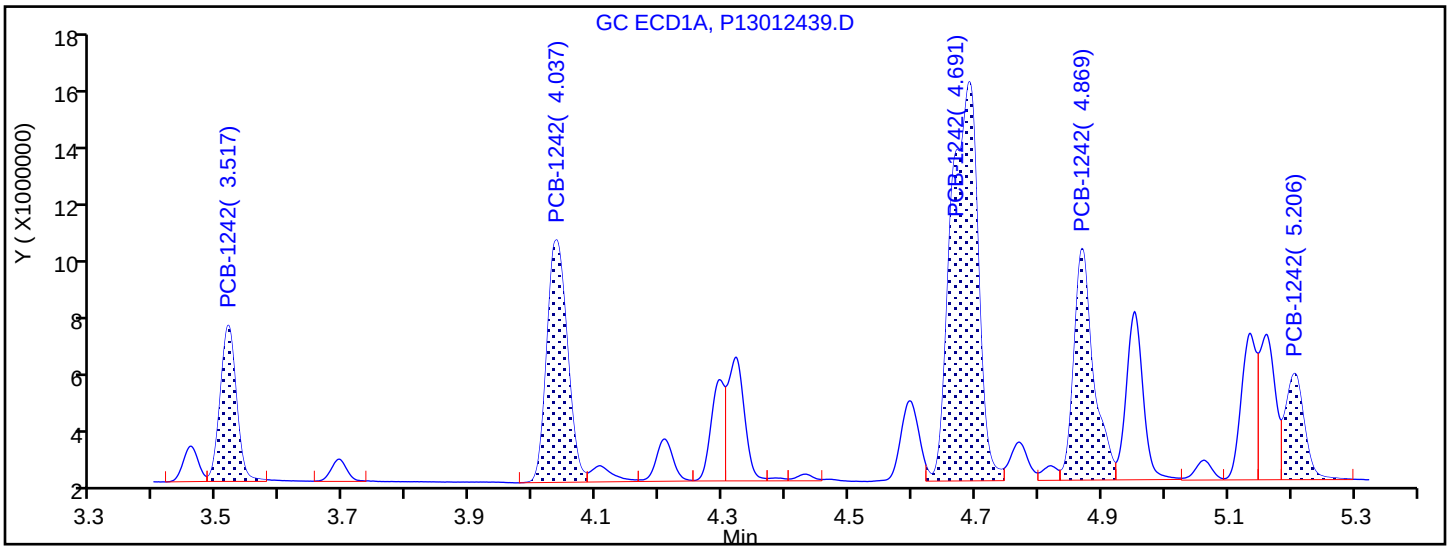
Column: Detector GC ECD1A

5 PCB-1242, CAS: 53469-21-9



Processing Integration Results

3.517	Response = 9268693
4.037	Response = 18229849
4.691	Response = 25169562
4.869	Response = 16781468
5.206	Response = 7419884



Manual Integration Results

3.517	Response = 9268693	
4.037	Response = 18229849	
4.691	Response = 39827664	M
4.869	Response = 16698513	M
5.206	Response = 7419884	

Reviewer: grantk, 25-Jan-2019 08:49:10

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCV 240-365410/6 Calibration Date: 01/24/2019 16:58

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 18:25

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 19:57

Lab File ID: P13012440.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Ave	0.0152	0.0140		0.460	0.500	-8.0	20.0
PCB-1248 Peak 2	Ave	0.0226	0.0220		0.486	0.500	-2.9	20.0
PCB-1248 Peak 3	Ave	0.0331	0.0335		0.505	0.500	1.1	20.0
PCB-1248 Peak 4	Ave	0.0276	0.0272		0.493	0.500	-1.3	20.0
PCB-1248 Peak 5	Ave	0.0173	0.0178		0.512	0.500	2.4	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCV 240-365410/6 Calibration Date: 01/24/2019 16:58

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 18:25

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 19:57

Lab File ID: P13012440.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	4.04	4.02	4.06
PCB-1248 Peak 2	5.14	5.12	5.16
PCB-1248 Peak 3	5.97	5.95	5.99
PCB-1248 Peak 4	6.25	6.23	6.27
PCB-1248 Peak 5	6.74	6.73	6.76

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012440.D
Lims ID: CCV AR1248
Client ID:
Sample Type: CCV
Inject. Date: 24-Jan-2019 16:58:11 ALS Bottle#: 40 Worklist Smp#: 6
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0083947-006
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub3

Method: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 25-Jan-2019 10:03:21 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0327

First Level Reviewer: grantk Date: 25-Jan-2019 08:50:41

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.922	1.922	0.000	70214866	0.0500	0.0500	
2	2.353	2.353	0.000	44181022	0.0500	0.0500	
7 PCB-1248							
1	4.036	4.036	0.000	9839630	0.5000	0.4599	
1	5.136	5.136	0.000	15410402	0.5000	0.4856	
1	5.973	5.973	0.000	23513604	0.5000	0.5053	
1	6.252	6.252	0.000	19098868	0.5000	0.4935	
1	6.744	6.744	0.000	12467770	0.5000	0.5119	
		Average of Peak Amounts =				0.4912	
2	5.170	5.170	0.000	6739511	0.5000	0.4641	
2	6.270	6.270	0.000	9666371	0.5000	0.4725	
2	6.613	6.613	0.000	12907056	0.5000	0.4894	
2	7.158	7.158	0.000	16189903	0.5000	0.4956	
2	7.962	7.962	0.000	8923215	0.5000	0.4793	
		Average of Peak Amounts =				0.4802	
						RPD = 2.27	

Reagents:

SG1248@0.5ppm_00037 Amount Added: 1.00 Units: mL

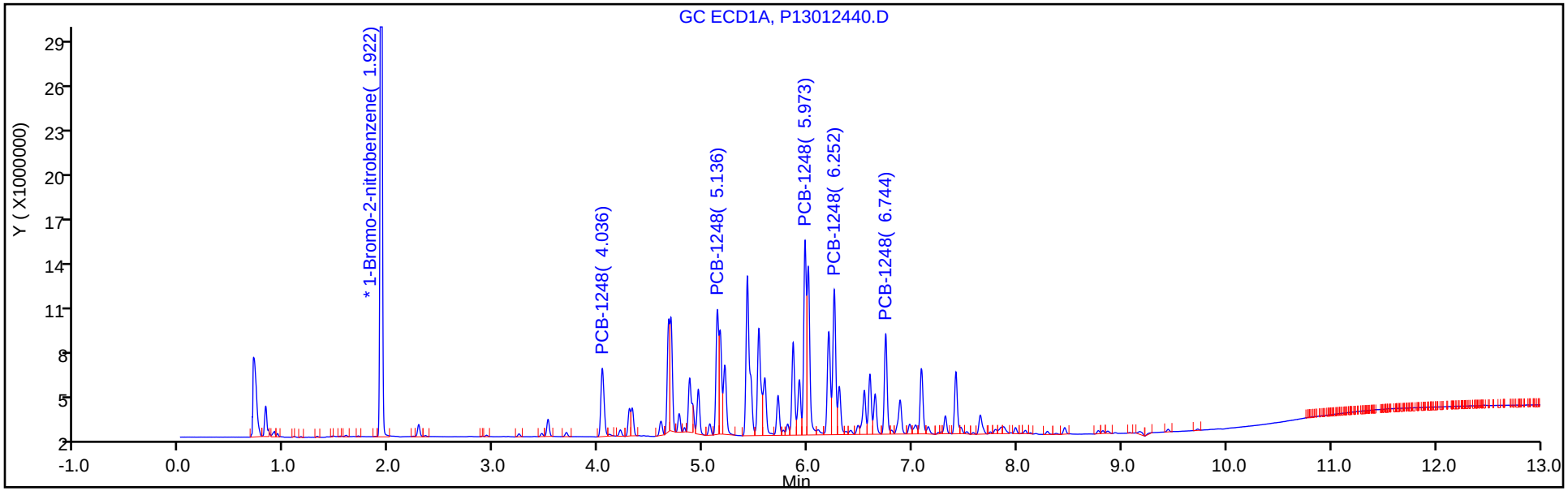
Report Date: 25-Jan-2019 10:03:22 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

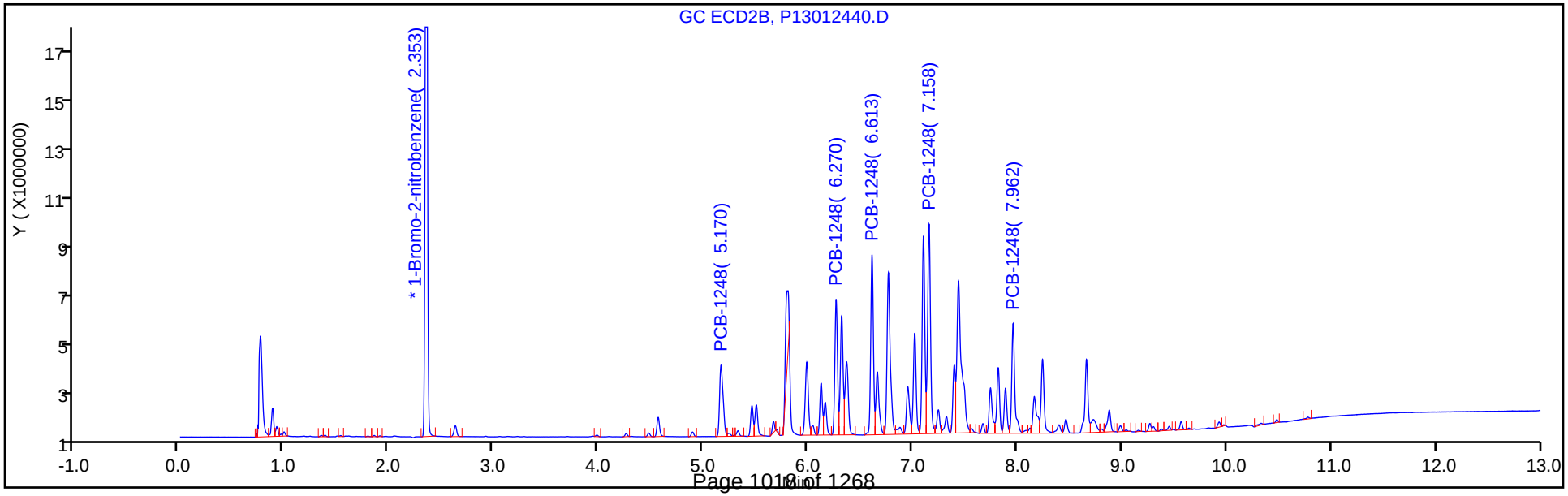
Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012440.D

Injection Date:	24-Jan-2019 16:58:11	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	CCV AR1248			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	40
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCV 240-365410/7 Calibration Date: 01/24/2019 17:16

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 20:15

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 21:47

Lab File ID: P13012441.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Ave	0.0108	0.0103		0.476	0.500	-4.8	20.0
PCB-1221 Peak 2	Ave	0.0071	0.0068		0.475	0.500	-4.9	20.0
PCB-1221 Peak 3	Ave	0.0250	0.0236		0.472	0.500	-5.6	20.0
PCB-1254 Peak 1	Ave	0.0291	0.0293		0.504	0.500	0.9	20.0
PCB-1254 Peak 2	Ave	0.0404	0.0410		0.507	0.500	1.4	20.0
PCB-1254 Peak 3	Ave	0.0542	0.0569		0.525	0.500	4.9	20.0
PCB-1254 Peak 4	Ave	0.0400	0.0424		0.529	0.500	5.9	20.0
PCB-1254 Peak 5	Ave	0.0541	0.0581		0.537	0.500	7.4	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCV 240-365410/7 Calibration Date: 01/24/2019 17:16

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 20:15

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 21:47

Lab File ID: P13012441.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	3.24	3.22	3.26
PCB-1221 Peak 2	3.46	3.44	3.48
PCB-1221 Peak 3	3.52	3.50	3.54
PCB-1254 Peak 1	5.92	5.90	5.94
PCB-1254 Peak 2	6.26	6.24	6.27
PCB-1254 Peak 3	6.74	6.73	6.76
PCB-1254 Peak 4	7.09	7.07	7.11
PCB-1254 Peak 5	7.65	7.63	7.67

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012441.D
Lims ID: CCV AR1221/1254
Client ID:
Sample Type: CCV
Inject. Date: 24-Jan-2019 17:16:51 ALS Bottle#: 41 Worklist Smp#: 7
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0083947-007
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub4

Method: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 25-Jan-2019 10:03:27 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0327

First Level Reviewer: grantk Date: 25-Jan-2019 08:55:10

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.923	1.923	0.000	70998505	0.0500	0.0500	
2	2.354	2.354	0.000	44546094	0.0500	0.0500	
3 PCB-1221							
1	3.241	3.241	0.000	7299721	0.5000	0.4760	
1	3.459	3.459	0.000	4806183	0.5000	0.4755	
1	3.518	3.518	0.000	16761713	0.5000	0.4718	
		Average of Peak Amounts =				0.4744	
2	4.263	4.263	0.000	4937405	0.5000	0.4620	
2	4.479	4.479	0.000	3293243	0.5000	0.4617	
2	4.570	4.570	0.000	11647787	0.5000	0.4738	
		Average of Peak Amounts =				0.4658	
						RPD = 1.83	
8 PCB-1254							
1	5.920	5.920	0.000	20827635	0.5000	0.5045	
1	6.255	6.255	0.000	29084906	0.5000	0.5070	
1	6.744	6.744	0.000	40382172	0.5000	0.5246	
1	7.086	7.086	0.000	30083990	0.5000	0.5293	
1	7.647	7.647	0.000	41271292	0.5000	0.5369	
		Average of Peak Amounts =				0.5205	
2	7.151	7.151	0.000	15598411	0.5000	0.5298	
2	7.398	7.398	0.000	17123416	0.5000	0.5198	
2	7.961	7.961	0.000	24738396	0.5000	0.5148	
2	8.241	8.241	0.000	18680437	0.5000	0.5333	
2	8.880	8.880	0.000	25269387	0.5000	0.5863	
		Average of Peak Amounts =				0.5368	
						RPD = 3.10	

Reagents:

SG2154@0.5PPM_00042 Amount Added: 1.00 Units: mL

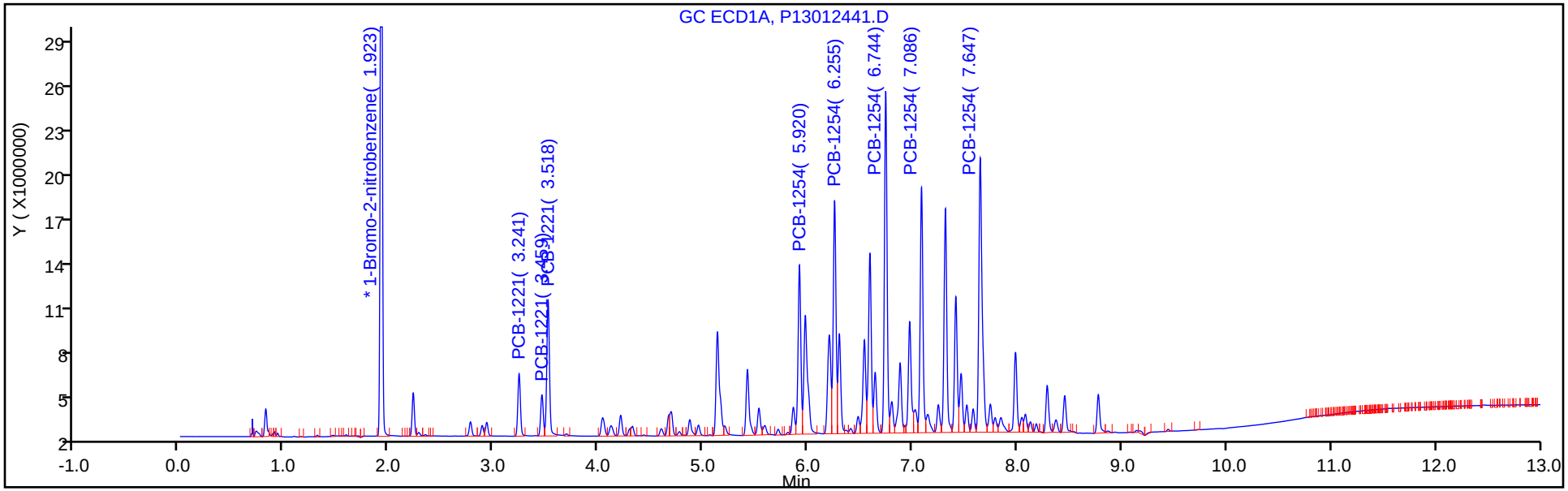
Report Date: 25-Jan-2019 10:03:28 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

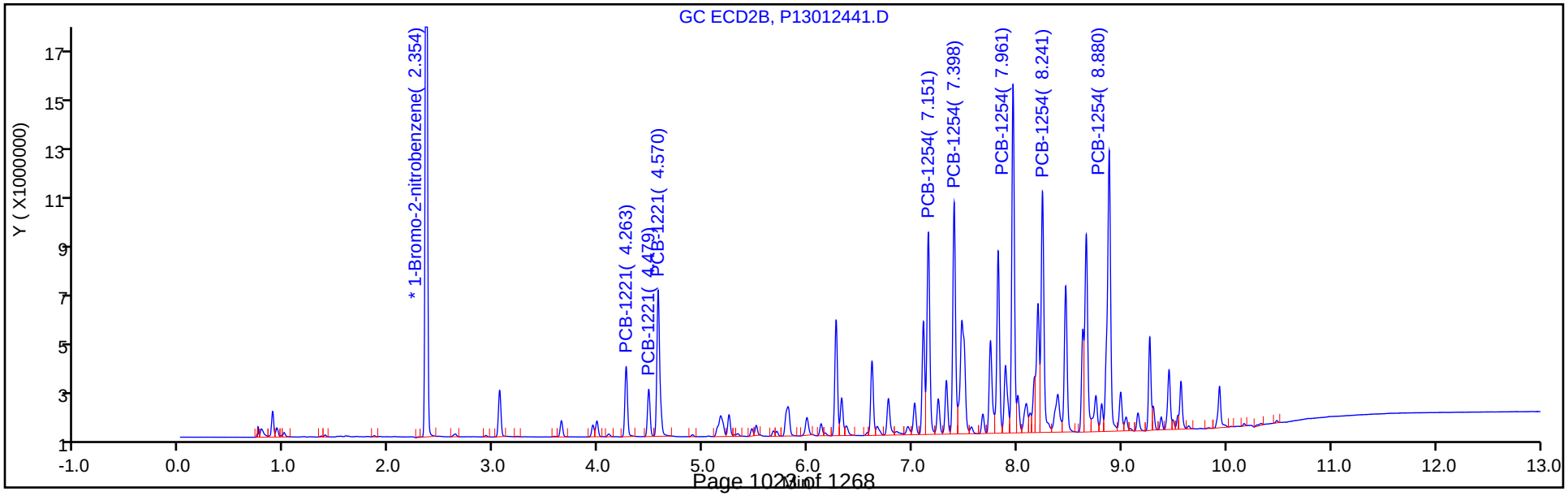
Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012441.D

Injection Date:	24-Jan-2019 17:16:51	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	CCV AR1221/1254			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	41
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCVIS 240-365410/28 Calibration Date: 01/24/2019 23:42

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 22:05

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 23:37

Lab File ID: P13012462.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	0.0175	0.0162		0.461	0.500	-7.8	20.0
PCB-1016 Peak 2	Ave	0.0352	0.0328		0.467	0.500	-6.7	20.0
PCB-1016 Peak 3	Ave	0.0725	0.0736		0.508	0.500	1.6	20.0
PCB-1016 Peak 4	Ave	0.0311	0.0307		0.493	0.500	-1.4	20.0
PCB-1016 Peak 5	Ave	0.0130	0.0133		0.510	0.500	2.0	20.0
PCB-1260 Peak 1	Ave	0.0382	0.0415		0.543	0.500	8.5	20.0
PCB-1260 Peak 2	Ave	0.0583	0.0642		0.550	0.500	10.1	20.0
PCB-1260 Peak 3	Ave	0.0646	0.0723		0.559	0.500	11.9	20.0
PCB-1260 Peak 4	Ave	0.0842	0.0987		0.586	0.500	17.2	20.0
PCB-1260 Peak 5	Ave	0.0427	0.0493		0.578	0.500	15.5	20.0
Tetrachloro-m-xylene	Ave	0.9888	0.9391		0.0237	0.0250	-5.0	20.0
DCB Decachlorobiphenyl	Ave	0.8131	0.9176		0.0282	0.0250	12.9	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: CCVIS 240-365410/28 Calibration Date: 01/24/2019 23:42

Instrument ID: A2HP13 Calib Start Date: 11/26/2018 22:05

GC Column: CLP-1 (0.53mm) ID: 0.53(mm) Calib End Date: 11/26/2018 23:37

Lab File ID: P13012462.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.52	3.50	3.54
PCB-1016 Peak 2	4.04	4.02	4.06
PCB-1016 Peak 3	4.69	4.67	4.71
PCB-1016 Peak 4	4.87	4.85	4.89
PCB-1016 Peak 5	5.21	5.19	5.23
PCB-1260 Peak 1	6.97	6.95	6.99
PCB-1260 Peak 2	7.31	7.29	7.33
PCB-1260 Peak 3	7.64	7.62	7.66
PCB-1260 Peak 4	8.45	8.43	8.47
PCB-1260 Peak 5	8.77	8.75	8.79
Tetrachloro-m-xylene	2.95	2.93	2.97
DCB Decachlorobiphenyl	9.90	9.88	9.92

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012462.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 24-Jan-2019 23:42:03 ALS Bottle#: 62 Worklist Smp#: 28
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0083947-028
Operator ID: Instrument ID: A2HP13
Sublist: chrom-PCB13 IS*sub5

Method: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 25-Jan-2019 10:01:40 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0327

First Level Reviewer: coastc Date: 25-Jan-2019 09:57:48

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.923	1.923	0.000	71873209	0.0500	0.0500	
2	2.353	2.353	0.000	45579081	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.949	2.949	0.000	33747261	0.0250	0.0237	
2	3.775	3.775	0.000	21644098	0.0250	0.0232	
						RPD = 2.31	
6 PCB-1016							M
1	3.517	3.517	0.000	11625710	0.5000	0.4610	
1	4.036	4.036	0.000	23581261	0.5000	0.4666	
1	4.692	4.692	0.000	52890390	0.5000	0.5078	M
1	4.869	4.869	0.000	22063196	0.5000	0.4931	
1	5.206	5.206	0.000	9549067	0.5000	0.5102	
		Average of Peak Amounts =				0.4878	
2	4.569	4.569	0.000	7655168	0.5000	0.4481	
2	5.169	5.169	0.000	15998661	0.5000	0.4736	
2	5.810	5.810	0.000	34487263	0.5000	0.5032	
2	5.990	5.990	0.000	13712085	0.5000	0.4848	
2	6.321	6.321	0.000	8108061	0.5000	0.4904	
		Average of Peak Amounts =				0.4800	
						RPD = 1.60	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	6.971	6.971	0.000	29810732	0.5000	0.5425	
1	7.312	7.312	0.000	46144838	0.5000	0.5504	
1	7.643	7.643	0.000	51967222	0.5000	0.5593	
1	8.449	8.449	0.000	70942803	0.5000	0.5859	
1	8.769	8.769	0.000	35446036	0.5000	0.5777	
		Average of Peak Amounts =				0.5632	
2	8.199	8.199	0.000	18063465	0.5000	0.5306	
2	8.462	8.462	0.000	22096419	0.5000	0.5357	
2	9.299	9.299	0.000	17525506	0.5000	0.5110	
2	9.564	9.564	0.000	42478404	0.5000	0.5613	
2	9.928	9.928	0.000	29282473	0.5000	0.5428	
		Average of Peak Amounts =				0.5363	
						RPD = 4.89	
$ 12 DCB Decachlorobiphenyl							
1	9.903	9.903	0.000	32974560	0.0250	0.0282	
2	11.018	11.018	0.000	20375072	0.0250	0.0276	
						RPD = 2.12	
16 1260 Res 1							U
1		8.774			ND	ND	
2		9.690					
13 1260 Res 2							U
1		8.817			ND	ND	
2		9.566					
15 1260 Res 3							U
1		8.865			ND	ND	
2		0.780					

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

SG1660@0.5PPM_00086 Amount Added: 1.00 Units: mL

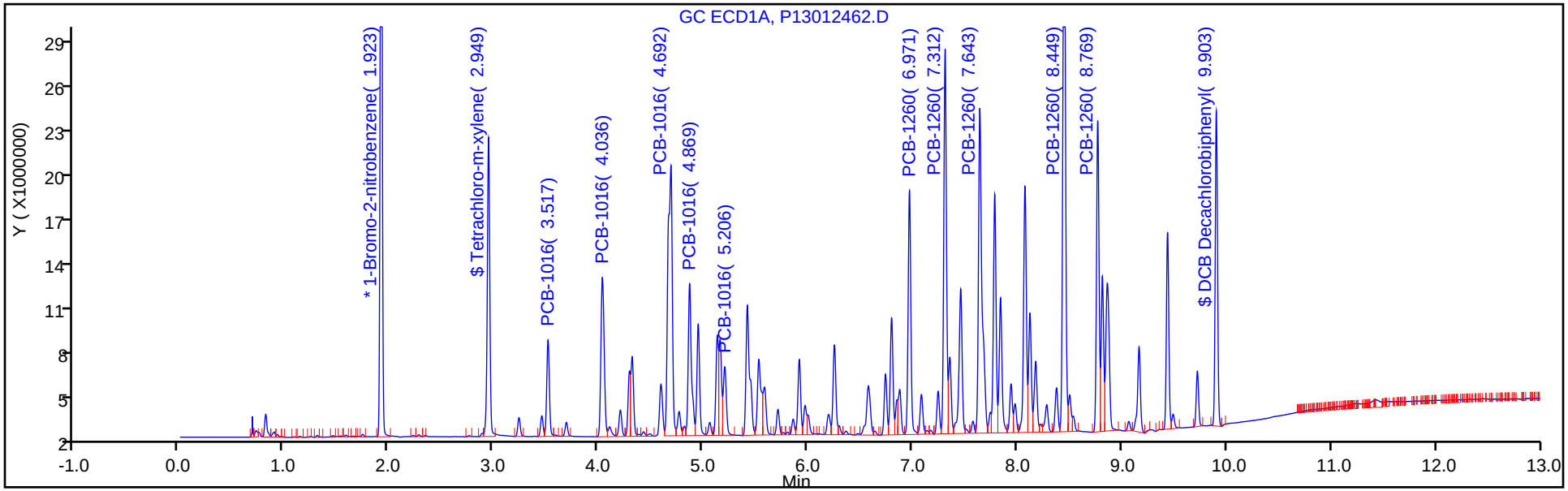
Report Date: 25-Jan-2019 10:01:42 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

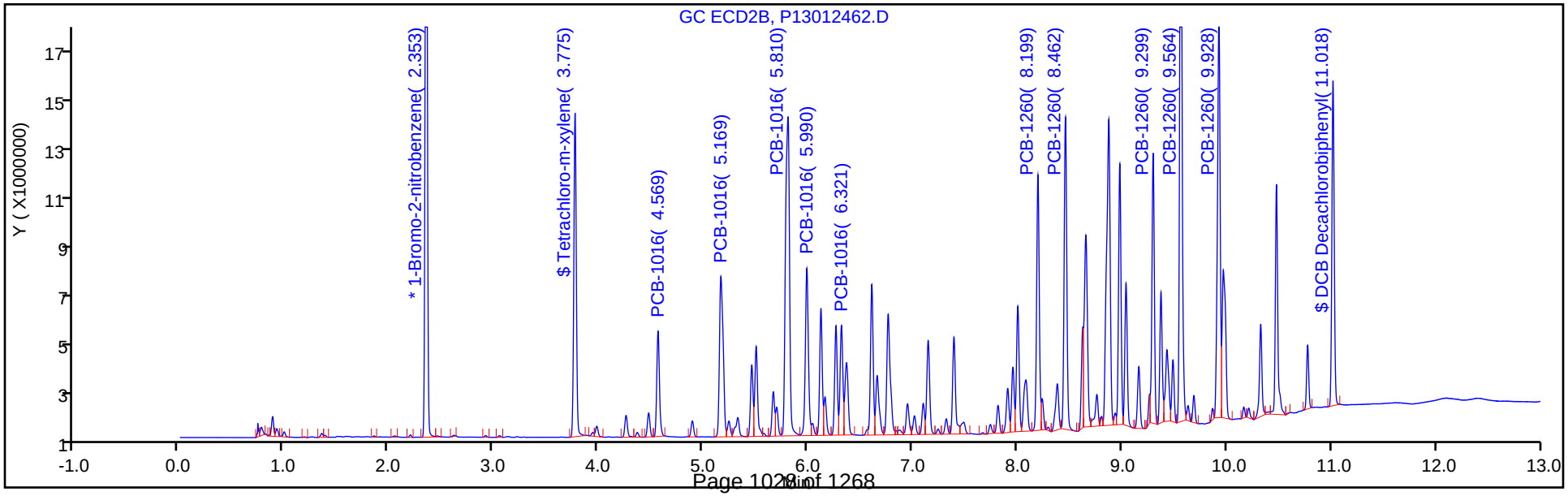
Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012462.D

Injection Date:	24-Jan-2019 23:42:03	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	62
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 25-Jan-2019 10:01:43 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012462.D

Injection Date: 24-Jan-2019 23:42:03 Instrument ID: A2HP13

Lims ID: CCVIS

Client ID:

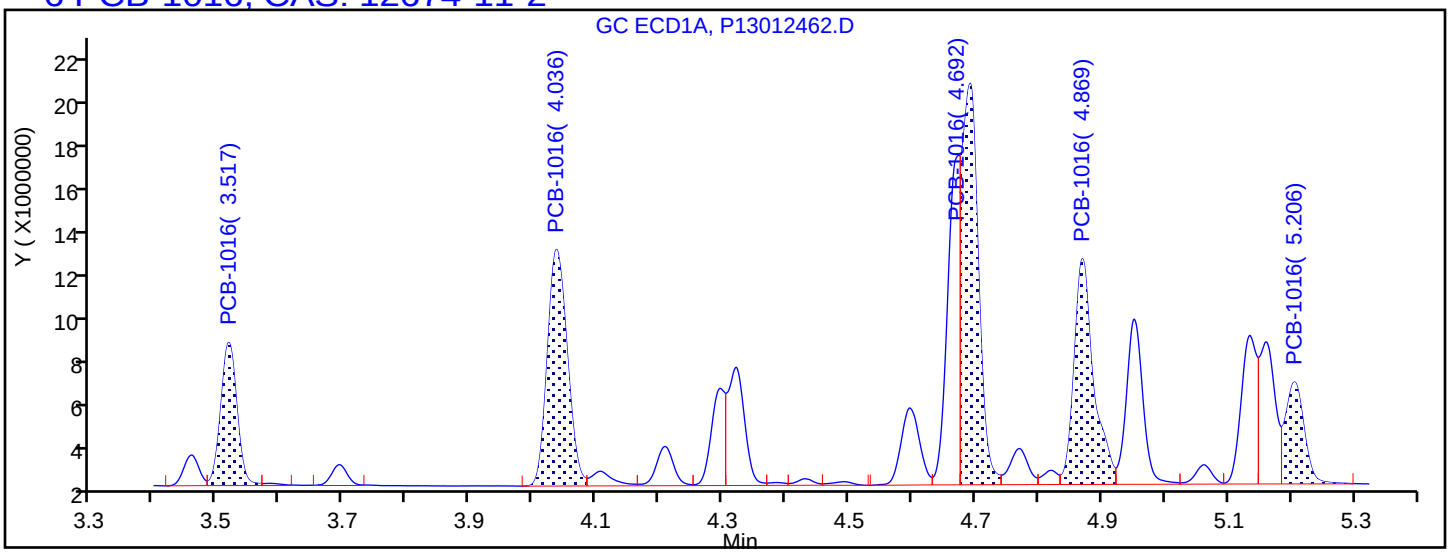
Operator ID: ALS Bottle#: 62 Worklist Smp#: 28

Injection Vol: 1.0 uL Dil. Factor: 1.0000

Method: PCB13 IS Limit Group: GC 8082A IS

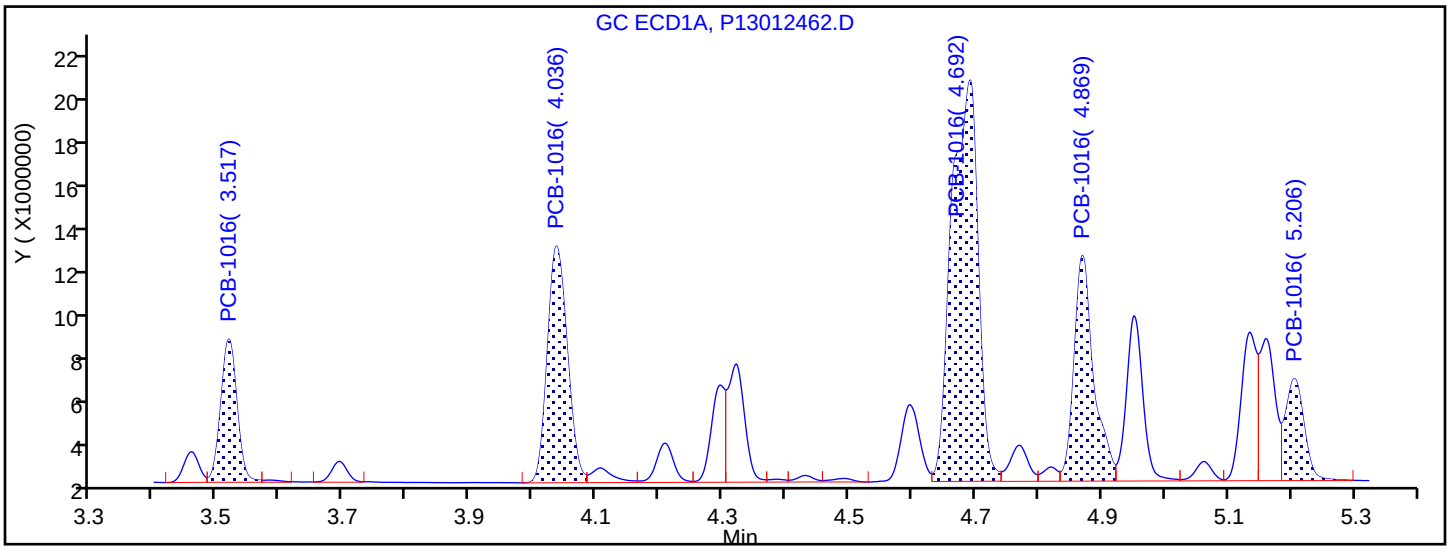
Column: Detector GC ECD1A

6 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.517	Response = 11625710
4.036	Response = 23581261
4.692	Response = 33038850
4.869	Response = 22063196
5.206	Response = 9549067



Manual Integration Results

3.517	Response = 11625710	
4.036	Response = 23581261	
4.692	Response = 52890390	M
4.869	Response = 22063196	
5.206	Response = 9549067	

Reviewer: coastc, 25-Jan-2019 09:57:42

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-365105/23-A

Matrix: Solid | Lab File ID: P13012443.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3540C | Date Extracted: 01/23/2019 06:41

Sample wt/vol: 10(g) | Date Analyzed: 01/24/2019 17:53

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-1 (0.53mm) ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 365410 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor-1016	22	U	50	22
11104-28-2	Aroclor-1221	24	U	50	24
11141-16-5	Aroclor-1232	23	U	50	23
53469-21-9	Aroclor-1242	19	U	50	19
12672-29-6	Aroclor-1248	24	U	50	24
11097-69-1	Aroclor-1254	23	U	50	23
11096-82-5	Aroclor-1260	22	U	50	22
37324-23-5	Aroclor-1262	31	U	50	31
11100-14-4	Aroclor-1268	23	U	50	23

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	68		14-128
2051-24-3	DCB Decachlorobiphenyl	87		10-132

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012443.D
Lims ID: MB 240-365105/23-A
Client ID:
Sample Type: MB
Inject. Date: 24-Jan-2019 17:53:29 ALS Bottle#: 43 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0083947-009
Operator ID: Instrument ID: A2HP13

Method: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 25-Jan-2019 10:01:40 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0327

First Level Reviewer: coastc Date: 25-Jan-2019 09:41:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
S 1 Polychlorinated biphenyls, Total							
1		1.000				ND	
* 14 1-Bromo-2-nitrobenzene							
1	1.923	1.923	0.000	79384562	0.0500	0.0500	
2	2.354	2.354	0.000	50149246	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.949	2.949	0.000	21254330	0.0200	0.0135	
2	3.776	3.776	0.000	13630793	0.0200	0.0133	
						RPD = 1.94	
3 PCB-1221							
1		3.241				ND	
1		3.459					
1		3.518					
2		4.263					
2		4.479					
2		4.570					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
5 PCB-1242							
1		3.517				ND	
1		4.037					
1		4.691					
1		4.869					
1		5.206					
2		4.568					
2		5.169					
2		5.811					
2		5.991					
2		6.322					
6 PCB-1016							
1		3.518				ND	
1		4.037					
1		4.692					
1		4.871					
1		5.207					
2		4.569					
2		5.171					
2		5.812					
2		5.992					
2		6.323					
4 PCB-1232							
1		3.518				ND	
1		4.038					
1		4.692					
1		4.870					
1		5.206					
2		4.569					
2		5.170					
2		5.812					
2		5.992					
2		6.322					
7 PCB-1248							
1		4.036				ND	
1		5.136					
1		5.973					
1		6.252					
1		6.744					
2		5.170					
2		6.270					
2		6.613					
2		7.158					
2		7.962					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
8 PCB-1254							
1		5.920				ND	
1		6.255					
1		6.744					
1		7.086					
1		7.647					
2		7.151					
2		7.398					
2		7.961					
2		8.241					
2		8.880					
10 PCB-1260							
1		6.973				ND	
1		7.314					
1		7.645					
1		8.452					
1		8.774					
2		8.201					
2		8.464					
2		9.302					
2		9.566					
2		9.930					
9 PCB-1262							
1		7.313				ND	
1		7.788					
1		8.077					
1		8.452					
1		8.817					
2		8.464					
2		8.983					
2		9.302					
2		9.566					
2		9.928					
11 PCB-1268							
1		8.815				ND	
1		8.857					
1		9.066					
1		9.438					
1		9.722					
2		9.923					
2		9.969					
2		10.213					
2		10.478					
2		10.777					
$ 12 DCB Decachlorobiphenyl							
1	9.906	9.906	0.000	22454192	0.0200	0.0174	
2	11.021	11.021	0.000	14000117	0.0200	0.0173	
						RPD = 0.83	
16 1260 Res 1							
1		8.774				ND	
2		9.690					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
13 1260 Res 2							
1		8.817				ND	
2		9.566					
15 1260 Res 3							
1		8.865				ND	
2		0.780					

Reagents:

SGPCBISTD_00017 Amount Added: 5.00 Units: uL Run Reagent

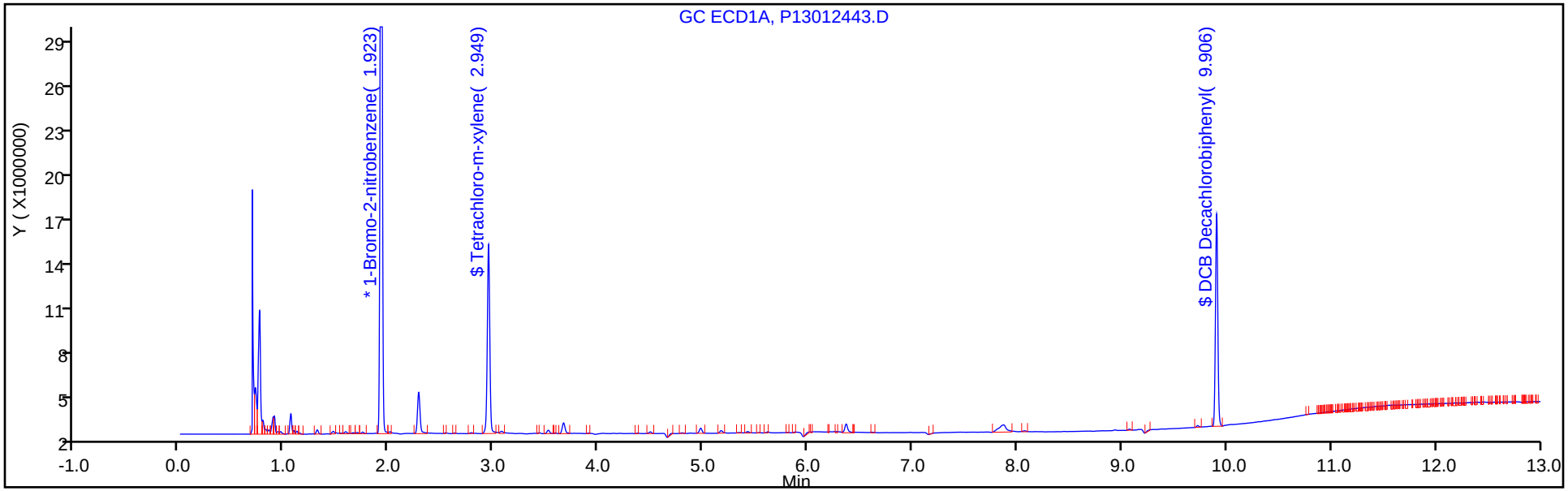
Report Date: 25-Jan-2019 10:01:54 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

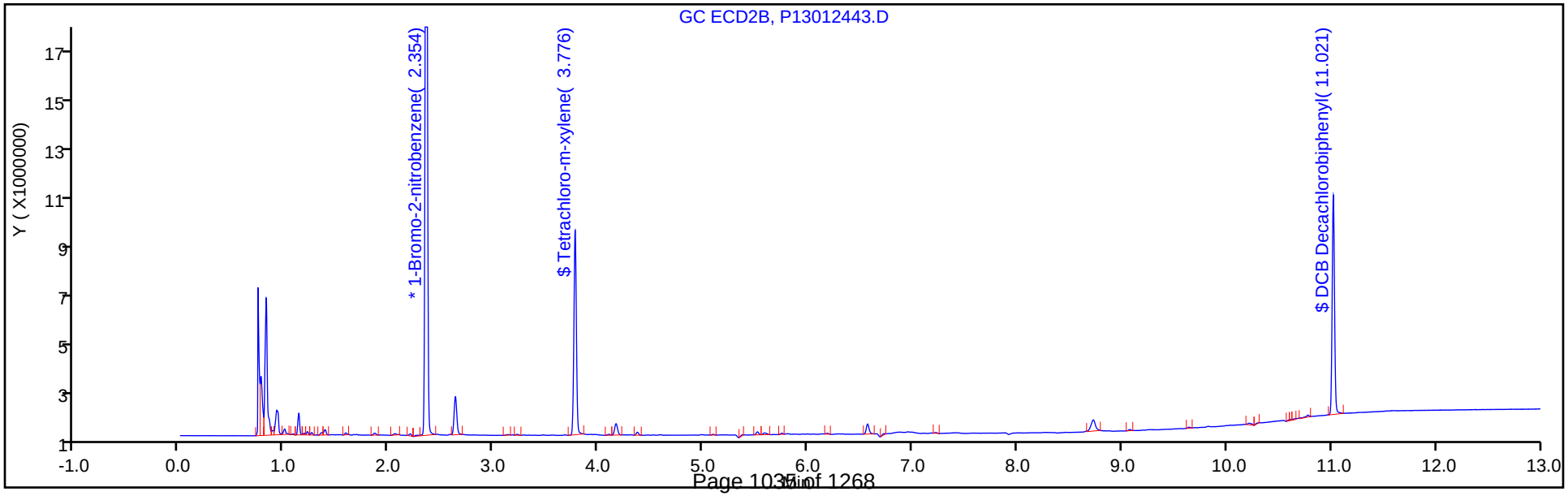
Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012443.D

Injection Date:	24-Jan-2019 17:53:29	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	MB 240-365105/23-A			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Recovery Report

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012443.D
Lims ID: MB 240-365105/23-A
Client ID:
Sample Type: MB
Inject. Date: 24-Jan-2019 17:53:29 ALS Bottle#: 43 Worklist Smp#: 9
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0083947-009
Operator ID: Instrument ID: A2HP13

Method: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 25-Jan-2019 10:01:40 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0327

First Level Reviewer: coastc Date: 25-Jan-2019 09:41:20

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0135	67.70
$ 12 DCB Decachlorobiphenyl	0.0200	0.0174	86.97

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0133	66.40
$ 12 DCB Decachlorobiphenyl	0.0200	0.0173	86.25

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107194-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-365105/24-A

Matrix: Solid | Lab File ID: P13012444.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3540C | Date Extracted: 01/23/2019 06:41

Sample wt/vol: 10(g) | Date Analyzed: 01/24/2019 18:11

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-1 (0.53mm) ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 365410 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor-1016	620		50	22
11096-82-5	Aroclor-1260	785		50	22

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	72		14-128
2051-24-3	DCB Decachlorobiphenyl	94		10-132

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012444.D
Lims ID: LCS 240-365105/24-A
Client ID:
Sample Type: LCS
Inject. Date: 24-Jan-2019 18:11:47 ALS Bottle#: 44 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0083947-010
Operator ID: Instrument ID: A2HP13

Method: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 25-Jan-2019 10:01:40 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0327

First Level Reviewer: coastc Date: 25-Jan-2019 09:41:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 14 1-Bromo-2-nitrobenzene							
1	1.923	1.923	0.000	79553805	0.0500	0.0500	
2	2.354	2.354	0.000	50218638	0.0500	0.0500	
$ 2 Tetrachloro-m-xylene							
1	2.950	2.949	0.001	22730277	0.0200	0.0144	
2	3.776	3.776	0.000	14570059	0.0200	0.0142	
						RPD = 1.91	
6 PCB-1016							
1	3.517	3.518	-0.001	16157290	1.00	0.5789	
1	4.037	4.037	0.000	34068875	1.00	0.6090	
1	4.693	4.692	0.001	68185565	1.00	0.5915	
1	4.871	4.871	0.000	32184743	1.00	0.6499	
1	5.206	5.207	-0.001	13906004	1.00	0.6712	
		Average of Peak Amounts =				0.6201	
2	4.570	4.569	0.001	10997313	1.00	0.5843	
2	5.171	5.171	0.000	22640654	1.00	0.6083	
2	5.812	5.812	0.000	50683941	1.00	0.6712	
2	5.992	5.992	0.000	19999589	1.00	0.6417	
2	6.324	6.323	0.001	11884005	1.00	0.6524	
		Average of Peak Amounts =				0.6316	
						RPD = 1.83	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
10 PCB-1260							
1	6.971	6.973	-0.002	45078481	1.00	0.7412	
1	7.311	7.314	-0.003	69943855	1.00	0.7538	
1	7.645	7.645	0.000	80150400	1.00	0.7794	
1	8.451	8.452	-0.001	111210526	1.00	0.8297	
1	8.771	8.774	-0.003	55628471	1.00	0.8192	
		Average of Peak Amounts =				0.7846	
2	8.201	8.201	0.000	27787977	1.00	0.7409	
2	8.464	8.464	0.000	34093454	1.00	0.7501	
2	9.300	9.302	-0.002	28127404	1.00	0.7444	
2	9.565	9.566	-0.001	67390128	1.00	0.8083	
2	9.930	9.930	0.000	46493634	1.00	0.7823	
		Average of Peak Amounts =				0.7652	
						RPD = 2.51	
$ 12 DCB Decachlorobiphenyl							
1	9.905	9.906	-0.001	24447322	0.0200	0.0189	
2	11.020	11.021	-0.001	14859737	0.0200	0.0183	
						RPD = 3.30	

Reagents:

SGPCBISTD_00017 Amount Added: 5.00 Units: uL Run Reagent

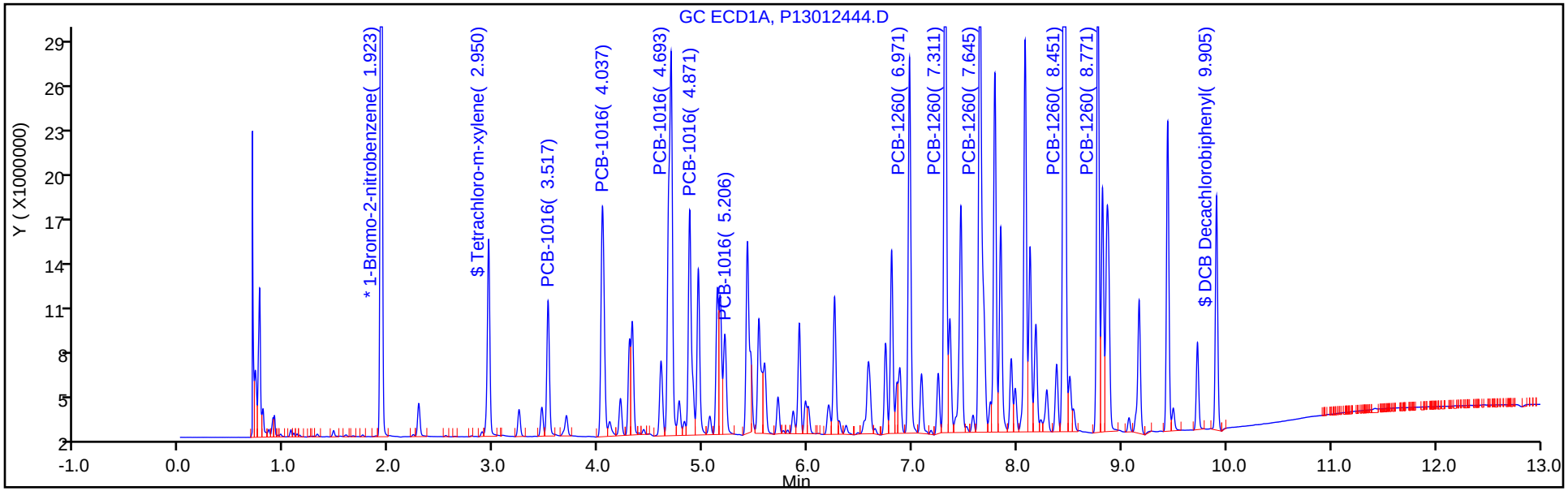
Report Date: 25-Jan-2019 10:01:58 Chrom Revision: 2.3 15-Jan-2019 08:51:34

TestAmerica Canton

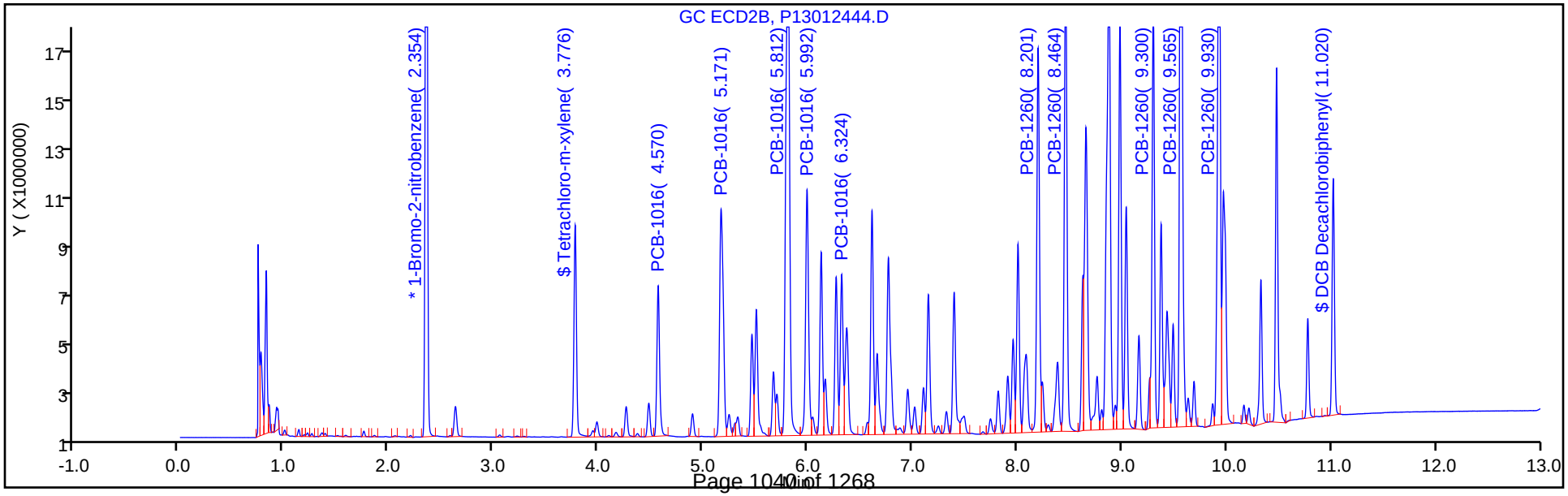
Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012444.D

Injection Date:	24-Jan-2019 18:11:47	Instrument ID:	A2HP13	Operator ID:	
Lims ID:	LCS 240-365105/24-A			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	44
Method:	PCB13 IS	Limit Group:	GC 8082A IS		

Y Scaling: Method Defined: Set to Absolute Y Value



Y Scaling: Method Defined: Set to Absolute Y Value



TestAmerica Canton
Recovery Report

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012444.D
Lims ID: LCS 240-365105/24-A
Client ID:
Sample Type: LCS
Inject. Date: 24-Jan-2019 18:11:47 ALS Bottle#: 44 Worklist Smp#: 10
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: 240-0083947-010
Operator ID: Instrument ID: A2HP13

Method: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\PCB13 IS.m
Limit Group: GC 8082A IS
Last Update: 25-Jan-2019 10:01:40 Calib Date: 26-Nov-2018 23:37:52
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A2HP13\20181126-82259.b\P13112633.D

Column 1 : Det: GC ECD1A
Column 2 : Det: GC ecd2b
Process Host: CTX0327

First Level Reviewer: coastc Date: 25-Jan-2019 09:41:51

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0144	72.24
$ 12 DCB Decachlorobiphenyl	0.0200	0.0189	94.49

Surrogate Recovery, Detector: GC ecd2b

Compound	Amount Added	Amount Recovered	% Rec.
$ 2 Tetrachloro-m-xylene	0.0200	0.0142	70.87
$ 12 DCB Decachlorobiphenyl	0.0200	0.0183	91.42

Report Date: 25-Jan-2019 10:01:58 Chrom Revision: 2.3 15-Jan-2019 08:51:34

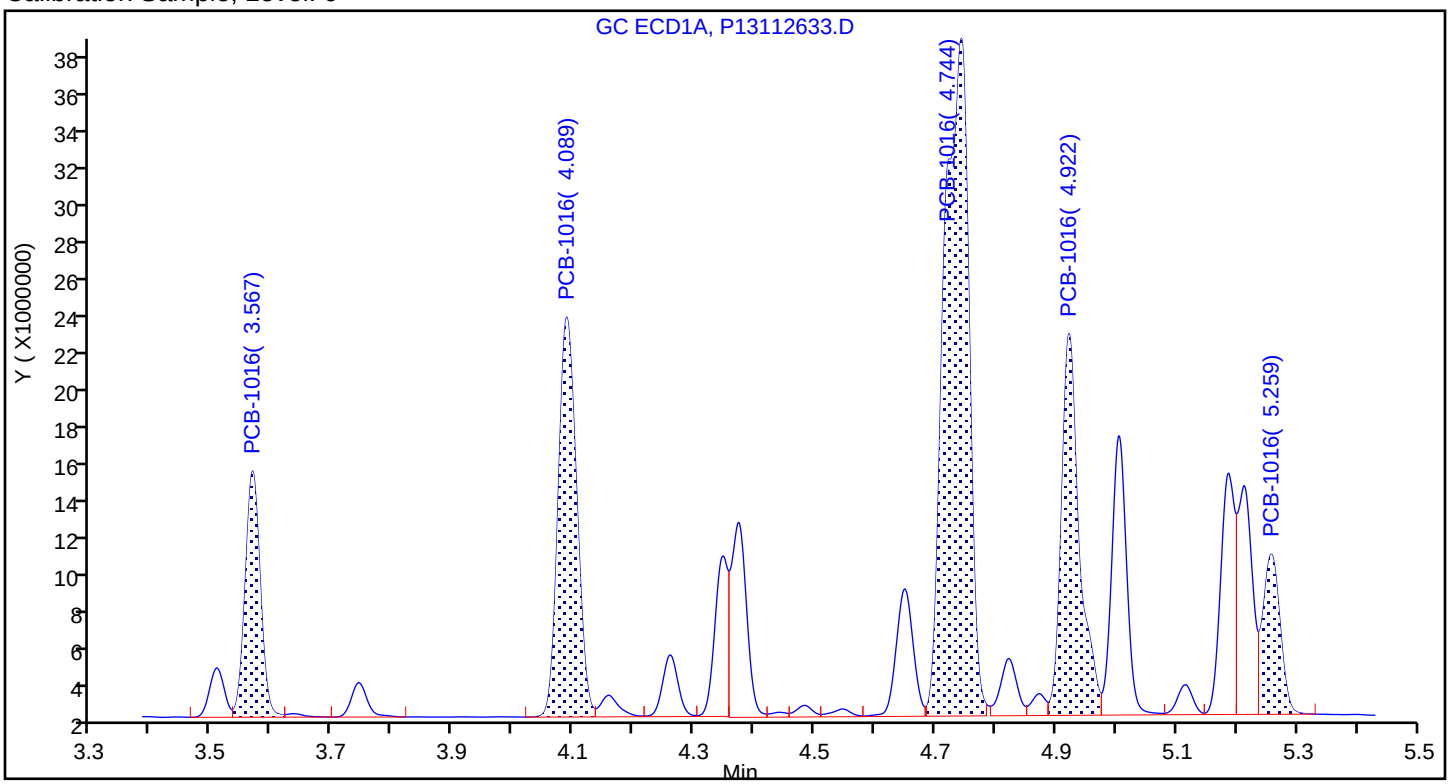
TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012444.D

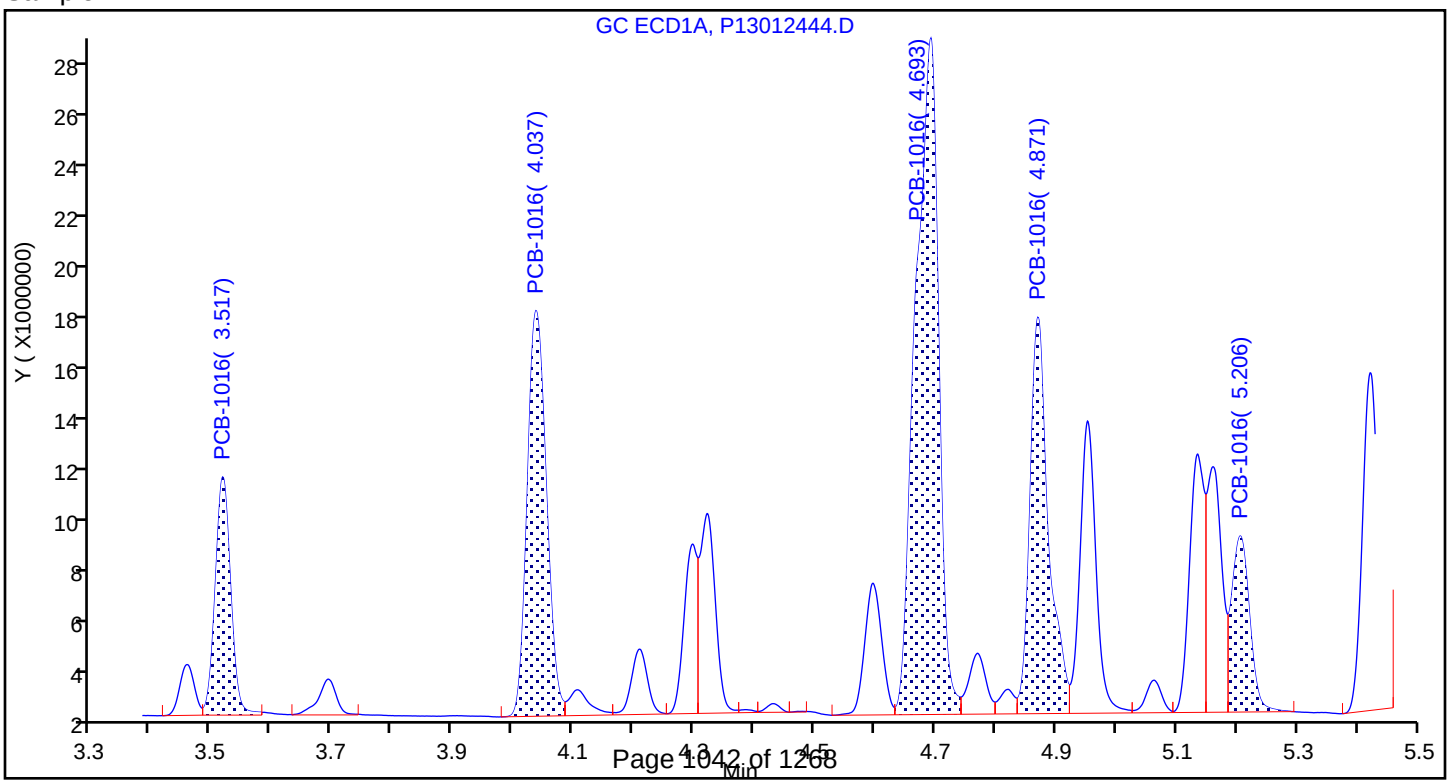
Injection Date:	24-Jan-2019 18:11:47	Instrument ID:	A2HP13
Lims ID:	LCS 240-365105/24-A		
Client ID:			
Operator ID:		ALS Bottle#:	44 Worklist Smp#: 10
Injection Vol:	1.0 uL	Dil. Factor:	1.0000
Method:	PCB13 IS	Limit Group:	GC 8082A IS
Column:		Detector	GC ECD1A

6 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 6



Sample



Report Date: 25-Jan-2019 10:01:58 Chrom Revision: 2.3 15-Jan-2019 08:51:34

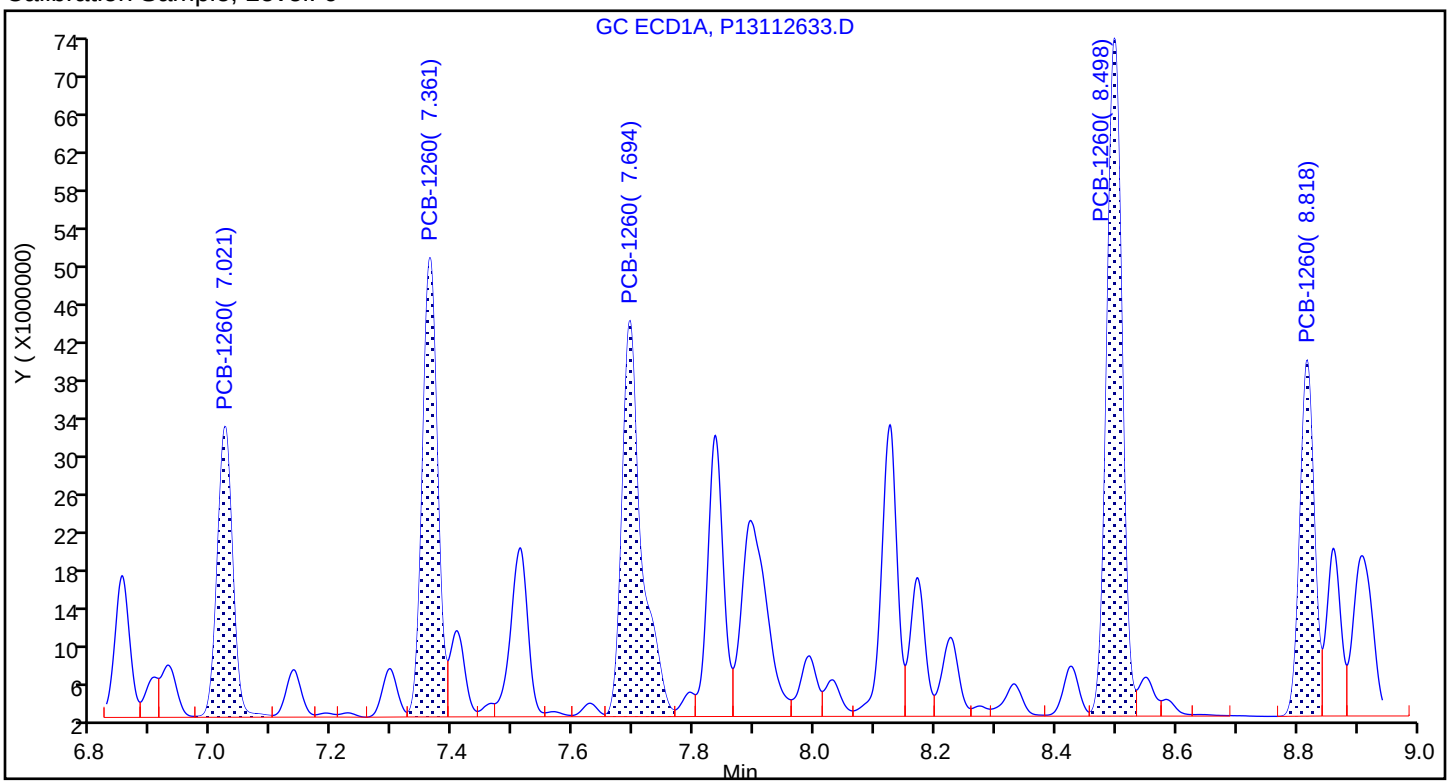
TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A2HP13\20190124-83947.b\P13012444.D

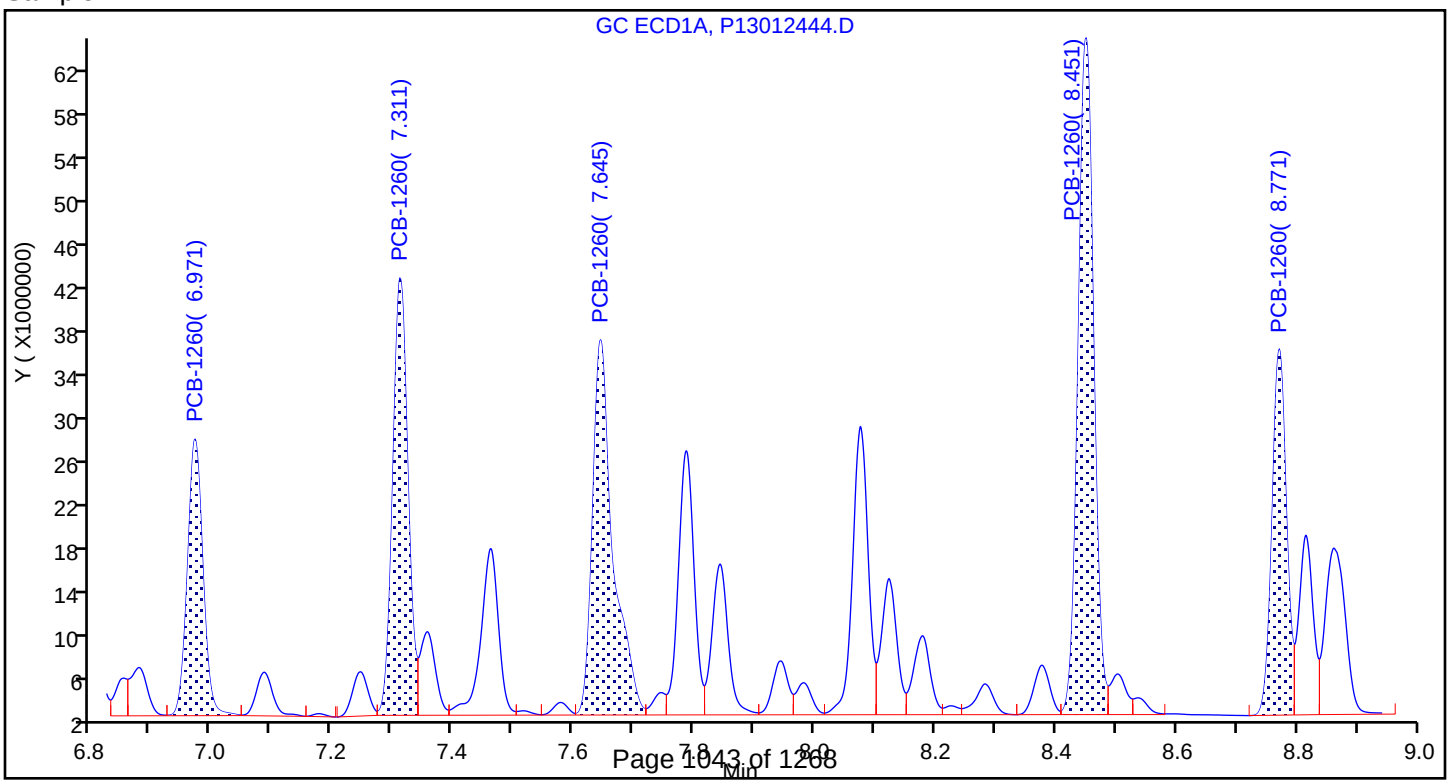
Injection Date:	24-Jan-2019 18:11:47	Instrument ID:	A2HP13		
Lims ID:	LCS 240-365105/24-A				
Client ID:					
Operator ID:		ALS Bottle#:	44	Worklist Smp#:	10
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	PCB13 IS	Limit Group:	GC 8082A IS		
Column:		Detector	GC ECD1A		

10 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 6



Sample



PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A2HP13 Start Date: 11/26/2018 14:45

Analysis Batch Number: 356910 End Date: 11/27/2018 07:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD005 240-356910/4 IC		11/26/2018 14:45	1	P13112604.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-356910/4 IC		11/26/2018 14:45	1	P13112604.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-356910/5 IC		11/26/2018 15:03	1	P13112605.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-356910/5 IC		11/26/2018 15:03	1	P13112605.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-356910/6 IC		11/26/2018 15:21	1	P13112606.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-356910/6 IC		11/26/2018 15:21	1	P13112606.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-356910/7 IC		11/26/2018 15:40	1	P13112607.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-356910/7 IC		11/26/2018 15:40	1	P13112607.D	CLP-2 (0.53mm) 0.53(mm)
STD1 240-356910/8 IC		11/26/2018 15:58	1	P13112608.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-356910/8 IC		11/26/2018 15:58	1	P13112608.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-356910/9 IC		11/26/2018 16:16	1	P13112609.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-356910/9 IC		11/26/2018 16:16	1	P13112609.D	CLP-2 (0.53mm) 0.53(mm)
STD005 240-356910/10 IC		11/26/2018 16:35	1	P13112610.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-356910/10 IC		11/26/2018 16:35	1	P13112610.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-356910/11 IC		11/26/2018 16:53	1	P13112611.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-356910/11 IC		11/26/2018 16:53	1	P13112611.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-356910/12 IC		11/26/2018 17:12	1	P13112612.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-356910/12 IC		11/26/2018 17:12	1	P13112612.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-356910/13 IC		11/26/2018 17:30	1	P13112613.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-356910/13 IC		11/26/2018 17:30	1	P13112613.D	CLP-2 (0.53mm) 0.53(mm)
STD1 240-356910/14 IC		11/26/2018 17:48	1	P13112614.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-356910/14 IC		11/26/2018 17:48	1	P13112614.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-356910/15 IC		11/26/2018 18:07	1	P13112615.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-356910/15 IC		11/26/2018 18:07	1	P13112615.D	CLP-2 (0.53mm) 0.53(mm)
STD005 240-356910/16 IC		11/26/2018 18:25	1	P13112616.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-356910/16 IC		11/26/2018 18:25	1	P13112616.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-356910/17 IC		11/26/2018 18:44	1	P13112617.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-356910/17 IC		11/26/2018 18:44	1	P13112617.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-356910/18 IC		11/26/2018 19:02	1	P13112618.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-356910/18 IC		11/26/2018 19:02	1	P13112618.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-356910/19 IC		11/26/2018 19:20	1	P13112619.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-356910/19 IC		11/26/2018 19:20	1	P13112619.D	CLP-2 (0.53mm) 0.53(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A2HP13 Start Date: 11/26/2018 14:45

Analysis Batch Number: 356910 End Date: 11/27/2018 07:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-356910/20 IC		11/26/2018 19:39	1	P13112620.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-356910/20 IC		11/26/2018 19:39	1	P13112620.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-356910/21 IC		11/26/2018 19:57	1	P13112621.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-356910/21 IC		11/26/2018 19:57	1	P13112621.D	CLP-2 (0.53mm) 0.53(mm)
STD005 240-356910/22 IC		11/26/2018 20:15	1	P13112622.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-356910/22 IC		11/26/2018 20:15	1	P13112622.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-356910/23 IC		11/26/2018 20:34	1	P13112623.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-356910/23 IC		11/26/2018 20:34	1	P13112623.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-356910/24 IC		11/26/2018 20:52	1	P13112624.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-356910/24 IC		11/26/2018 20:52	1	P13112624.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-356910/25 IC		11/26/2018 21:11	1	P13112625.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-356910/25 IC		11/26/2018 21:11	1	P13112625.D	CLP-2 (0.53mm) 0.53(mm)
STD1 240-356910/26 IC		11/26/2018 21:29	1	P13112626.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-356910/26 IC		11/26/2018 21:29	1	P13112626.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-356910/27 IC		11/26/2018 21:47	1	P13112627.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-356910/27 IC		11/26/2018 21:47	1	P13112627.D	CLP-2 (0.53mm) 0.53(mm)
STD005 240-356910/28 IC		11/26/2018 22:05	1	P13112628.D	CLP-1 (0.53mm) 0.53(mm)
STD005 240-356910/28 IC		11/26/2018 22:05	1	P13112628.D	CLP-2 (0.53mm) 0.53(mm)
STD01 240-356910/29 IC		11/26/2018 22:24	1	P13112629.D	CLP-1 (0.53mm) 0.53(mm)
STD01 240-356910/29 IC		11/26/2018 22:24	1	P13112629.D	CLP-2 (0.53mm) 0.53(mm)
STD02 240-356910/30 IC		11/26/2018 22:42	1	P13112630.D	CLP-1 (0.53mm) 0.53(mm)
STD02 240-356910/30 IC		11/26/2018 22:42	1	P13112630.D	CLP-2 (0.53mm) 0.53(mm)
STD05 240-356910/31 ICIS		11/26/2018 23:01	1	P13112631.D	CLP-1 (0.53mm) 0.53(mm)
STD05 240-356910/31 ICIS		11/26/2018 23:01	1	P13112631.D	CLP-2 (0.53mm) 0.53(mm)
STD1 240-356910/32 IC		11/26/2018 23:19	1	P13112632.D	CLP-1 (0.53mm) 0.53(mm)
STD1 240-356910/32 IC		11/26/2018 23:19	1	P13112632.D	CLP-2 (0.53mm) 0.53(mm)
STD15 240-356910/33 IC		11/26/2018 23:37	1	P13112633.D	CLP-1 (0.53mm) 0.53(mm)
STD15 240-356910/33 IC		11/26/2018 23:37	1	P13112633.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-356910/34		11/26/2018 23:56	1	P13112634.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-356910/34		11/26/2018 23:56	1	P13112634.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-356910/35		11/27/2018 00:14	1	P13112635.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-356910/35		11/27/2018 00:14	1	P13112635.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-356910/36		11/27/2018 00:32	1	P13112636.D	CLP-1 (0.53mm) 0.53(mm)

8082A

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A2HP13 Start Date: 11/26/2018 14:45

Analysis Batch Number: 356910 End Date: 11/27/2018 07:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ICV 240-356910/36		11/27/2018 00:32	1	P13112636.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-356910/37		11/27/2018 00:51	1	P13112637.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-356910/37		11/27/2018 00:51	1	P13112637.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-356910/38		11/27/2018 01:09	1	P13112638.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-356910/38		11/27/2018 01:09	1	P13112638.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-356910/40		11/27/2018 01:46	1	P13112640.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-356910/40		11/27/2018 01:46	1	P13112640.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-356910/41		11/27/2018 02:04	1	P13112641.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-356910/41		11/27/2018 02:04	1	P13112641.D	CLP-2 (0.53mm) 0.53(mm)
ICV 240-356910/43		11/27/2018 07:14	1	P13112643.D	CLP-1 (0.53mm) 0.53(mm)
ICV 240-356910/43		11/27/2018 07:14	1	P13112643.D	CLP-2 (0.53mm) 0.53(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A2HP13 Start Date: 01/24/2019 16:03

Analysis Batch Number: 365410 End Date: 01/25/2019 00:18

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 240-365410/3 CCVIS		01/24/2019 16:03	1	P13012437.D	CLP-1 (0.53mm) 0.53(mm)
CCV 240-365410/3 CCVIS		01/24/2019 16:03	1		CLP-2 (0.53mm) 0.53(mm)
CCV 240-365410/4		01/24/2019 16:21	1	P13012438.D	CLP-1 (0.53mm) 0.53(mm)
CCV 240-365410/4		01/24/2019 16:21	1		CLP-2 (0.53mm) 0.53(mm)
CCV 240-365410/5		01/24/2019 16:39	1	P13012439.D	CLP-1 (0.53mm) 0.53(mm)
CCV 240-365410/5		01/24/2019 16:39	1		CLP-2 (0.53mm) 0.53(mm)
CCV 240-365410/6		01/24/2019 16:58	1	P13012440.D	CLP-1 (0.53mm) 0.53(mm)
CCV 240-365410/6		01/24/2019 16:58	1		CLP-2 (0.53mm) 0.53(mm)
CCV 240-365410/7		01/24/2019 17:16	1	P13012441.D	CLP-1 (0.53mm) 0.53(mm)
CCV 240-365410/7		01/24/2019 17:16	1		CLP-2 (0.53mm) 0.53(mm)
MB 240-365105/23-A		01/24/2019 17:53	1	P13012443.D	CLP-1 (0.53mm) 0.53(mm)
MB 240-365105/23-A		01/24/2019 17:53	1	P13012443.D	CLP-2 (0.53mm) 0.53(mm)
LCS 240-365105/24-A		01/24/2019 18:11	1	P13012444.D	CLP-1 (0.53mm) 0.53(mm)
LCS 240-365105/24-A		01/24/2019 18:11	1	P13012444.D	CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 18:30	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 18:30	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 18:48	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 18:48	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 19:06	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 19:06	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 19:25	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 19:25	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 19:43	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 19:43	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 20:01	500		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 20:01	500		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 20:20	20		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 20:20	20		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 20:38	10		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 20:38	10		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 20:57	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 20:57	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 21:15	5		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 21:15	5		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 21:33	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 21:33	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 21:51	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 21:51	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 22:10	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 22:10	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 22:28	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 22:28	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 22:46	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/24/2019 22:46	1		CLP-2 (0.53mm) 0.53(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: A2HP13 Start Date: 01/24/2019 16:03

Analysis Batch Number: 365410 End Date: 01/25/2019 00:18

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 240-365410/28		01/24/2019 23:42	1	P13012462.D	CLP-1 (0.53mm) 0.53(mm)
CCVIS 240-365410/28		01/24/2019 23:42	1		CLP-2 (0.53mm) 0.53(mm)
ZZZZZ		01/25/2019 00:00	1		CLP-1 (0.53mm) 0.53(mm)
ZZZZZ		01/25/2019 00:00	1		CLP-2 (0.53mm) 0.53(mm)
240-107194-2		01/25/2019 00:18	1	P13012464.D	CLP-1 (0.53mm) 0.53(mm)
240-107194-2		01/25/2019 00:18	1	P13012464.D	CLP-2 (0.53mm) 0.53(mm)

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365105 Batch Start Date: 01/23/19 10:20 Batch Analyst: Fisher, Za'Chary M

Batch Method: 3540C Batch End Date: 01/24/19 02:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ex10PPMSPK 00045	ex2/.2SURRW 00119		
240-107194-C-2	WC-EFSOIL-011819	3540C, 8082A	T	10.02 g	10 mL		1 mL		
MB 240-365105/23		3540C, 8082A		10 g	10 mL		1 mL		
LCS 240-365105/24		3540C, 8082A		10 g	10 mL	1 mL	1 mL		

Batch Notes	
Balance ID	3874053
Analyst ID - Concentration	JESSICA.TRUSHEL STEVE.EARLE
Analyst ID - Extraction	ELIZABETH.BORDER ZACHARY.FISHER
Glass Wool ID	3894701
Na2SO4 ID	2548159
Prep Solvent ID	3985085
Analyst ID - Spike Analyst	ZACHARY.FISHER

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107194-1

SDG No.:

Project: MRC Block E/F Mass DIscharge Waste

Client Sample ID	Lab Sample ID
WC-EFSOIL-011819	240-107194-2

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TCLP

Client Sample ID: WC-EFSOIL-011819 Lab Sample ID: 240-107194-2

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG ID.:

Matrix: Solid Date Sampled: 01/18/2019 09:30

Reporting Basis: WET Date Received: 01/19/2019 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-38-2	Arsenic	0.0064	0.050	0.0041	mg/L	J	B	1	6010C
7440-39-3	Barium	0.048	0.50	0.0013	mg/L	J		1	6010C
7440-43-9	Cadmium	0.00020	0.050	0.00020	mg/L	U		1	6010C
7440-47-3	Chromium	0.0025	0.050	0.00063	mg/L	J	B	1	6010C
7439-92-1	Lead	0.0028	0.050	0.0028	mg/L	U		1	6010C
7782-49-2	Selenium	0.0060	0.050	0.0060	mg/L	U		1	6010C
7440-22-4	Silver	0.00062	0.050	0.00062	mg/L	U		1	6010C
7439-97-6	Mercury	0.00013	0.0020	0.00013	mg/L	U		1	7470A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

ICV Source: MT6500ICV_00051 Concentration Units: ug/L

CCV Source: MTICPCCV_00146

Analyte	ICV 240-365404/4 01/24/2019 09:13				CCV 240-365404/18 01/24/2019 10:13				CCV 240-365404/30 01/24/2019 11:06			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	394		375	105	506		500	101	496		500	99
Barium	1510		1500	101	1990		2000	100	1910		2000	95
Cadmium	388		375	103	513		500	103	500		500	100
Chromium	1510		1500	101	2030		2000	101	1920		2000	96
Lead	378		375	101	505		500	101	494		500	99
Selenium	397		375	106	523		500	105	509		500	102
Silver	751		750	100	1030		1000	103	992		1000	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

ICV Source: MT6500ICV_00051 Concentration Units: ug/L

CCV Source: MTICPCCV_00146

Analyte	CCV 240-365404/42 01/24/2019 11:57				CCV 240-365404/65 01/24/2019 14:01				CCV 240-365404/75 01/25/2019 07:26			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	506		500	101	515		500	103	479		500	96
Barium	1980		2000	99	1960		2000	98	1920		2000	96
Cadmium	507		500	101	508		500	102	486		500	97
Chromium	1990		2000	99	1980		2000	99	2000		2000	100
Lead	499		500	100	501		500	100	498		500	100
Selenium	512		500	102	521		500	104	496		500	99
Silver	1020		1000	102	1010		1000	101	986		1000	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-365404/6 01/24/2019 09:21				CCVL 240-365404/74 01/25/2019 07:21							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Arsenic	14.5		15.0	97	14.4		15.0	96				
Barium	196	J	200	98	190	J	200	95				
Cadmium	4.88		5.00	98	4.36		5.00	87				
Chromium	10.0		10.0	100	10.6		10.0	106				
Lead	8.04		10.0	80	9.16		10.0	92				
Selenium	19.7		20.0	99	18.7		20.0	93				
Silver	9.50		10.0	95	9.69		10.0	97				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

ICV Source: MTHgICV_00001_00461 Concentration Units: ug/L

CCV Source: MTHGCALW_02019

Analyte	ICV 240-365353/7-A 01/24/2019 08:47				CCV 240-365353/10-A 01/24/2019 08:53				CCV 240-365353/10-A 01/24/2019 09:19			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.81		5.00	96	5.15		5.00	103	5.14		5.00	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Method: 7470A Instrument ID: H2

Lab Sample ID: CRA 240-365353/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_02019

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.217	J	109	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-365404/5 01/24/2019 09:17		CCB 240-365404/19 01/24/2019 10:17		CCB 240-365404/31 01/24/2019 11:10		CCB 240-365404/43 01/24/2019 12:01	
		Found	C	Found	C	Found	C	Found	C
Arsenic	10	4.1	U	4.1	U	4.1	U	4.1	U
Barium	200	1.3	U	1.3	U	1.3	U	1.3	U
Cadmium	2.0	0.20	U	0.20	U	0.20	U	0.20	U
Chromium	5.0	0.63	U	0.63	U	0.63	U	0.63	U
Lead	5.0	2.8	U	2.8	U	2.8	U	2.8	U
Selenium	15	6.0	U	6.0	U	6.0	U	6.0	U
Silver	5.0	0.62	U	0.62	U	0.62	U	0.62	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-365404/66 01/24/2019 14:05		CCB 240-365404/76 01/25/2019 07:30					
		Found	C	Found	C	Found	C	Found	C
Arsenic	10	4.1	U	4.1	U				
Barium	200	1.3	U	1.3	U				
Cadmium	2.0	0.20	U	0.20	U				
Chromium	5.0	0.63	U	0.63	U				
Lead	5.0	2.8	U	2.8	U				
Selenium	15	6.0	U	6.0	U				
Silver	5.0	0.62	U	0.62	U				

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-365353/8-A 01/24/2019 08:49		CCB 240-365353/11-A 01/24/2019 08:55		CCB 240-365353/11-A 01/24/2019 09:21			
		Found	C	Found	C	Found	C	Found	C
Mercury	2.0	0.13	U	0.13	U	0.13	U		

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: MB 240-365151/2-A

Instrument Code: I9 Batch No.: 365404

CAS No.	Analyte	Concentration	C	Q	Method
7440-38-2	Arsenic	0.0041	U		6010C
7440-39-3	Barium	0.0013	U		6010C
7440-43-9	Cadmium	0.00020	U		6010C
7440-47-3	Chromium	0.00063	U		6010C
7439-92-1	Lead	0.0028	U		6010C
7782-49-2	Selenium	0.0060	U		6010C
7440-22-4	Silver	0.00062	U		6010C

3-IN
METHOD BLANK
METALS - TCLP

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: LB 240-365049/1-B

Instrument Code: I9 Batch No.: 365404

CAS No.	Analyte	Concentration	C	Q	Method
7440-38-2	Arsenic	0.00634	J		6010C
7440-39-3	Barium	0.0013	U		6010C
7440-43-9	Cadmium	0.00020	U		6010C
7440-47-3	Chromium	0.00121	J		6010C
7439-92-1	Lead	0.0028	U		6010C
7782-49-2	Selenium	0.0060	U		6010C
7440-22-4	Silver	0.000838	J		6010C

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: MB 240-365159/2-A

Instrument Code: H2 Batch No.: 365352

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.00013	U		7470A

FORM III-IN

3-IN
METHOD BLANK
METALS - TCLP

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: LB 240-365049/1-C

Instrument Code: H2 Batch No.: 365352

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.00013	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICSA 240-365404/8 Instrument ID: I9

Lab File ID: I9012419A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Arsenic		**-6.46**	
Barium		**0.0071**	
Cadmium		**0.702**	
Chromium		**3.79**	
Lead		**7.75**	
Selenium		**-3.82**	
Silver		**-0.314**	
Aluminum	*500000*	*503670*	*101*
Antimony		*-7.48*	
Beryllium		*0.265*	
Boron		*-3.60*	
Calcium	*500000*	*475160*	*95*
Cobalt		*-2.02*	
Copper		*-0.151*	
Iron	*200000*	*191330*	*96*
Lithium		*12.6*	
Magnesium	*500000*	*493360*	*99*
Manganese		*0.899*	
Molybdenum		*1.24*	
Nickel		*5.34*	
Potassium		*45.0*	
Silicon		*25.7*	
Sodium		*103*	
Strontium		*12.8*	
Thallium		*-1.71*	
Tin		*4.58*	
Titanium		*-0.0304*	
Vanadium		*-1.07*	
Zinc		*-1.38*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Lab Sample ID: ICSAB 240-365404/9 Instrument ID: I9

Lab File ID: I9012419A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Arsenic	**1000**	**986**	**99**
Barium	**500**	**491**	**98**
Cadmium	**1000**	**1032**	**103**
Chromium	**500**	**491**	**98**
Lead	**1000**	**988**	**99**
Selenium	**1000**	**980**	**98**
Silver	**1000**	**1065**	**106**
Aluminum	*500000*	*500210*	*100*
Antimony	*1000*	*1017*	*102*
Beryllium	*500*	*483*	*97*
Boron	*500*	*520*	*104*
Calcium	*500000*	*475450*	*95*
Cobalt	*500*	*485*	*97*
Copper	*500*	*546*	*109*
Iron	*200000*	*190830*	*95*
Lithium	*500*	*546*	*109*
Magnesium	*500000*	*492390*	*98*
Manganese	*500*	*484*	*97*
Molybdenum	*1000*	*1028*	*103*
Nickel	*1000*	*972*	*97*
Potassium	*10000*	*10397*	*104*
Silicon	*10000*	*9773*	*98*
Sodium	*10000*	*10473*	*105*
Strontium	*1500*	*1442*	*96*
Thallium	*1000*	*1003*	*100*
Tin	*500*	*511*	*102*
Titanium	*500*	*511*	*102*
Vanadium	*500*	*484*	*97*
Zinc	*1000*	*936*	*94*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TCLP

Client ID: _____ Lab ID: 280-119276-A-3-Q MS ^10

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.: _____

Matrix: Solid Concentration Units: mg/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Arsenic	5.34		0.064	J	5.00	105	75-125		6010C
Barium	56.2		5.3		50.0	102	75-125		6010C
Cadmium	1.08		0.018	J	1.00	106	75-125		6010C
Chromium	5.41		0.076	J	5.00	107	75-125		6010C
Lead	38.2		35		5.00	60	75-125	4	6010C
Selenium	1.12		0.060	U	1.00	112	75-125		6010C
Silver	1.04		0.0062	U	1.00	104	75-125		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TCLP

Client ID: _____ Lab ID: 280-119276-A-3-T MS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.: _____

Matrix: Solid Concentration Units: mg/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.00501		0.00030	J	0.00500	94	80-120		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TCLP

Client ID: _____ Lab ID: 280-119276-A-3-R MSD ^10

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.: _____

Matrix: Solid Concentration Units: mg/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Arsenic	5.33		5.00	105	75-125	0	20		6010C
Barium	56.8		50.0	103	75-125	1	20		6010C
Cadmium	1.09		1.00	107	75-125	1	20		6010C
Chromium	5.44		5.00	107	75-125	1	20		6010C
Lead	38.6		5.00	67	75-125	1	20	4	6010C
Selenium	1.09		1.00	109	75-125	3	20		6010C
Silver	1.05		1.00	105	75-125	2	20		6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TCLP

Client ID: _____ Lab ID: 280-119276-A-3-U MSD

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.: _____

Matrix: Solid Concentration Units: mg/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.00512		0.00500	96	80-120	2	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-365151/3-A

Lab Name: TestAmerica Canton Job No.: 240-107194-1

Sample Matrix: Water LCS Source: MTICP1_00079

Analyte	Water(mg/L)							
	True	Found	C	%R	Limits		Q	Method
Arsenic	2.00	1.98		99	50	150		6010C
Barium	2.00	1.94		97	50	150		6010C
Cadmium	0.0500	0.0486	J	97	50	150		6010C
Chromium	0.200	0.199		99	50	150		6010C
Lead	0.500	0.491		98	50	150		6010C
Selenium	2.00	1.99		100	50	150		6010C
Silver	0.0500	0.0506		101	50	150		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-365159/3-A

Lab Name: TestAmerica Canton Job No.: 240-107194-1

Sample Matrix: Water LCS Source: MTHGCALW_02019

Analyte	Water(mg/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	0.00500	0.00527		105	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TCLP

Lab ID: 280-119276-A-3-P SD ^50

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107194-1

Matrix: Solid Concentration Units: mg/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Arsenic	0.064	J	0.20	U	NC		6010C
Barium	5.3		5.49	J	2.7		6010C
Cadmium	0.018	J	0.010	U	NC		6010C
Chromium	0.076	J	0.0542	J	NC		6010C
Lead	35		36.0		2.1		6010C
Selenium	0.060	U	0.30	U	NC		6010C
Silver	0.0062	U	0.031	U	NC		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Canton Job Number: 240-107194-1

SDG Number:

Matrix: Solid Instrument ID: I9

Method: 6010C MDL Date: 12/15/2017 12:45

Prep Method: 3010A

Leach Method: 1311

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Arsenic	189.042	0.05	0.004051
Barium	493.409	0.5	0.001328
Cadmium	226.502	0.05	0.000203
Chromium	267.716	0.05	0.000625
Lead	220.353	0.05	0.002765
Selenium	196.026	0.05	0.00596
Silver	328.068	0.05	0.000623

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Canton Job Number: 240-107194-1

SDG Number:

Matrix: Solid Instrument ID: I9

Method: 6010C XMDL Date: 12/15/2017 12:45

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (mg/L)
Arsenic	189.042	10	0.004051
Barium	493.409	200	0.001328
Cadmium	226.502	2	0.000203
Chromium	267.716	5	0.000625
Lead	220.353	5	0.002765
Selenium	196.026	15	0.00596
Silver	328.068	5	0.000623

9-IN
DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Canton Job Number: 240-107194-1

SDG Number:

Matrix: Solid Instrument ID: H2

Method: 7470A MDL Date: 02/22/2017 15:32

Prep Method: 7470A

Leach Method: 1311

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury	253.7	0.002	0.00013

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TCLP

Lab Name: TestAmerica Canton Job Number: 240-107194-1

SDG Number:

Matrix: Solid Instrument ID: H2

Method: 7470A XMDL Date: 02/22/2017 15:32

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (mg/L)
Mercury	253.7	2	0.00013

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-107194-1

SDG No.:

ICP-AES Instrument ID: I9 Date: 07/25/2018

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	Tl	V
Aluminum										0.021446					0.026101
Antimony		-0.000056			-0.000451			-0.000015							0.002940
Arsenic		0.000005			-0.000198	0.000538			-0.000355	0.001291					
Barium															
Beryllium															0.000086
Boron															
Cadmium			0.008775					-0.00001							
Calcium															
Chromium															
Cobalt													0.001923		
Copper				0.000018	0.000453			-0.000018					-0.000463		
Iron															
Lead		-0.000129					0.000183	0.000043			0.000260	0.0001			
Lithium															
Magnesium															
Manganese															
Molybdenum															
Nickel					0.000799			0.000054							
Potassium															
Selenium		-0.000049							0.000231						
Silver															
Sodium															
Strontium															
Thallium		-0.000010			0.003994			0.000007	0.001101				-0.000498		-0.000210
Tin															
Titanium															
Vanadium								0.000027							
Zinc						-0.000286									

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-107194-1

SDG No.:

ICP-AES Instrument ID: I9 Date: 01/25/2019

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	Tl	V
Aluminum										0.01401160					0.026101
Antimony		-0.000056			-0.000451			-0.000015							0.002940
Arsenic		0.000005			-0.000198	0.00022072			-0.000355	0.00045569					
Barium															
Beryllium															0.000086
Boron															
Cadmium			0.008775					-0.00001							
Calcium															
Chromium															
Cobalt													0.001923		
Copper				0.000018	0.000453			-0.000018					-0.000463		
Iron															
Lead		-0.000129					0.00001699	0.000043			0.000260	0.000066831			
Lithium															
Magnesium															
Manganese															
Molybdenum															
Nickel					0.000799			0.000054							
Potassium															
Selenium		-0.000049							0.000231						
Silver															
Sodium															
Strontium															
Thallium		-0.000010			0.003994			0.000007	0.00168520				-0.000498		-0.000210
Tin															
Titanium															
Vanadium								0.000027							
Zinc						-0.000286									

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107194-1

SDG No.:

Instrument ID: I9 Date: 07/26/2018 09:39

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Arsenic		5000	6010C
Barium		20000	6010C
Cadmium		4000	6010C
Chromium		20000	6010C
Lead		15000	6010C
Selenium		10000	6010C
Silver		2000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107194-1

SDG No.:

Instrument ID: H2 Date: 05/15/2016 09:06

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Prep Method: 3010A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
LB 240-365049/1-B	01/23/2019 14:00	365151		50	50
MB 240-365151/2-A	01/23/2019 14:00	365151		50	50
LCS 240-365151/3-A	01/23/2019 14:00	365151		50	50
280-119276-A-3-Q MS ^10	01/23/2019 14:00	365151		50	50
280-119276-A-3-R MSD ^10	01/23/2019 14:00	365151		50	50
240-107194-2	01/23/2019 14:00	365151		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
LB 240-365049/1-C	01/23/2019 12:00	365159		50	50
MB 240-365159/2-A	01/23/2019 12:00	365159		50	50
LCS 240-365159/3-A	01/23/2019 12:00	365159		50	50
280-119276-A-3-T MS	01/23/2019 12:00	365159		50	50
280-119276-A-3-U MSD	01/23/2019 12:00	365159		50	50
240-107194-2	01/23/2019 12:00	365159		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 01/24/2019 09:00 End Date: 01/25/2019 07:30

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	As	Ba	Cd	Cr	Pb	Se																				
ICIS 240-365404/1	1		09:00	X	X	X	X	X	X	X																				
CALSTD 240-365404/2 IC			09:04	X	X	X	X	X	X	X																				
CALSTD 240-365404/3 IC			09:08	X	X	X	X	X	X	X																				
ICV 240-365404/4	1		09:13	X	X	X	X	X	X	X																				
ICB 240-365404/5	1		09:17	X	X	X	X	X	X	X																				
ICVL 240-365404/6	1		09:21	X	X	X	X	X	X	X																				
ZZZZZZ			09:26																											
ICSA 240-365404/8	1		09:30	X	X	X	X	X	X	X																				
ICSAB 240-365404/9	1		09:34	X	X	X	X	X	X	X																				
CCV 240-365404/10			09:38																											
CCB 240-365404/11			09:42																											
ZZZZZZ			09:47																											
ZZZZZZ			09:51																											
ZZZZZZ			09:56																											
ZZZZZZ			10:00																											
ZZZZZZ			10:04																											
ZZZZZZ			10:09																											
CCV 240-365404/18	1		10:13	X	X	X	X	X	X	X																				
CCB 240-365404/19	1		10:17	X	X	X	X	X	X	X																				
ZZZZZZ			10:22																											
ZZZZZZ			10:26																											
ZZZZZZ			10:31																											
ZZZZZZ			10:35																											
ZZZZZZ			10:39																											
ZZZZZZ			10:44																											
ZZZZZZ			10:48																											
ZZZZZZ			10:53																											
ZZZZZZ			10:57																											
LB 240-365049/1-B	1	P	11:02	X	X	X	X	X	X	X																				
CCV 240-365404/30	1		11:06	X	X	X	X	X	X	X																				
CCB 240-365404/31	1		11:10	X	X	X	X	X	X	X																				
MB 240-365151/2-A	1	T	11:15	X	X	X	X	X	X	X																				
LCS 240-365151/3-A	1	T	11:19	X	X	X	X	X	X	X																				
ZZZZZZ			11:23																											
280-119276-A-3-P SD ^50	50	P	11:28	X	X	X	X	X	X	X																				
ZZZZZZ			11:32																											
280-119276-A-3-Q MS ^10	10	P	11:36	X	X	X	X	X	X	X																				
280-119276-A-3-R MSD ^10	10	P	11:40	X	X	X	X	X	X	X																				
ZZZZZZ			11:44																											
ZZZZZZ			11:49																											
ZZZZZZ			11:53																											
CCV 240-365404/42	1		11:57	X	X	X	X	X	X	X																				

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 01/24/2019 09:00 End Date: 01/25/2019 07:30

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	As	Ba	Cd	Cr	Pb	Se																				
CCB 240-365404/43	1		12:01	X	X	X	X	X	X	X																				
ZZZZZZ			12:06																											
ZZZZZZ			12:10																											
ZZZZZZ			12:14																											
ZZZZZZ			12:19																											
ZZZZZZ			12:23																											
ZZZZZZ			12:28																											
ZZZZZZ			12:32																											
ZZZZZZ			12:36																											
ZZZZZZ			12:41																											
ZZZZZZ			12:45																											
CCV 240-365404/54			12:50																											
CCB 240-365404/55			12:54																											
ZZZZZZ			12:58																											
ZZZZZZ			13:02																											
CCVL 240-365404/58			13:09																											
ZZZZZZ			13:13																											
CCV 240-365404/60			13:21																											
CCB 240-365404/61			13:25																											
ZZZZZZ			13:44																											
ZZZZZZ			13:53																											
CCVL 240-365404/64			13:57																											
CCV 240-365404/65	1		14:01	X	X	X	X	X	X	X																				
CCB 240-365404/66	1		14:05	X	X	X	X	X	X	X																				
ZZZZZZ			14:22																											
ZZZZZZ			14:26																											
240-107194-2	1	P	14:30	X	X	X	X	X	X	X																				
ZZZZZZ			14:35																											
CHECKSTD 240-365404/71 IC			07:05	X	X	X	X	X	X	X																				
ZZZZZZ			07:12																											
ZZZZZZ			07:17																											
CCVL 240-365404/74	1		07:21	X	X	X	X	X	X	X																				
CCV 240-365404/75	1		07:26	X	X	X	X	X	X	X																				
CCB 240-365404/76	1		07:30	X	X	X	X	X	X	X																				

Prep Types:
P = TCLP
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: H2 Analysis Method: 7470A

Start Date: 01/24/2019 08:11 End Date: 01/24/2019 11:59

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
IC 240-365353/1-A			08:11	X																								
IC 240-365353/2-A			08:13	X																								
IC 240-365353/3-A			08:15	X																								
IC 240-365353/4-A			08:17	X																								
IC 240-365353/5-A			08:19	X																								
IC 240-365353/6-A			08:21	X																								
ICV 240-365353/7-A	1		08:47	X																								
ICB 240-365353/8-A	1		08:49	X																								
CRA 240-365353/9-A	1		08:51	X																								
CCV 240-365353/10-A	1		08:53	X																								
CCB 240-365353/11-A	1		08:55	X																								
LB 240-365049/1-C	1	P	08:57	X																								
MB 240-365159/2-A	1	T	08:59	X																								
LCS 240-365159/3-A	1	T	09:01	X																								
ZZZZZZ			09:03																									
280-119276-A-3-T MS	1	P	09:06	X																								
280-119276-A-3-U MSD	1	P	09:08	X																								
ZZZZZZ			09:10																									
240-107194-2	1	P	09:13	X																								
ZZZZZZ			09:15																									
ZZZZZZ			09:17																									
CCV 240-365353/10-A	1		09:19	X																								
CCB 240-365353/11-A	1		09:21	X																								
ZZZZZZ			09:23																									
CCV 240-365353/10-A			09:25																									
CCB 240-365353/11-A			09:27																									
ZZZZZZ			11:17																									
ZZZZZZ			11:19																									
ZZZZZZ			11:21																									
ZZZZZZ			11:23																									
ZZZZZZ			11:25																									
ZZZZZZ			11:27																									
ZZZZZZ			11:30																									
ZZZZZZ			11:32																									
ZZZZZZ			11:34																									
CCV 240-365353/10-A			11:36																									
CCB 240-365353/11-A			11:39																									
ZZZZZZ			11:41																									
ZZZZZZ			11:43																									
ZZZZZZ			11:45																									
ZZZZZZ			11:47																									
ZZZZZZ			11:49																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: H2 Analysis Method: 7470A

Start Date: 01/24/2019 08:11 End Date: 01/24/2019 11:59

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			11:51																									
ZZZZZZ			11:53																									
ZZZZZZ			11:55																									
CCV 240-365353/10-A			11:57																									
CCB 240-365353/11-A			11:59																									

Prep Types:
P = TCLP
T = Total/NA

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

ICP Instrument ID: I9 Start Date: 01/24/2019 End Date: 01/25/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-365404/1	09:00										
ICV 240-365404/4	09:13	99		98		101		101			
ICB 240-365404/5	09:17	98		98		100		100			
ICVL 240-365404/6	09:21	99		98		100		100			
ICSA 240-365404/8	09:30	90		90		96		98			
ICSAB 240-365404/9	09:34	89		89		94		95			
CCV 240-365404/18	10:13	99		99		100		98			
CCB 240-365404/19	10:17	102		102		103		103			
LB 240-365049/1-B	11:02	108		109		115		109			
CCV 240-365404/30	11:06	107		106		115		115			
CCB 240-365404/31	11:10	103		102		106		105			
MB 240-365151/2-A	11:15	101		101		103		101			
LCS 240-365151/3-A	11:19	97		100		101		92			
280-119276-A-3-P SD ^50	11:28	96		95		96		91			
280-119276-A-3-Q MS ^10	11:36	94		94		95		90			
280-119276-A-3-R MSD ^10	11:40	93		93		95		88			
CCV 240-365404/42	11:57	99		99		105		102			
CCB 240-365404/43	12:01	98		98		100		95			
CCV 240-365404/65	14:01	92		91		96		90			
CCB 240-365404/66	14:05	90		90		91		83			
240-107194-2	14:30	89		96		102		91			
CCVL 240-365404/74	07:21	105		104		105		96			
CCV 240-365404/75	07:26	103		103		104		95			
CCB 240-365404/76	07:30	105		106		106		97			

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365049 Batch Start Date: 01/22/19 15:55 Batch Analyst: Jones, Diane

Batch Method: 1311 Batch End Date: 01/23/19 10:44

Lab Sample ID	Client Sample ID	Method Chain	Basis	EXpH(0-14) 00027	EXTCLPBUFF1 01762	EXTCLPFILTERS 00044	EXTCLPHCLW 00064	AnalysisComment	
LB 240-365049/1		1311, 3010A, 6010C		1 No Unit	1 mL	1	1 mL	Buffer 1	
280-119276-A-3-B MS		1311, 3010A, 6010C	P	1 No Unit	1 mL	1	1 mL	Client-required MS/MSD	
280-119276-A-3-C MSD		1311, 3010A, 6010C	P	1 No Unit	1 mL	1	1 mL	Client-required MS/MSD	
240-107194-D-2	WC-EFSOIL-011819	1311, 3010A, 6010C	P	1 No Unit	1 mL	1	1 mL		

Batch Notes	
Tumbler Rotations per Minute	A, B = 31rpm

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365151 Batch Start Date: 01/23/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3010A Batch End Date: 01/23/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MT1to1HCL 00089	MTAGSPIKEW 00089	MTICP1 00079	MTICP2A 00090
LB 240-365049/1-A		3010A, 6010C		50 mL	50 mL	5 mL			
MB 240-365151/2		3010A, 6010C		50 mL	50 mL	5 mL			
LCS 240-365151/3		3010A, 6010C		50 mL	50 mL	5 mL	1 mL	1 mL	1 mL
280-119276-A-3-H MS		3010A, 6010C	P	50 mL	50 mL	5 mL			1 mL
280-119276-A-3-I MSD		3010A, 6010C	P	50 mL	50 mL	5 mL			1 mL
240-107194-D-2-A	WC-EFSOIL-011819	3010A, 6010C	P	50 mL	50 mL	5 mL			

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTNONRCRA+ODD 00011	MTRCRA 00014	MTTMHNO3 00179			
LB 240-365049/1-A		3010A, 6010C				3 mL			
MB 240-365151/2		3010A, 6010C				3 mL			
LCS 240-365151/3		3010A, 6010C				3 mL			
280-119276-A-3-H MS		3010A, 6010C	P	1 mL	0.5 mL	3 mL			
280-119276-A-3-I MSD		3010A, 6010C	P	1 mL	0.5 mL	3 mL			
240-107194-D-2-A	WC-EFSOIL-011819	3010A, 6010C	P			3 mL			

Batch Notes	
Batch Comment	filter paper: 80509102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb3
Pipette/Syringe/Dispenser ID	mp1, mp3, mp5
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365151 Batch Start Date: 01/23/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3010A Batch End Date: 01/23/19 22:00

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365049 Batch Start Date: 01/22/19 15:55 Batch Analyst: Jones, Diane

Batch Method: 1311 Batch End Date: 01/23/19 10:44

Lab Sample ID	Client Sample ID	Method Chain	Basis	EXpH(0-14) 00027	EXTCLPBUFF1 01762	EXTCLPFILTERS 00044	EXTCLPHCLW 00064	AnalysisComment	
LB 240-365049/1		1311, 7470A, 7470A		1 No Unit	1 mL	1	1 mL	Buffer 1	
280-119276-A-3-B MS		1311, 7470A, 7470A	P	1 No Unit	1 mL	1	1 mL	Client-required MS/MSD	
280-119276-A-3-C MSD		1311, 7470A, 7470A	P	1 No Unit	1 mL	1	1 mL	Client-required MS/MSD	
240-107194-D-2	WC-EFSOIL-011819	1311, 7470A, 7470A	P	1 No Unit	1 mL	1	1 mL		

Batch Notes	
Tumbler Rotations per Minute	A, B = 31rpm

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365159 Batch Start Date: 01/23/19 12:00 Batch Analyst: Dillon, Samuel

Batch Method: 7470A Batch End Date: 01/23/19 14:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	K2S2O8 00095	MTH2S04 00070	MTHGCALW 02019	MTKMN04W 00183
LB 240-365049/1-A		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		7.5 mL
MB 240-365159/2		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		7.5 mL
LCS 240-365159/3		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL	2.5 mL	7.5 mL
280-119276-A-3-H MS		7470A, 7470A	P	50 mL	50 mL	4 mL	2.5 mL	2.5 mL	7.5 mL
280-119276-A-3-I MSD		7470A, 7470A	P	50 mL	50 mL	4 mL	2.5 mL	2.5 mL	7.5 mL
240-107194-D-2-A	WC-EFSOIL-011819	7470A, 7470A	P	50 mL	50 mL	4 mL	2.5 mL		7.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00179					
LB 240-365049/1-A		7470A, 7470A		1.25 mL					
MB 240-365159/2		7470A, 7470A		1.25 mL					
LCS 240-365159/3		7470A, 7470A		1.25 mL					
280-119276-A-3-H MS		7470A, 7470A	P	1.25 mL					
280-119276-A-3-I MSD		7470A, 7470A	P	1.25 mL					
240-107194-D-2-A	WC-EFSOIL-011819	7470A, 7470A	P	1.25 mL					

Batch Notes	
Batch Comment	take out temps in range
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	b1
Pipette/Syringe/Dispenser ID	mp2
Thermometer ID	temp log
Digestion Tube/Cup ID	1807160
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365159 Batch Start Date: 01/23/19 12:00 Batch Analyst: Dillon, Samuel

Batch Method: 7470A Batch End Date: 01/23/19 14:00

Basis	Basis Description
P	TCLP

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365353 Batch Start Date: 01/23/19 08:00 Batch Analyst: Colosi, Alexander J

Batch Method: 7470A Batch End Date: 01/23/19 10:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	K2S2O8 00095	MTH2S04 00070	MTHGCALW 02019	MTHgICV_00001 00461
ICV 240-365353/7		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		2.5 mL
ICB 240-365353/8		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		
CRA 240-365353/9		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL	0.1 mL	
CCV 240-365353/10		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL	2.5 mL	
CCB 240-365353/11		7470A, 7470A		50 mL	50 mL	4 mL	2.5 mL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTKMN04W 00183	MTTMHNO3 00179				
ICV 240-365353/7		7470A, 7470A		7.5 mL	1.25 mL				
ICB 240-365353/8		7470A, 7470A		7.5 mL	1.25 mL				
CRA 240-365353/9		7470A, 7470A		7.5 mL	1.25 mL				
CCV 240-365353/10		7470A, 7470A		7.5 mL	1.25 mL				
CCB 240-365353/11		7470A, 7470A		7.5 mL	1.25 mL				

Batch Notes	
Batch Comment	take out temp in range
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	B1
Pipette/Syringe/Dispenser ID	MP1, MP2, A8
Thermometer ID	temp log
Digestion Tube/Cup ID	1804377
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365353 Batch Start Date: 01/23/19 08:00 Batch Analyst: Colosi, Alexander J

Batch Method: 7470A Batch End Date: 01/23/19 10:00

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

MT6500BLKH20 310

Test America Canton ICP Data Review Checklist

Analysis Date: 1-24-19 **Analyst:** WLO **Instrument:** I 9

Review Items

A. Calibration/Instrument Run QC	
1. Instrument calibrated per method.	
2. ICV/CCV analyzed at appropriate frequency and within acceptance criteria. *(ICV (2nd source):200.7=95 – 105%, 6010B 90-110%) (CCV: 90 – 110%)*	
3. ICB/CCB analyzed at appropriate frequency and within acceptance criteria.	
4. CRI analyzed at SOP or project-specific frequency and within acceptance criteria. (project specific limits may vary)	
5. ICSA/ICSAB analyzed at required frequency and within acceptance criteria.	
B. Sample Results	
1. Samples with concentrations > the linear range for any parameter diluted and reanalyzed.	
2. Internal standard(s) within acceptance criteria.	
3. Sample analyses done within holding time.	
C. Preparation/Matrix QC	
1. LCS performed per prep batch and within acceptance criteria.	
2. Method blank performed per prep batch and within acceptance criteria.	
3. MS performed at required frequency and evaluated.	
4. MSD or DU performed at required frequency and evaluated.	
5. Serial dilution performed per prep batch.	
6. Post digest spike performed at required frequency and evaluated.	
D. Other	
1. Are all nonconformances documented appropriately in lims system.	
2. Calculations checked for error.	
3. All client/project specific requirements met.	
4. Date/time of analysis verified as correct.	

Level I Analyst: [signature] **Date:** 1-24-19 **Time:** 9:00 - 14:05

Level I Analyst: _____ **Date:** _____ **Time:** _____

Level I Analyst: _____ **Date:** _____ **Time:** _____

Level II Reviewer: [signature] **Date:** 1/24/19 **Time:** 119275, 119296 jobs 107233, 106892 only

Level II Reviewer: Nudjaira Naimkhun **Date:** 1/25/19 **Time:** 09:00 - 14:05

Level II Reviewer: _____ **Date:** _____ **Time:** _____

Comments: _____

Sample Name: Blank Acquired: 1/24/2019 9:00:10 Type: Cal
Method: ICP I9 6010 200.7 Methods(v619) Mode: IR Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00225	.00222	.00072	.00422	.01668	.00249	.00702
Stddev	.00022	.00027	.00036	.00005	.00278	.00067	.00095
%RSD	9.8549	12.058	50.031	1.2247	16.647	26.790	13.486

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.0003	.00044	-.00024	-.00200	-.00000	.00141	-.00384
Stddev	.0003	.00028	.00008	.00011	.00041	.00184	.00325
%RSD	100.4	63.351	32.060	5.4054	16730.	130.27	84.692

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00029	.00272	.00290	.01092	.00169	-.00095	-.0005
Stddev	.00014	.00019	.00009	.00112	.00019	.00096	.0006
%RSD	48.014	6.9555	2.9550	10.266	11.143	101.30	117.2

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00030	.00042	.00386	-.00267	.00005	.00072	.00270
Stddev	.00051	.00017	.00033	.00013	.00054	.00003	.00034
%RSD	170.87	39.802	8.4921	4.9737	1088.9	4.8599	12.724

Elem	Sr3464
IS Ref	(Y_3710)
Units	Cts/S
Avg	-.00196
Stddev	.00073
%RSD	37.093

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3333.3	2598.4	27489.	3994.8
Stddev	8.9	3.1	156.	5.2
%RSD	.26782	.11963	.56582	.12964

Sample Name: SCAL1-4008352 Acquired: 1/24/2019 9:04:34 Type: Cal
Method: ICP I9 6010 200.7 Methods(v619) Mode: IR Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	As1890	B_1826	Ba4554	Be3130	Cd2288	Co2286	Cr2677
IS Ref	(Y_3600)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.92252	.15144	6.6846	32.787	16.573	3.244	4.2317	1.1876
Stddev	.00043	.00040	.0218	.027	.030	.012	.0199	.0021
%RSD	.04698	.26690	.32625	.08099	.18361	.3665	.47016	.17338

Elem	Cu3273	Li6707	Mn2576	Mo2020	Ni2316	Pb2203	Sb2175	Se1960
IS Ref	(Y_3600)	(Y_3710)	(Y_3600)	(Y_2243)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.92703	16.805	8.6276	4.0292	2.3581	.34738	.2118	.15951
Stddev	.00182	.008	.0401	.0149	.0133	.00185	.0003	.00145
%RSD	.19604	.04780	.46425	.36988	.56506	.53264	.1352	.90811

Elem	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Sr3464
IS Ref	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.1762	8.9136	.27306	.50371	6.0918	1.6400
Stddev	.0147	.0279	.00151	.00185	.0324	.0043
%RSD	.46364	.31251	.55206	.36717	.53238	.26457

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3349.5	2588.7	27844.	3991.0
Stddev	20.4	13.8	91.	6.2
%RSD	.61018	.53228	.32658	.15547

Sample Name: SCAL2-3984833 Acquired: 1/24/2019 9:08:47 Type: Cal
Method: ICP I9 6010 200.7 Methods(v619) Mode: IR Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Al3082	Ca3179	Fe2599	K_7664	Mg2790	Na5895	Si2516
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.97830	14.281	6.1511	7.1380	1.6027	30.510	.44592
Stddev	.00726	.102	.0100	.0430	.0084	.143	.00016
%RSD	.74236	.71466	.16189	.60196	.52583	.46920	.03550

Int. Std.	Y_3710
Units	Cts/S
Avg	3919.5
Stddev	19.8
%RSD	.50485

Sample Name: ICV-3932532 Acquired: 1/24/2019 9:13:09 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	751.31	12586.	393.76	W 1583.8	1508.2	1494.8	25140.
Stddev	.42	122.	.75	2.3	1.6	8.0	118.
%RSD	.05587	.96770	.19062	.14224	.10805	.53310	.47036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass
Value				1500.0			
Range				5.5000%			

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	387.7	1502.7	1509.9	1501.8	12824.	24657.	1023.3
Stddev	.8	6.9	1.7	1.4	25.	165.	1.6
%RSD	.2074	.45800	.11237	.09220	.19240	.67091	.15940
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	25403.	1531.7	1541.2	24956.	1510.8	377.68	390.7
Stddev	100.	3.9	2.7	85.	5.5	1.10	3.0
%RSD	.39359	.25475	.17840	.34205	.36223	.29192	.7803
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICV-3932532 Acquired: 1/24/2019 9:13:09 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	W 397.47	1537.3	1543.4	764.73	1496.6	1524.6	5206.6
Stddev	1.53	6.4	2.7	2.68	9.9	4.7	58.8
%RSD	.38600	.41752	.17407	.35023	.66370	.30927	1.1299
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	375.00						
Range	5.5000%						

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	4564.2
Stddev	25.0
%RSD	.54677
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3302.9	2551.8	27792.	4030.6
Stddev	5.5	1.9	31.	6.8
%RSD	.16538	.07543	.11271	.16872

Sample Name: ICB Acquired: 1/24/2019 9:17:12 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.59643	27.921	-.79883	5.1674	.42170	.24100	-.16848	.0416
Stddev	.69062	22.541	1.3919	.8693	.14388	.11369	2.3676	.4000
%RSD	115.79	80.731	174.24	16.824	34.119	47.174	1405.2	961.2
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.16953	.21746	1.2537	5.2459	69.958	3.7101	-13.880	-.05148
Stddev	.21376	.43199	1.4240	1.1358	37.957	1.8773	13.603	.06848
%RSD	126.09	198.65	113.59	21.651	54.257	50.601	98.005	133.04
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5.6388	29.397	-.46308	-1.0332	1.226	.26530	.83431	1.9483
Stddev	.4566	11.057	.37855	1.1554	1.116	2.7209	1.1915	.2566
%RSD	8.0979	37.613	81.745	111.83	91.00	1025.6	142.81	13.169
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: ICB Acquired: 1/24/2019 9:17:12 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	3.5007	4.5781	.05719	16.914	9.6677
Stddev	1.7630	4.4380	.02647	16.957	4.7481
%RSD	50.362	96.941	46.286	100.26	49.113
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3266.3	2547.4	27467.	4014.4
Stddev	15.4	5.6	50.	16.4
%RSD	.47160	.21844	.18096	.40913

Sample Name: ICVL-4004588 Acquired: 1/24/2019 9:21:39 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.4976	205.27	14.502	102.81	196.01	4.8718	4981.9	4.879
Stddev	.3361	11.36	1.662	1.70	.29	.0831	25.2	.075
%RSD	3.5383	5.5334	11.460	1.6542	.14978	1.7059	.50620	1.529
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.2283	10.040	24.479	204.34	4827.7	52.644	5133.5	15.010
Stddev	.3370	.668	.506	1.47	32.6	1.906	23.1	.186
%RSD	3.6514	6.6547	2.0667	.72183	.67440	3.6197	.45070	1.2391
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	39.929	4917.6	39.333	8.0403	20.32	19.722	99.646	50.720
Stddev	.181	31.2	.588	1.7281	3.47	3.804	1.834	.338
%RSD	.45435	.63518	1.4951	21.493	17.06	19.290	1.8408	.66644
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: ICVL-4004588 Acquired: 1/24/2019 9:21:39 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	20.417	53.206	48.731	507.12	49.660
Stddev	.936	3.599	.681	14.27	.894
%RSD	4.5838	6.7638	1.3981	2.8135	1.7999
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3307.8	2551.9	27429.	4006.5
Stddev	11.6	4.6	15.	9.8
%RSD	.35155	.18214	.05500	.24447

Sample Name: CRILL-3957605 Acquired: 1/24/2019 9:26:01 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.6664	233.52	7.7118	204.01	199.75	5.1467	5106.8	2.032
Stddev	1.0747	18.28	1.8543	.14	.27	.1290	38.5	.199
%RSD	23.031	7.8281	24.045	.06785	.13406	2.5069	.75325	9.773
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6.9784	4.2372	25.588	105.67	4924.2	52.883	5218.3	15.086
Stddev	.2854	.7173	.615	.56	45.3	1.280	11.8	.077
%RSD	4.0901	16.928	2.4024	.53444	.91942	2.4204	.22554	.50777
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.7560	5017.6	40.634	3.5534	12.68	5.7102	101.10	51.292
Stddev	.1792	15.3	.707	1.3074	1.35	2.5015	.86	.263
%RSD	1.8369	.30570	1.7409	36.794	10.61	43.806	.85067	.51327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CRILL-3957605 Acquired: 1/24/2019 9:26:01 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	12.993	9.2914	19.574	503.00	57.532
Stddev	2.161	2.2705	.025	3.86	4.573
%RSD	16.635	24.436	.12617	.76758	7.9489
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3309.6	2554.0	27313.	3971.4
Stddev	13.9	7.3	31.	5.2
%RSD	.42042	.28581	.11430	.13191

Sample Name: ICSA-4000064 Acquired: 1/24/2019 9:30:21 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.31423	503670.	-6.4573	-3.5965	.00705	.26461	475160.
Stddev	.31575	1492.	3.2468	.8232	.29148	.05948	3122.
%RSD	100.49	.29621	50.281	22.888	4134.6	22.479	.65695
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.7024	-2.0169	3.7921	-.15096	191330.	44.991	12.607
Stddev	.0791	.1683	.1585	.98174	598.	37.570	2.440
%RSD	11.26	8.3428	4.1799	650.33	.31261	83.506	19.355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	493360.	.89851	1.2387	103.18	5.3432	F 7.7481	-7.476
Stddev	1478.	.12335	.2446	12.93	.5716	2.2526	4.882
%RSD	.29966	13.728	19.749	12.530	10.698	29.073	65.31
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit						6.0000	
Low Limit						-6.0000	

Sample Name: ICSA-4000064 Acquired: 1/24/2019 9:30:21 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-3.8246	4.5819	-.03037	-1.7117	-1.0721	-1.3841	25.738
Stddev	4.7380	.4847	.54077	3.3585	1.2380	.4005	15.492
%RSD	123.88	10.579	1780.5	196.21	115.48	28.933	60.191
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	12.818
Stddev	1.951
%RSD	15.223
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3016.5	2345.4	26390.	3919.1
Stddev	3.1	4.8	104.	8.5
%RSD	.10165	.20411	.39495	.21666

Sample Name: ICSAB-3981581 Acquired: 1/24/2019 9:34:43 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1064.8	500210.	986.11	519.59	491.01	483.18	475450.
Stddev	3.2	488.	8.85	1.74	.93	1.14	1209.
%RSD	.30368	.09747	.89765	.33455	.18919	.23526	.25436
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1032.	484.87	490.94	546.01	190830.	10397.	546.33
Stddev	2.	2.21	.55	2.15	289.	32.	2.19
%RSD	.1851	.45515	.11189	.39384	.15124	.31132	.39999
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	492390.	484.14	1028.2	10473.	971.68	988.16	1017.
Stddev	242.	.86	4.8	10.	4.48	4.03	5.
%RSD	.04920	.17763	.46596	.09881	.46145	.40783	.5085
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: ICSAB-3981581 Acquired: 1/24/2019 9:34:43 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	979.92	511.00	511.14	1003.4	484.23	936.14	9773.1
Stddev	1.89	2.18	1.63	5.8	3.16	4.02	41.0
%RSD	.19240	.42586	.31816	.57516	.65349	.42926	.41984
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1442.1
Stddev	7.9
%RSD	.54869
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2964.0	2320.4	25806.	3777.9
Stddev	11.4	6.2	82.	1.7
%RSD	.38447	.26890	.31893	.04427

Sample Name: CCV-3995455 Acquired: 1/24/2019 9:38:51 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1038.7	25496.	524.20	5256.4	2016.9	1989.8	51196.	521.3
Stddev	.8	41.	4.75	5.3	1.9	1.6	101.	.4
%RSD	.07583	.15929	.90673	.10147	.09588	.07897	.19633	.0723
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2005.3	2053.8	2058.0	25976.	50579.	5171.9	51615.	2020.2
Stddev	1.3	2.3	4.9	28.	62.	2.7	70.	2.9
%RSD	.06511	.11094	.23807	.10960	.12188	.05276	.13555	.14569
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2091.5	50853.	2034.4	513.45	526.3	532.67	5186.3	5193.8
Stddev	1.8	33.	1.2	2.20	1.9	2.11	5.1	6.9
%RSD	.08633	.06539	.05904	.42894	.3627	.39536	.09739	.13340
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3995455 Acquired: 1/24/2019 9:38:51 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1048.3	2036.1	2036.7	5321.9	5083.6
Stddev	3.7	8.6	1.3	64.9	18.5
%RSD	.35163	.41994	.06298	1.2186	.36385
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3232.4	2508.8	27234.	3891.2
Stddev	4.6	3.0	49.	5.6
%RSD	.14322	.11986	.17830	.14500

Sample Name: CCB Acquired: 1/24/2019 9:42:50 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.40313	-5.0283	.20045	5.3123	.31430	.04734	16.700	-.1416
Stddev	.34907	23.972	2.1145	1.0895	.11540	.16621	3.120	.0773
%RSD	86.590	476.74	1054.9	20.509	36.715	351.13	18.683	54.61
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.35417	.12483	-.42498	10.575	37.372	2.5329	-19.683	.20137
Stddev	.31438	.31375	1.8421	4.637	21.493	2.4205	6.654	.05648
%RSD	88.765	251.34	433.46	43.852	57.509	95.560	33.806	28.048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	7.1268	52.543	.55210	-.01416	3.231	1.6973	3.7997	4.4157
Stddev	.7681	2.486	.80487	1.6450	2.047	3.1650	.4213	.4249
%RSD	10.778	4.7323	145.78	11620.	63.35	186.47	11.087	9.6216
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/24/2019 9:42:50 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	2.6362	2.9684	.09184	11.211	1.1658
Stddev	1.0456	6.0523	.11533	15.430	4.4780
%RSD	39.664	203.89	125.58	137.64	384.12
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3247.3	2535.8	27234.	3953.6
Stddev	2.3	.3	46.	19.4
%RSD	.07037	.01148	.17020	.49162

Sample Name: IEC Check As Acquired: 1/24/2019 9:47:17 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.42890	19.386	5133.4	1.5800	.34297	.15527	-15.032	-.1763
Stddev	.82648	17.660	8.6	.9417	.18449	.12210	5.112	.4595
%RSD	192.70	91.100	.16783	59.601	53.790	78.639	34.008	260.6
Check ?	None	None	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.13209	-.71551	.64482	3.8925	-33.927	-.17510	-7.4741	-.55281
Stddev	.13558	.45352	.51491	1.9671	66.719	1.8558	18.864	.08128
%RSD	102.65	63.384	79.854	50.535	196.65	1059.9	252.40	14.702
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.9735	1.4226	-.69371	-.95520	.4341	-1.9487	-.20115	.14538
Stddev	.1691	13.927	.48581	1.4438	3.786	.6646	.35967	.13815
%RSD	8.5715	979.00	70.031	151.15	872.1	34.104	178.81	95.033
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: IEC Check As Acquired: 1/24/2019 9:47:17 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	5.9279	1.6279	-.88566	-20.688	3.9319
Stddev	2.3718	4.2467	.05805	3.212	7.0567
%RSD	40.011	260.86	6.5543	15.524	179.47
Check ?	None	None	None	None	None
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3384.4	2606.7	27632.	4007.6
Stddev	12.9	6.0	121.	25.7
%RSD	.37986	.22936	.43726	.64162

Sample Name: IEC Check Ti Acquired: 1/24/2019 9:51:40 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.0329	32.011	12.605	.81417	-.14260	-.14696	-17.854	-.2472
Stddev	.2716	39.195	2.538	.27050	.13169	.23788	5.211	.1184
%RSD	26.293	122.44	20.132	33.224	92.351	161.86	29.186	47.89
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.91410	.18792	8.4201	-1.4398	-52.297	-.12937	-51.706	-.53678
Stddev	.95511	.55189	.5426	2.9229	30.817	.48044	19.976	.03677
%RSD	104.49	293.69	6.4441	203.01	58.927	371.36	38.633	6.8500
Check ?	Chk Pass	None	Chk Pass	None	None	None	None	None
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.04910	-5.6722	-1.4245	-2.4559	2.168	-.19107	2.3851	29893.
Stddev	.20928	4.0450	.4147	.3648	1.145	1.3770	.0355	80.
%RSD	426.26	71.312	29.113	14.854	52.84	720.66	1.4901	.26720
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Sample Name: IEC Check Ti Acquired: 1/24/2019 9:51:40 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	-4.6404	2.9695	-1.4726	3855.3	4.5849
Stddev	1.4497	6.6710	.2311	804.1	5.5195
%RSD	31.240	224.65	15.691	20.858	120.39
Check ?	Chk Pass	None	None	None	None
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3357.0	2586.9	27799.	4075.6
Stddev	14.6	12.2	34.	15.2
%RSD	.43550	.47335	.12131	.37270

Sample Name: IEC Check Co Acquired: 1/24/2019 9:56:12 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.96224	12.520	.01416	-3.9785	.14474	.13331	-16.894	-.0192
Stddev	.55212	26.431	.99055	.4676	.39181	.19324	8.821	.1248
%RSD	57.379	211.12	6996.4	11.754	270.70	144.95	52.217	650.9
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9978.7	-.40783	-.31279	.20539	18.862	1.6676	-19.002	-.60793
Stddev	33.9	.11743	.35835	1.4028	32.641	1.5248	6.264	.06803
%RSD	.34013	28.795	114.57	682.97	173.05	91.435	32.964	11.190
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.8485	-13.749	-2.5720	-.56306	2.970	-1.3089	-.41440	18.118
Stddev	.3511	9.165	.6930	1.1256	.309	.1081	1.3778	1.536
%RSD	18.996	66.665	26.945	199.91	10.40	8.2574	332.48	8.4781
Check ?	None	None	Chk Pass	None	Chk Pass	None	None	None
Value								
Range								

Sample Name: IEC Check Co Acquired: 1/24/2019 9:56:12 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	5.3528	-.70803	-1.0152	10.859	1.5975
Stddev	.7202	11.483	.0356	4.852	6.2289
%RSD	13.455	1621.8	3.5084	44.681	389.91
Check ?	Chk Pass	None	None	None	None
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3348.3	2593.8	27487.	4016.4
Stddev	9.4	11.6	94.	10.2
%RSD	.28146	.44633	.34263	.25314

Sample Name: IEC Check Al Acquired: 1/24/2019 10:00:35 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.65655	500860.	-.00066	-6.8878	.43885	.06632	3.3259
Stddev	.32841	1596.	3.3495	1.0393	.21997	.09712	4.1428
%RSD	50.020	.31858	509650.	15.088	50.124	146.45	124.56
Check ?	None	None	Chk Pass	None	None	None	None
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0357	-.25900	4.2740	.72408	46.346	-7.5715	.90433
Stddev	.2551	.44832	.5198	.53423	1.780	38.099	1.3195
%RSD	714.0	173.10	12.162	73.782	3.8404	503.19	145.91
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-28.010	.55941	-1.0592	166.32	.88911	-1.5988	-.0087
Stddev	36.766	.05359	.4675	7.05	.62175	2.2080	2.350
%RSD	131.26	9.5793	44.136	4.2369	69.929	138.11	26930.
Check ?	None	None	None	None	None	Chk Pass	Chk Pass
Value							
Range							

Sample Name: IEC Check Al Acquired: 1/24/2019 10:00:35 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.00013	2.8361	5.2381	1.4628	3.8345	-1.5662	9.7665
Stddev	.78694	.5488	.4837	2.3874	3.9034	.3563	6.6608
%RSD	605900.	19.350	9.2345	163.20	101.80	22.752	68.200
Check ?	Chk Pass	None	None	Chk Pass	None	None	None
Value							
Range							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1.0133
Stddev	6.3310
%RSD	624.80
Check ?	None
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3391.6	2529.0	26860.	4046.2
Stddev	8.6	4.4	38.	24.8
%RSD	.25495	.17566	.14161	.61304

Sample Name: IEC Check Fe Acquired: 1/24/2019 10:04:57 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.88809	4.7406	-4.5002	-5.6187	.06302	.03426	-14.672
Stddev	.69413	16.781	4.7564	.5340	.52142	.13989	1.755
%RSD	78.160	353.98	105.69	9.5041	827.39	408.37	11.963
Check ?	None	None	None	None	None	None	None
Value							
Range							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.0399	-2.5523	.37040	.00308	506050.	-108.96	2.6420
Stddev	.1099	.2811	.41646	.28490	1680.	54.33	2.1118
%RSD	275.5	11.012	112.44	9257.4	.33202	49.864	79.934
Check ?	Chk Pass	None	None	Chk Pass	None	None	None
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-95.628	5.4956	-2.4080	-17.051	9.4184	-1.8835	-.0091
Stddev	6.378	.0853	.2484	9.734	.2728	2.3531	2.534
%RSD	6.6698	1.5522	10.314	57.087	2.8970	124.93	27750.
Check ?	None	None	None	None	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: IEC Check Fe Acquired: 1/24/2019 10:04:57 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2.6479	2.6746	3.4221	7.7879	3.2170	-1.1312	-5.5712
Stddev	2.0601	.4997	.7227	.9016	6.7164	.1393	15.456
%RSD	77.800	18.684	21.117	11.577	208.78	12.312	277.44
Check ?	None	None	None	Chk Pass	Chk Pass	None	None
Value							
Range							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	13.829
Stddev	5.175
%RSD	37.422
Check ?	None
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3246.5	2564.3	27543.	3956.3
Stddev	8.0	2.8	64.	7.9
%RSD	.24529	.10962	.23283	.19898

Sample Name: IEC Check V Acquired: 1/24/2019 10:09:24 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.37337	.07710	.54102	-4.9989	.20056	.62852	-10.155	-.0223
Stddev	.32631	14.339	3.6957	.0796	.16029	.10569	2.863	.0936
%RSD	87.395	18599.	683.10	1.5922	79.924	16.815	28.192	420.2
Check ?	None	Chk Pass	None	None	None	Chk Pass	None	None
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.13059	-.46201	-.61748	20.746	-17.926	.87859	-11.185	-.58415
Stddev	.39985	.08950	.74627	3.803	47.003	2.5572	26.104	.02816
%RSD	306.19	19.371	120.86	18.332	262.21	291.06	233.38	4.8211
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-3.5927	-33.644	-.85451	-2.1286	3.162	-.98807	-.67889	1.5602
Stddev	.3990	9.707	.15698	1.9335	1.279	1.4420	.47044	.2136
%RSD	11.106	28.853	18.370	90.834	40.44	145.94	69.295	13.691
Check ?	None	None	None	None	Chk Pass	None	None	None
Value								
Range								

Sample Name: IEC Check V Acquired: 1/24/2019 10:09:24 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	5.2145	5144.4	-.99100	-10.111	.56334
Stddev	2.2824	20.1	.12250	4.286	3.7795
%RSD	43.770	.39062	12.361	42.393	670.91
Check ?	Chk Pass	None	None	None	None
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3287.3	2563.3	27094.	3896.2
Stddev	26.5	23.7	51.	29.9
%RSD	.80473	.92494	.18660	.76653

Sample Name: CCV-3995455 Acquired: 1/24/2019 10:13:47 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1026.8	25196.	506.35	5148.3	1992.6	1944.6	50566.	512.9
Stddev	2.8	105.	2.72	8.4	7.6	6.1	161.	1.1
%RSD	.26971	.41584	.53798	.16293	.38171	.31522	.31846	.2237
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1958.6	2027.2	2029.6	25829.	50093.	5162.1	50705.	1968.7
Stddev	8.4	2.8	2.7	61.	169.	12.6	111.	2.3
%RSD	.42947	.14051	.13472	.23533	.33810	.24369	.21901	.11610
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2073.5	50224.	1997.2	505.20	518.4	523.40	5084.0	5119.1
Stddev	5.9	166.	6.5	1.66	3.1	2.43	13.6	1.2
%RSD	.28448	.32983	.32778	.32783	.6022	.46431	.26674	.02428
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3995455 Acquired: 1/24/2019 10:13:47 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1037.7	2026.2	1983.8	5170.9	5015.9
Stddev	2.3	11.4	5.6	33.9	18.4
%RSD	.22139	.56351	.28082	.65602	.36783
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3305.7	2564.1	27555.	3916.8
Stddev	10.5	6.0	136.	17.0
%RSD	.31760	.23315	.49390	.43476

Sample Name: CCB Acquired: 1/24/2019 10:17:47 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.57028	7.6162	-.42736	2.2448	.23718	.12491	15.228	-.1799
Stddev	.55369	28.472	1.0743	.7421	.30918	.16322	1.699	.0513
%RSD	97.091	373.83	251.38	33.056	130.35	130.67	11.154	28.48
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.38961	.34701	.51114	10.988	134.20	6.7632	-42.356	.16106
Stddev	.31453	.50609	1.1168	1.821	10.26	2.6373	26.020	.10678
%RSD	80.729	145.84	218.49	16.574	7.6482	38.994	61.431	66.297
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6.4428	1.5604	.23309	-1.4917	3.160	.45306	2.7074	5.4191
Stddev	.4917	4.2683	.24534	.8962	1.236	1.7386	.9149	.2665
%RSD	7.6315	273.53	105.26	60.081	39.10	383.74	33.794	4.9175
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/24/2019 10:17:47 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	4.3302	1.7510	-.09350	13.650	4.1630
Stddev	2.3083	4.6821	.11570	9.557	3.9497
%RSD	53.308	267.40	123.74	70.020	94.877
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3400.9	2649.7	28341.	4132.5
Stddev	7.7	6.8	32.	16.8
%RSD	.22707	.25652	.11330	.40728

Sample Name: lb 240-364846/1-b Acquired: 1/24/2019 10:22:15 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.21007	-8.6266	F 8.3757	5.3544	.67408	.04869
Stddev	.79632	12.474	1.2782	.7109	.32084	.06302
%RSD	379.08	144.60	15.261	13.276	47.597	129.41
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			5.0000			
Low Limit			-1000.0			

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	33.827	-.3658	.20376	.61569	2.0507	6.3849
Stddev	3.571	.1574	.26151	.46981	1.6707	.7363
%RSD	10.555	43.03	128.34	76.306	81.471	11.532
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1188.4	F 63.624	-8.6415	-.28271	-.17563	1292400.
Stddev	49.4	5.034	32.118	.06789	.42649	21034.
%RSD	4.1569	7.9117	371.67	24.014	242.83	1.6276
Check ?	None	Chk Fail	None	Chk Pass	Chk Pass	None
High Limit		50.000				
Low Limit		-1000.0				

Sample Name: lb 240-364846/1-b Acquired: 1/24/2019 10:22:15 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2.7125	1.2663	.3462	F 5.9907	2.8622	1.4601
Stddev	.8742	1.8877	1.260	1.4711	1.0434	.0909
%RSD	32.230	149.07	363.9	24.556	36.456	6.2282
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit				5.0000		
Low Limit				-1000.0		

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.8916	F 6.1907	1.4819	157.02	4.6776
Stddev	2.8406	4.7803	.0179	4.91	2.7351
%RSD	150.17	77.218	1.2093	3.1252	58.472
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit		4.0000			
Low Limit		-1000.0			

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3274.6	2613.8	28796.	4070.9
Stddev	47.7	38.7	95.	8.7
%RSD	1.4561	1.4809	.33000	.21328

Sample Name: mb 240-364977/2-a Acquired: 1/24/2019 10:26:50 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.10671	-34.050	-.47753	-3.6038	.09540	-.04782	72.931	.0119
Stddev	.67843	13.859	.16919	.3738	.34654	.15045	2.784	.0852
%RSD	635.78	40.702	35.429	10.371	363.25	314.65	3.8171	718.5
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.65278	1.0602	1.6627	18.629	259.99	15.052	-8.6758	-.46714
Stddev	.22407	.1393	1.2590	1.643	29.95	.938	19.424	.09023
%RSD	34.325	13.136	75.718	8.8211	11.519	6.2286	223.89	19.315
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.0495	571.77	-.17663	-1.2365	1.012	1.2033	.12183	.35829
Stddev	.3848	47.03	.14112	2.3248	1.494	2.2133	.33867	.30433
%RSD	36.666	8.2256	79.895	188.01	147.7	183.93	277.98	84.939
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: mb 240-364977/2-a Acquired: 1/24/2019 10:26:50 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	2.1757	-.20532	1.8108	-4.9481	.99126
Stddev	.7302	1.2967	.2372	5.7798	8.3347
%RSD	33.564	631.51	13.100	116.81	840.82
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3522.2	2745.2	29602.	4375.7
Stddev	21.2	17.0	30.	16.9
%RSD	.60134	.61997	.10220	.38642

Sample Name: lcs 240-364977/3-a Acquired: 1/24/2019 10:31:17 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	53.432	2074.3	2074.0	1029.9	2029.1	50.275
Stddev	.699	27.5	4.7	1.3	5.3	.288
%RSD	1.3087	1.3276	.22471	.12567	.25975	.57190
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	49496.	51.57	503.74	200.56	276.72	1067.5
Stddev	245.	.05	.49	.07	.47	2.2
%RSD	.49466	.0942	.09729	.03725	.16864	.20692
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	55649.	1178.5	48947.	477.37	1056.5	1199500.
Stddev	247.	6.4	322.	.40	3.1	24450.
%RSD	.44345	.54497	.65731	.08295	.29271	2.0384
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None
Value						
Range						

Sample Name: lcs 240-364977/3-a Acquired: 1/24/2019 10:31:17 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	514.85	504.80	515.2	2147.6	2094.7	1031.9
Stddev	1.12	1.13	4.5	8.1	7.6	2.0
%RSD	.21715	.22386	.8795	.37949	.36500	.19181
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	2070.0	527.79	510.02	F 1314.0	1012.3
Stddev	8.7	4.75	.98	37.7	8.3
%RSD	.42033	.89985	.19204	2.8718	.82471
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value				1000.0	
Range				20.500%	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3426.4	2721.7	31070.	4353.8
Stddev	8.5	9.1	83.	10.6
%RSD	.24919	.33285	.26727	.24261

Sample Name: 280-119275-b-1-j@50 Acquired: 1/24/2019 10:35:27 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.10045	-15.312	3.8345	18.516	1.0363	-.23234	1258.9
Stddev	.49170	9.950	1.4214	.229	.1257	.05938	11.8
%RSD	489.49	64.983	37.069	1.2360	12.130	25.559	.93674
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.1086	-.32844	.92357	1.8306	53.109	641.96	23.076
Stddev	.0712	.24350	.41262	.6236	2.519	27.52	1.728
%RSD	65.56	74.138	44.677	34.067	4.7425	4.2865	7.4887
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	208.36	2.1028	3.1257	197930.	.03621	1.2076	3.459
Stddev	25.70	.0745	.1366	923.	.54444	2.3051	.859
%RSD	12.337	3.5420	4.3687	.46613	1503.5	190.89	24.84
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 280-119275-b-1-j@50 Acquired: 1/24/2019 10:35:27 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5.0526	1.8449	.87449	6.5736	.31923	5.0739	8.6220
Stddev	1.5215	.3156	.40828	.9228	4.3663	.2333	8.4290
%RSD	30.114	17.105	46.688	14.037	1367.7	4.5985	97.761
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	11.556
Stddev	2.251
%RSD	19.475
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3729.1	2841.5	31395.	4489.1
Stddev	12.5	9.8	109.	2.6
%RSD	.33559	.34422	.34677	.05853
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	111.87%	109.36%	114.21%	112.37%
Range				

Sample Name: SD 280-119275-b1@250 Acquired: 1/24/2019 10:39:54 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.88046	-10.908	-2.3145	-.49443	.20703	-.04139	247.70	-.0516
Stddev	.46818	18.277	.3327	.20507	.07508	.07723	2.13	.1380
%RSD	53.174	167.55	14.374	41.476	36.267	186.59	.85994	267.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.49234	.33498	.63426	11.084	255.18	14.129	24.696	.29229
Stddev	.18656	.19518	.81564	3.502	9.45	2.329	10.731	.01673
%RSD	37.893	58.266	128.60	31.593	3.7019	16.486	43.454	5.7246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.57530	41462.	-.78397	-.14816	1.417	2.1738	-.47243	-.56635
Stddev	.34838	132.	.45784	1.0042	1.860	2.8616	.09424	.28307
%RSD	60.556	.31729	58.400	677.79	131.3	131.64	19.949	49.981
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: SD 280-119275-b1@250 Acquired: 1/24/2019 10:39:54 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	5.1157	-.85568	1.0518	-4.0350	3.1951
Stddev	1.9215	2.3557	.0717	9.9798	6.2514
%RSD	37.560	275.30	6.8207	247.33	195.65
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3740.3	2833.0	31134.	4517.9
Stddev	42.8	32.6	93.	13.4
%RSD	1.1433	1.1507	.30014	.29765
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	112.21%	109.03%	113.26%	113.10%
Range				

Sample Name: 280-119275-b1k ms@50 Acquired: 1/24/2019 10:44:21 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	20.378	1.3421	91.650	42.503	14.569	.81202	2648.4
Stddev	.687	50.807	1.754	1.211	.154	.11331	8.4
%RSD	3.3714	3785.6	1.9137	2.8488	1.0541	13.954	.31729
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	19.21	8.8967	95.089	5.9752	86.702	1678.3	36.480
Stddev	.16	.1694	.837	.8580	2.634	30.0	3.493
%RSD	.8582	1.9047	.88001	14.360	3.0381	1.7879	9.5761
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1241.1	11.541	17.421	266630.	9.1969	50.948	7.529
Stddev	22.4	.034	.111	788.	.5422	1.584	2.047
%RSD	1.8063	.29610	.63583	.29563	5.8956	3.1095	27.19
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 280-119275-b1k ms@50 Acquired: 1/24/2019 10:44:21 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	18.546	37.579	18.370	45.992	12.457	15.157	25.963
Stddev	.976	.199	.237	2.414	5.900	.136	7.678
%RSD	5.2614	.52926	1.2920	5.2477	47.367	.89931	29.573
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	27.960
Stddev	4.183
%RSD	14.962
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3777.3	2879.7	31874.	4458.4
Stddev	23.1	7.6	92.	11.9
%RSD	.61024	.26310	.28972	.26681
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	113.32%	110.83%	115.95%	111.61%
Range				

Sample Name: 280-119275b1l msd@50 Acquired: 1/24/2019 10:48:53 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	20.249	11.739	96.520	43.358	11.666	1.0221	2633.6
Stddev	.218	9.015	2.201	.761	.033	.1165	20.7
%RSD	1.0749	76.801	2.2800	1.7554	.27909	11.395	.78722
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	19.84	8.8319	95.739	7.3066	87.266	1707.3	37.724
Stddev	.33	.5051	.468	.7363	2.076	26.1	.772
%RSD	1.662	5.7191	.48896	10.077	2.3794	1.5288	2.0455
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1234.4	11.812	17.815	264380.	9.4667	46.872	8.315
Stddev	11.2	.062	.488	1347.	.8315	1.702	2.299
%RSD	.90771	.52227	2.7417	.50954	8.7832	3.6317	27.65
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 280-119275b1l msd@50 Acquired: 1/24/2019 10:48:53 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	18.908	37.675	18.569	44.971	13.541	15.391	24.933
Stddev	1.530	.374	.267	1.111	1.558	.080	2.422
%RSD	8.0890	.99296	1.4397	2.4714	11.504	.52039	9.7127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	28.868
Stddev	2.276
%RSD	7.8854
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3792.8	2886.0	32459.	4686.2
Stddev	15.0	9.2	152.	22.3
%RSD	.39546	.31899	.46948	.47657
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	113.78%	111.07%	118.08%	117.31%
Range				

Sample Name: lb 240-365049/1-b@10 Acquired: 1/24/2019 10:53:24 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.93559	-51.340	-1.3259	-4.5345	.01095	-.05127	9.2657
Stddev	.31629	10.800	1.1466	.2449	.10290	.07430	1.5071
%RSD	33.806	21.037	86.479	5.4010	939.69	144.92	16.266
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.1786	-.17371	.15922	1.4169	1.1283	234.47	13.864
Stddev	.1852	.29222	.14022	.4430	1.6114	16.69	1.084
%RSD	103.7	168.22	88.066	31.264	142.81	7.1195	7.8182
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-6.7782	-.27912	-1.5010	142010.	-.79993	-.46981	1.860
Stddev	18.596	.07069	.1845	113.	.12504	1.2576	2.583
%RSD	274.35	25.326	12.289	.07971	15.631	267.69	138.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: lb 240-365049/1-b@10 Acquired: 1/24/2019 10:53:24 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.9516	-.07854	-.93697	6.3671	1.9792	.37953	2.1729
Stddev	1.7776	.39396	.18035	.8783	4.9161	.02608	1.4772
%RSD	91.083	501.62	19.248	13.795	248.39	6.8710	67.982
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	.02759
Stddev	5.1155
%RSD	18543.
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3859.0	2957.6	32568.	4682.2
Stddev	33.1	26.6	88.	15.8
%RSD	.85798	.89861	.27059	.33751
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	115.77%	113.83%	118.47%	117.21%
Range				

Sample Name: lcs 240-365151/3a@10 Acquired: 1/24/2019 10:57:50 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5.5826	204.91	203.22	98.232	201.19	5.0839	5216.0
Stddev	.3163	23.70	1.58	.472	.37	.1265	28.8
%RSD	5.6663	11.564	.77678	.48017	.18629	2.4872	.55250
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.997	50.250	20.954	28.328	104.75	5466.4	119.65
Stddev	.045	.200	.241	.659	1.09	38.1	2.42
%RSD	.9080	.39743	1.1520	2.3255	1.0396	.69759	2.0184
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5108.3	49.803	103.29	150590.	50.981	50.823	52.52
Stddev	5.4	.349	.35	551.	.415	1.087	2.01
%RSD	.10664	.70117	.33716	.36602	.81502	2.1387	3.826
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: lcs 240-365151/3a@10 Acquired: 1/24/2019 10:57:50 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	206.90	206.46	102.38	215.42	51.310	51.438	102.79
Stddev	4.12	1.52	.38	2.73	1.055	.270	4.10
%RSD	1.9918	.73689	.37099	1.2665	2.0558	.52427	3.9906
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	106.78
Stddev	3.07
%RSD	2.8791
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3721.9	2865.3	32331.	4824.5
Stddev	13.3	8.1	611.	36.5
%RSD	.35663	.28355	1.8886	.75729
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	111.66%	110.27%	117.61%	120.77%
Range				

Sample Name: lb 240-365049/1-b Acquired: 1/24/2019 11:02:09 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.83765	-13.726	F 6.3361	6.7541	.56797	.03932
Stddev	.25008	40.180	2.0294	.6632	.17842	.24744
%RSD	29.855	292.73	32.029	9.8196	31.413	629.31
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			5.0000			
Low Limit			-1000.0			

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	72.803	-.2996	-.02369	1.2076	2.0319	7.3677
Stddev	5.499	.0673	.15257	.4521	.4094	1.3004
%RSD	7.5527	22.45	643.91	37.438	20.147	17.650
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1416.2	49.335	-6.3957	-.15733	-1.4942	1110600.
Stddev	133.8	4.410	3.8156	.01742	.3085	32649.
%RSD	9.4480	8.9389	59.658	11.071	20.645	2.9398
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None
High Limit						
Low Limit						

Sample Name: lb 240-365049/1-b Acquired: 1/24/2019 11:02:09 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.1431	.44499	-2.412	F 5.8358	2.0830	-.49625
Stddev	.4121	1.0664	.753	3.9140	.8310	.32959
%RSD	36.053	239.65	31.21	67.069	39.896	66.417
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit				5.0000		
Low Limit				-1000.0		

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	2.8349	-.60912	3.9189	123.25	3.9902
Stddev	2.3695	1.8604	.1144	13.36	5.9134
%RSD	83.583	305.42	2.9196	10.841	148.20
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3585.2	2838.7	31498.	4369.4
Stddev	19.5	12.1	52.	54.0
%RSD	.54475	.42681	.16592	1.2356

Sample Name: CCV-3995455 Acquired: 1/24/2019 11:06:47 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	991.51	24109.	496.18	5051.9	1906.4	1885.1	48495.	500.1
Stddev	4.04	159.	2.59	10.8	9.0	13.1	301.	1.0
%RSD	.40789	.65895	.52167	.21348	.47319	.69568	.62157	.1920
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1912.5	1922.7	1980.3	24266.	48186.	4931.4	47660.	1863.5
Stddev	4.3	12.4	12.3	113.	215.	24.5	311.	9.6
%RSD	.22605	.64346	.61905	.46739	.44644	.49599	.65247	.51355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2025.7	46367.	1950.8	493.81	505.1	508.88	4945.2	4909.5
Stddev	6.5	295.	2.1	2.14	4.0	1.90	7.3	25.1
%RSD	.32205	.63706	.10823	.43390	.7932	.37347	.14805	.51087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3995455 Acquired: 1/24/2019 11:06:47 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1002.0	1923.7	1913.5	4836.2	4789.1
Stddev	5.0	15.8	9.6	65.6	28.2
%RSD	.49418	.82236	.50239	1.3558	.58962
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3580.4	2759.0	31548.	4600.6
Stddev	49.3	36.0	198.	10.4
%RSD	1.3772	1.3056	.62785	.22664

Sample Name: CCB Acquired: 1/24/2019 11:10:48 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.28885	1.4656	.01557	1.4640	.24677	.00350	13.175	-.0925
Stddev	.24723	28.591	1.5522	1.0335	.14824	.08148	2.574	.1482
%RSD	85.594	1950.8	9970.5	70.593	60.071	2326.6	19.533	160.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.45810	.29791	-.04807	8.8092	159.50	9.8767	-23.006	.11542
Stddev	.14490	.33045	1.2033	2.3142	27.69	3.0082	26.674	.04771
%RSD	31.631	110.92	2503.1	26.271	17.360	30.457	115.94	41.338
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6.3296	475.71	-.60641	-2.1018	-.0392	.10430	3.1031	4.0574
Stddev	.4991	17.26	.70975	.8636	.7604	1.8511	1.2570	.6648
%RSD	7.8855	3.6281	117.04	41.088	1939.	1774.7	40.508	16.386
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/24/2019 11:10:48 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	3.8939	2.0869	.08432	6.7809	-2.0867
Stddev	.3498	2.9250	.05969	12.780	6.8948
%RSD	8.9838	140.16	70.784	188.47	330.42
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3429.8	2658.8	29179.	4199.9
Stddev	5.6	1.7	122.	69.3
%RSD	.16386	.06258	.41890	1.6491

Sample Name: mb 240-365151/2-a Acquired: 1/24/2019 11:15:15 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.42334	-13.843	-1.5388	-1.4595	.29235	-.03283	.90211
Stddev	.54605	74.875	1.0935	.4814	.11553	.10165	2.0087
%RSD	128.98	540.88	71.059	32.985	39.519	309.59	222.67
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.0173	-.30585	.48787	.97938	13.589	114.89	4.4786
Stddev	.1346	.42176	.29121	.70682	2.460	44.51	1.9754
%RSD	780.1	137.90	59.689	72.169	18.105	38.739	44.107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-29.953	-.33526	-.11508	291.14	.15713	-.53129	-1.286
Stddev	24.997	.05521	.21127	6.82	.92770	1.7192	3.819
%RSD	83.455	16.468	183.58	2.3418	590.40	323.58	297.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: mb 240-365151/2-a Acquired: 1/24/2019 11:15:15 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.1584	-.01670	.81377	2.9769	F 6.7755	10.117	.53784
Stddev	.9111	.81073	.08085	1.0139	7.3232	.282	6.2991
%RSD	78.649	4853.8	9.9346	34.059	108.08	2.7872	1171.2
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit					4.0000		
Low Limit					-1000.0		

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	3.0028
Stddev	6.3569
%RSD	211.70
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3352.5	2613.4	28329.	4018.0
Stddev	14.4	6.3	56.	15.4
%RSD	.43055	.24073	.19626	.38213

Sample Name: lcs 240-365151/3-a Acquired: 1/24/2019 11:19:41 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	50.608	2014.6	1975.2	966.30	1938.4	49.433
Stddev	.789	56.2	20.6	9.57	13.6	.666
%RSD	1.5599	2.7887	1.0451	.99084	.70362	1.3465
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	51102.	48.59	492.25	198.60	261.51	1026.9
Stddev	385.	.81	5.41	1.10	1.36	12.6
%RSD	.75253	1.664	1.0981	.55189	.51849	1.2273
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	56345.	1098.6	51069.	479.67	1004.6	1201500.
Stddev	557.	10.9	575.	.60	14.0	6218.
%RSD	.98768	.98780	1.1260	.12407	1.3984	.51748
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None
Value						
Range						

Sample Name: lcs 240-365151/3-a Acquired: 1/24/2019 11:19:41 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	502.09	491.06	479.4	1994.3	2057.9	999.41
Stddev	5.83	8.30	8.0	22.4	23.8	.66
%RSD	1.1613	1.6911	1.679	1.1215	1.1569	.06650
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1998.2	509.33	518.98	F 1233.6	999.22
Stddev	22.5	15.00	6.08	29.4	14.29
%RSD	1.1241	2.9446	1.1717	2.3826	1.4300
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value				1000.0	
Range				20.500%	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3241.2	2599.5	27755.	3693.7
Stddev	44.1	36.7	355.	51.6
%RSD	1.3596	1.4113	1.2785	1.3961

Sample Name: 280-119276-a-3-p@10 Acquired: 1/24/2019 11:23:51 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.79613	439.30	6.4190	1163.5	534.63	.01315	12068.
Stddev	.20148	54.76	1.4907	3.8	1.24	.02699	17.
%RSD	25.308	12.465	23.224	.32593	.23254	205.16	.14201
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.795	3.1679	7.5703	31.464	24151.	525.09	20.474
Stddev	.055	.1706	.1408	.937	56.	35.15	3.841
%RSD	3.076	5.3862	1.8604	2.9767	.23190	6.6936	18.760
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1194.0	191.36	3.4526	157280.	6.8144	3521.4	2.927
Stddev	29.3	.09	.4228	366.	.4530	12.7	3.172
%RSD	2.4561	.04850	12.245	.23241	6.6475	.36136	108.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 280-119276-a-3-p@10 Acquired: 1/24/2019 11:23:51 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.5057	55.490	1.4600	4.1884	-.50871	4545.7	253.93
Stddev	2.1764	.647	.4885	.2639	2.4174	17.2	11.64
%RSD	144.54	1.1652	33.456	6.3003	475.19	.37894	4.5837
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	44.744
Stddev	7.634
%RSD	17.061
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3311.0	2568.6	27735.	3743.1
Stddev	38.4	31.4	50.	14.2
%RSD	1.1603	1.2236	.18132	.37835
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	99.329%	98.854%	100.89%	93.698%
Range				

Sample Name: SD 280-119276-a3p@50 Acquired: 1/24/2019 11:28:10 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.82970	106.36	1.4912	234.49	109.76	.21800	2461.0	.1816
Stddev	.66259	14.58	1.6041	1.06	.49	.11383	1.9	.1056
%RSD	79.858	13.708	107.57	.45316	.44589	52.214	.07892	58.17
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.24188	1.0831	6.4669	5001.8	194.49	7.9500	244.52	39.682
Stddev	.36543	.4241	.3054	8.6	42.28	1.8419	4.79	.192
%RSD	151.08	39.154	4.7225	.17268	21.737	23.168	1.9572	.48367
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.42249	33783.	2.2249	719.23	.3715	-1.9696	11.352	.19981
Stddev	.20900	150.	.7244	7.45	1.797	1.1088	.670	.23848
%RSD	49.470	.44313	32.559	1.0352	483.7	56.297	5.9029	119.35
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: SD 280-119276-a3p@50 Acquired: 1/24/2019 11:28:10 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	2.6187	-.02317	920.64	62.729	7.6512
Stddev	3.2044	3.9919	4.21	15.202	3.0752
%RSD	122.37	17231.	.45695	24.235	40.193
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3207.3	2467.3	26463.	3620.1
Stddev	6.3	3.9	62.	18.3
%RSD	.19643	.15736	.23472	.50553
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	96.219%	94.954%	96.265%	90.622%
Range				

Sample Name: PDS 280-119276a3p@10 Acquired: 1/24/2019 11:32:28 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	49.563	2601.3	2108.7	2176.4	2605.5	53.368	65883.
Stddev	.370	26.7	8.0	3.8	2.4	.098	321.
%RSD	.74722	1.0263	.37740	.17424	.09351	.18408	.48697
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	55.92	529.05	225.53	300.68	23702.	54994.	1110.9
Stddev	.31	.07	1.30	2.85	75.	178.	4.4
%RSD	.5532	.01311	.57582	.94832	.31531	.32325	.39267
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	56580.	695.81	1097.4	204760.	543.24	3806.1	518.7
Stddev	145.	.67	1.8	658.	1.73	6.3	3.2
%RSD	.25624	.09561	.16532	.32144	.31792	.16507	.6215
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: PDS 280-119276a3p@10 Acquired: 1/24/2019 11:32:28 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2215.8	2237.1	1074.6	2204.8	551.55	4687.2	1410.6
Stddev	5.2	2.7	1.4	6.0	6.78	2.9	15.0
%RSD	.23370	.12073	.12700	.27335	1.2297	.06204	1.0600
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1116.5
Stddev	11.4
%RSD	1.0211
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3116.0	2431.7	26081.	3532.8
Stddev	2.3	6.3	134.	14.7
%RSD	.07441	.26054	.51384	.41702
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	93.479%	93.586%	94.877%	88.435%
Range				

Sample Name: 280-119276-a3q ms@10 Acquired: 1/24/2019 11:36:29 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	W 103.54	646.07	533.82	1216.7	5623.9	5.2228	16401.
Stddev	.85	42.81	1.71	3.0	8.7	.2139	10.
%RSD	.82021	6.6269	.32019	.24847	.15426	4.0947	.05975
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	100.00						
Low Limit	-500000.						

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	107.5	52.587	540.57	55.040	22710.	5652.2	112.59
Stddev	.1	.580	.83	.772	55.	30.6	1.72
%RSD	.0826	1.1031	.15322	1.4020	.24292	.54198	1.5240
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6493.3	230.04	107.07	157440.	57.739	3822.3	61.71
Stddev	22.0	.17	.54	103.	.288	15.4	3.50
%RSD	.33851	.07534	.50422	.06549	.49958	.40416	5.664
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 280-119276-a3q ms@10 Acquired: 1/24/2019 11:36:29 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	112.21	259.48	105.13	211.21	55.641	4286.9	428.60
Stddev	.69	.59	.50	2.71	2.925	14.9	9.35
%RSD	.61466	.22582	.47664	1.2848	5.2568	.34751	2.1822
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	144.83
Stddev	10.01
%RSD	6.9078
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3128.1	2436.6	26081.	3593.8
Stddev	21.1	19.3	123.	2.6
%RSD	.67561	.79341	.47305	.07275
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	93.842%	93.774%	94.875%	89.961%
Range				

Sample Name: 280-119276a3r msd@10 Acquired: 1/24/2019 11:40:39 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	W 105.16	585.51	533.26	1223.2	5683.8	5.3524	16419.
Stddev	.48	39.52	3.53	7.1	3.7	.1440	40.
%RSD	.45339	6.7499	.66229	.58032	.06515	2.6898	.24623
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	100.00						
Low Limit	-500000.						

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	109.0	53.698	544.35	55.154	22886.	5738.5	114.20
Stddev	.9	.471	2.29	.985	75.	25.5	1.88
%RSD	.8560	.87706	.42007	1.7853	.32877	.44507	1.6447
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6550.2	231.81	105.22	159150.	58.739	3855.2	59.04
Stddev	49.1	.72	.64	361.	1.273	17.5	2.10
%RSD	.74901	.30975	.61064	.22685	2.1672	.45327	3.550
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 280-119276a3r msd@10 Acquired: 1/24/2019 11:40:39 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	108.93	260.56	105.89	216.29	52.017	4306.0	440.65
Stddev	1.88	.72	.19	1.96	4.844	10.8	8.05
%RSD	1.7237	.27587	.17626	.90587	9.3122	.25136	1.8258
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	143.45
Stddev	5.14
%RSD	3.5851
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3111.8	2428.1	26163.	3500.0
Stddev	17.1	10.9	54.	16.0
%RSD	.54873	.44932	.20609	.45693
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	93.356%	93.448%	95.175%	87.613%
Range				

Sample Name: mb 240-365182/1-a Acquired: 1/24/2019 11:44:50 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.1894	38.881	4.0482	.15525	.72854	.13793	128.65	-.4391
Stddev	.6882	52.855	2.8301	.21060	.15740	.02053	4.59	.1355
%RSD	57.858	135.94	69.912	135.65	21.605	14.885	3.5653	30.87
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.16633	.91492	.74058	82.591	213.58	8.6019	15.779	.02715
Stddev	.05388	.19847	1.2331	3.761	29.06	1.4207	1.915	.04085
%RSD	32.395	21.693	166.50	4.5535	13.605	16.516	12.138	150.44
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.30620	350.26	-.12201	-1.9704	2.777	1.1766	.81886	.26806
Stddev	.32593	5.06	.49083	.6043	2.885	1.8215	.42801	.53695
%RSD	106.45	1.4433	402.29	30.667	103.9	154.81	52.269	200.31
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: mb 240-365182/1-a Acquired: 1/24/2019 11:44:50 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	3.1997	2.2737	4.5677	1.9990	3.3507
Stddev	.2280	1.9578	.1436	8.0432	7.6334
%RSD	7.1256	86.107	3.1435	402.35	227.82
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3229.6	2528.5	26625.	3658.6
Stddev	10.9	12.9	40.	9.6
%RSD	.33803	.51042	.15049	.26315

Sample Name: lcs 240-365182/2-a Acquired: 1/24/2019 11:49:16 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	49.465	1996.3	1993.5	985.29	1917.9	48.782	49723.	50.09
Stddev	.824	45.4	6.8	2.18	5.4	.541	152.	.37
%RSD	1.6657	2.2725	.34166	.22151	.28036	1.1089	.30628	.7393
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	479.85	198.63	243.72	1020.2	50132.	1005.1	50972.	485.90
Stddev	1.07	.25	1.03	7.6	126.	3.5	221.	1.05
%RSD	.22231	.12470	.42086	.74751	.25113	.35262	.43356	.21672
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	977.05	49917.	490.81	489.94	501.1	2166.9	1968.6	985.20
Stddev	7.68	114.	.18	3.06	1.4	3.5	5.3	1.66
%RSD	.78561	.22819	.03651	.62439	.2889	.16318	.27076	.16815
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: lcs 240-365182/2-a Acquired: 1/24/2019 11:49:16 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1983.0	496.76	496.56	1051.3	975.62
Stddev	16.0	6.59	2.28	25.8	3.60
%RSD	.80849	1.3271	.45838	2.4537	.36892
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3211.5	2497.1	27142.	3742.7
Stddev	3.6	5.4	22.	11.1
%RSD	.11237	.21806	.08044	.29543

Sample Name: 240-107233-a-1-a Acquired: 1/24/2019 11:53:18 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.00789	319.32	7.8792	76.420	279.47	.14236	190660.
Stddev	.35205	31.65	2.4426	.858	1.08	.12349	654.
%RSD	4459.5	9.9114	31.001	1.1226	.38665	86.741	.34307
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.1077	-.11447	2.5323	25.174	3007.4	5519.7	3441.4
Stddev	.2180	.40561	.5973	.467	9.6	32.9	9.3
%RSD	202.4	354.32	23.588	1.8549	.32058	.59542	.26991
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	61415.	140.20	11.306	86168.	4.2794	-1.2549	1.922
Stddev	291.	.49	.459	221.	.3330	2.6477	2.055
%RSD	.47395	.35077	4.0615	.25662	7.7811	210.99	106.9
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-107233-a-1-a Acquired: 1/24/2019 11:53:18 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.0849	2.8427	1.3340	9.5585	3.1676	236.79	7057.6
Stddev	2.3131	.5044	.0514	1.7659	6.8999	1.67	383.3
%RSD	74.983	17.744	3.8490	18.474	217.82	.70527	5.4306
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	390.06
Stddev	3.21
%RSD	.82409
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3308.9	2547.7	27552.	3683.9
Stddev	10.4	11.5	104.	8.5
%RSD	.31549	.45269	.37812	.23131
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	99.266%	98.049%	100.23%	92.218%
Range				

Sample Name: CCV-3995455 Acquired: 1/24/2019 11:57:39 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1016.3	25240.	505.83	5066.0	1977.9	1967.8	50626.	506.6
Stddev	.6	115.	1.81	17.6	2.6	5.8	210.	.8
%RSD	.05752	.45501	.35785	.34750	.13030	.29325	.41572	.1673
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1954.8	1986.2	2008.9	25376.	50233.	5103.7	50482.	1944.0
Stddev	3.1	1.3	2.4	40.	81.	12.7	105.	1.5
%RSD	.15793	.06470	.11849	.15959	.16209	.24905	.20872	.07599
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2042.5	49689.	1984.8	498.64	507.6	511.63	5040.5	5060.3
Stddev	9.1	125.	3.3	2.80	3.4	3.91	11.7	3.1
%RSD	.44367	.25080	.16606	.56092	.6628	.76349	.23238	.06078
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3995455 Acquired: 1/24/2019 11:57:39 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1014.2	2001.0	1975.3	5129.6	4994.4
Stddev	2.5	7.4	2.2	55.5	10.0
%RSD	.25110	.37166	.10962	1.0825	.19996
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3312.9	2568.8	28773.	4069.0
Stddev	22.5	17.4	108.	13.2
%RSD	.68028	.67544	.37604	.32445

Sample Name: CCB Acquired: 1/24/2019 12:01:40 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.03661	3.9176	1.1441	3.1076	.67998	.16743	11.401	-.1008
Stddev	.46460	13.326	.1566	.9292	.44003	.09230	2.295	.1003
%RSD	1269.2	340.16	13.686	29.899	64.712	55.126	20.132	99.47
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.64414	.25652	.24999	9.6986	183.64	10.254	-7.4523	.23729
Stddev	.31911	.33020	1.6852	3.4128	43.81	1.608	21.900	.06551
%RSD	49.540	128.72	674.08	35.189	23.860	15.680	293.86	27.608
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6.5257	204.68	-.44506	.26265	4.466	.31163	2.8536	4.4408
Stddev	.3180	15.01	.82441	.67597	1.828	1.9796	1.0779	.5824
%RSD	4.8736	7.3321	185.24	257.37	40.94	635.23	37.771	13.115
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/24/2019 12:01:40 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	4.6162	2.0228	.09343	13.722	-.76533
Stddev	.3354	7.2822	.12615	6.984	6.9530
%RSD	7.2655	360.02	135.03	50.896	908.50
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3269.5	2548.0	27472.	3803.4
Stddev	12.0	14.1	84.	7.4
%RSD	.36613	.55330	.30558	.19330

Sample Name: 240-106892-a-6b@1000 Acquired: 1/24/2019 12:06:07 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.48803	442.55	2.9955	-.35298	.37706	-.01577	10.885	-.1933
Stddev	.56785	27.52	.3430	.46792	.08151	.19716	2.211	.0771
%RSD	116.36	6.2178	11.449	132.56	21.617	1250.3	20.308	39.88
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.15712	2558.6	.10269	.71343	9150.9	8.9656	-27.695	.41269
Stddev	.15509	11.6	1.0312	1.6612	91.0	.8942	9.632	.04871
%RSD	98.707	.45163	1004.2	232.85	.99498	9.9733	34.779	11.804
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	40.519	148.12	-.06087	-.82352	3.749	1.4238	-.26643	.68139
Stddev	.508	13.24	.52800	.59192	1.937	2.6694	.52658	.28269
%RSD	1.2536	8.9382	867.38	71.876	51.67	187.49	197.64	41.488
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-106892-a-6b@1000 Acquired: 1/24/2019 12:06:07 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	3.6716	-1.3945	1.7901	19.942	-.03094
Stddev	2.2070	4.7076	.0587	10.968	.51923
%RSD	60.110	337.58	3.2819	55.000	1678.1
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3416.6	2632.0	28080.	3906.4
Stddev	37.4	27.9	42.	37.2
%RSD	1.0952	1.0587	.14889	.95170
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	102.50%	101.29%	102.15%	97.786%
Range				

Sample Name: SD240-106892a6b@5000 Acquired: 1/24/2019 12:10:32 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.22005	83.548	.01556	-2.3086	.30500	.02855	1.6776	-.0117
Stddev	.41673	49.519	1.6589	.1198	.13826	.15363	1.5575	.1914
%RSD	189.39	59.270	10658.	5.1872	45.332	538.08	92.842	1640.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.17237	541.65	-.26394	2.5462	1980.4	9.1983	-39.477	-.22407
Stddev	.04851	2.11	.60259	2.9362	14.9	.3660	22.081	.04590
%RSD	28.146	.39018	228.31	115.32	.75487	3.9790	55.934	20.483
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	7.7585	115.83	-.84664	-1.1697	2.175	-.43740	-.37797	.12105
Stddev	.3657	7.43	.25095	2.2152	1.999	1.2287	.14658	.05410
%RSD	4.7131	6.4161	29.641	189.39	91.94	280.91	38.781	44.692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: SD240-106892a6b@5000 Acquired: 1/24/2019 12:10:32 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	5.2415	3.1493	-.12900	-3.8153	7.1748
Stddev	.5099	7.8753	.15076	11.699	1.7953
%RSD	9.7276	250.07	116.87	306.64	25.022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3338.4	2577.3	28364.	4049.0
Stddev	10.4	15.7	193.	38.0
%RSD	.31020	.61023	.68193	.93966
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	100.15%	99.188%	103.18%	101.36%
Range				

Sample Name: 240-106892a6cms@1000 Acquired: 1/24/2019 12:14:58 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.1537	372.29	6.5664	-1.9017	7.8787	.20926	84.018	.9300
Stddev	.1689	23.77	1.5031	.2424	.1883	.19953	3.689	.1769
%RSD	14.637	6.3858	22.890	12.745	2.3905	95.351	4.3913	19.02
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.38417	2282.0	.58444	5.1374	8350.6	11.431	31.071	1.1952
Stddev	.19448	5.4	1.7376	2.5556	44.1	4.076	24.142	.0705
%RSD	50.622	.23695	297.31	49.745	.52782	35.660	77.701	5.9012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	36.146	170.98	.64217	4.5462	2.068	.79113	1.8287	.80449
Stddev	.347	11.82	.33671	2.8955	.893	1.9212	1.0129	.23130
%RSD	.95919	6.9106	52.433	63.690	43.20	242.84	55.389	28.751
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-106892a6cms@1000 Acquired: 1/24/2019 12:14:58 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	5.8352	-1.1144	2.3519	29.986	7.2563
Stddev	1.3653	9.3476	.0886	9.683	1.3719
%RSD	23.398	838.77	3.7677	32.293	18.906
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3360.8	2586.1	27761.	3757.0
Stddev	9.0	11.4	64.	7.3
%RSD	.26678	.44141	.22898	.19473
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	100.82%	99.528%	100.99%	94.046%
Range				

Sample Name: 240106892a6dmsd@1000 Acquired: 1/24/2019 12:19:23 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.99046	373.48	7.1184	-2.3820	7.4301	.24151	68.218	.9167
Stddev	.39311	15.18	.5190	.2618	.2701	.10307	3.809	.0344
%RSD	39.690	4.0644	7.2915	10.989	3.6345	42.678	5.5840	3.749
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.47984	2255.2	.87270	.80407	8174.6	8.6569	45.275	.88337
Stddev	.17752	4.2	.56166	.72489	45.0	.6840	3.905	.05704
%RSD	36.995	.18567	64.358	90.152	.55069	7.9012	8.6250	6.4573
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	35.832	139.80	1.0530	3.5689	1.890	1.7882	1.7777	.10213
Stddev	.368	9.49	.3879	1.4712	1.296	.9011	.9941	.27983
%RSD	1.0272	6.7860	36.836	41.223	68.57	50.390	55.918	273.99
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240106892a6dmsd@1000 Acquired: 1/24/2019 12:19:23 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	7.3064	.50980	2.0468	12.868	5.7042
Stddev	1.3379	4.5220	.1124	8.636	3.4361
%RSD	18.311	887.02	5.4907	67.110	60.238
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3487.7	2677.4	28732.	3927.8
Stddev	1.7	2.9	113.	6.8
%RSD	.04780	.10710	.39392	.17339
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	104.63%	103.04%	104.52%	98.323%
Range				

Sample Name: 240-106892-a-11b@100 Acquired: 1/24/2019 12:23:49 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.07625	10985.	2.3135	2.6863	.61058	.34413	18.557	-.2101
Stddev	.61815	89.	.9395	.5686	.20811	.14851	1.831	.1488
%RSD	810.73	.81178	40.610	21.167	34.084	43.156	9.8645	70.83
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.37536	1819.0	-.93265	3.1450	82861.	6.1722	-12.635	-.19622
Stddev	.29711	4.0	1.4155	1.4841	593.	4.4844	16.619	.05256
%RSD	79.153	.22130	151.77	47.189	.71562	72.656	131.53	26.784
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	160.53	878.00	-.08829	-1.6688	-.7062	.53531	-.14622	-.45338
Stddev	2.02	.53	.67387	2.1602	3.630	.26980	.56263	.42909
%RSD	1.2598	.06082	763.23	129.44	514.1	50.400	384.78	94.641
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-106892-a-11b@100 Acquired: 1/24/2019 12:23:49 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	4.7774	5.3679	-.60986	33.960	2.3767
Stddev	1.0735	5.2942	.16255	8.940	6.0969
%RSD	22.471	98.626	26.654	26.325	256.52
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3336.6	2564.8	28205.	3978.4
Stddev	4.5	3.8	174.	56.5
%RSD	.13554	.14782	.61579	1.4209
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	100.10%	98.708%	102.60%	99.590%
Range				

Sample Name: 240-106892-a-14-b@10 Acquired: 1/24/2019 12:28:12 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.59812	48784.	3.6967	28.781	.70591	.15749
Stddev	.59609	123.	3.5089	.229	.49635	.11542
%RSD	99.660	.25137	94.919	.79492	70.313	73.290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	113.47	-.4493	.00628	1837.1	-3.4952	1.3353
Stddev	4.60	.0639	.21430	2.8	1.7211	2.9938
%RSD	4.0535	14.21	3410.4	.15041	49.241	224.20
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 703240.	11.707	-36.801	-.34092	111.33	5928.4
Stddev	1531.	1.813	32.120	.10193	.72	39.1
%RSD	.21766	15.489	87.282	29.900	.64241	.66012
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	100000.					
Low Limit	-500000.					

Sample Name: 240-106892-a-14-b@10 Acquired: 1/24/2019 12:28:12 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.13551	-2.6593	4.399	.33132	1.0688	-.03989
Stddev	.36469	1.1345	2.142	.62741	.5876	.22225
%RSD	269.13	42.662	48.69	189.37	54.975	557.09
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	5.2457	4.4491	-.93197	220.14	6.5656
Stddev	.9801	1.3767	.05487	8.02	2.4995
%RSD	18.685	30.942	5.8872	3.6445	38.069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3089.0	2411.2	26675.	3644.0
Stddev	43.9	36.1	48.	85.0
%RSD	1.4206	1.4982	.17836	2.3338
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	92.669%	92.796%	97.036%	91.219%
Range				

Sample Name: 240-107233-a-2-a Acquired: 1/24/2019 12:32:36 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.58589	182.78	4.8224	86.257	242.26	.02265	199750.
Stddev	.23998	5.57	2.3202	.615	.15	.05358	555.
%RSD	40.961	3.0482	48.114	.71278	.06397	236.56	.27799
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.2039	-.21215	2.8017	12.678	2021.7	6390.4	3802.3
Stddev	.2898	.39077	.0916	1.542	4.9	36.1	4.8
%RSD	142.1	184.19	3.2683	12.165	.24191	.56461	.12743
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	66416.	155.27	6.4151	92903.	.17460	-2.5356	1.947
Stddev	214.	.25	.4201	132.	.68324	.4233	1.871
%RSD	.32243	.16009	6.5480	.14239	391.31	16.693	96.11
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-107233-a-2-a Acquired: 1/24/2019 12:32:36 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-2.3423	.99603	.34388	7.5042	1.8335	157.85	10115.
Stddev	1.3032	.79729	.15187	.9396	6.9767	.78	57.
%RSD	55.636	80.047	44.165	12.521	380.51	.49497	.56530
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	418.45
Stddev	4.56
%RSD	1.0888
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3133.8	2405.8	26828.	3554.2
Stddev	21.1	18.1	70.	23.5
%RSD	.67382	.75367	.26025	.66252
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	94.014%	92.589%	97.595%	88.971%
Range				

Sample Name: 240-107233-a-3-a Acquired: 1/24/2019 12:36:56 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.90755	270.50	4.3648	82.525	239.44	.43679	190710.
Stddev	.37158	4.62	.8916	.569	.96	.12226	671.
%RSD	40.943	1.7072	20.427	.68962	.40300	27.992	.35170
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.1199	.40623	2.4786	16.299	2163.9	5809.5	3404.9
Stddev	.0591	.42786	.5165	.518	8.7	66.7	8.7
%RSD	49.28	105.32	20.839	3.1773	.40002	1.1482	.25563
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	61512.	110.91	5.2207	86139.	.37344	-2.1384	-.0671
Stddev	386.	.49	.5180	320.	.18489	2.9928	3.162
%RSD	.62785	.44562	9.9218	.37171	49.511	139.95	4716.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-107233-a-3-a Acquired: 1/24/2019 12:36:56 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.33778	1.2022	.78043	8.4280	.29819	198.12	7599.5
Stddev	.64711	1.0710	.35804	2.1907	6.6433	.22	829.4
%RSD	191.57	89.090	45.877	25.993	2227.9	.11308	10.914
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	383.78
Stddev	15.18
%RSD	3.9543
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3032.1	2323.2	25456.	3293.8
Stddev	41.9	35.1	154.	17.6
%RSD	1.3821	1.5123	.60609	.53548
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	90.962%	89.411%	92.604%	82.453%
Range				

Sample Name: 240-107233-a-4-a Acquired: 1/24/2019 12:41:18 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.86373	201.14	3.9509	62.382	248.56	.32638	188950.
Stddev	.35393	44.70	2.2452	.287	.68	.28318	667.
%RSD	40.977	22.225	56.827	.46041	.27358	86.764	.35299
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.2504	.02067	2.1406	13.404	2071.9	5774.8	3507.8
Stddev	.2032	.18610	.3943	.668	14.8	42.1	16.5
%RSD	81.12	900.27	18.420	4.9841	.71293	.72948	.46993
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	63600.	114.50	4.7578	88944.	.66940	.38508	4.152
Stddev	217.	.47	.2927	302.	.42488	1.6701	2.422
%RSD	.34188	.41002	6.1522	.33935	63.472	433.71	58.35
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-107233-a-4-a Acquired: 1/24/2019 12:41:18 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.48157	1.3725	.62282	8.2100	1.1436	144.67	10124.
Stddev	3.0666	.5620	.07115	.1557	6.3626	1.37	32.
%RSD	636.79	40.950	11.424	1.8966	556.38	.94393	.31872
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	424.05
Stddev	3.61
%RSD	.85107
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3044.6	2342.1	25177.	3256.4
Stddev	16.7	13.0	49.	32.0
%RSD	.54864	.55636	.19286	.98373
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	91.337%	90.137%	91.588%	81.515%
Range				

Sample Name: 240-106998-a-4-a Acquired: 1/24/2019 12:45:39 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.07899	1349.2	8.3683	85.296	328.23	.12853	199360.
Stddev	.33653	27.8	1.0090	.619	1.51	.10724	1301.
%RSD	426.04	2.0618	12.057	.72533	.46067	83.442	.65263
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.3492	.00550	11.216	75.054	11597.	9716.4	6422.2
Stddev	.0555	.29143	.174	1.475	44.	83.5	20.1
%RSD	15.90	5299.4	1.5509	1.9651	.38342	.85952	.31310
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	106190.	99.651	4.2692	144920.	4.4599	1.7504	-.1327
Stddev	442.	.019	.0968	709.	.5409	1.3320	1.173
%RSD	.41603	.01951	2.2675	.48911	12.127	76.097	884.0
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-106998-a-4-a Acquired: 1/24/2019 12:45:39 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-2.6084	3.1986	2.1655	7.3170	-.49024	1671.4	12743.
Stddev	1.8337	1.0212	.6270	2.2955	2.5724	15.3	56.
%RSD	70.298	31.927	28.953	31.373	524.73	.91414	.43731
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	682.28
Stddev	3.12
%RSD	.45692
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3073.8	2370.9	25642.	3358.8
Stddev	12.7	12.4	91.	29.9
%RSD	.41371	.52448	.35481	.88893
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	92.213%	91.246%	93.278%	84.079%
Range				

Sample Name: CCV-3995455 Acquired: 1/24/2019 12:50:00 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1019.6	26388.	506.20	4961.8	1971.6	2043.1	52362.	508.6
Stddev	1.1	32.	2.98	14.3	4.8	6.3	169.	2.2
%RSD	.10610	.12169	.58966	.28837	.24180	.30693	.32369	.4315
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1963.1	1998.2	1973.9	25425.	51708.	5153.7	52824.	1981.9
Stddev	8.8	2.0	1.5	33.	102.	9.6	58.	1.6
%RSD	.44881	.10102	.07419	.13009	.19820	.18690	.10976	.08231
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2004.7	51416.	1976.0	499.19	502.5	508.26	4999.1	5054.4
Stddev	11.9	105.	8.6	2.40	2.5	1.44	20.4	3.5
%RSD	.59477	.20465	.43676	.47997	.4892	.28355	.40851	.06997
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3995455 Acquired: 1/24/2019 12:50:00 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	994.10	2013.2	1998.2	5358.3	5104.7
Stddev	2.18	11.5	6.3	73.9	17.8
%RSD	.21880	.57105	.31339	1.3795	.34902
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2909.8	2247.4	24390.	3201.1
Stddev	3.4	3.5	67.	14.2
%RSD	.11737	.15579	.27295	.44272

Sample Name: CCB Acquired: 1/24/2019 12:54:02 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.94375	26.778	-1.1732	3.2016	1.2215	.26747	15.996	-.2418
Stddev	.55705	39.619	1.6940	1.4756	.1385	.29248	2.329	.2936
%RSD	59.025	147.95	144.39	46.090	11.338	109.35	14.563	121.4
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.14774	.46306	-.46028	9.7275	324.51	9.0248	-19.400	.41008
Stddev	.23657	.34951	.12586	3.5197	24.41	3.2547	19.499	.09597
%RSD	160.13	75.478	27.345	36.183	7.5233	36.064	100.51	23.403
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6.4212	218.73	-.18058	-.24639	1.105	-.28464	4.2883	4.9779
Stddev	.4809	17.59	1.2816	2.2387	.268	1.9487	.6105	.3393
%RSD	7.4899	8.0412	709.73	908.58	24.29	684.63	14.237	6.8165
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/24/2019 12:54:02 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	2.7647	2.7408	.00238	20.982	6.1980
Stddev	1.5417	5.8789	.04400	8.201	1.0146
%RSD	55.763	214.50	1849.7	39.087	16.370
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2924.6	2268.4	24582.	3224.5
Stddev	16.3	13.0	59.	11.5
%RSD	.55893	.57260	.24007	.35606

Sample Name: 240-106998-a-4-d Acquired: 1/24/2019 12:58:29 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.0422	1324.6	9.7991	93.837	231.67	.09611	207690.
Stddev	.4729	25.5	2.0176	.966	.55	.05242	400.
%RSD	45.374	1.9247	20.590	1.0295	.23746	54.545	.19244
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.4757	-.00003	8.9947	71.417	12605.	10060.	6697.3
Stddev	.0036	.38096	1.0361	.265	29.	63.	5.3
%RSD	.7578	1201900.	11.519	.37080	.22805	.62138	.07892
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	110650.	93.652	4.8494	151290.	4.5141	.30274	-.0884
Stddev	258.	.197	.2743	106.	.9736	1.6719	2.288
%RSD	.23336	.21031	5.6572	.07031	21.569	552.27	2589.
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: 240-106998-a-4-d Acquired: 1/24/2019 12:58:29 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.0276	2.2069	2.7315	7.2020	-2.9991	1722.5	13121.
Stddev	1.5265	.7882	.2378	.3127	3.1671	12.4	94.
%RSD	148.55	35.715	8.7066	4.3425	105.60	.72210	.72018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	705.67
Stddev	16.67
%RSD	2.3622
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3065.4	2362.3	25357.	3285.0
Stddev	17.7	15.4	149.	9.7
%RSD	.57870	.65249	.58931	.29406
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	91.963%	90.915%	92.244%	82.232%
Range				

Sample Name: DNUCCVL-4004588 Acquired: 1/24/2019 13:02:50 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	8.7590	F 270.70	14.708	92.926	193.13	5.1275	5179.5
Stddev	.6012	53.23	2.396	.708	.47	.2272	50.5
%RSD	6.8634	19.662	16.291	.76217	.24563	4.4308	.97462
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		200.00					
Range		30.500%					

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.517	9.1696	9.8913	22.470	209.37	5198.6	59.322
Stddev	.071	.3878	.5044	1.118	4.73	34.0	4.009
%RSD	1.578	4.2294	5.0994	4.9746	2.2585	.65430	6.7583
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5244.5	14.688	37.902	5241.6	38.784	7.2596	18.73
Stddev	38.8	.079	.232	12.0	.552	2.4227	2.92
%RSD	.74077	.53639	.61139	.22945	1.4240	33.372	15.58
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Sample Name: DNUCCVL-4004588 Acquired: 1/24/2019 13:02:50 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	18.199	97.917	50.934	18.787	46.688	48.308	525.60
Stddev	1.624	.881	.293	3.379	2.311	.460	24.75
%RSD	8.9250	.89973	.57491	17.986	4.9507	.95186	4.7100
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	46.037
Stddev	3.193
%RSD	6.9349
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3019.2	2320.9	24797.	3306.2
Stddev	4.9	2.9	44.	6.8
%RSD	.16279	.12593	.17768	.20705

Sample Name: CCVL-4004588 Acquired: 1/24/2019 13:09:01 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	8.8934	218.62	13.958	92.082	192.15	4.9794	5087.2	4.875
Stddev	.6670	27.64	1.249	.948	.25	.1321	42.5	.080
%RSD	7.5002	12.646	8.9501	1.0298	.13059	2.6533	.83593	1.638
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.2615	9.9894	22.323	205.66	5081.2	59.013	5198.2	14.677
Stddev	.4114	.5190	.726	4.31	55.1	4.781	29.4	.104
%RSD	4.4426	5.1958	3.2536	2.0947	1.0842	8.1020	.56640	.70849
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	38.057	5092.7	38.641	8.1710	20.63	17.838	98.208	49.806
Stddev	.422	9.2	.406	1.0465	3.45	1.868	.654	.206
%RSD	1.1099	.18058	1.0497	12.808	16.72	10.471	.66613	.41424
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCVL-4004588 Acquired: 1/24/2019 13:09:01 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	19.956	49.206	48.244	512.82	41.828
Stddev	1.643	3.922	.173	10.76	5.042
%RSD	8.2326	7.9707	.35891	2.0977	12.054
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3128.4	2409.3	25684.	3395.0
Stddev	5.8	4.3	71.	4.0
%RSD	.18661	.17815	.27783	.11845

Sample Name: EMPTYCUP Acquired: 1/24/2019 13:13:24 Type: Blank
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.63003	-21.860	-1.1489	-5.5402	.06938	-.26022	-9.8679	-.1558
Stddev	.45156	32.599	1.8356	.3647	.73424	.22846	12.455	.0278
%RSD	71.672	149.12	159.78	6.5835	1058.3	87.793	126.21	17.84
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.49815	1.1012	2.9009	-1.0196	40.769	-.68934	-19.322	-.65145
Stddev	.14148	1.3121	.3363	1.0117	20.768	4.1194	11.640	.03050
%RSD	28.401	119.15	11.594	99.226	50.940	597.58	60.241	4.6826
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.7426	92.236	-.74948	-.57605	1.314	-1.5546	-.64143	-.65973
Stddev	.7033	25.052	.39461	.99008	.378	.5972	.13676	.10265
%RSD	40.360	27.160	52.651	171.87	28.81	38.416	21.321	15.560
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: EMPTYCUP Acquired: 1/24/2019 13:13:24 Type: Blank
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	7.0488	3.0401	-1.2069	-20.516	4.4396
Stddev	.4533	1.2982	.0326	10.211	4.5227
%RSD	6.4310	42.704	2.6993	49.769	101.87
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4467.3	3398.5	38454.	5337.7
Stddev	74.1	56.9	346.	653.1
%RSD	1.6591	1.6741	.89987	12.236

Sample Name: CCV-3995455 Acquired: 1/24/2019 13:21:44 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	999.10	25422.	496.49	4885.0	1918.8	1974.7	50312.	499.5
Stddev	2.51	17.	4.82	10.3	5.3	8.1	233.	.3
%RSD	.25091	.06747	.96992	.21121	.27875	.40809	.46213	.0519
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1941.1	1956.5	1930.2	24753.	49960.	5005.9	51103.	1943.2
Stddev	2.7	7.1	6.7	119.	225.	17.4	272.	.7
%RSD	.14075	.36219	.34565	.48234	.44951	.34785	.53318	.03821
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1981.6	50009.	1953.9	489.47	491.6	501.41	4949.2	4958.9
Stddev	3.2	190.	1.8	4.33	1.0	3.71	10.9	8.0
%RSD	.16344	.37923	.09025	.88475	.2013	.73895	.21967	.16042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3995455 Acquired: 1/24/2019 13:21:44 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	988.63	1949.8	1977.6	5156.0	4932.4
Stddev	10.60	13.1	1.6	73.4	9.9
%RSD	1.0719	.67365	.07850	1.4240	.20012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3018.1	2338.4	24975.	3273.6
Stddev	8.1	2.7	64.	23.8
%RSD	.26967	.11705	.25673	.72670

Sample Name: CCB Acquired: 1/24/2019 13:25:43 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.2411	64.280	.76319	3.3208	.98496	.32110	-.45020	-.2992
Stddev	.1669	67.626	1.7332	1.1203	.12679	.07694	3.9721	.0686
%RSD	13.450	105.21	227.09	33.736	12.872	23.961	882.31	22.93
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.24598	-.06683	-1.7488	10.053	191.16	4.2168	20.939	.29687
Stddev	.41376	.23337	.7419	2.465	40.09	4.4098	12.079	.09079
%RSD	168.21	349.22	42.420	24.524	20.973	104.58	57.685	30.582
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6.8607	131.70	.36452	-1.8776	1.583	-2.3969	3.4604	5.2225
Stddev	.5719	6.97	1.3904	.4033	3.053	1.2363	.8106	.5872
%RSD	8.3364	5.2928	381.44	21.481	192.9	51.579	23.424	11.243
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/24/2019 13:25:43 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.2065	-.95273	.11397	27.071	-3.6244
Stddev	1.2518	6.7157	.03702	3.423	12.515
%RSD	103.76	704.89	32.479	12.646	345.29
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2960.7	2298.4	24880.	3344.3
Stddev	7.2	3.9	158.	3.4
%RSD	.24290	.17099	.63342	.10135

Sample Name: 280-119275-b-1-j@10 Acquired: 1/24/2019 13:44:31 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.5172	60.372	6.5797	129.63	9.0653	.26372
Stddev	.4094	73.275	1.0312	.56	.3341	.32442
%RSD	26.983	121.37	15.672	.43415	3.6853	123.02
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	7160.4	-.4460	.36933	2.1776	.04355	285.63
Stddev	28.4	.1998	.36222	.5130	1.3028	4.59
%RSD	.39696	44.80	98.073	23.557	2991.2	1.6061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3139.8	33.375	1340.1	39.093	1.8179	F 1094700.
Stddev	142.2	4.627	20.2	.110	.5673	19044.
%RSD	4.5288	13.863	1.5091	.28026	31.205	1.7397
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 280-119275-b-1-j@10 Acquired: 1/24/2019 13:44:31 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	3.0674	-.79598	-.6877	2.4148	5.0733	2.3926
Stddev	.6617	.67924	2.483	1.7025	.4431	.1387
%RSD	21.574	85.334	361.1	70.504	8.7350	5.7986
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	6.7847	-2.8673	27.766	55.384	39.823
Stddev	2.7376	5.5221	.264	7.264	6.321
%RSD	40.350	192.59	.95093	13.116	15.872
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3104.6	2451.6	25271.	3198.5
Stddev	43.1	35.3	113.	33.4
%RSD	1.3877	1.4413	.44716	1.0454
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	93.139%	94.352%	91.929%	80.067%
Range				

Sample Name: PDS 280-119276a3p@10 Acquired: 1/24/2019 13:53:12 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	46.145	2562.0	2005.1	1977.5	2472.9	52.855	63479.
Stddev	1.116	53.4	37.8	32.6	1.6	.363	154.
%RSD	2.4183	2.0848	1.8854	1.6504	.06634	.68687	.24226
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	52.47	503.32	214.42	285.41	21168.	53765.	1070.9
Stddev	1.05	9.11	.97	.74	58.	61.	2.9
%RSD	1.998	1.8096	.45295	.26045	.27241	.11283	.26911
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	54981.	662.22	1018.1	192090.	510.55	3365.2	483.7
Stddev	398.	1.78	21.4	564.	9.08	58.7	13.0
%RSD	.72343	.26822	2.1019	.29338	1.7794	1.7436	2.696
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Sample Name: PDS 280-119276a3p@10 Acquired: 1/24/2019 13:53:12 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2104.1	2084.2	1032.1	2056.7	526.98	4157.3	1321.0
Stddev	36.5	30.6	1.7	26.5	6.49	73.7	10.3
%RSD	1.7343	1.4666	.16282	1.2884	1.2324	1.7739	.77602
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							
Low Limit							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1067.5
Stddev	14.1
%RSD	1.3191
Check ?	Chk Pass
High Limit	
Low Limit	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2971.5	2316.5	25062.	3340.4
Stddev	7.1	11.8	145.	6.5
%RSD	.23895	.50855	.57927	.19323
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	89.145%	89.152%	91.169%	83.619%
Range				

Sample Name: CCVL-4004588 Acquired: 1/24/2019 13:57:14 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	8.9699	260.23	F 20.627	93.522	190.73	5.0432	5056.1
Stddev	.5835	44.03	.980	.775	1.35	.1204	9.1
%RSD	6.5048	16.921	4.7514	.82889	.70607	2.3865	.17945
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			15.000				
Range			30.500%				

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.665	8.6460	10.077	23.954	209.58	5117.8	60.553
Stddev	.358	.1412	.607	1.965	1.26	16.0	2.462
%RSD	7.667	1.6334	6.0273	8.2016	.60165	.31353	4.0666
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5170.6	14.422	42.678	5174.3	38.486	10.322	F 30.43
Stddev	39.8	.126	.600	50.5	.509	1.678	1.94
%RSD	.76919	.87545	1.4047	.97561	1.3217	16.256	6.383
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value							20.00
Range							30.50%

Sample Name: CCVL-4004588 Acquired: 1/24/2019 13:57:14 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	26.081	98.752	50.862	22.002	54.751	48.170	504.98
Stddev	2.802	1.065	.639	3.009	4.219	.277	12.44
%RSD	10.745	1.0785	1.2561	13.674	7.7060	.57437	2.4630
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	51.462
Stddev	7.613
%RSD	14.793
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3152.9	2430.5	25715.	3433.9
Stddev	20.8	18.8	48.	13.9
%RSD	.65971	.77333	.18541	.40598

Sample Name: CCV-3995455 Acquired: 1/24/2019 14:01:36 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1013.8	25568.	515.20	5018.7	1956.7	2001.7	50911.	507.7
Stddev	1.2	152.	2.47	6.6	7.7	9.9	264.	.6
%RSD	.11733	.59266	.47864	.13130	.39397	.49569	.51868	.1148
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1976.9	1982.7	1974.4	25168.	50397.	5038.8	51409.	1977.7
Stddev	7.0	5.6	1.9	98.	208.	24.1	277.	1.9
%RSD	.35648	.28221	.09644	.38756	.41221	.47794	.53901	.09463
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2013.4	50104.	1985.9	500.72	508.6	520.90	5034.8	5052.3
Stddev	5.5	213.	4.4	1.84	3.6	2.27	11.9	5.9
%RSD	.27408	.42611	.22031	.36718	.7026	.43614	.23647	.11728
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3995455 Acquired: 1/24/2019 14:01:36 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1007.0	1968.3	2024.4	5196.3	4979.0
Stddev	4.0	15.6	2.6	42.8	11.7
%RSD	.39797	.79067	.12987	.82326	.23429
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3061.2	2376.7	26356.	3582.1
Stddev	22.5	18.3	67.	16.1
%RSD	.73472	.77057	.25396	.44807

Sample Name: CCB Acquired: 1/24/2019 14:05:38 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.77930	18.890	1.2761	3.5355	1.2105	.31216	19.442	-.1758
Stddev	.55668	29.265	.6033	1.4396	.0768	.13466	4.395	.1146
%RSD	71.433	154.92	47.277	40.719	6.3432	43.139	22.607	65.19
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.30652	.03119	-.60537	10.176	188.09	6.7386	-4.7423	.47797
Stddev	.21434	.23087	.89437	3.625	19.47	1.3059	25.572	.08265
%RSD	69.927	740.26	147.74	35.622	10.350	19.379	539.24	17.291
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	6.6182	211.72	.25770	-1.4805	1.681	-1.9800	3.6201	4.7326
Stddev	.3777	19.62	.63785	1.5837	1.873	1.5352	.5514	.4635
%RSD	5.7075	9.2669	247.51	106.97	111.4	77.536	15.230	9.7938
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/24/2019 14:05:38 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.6157	2.3017	1.0214	19.117	-1.4207
Stddev	2.1775	5.6361	.0645	6.957	7.0611
%RSD	134.77	244.87	6.3172	36.391	497.04
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3004.4	2342.1	24892.	3312.8
Stddev	7.4	9.0	24.	15.7
%RSD	.24510	.38368	.09474	.47403

Sample Name: CHECK STD Acquired: 1/24/2019 14:22:00 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F -.59650	2144.9	2018.1	968.07	1967.7	49.875	F -20.646
Stddev	.26123	57.8	6.6	3.43	2.4	.312	1.145
%RSD	43.794	2.6927	.32949	.35477	.12439	.62552	5.5458
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value	50.000						50000.
Range	-15.500%						-15.500%

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	49.94	507.14	204.74	237.63	1010.7	F 140.94	1007.0
Stddev	.39	1.21	.43	.72	8.3	62.43	1.4
%RSD	.7842	.23893	.21140	.30145	.82143	44.295	.13733
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						50000.	
Range						-15.500%	

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F -18.382	514.21	F 792.99	F 56.849	519.06	498.25	F 415.6
Stddev	26.124	.84	24.07	12.043	1.21	4.36	5.2
%RSD	142.12	.16398	3.0354	21.183	.23373	.87444	1.239
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value	50000.		1000.0	50000.			500.0
Range	-15.500%		-15.500%	-15.500%			-15.50%

Sample Name: CHECK STD Acquired: 1/24/2019 14:22:00 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2248.5	F 1581.5	955.83	1960.3	494.01	528.85	1042.7
Stddev	12.3	38.2	3.68	4.2	10.42	.88	11.3
%RSD	.54765	2.4158	.38523	.21577	2.1088	.16696	1.0811
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		2000.0					
Range		-15.500%					

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1010.4
Stddev	6.1
%RSD	.60342
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3228.9	2504.8	26249.	3492.9
Stddev	8.1	11.0	95.	40.0
%RSD	.24955	.43771	.36354	1.1458

Sample Name: 240-107208-b-1-b Acquired: 1/24/2019 14:26:06 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.39279	2061.5	24.457	254.17	73.143	.19993
Stddev	.32827	62.0	.954	2.04	.378	.09149
%RSD	83.573	3.0061	3.9008	.80384	.51676	45.761
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	8350.6	-.1455	27.272	59.499	870.41	48915.
Stddev	39.9	.2801	.278	.578	.39	260.
%RSD	.47799	192.5	1.0196	.97111	.04529	.53116
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2479.5	39.469	1377.8	299.78	53.194	F 1170300.
Stddev	165.8	6.634	9.0	.15	2.261	28225.
%RSD	6.6877	16.808	.65522	.04867	4.2501	2.4117
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-107208-b-1-b Acquired: 1/24/2019 14:26:06 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	296.46	F 30875.	30.62	17.279	185.18	23.343
Stddev	2.88	216.	4.54	1.025	25.47	.467
%RSD	.97276	.70101	14.84	5.9301	13.754	1.9998
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		15000.				
Low Limit		-500000.				

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	2.2253	2.4987	1065.1	977.77	64.791
Stddev	1.5734	4.0813	7.8	.89	2.371
%RSD	70.705	163.33	.72811	.09094	3.6588
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3082.1	2456.5	27484.	3729.6
Stddev	35.0	30.5	169.	28.2
%RSD	1.1350	1.2427	.61594	.75547
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	92.464%	94.538%	99.981%	93.362%
Range				

Sample Name: 240-107194-d-2-b Acquired: 1/24/2019 14:30:29 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.32558	378.00	6.4177	41.874	48.013	2.5006
Stddev	.25107	10.04	1.2597	.502	.334	.0719
%RSD	77.114	2.6547	19.629	1.1992	.69563	2.8745
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	5734.5	-.2476	14.253	2.4526	7.6353	55.656
Stddev	10.1	.2025	.296	.4388	.7384	2.006
%RSD	.17660	81.79	2.0764	17.892	9.6710	3.6042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2659.2	50.632	2462.2	54.463	6.2622	F 1059400.
Stddev	110.5	3.682	38.7	.069	.2326	22503.
%RSD	4.1566	7.2726	1.5734	.12744	3.7142	2.1241
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-107194-d-2-b Acquired: 1/24/2019 14:30:29 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	26.669	2.6639	2.500	1.6355	17.362	4.5240
Stddev	.687	1.4954	3.382	2.3327	1.028	.6206
%RSD	2.5764	56.133	135.3	142.62	5.9204	13.717
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	2.1325	1.5188	49.421	579.86	20.692
Stddev	1.0486	2.1209	.583	18.28	7.611
%RSD	49.173	139.64	1.1789	3.1533	36.785
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2966.1	2500.5	28065.	3648.3
Stddev	117.1	100.3	151.	56.7
%RSD	3.9471	4.0128	.53888	1.5538
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	88.983%	96.232%	102.09%	91.327%
Range				

Sample Name: 240-107141-e-2-b Acquired: 1/24/2019 14:35:00 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.28795	50.904	3.4103	207.93	54.350	.16121	65482.	-.0283
Stddev	.58428	18.989	2.8848	1.69	.259	.06255	138.	.1973
%RSD	202.91	37.302	84.590	.81285	.47637	38.800	.21109	697.2
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.30028	3.2808	4.2465	193.21	1808.0	23.591	27121.	.44452
Stddev	.15661	.7196	.8017	2.78	6.7	1.307	180.	.06881
%RSD	52.154	21.933	18.878	1.4408	.36876	5.5410	.66276	15.481
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.6201	71537.	.25282	-.08567	2.915	1.8004	6.3213	1.0550
Stddev	.7173	196.	.64448	3.2363	1.605	.8413	1.2238	.6331
%RSD	7.4561	.27384	254.91	3777.6	55.05	46.728	19.360	60.005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: 240-107141-e-2-b Acquired: 1/24/2019 14:35:00 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1.2047	5.4101	2.4062	6396.0	350.85
Stddev	1.0651	2.0908	.1008	209.3	8.08
%RSD	88.413	38.647	4.1906	3.2729	2.3019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3231.5	2490.3	27118.	3570.4
Stddev	11.7	11.0	69.	14.6
%RSD	.36147	.43995	.25452	.40845
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	96.944%	95.840%	98.647%	89.377%
Range				

Sample Name: CHECKSTD Acquired: 1/25/2019 7:05:35 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F -1.0648	2121.8	1961.8	956.77	1957.1	47.309	F -16.496
Stddev	.4105	51.1	4.0	1.96	6.6	.267	4.964
%RSD	38.555	2.4101	.20148	.20479	.33619	.56397	30.091
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value	50.000						50000.
Range	-15.500%						-15.500%

Elem	Cd2288	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	52.79	498.66	215.67	237.05	1050.5	F 193.68	1044.6
Stddev	.18	3.16	1.40	1.09	3.3	75.88	3.2
%RSD	.3467	.63444	.65115	.45825	.31079	39.175	.30877
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value						50000.	
Range						-15.500%	

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2175
IS Ref	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F -54.446	502.97	F 808.74	F -54.155	528.94	523.35	F 408.1
Stddev	20.091	1.94	27.42	9.259	4.17	2.03	7.0
%RSD	36.902	.38584	3.3909	17.097	.78802	.38737	1.724
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value	50000.		1000.0	50000.			500.0
Range	-15.500%		-15.500%	-15.500%			-15.50%

Sample Name: CHECKSTD Acquired: 1/25/2019 7:05:35 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Se1960	Sn1899	Ti3372	Tl1908	V_2908	Zn2062	Si2516
IS Ref	(Y_2243)	(In2306)	(Y_3600)	(In2306)	(Y_3710)	(In2306)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2282.7	F 1681.6	955.83	2086.7	509.06	544.85	1085.9
Stddev	5.2	36.7	.98	11.0	7.24	3.30	44.4
%RSD	.22852	2.1808	.10296	.52598	1.4214	.60555	4.0882
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		2000.0					
Range		-15.500%					

Elem	Sr3464
IS Ref	(Y_3710)
Units	ppb
Avg	1026.5
Stddev	5.6
%RSD	.54595
Check ?	Chk Pass
Value	
Range	

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3107.6	2413.8	24743.	3147.5
Stddev	14.1	8.2	17.	29.0
%RSD	.45295	.34124	.06714	.92167

Sample Name: 240-107219-b-1-d Acquired: 1/25/2019 7:12:35 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-1.5357	42.679	12.220	277.10	476.11	.32381
Stddev	.3776	21.442	1.821	2.28	1.10	.11485
%RSD	24.590	50.240	14.905	.82173	.23095	35.468
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	W 747820.	-.3471	2.6968	2.6177	-2.3504	356.54
Stddev	5085.	.0690	.3548	.1786	1.0492	7.18
%RSD	.67997	19.88	13.155	6.8211	44.641	2.0134
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	720000.					
Low Limit	-500000.					

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	17648.	45.806	20232.	817.89	43.878	F 1285100.
Stddev	124.	4.822	212.	1.95	3.855	30851.
%RSD	.70267	10.526	1.0491	.23832	8.7867	2.4006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit						500000.
Low Limit						-500000.

Sample Name: 240-107219-b-1-d Acquired: 1/25/2019 7:12:35 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	16.049	-1.2966	27.09	6.9530	142.10	6.3847
Stddev	.149	2.0144	7.03	1.6187	1.44	.2215
%RSD	.92846	155.37	25.93	23.281	1.0163	3.4698
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	9.0074	.37316	269.13	2522.0	1159.3
Stddev	.4487	3.6871	2.51	85.8	14.7
%RSD	4.9811	988.08	.93439	3.4012	1.2651
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2790.6	2252.3	24285.	3021.8
Stddev	12.7	12.6	35.	11.9
%RSD	.45566	.56032	.14500	.39478
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	83.717%	86.679%	88.345%	75.644%
Range				

Sample Name: 240-107230-a-1-d Acquired: 1/25/2019 7:17:12 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.30862	22.878	6.1085	561.16	31.982	.22596
Stddev	.56358	47.906	1.0451	3.92	.780	.06914
%RSD	182.61	209.40	17.109	.69784	2.4389	30.601
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Ca3179	Cd2288	Co2286	Cr2677	Cu3273	Fe2599
IS Ref	(Y_3710)	(Y_2243)	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2085.9	-.3448	-.07902	83.847	3.7884	42.771
Stddev	25.0	.1725	.30858	.326	.6600	4.118
%RSD	1.2008	50.03	390.52	.38884	17.421	9.6290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895
IS Ref	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)	(Y_2243)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	F 786100.	59.899	353.10	.16784	22.138	F 826500.
Stddev	24453.	3.293	39.67	.06050	.754	42215.
%RSD	3.1107	5.4971	11.235	36.048	3.4066	5.1077
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
High Limit	500000.					500000.
Low Limit	-500000.					-500000.

Sample Name: 240-107230-a-1-d Acquired: 1/25/2019 7:17:12 Type: Unk
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	4.3193	-1.0735	3.319	.71415	15.430	.78058
Stddev	.1546	2.1816	2.866	1.8728	.808	.08035
%RSD	3.5786	203.23	86.36	262.24	5.2371	10.294
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	10.210	5.2715	5.0614	6772.3	12.672
Stddev	2.478	5.1729	.1583	190.2	7.152
%RSD	24.270	98.129	3.1268	2.8089	56.440
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3397.3	2723.0	29104.	3530.7
Stddev	40.0	31.9	123.	214.7
%RSD	1.1766	1.1715	.42257	6.0811
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	101.92%	104.80%	105.87%	88.383%
Range				

Sample Name: CCVL-4004588 Acquired: 1/25/2019 7:21:46 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.6896	182.15	14.403	87.822	189.58	4.9606	5085.8	4.364
Stddev	.8601	35.23	3.162	.865	.23	.2418	10.8	.158
%RSD	8.8769	19.344	21.955	.98456	.12072	4.8750	.21317	3.626
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	9.0786	10.599	24.390	213.28	5590.5	61.503	5153.1	13.843
Stddev	.6848	.213	1.499	2.16	51.9	2.233	10.0	.037
%RSD	7.5434	2.0096	6.1440	1.0147	.92768	3.6305	.19383	.26969
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	41.677	5467.7	38.005	9.1603	20.97	18.673	103.70	48.900
Stddev	.301	52.6	.396	2.5332	1.65	1.026	1.01	.371
%RSD	.72206	.96120	1.0420	27.654	7.849	5.4945	.97555	.75822
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCVL-4004588 Acquired: 1/25/2019 7:21:46 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	24.806	50.564	48.195	517.62	55.118
Stddev	.789	3.639	.561	8.30	4.510
%RSD	3.1791	7.1958	1.1646	1.6043	8.1826
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3493.9	2696.6	28988.	3834.4
Stddev	17.0	14.5	200.	25.5
%RSD	.48590	.53724	.69060	.66601

Sample Name: CCV-3995455 Acquired: 1/25/2019 7:26:11 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	986.36	24979.	479.01	4848.0	1922.1	1873.9	50935.	485.6
Stddev	2.95	123.	3.61	9.6	8.6	5.4	197.	.7
%RSD	.29956	.49351	.75355	.19882	.44619	.28872	.38682	.1367
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1873.1	2001.6	1935.2	25670.	49933.	5083.1	50849.	1859.6
Stddev	3.8	6.1	2.7	98.	253.	13.9	163.	2.2
%RSD	.20296	.30354	.14107	.38132	.50606	.27377	.32050	.11974
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	2018.4	48925.	1950.7	497.61	483.0	495.52	5012.3	4886.4
Stddev	3.8	183.	3.8	6.33	3.0	5.65	7.5	5.2
%RSD	.18605	.37411	.19620	1.2716	.6243	1.1400	.14935	.10734
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CCV-3995455 Acquired: 1/25/2019 7:26:11 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	1024.5	2029.1	1969.2	5116.3	5008.6
Stddev	2.4	8.3	3.5	110.2	19.9
%RSD	.23667	.40715	.17872	2.1543	.39708
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value					
Range					

Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3416.9	2668.6	28483.	3792.7
Stddev	2.4	5.5	186.	29.3
%RSD	.06955	.20752	.65282	.77255

Sample Name: CCB Acquired: 1/25/2019 7:30:12 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.58320	-13.849	-.27188	-.35170	.25437	.12687	17.378	-.1586
Stddev	.33115	42.986	1.5793	.58676	.23947	.20491	1.645	.0352
%RSD	56.781	310.39	580.87	166.84	94.144	161.52	9.4677	22.18
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.41618	.40444	.41926	6.3682	317.11	10.191	-33.054	-.10604
Stddev	.31616	.26277	.46328	2.6674	18.35	2.305	21.030	.03181
%RSD	75.968	64.971	110.50	41.885	5.7877	22.618	63.622	30.002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	7.7502	195.33	-.38682	-.76341	3.286	2.2573	4.8025	3.3149
Stddev	.6708	1.12	.74837	.60799	.739	3.5904	.2763	.2783
%RSD	8.6547	.57327	193.47	79.642	22.50	159.06	5.7542	8.3964
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 1/25/2019 7:30:12 Type: QC
Method: ICP I9 6010 200.7 Methods(v619) Mode: CONC Corr. Factor: 1.000000
User: analyst Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Tl1908	V_2908	Zn2062	Si2516	Sr3464
IS Ref	(In2306)	(Y_3710)	(In2306)	(Y_3710)	(Y_3710)
Units	ppb	ppb	ppb	ppb	ppb
Avg	5.5643	1.2428	.35057	6.6635	-3.2844
Stddev	1.3791	5.7002	.07745	10.646	4.4190
%RSD	24.785	458.64	22.093	159.77	134.55
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					
Low Limit					

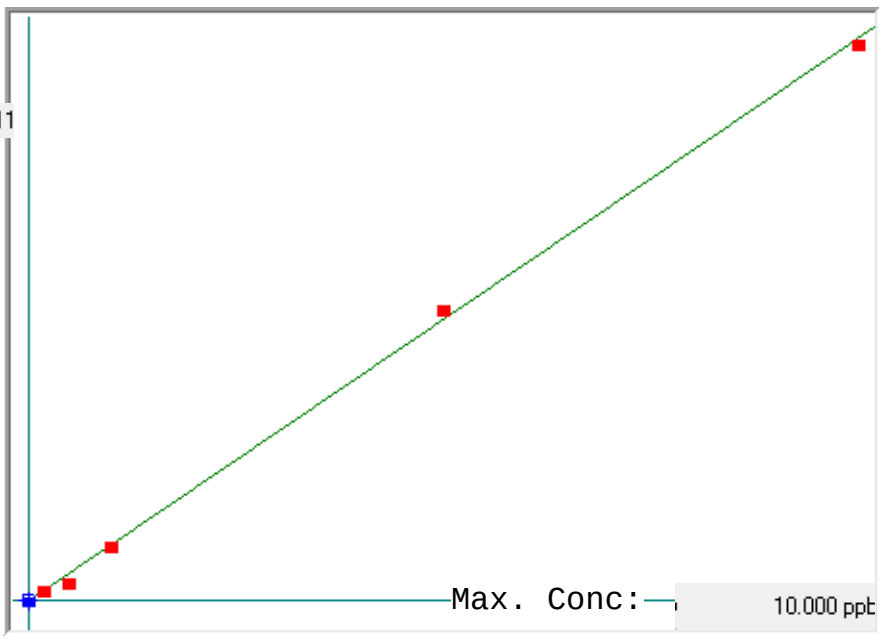
Int. Std.	In2306	Y_2243	Y_3600	Y_3710
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3512.3	2743.3	29003.	3875.8
Stddev	3.4	5.6	43.	3.9
%RSD	.09545	.20469	.14817	.09936

Initial Method

Linear

μ Abs.:

53711



A= 0.0000e+000

B= 1.8386e-004

C= 2.0567e-002

Rho= 0.9995354

Accept= Accepted

Accepted Date=

01/24/19 08:46

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0.0 ppb	0.000	0.021	0.021	4	0.000	4				
0.2 ppb	0.200	0.223	0.023	1099	0.0 %	1099				
0.5 ppb	0.500	0.362	-0.138	1857	0.0 %	1857				
1.0 ppb	1.000	0.990	-0.010	5273	0.0 %	5273				
5.0 ppb	5.000	5.208	0.208	28213	0.0 %	28213				
10.0 ppb	10.000	9.896	-0.104	53711	0.0 %	53711				

Method: Initial Method Operator: Admin Date of Analysis: 24 Jan 2019 07:55:58

Sample ID	Conc.	µ Abs.	Seq ID	Units	Date
0.0 ppb - 1	-	4	1243	ppb	24 Jan 2019 08:11:34
0.2 ppb - 1	-	1099	1244	ppb	24 Jan 2019 08:13:36
0.5 ppb - 1	-	1857	1245	ppb	24 Jan 2019 08:15:37
1.0 ppb - 1	-	5273	1246	ppb	24 Jan 2019 08:17:40
5.0 ppb - 1	-	28213	1247	ppb	24 Jan 2019 08:19:43
10.0 ppb - 1	-	53711	1248	ppb	24 Jan 2019 08:21:47
ICV - 1	96.2% 4.8100	26049	1249	ppb	24 Jan 2019 08:47:06
ICB - 1	-0.0497	-382	1250	ppb	24 Jan 2019 08:49:06
CRA - 1	108.7% 0.2173	1070	1251	ppb	24 Jan 2019 08:51:27
CCV - 1	103.0% 5.1518	27908	1252	ppb	24 Jan 2019 08:53:27
CCB - 1	-0.0510	-389	1253	ppb	24 Jan 2019 08:55:29
lb 240-365049/1-c - 1	0.0141	-35	1254	ppb	24 Jan 2019 08:57:48
mb 240-365159/2-a - 1	0.0228	12	1255	ppb	24 Jan 2019 08:59:48
lcs 240-365159/3-a - 1	5.2715	28559	1256	ppb	24 Jan 2019 09:01:48
280-119276-a-3-s - 1	0.2953	1494	1257	ppb	24 Jan 2019 09:03:48
280-119276-a-3-t ms - 1	5.0139	27158	1258	ppb	24 Jan 2019 09:06:09
280-119276-a-3-u msd - 1	5.1158	27712	1259	ppb	24 Jan 2019 09:08:11
240-107208-b-1-c - 1	-0.0495	-381	1260	ppb	24 Jan 2019 09:10:40
240-107194-d-2-c - 1	0.0217	6	1261	ppb	24 Jan 2019 09:13:05
240-107141-e-2-c - 1	0.0220	8	1262	ppb	24 Jan 2019 09:15:06
240-107219-b-1-e - 1	0.0231	14	1263	ppb	24 Jan 2019 09:17:07
CCV - 1	102.9% 5.1432	27861	1264	ppb	24 Jan 2019 09:19:08
CCB - 1	-0.0392	-325	1265	ppb	24 Jan 2019 09:21:09
240-107230-a-1-e - 1	0.0178	-15	1266	ppb	24 Jan 2019 09:23:31
CCV - 1	103.8% 5.1915	28124	1267	ppb	24 Jan 2019 09:25:33
CCB - 1	-0.0361	-308	1268	ppb	24 Jan 2019 09:27:34
lb 240-365048/1-c - 1	0.0349	78	1269	ppb	24 Jan 2019 11:17:28
mb 240-365136/2-a - 1	0.0342	74	1270	ppb	24 Jan 2019 11:19:30
lcs 240-365136/3-a - 1	5.0869	27555	1271	ppb	24 Jan 2019 11:21:30
240-107183-d-1-e - 1	-0.0342	-298	1272	ppb	24 Jan 2019 11:23:30
240-107183-d-1-f ms - 1	4.9376	26743	1273	ppb	24 Jan 2019 11:25:52
240-107183-d-1-g msd - 1	4.9431	26773	1274	ppb	24 Jan 2019 11:27:52
240-107183-d-2-c - 1	-0.0276	-262	1275	ppb	24 Jan 2019 11:30:16
mb 240-365187/1-a - 1	0.0204	-1	1276	ppb	24 Jan 2019 11:32:38
lcs 240-365187/2-a - 1	4.8067	26031	1277	ppb	24 Jan 2019 11:34:39
CCV - 1	102.1% 5.1073	27666	1278	ppb	24 Jan 2019 11:36:40
CCB - 1	-0.0574	-424	1279	ppb	24 Jan 2019 11:39:02
280-119116-e-1-c - 1	0.0127	-43	1280	ppb	24 Jan 2019 11:41:22
280-119116-e-1-e msd - 1	1.0879	5805	1281	ppb	24 Jan 2019 11:43:24
280-119116-e-1-d ms - 1	1.0791	5757	1282	ppb	24 Jan 2019 11:45:25
280-119116-e-2-e - 1	-0.0272	-260	1283	ppb	24 Jan 2019 11:47:31
280-119116-e-3-c - 1	0.0176	-16	1284	ppb	24 Jan 2019 11:49:36
280-119116-e-4-c - 1	0.0329	67	1285	ppb	24 Jan 2019 11:51:36
280-119116-e-5-c - 1	0.0160	-25	1286	ppb	24 Jan 2019 11:53:37
280-119116-e-6-c - 1	0.0206	0	1287	ppb	24 Jan 2019 11:55:37
CCV - 1	102.1% 5.1031	27643	1288	ppb	24 Jan 2019 11:57:38
CCB - 1	-0.0657	-469	1289	ppb	24 Jan 2019 11:59:38

Test America Canton Hg Data Review Checklist

Curve Prep Batch: 365353

Circle Methods used: ~~7470A~~ / 245.1 / 7471 Analytical Batch: 365352

Analysis Date: 1/24/19 Analyst: AC Instrument: H2

Review Items
A. Calibration/Instrument Run QC
1. Instrument calibrated per manufacturer's instructions and at SOP specified levels.
2. ICV/CCV analyzed at appropriate frequency and within acceptance criteria.
3. ICV/ICB analyzed at appropriate frequency and within acceptance criteria.
4. CRA analyzed at SOP or project specific frequency and within acceptance criteria. (project specific limits may vary)
B. Sample Results
1. Samples with concentrations > high calibration standard diluted and reanalyzed.
2. Sample analyses done within holding time.
C. Preparation/ Matrix QC
1. LCS performed per prep batch and within acceptance criteria.
2. Method blank performed per prep batch and within acceptance criteria.
3. MS performed at required frequency and evaluated.
4. MSD or DU performed at required frequency and evaluated.
D. Other
1. All nonconformances documented appropriately in lims system.
2. All client/project specific requirements met.
3. Date of analysis verified as correct.

Level I

Analyst: Alex Cieler Date/Time: 1/24/19 Reviewed from 8:11 to 11:59

Analyst: _____ Date/Time: _____ Reviewed from _____ to _____

Comments: _____

Level II

Reviewer: [signature] Date/Time: 1-24-19 Reviewed from 8:11 to 11:59

Reviewer: _____ Date/Time: _____ Reviewed from _____ to _____

Comments _____

Curve Date 1/23/19 Curve Time 8:00-10:00 DILUTION H20 N/A

Revised 01/19/2016

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107194-1

SDG No.:

Project: MRC Block E/F Mass DIscharge Waste

Client Sample ID	Lab Sample ID
WC-EFSOIL-011819	240-107194-2

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: WC-EFSOIL-011819 Lab Sample ID: 240-107194-2

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG ID.:

Matrix: Solid Date Sampled: 01/18/2019 09:30

Reporting Basis: WET Date Received: 01/19/2019 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Flashpoint	>200	1.00	1.00	Degrees F			1	1010A

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Solid

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 365145 Date: 01/23/2019 05:41								
1010A		240-107230-A-1	Flashpoint	>200	Degrees F			
1010A		240-107230-A-1 DU	Flashpoint	>200	Degrees F	NC	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Matrix: Solid

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 365145 Date: 01/23/2019 05:00											
						LCS Source: WCP-XYLENE_00023					
1010A	LCS 240-365145/1	Flashpoint	83.00		Degrees F	81.0	102	97-103			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107194-1

SDG Number:

Matrix: Solid Instrument ID: WHITEY

Method: 1010A RL Date: 01/28/2010 09:55

Analyte	Wavelength/ Mass	RL (Degrees F)	
Flashpoint		1	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107194-1

SDG Number:

Matrix: Solid Instrument ID: WHITEY

Method: 1010A XRL Date: 01/28/2010 09:55

Analyte	Wavelength/ Mass	XRL (Degrees F)	
Flashpoint		1	

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107194-1

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: Moisture RL Date: 01/28/2010 09:24

Analyte	Wavelength/ Mass	RL (%)	
Percent Moisture		0.1	
Percent Solids		0.1	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107194-1

SDG Number:

Matrix: Solid Instrument ID: NOEQUIP

Method: Moisture XRL Date: 01/28/2010 09:24

Analyte	Wavelength/ Mass	XRL (mg/L)	
Percent Moisture		10	
Percent Solids		10	

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: WHITEY Analysis Method: 1010A

Start Date: 01/23/2019 05:00 End Date: 01/23/2019 12:33

Lab Sample Id	D/F	Type	Time	Analytes																									
				FP																									
LCS 240-365145/1	1	T	05:00	X																									
240-107230-A-1 DU	1	T	05:41	X																									
ZZZZZZ			06:22																										
ZZZZZZ			07:03																										
ZZZZZZ			07:45																										
ZZZZZZ			08:26																										
ZZZZZZ			09:07																										
ZZZZZZ			09:48																										
ZZZZZZ			10:30																										
ZZZZZZ			11:11																										
ZZZZZZ			11:52																										
240-107194-2	1	T	12:33	X																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: Moisture

Start Date: 01/21/2019 13:02 End Date: 01/21/2019 15:04

Lab Sample Id	D/F	Type	Time	Analytes																									
				% Sol	Moist																								
ZZZZZZ			13:02	

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: Moisture

Start Date: 01/21/2019 13:02 End Date: 01/21/2019 15:04

Lab Sample Id	D/F	Type	Time	Analytes																										
				% Sol	Moist																									
ZZZZZZ			13:02																											
240-107186-A-5 DU	1	T	13:02	X	X																									
ZZZZZZ			13:02																											
ZZZZZZ			13:02																											
ZZZZZZ			13:02																											
240-107194-2	1	T	13:02	X	X																									
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FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: Moisture

Start Date: 01/21/2019 13:02 End Date: 01/21/2019 15:04

Lab Sample Id	D/F	Type	Time	Analytes																										
				% Sol	Moist																									
ZZZZZZ			13:19																											
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FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: Moisture

Start Date: 01/21/2019 13:02 End Date: 01/21/2019 15:04

Lab Sample Id	D/F	Type	Time	Analytes																										
				% Sol	Moist																									
ZZZZZZ			13:26																											
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Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 365145 Batch Start Date: 01/23/19 05:00 Batch Analyst: Harshman, Tom

Batch Method: 1010A Batch End Date: 01/23/19 13:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	FinalAmount	InitialTemp	WCP-XYLENE 00023			
LCS 240-365145/1		1010A		70 mL	53 Degrees F	70 mL			
240-107230-A-1 DU		1010A	T	70 g	55 Degrees F				
240-107194-D-2	WC-EFSOIL-011819	1010A	T	70 g	69 Degrees F				

Batch Notes	
Equipment ID	whitey
Thermometer ID	x

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107194-1

SDG No.:

Batch Number: 364833 Batch Start Date: 01/21/19 13:02 Batch Analyst: Carson, Monica

Batch Method: Moisture Batch End Date: 01/22/19 11:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	DishWeight	SampleMassWet	SampleMassDry			
240-107186-A-5 DU		Moisture	T	4.3251 g	9.0962 g	8.1658 g			
240-107194-A-2	WC-EFSOIL-011819	Moisture	T	4.3251 g	22.4542 g	19.7910 g			

Batch Notes	
Balance ID	B047
Date and Time Samples in Desiccator	01/22/2019 03:51
Date and Time Samples out of Desiccator	01/22/2019 10:27
Date samples were placed in the oven	01/21/2019
Oven Temp In	104.1 Degrees C
Time samples were place in the oven	15:10
Date samples were removed from oven	01/22/2019
Oven Temp Out	104.4 Degrees C
Time Samples were removed from oven	03:51
Oven ID	O02
Thermometer ID	TEMPGUARD BOX C #6

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

North Canton
4101 Shuffel Street, N. W.

North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

1.6/C1.6

Chain of Custody Record

Baltimore #201

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Mike Martin	Site Contact: Mullis/Larson	Date: 1/18/2019	COC No:
Tetra Tech	Tel: (301) 528-3021	Lab Contact: John McFadden	Carrier: Fedex	1 of 1 COCs
20251 Century Blvd, Suite 200	**Analysis Turnaround Time**			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) _____			
(301) 528-3021 Phone	TAT if different from Below **STANDARD TAT**			SDG No.
(301) 528-3000 FAX	☐ 2 weeks			
Project Name: MRC BLOCK E/F MASS DISCHARGE, WASTE CHARACTERIZATION	☐ 1 week			
Site: MRC BLOCK E	☐ 2 days			Sampler: Mullis/Larson
PO # 112IC08784	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs	TCLP Metals	PCBs (8082A)	Ignitability	Sample Specific Notes:
TB-011819	1/18/2019	0000	GRAB	WATER	2		x				
WC-EFSOIL-011819	1/18/2019	0930	GRAB	SOIL	3		x	x	x	x	
							1	1	1	1	

240-107194 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☒ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☒ *Disposal By Lab* ☐ *Archive For _____ Months*

Special Instructions/QC Requirements & Comments: Block E/F Mass discharge well installation project, waste characterization sample collected from drum #1 on-site.

	Company:	Date/Time:		Company:	Date/Time:
Relinquished by: JL	TETRA TECH INC	1/18/19	Received by:	TA	1/18/19 1120
Relinquished by:	TA	1/18/19 1700	Received by:	TAC	1-19-19 945
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 2, dated 03/06/2012

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client Tetra Tech Site Name _____ Cooler unpacked by: MJ

Cooler Received on 1-19-19 Opened on 1-19-19

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 1.6 °C Corrected Cooler Temp. 1.6 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes (No)
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No (NA) pH Strip Lot# **HC854592**
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # B828801VB (Yes) No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

APPENDIX G—FULL LABORATORY DATA REPORTS

TETRA TECH **INTERNAL CORRESPONDENCE**

TO: **S. BRENNER** **DATE:** **FEBRUARY 26, 2019**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION –VOCs**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
FIRE LINE LEAK
SDG 240-106686-1

SAMPLES: 9/Soils/

SB-MW154-10-12	SB-MW154-12-13
SB-MW154-9-10	SB-MW155-11-12
SB-MW155-8-9	SB-MW155-9-11
SB-MW158-10-11	SB-MW158-11-12
SB-MW158-9-10	

1/Trip Blank/
TB-010819

Overview

The sample set for LMC-MRC Fire Line Leak, SDG 240-106686-1, consisted of nine (9) soil environmental samples and one (1) trip blank. All samples were analyzed for volatile organic compounds (VOCs). No field duplicate samples were included in this sample delivery group (SDG).

The samples were collected by Tetra Tech, Inc. on January 8, 2019 and analyzed by Test America – Canton. All analyses were conducted in accordance with SW-846 methods 8260B and 8260C analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method/trip blank results, surrogate spike recoveries, laboratory control sample results, matrix spike / matrix spike duplicate results, internal standard areas, chromatographic resolution, analyte identification, analyte quantitation, and detection limits. Areas of concern are listed below.

Major

- The laboratory case narrative indicates that sample TB-010819 was preserved with hydrochloric acid. The VOC analyte 2-chloroethyl vinyl ether is an acid-labile compound that degrades in an acidic medium. The non-detected result for 2-chloroethyl vinyl ether was rejected (UR) in sample TB-010819.

Minor

- The VOC initial calibration verification performed on 11/30/18 @ 10:37 on instrument A3UX8 had percent differences (%Ds) that were greater than the 20% quality control limit for 1,2,4-trichlorobenzene and hexachlorobutadiene. All soil samples were affected. The non-detected results reported for the aforementioned compounds in the affected samples were qualified as estimated (UJ).

- The VOC continuing calibration verifications performed on 01/10/19 @ 3:21 and 3:44 on instrument A3UX8 had %Ds that were greater than the 20% quality control limit for ethyl tert-butyl ether, tert-butyl alcohol, 2-butanone, 1,1,2,2-tetrachloroethane and 1,2,3-trichloropropane. All soil samples were affected. The non-detected results reported for the aforementioned compounds in the

affected samples were qualified as estimated (UJ).

- The VOC initial calibration verification performed on 10/02/18 @ 18:21 on instrument A3UX10 had a %D that was greater than the 20% quality control limit for tert-butyl alcohol. Sample TB-010819 was affected. The non-detected result reported for tert-butyl alcohol in the affected sample was qualified as estimated (UJ).

- The VOC initial calibration verification performed on 8/07/18 @ 12:33 on instrument A3UX11 had %Ds that were greater than the 20% quality control limit for acetone and 2-butanone. Sample TB-010819 was affected. The non-detected results reported for the aforementioned compounds in the affected sample were qualified as estimated (UJ).

- The VOC continuing calibration verifications performed on 01/21/19 @ 10:02 and 10:47 on instrument A3UX11 had %Ds that were greater than the 20% quality control limit for dichlorodifluoromethane, chloroethane, methylene chloride, vinyl acetate, 2-butanone, 1,1,1-trichloroethane, carbon tetrachloride, 2-chloroethyl vinyl ether, 4-methyl-2-pentanone, tetrachloroethene, 2-hexanone, 1,1,2,2-tetrachloroethane, sec-butyl benzene, 4-isopropyl toluene, n-butyl benzene, naphthalene, ethyl tert-butyl ether, tert-amyl methyl ether and 1,2,3-trimethyl benzene. Sample TB-010819 was affected. The non-detected results reported for the aforementioned compounds, with the exception of 2-chloroethyl vinyl ether, in the affected sample were qualified as estimated (UJ). The nondetected result reported for 2-chloroethyl vinyl ether was rejected due to acid preservation.

Notes

Non-detected results were reported to the MDL.

Methylene chloride (2.86 ug/L) was detected in method blank 240-364762 affecting sample TB-010819. No validation actions were required as the sample result was nondetected.

Executive Summary

Laboratory Performance: Several initial calibration verification and continuing calibration %Ds were noncompliant for the VOC fraction.

Other Factors Affecting Data Quality: The non-detected result for 2-chloroethyl vinyl ether was rejected due to preservation noncompliance for sample TB-010819.

The data for these analyses were reviewed with reference to the USEPA “National Functional Guidelines for Organic Superfund Methods Data Review” (January 2017). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech, Inc.
Terri L. Solomon
Chemist/Data Validator

Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

PROJ_NO: 08474	NSAMPLE	SB-MW154-10-12			SB-MW154-12-13			SB-MW154-9-10			SB-MW155-11-12		
SDG: 240-106686-1	LAB_ID	240-106686-3			240-106686-4			240-106686-2			240-106686-7		
FRACTION: OV	SAMP_DATE	1/8/2019			1/8/2019			1/8/2019			1/8/2019		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	86.3			84.0			85.4			83.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		3.2	U		3.4	U		3.2	U		3.6	U	
1,1,1-TRICHLOROETHANE		0.88	U		0.93	U		0.9	U		0.98	U	
1,1,2,2-TETRACHLOROETHANE		1.5	UJ	C	1.6	UJ	C	1.6	UJ	C	1.7	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		1.4	U		1.5	U		1.4	U		1.5	U	
1,1-DICHLOROETHANE		0.74	U		0.79	U		0.76	U		0.83	U	
1,1-DICHLOROETHENE		0.97	U		1	U		0.99	U		1.1	U	
1,1-DICHLOROPROPENE		1.1	U		1.1	U		1.1	U		1.2	U	
1,2,3-TRICHLOROBENZENE		0.61	U		0.65	U		0.63	U		0.69	U	
1,2,3-TRICHLOROPROPANE		1.7	UJ	C	1.8	UJ	C	1.7	UJ	C	1.9	UJ	C
1,2,3-TRIMETHYLBENZENE		2	U		2.1	U		2	U		2.2	U	
1,2,4-TRICHLOROBENZENE		0.61	UJ	C	0.65	UJ	C	0.62	UJ	C	0.68	UJ	C
1,2,4-TRIMETHYLBENZENE		1.1	U		1.2	U		1.1	U		1.2	U	
1,2-DIBROMO-3-CHLOROPROPANE		3.9	U		4.1	U		3.9	U		4.3	U	
1,2-DIBROMOETHANE		0.82	U		0.88	U		0.84	U		0.92	U	
1,2-DICHLOROBENZENE		1.2	U		1.3	U		1.2	U		1.3	U	
1,2-DICHLOROETHANE		0.83	U		0.88	U		0.84	U		0.92	U	
1,2-DICHLOROPROPANE		0.91	U		0.97	U		0.93	U		1	U	
1,3-DICHLOROBENZENE		0.87	U		0.93	U		0.89	U		0.98	U	
1,3-DICHLOROPROPANE		1.1	U		1.1	U		1.1	U		1.2	U	
1,4-DICHLOROBENZENE		0.94	U		1	U		0.96	U		1.1	U	
2,2-DICHLOROPROPANE		1.3	U		1.4	U		1.3	U		1.4	U	
2-BUTANONE		3.8	UJ	C	4	UJ	C	3.9	UJ	C	4.3	UJ	C
2-CHLOROETHYL VINYL ETHER		9.5	U		10	U		9.7	U		11	U	
2-CHLOROTOLUENE		1	U		1.1	U		1	U		1.1	U	
2-HEXANONE		4.4	U		4.7	U		4.5	U		4.9	U	
4-CHLOROTOLUENE		0.92	U		0.98	U		0.94	U		1	U	
4-ISOPROPYLTOLUENE		3.2	U		3.4	U		3.2	U		3.5	U	
4-METHYL-2-PENTANONE		4	U		4.2	U		4.1	U		4.4	U	
ACETONE		22	U		24	U		23	U		25	U	
BENZENE		0.75	U		0.79	U		0.76	U		0.83	U	
BROMOBENZENE		1.3	U		1.3	U		1.3	U		1.4	U	
BROMOCHLOROMETHANE		0.64	U		0.68	U		0.65	U		0.71	U	
BROMODICHLOROMETHANE		0.73	U		0.77	U		0.74	U		0.81	U	
BROMOFORM		2.6	U		2.7	U		2.6	U		2.9	U	
BROMOMETHANE		1.1	U		1.1	U		1.1	U		1.2	U	

PROJ_NO: 08474	NSAMPLE	SB-MW155-8-9			SB-MW155-9-11			SB-MW158-10-11			SB-MW158-11-12		
SDG: 240-106686-1	LAB_ID	240-106686-5			240-106686-6			240-106686-9			240-106686-10		
FRACTION: OV	SAMP_DATE	1/8/2019			1/8/2019			1/8/2019			1/8/2019		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	86.6			86.5			84.9			84.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		3.3	U		3.3	U		3.4	U		3.3	U	
1,1,1-TRICHLOROETHANE		0.9	U		0.91	U		0.95	U		0.9	U	
1,1,2,2-TETRACHLOROETHANE		1.6	UJ	C	1.6	UJ	C	1.6	UJ	C	1.6	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		1.4	U		1.4	U		1.5	U		1.4	U	
1,1-DICHLOROETHANE		0.76	U		0.77	U		0.8	U		0.76	U	
1,1-DICHLOROETHENE		0.99	U		1	U		1	U		0.99	U	
1,1-DICHLOROPROPENE		1.1	U		1.1	U		1.1	U		1.1	U	
1,2,3-TRICHLOROBENZENE		0.63	U		0.64	U		0.66	U		0.63	U	
1,2,3-TRICHLOROPROPANE		1.7	UJ	C	1.7	UJ	C	1.8	UJ	C	1.7	UJ	C
1,2,3-TRIMETHYLBENZENE		2	U		2	U		2.1	U		2	U	
1,2,4-TRICHLOROBENZENE		0.63	UJ	C	0.64	UJ	C	0.66	UJ	C	0.63	UJ	C
1,2,4-TRIMETHYLBENZENE		1.1	U		1.1	U		1.2	U		1.1	U	
1,2-DIBROMO-3-CHLOROPROPANE		4	U		4	U		4.2	U		3.9	U	
1,2-DIBROMOETHANE		0.85	U		0.86	U		0.89	U		0.84	U	
1,2-DICHLOROBENZENE		1.2	U		1.2	U		1.3	U		1.2	U	
1,2-DICHLOROETHANE		0.85	U		0.86	U		0.89	U		0.84	U	
1,2-DICHLOROPROPANE		0.93	U		0.95	U		0.98	U		0.93	U	
1,3-DICHLOROBENZENE		0.9	U		0.91	U		0.94	U		0.89	U	
1,3-DICHLOROPROPANE		1.1	U		1.1	U		1.1	U		1.1	U	
1,4-DICHLOROBENZENE		0.97	U		0.98	U		1	U		0.96	U	
2,2-DICHLOROPROPANE		1.3	U		1.3	U		1.4	U		1.3	U	
2-BUTANONE		3.9	UJ	C	4	UJ	C	4.1	UJ	C	3.9	UJ	C
2-CHLOROETHYL VINYL ETHER		9.8	U		9.9	U		10	U		9.7	U	
2-CHLOROTOLUENE		1	U		1.1	U		1.1	U		1	U	
2-HEXANONE		4.5	U		4.5	U		4.7	U		4.5	U	
4-CHLOROTOLUENE		0.95	U		0.96	U		0.99	U		0.94	U	
4-ISOPROPYLTOLUENE		3.2	U		3.3	U		3.4	U		3.2	U	
4-METHYL-2-PENTANONE		4.1	U		4.1	U		4.3	U		4.1	U	
ACETONE		23	U		23	U		24	U		23	U	
BENZENE		0.77	U		0.78	U		0.8	U		0.76	U	
BROMOBENZENE		1.3	U		1.3	U		1.3	U		1.3	U	
BROMOCHLOROMETHANE		0.65	U		0.66	U		0.68	U		0.65	U	
BROMODICHLOROMETHANE		0.75	U		0.76	U		0.78	U		0.74	U	
BROMOFORM		2.6	U		2.7	U		2.8	U		2.6	U	
BROMOMETHANE		1.1	U		1.1	U		1.1	U		1.1	U	

PROJ_NO: 08474	NSAMPLE	SB-MW158-9-10		
SDG: 240-106686-1	LAB_ID	240-106686-8		
FRACTION: OV	SAMP_DATE	1/8/2019		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	83.5		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		3.5	U	
1,1,1-TRICHLOROETHANE		0.98	U	
1,1,2,2-TETRACHLOROETHANE		1.7	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		1.5	U	
1,1-DICHLOROETHANE		0.83	U	
1,1-DICHLOROETHENE		1.1	U	
1,1-DICHLOROPROPENE		1.2	U	
1,2,3-TRICHLOROBENZENE		0.68	U	
1,2,3-TRICHLOROPROPANE		1.9	UJ	C
1,2,3-TRIMETHYLBENZENE		2.2	U	
1,2,4-TRICHLOROBENZENE		0.68	UJ	C
1,2,4-TRIMETHYLBENZENE		1.2	U	
1,2-DIBROMO-3-CHLOROPROPANE		4.3	U	
1,2-DIBROMOETHANE		0.92	U	
1,2-DICHLOROBENZENE		1.3	U	
1,2-DICHLOROETHANE		0.92	U	
1,2-DICHLOROPROPANE		1	U	
1,3-DICHLOROBENZENE		0.97	U	
1,3-DICHLOROPROPANE		1.2	U	
1,4-DICHLOROBENZENE		1.1	U	
2,2-DICHLOROPROPANE		1.4	U	
2-BUTANONE		4.2	UJ	C
2-CHLOROETHYL VINYL ETHER		11	U	
2-CHLOROTOLUENE		1.1	U	
2-HEXANONE		4.9	U	
4-CHLOROTOLUENE		1	U	
4-ISOPROPYLTOLUENE		3.5	U	
4-METHYL-2-PENTANONE		4.4	U	
ACETONE		25	U	
BENZENE		0.83	U	
BROMOBENZENE		1.4	U	
BROMOCHLOROMETHANE		0.71	U	
BROMODICHLOROMETHANE		0.81	U	
BROMOFORM		2.9	U	
BROMOMETHANE		1.2	U	

PROJ_NO: 08474	NSAMPLE	SB-MW154-10-12			SB-MW154-12-13			SB-MW154-9-10			SB-MW155-11-12		
SDG: 240-106686-1	LAB_ID	240-106686-3			240-106686-4			240-106686-2			240-106686-7		
FRACTION: OV	SAMP_DATE	1/8/2019			1/8/2019			1/8/2019			1/8/2019		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	86.3			84.0			85.4			83.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		1.2	U		1.3	U		1.3	U		1.4	U	
CARBON TETRACHLORIDE		3.5	U		3.7	U		3.6	U		3.9	U	
CHLOROBENZENE		0.98	U		1	U		1	U		1.1	U	
CHLORODIBROMOMETHANE		3	U		3.2	U		3	U		3.3	U	
CHLOROETHANE		1.3	U		1.4	U		1.3	U		1.5	U	
CHLOROFORM		0.84	U		0.9	U		0.86	U		0.94	U	
CHLOROMETHANE		1.1	U		1.2	U		1.1	U		1.2	U	
CIS-1,2-DICHLOROETHENE		0.7	U		0.74	U		0.71	U		0.78	U	
CIS-1,3-DICHLOROPROPENE		1.5	U		1.6	U		1.6	U		1.7	U	
DIBROMOMETHANE		0.72	U		0.76	U		0.73	U		0.8	U	
DICHLORODIFLUOROMETHANE		1	U		1.1	U		1	U		1.1	U	
DIISOPROPYL ETHER		0.81	U		0.86	U		0.83	U		0.91	U	
ETHYL TERT-BUTYL ETHER		2.4	UJ	C	2.6	UJ	C	2.5	UJ	C	2.7	UJ	C
ETHYLBENZENE		1.1	U		1.2	U		1.1	U		1.3	U	
HEXACHLOROBUTADIENE		4	UJ	C	4.3	UJ	C	4.1	UJ	C	4.5	UJ	C
ISOPROPYLBENZENE		0.89	U		0.95	U		0.91	U		0.99	U	
METHYL TERT-BUTYL ETHER		0.88	U		0.93	U		0.9	U		0.98	U	
METHYLENE CHLORIDE		13	U		14	U		13	U		14	U	
NAPHTHALENE		2.9	U		3.1	U		2.9	U		3.2	U	
N-BUTYLBENZENE		3.7	U		4	U		3.8	U		4.1	U	
N-PROPYLBENZENE		0.78	U		0.83	U		0.8	U		0.88	U	
SEC-BUTYLBENZENE		0.92	U		0.98	U		0.94	U		1	U	
STYRENE		1.2	U		1.3	U		1.3	U		1.4	U	
TERT-AMYL METHYL ETHER		2.4	U		2.6	U		2.5	U		2.7	U	
TERT-BUTYLBENZENE		0.97	U		1	U		0.99	U		1.1	U	
TERTIARY-BUTYL ALCOHOL		18	UJ	C	19	UJ	C	18	UJ	C	20	UJ	C
TETRACHLOROETHENE		0.78	U		0.83	U		0.8	U		0.87	U	
TOLUENE		0.83	U		0.88	U		0.84	U		0.92	U	
TOTAL XYLENES		1.7	U		1.8	U		1.7	U		1.9	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.53	U		0.51	U		0.56	U	
TRANS-1,3-DICHLOROPROPENE		1.1	U		1.2	U		1.1	U		1.2	U	
TRICHLOROETHENE		0.68	U		0.72	U		0.69	U		0.76	U	
TRICHLOROFLUOROMETHANE		1.2	U		1.2	U		1.2	U		1.3	U	
VINYL ACETATE		2.3	U		2.4	U		2.3	U		2.5	U	
VINYL CHLORIDE		0.9	U		0.95	U		0.91	U		1	U	

PROJ_NO: 08474	NSAMPLE	SB-MW155-8-9			SB-MW155-9-11			SB-MW158-10-11			SB-MW158-11-12		
SDG: 240-106686-1	LAB_ID	240-106686-5			240-106686-6			240-106686-9			240-106686-10		
FRACTION: OV	SAMP_DATE	1/8/2019			1/8/2019			1/8/2019			1/8/2019		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	86.6			86.5			84.9			84.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		1.3	U		1.3	U		1.3	U		1.3	U	
CARBON TETRACHLORIDE		3.6	U		3.6	U		3.7	U		3.6	U	
CHLOROBENZENE		1	U		1	U		1.1	U		1	U	
CHLORODIBROMOMETHANE		3.1	U		3.1	U		3.2	U		3	U	
CHLOROETHANE		1.3	U		1.4	U		1.4	U		1.3	U	
CHLOROFORM		0.86	U		0.88	U		0.91	U		0.86	U	
CHLOROMETHANE		1.1	U		1.2	U		1.2	U		1.1	U	
CIS-1,2-DICHLOROETHENE		0.71	U		0.72	U		0.75	U		0.71	U	
CIS-1,3-DICHLOROPROPENE		1.6	U		1.6	U		1.7	U		1.6	U	
DIBROMOMETHANE		0.73	U		0.74	U		0.77	U		0.73	U	
DICHLORODIFLUOROMETHANE		1	U		1	U		1.1	U		1	U	
DIISOPROPYL ETHER		0.83	U		0.84	U		0.87	U		0.83	U	
ETHYL TERT-BUTYL ETHER		2.5	UJ	C	2.5	UJ	C	2.6	UJ	C	2.5	UJ	C
ETHYLBENZENE		1.1	U		1.2	U		1.2	U		1.1	U	
HEXACHLOROBUTADIENE		4.1	UJ	C	4.2	UJ	C	4.3	UJ	C	4.1	UJ	C
ISOPROPYLBENZENE		0.91	U		0.93	U		0.96	U		0.91	U	
METHYL TERT-BUTYL ETHER		0.9	U		0.91	U		0.95	U		0.9	U	
METHYLENE CHLORIDE		13	U		13	U		14	U		13	U	
NAPHTHALENE		3	U		3	U		3.1	U		3	U	
N-BUTYLBENZENE		3.8	U		3.9	U		4	U		3.8	U	
N-PROPYLBENZENE		0.8	U		0.81	U		0.84	U		0.8	U	
SEC-BUTYLBENZENE		0.95	U		0.96	U		1	U		0.94	U	
STYRENE		1.3	U		1.3	U		1.3	U		1.3	U	
TERT-AMYL METHYL ETHER		2.5	U		2.5	U		2.6	U		2.5	U	
TERT-BUTYLBENZENE		1	U		1	U		1	U		0.99	U	
TERTIARY-BUTYL ALCOHOL		18	UJ	C	18	UJ	C	19	UJ	C	18	UJ	C
TETRACHLOROETHENE		0.8	U		0.81	U		0.84	U		0.8	U	
TOLUENE		0.85	U		0.86	U		0.89	U		0.85	U	
TOTAL XYLENES		1.7	U		1.8	U		1.8	U		1.7	U	
TRANS-1,2-DICHLOROETHENE		0.51	U		0.52	U		0.54	U		0.51	U	
TRANS-1,3-DICHLOROPROPENE		1.1	U		1.1	U		1.2	U		1.1	U	
TRICHLOROETHENE		0.69	U		0.7	U		0.73	U		0.69	U	
TRICHLOROFLUOROMETHANE		1.2	U		1.2	U		1.2	U		1.2	U	
VINYL ACETATE		2.3	U		2.4	U		2.5	U		2.3	U	
VINYL CHLORIDE		0.92	U		0.93	U		0.96	U		0.92	U	

PROJ_NO: 08474	NSAMPLE	SB-MW158-9-10		
SDG: 240-106686-1	LAB_ID	240-106686-8		
FRACTION: OV	SAMP_DATE	1/8/2019		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	83.5		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CARBON DISULFIDE		1.4	U	
CARBON TETRACHLORIDE		3.9	U	
CHLOROBENZENE		1.1	U	
CHLORODIBROMOMETHANE		3.3	U	
CHLOROETHANE		1.5	U	
CHLOROFORM		0.94	U	
CHLOROMETHANE		1.2	U	
CIS-1,2-DICHLOROETHENE		0.78	U	
CIS-1,3-DICHLOROPROPENE		1.7	U	
DIBROMOMETHANE		0.8	U	
DICHLORODIFLUOROMETHANE		1.1	U	
DIISOPROPYL ETHER		0.9	U	
ETHYL TERT-BUTYL ETHER		2.7	UJ	C
ETHYLBENZENE		1.2	U	
HEXACHLOROBUTADIENE		4.5	UJ	C
ISOPROPYLBENZENE		0.99	U	
METHYL TERT-BUTYL ETHER		0.98	U	
METHYLENE CHLORIDE		14	U	
NAPHTHALENE		3.2	U	
N-BUTYLBENZENE		4.1	U	
N-PROPYLBENZENE		0.87	U	
SEC-BUTYLBENZENE		1	U	
STYRENE		1.4	U	
TERT-AMYL METHYL ETHER		2.7	U	
TERT-BUTYLBENZENE		1.1	U	
TERTIARY-BUTYL ALCOHOL		20	UJ	C
TETRACHLOROETHENE		0.87	U	
TOLUENE		0.92	U	
TOTAL XYLENES		1.9	U	
TRANS-1,2-DICHLOROETHENE		0.55	U	
TRANS-1,3-DICHLOROPROPENE		1.2	U	
TRICHLOROETHENE		0.75	U	
TRICHLOROFLUOROMETHANE		1.3	U	
VINYL ACETATE		2.5	U	
VINYL CHLORIDE		1	U	

PROJ_NO: 08474	NSAMPLE	TB-010819		
SDG: 240-106686-1	LAB_ID	240-106686-1		
FRACTION: OV	SAMP_DATE	1/8/2019		
MEDIA: WATER	QC_TYPE	TB		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U	
1,1,1-TRICHLOROETHANE		0.24	UJ	C
1,1,2,2-TETRACHLOROETHANE		0.13	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U	
1,1-DICHLOROETHANE		0.17	U	
1,1-DICHLOROETHENE		0.19	U	
1,1-DICHLOROPROPENE		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	U	
1,2,3-TRICHLOROPROPANE		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	UJ	C
1,2,4-TRICHLOROBENZENE		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	U	
1,2-DIBROMOETHANE		0.12	U	
1,2-DICHLOROBENZENE		0.15	U	
1,2-DICHLOROETHANE		0.21	U	
1,2-DICHLOROPROPANE		0.15	U	
1,3-DICHLOROBENZENE		0.15	U	
1,3-DICHLOROPROPANE		0.21	U	
1,4-DICHLOROBENZENE		0.16	U	
2,2-DICHLOROPROPANE		0.31	U	
2-BUTANONE		1.2	UJ	C
2-CHLOROETHYL VINYL ETHER		0.26	UR	M
2-CHLOROTOLUENE		0.15	U	
2-HEXANONE		0.54	UJ	C
4-CHLOROTOLUENE		0.09	U	
4-ISOPROPYLTOLUENE		0.13	UJ	C
4-METHYL-2-PENTANONE		0.42	UJ	C
ACETONE		5.4	UJ	C
BENZENE		0.13	U	
BROMOBENZENE		0.12	U	
BROMOCHLOROMETHANE		0.14	U	
BROMODICHLOROMETHANE		0.17	U	
BROMOFORM		0.76	U	
BROMOMETHANE		0.42	U	

PROJ_NO: 08474	NSAMPLE	TB-010819		
SDG: 240-106686-1	LAB_ID	240-106686-1		
FRACTION: OV	SAMP_DATE	1/8/2019		
MEDIA: WATER	QC_TYPE	TB		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CARBON DISULFIDE		0.28	U	
CARBON TETRACHLORIDE		0.26	UJ	C
CHLOROBENZENE		0.14	U	
CHLORODIBROMOMETHANE		0.39	U	
CHLOROETHANE		0.83	UJ	C
CHLOROFORM		0.13	U	
CHLOROMETHANE		0.2	U	
CIS-1,2-DICHLOROETHENE		0.16	U	
CIS-1,3-DICHLOROPROPENE		0.61	U	
DIBROMOMETHANE		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	UJ	C
DIISOPROPYL ETHER		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	UJ	C
ETHYLBENZENE		0.11	U	
HEXACHLOROBUTADIENE		0.83	U	
ISOPROPYLBENZENE		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U	
METHYLENE CHLORIDE		2.6	UJ	C
NAPHTHALENE		0.32	UJ	C
N-BUTYLBENZENE		0.14	UJ	C
N-PROPYLBENZENE		0.15	U	
SEC-BUTYLBENZENE		0.13	UJ	C
STYRENE		0.1	U	
TERT-AMYL METHYL ETHER		0.11	UJ	C
TERT-BUTYLBENZENE		0.14	U	
TERTIARY-BUTYL ALCOHOL		1.7	UJ	C
TETRACHLOROETHENE		0.15	UJ	C
TOLUENE		0.14	U	
TOTAL XYLENES		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.67	U	
TRICHLOROETHENE		0.1	U	
TRICHLOROFLUOROMETHANE		0.45	U	
VINYL ACETATE		0.19	UJ	C
VINYL CHLORIDE		0.2	U	

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-9-10 | Lab Sample ID: 240-106686-2

Matrix: Solid | Lab File ID: UX82201.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:30

Sample wt/vol: 5.36(g) | Date Analyzed: 01/10/2019 10:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.6 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.2	U	5.5	3.2
71-55-6	1,1,1-Trichloroethane	0.90	U	5.5	0.90
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U	5.5	1.6
76-13-1	1,1,2-Trichlorotrifluoroethane	1.4	U	5.5	1.4
75-34-3	1,1-Dichloroethane	0.76	U	5.5	0.76
75-35-4	1,1-Dichloroethene	0.99	U	5.5	0.99
563-58-6	1,1-Dichloropropene	1.1	U	5.5	1.1
87-61-6	1,2,3-Trichlorobenzene	0.63	U	5.5	0.63
96-18-4	1,2,3-Trichloropropane	1.7	U	5.5	1.7
526-73-8	1,2,3-Trimethylbenzene	2.0	U	5.5	2.0
120-82-1	1,2,4-Trichlorobenzene	0.62	U	5.5	0.62
95-63-6	1,2,4-Trimethylbenzene	1.1	U	5.5	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	3.9	U	11	3.9
95-50-1	1,2-Dichlorobenzene	1.2	U	5.5	1.2
107-06-2	1,2-Dichloroethane	0.84	U	5.5	0.84
78-87-5	1,2-Dichloropropane	0.93	U	5.5	0.93
541-73-1	1,3-Dichlorobenzene	0.89	U	5.5	0.89
142-28-9	1,3-Dichloropropane	1.1	U	5.5	1.1
106-46-7	1,4-Dichlorobenzene	0.96	U	5.5	0.96
594-20-7	2,2-Dichloropropane	1.3	U	5.5	1.3
110-75-8	2-Chloroethyl vinyl ether	9.7	U	55	9.7
95-49-8	2-Chlorotoluene	1.0	U	5.5	1.0
591-78-6	2-Hexanone	4.5	U	22	4.5
108-86-1	Bromobenzene	1.3	U	5.5	1.3
74-97-5	Bromochloromethane	0.65	U	5.5	0.65
106-43-4	4-Chlorotoluene	0.94	U	5.5	0.94
99-87-6	4-Isopropyltoluene	3.2	U	5.5	3.2
67-64-1	Acetone	23	U	27	23
71-43-2	Benzene	0.76	U	5.5	0.76
75-25-2	Bromoform	2.6	U	5.5	2.6
74-83-9	Bromomethane	1.1	U	5.5	1.1
75-15-0	Carbon disulfide	1.3	U	5.5	1.3
56-23-5	Carbon tetrachloride	3.6	U	5.5	3.6
108-90-7	Chlorobenzene	1.0	U	5.5	1.0
75-00-3	Chloroethane	1.3	U	5.5	1.3
67-66-3	Chloroform	0.86	U	5.5	0.86

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-9-10 | Lab Sample ID: 240-106686-2

Matrix: Solid | Lab File ID: UX82201.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:30

Sample wt/vol: 5.36(g) | Date Analyzed: 01/10/2019 10:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.6 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.1	U	5.5	1.1
156-59-2	cis-1,2-Dichloroethene	0.71	U	5.5	0.71
10061-01-5	cis-1,3-Dichloropropene	1.6	U	5.5	1.6
87-68-3	Hexachlorobutadiene	4.1	U	5.5	4.1
74-95-3	Dibromomethane	0.73	U	5.5	0.73
75-27-4	Bromodichloromethane	0.74	U	5.5	0.74
75-71-8	Dichlorodifluoromethane	1.0	U	5.5	1.0
100-41-4	Ethylbenzene	1.1	U	5.5	1.1
106-93-4	1,2-Dibromoethane	0.84	U	5.5	0.84
108-20-3	Diisopropyl ether	0.83	U	11	0.83
91-20-3	Naphthalene	2.9	U	5.5	2.9
104-51-8	n-Butylbenzene	3.8	U	5.5	3.8
98-82-8	Isopropylbenzene	0.91	U	5.5	0.91
103-65-1	N-Propylbenzene	0.80	U	5.5	0.80
78-93-3	2-Butanone (MEK)	3.9	U	22	3.9
108-10-1	4-Methyl-2-pentanone (MIBK)	4.1	U	22	4.1
135-98-8	sec-Butylbenzene	0.94	U	5.5	0.94
1634-04-4	Methyl tert-butyl ether	0.90	U	5.5	0.90
994-05-8	Tert-amyl methyl ether	2.5	U	5.5	2.5
75-09-2	Methylene Chloride	13	U	27	13
100-42-5	Styrene	1.3	U	5.5	1.3
637-92-3	Ethyl tert-butyl ether	2.5	U	5.5	2.5
98-06-6	tert-Butylbenzene	0.99	U	5.5	0.99
127-18-4	Tetrachloroethene	0.80	U	5.5	0.80
108-88-3	Toluene	0.84	U	5.5	0.84
156-60-5	trans-1,2-Dichloroethene	0.51	U	5.5	0.51
10061-02-6	trans-1,3-Dichloropropene	1.1	U	5.5	1.1
79-01-6	Trichloroethene	0.69	U	5.5	0.69
75-69-4	Trichlorofluoromethane	1.2	U	5.5	1.2
108-05-4	Vinyl acetate	2.3	U	11	2.3
75-01-4	Vinyl chloride	0.91	U	5.5	0.91
75-65-0	tert-Butyl alcohol	18	U	220	18
1330-20-7	Xylenes, Total	1.7	U	11	1.7
124-48-1	Chlorodibromomethane	3.0	U	5.5	3.0

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-9-10 | Lab Sample ID: 240-106686-2

Matrix: Solid | Lab File ID: UX82201.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:30

Sample wt/vol: 5.36(g) | Date Analyzed: 01/10/2019 10:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.6 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		48-123
460-00-4	4-Bromofluorobenzene (Surr)	74		49-141
2037-26-5	Toluene-d8 (Surr)	80		62-135
1868-53-7	Dibromofluoromethane (Surr)	91		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-10-12 | Lab Sample ID: 240-106686-3

Matrix: Solid | Lab File ID: UX82202.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:32

Sample wt/vol: 5.42(g) | Date Analyzed: 01/10/2019 10:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.7 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.2	U	5.3	3.2
71-55-6	1,1,1-Trichloroethane	0.88	U	5.3	0.88
79-34-5	1,1,2,2-Tetrachloroethane	1.5	U	5.3	1.5
76-13-1	1,1,2-Trichlorotrifluoroethane	1.4	U	5.3	1.4
75-34-3	1,1-Dichloroethane	0.74	U	5.3	0.74
75-35-4	1,1-Dichloroethene	0.97	U	5.3	0.97
563-58-6	1,1-Dichloropropene	1.1	U	5.3	1.1
87-61-6	1,2,3-Trichlorobenzene	0.61	U	5.3	0.61
96-18-4	1,2,3-Trichloropropane	1.7	U	5.3	1.7
526-73-8	1,2,3-Trimethylbenzene	2.0	U	5.3	2.0
120-82-1	1,2,4-Trichlorobenzene	0.61	U	5.3	0.61
95-63-6	1,2,4-Trimethylbenzene	1.1	U	5.3	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	3.9	U	11	3.9
95-50-1	1,2-Dichlorobenzene	1.2	U	5.3	1.2
107-06-2	1,2-Dichloroethane	0.83	U	5.3	0.83
78-87-5	1,2-Dichloropropane	0.91	U	5.3	0.91
541-73-1	1,3-Dichlorobenzene	0.87	U	5.3	0.87
142-28-9	1,3-Dichloropropane	1.1	U	5.3	1.1
106-46-7	1,4-Dichlorobenzene	0.94	U	5.3	0.94
594-20-7	2,2-Dichloropropane	1.3	U	5.3	1.3
110-75-8	2-Chloroethyl vinyl ether	9.5	U	53	9.5
95-49-8	2-Chlorotoluene	1.0	U	5.3	1.0
591-78-6	2-Hexanone	4.4	U	21	4.4
108-86-1	Bromobenzene	1.3	U	5.3	1.3
74-97-5	Bromochloromethane	0.64	U	5.3	0.64
106-43-4	4-Chlorotoluene	0.92	U	5.3	0.92
99-87-6	4-Isopropyltoluene	3.2	U	5.3	3.2
67-64-1	Acetone	22	U	27	22
71-43-2	Benzene	0.75	U	5.3	0.75
75-25-2	Bromoform	2.6	U	5.3	2.6
74-83-9	Bromomethane	1.1	U	5.3	1.1
75-15-0	Carbon disulfide	1.2	U	5.3	1.2
56-23-5	Carbon tetrachloride	3.5	U	5.3	3.5
108-90-7	Chlorobenzene	0.98	U	5.3	0.98
75-00-3	Chloroethane	1.3	U	5.3	1.3
67-66-3	Chloroform	0.84	U	5.3	0.84

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-10-12 | Lab Sample ID: 240-106686-3

Matrix: Solid | Lab File ID: UX82202.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:32

Sample wt/vol: 5.42(g) | Date Analyzed: 01/10/2019 10:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.7 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.1	U	5.3	1.1
156-59-2	cis-1,2-Dichloroethene	0.70	U	5.3	0.70
10061-01-5	cis-1,3-Dichloropropene	1.5	U	5.3	1.5
87-68-3	Hexachlorobutadiene	4.0	U	5.3	4.0
74-95-3	Dibromomethane	0.72	U	5.3	0.72
75-27-4	Bromodichloromethane	0.73	U	5.3	0.73
75-71-8	Dichlorodifluoromethane	1.0	U	5.3	1.0
100-41-4	Ethylbenzene	1.1	U	5.3	1.1
106-93-4	1,2-Dibromoethane	0.82	U	5.3	0.82
108-20-3	Diisopropyl ether	0.81	U	11	0.81
91-20-3	Naphthalene	2.9	U	5.3	2.9
104-51-8	n-Butylbenzene	3.7	U	5.3	3.7
98-82-8	Isopropylbenzene	0.89	U	5.3	0.89
103-65-1	N-Propylbenzene	0.78	U	5.3	0.78
78-93-3	2-Butanone (MEK)	3.8	U	21	3.8
108-10-1	4-Methyl-2-pentanone (MIBK)	4.0	U	21	4.0
135-98-8	sec-Butylbenzene	0.92	U	5.3	0.92
1634-04-4	Methyl tert-butyl ether	0.88	U	5.3	0.88
994-05-8	Tert-amyl methyl ether	2.4	U	5.3	2.4
75-09-2	Methylene Chloride	13	U	27	13
100-42-5	Styrene	1.2	U	5.3	1.2
637-92-3	Ethyl tert-butyl ether	2.4	U	5.3	2.4
98-06-6	tert-Butylbenzene	0.97	U	5.3	0.97
127-18-4	Tetrachloroethene	0.78	U	5.3	0.78
108-88-3	Toluene	0.83	U	5.3	0.83
156-60-5	trans-1,2-Dichloroethene	0.50	U	5.3	0.50
10061-02-6	trans-1,3-Dichloropropene	1.1	U	5.3	1.1
79-01-6	Trichloroethene	0.68	U	5.3	0.68
75-69-4	Trichlorofluoromethane	1.2	U	5.3	1.2
108-05-4	Vinyl acetate	2.3	U	11	2.3
75-01-4	Vinyl chloride	0.90	U	5.3	0.90
75-65-0	tert-Butyl alcohol	18	U	210	18
1330-20-7	Xylenes, Total	1.7	U	11	1.7
124-48-1	Chlorodibromomethane	3.0	U	5.3	3.0

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-10-12 | Lab Sample ID: 240-106686-3

Matrix: Solid | Lab File ID: UX82202.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:32

Sample wt/vol: 5.42(g) | Date Analyzed: 01/10/2019 10:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.7 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		48-123
460-00-4	4-Bromofluorobenzene (Surr)	75		49-141
2037-26-5	Toluene-d8 (Surr)	82		62-135
1868-53-7	Dibromofluoromethane (Surr)	94		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-12-13 | Lab Sample ID: 240-106686-4

Matrix: Solid | Lab File ID: UX82203.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:34

Sample wt/vol: 5.23(g) | Date Analyzed: 01/10/2019 10:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.0 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.4	U	5.7	3.4
71-55-6	1,1,1-Trichloroethane	0.93	U	5.7	0.93
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U	5.7	1.6
76-13-1	1,1,2-Trichlorotrifluoroethane	1.5	U	5.7	1.5
75-34-3	1,1-Dichloroethane	0.79	U	5.7	0.79
75-35-4	1,1-Dichloroethene	1.0	U	5.7	1.0
563-58-6	1,1-Dichloropropene	1.1	U	5.7	1.1
87-61-6	1,2,3-Trichlorobenzene	0.65	U	5.7	0.65
96-18-4	1,2,3-Trichloropropane	1.8	U	5.7	1.8
526-73-8	1,2,3-Trimethylbenzene	2.1	U	5.7	2.1
120-82-1	1,2,4-Trichlorobenzene	0.65	U	5.7	0.65
95-63-6	1,2,4-Trimethylbenzene	1.2	U	5.7	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	4.1	U	11	4.1
95-50-1	1,2-Dichlorobenzene	1.3	U	5.7	1.3
107-06-2	1,2-Dichloroethane	0.88	U	5.7	0.88
78-87-5	1,2-Dichloropropane	0.97	U	5.7	0.97
541-73-1	1,3-Dichlorobenzene	0.93	U	5.7	0.93
142-28-9	1,3-Dichloropropane	1.1	U	5.7	1.1
106-46-7	1,4-Dichlorobenzene	1.0	U	5.7	1.0
594-20-7	2,2-Dichloropropane	1.4	U	5.7	1.4
110-75-8	2-Chloroethyl vinyl ether	10	U	57	10
95-49-8	2-Chlorotoluene	1.1	U	5.7	1.1
591-78-6	2-Hexanone	4.7	U	23	4.7
108-86-1	Bromobenzene	1.3	U	5.7	1.3
74-97-5	Bromochloromethane	0.68	U	5.7	0.68
106-43-4	4-Chlorotoluene	0.98	U	5.7	0.98
99-87-6	4-Isopropyltoluene	3.4	U	5.7	3.4
67-64-1	Acetone	24	U	28	24
71-43-2	Benzene	0.79	U	5.7	0.79
75-25-2	Bromoform	2.7	U	5.7	2.7
74-83-9	Bromomethane	1.1	U	5.7	1.1
75-15-0	Carbon disulfide	1.3	U	5.7	1.3
56-23-5	Carbon tetrachloride	3.7	U	5.7	3.7
108-90-7	Chlorobenzene	1.0	U	5.7	1.0
75-00-3	Chloroethane	1.4	U	5.7	1.4
67-66-3	Chloroform	0.90	U	5.7	0.90

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-12-13 | Lab Sample ID: 240-106686-4

Matrix: Solid | Lab File ID: UX82203.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:34

Sample wt/vol: 5.23(g) | Date Analyzed: 01/10/2019 10:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.0 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.2	U	5.7	1.2
156-59-2	cis-1,2-Dichloroethene	0.74	U	5.7	0.74
10061-01-5	cis-1,3-Dichloropropene	1.6	U	5.7	1.6
87-68-3	Hexachlorobutadiene	4.3	U	5.7	4.3
74-95-3	Dibromomethane	0.76	U	5.7	0.76
75-27-4	Bromodichloromethane	0.77	U	5.7	0.77
75-71-8	Dichlorodifluoromethane	1.1	U	5.7	1.1
100-41-4	Ethylbenzene	1.2	U	5.7	1.2
106-93-4	1,2-Dibromoethane	0.88	U	5.7	0.88
108-20-3	Diisopropyl ether	0.86	U	11	0.86
91-20-3	Naphthalene	3.1	U	5.7	3.1
104-51-8	n-Butylbenzene	4.0	U	5.7	4.0
98-82-8	Isopropylbenzene	0.95	U	5.7	0.95
103-65-1	N-Propylbenzene	0.83	U	5.7	0.83
78-93-3	2-Butanone (MEK)	4.0	U	23	4.0
108-10-1	4-Methyl-2-pentanone (MIBK)	4.2	U	23	4.2
135-98-8	sec-Butylbenzene	0.98	U	5.7	0.98
1634-04-4	Methyl tert-butyl ether	0.93	U	5.7	0.93
994-05-8	Tert-amyl methyl ether	2.6	U	5.7	2.6
75-09-2	Methylene Chloride	14	U	28	14
100-42-5	Styrene	1.3	U	5.7	1.3
637-92-3	Ethyl tert-butyl ether	2.6	U	5.7	2.6
98-06-6	tert-Butylbenzene	1.0	U	5.7	1.0
127-18-4	Tetrachloroethene	0.83	U	5.7	0.83
108-88-3	Toluene	0.88	U	5.7	0.88
156-60-5	trans-1,2-Dichloroethene	0.53	U	5.7	0.53
10061-02-6	trans-1,3-Dichloropropene	1.2	U	5.7	1.2
79-01-6	Trichloroethene	0.72	U	5.7	0.72
75-69-4	Trichlorofluoromethane	1.2	U	5.7	1.2
108-05-4	Vinyl acetate	2.4	U	11	2.4
75-01-4	Vinyl chloride	0.95	U	5.7	0.95
75-65-0	tert-Butyl alcohol	19	U	230	19
1330-20-7	Xylenes, Total	1.8	U	11	1.8
124-48-1	Chlorodibromomethane	3.2	U	5.7	3.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-12-13 | Lab Sample ID: 240-106686-4

Matrix: Solid | Lab File ID: UX82203.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:34

Sample wt/vol: 5.23(g) | Date Analyzed: 01/10/2019 10:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.0 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		48-123
460-00-4	4-Bromofluorobenzene (Surr)	73		49-141
2037-26-5	Toluene-d8 (Surr)	83		62-135
1868-53-7	Dibromofluoromethane (Surr)	89		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-8-9 | Lab Sample ID: 240-106686-5

Matrix: Solid | Lab File ID: UX82204.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:50

Sample wt/vol: 5.26(g) | Date Analyzed: 01/10/2019 11:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.4 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.3	U	5.5	3.3
71-55-6	1,1,1-Trichloroethane	0.90	U	5.5	0.90
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U	5.5	1.6
76-13-1	1,1,2-Trichlorotrifluoroethane	1.4	U	5.5	1.4
75-34-3	1,1-Dichloroethane	0.76	U	5.5	0.76
75-35-4	1,1-Dichloroethene	0.99	U	5.5	0.99
563-58-6	1,1-Dichloropropene	1.1	U	5.5	1.1
87-61-6	1,2,3-Trichlorobenzene	0.63	U	5.5	0.63
96-18-4	1,2,3-Trichloropropane	1.7	U	5.5	1.7
526-73-8	1,2,3-Trimethylbenzene	2.0	U	5.5	2.0
120-82-1	1,2,4-Trichlorobenzene	0.63	U	5.5	0.63
95-63-6	1,2,4-Trimethylbenzene	1.1	U	5.5	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	4.0	U	11	4.0
95-50-1	1,2-Dichlorobenzene	1.2	U	5.5	1.2
107-06-2	1,2-Dichloroethane	0.85	U	5.5	0.85
78-87-5	1,2-Dichloropropane	0.93	U	5.5	0.93
541-73-1	1,3-Dichlorobenzene	0.90	U	5.5	0.90
142-28-9	1,3-Dichloropropane	1.1	U	5.5	1.1
106-46-7	1,4-Dichlorobenzene	0.97	U	5.5	0.97
594-20-7	2,2-Dichloropropane	1.3	U	5.5	1.3
110-75-8	2-Chloroethyl vinyl ether	9.8	U	55	9.8
95-49-8	2-Chlorotoluene	1.0	U	5.5	1.0
591-78-6	2-Hexanone	4.5	U	22	4.5
108-86-1	Bromobenzene	1.3	U	5.5	1.3
74-97-5	Bromochloromethane	0.65	U	5.5	0.65
106-43-4	4-Chlorotoluene	0.95	U	5.5	0.95
99-87-6	4-Isopropyltoluene	3.2	U	5.5	3.2
67-64-1	Acetone	23	U	27	23
71-43-2	Benzene	0.77	U	5.5	0.77
75-25-2	Bromoform	2.6	U	5.5	2.6
74-83-9	Bromomethane	1.1	U	5.5	1.1
75-15-0	Carbon disulfide	1.3	U	5.5	1.3
56-23-5	Carbon tetrachloride	3.6	U	5.5	3.6
108-90-7	Chlorobenzene	1.0	U	5.5	1.0
75-00-3	Chloroethane	1.3	U	5.5	1.3
67-66-3	Chloroform	0.86	U	5.5	0.86

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-8-9 | Lab Sample ID: 240-106686-5

Matrix: Solid | Lab File ID: UX82204.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:50

Sample wt/vol: 5.26(g) | Date Analyzed: 01/10/2019 11:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.4 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.1	U	5.5	1.1
156-59-2	cis-1,2-Dichloroethene	0.71	U	5.5	0.71
10061-01-5	cis-1,3-Dichloropropene	1.6	U	5.5	1.6
87-68-3	Hexachlorobutadiene	4.1	U	5.5	4.1
74-95-3	Dibromomethane	0.73	U	5.5	0.73
75-27-4	Bromodichloromethane	0.75	U	5.5	0.75
75-71-8	Dichlorodifluoromethane	1.0	U	5.5	1.0
100-41-4	Ethylbenzene	1.1	U	5.5	1.1
106-93-4	1,2-Dibromoethane	0.85	U	5.5	0.85
108-20-3	Diisopropyl ether	0.83	U	11	0.83
91-20-3	Naphthalene	3.0	U	5.5	3.0
104-51-8	n-Butylbenzene	3.8	U	5.5	3.8
98-82-8	Isopropylbenzene	0.91	U	5.5	0.91
103-65-1	N-Propylbenzene	0.80	U	5.5	0.80
78-93-3	2-Butanone (MEK)	3.9	U	22	3.9
108-10-1	4-Methyl-2-pentanone (MIBK)	4.1	U	22	4.1
135-98-8	sec-Butylbenzene	0.95	U	5.5	0.95
1634-04-4	Methyl tert-butyl ether	0.90	U	5.5	0.90
994-05-8	Tert-amyl methyl ether	2.5	U	5.5	2.5
75-09-2	Methylene Chloride	13	U	27	13
100-42-5	Styrene	1.3	U	5.5	1.3
637-92-3	Ethyl tert-butyl ether	2.5	U	5.5	2.5
98-06-6	tert-Butylbenzene	1.0	U	5.5	1.0
127-18-4	Tetrachloroethene	0.80	U	5.5	0.80
108-88-3	Toluene	0.85	U	5.5	0.85
156-60-5	trans-1,2-Dichloroethene	0.51	U	5.5	0.51
10061-02-6	trans-1,3-Dichloropropene	1.1	U	5.5	1.1
79-01-6	Trichloroethene	0.69	U	5.5	0.69
75-69-4	Trichlorofluoromethane	1.2	U	5.5	1.2
108-05-4	Vinyl acetate	2.3	U	11	2.3
75-01-4	Vinyl chloride	0.92	U	5.5	0.92
75-65-0	tert-Butyl alcohol	18	U	220	18
1330-20-7	Xylenes, Total	1.7	U	11	1.7
124-48-1	Chlorodibromomethane	3.1	U	5.5	3.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-8-9 | Lab Sample ID: 240-106686-5

Matrix: Solid | Lab File ID: UX82204.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:50

Sample wt/vol: 5.26(g) | Date Analyzed: 01/10/2019 11:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.4 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		48-123
460-00-4	4-Bromofluorobenzene (Surr)	70		49-141
2037-26-5	Toluene-d8 (Surr)	82		62-135
1868-53-7	Dibromofluoromethane (Surr)	90		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-9-11 | Lab Sample ID: 240-106686-6

Matrix: Solid | Lab File ID: UX82205.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:52

Sample wt/vol: 5.20(g) | Date Analyzed: 01/10/2019 11:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.5 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.3	U	5.6	3.3
71-55-6	1,1,1-Trichloroethane	0.91	U	5.6	0.91
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U	5.6	1.6
76-13-1	1,1,2-Trichlorotrifluoroethane	1.4	U	5.6	1.4
75-34-3	1,1-Dichloroethane	0.77	U	5.6	0.77
75-35-4	1,1-Dichloroethene	1.0	U	5.6	1.0
563-58-6	1,1-Dichloropropene	1.1	U	5.6	1.1
87-61-6	1,2,3-Trichlorobenzene	0.64	U	5.6	0.64
96-18-4	1,2,3-Trichloropropane	1.7	U	5.6	1.7
526-73-8	1,2,3-Trimethylbenzene	2.0	U	5.6	2.0
120-82-1	1,2,4-Trichlorobenzene	0.64	U	5.6	0.64
95-63-6	1,2,4-Trimethylbenzene	1.1	U	5.6	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	4.0	U	11	4.0
95-50-1	1,2-Dichlorobenzene	1.2	U	5.6	1.2
107-06-2	1,2-Dichloroethane	0.86	U	5.6	0.86
78-87-5	1,2-Dichloropropane	0.95	U	5.6	0.95
541-73-1	1,3-Dichlorobenzene	0.91	U	5.6	0.91
142-28-9	1,3-Dichloropropane	1.1	U	5.6	1.1
106-46-7	1,4-Dichlorobenzene	0.98	U	5.6	0.98
594-20-7	2,2-Dichloropropane	1.3	U	5.6	1.3
110-75-8	2-Chloroethyl vinyl ether	9.9	U	56	9.9
95-49-8	2-Chlorotoluene	1.1	U	5.6	1.1
591-78-6	2-Hexanone	4.5	U	22	4.5
108-86-1	Bromobenzene	1.3	U	5.6	1.3
74-97-5	Bromochloromethane	0.66	U	5.6	0.66
106-43-4	4-Chlorotoluene	0.96	U	5.6	0.96
99-87-6	4-Isopropyltoluene	3.3	U	5.6	3.3
67-64-1	Acetone	23	U	28	23
71-43-2	Benzene	0.78	U	5.6	0.78
75-25-2	Bromoform	2.7	U	5.6	2.7
74-83-9	Bromomethane	1.1	U	5.6	1.1
75-15-0	Carbon disulfide	1.3	U	5.6	1.3
56-23-5	Carbon tetrachloride	3.6	U	5.6	3.6
108-90-7	Chlorobenzene	1.0	U	5.6	1.0
75-00-3	Chloroethane	1.4	U	5.6	1.4
67-66-3	Chloroform	0.88	U	5.6	0.88

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-9-11 | Lab Sample ID: 240-106686-6

Matrix: Solid | Lab File ID: UX82205.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:52

Sample wt/vol: 5.20(g) | Date Analyzed: 01/10/2019 11:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.5 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.2	U	5.6	1.2
156-59-2	cis-1,2-Dichloroethene	0.72	U	5.6	0.72
10061-01-5	cis-1,3-Dichloropropene	1.6	U	5.6	1.6
87-68-3	Hexachlorobutadiene	4.2	U	5.6	4.2
74-95-3	Dibromomethane	0.74	U	5.6	0.74
75-27-4	Bromodichloromethane	0.76	U	5.6	0.76
75-71-8	Dichlorodifluoromethane	1.0	U	5.6	1.0
100-41-4	Ethylbenzene	1.2	U	5.6	1.2
106-93-4	1,2-Dibromoethane	0.86	U	5.6	0.86
108-20-3	Diisopropyl ether	0.84	U	11	0.84
91-20-3	Naphthalene	3.0	U	5.6	3.0
104-51-8	n-Butylbenzene	3.9	U	5.6	3.9
98-82-8	Isopropylbenzene	0.93	U	5.6	0.93
103-65-1	N-Propylbenzene	0.81	U	5.6	0.81
78-93-3	2-Butanone (MEK)	4.0	U	22	4.0
108-10-1	4-Methyl-2-pentanone (MIBK)	4.1	U	22	4.1
135-98-8	sec-Butylbenzene	0.96	U	5.6	0.96
1634-04-4	Methyl tert-butyl ether	0.91	U	5.6	0.91
994-05-8	Tert-amyl methyl ether	2.5	U	5.6	2.5
75-09-2	Methylene Chloride	13	U	28	13
100-42-5	Styrene	1.3	U	5.6	1.3
637-92-3	Ethyl tert-butyl ether	2.5	U	5.6	2.5
98-06-6	tert-Butylbenzene	1.0	U	5.6	1.0
127-18-4	Tetrachloroethene	0.81	U	5.6	0.81
108-88-3	Toluene	0.86	U	5.6	0.86
156-60-5	trans-1,2-Dichloroethene	0.52	U	5.6	0.52
10061-02-6	trans-1,3-Dichloropropene	1.1	U	5.6	1.1
79-01-6	Trichloroethene	0.70	U	5.6	0.70
75-69-4	Trichlorofluoromethane	1.2	U	5.6	1.2
108-05-4	Vinyl acetate	2.4	U	11	2.4
75-01-4	Vinyl chloride	0.93	U	5.6	0.93
75-65-0	tert-Butyl alcohol	18	U	220	18
1330-20-7	Xylenes, Total	1.8	U	11	1.8
124-48-1	Chlorodibromomethane	3.1	U	5.6	3.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-9-11 | Lab Sample ID: 240-106686-6

Matrix: Solid | Lab File ID: UX82205.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:52

Sample wt/vol: 5.20(g) | Date Analyzed: 01/10/2019 11:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.5 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		48-123
460-00-4	4-Bromofluorobenzene (Surr)	73		49-141
2037-26-5	Toluene-d8 (Surr)	86		62-135
1868-53-7	Dibromofluoromethane (Surr)	90		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-11-12 | Lab Sample ID: 240-106686-7

Matrix: Solid | Lab File ID: UX82206.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:54

Sample wt/vol: 5.02(g) | Date Analyzed: 01/10/2019 11:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.7 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.6	U	6.0	3.6
71-55-6	1,1,1-Trichloroethane	0.98	U	6.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.7	U	6.0	1.7
76-13-1	1,1,2-Trichlorotrifluoroethane	1.5	U	6.0	1.5
75-34-3	1,1-Dichloroethane	0.83	U	6.0	0.83
75-35-4	1,1-Dichloroethene	1.1	U	6.0	1.1
563-58-6	1,1-Dichloropropene	1.2	U	6.0	1.2
87-61-6	1,2,3-Trichlorobenzene	0.69	U	6.0	0.69
96-18-4	1,2,3-Trichloropropane	1.9	U	6.0	1.9
526-73-8	1,2,3-Trimethylbenzene	2.2	U	6.0	2.2
120-82-1	1,2,4-Trichlorobenzene	0.68	U	6.0	0.68
95-63-6	1,2,4-Trimethylbenzene	1.2	U	6.0	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	4.3	U	12	4.3
95-50-1	1,2-Dichlorobenzene	1.3	U	6.0	1.3
107-06-2	1,2-Dichloroethane	0.92	U	6.0	0.92
78-87-5	1,2-Dichloropropane	1.0	U	6.0	1.0
541-73-1	1,3-Dichlorobenzene	0.98	U	6.0	0.98
142-28-9	1,3-Dichloropropane	1.2	U	6.0	1.2
106-46-7	1,4-Dichlorobenzene	1.1	U	6.0	1.1
594-20-7	2,2-Dichloropropane	1.4	U	6.0	1.4
110-75-8	2-Chloroethyl vinyl ether	11	U	60	11
95-49-8	2-Chlorotoluene	1.1	U	6.0	1.1
591-78-6	2-Hexanone	4.9	U	24	4.9
108-86-1	Bromobenzene	1.4	U	6.0	1.4
74-97-5	Bromochloromethane	0.71	U	6.0	0.71
106-43-4	4-Chlorotoluene	1.0	U	6.0	1.0
99-87-6	4-Isopropyltoluene	3.5	U	6.0	3.5
67-64-1	Acetone	25	U	30	25
71-43-2	Benzene	0.83	U	6.0	0.83
75-25-2	Bromoform	2.9	U	6.0	2.9
74-83-9	Bromomethane	1.2	U	6.0	1.2
75-15-0	Carbon disulfide	1.4	U	6.0	1.4
56-23-5	Carbon tetrachloride	3.9	U	6.0	3.9
108-90-7	Chlorobenzene	1.1	U	6.0	1.1
75-00-3	Chloroethane	1.5	U	6.0	1.5
67-66-3	Chloroform	0.94	U	6.0	0.94

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-11-12 | Lab Sample ID: 240-106686-7

Matrix: Solid | Lab File ID: UX82206.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:54

Sample wt/vol: 5.02(g) | Date Analyzed: 01/10/2019 11:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.7 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.2	U	6.0	1.2
156-59-2	cis-1,2-Dichloroethene	0.78	U	6.0	0.78
10061-01-5	cis-1,3-Dichloropropene	1.7	U	6.0	1.7
87-68-3	Hexachlorobutadiene	4.5	U	6.0	4.5
74-95-3	Dibromomethane	0.80	U	6.0	0.80
75-27-4	Bromodichloromethane	0.81	U	6.0	0.81
75-71-8	Dichlorodifluoromethane	1.1	U	6.0	1.1
100-41-4	Ethylbenzene	1.3	U	6.0	1.3
106-93-4	1,2-Dibromoethane	0.92	U	6.0	0.92
108-20-3	Diisopropyl ether	0.91	U	12	0.91
91-20-3	Naphthalene	3.2	U	6.0	3.2
104-51-8	n-Butylbenzene	4.1	U	6.0	4.1
98-82-8	Isopropylbenzene	0.99	U	6.0	0.99
103-65-1	N-Propylbenzene	0.88	U	6.0	0.88
78-93-3	2-Butanone (MEK)	4.3	U	24	4.3
108-10-1	4-Methyl-2-pentanone (MIBK)	4.4	U	24	4.4
135-98-8	sec-Butylbenzene	1.0	U	6.0	1.0
1634-04-4	Methyl tert-butyl ether	0.98	U	6.0	0.98
994-05-8	Tert-amyl methyl ether	2.7	U	6.0	2.7
75-09-2	Methylene Chloride	14	U	30	14
100-42-5	Styrene	1.4	U	6.0	1.4
637-92-3	Ethyl tert-butyl ether	2.7	U	6.0	2.7
98-06-6	tert-Butylbenzene	1.1	U	6.0	1.1
127-18-4	Tetrachloroethene	0.87	U	6.0	0.87
108-88-3	Toluene	0.92	U	6.0	0.92
156-60-5	trans-1,2-Dichloroethene	0.56	U	6.0	0.56
10061-02-6	trans-1,3-Dichloropropene	1.2	U	6.0	1.2
79-01-6	Trichloroethene	0.76	U	6.0	0.76
75-69-4	Trichlorofluoromethane	1.3	U	6.0	1.3
108-05-4	Vinyl acetate	2.5	U	12	2.5
75-01-4	Vinyl chloride	1.0	U	6.0	1.0
75-65-0	tert-Butyl alcohol	20	U	240	20
1330-20-7	Xylenes, Total	1.9	U	12	1.9
124-48-1	Chlorodibromomethane	3.3	U	6.0	3.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-11-12 | Lab Sample ID: 240-106686-7

Matrix: Solid | Lab File ID: UX82206.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:54

Sample wt/vol: 5.02(g) | Date Analyzed: 01/10/2019 11:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.7 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		48-123
460-00-4	4-Bromofluorobenzene (Surr)	75		49-141
2037-26-5	Toluene-d8 (Surr)	85		62-135
1868-53-7	Dibromofluoromethane (Surr)	92		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-9-10 | Lab Sample ID: 240-106686-8

Matrix: Solid | Lab File ID: UX82207.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:42

Sample wt/vol: 5.03(g) | Date Analyzed: 01/10/2019 12:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.5 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.5	U	6.0	3.5
71-55-6	1,1,1-Trichloroethane	0.98	U	6.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.7	U	6.0	1.7
76-13-1	1,1,2-Trichlorotrifluoroethane	1.5	U	6.0	1.5
75-34-3	1,1-Dichloroethane	0.83	U	6.0	0.83
75-35-4	1,1-Dichloroethene	1.1	U	6.0	1.1
563-58-6	1,1-Dichloropropene	1.2	U	6.0	1.2
87-61-6	1,2,3-Trichlorobenzene	0.68	U	6.0	0.68
96-18-4	1,2,3-Trichloropropane	1.9	U	6.0	1.9
526-73-8	1,2,3-Trimethylbenzene	2.2	U	6.0	2.2
120-82-1	1,2,4-Trichlorobenzene	0.68	U	6.0	0.68
95-63-6	1,2,4-Trimethylbenzene	1.2	U	6.0	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	4.3	U	12	4.3
95-50-1	1,2-Dichlorobenzene	1.3	U	6.0	1.3
107-06-2	1,2-Dichloroethane	0.92	U	6.0	0.92
78-87-5	1,2-Dichloropropane	1.0	U	6.0	1.0
541-73-1	1,3-Dichlorobenzene	0.97	U	6.0	0.97
142-28-9	1,3-Dichloropropane	1.2	U	6.0	1.2
106-46-7	1,4-Dichlorobenzene	1.1	U	6.0	1.1
594-20-7	2,2-Dichloropropane	1.4	U	6.0	1.4
110-75-8	2-Chloroethyl vinyl ether	11	U	60	11
95-49-8	2-Chlorotoluene	1.1	U	6.0	1.1
591-78-6	2-Hexanone	4.9	U	24	4.9
108-86-1	Bromobenzene	1.4	U	6.0	1.4
74-97-5	Bromochloromethane	0.71	U	6.0	0.71
106-43-4	4-Chlorotoluene	1.0	U	6.0	1.0
99-87-6	4-Isopropyltoluene	3.5	U	6.0	3.5
67-64-1	Acetone	25	U	30	25
71-43-2	Benzene	0.83	U	6.0	0.83
75-25-2	Bromoform	2.9	U	6.0	2.9
74-83-9	Bromomethane	1.2	U	6.0	1.2
75-15-0	Carbon disulfide	1.4	U	6.0	1.4
56-23-5	Carbon tetrachloride	3.9	U	6.0	3.9
108-90-7	Chlorobenzene	1.1	U	6.0	1.1
75-00-3	Chloroethane	1.5	U	6.0	1.5
67-66-3	Chloroform	0.94	U	6.0	0.94

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-9-10 | Lab Sample ID: 240-106686-8

Matrix: Solid | Lab File ID: UX82207.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:42

Sample wt/vol: 5.03(g) | Date Analyzed: 01/10/2019 12:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.5 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.2	U	6.0	1.2
156-59-2	cis-1,2-Dichloroethene	0.78	U	6.0	0.78
10061-01-5	cis-1,3-Dichloropropene	1.7	U	6.0	1.7
87-68-3	Hexachlorobutadiene	4.5	U	6.0	4.5
74-95-3	Dibromomethane	0.80	U	6.0	0.80
75-27-4	Bromodichloromethane	0.81	U	6.0	0.81
75-71-8	Dichlorodifluoromethane	1.1	U	6.0	1.1
100-41-4	Ethylbenzene	1.2	U	6.0	1.2
106-93-4	1,2-Dibromoethane	0.92	U	6.0	0.92
108-20-3	Diisopropyl ether	0.90	U	12	0.90
91-20-3	Naphthalene	3.2	U	6.0	3.2
104-51-8	n-Butylbenzene	4.1	U	6.0	4.1
98-82-8	Isopropylbenzene	0.99	U	6.0	0.99
103-65-1	N-Propylbenzene	0.87	U	6.0	0.87
78-93-3	2-Butanone (MEK)	4.2	U	24	4.2
108-10-1	4-Methyl-2-pentanone (MIBK)	4.4	U	24	4.4
135-98-8	sec-Butylbenzene	1.0	U	6.0	1.0
1634-04-4	Methyl tert-butyl ether	0.98	U	6.0	0.98
994-05-8	Tert-amyl methyl ether	2.7	U	6.0	2.7
75-09-2	Methylene Chloride	14	U	30	14
100-42-5	Styrene	1.4	U	6.0	1.4
637-92-3	Ethyl tert-butyl ether	2.7	U	6.0	2.7
98-06-6	tert-Butylbenzene	1.1	U	6.0	1.1
127-18-4	Tetrachloroethene	0.87	U	6.0	0.87
108-88-3	Toluene	0.92	U	6.0	0.92
156-60-5	trans-1,2-Dichloroethene	0.55	U	6.0	0.55
10061-02-6	trans-1,3-Dichloropropene	1.2	U	6.0	1.2
79-01-6	Trichloroethene	0.75	U	6.0	0.75
75-69-4	Trichlorofluoromethane	1.3	U	6.0	1.3
108-05-4	Vinyl acetate	2.5	U	12	2.5
75-01-4	Vinyl chloride	1.0	U	6.0	1.0
75-65-0	tert-Butyl alcohol	20	U	240	20
1330-20-7	Xylenes, Total	1.9	U	12	1.9
124-48-1	Chlorodibromomethane	3.3	U	6.0	3.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-9-10 | Lab Sample ID: 240-106686-8

Matrix: Solid | Lab File ID: UX82207.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:42

Sample wt/vol: 5.03(g) | Date Analyzed: 01/10/2019 12:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.5 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		48-123
460-00-4	4-Bromofluorobenzene (Surr)	72		49-141
2037-26-5	Toluene-d8 (Surr)	84		62-135
1868-53-7	Dibromofluoromethane (Surr)	90		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-10-11 | Lab Sample ID: 240-106686-9

Matrix: Solid | Lab File ID: UX82208.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:44

Sample wt/vol: 5.11(g) | Date Analyzed: 01/10/2019 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 15.1 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.4	U	5.8	3.4
71-55-6	1,1,1-Trichloroethane	0.95	U	5.8	0.95
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U	5.8	1.6
76-13-1	1,1,2-Trichlorotrifluoroethane	1.5	U	5.8	1.5
75-34-3	1,1-Dichloroethane	0.80	U	5.8	0.80
75-35-4	1,1-Dichloroethene	1.0	U	5.8	1.0
563-58-6	1,1-Dichloropropene	1.1	U	5.8	1.1
87-61-6	1,2,3-Trichlorobenzene	0.66	U	5.8	0.66
96-18-4	1,2,3-Trichloropropane	1.8	U	5.8	1.8
526-73-8	1,2,3-Trimethylbenzene	2.1	U	5.8	2.1
120-82-1	1,2,4-Trichlorobenzene	0.66	U	5.8	0.66
95-63-6	1,2,4-Trimethylbenzene	1.2	U	5.8	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	4.2	U	12	4.2
95-50-1	1,2-Dichlorobenzene	1.3	U	5.8	1.3
107-06-2	1,2-Dichloroethane	0.89	U	5.8	0.89
78-87-5	1,2-Dichloropropane	0.98	U	5.8	0.98
541-73-1	1,3-Dichlorobenzene	0.94	U	5.8	0.94
142-28-9	1,3-Dichloropropane	1.1	U	5.8	1.1
106-46-7	1,4-Dichlorobenzene	1.0	U	5.8	1.0
594-20-7	2,2-Dichloropropane	1.4	U	5.8	1.4
110-75-8	2-Chloroethyl vinyl ether	10	U	58	10
95-49-8	2-Chlorotoluene	1.1	U	5.8	1.1
591-78-6	2-Hexanone	4.7	U	23	4.7
108-86-1	Bromobenzene	1.3	U	5.8	1.3
74-97-5	Bromochloromethane	0.68	U	5.8	0.68
106-43-4	4-Chlorotoluene	0.99	U	5.8	0.99
99-87-6	4-Isopropyltoluene	3.4	U	5.8	3.4
67-64-1	Acetone	24	U	29	24
71-43-2	Benzene	0.80	U	5.8	0.80
75-25-2	Bromoform	2.8	U	5.8	2.8
74-83-9	Bromomethane	1.1	U	5.8	1.1
75-15-0	Carbon disulfide	1.3	U	5.8	1.3
56-23-5	Carbon tetrachloride	3.7	U	5.8	3.7
108-90-7	Chlorobenzene	1.1	U	5.8	1.1
75-00-3	Chloroethane	1.4	U	5.8	1.4
67-66-3	Chloroform	0.91	U	5.8	0.91

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-10-11 | Lab Sample ID: 240-106686-9

Matrix: Solid | Lab File ID: UX82208.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:44

Sample wt/vol: 5.11(g) | Date Analyzed: 01/10/2019 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 15.1 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.2	U	5.8	1.2
156-59-2	cis-1,2-Dichloroethene	0.75	U	5.8	0.75
10061-01-5	cis-1,3-Dichloropropene	1.7	U	5.8	1.7
87-68-3	Hexachlorobutadiene	4.3	U	5.8	4.3
74-95-3	Dibromomethane	0.77	U	5.8	0.77
75-27-4	Bromodichloromethane	0.78	U	5.8	0.78
75-71-8	Dichlorodifluoromethane	1.1	U	5.8	1.1
100-41-4	Ethylbenzene	1.2	U	5.8	1.2
106-93-4	1,2-Dibromoethane	0.89	U	5.8	0.89
108-20-3	Diisopropyl ether	0.87	U	12	0.87
91-20-3	Naphthalene	3.1	U	5.8	3.1
104-51-8	n-Butylbenzene	4.0	U	5.8	4.0
98-82-8	Isopropylbenzene	0.96	U	5.8	0.96
103-65-1	N-Propylbenzene	0.84	U	5.8	0.84
78-93-3	2-Butanone (MEK)	4.1	U	23	4.1
108-10-1	4-Methyl-2-pentanone (MIBK)	4.3	U	23	4.3
135-98-8	sec-Butylbenzene	1.0	U	5.8	1.0
1634-04-4	Methyl tert-butyl ether	0.95	U	5.8	0.95
994-05-8	Tert-amyl methyl ether	2.6	U	5.8	2.6
75-09-2	Methylene Chloride	14	U	29	14
100-42-5	Styrene	1.3	U	5.8	1.3
637-92-3	Ethyl tert-butyl ether	2.6	U	5.8	2.6
98-06-6	tert-Butylbenzene	1.0	U	5.8	1.0
127-18-4	Tetrachloroethene	0.84	U	5.8	0.84
108-88-3	Toluene	0.89	U	5.8	0.89
156-60-5	trans-1,2-Dichloroethene	0.54	U	5.8	0.54
10061-02-6	trans-1,3-Dichloropropene	1.2	U	5.8	1.2
79-01-6	Trichloroethene	0.73	U	5.8	0.73
75-69-4	Trichlorofluoromethane	1.2	U	5.8	1.2
108-05-4	Vinyl acetate	2.5	U	12	2.5
75-01-4	Vinyl chloride	0.96	U	5.8	0.96
75-65-0	tert-Butyl alcohol	19	U	230	19
1330-20-7	Xylenes, Total	1.8	U	12	1.8
124-48-1	Chlorodibromomethane	3.2	U	5.8	3.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-10-11 | Lab Sample ID: 240-106686-9

Matrix: Solid | Lab File ID: UX82208.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:44

Sample wt/vol: 5.11(g) | Date Analyzed: 01/10/2019 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 15.1 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		48-123
460-00-4	4-Bromofluorobenzene (Surr)	76		49-141
2037-26-5	Toluene-d8 (Surr)	85		62-135
1868-53-7	Dibromofluoromethane (Surr)	95		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-11-12 | Lab Sample ID: 240-106686-10

Matrix: Solid | Lab File ID: UX82209.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:46

Sample wt/vol: 5.39(g) | Date Analyzed: 01/10/2019 13:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 15.2 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.3	U	5.5	3.3
71-55-6	1,1,1-Trichloroethane	0.90	U	5.5	0.90
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U	5.5	1.6
76-13-1	1,1,2-Trichlorotrifluoroethane	1.4	U	5.5	1.4
75-34-3	1,1-Dichloroethane	0.76	U	5.5	0.76
75-35-4	1,1-Dichloroethene	0.99	U	5.5	0.99
563-58-6	1,1-Dichloropropene	1.1	U	5.5	1.1
87-61-6	1,2,3-Trichlorobenzene	0.63	U	5.5	0.63
96-18-4	1,2,3-Trichloropropane	1.7	U	5.5	1.7
526-73-8	1,2,3-Trimethylbenzene	2.0	U	5.5	2.0
120-82-1	1,2,4-Trichlorobenzene	0.63	U	5.5	0.63
95-63-6	1,2,4-Trimethylbenzene	1.1	U	5.5	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	3.9	U	11	3.9
95-50-1	1,2-Dichlorobenzene	1.2	U	5.5	1.2
107-06-2	1,2-Dichloroethane	0.84	U	5.5	0.84
78-87-5	1,2-Dichloropropane	0.93	U	5.5	0.93
541-73-1	1,3-Dichlorobenzene	0.89	U	5.5	0.89
142-28-9	1,3-Dichloropropane	1.1	U	5.5	1.1
106-46-7	1,4-Dichlorobenzene	0.96	U	5.5	0.96
594-20-7	2,2-Dichloropropane	1.3	U	5.5	1.3
110-75-8	2-Chloroethyl vinyl ether	9.7	U	55	9.7
95-49-8	2-Chlorotoluene	1.0	U	5.5	1.0
591-78-6	2-Hexanone	4.5	U	22	4.5
108-86-1	Bromobenzene	1.3	U	5.5	1.3
74-97-5	Bromochloromethane	0.65	U	5.5	0.65
106-43-4	4-Chlorotoluene	0.94	U	5.5	0.94
99-87-6	4-Isopropyltoluene	3.2	U	5.5	3.2
67-64-1	Acetone	23	U	27	23
71-43-2	Benzene	0.76	U	5.5	0.76
75-25-2	Bromoform	2.6	U	5.5	2.6
74-83-9	Bromomethane	1.1	U	5.5	1.1
75-15-0	Carbon disulfide	1.3	U	5.5	1.3
56-23-5	Carbon tetrachloride	3.6	U	5.5	3.6
108-90-7	Chlorobenzene	1.0	U	5.5	1.0
75-00-3	Chloroethane	1.3	U	5.5	1.3
67-66-3	Chloroform	0.86	U	5.5	0.86

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-11-12 | Lab Sample ID: 240-106686-10

Matrix: Solid | Lab File ID: UX82209.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:46

Sample wt/vol: 5.39(g) | Date Analyzed: 01/10/2019 13:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 15.2 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.1	U	5.5	1.1
156-59-2	cis-1,2-Dichloroethene	0.71	U	5.5	0.71
10061-01-5	cis-1,3-Dichloropropene	1.6	U	5.5	1.6
87-68-3	Hexachlorobutadiene	4.1	U	5.5	4.1
74-95-3	Dibromomethane	0.73	U	5.5	0.73
75-27-4	Bromodichloromethane	0.74	U	5.5	0.74
75-71-8	Dichlorodifluoromethane	1.0	U	5.5	1.0
100-41-4	Ethylbenzene	1.1	U	5.5	1.1
106-93-4	1,2-Dibromoethane	0.84	U	5.5	0.84
108-20-3	Diisopropyl ether	0.83	U	11	0.83
91-20-3	Naphthalene	3.0	U	5.5	3.0
104-51-8	n-Butylbenzene	3.8	U	5.5	3.8
98-82-8	Isopropylbenzene	0.91	U	5.5	0.91
103-65-1	N-Propylbenzene	0.80	U	5.5	0.80
78-93-3	2-Butanone (MEK)	3.9	U	22	3.9
108-10-1	4-Methyl-2-pentanone (MIBK)	4.1	U	22	4.1
135-98-8	sec-Butylbenzene	0.94	U	5.5	0.94
1634-04-4	Methyl tert-butyl ether	0.90	U	5.5	0.90
994-05-8	Tert-amyl methyl ether	2.5	U	5.5	2.5
75-09-2	Methylene Chloride	13	U	27	13
100-42-5	Styrene	1.3	U	5.5	1.3
637-92-3	Ethyl tert-butyl ether	2.5	U	5.5	2.5
98-06-6	tert-Butylbenzene	0.99	U	5.5	0.99
127-18-4	Tetrachloroethene	0.80	U	5.5	0.80
108-88-3	Toluene	0.85	U	5.5	0.85
156-60-5	trans-1,2-Dichloroethene	0.51	U	5.5	0.51
10061-02-6	trans-1,3-Dichloropropene	1.1	U	5.5	1.1
79-01-6	Trichloroethene	0.69	U	5.5	0.69
75-69-4	Trichlorofluoromethane	1.2	U	5.5	1.2
108-05-4	Vinyl acetate	2.3	U	11	2.3
75-01-4	Vinyl chloride	0.92	U	5.5	0.92
75-65-0	tert-Butyl alcohol	18	U	220	18
1330-20-7	Xylenes, Total	1.7	U	11	1.7
124-48-1	Chlorodibromomethane	3.0	U	5.5	3.0

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-11-12 | Lab Sample ID: 240-106686-10

Matrix: Solid | Lab File ID: UX82209.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:46

Sample wt/vol: 5.39(g) | Date Analyzed: 01/10/2019 13:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 15.2 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		48-123
460-00-4	4-Bromofluorobenzene (Surr)	69		49-141
2037-26-5	Toluene-d8 (Surr)	81		62-135
1868-53-7	Dibromofluoromethane (Surr)	91		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: TB-010819 | Lab Sample ID: 240-106686-1

Matrix: Water | Lab File ID: UXJ7833.D

Analysis Method: 8260C | Date Collected: 01/08/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 01/21/2019 14:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 364762 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: TB-010819 | Lab Sample ID: 240-106686-1

Matrix: Water | Lab File ID: UXJ7833.D

Analysis Method: 8260C | Date Collected: 01/08/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 01/21/2019 14:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 364762 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: TB-010819 | Lab Sample ID: 240-106686-1

Matrix: Water | Lab File ID: UXJ7833.D

Analysis Method: 8260C | Date Collected: 01/08/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 01/21/2019 14:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 364762 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		70-121
460-00-4	4-Bromofluorobenzene (Surr)	78		59-120
2037-26-5	Toluene-d8 (Surr)	79		70-123
1868-53-7	Dibromofluoromethane (Surr)	112		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: TB-010819 | Lab Sample ID: 240-106686-1

Matrix: Water | Lab File ID: UXX9154.D

Analysis Method: 8260C | Date Collected: 01/08/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 01/18/2019 15:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 364651 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		70-121
460-00-4	4-Bromofluorobenzene (Surr)	95		59-120
2037-26-5	Toluene-d8 (Surr)	100		70-123
1868-53-7	Dibromofluoromethane (Surr)	94		75-128

Appendix C

Support Documentation

0.5/0.5

North Canton
4101 Shuffel Street, N. W.

North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

Chain of Custody Record

Baltimore #201

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Mike Martin	Site Contact: Mullis/Larson	Date: 1/8/2019	COC No:
Tetra Tech	Tel: (301) 528-3021	Lab Contact: John McFadden	Carrier: Fedex	1 of 1 COCs
20251 Century Blvd, Suite 200	**Analysis Turnaround Time**			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) _____			
(301) 528-3021 Phone	TAT if different from Below: **STANDARD TAT**			SDG No.
(301) 528-3000 FAX	☐ 2 weeks			
Project Name: MRC BLOCK E/F MASS DISCHARGE	☐ 1 week			Sampler: Mullis/Larson
Site: MRC BLOCK E	☐ 2 days			
PO # 112IC08784	☐ 1 day			Sample Specific Notes:

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (8260)
TB-010819	1/8/2019	0000	GRAB	WATER	2		x
SB-MW154-9-10	1/8/2019	1230	GRAB	SOIL	1		x
SB-MW154-10-12	1/8/2019	1232	GRAB	SOIL	1		x
SB-MW154-12-13	1/8/2019	1234	GRAB	SOIL	1		x
SB-MW155-8-9	1/8/2019	1350	GRAB	SOIL	1		x
SB-MW155-9-11	1/8/2019	1352	GRAB	SOIL	1		x
SB-MW155-11-12	1/8/2019	1354	GRAB	SOIL	1		x
SB-MW158-9-10	1/8/2019	1442	GRAB	SOIL	1		x
SB-MW158-10-11	1/8/2019	1444	GRAB	SOIL	1		x
SB-MW158-11-12	1/8/2019	1446	GRAB	SOIL	1		x
						2	

240-106686 Chain of Custody

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Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: Block E/F Mass discharge well installation project, clay layer A/B boundary soil samples for VOC analysis.

Relinquished by:	Company: Tetra Tech Inc	Date/Time: 1/8/19 1600	Received by:	Company: TestAmerica	Date/Time: 1-9-2019 1600
Relinquished by:	Company: TA 1/8/19	Date/Time: 1700	Received by:	Company: TA	Date/Time: 1-9-19 0940
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass Discharge

Report Number: 240-106686-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 1/9/2019 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.5º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples SB-MW154-9-10 (240-106686-2), SB-MW154-10-12 (240-106686-3), SB-MW154-12-13 (240-106686-4), SB-MW155-8-9 (240-106686-5), SB-MW155-9-11 (240-106686-6), SB-MW155-11-12 (240-106686-7), SB-MW158-9-10 (240-106686-8), SB-MW158-10-11 (240-106686-9) and SB-MW158-11-12 (240-106686-10) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared and analyzed on 01/10/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Sample TB-010819 (240-106686-1) was analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The sample was analyzed on 01/18/2019 and 01/21/2019.

Methylene Chloride was detected in method blank MB 240-364762/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-364651.

The continuing calibration verification (CCV) for analytical batch 364762 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TB-010819 (240-106686-1)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following sample was received preserved with hydrochloric acid:TB-010819 (240-106686-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples SB-MW154-9-10 (240-106686-2), SB-MW154-10-12 (240-106686-3), SB-MW154-12-13 (240-106686-4), SB-MW155-8-9 (240-106686-5), SB-MW155-9-11 (240-106686-6), SB-MW155-11-12 (240-106686-7), SB-MW158-9-10 (240-106686-8), SB-MW158-10-11 (240-106686-9) and SB-MW158-11-12 (240-106686-10) were analyzed for percent solids in accordance with ASTM Method D2216-80. The samples were analyzed on 01/10/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-106686-1
Project/Site: MRC Block E/F Mass Discharge

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN
5030A	Purge and Trap	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-106686-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-106686-1	TB-010819	Water	01/08/19 00:00	01/09/19 09:40
240-106686-2	SB-MW154-9-10	Solid	01/08/19 12:30	01/09/19 09:40
240-106686-3	SB-MW154-10-12	Solid	01/08/19 12:32	01/09/19 09:40
240-106686-4	SB-MW154-12-13	Solid	01/08/19 12:34	01/09/19 09:40
240-106686-5	SB-MW155-8-9	Solid	01/08/19 13:50	01/09/19 09:40
240-106686-6	SB-MW155-9-11	Solid	01/08/19 13:52	01/09/19 09:40
240-106686-7	SB-MW155-11-12	Solid	01/08/19 13:54	01/09/19 09:40
240-106686-8	SB-MW158-9-10	Solid	01/08/19 14:42	01/09/19 09:40
240-106686-9	SB-MW158-10-11	Solid	01/08/19 14:44	01/09/19 09:40
240-106686-10	SB-MW158-11-12	Solid	01/08/19 14:46	01/09/19 09:40

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
SB-MW154-9-10	240-106686-2	91	95	80	74
SB-MW154-10-12	240-106686-3	94	95	82	75
SB-MW154-12-13	240-106686-4	89	92	83	73
SB-MW155-8-9	240-106686-5	90	95	82	70
SB-MW155-9-11	240-106686-6	90	93	86	73
SB-MW155-11-12	240-106686-7	92	95	85	75
SB-MW158-9-10	240-106686-8	90	93	84	72
SB-MW158-10-11	240-106686-9	95	100	85	76
SB-MW158-11-12	240-106686-10	91	93	81	69
	MB 240-363459/8	87	93	83	77
	LCS 240-363459/9	88	89	85	85
SB-MW158-11-12 MS	240-106686-10 MS	93	92	90	87
SB-MW158-11-12 MSD	240-106686-10 MSD	89	88	89	87

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	49-132
DCA = 1,2-Dichloroethane-d4 (Surr)	48-123
TOL = Toluene-d8 (Surr)	62-135
BFB = 4-Bromofluorobenzene (Surr)	49-141

Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82188.D

Lab ID: LCS 240-363459/9 Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	22.3	89	73-124	
1,1,1-Trichloroethane	25.0	21.4	85	64-135	
1,1,2,2-Tetrachloroethane	25.0	25.9	104	68-128	
1,1,2-Trichlorotrifluoroethane	25.0	21.8	87	56-138	
1,1-Dichloroethane	25.0	21.0	84	72-122	
1,1-Dichloroethene	25.0	21.8	87	57-139	
1,1-Dichloropropene	25.0	22.9	92	72-127	
1,2,3-Trichlorobenzene	25.0	20.0	80	59-120	
1,2,3-Trichloropropane	25.0	24.8	99	68-128	
1,2,4-Trichlorobenzene	25.0	19.5	78	54-120	
1,2,4-Trimethylbenzene	25.0	20.6	82	75-121	
1,2-Dibromo-3-Chloropropane	25.0	21.9	88	38-135	
1,2-Dichlorobenzene	25.0	21.6	87	73-120	
1,2-Dichloroethane	25.0	22.7	91	64-126	
1,2-Dichloropropane	25.0	22.4	90	78-122	
1,3-Dichlorobenzene	25.0	20.9	84	70-120	
1,3-Dichloropropane	25.0	23.3	93	76-120	
1,4-Dichlorobenzene	25.0	20.2	81	71-120	
2,2-Dichloropropane	25.0	16.4	66	42-143	
2-Chloroethyl vinyl ether	25.0	23.5 J	94	58-154	
2-Chlorotoluene	25.0	21.0	84	75-120	
2-Hexanone	50.0	48.9	98	52-145	
Bromobenzene	25.0	21.0	84	75-120	
Bromochloromethane	25.0	24.1	96	72-124	
4-Chlorotoluene	25.0	20.6	82	74-121	
4-Isopropyltoluene	25.0	20.7	83	74-124	
Acetone	50.0	50.5	101	43-159	
Benzene	25.0	22.3	89	74-123	
Bromoform	25.0	21.1	85	46-137	
Bromomethane	25.0	19.1	76	10-152	
Carbon disulfide	25.0	20.7	83	29-153	
Carbon tetrachloride	25.0	21.5	86	56-139	
Chlorobenzene	25.0	20.9	84	80-120	
Chloroethane	25.0	18.6	74	15-155	
Chloroform	25.0	22.2	89	72-124	
Chloromethane	25.0	17.8	71	45-128	
cis-1,2-Dichloroethene	25.0	22.4	90	74-123	
cis-1,3-Dichloropropene	25.0	22.0	88	63-137	
Hexachlorobutadiene	25.0	17.2	69	58-122	
Dibromomethane	25.0	25.0	100	71-122	
Bromodichloromethane	25.0	22.3	89	63-132	
Dichlorodifluoromethane	25.0	19.9	79	26-138	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82188.D

Lab ID: LCS 240-363459/9 Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	25.0	21.6	86	76-120	
1,2-Dibromoethane	25.0	25.3	101	76-120	
Naphthalene	25.0	21.4	86	51-120	
m-Xylene & p-Xylene	25.0	22.1	88	77-120	
n-Butylbenzene	25.0	20.2	81	64-133	
Isopropylbenzene	25.0	20.8	83	77-124	
N-Propylbenzene	25.0	20.4	81	73-129	
2-Butanone (MEK)	50.0	54.0	108	45-148	
4-Methyl-2-pentanone (MIBK)	50.0	53.1	106	53-139	
sec-Butylbenzene	25.0	19.7	79	73-126	
Methyl tert-butyl ether	25.0	22.7	91	66-127	
Methylene Chloride	25.0	20.7 J	83	62-137	
o-Xylene	25.0	21.9	88	79-120	
Styrene	25.0	20.2	81	76-121	
tert-Butylbenzene	25.0	19.4	78	73-122	
Tetrachloroethene	25.0	21.6	86	76-120	
Toluene	25.0	21.9	88	76-120	
trans-1,2-Dichloroethene	25.0	22.4	90	71-133	
trans-1,3-Dichloropropene	25.0	19.7	79	55-121	
Trichloroethene	25.0	23.5	94	73-126	
Trichlorofluoromethane	25.0	21.3	85	47-146	
Vinyl acetate	25.0	26.5	106	43-144	
Vinyl chloride	25.0	19.2	77	52-130	
tert-Butyl alcohol	250	265	106	41-139	
Xylenes, Total	50.0	44.0	88	79-120	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82210.D

Lab ID: 240-106686-10 MS Client ID: SB-MW158-11-12 MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	29.1	3.3 U	26.9	93	16-137	
1,1,1-Trichloroethane	29.1	0.90 U	26.7	92	38-143	
1,1,2,2-Tetrachloroethane	29.1	1.6 U	27.6	95	16-178	
1,1,2-Trichlorotrifluoroethane	29.1	1.4 U	26.2	90	37-147	
1,1-Dichloroethane	29.1	0.76 U	26.5	91	50-133	
1,1-Dichloroethene	29.1	0.99 U	27.3	94	36-150	
1,1-Dichloropropene	29.1	1.1 U	26.0	90	30-138	
1,2,3-Trichlorobenzene	29.1	0.63 U	17.6	61	10-120	
1,2,3-Trichloropropane	29.1	1.7 U	27.0	93	10-178	
1,2,4-Trichlorobenzene	29.1	0.63 U	15.4	53	10-120	
1,2,4-Trimethylbenzene	29.1	1.1 U	21.9	75	10-149	
1,2-Dibromo-3-Chloropropane	29.1	3.9 U	21.1	72	10-141	
1,2-Dichlorobenzene	29.1	1.2 U	22.7	78	10-130	
1,2-Dichloroethane	29.1	0.84 U	27.1	93	42-127	
1,2-Dichloropropane	29.1	0.93 U	27.3	94	51-128	
1,3-Dichlorobenzene	29.1	0.89 U	22.0	76	10-131	
1,3-Dichloropropane	29.1	1.1 U	27.0	93	34-121	
1,4-Dichlorobenzene	29.1	0.96 U	21.1	73	10-130	
2,2-Dichloropropane	29.1	1.3 U	18.6	64	20-141	
2-Chloroethyl vinyl ether	29.1	9.7 U	25.8 J	89	10-134	
2-Chlorotoluene	29.1	1.0 U	22.9	79	10-179	
2-Hexanone	58.1	4.5 U	49.1	84	15-147	
Bromobenzene	29.1	1.3 U	24.4	84	10-164	
Bromochloromethane	29.1	0.65 U	30.0	103	36-147	
4-Chlorotoluene	29.1	0.94 U	22.3	77	10-158	
4-Isopropyltoluene	29.1	3.2 U	21.3	73	10-142	
Acetone	58.1	23 U	66.0	113	10-160	
Benzene	29.1	0.76 U	27.8	95	39-133	
Bromoform	29.1	2.6 U	24.2	83	18-120	
Bromomethane	29.1	1.1 U	24.8	85	10-159	
Carbon disulfide	29.1	1.3 U	26.0	89	16-145	
Carbon tetrachloride	29.1	3.6 U	26.6	91	22-142	
Chlorobenzene	29.1	1.0 U	24.9	86	21-131	
Chloroethane	29.1	1.3 U	25.0	86	17-162	
Chloroform	29.1	0.86 U	27.7	95	51-130	
Chloromethane	29.1	1.1 U	23.8	82	26-149	
cis-1,2-Dichloroethene	29.1	0.71 U	27.7	95	50-128	
cis-1,3-Dichloropropene	29.1	1.6 U	23.8	82	15-132	
Hexachlorobutadiene	29.1	4.1 U	17.3	60	10-120	
Dibromomethane	29.1	0.73 U	30.5	105	37-138	
Bromodichloromethane	29.1	0.74 U	27.1	93	32-129	
Dichlorodifluoromethane	29.1	1.0 U	24.8	85	15-150	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82210.D

Lab ID: 240-106686-10 MS Client ID: SB-MW158-11-12 MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
Ethylbenzene	29.1	1.1 U	25.8	89	20-135	
1,2-Dibromoethane	29.1	0.84 U	28.2	97	36-125	
Naphthalene	29.1	3.0 U	18.2	63	10-120	
m-Xylene & p-Xylene	29.1	0.86 U	25.1	86	16-137	
n-Butylbenzene	29.1	3.8 U	19.0	65	10-149	
Isopropylbenzene	29.1	0.91 U	23.9	82	20-138	
N-Propylbenzene	29.1	0.80 U	22.5	78	10-162	
2-Butanone (MEK)	58.1	3.9 U	61.6	106	20-148	
4-Methyl-2-pentanone (MIBK)	58.1	4.1 U	54.6	94	29-143	
sec-Butylbenzene	29.1	0.94 U	21.4	74	10-156	
Methyl tert-butyl ether	29.1	0.90 U	26.7	92	48-134	
Methylene Chloride	29.1	13 U	28.3 J	97	39-145	
o-Xylene	29.1	0.94 U	25.6	88	21-138	
Styrene	29.1	1.3 U	23.1	80	10-134	
tert-Butylbenzene	29.1	0.99 U	22.0	76	10-148	
Tetrachloroethene	29.1	0.80 U	23.5	81	20-151	
Toluene	29.1	0.85 U	26.5	91	29-141	
trans-1,2-Dichloroethene	29.1	0.51 U	28.4	98	44-141	
trans-1,3-Dichloropropene	29.1	1.1 U	20.8	71	15-120	
Trichloroethene	29.1	0.69 U	27.7	95	25-148	
Trichlorofluoromethane	29.1	1.2 U	27.2	94	38-149	
Vinyl acetate	29.1	2.3 U	22.7	78	10-120	
Vinyl chloride	29.1	0.92 U	25.7	88	31-148	
tert-Butyl alcohol	291	18 U	272	93	59-128	
Xylenes, Total	58.1	1.7 U	50.7	87	19-137	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82211.D

Lab ID: 240-106686-10 MSD Client ID: SB-MW158-11-12 MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	29.0	28.2	97	5	40	16-137	
1,1,1-Trichloroethane	29.0	26.4	91	1	40	38-143	
1,1,2,2-Tetrachloroethane	29.0	30.8	107	11	40	16-178	
1,1,2-Trichlorotrifluoroethane	29.0	25.2	87	4	37	37-147	
1,1-Dichloroethane	29.0	26.6	92	0	40	50-133	
1,1-Dichloroethene	29.0	27.1	94	1	40	36-150	
1,1-Dichloropropene	29.0	26.8	93	3	36	30-138	
1,2,3-Trichlorobenzene	29.0	19.1	66	8	40	10-120	
1,2,3-Trichloropropane	29.0	30.1	104	11	40	10-178	
1,2,4-Trichlorobenzene	29.0	16.6	57	8	40	10-120	
1,2,4-Trimethylbenzene	29.0	22.7	78	3	40	10-149	
1,2-Dibromo-3-Chloropropane	29.0	24.4	84	14	40	10-141	
1,2-Dichlorobenzene	29.0	24.1	83	6	40	10-130	
1,2-Dichloroethane	29.0	26.9	93	0	34	42-127	
1,2-Dichloropropane	29.0	27.5	95	1	36	51-128	
1,3-Dichlorobenzene	29.0	22.5	78	2	40	10-131	
1,3-Dichloropropane	29.0	28.0	97	4	40	34-121	
1,4-Dichlorobenzene	29.0	22.1	76	5	40	10-130	
2,2-Dichloropropane	29.0	18.2	63	3	40	20-141	
2-Chloroethyl vinyl ether	29.0	25.6 J	88	1	40	10-134	
2-Chlorotoluene	29.0	23.3	81	2	40	10-179	
2-Hexanone	57.9	52.7	91	7	40	15-147	
Bromobenzene	29.0	24.1	83	1	40	10-164	
Bromochloromethane	29.0	29.7	103	1	40	36-147	
4-Chlorotoluene	29.0	23.2	80	4	40	10-158	
4-Isopropyltoluene	29.0	22.1	76	4	40	10-142	
Acetone	57.9	62.7	108	5	39	10-160	
Benzene	29.0	27.2	94	2	40	39-133	
Bromoform	29.0	25.2	87	4	40	18-120	
Bromomethane	29.0	25.3	87	2	40	10-159	
Carbon disulfide	29.0	25.6	88	2	40	16-145	
Carbon tetrachloride	29.0	25.3	87	5	40	22-142	
Chlorobenzene	29.0	25.0	86	1	40	21-131	
Chloroethane	29.0	24.9	86	0	40	17-162	
Chloroform	29.0	27.2	94	2	32	51-130	
Chloromethane	29.0	23.8	82	0	37	26-149	
cis-1,2-Dichloroethene	29.0	26.9	93	3	40	50-128	
cis-1,3-Dichloropropene	29.0	24.8	86	4	40	15-132	
Hexachlorobutadiene	29.0	17.8	61	3	40	10-120	
Dibromomethane	29.0	30.1	104	1	30	37-138	
Bromodichloromethane	29.0	26.4	91	2	39	32-129	
Dichlorodifluoromethane	29.0	24.0	83	3	31	15-150	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82211.D

Lab ID: 240-106686-10 MSD Client ID: SB-MW158-11-12 MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	29.0	25.3	87	2	40	20-135	
1,2-Dibromoethane	29.0	29.1	101	3	40	36-125	
Naphthalene	29.0	21.3	74	16	40	10-120	
m-Xylene & p-Xylene	29.0	25.0	86	0	40	16-137	
n-Butylbenzene	29.0	20.2	70	6	40	10-149	
Isopropylbenzene	29.0	24.2	84	1	40	20-138	
N-Propylbenzene	29.0	22.7	78	1	40	10-162	
2-Butanone (MEK)	57.9	59.2	102	4	36	20-148	
4-Methyl-2-pentanone (MIBK)	57.9	57.9	100	6	40	29-143	
sec-Butylbenzene	29.0	22.2	77	3	40	10-156	
Methyl tert-butyl ether	29.0	26.7	92	0	34	48-134	
Methylene Chloride	29.0	26.0 J	90	8	40	39-145	
o-Xylene	29.0	26.1	90	2	40	21-138	
Styrene	29.0	23.8	82	3	40	10-134	
tert-Butylbenzene	29.0	22.7	79	3	40	10-148	
Tetrachloroethene	29.0	24.6	85	4	40	20-151	
Toluene	29.0	26.0	90	2	40	29-141	
trans-1,2-Dichloroethene	29.0	27.6	95	3	40	44-141	
trans-1,3-Dichloropropene	29.0	20.9	72	1	40	15-120	
Trichloroethene	29.0	27.3	94	2	40	25-148	
Trichlorofluoromethane	29.0	26.4	91	3	39	38-149	
Vinyl acetate	29.0	22.7	78	0	40	10-120	
Vinyl chloride	29.0	25.7	89	0	37	31-148	
tert-Butyl alcohol	290	289	100	6	39	59-128	
Xylenes, Total	57.9	51.1	88	1	40	19-137	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: UX82187.D Lab Sample ID: MB 240-363459/8

Matrix: Solid Heated Purge:(Y/N) Y

Instrument ID: A3UX8 Date Analyzed: 01/10/2019 04:30

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-363459/9	UX82188.D	01/10/2019 04:54
SB-MW154-9-10	240-106686-2	UX82201.D	01/10/2019 10:00
SB-MW154-10-12	240-106686-3	UX82202.D	01/10/2019 10:23
SB-MW154-12-13	240-106686-4	UX82203.D	01/10/2019 10:47
SB-MW155-8-9	240-106686-5	UX82204.D	01/10/2019 11:10
SB-MW155-9-11	240-106686-6	UX82205.D	01/10/2019 11:33
SB-MW155-11-12	240-106686-7	UX82206.D	01/10/2019 11:55
SB-MW158-9-10	240-106686-8	UX82207.D	01/10/2019 12:18
SB-MW158-10-11	240-106686-9	UX82208.D	01/10/2019 12:42
SB-MW158-11-12	240-106686-10	UX82209.D	01/10/2019 13:05
SB-MW158-11-12 MS	240-106686-10 MS	UX82210.D	01/10/2019 13:28
SB-MW158-11-12 MSD	240-106686-10 MSD	UX82211.D	01/10/2019 13:51

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-363459/8

Matrix: Solid | Lab File ID: UX82187.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 01/10/2019 04:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.0	U	5.0	3.0
71-55-6	1,1,1-Trichloroethane	0.82	U	5.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	1.4	U	5.0	1.4
76-13-1	1,1,2-Trichlorotrifluoroethane	1.3	U	5.0	1.3
75-34-3	1,1-Dichloroethane	0.69	U	5.0	0.69
75-35-4	1,1-Dichloroethene	0.90	U	5.0	0.90
563-58-6	1,1-Dichloropropene	0.99	U	5.0	0.99
87-61-6	1,2,3-Trichlorobenzene	0.57	U	5.0	0.57
96-18-4	1,2,3-Trichloropropane	1.6	U	5.0	1.6
526-73-8	1,2,3-Trimethylbenzene	1.8	U	5.0	1.8
120-82-1	1,2,4-Trichlorobenzene	0.57	U	5.0	0.57
95-63-6	1,2,4-Trimethylbenzene	1.0	U	5.0	1.0
96-12-8	1,2-Dibromo-3-Chloropropane	3.6	U	10	3.6
95-50-1	1,2-Dichlorobenzene	1.1	U	5.0	1.1
107-06-2	1,2-Dichloroethane	0.77	U	5.0	0.77
78-87-5	1,2-Dichloropropane	0.85	U	5.0	0.85
541-73-1	1,3-Dichlorobenzene	0.82	U	5.0	0.82
142-28-9	1,3-Dichloropropane	0.99	U	5.0	0.99
106-46-7	1,4-Dichlorobenzene	0.88	U	5.0	0.88
594-20-7	2,2-Dichloropropane	1.2	U	5.0	1.2
110-75-8	2-Chloroethyl vinyl ether	8.9	U	50	8.9
95-49-8	2-Chlorotoluene	0.95	U	5.0	0.95
591-78-6	2-Hexanone	4.1	U	20	4.1
108-86-1	Bromobenzene	1.2	U	5.0	1.2
74-97-5	Bromochloromethane	0.59	U	5.0	0.59
106-43-4	4-Chlorotoluene	0.86	U	5.0	0.86
99-87-6	4-Isopropyltoluene	2.9	U	5.0	2.9
67-64-1	Acetone	21	U	25	21
71-43-2	Benzene	0.70	U	5.0	0.70
75-25-2	Bromoform	2.4	U	5.0	2.4
74-83-9	Bromomethane	0.99	U	5.0	0.99
75-15-0	Carbon disulfide	1.2	U	5.0	1.2
56-23-5	Carbon tetrachloride	3.3	U	5.0	3.3
108-90-7	Chlorobenzene	0.92	U	5.0	0.92
75-00-3	Chloroethane	1.2	U	5.0	1.2
67-66-3	Chloroform	0.79	U	5.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-363459/8

Matrix: Solid | Lab File ID: UX82187.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 01/10/2019 04:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	5.0	1.0
156-59-2	cis-1,2-Dichloroethene	0.65	U	5.0	0.65
10061-01-5	cis-1,3-Dichloropropene	1.4	U	5.0	1.4
87-68-3	Hexachlorobutadiene	3.7	U	5.0	3.7
74-95-3	Dibromomethane	0.67	U	5.0	0.67
75-27-4	Bromodichloromethane	0.68	U	5.0	0.68
75-71-8	Dichlorodifluoromethane	0.94	U	5.0	0.94
100-41-4	Ethylbenzene	1.0	U	5.0	1.0
106-93-4	1,2-Dibromoethane	0.77	U	5.0	0.77
108-20-3	Diisopropyl ether	0.76	U	10	0.76
91-20-3	Naphthalene	2.7	U	5.0	2.7
104-51-8	n-Butylbenzene	3.5	U	5.0	3.5
98-82-8	Isopropylbenzene	0.83	U	5.0	0.83
103-65-1	N-Propylbenzene	0.73	U	5.0	0.73
78-93-3	2-Butanone (MEK)	3.6	U	20	3.6
108-10-1	4-Methyl-2-pentanone (MIBK)	3.7	U	20	3.7
135-98-8	sec-Butylbenzene	0.86	U	5.0	0.86
1634-04-4	Methyl tert-butyl ether	0.82	U	5.0	0.82
994-05-8	Tert-amyl methyl ether	2.2	U	5.0	2.2
75-09-2	Methylene Chloride	12	U	25	12
100-42-5	Styrene	1.2	U	5.0	1.2
637-92-3	Ethyl tert-butyl ether	2.3	U	5.0	2.3
98-06-6	tert-Butylbenzene	0.91	U	5.0	0.91
127-18-4	Tetrachloroethene	0.73	U	5.0	0.73
108-88-3	Toluene	0.77	U	5.0	0.77
156-60-5	trans-1,2-Dichloroethene	0.47	U	5.0	0.47
10061-02-6	trans-1,3-Dichloropropene	1.0	U	5.0	1.0
79-01-6	Trichloroethene	0.63	U	5.0	0.63
75-69-4	Trichlorofluoromethane	1.1	U	5.0	1.1
108-05-4	Vinyl acetate	2.1	U	10	2.1
75-01-4	Vinyl chloride	0.84	U	5.0	0.84
75-65-0	tert-Butyl alcohol	17	U	200	17
1330-20-7	Xylenes, Total	1.6	U	10	1.6
124-48-1	Chlorodibromomethane	2.8	U	5.0	2.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-363459/8

Matrix: Solid | Lab File ID: UX82187.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 01/10/2019 04:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		48-123
460-00-4	4-Bromofluorobenzene (Surr)	77		49-141
2037-26-5	Toluene-d8 (Surr)	83		62-135
1868-53-7	Dibromofluoromethane (Surr)	87		49-132

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: BFB8814.D BFB Injection Date: 11/30/2018

Instrument ID: A3UX8 BFB Injection Time: 03:22

Analysis Batch No.: 357692

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	31.2	
75	30.0 - 60.0 % of mass 95	55.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.3	(0.4) 1
174	50.0 - 120.00 % of mass 95	78.1	
175	5.0 - 9.0 % of mass 174	5.9	(7.6) 1
176	95.0 - 101.0 % of mass 174	76.4	(97.9) 1
177	5.0 - 9.0 % of mass 176	4.9	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-357692/3	UX81313.D	11/30/2018	03:55
	STD8260 240-357692/4	UX81314.D	11/30/2018	04:18
	STD8260 240-357692/5	UX81315.D	11/30/2018	04:40
	STD8260 240-357692/6	UX81316.D	11/30/2018	05:01
	ICIS 240-357692/7	UX81317.D	11/30/2018	05:24
	STD8260 240-357692/8	UX81318.D	11/30/2018	05:47
	STD8260 240-357692/9	UX81319.D	11/30/2018	06:09
	STD8260 240-357692/10	UX81320.D	11/30/2018	06:31
	STD8260 240-357692/11	UX81321.D	11/30/2018	06:53
	STDA9 240-357692/12	UX81322.D	11/30/2018	07:16
	STDA9 240-357692/13	UX81323.D	11/30/2018	07:38
	STDA9 240-357692/14	UX81324.D	11/30/2018	08:00
	STDA9 240-357692/15	UX81325.D	11/30/2018	08:23
	STDA9 240-357692/16	UX81326.D	11/30/2018	08:45
	STDA9 240-357692/17	UX81327.D	11/30/2018	09:08
	STDA9 240-357692/18	UX81328.D	11/30/2018	09:30
	STDA9 240-357692/19	UX81329.D	11/30/2018	09:52
	STDA9 240-357692/20	UX81330.D	11/30/2018	10:15
	ICV 240-357692/21	UX81331.D	11/30/2018	10:37
	ICV 240-357692/22	UX81332.D	11/30/2018	11:00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-357692/11	UX81321.D
Level 2	STD8260 240-357692/10	UX81320.D
Level 3	STD8260 240-357692/9	UX81319.D
Level 4	STD8260 240-357692/8	UX81318.D
Level 5	ICIS 240-357692/7	UX81317.D
Level 6	STD8260 240-357692/6	UX81316.D
Level 7	STD8260 240-357692/5	UX81315.D
Level 8	STD8260 240-357692/4	UX81314.D
Level 9	STD8260 240-357692/3	UX81313.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3171 0.3632	0.3618 0.3530	0.3888 0.3159	0.3248 0.3379	0.3477	Ave		0.3456				7.0		15.0			
Chloromethane	0.5402 0.4908	0.4890 0.4859	0.5494 0.4240	0.4344 0.4312	0.4675	Ave		0.4792			0.1000	9.5		15.0			
Vinyl chloride	0.3512 0.3316	0.3401 0.3284	0.3670 0.2876	0.2953 0.3092	0.3132	Ave		0.3248				8.0		15.0			
Butadiene	0.4215 0.4391	0.4065 0.4371	0.4867 0.3860	0.3922 0.4094	0.4125	Ave		0.4212				7.2		15.0			
Bromomethane	0.2210 0.1716	0.1865 0.1610	0.2087 +++++	0.1628 +++++	0.1624	Ave		0.1820				13.4		15.0			
Chloroethane	0.2574 0.2120	0.2041 0.2094	0.2368 0.1739	0.1906 0.1784	0.1937	Ave		0.2062				13.1		15.0			
Dichlorofluoromethane	0.5144 0.4763	0.4966 0.4649	0.5146 0.4039	0.4255 0.4285	0.4421	Ave		0.4630				8.8		15.0			
Trichlorofluoromethane	0.4443 0.4379	0.4349 0.4315	0.4773 0.3809	0.3927 0.4132	0.4165	Ave		0.4255				6.8		15.0			
Ethyl ether	0.2330 0.2088	0.2238 0.2019	0.2671 0.2166	0.2553 0.1960	0.2454	Ave		0.2276				10.8		15.0			
Acrolein	0.0394 0.0387	0.0376 0.0386	0.0415 0.0335	0.0357 0.0348	0.0380	Ave		0.0375				6.6		15.0			
1,1-Dichloroethene	+++++ 0.2743	0.2356 0.2676	0.3420 0.2396	0.2651 0.2551	0.2651	Ave		0.2680				12.3		15.0			
1,1,2-Trichlorotrifluoroethane	+++++ 0.2225	+++++ 0.2120	0.3091 0.1903	0.2216 0.2040	0.2282	Lin1	0.5057	0.1987							0.9970		0.9900
Acetone	0.2804 0.0955	0.1787 0.0913	0.1431 0.0798	0.1040 0.0813	0.1044	Lin1	0.4395	0.0826							0.9960		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Iodomethane	0.3932 0.4536	0.4506 0.4430	0.5529 0.3913	0.4262 0.4086	0.4311	Ave		0.4389				11.1		15.0			
Carbon disulfide	0.6255 0.8480	0.6103 0.8665	0.8942 0.7865	0.7381 0.8592	0.7724	Ave		0.7778				13.3		15.0			
3-Chloro-1-propene	0.1288 0.1692	0.1226 0.1651	0.1735 0.1551	0.1465 0.1622	0.1512	Ave		0.1527				11.5		15.0			
Methyl acetate	0.2138 0.1977	0.2019 0.1904	0.2458 0.1776	0.2031 0.1799	0.2047	Ave		0.2016				10.1		15.0			
Methylene Chloride	+++++ 0.3068	+++++ 0.2867	0.5022 0.2560	0.3355 0.2638	0.3196	Lin1	1.1511	0.2604							0.9970		0.9900
tert-Butyl alcohol	+++++ 0.0164	+++++ 0.0155	0.0213 0.0141	0.0164 0.0135	0.0175	Lin1	0.4295	0.0140							0.9960		0.9900
Acrylonitrile	0.0848 0.0877	0.0885 0.0840	0.1079 0.0772	0.0868 0.0791	0.0894	Ave		0.0873				10.1		15.0			
Methyl tert-butyl ether	0.5113 0.6220	0.5659 0.5853	0.7570 0.5419	0.5777 0.5428	0.6118	Ave		0.5906				12.1		15.0			
trans-1,2-Dichloroethene	0.2722 0.3154	0.3251 0.3015	0.3658 0.2720	0.3110 0.2860	0.3127	Ave		0.3069				9.5		15.0			
Hexane	+++++ 0.0774	0.1027 0.0734	0.0955 0.0776	0.0937 0.0802	0.0827	Ave		0.0854				12.3		15.0			
1,1-Dichloroethane	0.5224 0.5973	0.5762 0.5832	0.7558 0.5485	0.5961 0.5640	0.6036	Ave		0.5941			0.1000	11.1		15.0			
Vinyl acetate	0.3795 0.4822	0.3839 0.4919	0.4935 0.5172	0.4769 0.5103	0.5088	Ave		0.4716				11.2		15.0			
2-Butanone (MEK)	+++++ 0.1187	+++++ 0.1105	+++++ 0.1077	0.1323 0.1071	0.1337	Ave		0.1183				10.2		15.0			
cis-1,2-Dichloroethene	0.3154 0.3169	0.3232 0.3078	0.3837 0.2851	0.3349 0.2907	0.3310	Ave		0.3210				9.0		15.0			
2,2-Dichloropropane	+++++ 0.3631	0.3905 0.3612	0.4439 0.3208	0.3462 0.3345	0.3383	Ave		0.3623				10.8		15.0			
Bromochloromethane	0.0989 0.1253	0.1196 0.1194	0.1536 0.1114	0.1325 0.1119	0.1269	Ave		0.1222				12.6		15.0			
Tetrahydrofuran	0.0743 0.0710	0.0724 0.0687	0.0897 0.0666	0.0736 0.0675	0.0733	Ave		0.0730				9.4		15.0			
Chloroform	0.4877 0.5211	0.5195 0.5068	0.6672 0.4784	0.5317 0.4936	0.5310	Ave		0.5263				10.7		15.0			
1,1,1-Trichloroethane	0.3424 0.4795	0.3858 0.4814	0.5340 0.4420	0.4519 0.4624	0.4666	Ave		0.4496				12.5		15.0			
Cyclohexane	0.5159 0.7296	0.5184 0.7182	0.8300 0.6602	0.6949 0.6992	0.6965	Ave		0.6736				14.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.3506 0.4003	0.3611 0.3964	0.4756 0.3939	0.4170 0.4123	0.4261	Ave		0.4037				9.1		15.0			
Carbon tetrachloride	0.2971 0.4152	0.3160 0.4161	0.4551 0.3917	0.3810 0.4159	0.3926	Ave		0.3867				13.0		15.0			
Isobutyl alcohol	+++++ 0.0094	+++++ 0.0090	0.0116 0.0079	0.0095 0.0080	0.0098	Ave		0.0093				13.4		15.0			
1,2-Dichloroethane	0.4886 0.4121	0.3939 0.3968	0.5146 0.3825	0.4421 0.3903	0.4373	Ave		0.4287				10.9		15.0			
Benzene	1.1423 1.1254	1.1229 1.0882	1.4286 1.0624	1.1912 1.0958	1.1701	Ave		1.1586				9.4		15.0			
n-Heptane	+++++ 0.0779	+++++ 0.0736	0.0951 0.0781	0.0863 0.0833	0.0793	Ave		0.0819				8.7		15.0			
Trichloroethene	0.2678 0.2698	0.2679 0.2662	0.3301 0.2623	0.2890 0.2764	0.2854	Ave		0.2794				7.5		15.0			
Methylcyclohexane	0.4413 0.5681	0.3994 0.5527	0.6459 0.5085	0.5476 0.5421	0.5559	Ave		0.5291				13.7		15.0			
1,2-Dichloropropane	0.2775 0.2693	0.2671 0.2617	0.3454 0.2587	0.2854 0.2600	0.2724	Ave		0.2775				9.7		15.0			
1,4-Dioxane	+++++ 0.0017	+++++ 0.0016	0.0018 0.0014	0.0017 0.0015	0.0018	Ave		0.0016				8.7		15.0			
Dibromomethane	0.0878 0.1274	0.1134 0.1232	0.1505 0.1189	0.1356 0.1212	0.1291	Ave		0.1230				13.9		15.0			
Bromodichloromethane	+++++ 0.3022	0.2572 0.3114	0.3264 0.3182	0.2925 0.3304	0.2983	Ave		0.3046				7.7		15.0			
2-Chloroethyl vinyl ether	+++++ 0.0765	0.0648 0.0741	0.0822 0.0809	0.0748 0.0820	0.0801	Ave		0.0769				7.6		15.0			
cis-1,3-Dichloropropene	+++++ 0.3071	+++++ 0.3036	0.2970 0.3289	0.2713 0.3322	0.2792	Ave		0.3028				7.6		15.0			
4-Methyl-2-pentanone (MIBK)	0.1572 0.2336	0.1775 0.2201	0.2587 0.2118	0.2249 0.2135	0.2318	Ave		0.2143				14.2		15.0			
Toluene	1.6081 1.6954	1.4143 1.6550	1.9821 1.6725	1.7826 1.7554	1.7449	Ave		1.7011				8.9		15.0			
trans-1,3-Dichloropropene	+++++ 0.3722	+++++ 0.3830	0.3505 0.4222	0.3114 0.4346	0.3442	Ave		0.3740				11.7		15.0			
Ethyl methacrylate	+++++ 0.3046	0.2146 0.2930	0.2582 0.3027	0.2829 0.3105	0.2882	Ave		0.2818				11.2		15.0			
1,1,2-Trichloroethane	0.2413 0.2445	0.2245 0.2319	0.3128 0.2312	0.2716 0.2358	0.2580	Ave		0.2502				11.0		15.0			
1,3-Dichloropropane	0.3694 0.4586	0.4724 0.4284	0.5498 0.4347	0.4925 0.4427	0.4783	Ave		0.4585				10.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Tetrachloroethene	0.3377 0.3473	0.3231 0.3407	0.4150 0.3363	0.3824 0.3541	0.3460	Ave		0.3536				8.0		15.0			
2-Hexanone	+++++ 0.2425	+++++ 0.2204	0.2490 0.2143	0.2240 0.2195	0.2459	Ave		0.2308				6.2		15.0			
Chlorodibromomethane	+++++ 0.2512	0.1748 0.2613	0.2334 0.2788	0.2200 0.2899	0.2399	Ave		0.2437				14.9		15.0			
1,2-Dibromoethane	0.1870 0.2355	0.1892 0.2244	0.2461 0.2222	0.2314 0.2303	0.2359	Ave		0.2225				9.3		15.0			
Chlorobenzene	1.1316 1.0368	1.1454 1.0060	1.3456 0.9914	1.1528 1.0302	1.0868	Ave		1.1030			0.3000	9.9		15.0			
1,1,1,2-Tetrachloroethane	0.2479 0.3734	0.2681 0.3745	0.3490 0.3650	0.3427 0.3694	0.3498	Ave		0.3377				13.9		15.0			
Ethylbenzene	0.4584 0.5971	0.5081 0.5757	0.6897 0.5752	0.5976 0.6007	0.6019	Ave		0.5783				11.2		15.0			
m-Xylene & p-Xylene	0.5408 0.7328	0.5891 0.7056	0.8378 0.7051	0.7575 0.7418	0.7241	Ave		0.7038				12.6		15.0			
o-Xylene	0.5324 0.7413	0.5515 0.7152	0.7892 0.6841	0.7403 0.7028	0.7253	Ave		0.6869				12.7		15.0			
Styrene	+++++ 1.1220	+++++ 1.0974	1.1463 1.1029	1.0569 1.1377	1.0771	Ave		1.1058				2.9		15.0			
Bromoform	+++++ 0.1236	+++++ 0.1316	0.1150 0.1469	0.1027 0.1535	0.1162	Ave		0.1271			0.1000	14.3		15.0			
Isopropylbenzene	+++++ 2.0550	1.4442 2.0601	2.1645 1.9730	2.0123 2.0590	2.0469	Ave		1.9769				11.2		15.0			
1,1,2,2-Tetrachloroethane	0.4616 0.5244	0.4419 0.5383	0.6737 0.5044	0.5671 0.5360	0.5608	Ave		0.5343			0.3000	12.6		15.0			
Bromobenzene	0.8221 0.7852	0.7460 0.7797	0.9932 0.7631	0.8506 0.7909	0.8685	Ave		0.8222				9.2		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.2052	+++++ 0.2106	0.1878 0.2144	0.1919 0.2317	0.1983	Ave		0.2057				7.3		15.0			
1,2,3-Trichloropropane	0.1684 0.1855	0.1895 0.1765	0.2401 0.1662	0.2109 0.1722	0.1997	Ave		0.1899				12.6		15.0			
N-Propylbenzene	+++++ 1.0015	0.7297 1.0057	1.2077 0.9671	1.0604 1.0301	1.0422	Ave		1.0055				13.2		15.0			
2-Chlorotoluene	0.6929 0.8243	0.7599 0.8534	0.9988 0.8117	0.9411 0.8545	0.8714	Ave		0.8453				10.7		15.0			
1,3,5-Trimethylbenzene	+++++ 3.2929	2.3946 3.3915	3.7591 3.2056	3.4135 3.3286	3.4072	Ave		3.2741				11.9		15.0			
4-Chlorotoluene	+++++ 0.8259	0.7336 0.8534	1.0558 0.8109	0.9513 0.8508	0.8860	Ave		0.8710				11.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
tert-Butylbenzene	+++++ 2.8758	2.1025 3.0161	3.5261 2.8829	2.9062 2.9807	2.9610	Ave		2.9064				13.3		15.0			
1,2,4-Trimethylbenzene	+++++ 3.3149	2.4165 3.3592	3.8068 3.2131	3.4931 3.3855	3.4479	Ave		3.3046				12.1		15.0			
sec-Butylbenzene	+++++ 4.2866	3.1867 4.3553	4.9050 4.1601	4.4013 4.3781	4.5446	Ave		4.2772				11.5		15.0			
1,3-Dichlorobenzene	1.5565 1.6467	1.6841 1.6325	2.0991 1.5445	1.8208 1.5944	1.7925	Ave		1.7079				10.3		15.0			
4-Isopropyltoluene	+++++ 3.5678	2.5536 3.6474	3.9940 3.4527	3.6858 3.6156	3.6921	Ave		3.5261				12.0		15.0			
1,4-Dichlorobenzene	2.0853 1.6420	1.9411 1.6068	2.1614 1.5496	1.8780 1.6144	1.7942	Ave		1.8081				12.3		15.0			
n-Butylbenzene	2.7018 3.2409	2.4114 3.3003	3.4625 3.1626	3.1569 3.3151	3.3451	Ave		3.1219				10.9		15.0			
1,2-Dichlorobenzene	1.5868 1.4949	1.6927 1.4893	1.9910 1.3787	1.6570 1.4246	1.6460	Ave		1.5957				11.5		15.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.0673	+++++ 0.0698	0.0605 0.0711	0.0605 0.0768	0.0685	Ave		0.0678				8.6		15.0			
1,2,4-Trichlorobenzene	1.0781 0.9039	0.9490 0.9116	1.0768 0.8892	0.9286 0.9012	1.0071	Ave		0.9606				7.8		15.0			
Hexachlorobutadiene	0.7521 0.5872	0.6981 0.5789	0.8360 0.5499	0.6882 0.5656	0.6732	Ave		0.6588				14.7		15.0			
Naphthalene	1.4853 1.6372	1.3520 1.6432	1.6018 1.5920	1.4130 1.6126	1.8026	Ave		1.5711				8.6		15.0			
1,2,3-Trichlorobenzene	1.0069 0.8223	0.8801 0.8007	1.0544 0.7651	0.8900 0.7701	0.9464	Ave		0.8818				11.8		15.0			
Dibromofluoromethane (Surr)	+++++ 0.2285	0.2793 0.2329	0.2954 0.2283	0.2569 0.2297	0.2422	Ave		0.2492				10.4		15.0			
1,2-Dichloroethane-d4 (Surr)	+++++ 0.2950	+++++ 0.2992	0.4136 0.2980	0.3787 0.3010	0.3478	Ave		0.3333				14.3		15.0			
Toluene-d8 (Surr)	+++++ 1.3185	1.5223 1.3277	1.5468 1.3487	1.5064 1.4017	1.3865	Ave		1.4198				6.5		15.0			
4-Bromofluorobenzene (Surr)	+++++ 0.4893	0.6230 0.4973	0.6119 0.4963	0.5922 0.5058	0.5522	Ave		0.5460				10.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-357692/11	UX81321.D
Level 2	STD8260 240-357692/10	UX81320.D
Level 3	STD8260 240-357692/9	UX81319.D
Level 4	STD8260 240-357692/8	UX81318.D
Level 5	ICIS 240-357692/7	UX81317.D
Level 6	STD8260 240-357692/6	UX81316.D
Level 7	STD8260 240-357692/5	UX81315.D
Level 8	STD8260 240-357692/4	UX81314.D
Level 9	STD8260 240-357692/3	UX81313.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Ave	4954 279141	11174 568268	29394 1094502	56816 1373276	109960	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Chloromethane	FB	Ave	8440 377249	15102 782368	41536 1468786	76006 1752480	147866	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Vinyl chloride	FB	Ave	5487 254844	10504 528781	27745 996224	51655 1256546	99076	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Butadiene	FB	Ave	6585 337503	12554 703743	36794 1337228	68611 1663875	130486	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromomethane	FB	Ave	3453 131870	5758 259205	15778 +++++	28489 +++++	51381	1.00 50.0	2.00 100	5.00 +++++	10.0 +++++	20.0
Chloroethane	FB	Ave	4021 162914	6302 337091	17902 602571	33353 725083	61254	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Dichlorofluoromethane	FB	Ave	8036 366114	15336 748575	38905 1399147	74434 1741764	139832	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Trichlorofluoromethane	FB	Ave	6941 336605	13430 694656	36088 1319595	68701 1679321	131734	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Ethyl ether	FB	Ave	3641 160486	6912 325028	20196 750398	44669 796758	77628	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Acrolein	FB	Ave	3077 148548	5811 310901	15697 580200	31190 707839	60063	5.00 250	10.0 500	25.0 1000	50.0 1250	100
1,1-Dichloroethene	FB	Ave	+++++ 210810	7276 430842	25859 829898	46378 1036862	83850	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,2-Trichlorotrifluoroethane	FB	Lin1	+++++ 171020	+++++ 341379	23368 659252	38761 829321	72182	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Acetone	FB	Lin1	8761 146743	11040 293982	21639 553074	36404 661144	66070	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Iodomethane	FB	Ave	6143 348650	13916 713306	41801 1355553	74560 1660680	136339	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Carbon disulfide	FB	Ave	9772 651749	18848 1395081	67608 2724689	129123 3492065	244291	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
3-Chloro-1-propene	FB	Ave	2013 130039	3786 265798	13121 537366	25635 659307	47819	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Methyl acetate	FB	Ave	6680 303910	12467 612946	37174 1230504	71049 1462299	129517	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Methylene Chloride	FB	Lin1	+++++ 235812	+++++ 461669	37969 886976	58700 1072076	101081	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
tert-Butyl alcohol	FB	Lin1	+++++ 126034	+++++ 248932	16112 488711	28607 549097	55379	+++++ 500	+++++ 1000	50.0 2000	100 2500	200
Acrylonitrile	FB	Ave	13246 674305	27329 1352070	81548 2673958	151772 3215370	282909	10.0 500	20.0 1000	50.0 2000	100 2500	200
Methyl tert-butyl ether	FB	Ave	7988 478061	17476 942386	57230 1877478	101072 2206379	193503	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
trans-1,2-Dichloroethene	FB	Ave	4253 242388	10039 485444	27659 942413	54416 1162386	98910	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Hexane	FB	Ave	+++++ 59456	3171 118233	7222 268996	16394 325890	26149	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1-Dichloroethane	FB	Ave	8161 459125	17793 939049	57144 1900339	104286 2292372	190905	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Vinyl acetate	FB	Ave	5929 370592	11855 791901	37308 1791726	83438 2073901	160918	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Butanone (MEK)	FB	Ave	+++++ 182435	+++++ 355736	+++++ 746209	46287 870694	84603	+++++ 100	+++++ 200	+++++ 400	20.0 500	40.0
cis-1,2-Dichloroethene	FB	Ave	4927 243569	9981 495620	29007 987552	58583 1181472	104699	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2,2-Dichloropropane	FB	Ave	+++++ 279105	12059 581481	33561 1111249	60563 1359759	107000	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromochloromethane	FB	Ave	1545 96331	3693 192288	11615 385769	23175 454825	40143	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Tetrahydrofuran	FB	Ave	2323 109131	4474 221119	13557 461313	25760 548900	46373	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Chloroform	FB	Ave	7619 400540	16042 815970	50446 1657497	93014 2006254	167955	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,1-Trichloroethane	FB	Ave	5350 368526	11914 775118	40374 1531278	79062 1879237	147588	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Cyclohexane	FB	Ave	8060 560745	16008 1156249	62750 2287237	121575 2841772	220311	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1-Dichloropropene	FB	Ave	5477 307663	11150 638286	35959 1364720	72955 1675933	134776	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Carbon tetrachloride	FB	Ave	4641 319152	9760 669938	34404 1357018	66651 1690270	124163	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isobutyl alcohol	FB	Ave	+++++ 181266	+++++ 361847	21957 683475	41460 815822	77314	+++++ 1250	+++++ 2500	125 5000	250 6250	500
1,2-Dichloroethane	FB	Ave	7633 316745	12164 638927	38904 1325302	77342 1586225	138304	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Benzene	FB	Ave	17847 865021	34676 1751961	108012 3680557	208401 4453816	370100	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
n-Heptane	FB	Ave	+++++ 59847	+++++ 118441	7188 270516	15090 338550	25091	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Trichloroethene	FB	Ave	4184 207406	8273 428549	24960 908539	50560 1123462	90273	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Methylcyclohexane	FB	Ave	6894 436655	12335 889809	48836 1761807	95800 2203449	175834	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2-Dichloropropane	FB	Ave	4336 206965	8249 421401	26112 896196	49933 1056573	86161	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,4-Dioxane	FB	Ave	+++++ 25584	+++++ 51439	2670 98751	5871 121958	11603	+++++ 1000	+++++ 2000	100 4000	200 5000	400
Dibromomethane	FB	Ave	1371 97929	3503 198429	11375 412001	23725 492798	40829	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromodichloromethane	FB	Ave	+++++ 232274	7944 501325	24676 1102314	51177 1343020	94352	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Chloroethyl vinyl ether	FB	Ave	+++++ 117608	4004 238519	12433 560409	26164 666909	50690	+++++ 100	4.00 200	10.0 400	20.0 500	40.0
cis-1,3-Dichloropropene	FB	Ave	+++++ 236025	+++++ 488791	22452 1139544	47463 1350116	88314	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	4911 359116	10965 708591	39119 1467377	78694 1735491	146650	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Toluene	CBNZ d5	Ave	16379 837309	28675 1675291	103180 3628284	201227 4438593	353237	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	+++++ 183828	+++++ 387714	18247 916021	35152 1098891	69682	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Ethyl methacrylate	CBNZ d5	Ave	+++++ 150415	4352 296628	13439 656597	31936 785221	58344	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,2-Trichloroethane	CBNZ d5	Ave	2458 120770	4552 234770	16284 501489	30656 596283	52228	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,3-Dichloropropane	CBNZ d5	Ave	3762 226496	9578 433619	28619 942988	55594 1119305	96835	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Tetrachloroethene	CBNZ d5	Ave	3440 171520	6550 344850	21602 729503	43167 895306	70037	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Hexanone	CBNZ d5	Ave	+++++ 239551	+++++ 446144	25920 929872	50573 1110288	99548	+++++ 100	+++++ 200	10.0 400	20.0 500	40.0
Chlorodibromomethane	CBNZ d5	Ave	+++++ 124046	3544 264524	12150 604889	24835 733136	48556	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2-Dibromoethane	CBNZ d5	Ave	1905 116324	3837 227155	12813 482135	26127 582247	47752	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Chlorobenzene	CBNZ d5	Ave	11526 512075	23223 1018313	70045 2150667	130132 2604849	220017	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	2525 184395	5435 379046	18168 791915	38686 934020	70803	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Ethylbenzene	CBNZ d5	Ave	4669 294909	10301 582722	35903 1247932	67457 1519044	121847	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
m-Xylene & p-Xylene	CBNZ d5	Ave	5508 361893	11944 714281	43610 1529564	85510 1875798	146588	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
o-Xylene	CBNZ d5	Ave	5423 366089	11181 724001	41083 1484130	83564 1776991	146819	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Styrene	CBNZ d5	Ave	+++++ 554125	+++++ 1110846	59673 2392654	119313 2876694	218050	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Bromoform	CBNZ d5	Ave	+++++ 61028	+++++ 133219	5989 318784	11592 388118	23525	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Isopropylbenzene	CBNZ d5	Ave	+++++ 1014922	29281 2085272	112676 4280140	227156 5206425	414366	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	2314 139763	4636 282641	18133 564985	32781 685403	58802	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromobenzene	DCBd 4	Ave	4121 209300	7826 409384	26730 854780	49172 1011266	91059	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	+++++ 54682	+++++ 110568	5054 240184	11095 296216	20788	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
1,2,3-Trichloropropane	DCBd 4	Ave	844 49440	1988 92650	6462 186159	12189 220138	20936	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
N-Propylbenzene	DCBd 4	Ave	+++++ 266952	7655 528032	32503 1083287	61299 1317129	109265	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Chlorotoluene	DCBd 4	Ave	3473 219702	7972 448041	26883 909232	54403 1092667	91359	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	+++++ 877704	25121 1780660	101172 3590633	197320 4256165	357230	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
4-Chlorotoluene	DCBd 4	Ave	+++++ 220141	7696 448042	28417 908290	54989 1087895	92890	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
tert-Butylbenzene	DCBd 4	Ave	+++++ 766530	22056 1583557	94902 3229218	167997 3811337	310450	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	+++++ 883583	25351 1763719	102457 3599002	201921 4328883	361496	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
sec-Butylbenzene	DCBd 4	Ave	+++++ 1142564	33430 2286684	132012 4659804	254422 5598145	476479	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	7802 438931	17667 857099	56496 1730048	105256 2038691	187931	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4-Isopropyltoluene	DCBd 4	Ave	+++++ 950992	26789 1915042	107495 3867480	213061 4623154	387101	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,4-Dichlorobenzene	DCBd 4	Ave	10453 437671	20363 843618	58173 1735706	108560 2064288	188112	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
n-Butylbenzene	DCBd 4	Ave	13543 863846	25297 1732791	93191 3542510	182489 4238891	350724	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2-Dichlorobenzene	DCBd 4	Ave	7954 398457	17757 781961	53587 1544350	95787 1821587	172575	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	+++++ 17937	+++++ 36669	1628 79629	3498 98170	7177	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	5404 240935	9956 478635	28981 996056	53677 1152276	105593	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Hexachlorobutadiene	DCBd 4	Ave	3770 156505	7324 303954	22500 615978	39783 723274	70584	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Naphthalene	DCBd 4	Ave	7445 436395	14183 862747	43110 1783274	81683 2061939	188996	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	5047 219171	9233 420378	28379 857020	51445 984705	99225	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Dibromofluoromethane (Surr)	FB	Ave	+++++ 175617	8626 374903	22334 790934	44946 933742	76605	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	+++++ 226756	+++++ 481793	31273 1032509	66248 1223319	110019	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Toluene-d8 (Surr)	CBNZ d5	Ave	+++++ 651162	30864 1344000	80521 2925810	170055 3544273	280681	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	+++++ 241679	12632 503436	31855 1076768	66853 1278951	111780	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 07:16 Calibration End Date: 11/30/2018 10:15 Calibration ID: 48278

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-357692/20	UX81330.D
Level 2	STDA9 240-357692/19	UX81329.D
Level 3	STDA9 240-357692/18	UX81328.D
Level 4	STDA9 240-357692/17	UX81327.D
Level 5	STDA9 240-357692/16	UX81326.D
Level 6	STDA9 240-357692/15	UX81325.D
Level 7	STDA9 240-357692/14	UX81324.D
Level 8	STDA9 240-357692/13	UX81323.D
Level 9	STDA9 240-357692/12	UX81322.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Acetonitrile	+++++ 0.0329	0.0356 0.0337	0.0459 0.0323	0.0392 0.0312	0.0354	Ave		0.0358				13.4		15.0			
Diisopropyl ether	0.2075 0.2265	0.2212 0.2336	0.2380 0.2310	0.2296 0.2213	0.2281	Ave		0.2263				3.9		15.0			
2-Chloro-1,3-butadiene	0.6583 0.6872	0.5621 0.7038	0.7374 0.7349	0.6720 0.7133	0.6898	Ave		0.6843				7.7		15.0			
Ethyl tert-butyl ether	0.8577 0.8634	0.7525 0.9006	0.9754 0.8720	0.8739 0.8389	0.8630	Ave		0.8664				6.7		15.0			
Propionitrile	0.0358 0.0292	0.0288 0.0290	0.0395 0.0297	0.0322 0.0279	0.0305	Ave		0.0314				12.3		15.0			
Ethyl acetate	+++++ 0.2199	0.2603 0.2147	0.2868 0.2386	0.2429 0.2114	0.2332	Ave		0.2385				10.6		15.0			
Methacrylonitrile	0.2017 0.1685	0.1567 0.1659	0.2088 0.1779	0.1815 0.1657	0.1760	Ave		0.1781				9.7		15.0			
Tert-amyl methyl ether	0.5006 0.5709	0.4504 0.6108	0.6352 0.5856	0.5857 0.5598	0.5648	Ave		0.5626				10.0		15.0			
n-Butanol	+++++ 0.0047	0.0033 0.0049	0.0041 0.0051	0.0042 0.0047	0.0039	Ave		0.0044				13.5		15.0			
Ethyl acrylate	0.2335 0.2212	0.1751 0.2186	0.2229 0.2539	0.2132 0.2163	0.2098	Ave		0.2183				9.6		15.0			
Methyl methacrylate	0.2107 0.2163	0.1800 0.2146	0.2359 0.2439	0.2088 0.2090	0.2089	Ave		0.2142				8.5		15.0			
2-Nitropropane	+++++ 0.0323	+++++ 0.0369	0.0317 0.0496	0.0285 +++++	0.0330	Qua	0.1320	0.0241	0.0000629						1.0000		0.9900
n-Butyl acetate	+++++ 0.3234	+++++ 0.3306	0.3296 0.3775	0.2936 +++++	0.2820	Ave		0.3228				10.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 07:16 Calibration End Date: 11/30/2018 10:15 Calibration ID: 48278

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1-Chlorohexane	+++++ 0.4332	+++++ 0.4538	0.4223 0.4976	0.3987 0.4493	0.4197	Ave		0.4392				7.2		15.0			
Cyclohexanone	+++++ 0.0079	+++++ 0.0090	0.0077 0.0095	0.0081 0.0091	0.0071	Ave		0.0084				10.5		15.0			
Pentachloroethane	+++++ 0.3616	0.2003 0.3981	0.2813 0.3817	0.2591 0.3865	0.2885	Lin1	-1.192	0.3858							0.9980		0.9900
1,2,3-Trimethylbenzene	3.5343 3.4716	2.6987 3.4357	3.4621 3.3796	3.0677 3.2470	3.4050	Ave		3.3002				8.1		15.0			
Benzyl chloride	+++++ 0.0831	+++++ 0.1056	+++++ 0.1342	0.0509 0.1368	0.0610	Qua	-0.916	0.1023	0.0001604						0.9990		0.9900
1,3,5-Trichlorobenzene	1.6308 1.1935	1.2237 1.1858	1.4381 1.1229	1.2026 1.0996	1.2971	Ave		1.2660				13.4		15.0			
2-Methylnaphthalene	1.4491 1.2035	1.1110 1.2078	0.9369 1.0829	1.0546 0.9959	1.1963	Ave		1.1376				13.2		15.0			
1-Chloro-1-fluoroethane TIC	0.6206 0.4708	0.4384 0.4847	0.6340 0.4735	0.5483 0.4627	0.4858	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 07:16 Calibration End Date: 11/30/2018 10:15 Calibration ID: 48278

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-357692/20	UX81330.D
Level 2	STDA9 240-357692/19	UX81329.D
Level 3	STDA9 240-357692/18	UX81328.D
Level 4	STDA9 240-357692/17	UX81327.D
Level 5	STDA9 240-357692/16	UX81326.D
Level 6	STDA9 240-357692/15	UX81325.D
Level 7	STDA9 240-357692/14	UX81324.D
Level 8	STDA9 240-357692/13	UX81323.D
Level 9	STDA9 240-357692/12	UX81322.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acetonitrile	FB	Ave	+++++ 264533	10991 528905	33544 1080699	56990 1285693	111839	+++++ 500	20.0 1000	50.0 2000	100 2500	200
Diisopropyl ether	FB	Ave	3021 182224	6825 366997	17391 772697	33385 911194	72081	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Chloro-1,3-butadiene	FB	Ave	9584 552939	17344 1105506	53891 2458699	97706 2936617	218000	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Ethyl tert-butyl ether	FB	Ave	12487 694739	23218 1414715	71280 2917288	127064 3454008	272705	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Propionitrile	FB	Ave	5206 234764	8884 456055	28900 993083	46836 1149165	96247	10.0 500	20.0 1000	50.0 2000	100 2500	200
Ethyl acetate	FB	Ave	+++++ 353926	16061 674415	41914 1596709	70627 1740454	147407	+++++ 100	4.00 200	10.0 400	20.0 500	40.0
Methacrylonitrile	FB	Ave	29366 1355765	48364 2606121	152577 5952587	263838 6820427	556135	10.0 500	20.0 1000	50.0 2000	100 2500	200
Tert-amyl methyl ether	FB	Ave	7288 459333	13897 959532	46421 1959070	85152 2304938	178498	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
n-Butanol	FB	Ave	+++++ 95019	2575 192593	7539 428345	15168 484393	31043	+++++ 1250	50.0 2500	125 5000	250 6250	500
Ethyl acrylate	FB	Ave	3399 178012	5404 343402	16289 849313	30994 890732	66288	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Methyl methacrylate	FB	Ave	6134 348045	11105 674095	34474 1631845	60710 1721261	132047	2.00 100	4.00 200	10.0 400	20.0 500	40.0
2-Nitropropane	FB	Qua	+++++ 52002	+++++ 115986	4628 331782	8294 +++++	20877	+++++ 100	+++++ 200	10.0 400	20.0 +++++	40.0
n-Butyl acetate	FB	Ave	+++++ 260212	+++++ 519258	24087 1263084	42684 +++++	89111	+++++ 50.0	+++++ 100	5.00 200	10.0 +++++	20.0
1-Chlorohexane	CBNZ d5	Ave	+++++ 228804	+++++ 464802	20911 1102927	38265 1193853	86918	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 07:16 Calibration End Date: 11/30/2018 10:15 Calibration ID: 48278

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Cyclohexanone	CBNZ d5	Ave	+++++ 41847	+++++ 92378	3813 211319	7769 242673	14736	+++++ 500	+++++ 1000	50.0 2000	100 2500	200
Pentachloroethane	DCBd 4	Lin1	+++++ 182005	3809 405387	13315 822330	24861 1019931	57367	+++++ 100	4.00 200	10.0 400	20.0 500	40.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	15897 873600	25657 1749353	81944 3640722	147174 4284228	338551	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Benzyl chloride	DCBd 4	Qua	+++++ 20910	+++++ 53749	+++++ 144556	2441 180471	6069	+++++ 50.0	+++++ 100	+++++ 200	10.0 250	20.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	7335 300329	11634 603796	34038 1209602	57694 1450903	128969	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Methylnaphthalene	DCBd 4	Ave	13036 605698	21125 1229959	44349 2333072	101194 2627993	237895	2.00 100	4.00 200	10.0 400	20.0 500	40.0
1-Chloro-1-fluoroethane TIC	FB	None	9035 378859	13527 761389	46331 1584321	79721 1904925	153533	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
None = No Calib Curve
Qua = Quadratic ISTD

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-357692/21 Calibration Date: 11/30/2018 10:37

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 03:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 06:53

Lab File ID: UX81331.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3456	0.4014		0.0290	0.0250	16.2	50.0
Chloromethane	Ave	0.4792	0.4988	0.1000	0.0260	0.0250	4.1	50.0
Vinyl chloride	Ave	0.3248	0.3392		0.0261	0.0250	4.4	20.0
Butadiene	Ave	0.4212	0.3852		0.0229	0.0250	-8.5	50.0
Bromomethane	Ave	0.1820	0.1707		0.0235	0.0250	-6.2	50.0
Chloroethane	Ave	0.2062	0.1998		0.0242	0.0250	-3.1	50.0
Dichlorofluoromethane	Ave	0.4630	0.4649		0.0251	0.0250	0.4	50.0
Trichlorofluoromethane	Ave	0.4255	0.4216		0.0248	0.0250	-0.9	50.0
Ethyl ether	Ave	0.2276	0.2484		0.0273	0.0250	9.2	50.0
Acrolein	Ave	0.0375	0.0245		0.0816	0.125	-34.7	50.0
1,1-Dichloroethene	Ave	0.2680	0.2588		0.0241	0.0250	-3.5	20.0
1,1,2-Trichlorotrifluoroethane	Lin1		0.2166		0.0247	0.0250	-1.2	50.0
Acetone	Lin1		0.0952		0.0523	0.0500	4.6	50.0
Iodomethane	Ave	0.4389	0.4288		0.0244	0.0250	-2.3	50.0
Carbon disulfide	Ave	0.7778	0.7462		0.0240	0.0250	-4.1	50.0
3-Chloro-1-propene	Ave	0.1527	0.1540		0.0252	0.0250	0.8	50.0
Methyl acetate	Ave	0.2016	0.1948		0.0483	0.0500	-3.4	50.0
Methylene Chloride	Lin1		0.3070		0.0251	0.0250	0.2	50.0
tert-Butyl alcohol	Lin1		0.0171		0.274	0.250	9.7	50.0
Acrylonitrile	Ave	0.0873	0.0874		0.250	0.250	0.1	50.0
Methyl tert-butyl ether	Ave	0.5906	0.5890		0.0249	0.0250	-0.3	50.0
trans-1,2-Dichloroethene	Ave	0.3069	0.3107		0.0253	0.0250	1.2	50.0
Hexane	Ave	0.0854	0.0776		0.0227	0.0250	-9.2	20.0
1,1-Dichloroethane	Ave	0.5941	0.5846	0.1000	0.0246	0.0250	-1.6	50.0
Vinyl acetate	Ave	0.4716	0.4796		0.0254	0.0250	1.7	50.0
2,2-Dichloropropane	Ave	0.3623	0.3053		0.0211	0.0250	-15.7	50.0
2-Butanone (MEK)	Ave	0.1183	0.1251		0.0528	0.0500	5.7	50.0
cis-1,2-Dichloroethene	Ave	0.3210	0.3163		0.0246	0.0250	-1.4	50.0
Bromochloromethane	Ave	0.1222	0.1250		0.0256	0.0250	2.3	50.0
Chloroform	Ave	0.5263	0.5115		0.0243	0.0250	-2.8	20.0
Tetrahydrofuran	Ave	0.0730	0.0705		0.0483	0.0500	-3.4	50.0
1,1,1-Trichloroethane	Ave	0.4496	0.4461		0.0248	0.0250	-0.8	50.0
Cyclohexane	Ave	0.6736	0.6974		0.0259	0.0250	3.5	50.0
1,1-Dichloropropene	Ave	0.4037	0.3829		0.0237	0.0250	-5.1	50.0
Carbon tetrachloride	Ave	0.3867	0.3738		0.0242	0.0250	-3.3	50.0
Isobutyl alcohol	Ave	0.0093	0.0099		0.661	0.625	5.8	50.0
1,2-Dichloroethane	Ave	0.4287	0.4222		0.0246	0.0250	-1.5	50.0
Benzene	Ave	1.159	1.084		0.0234	0.0250	-6.4	50.0
n-Heptane	Ave	0.0819	0.0717		0.0219	0.0250	-12.5	50.0
Trichloroethene	Ave	0.2794	0.2650		0.0237	0.0250	-5.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-357692/21 Calibration Date: 11/30/2018 10:37

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 03:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 06:53

Lab File ID: UX81331.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.2775	0.2771		0.0250	0.0250	-0.1	20.0
Methylcyclohexane	Ave	0.5291	0.5119		0.0242	0.0250	-3.2	50.0
1,4-Dioxane	Ave	0.0016	0.0016		0.500	0.500	0.0	50.0
Dibromomethane	Ave	0.1230	0.1192		0.0242	0.0250	-3.1	50.0
Bromodichloromethane	Ave	0.3046	0.2843		0.0233	0.0250	-6.7	50.0
2-Chloroethyl vinyl ether	Ave	0.0769	0.0675		0.0219	0.0250	-12.2	50.0
cis-1,3-Dichloropropene	Ave	0.3028	0.2796		0.0231	0.0250	-7.6	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2143	0.2261		0.0528	0.0500	5.5	50.0
Toluene	Ave	1.701	1.631		0.0240	0.0250	-4.1	20.0
trans-1,3-Dichloropropene	Ave	0.3740	0.3148		0.0210	0.0250	-15.8	50.0
Ethyl methacrylate	Ave	0.2818	0.2870		0.0255	0.0250	1.8	50.0
1,1,2-Trichloroethane	Ave	0.2502	0.2595		0.0259	0.0250	3.7	50.0
1,3-Dichloropropane	Ave	0.4585	0.4711		0.0257	0.0250	2.8	50.0
Tetrachloroethene	Ave	0.3536	0.3329		0.0235	0.0250	-5.9	50.0
2-Hexanone	Ave	0.2308	0.2346		0.0508	0.0500	1.6	50.0
Chlorodibromomethane	Ave	0.2437	0.2234		0.0229	0.0250	-8.3	50.0
1,2-Dibromoethane	Ave	0.2225	0.2265		0.0255	0.0250	1.8	50.0
Chlorobenzene	Ave	1.103	1.005	0.3000	0.0228	0.0250	-8.8	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3377	0.3479		0.0258	0.0250	3.0	50.0
Ethylbenzene	Ave	0.5783	0.5724		0.0247	0.0250	-1.0	20.0
m-Xylene & p-Xylene	Ave	0.7038	0.6947		0.0247	0.0250	-1.3	50.0
o-Xylene	Ave	0.6869	0.7051		0.0257	0.0250	2.7	50.0
Styrene	Ave	1.106	1.061		0.0240	0.0250	-4.0	50.0
Bromoform	Ave	0.1271	0.1137	0.1000	0.0224	0.0250	-10.6	50.0
Isopropylbenzene	Ave	1.977	1.939		0.0245	0.0250	-1.9	50.0
1,1,2,2-Tetrachloroethane	Ave	0.5343	0.5652	0.3000	0.0264	0.0250	5.8	50.0
Bromobenzene	Ave	0.8222	0.7770		0.0236	0.0250	-5.5	50.0
1,2,3-Trichloropropane	Ave	0.1899	0.1960		0.0258	0.0250	3.2	50.0
trans-1,4-Dichloro-2-butene	Ave	0.2057	0.2043		0.0248	0.0250	-0.7	50.0
N-Propylbenzene	Ave	1.006	0.9517		0.0237	0.0250	-5.4	50.0
2-Chlorotoluene	Ave	0.8453	0.8084		0.0239	0.0250	-4.4	50.0
1,3,5-Trimethylbenzene	Ave	3.274	3.038		0.0232	0.0250	-7.2	50.0
4-Chlorotoluene	Ave	0.8710	0.8088		0.0232	0.0250	-7.1	50.0
tert-Butylbenzene	Ave	2.906	2.627		0.0226	0.0250	-9.6	50.0
1,2,4-Trimethylbenzene	Ave	3.305	3.039		0.0230	0.0250	-8.0	50.0
sec-Butylbenzene	Ave	4.277	3.918		0.0229	0.0250	-8.4	50.0
1,3-Dichlorobenzene	Ave	1.708	1.583		0.0232	0.0250	-7.3	50.0
4-Isopropyltoluene	Ave	3.526	3.205		0.0227	0.0250	-9.1	50.0
1,4-Dichlorobenzene	Ave	1.808	1.593		0.0220	0.0250	-11.9	50.0
n-Butylbenzene	Ave	3.122	2.807		0.0225	0.0250	-10.1	50.0
1,2-Dichlorobenzene	Ave	1.596	1.481		0.0232	0.0250	-7.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-357692/21 Calibration Date: 11/30/2018 10:37

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 03:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 06:53

Lab File ID: UX81331.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.0678	0.0626		0.0231	0.0250	-7.7	50.0
1,2,4-Trichlorobenzene	Ave	0.9606	0.7594		0.0198	0.0250	-20.9	50.0
Hexachlorobutadiene	Ave	0.6588	0.5260		0.0200	0.0250	-20.2	50.0
Naphthalene	Ave	1.571	1.320		0.0210	0.0250	-16.0	50.0
1,2,3-Trichlorobenzene	Ave	0.8818	0.7263		0.0206	0.0250	-17.6	50.0
Dibromofluoromethane (Surr)	Ave	0.2492	0.2160		0.0434	0.0500	-13.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3333	0.2833		0.0425	0.0500	-15.0	50.0
Toluene-d8 (Surr)	Ave	1.420	1.251		0.0441	0.0500	-11.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5460	0.4758		0.0436	0.0500	-12.9	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-357692/22 Calibration Date: 11/30/2018 11:00

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 03:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 06:53

Lab File ID: UX81332.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2492	0.2099		0.0421	0.0500	-15.8	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3333	0.2837		0.0426	0.0500	-14.9	50.0
Toluene-d8 (Surr)	Ave	1.420	1.160		0.0409	0.0500	-18.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5460	0.4235		0.0388	0.0500	-22.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-357692/22 Calibration Date: 11/30/2018 11:00

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 07:16

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 10:15

Lab File ID: UX81332.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0358	0.0354		0.247	0.250	-1.0	50.0
Diisopropyl ether	Ave	0.2263	0.2300		0.0254	0.0250	1.6	50.0
2-Chloro-1,3-butadiene	Ave	0.6843	0.6772		0.0247	0.0250	-1.0	50.0
Ethyl tert-butyl ether	Ave	0.8664	0.8597		0.0248	0.0250	-0.8	50.0
Ethyl acetate	Ave	0.2385	0.2259		0.0474	0.0500	-5.3	50.0
Propionitrile	Ave	0.0314	0.0299		0.238	0.250	-4.8	50.0
Methacrylonitrile	Ave	0.1781	0.1701		0.239	0.250	-4.5	50.0
Tert-amyl methyl ether	Ave	0.5626	0.5658		0.0251	0.0250	0.6	50.0
n-Butanol	Ave	0.0044	0.0038		0.535	0.625	-14.4	50.0
Ethyl acrylate	Ave	0.2183	0.2149		0.0246	0.0250	-1.6	50.0
Methyl methacrylate	Ave	0.2142	0.2152		0.0502	0.0500	0.4	50.0
2-Nitropropane	Qua		0.0288		0.0483	0.0500	-3.3	50.0
n-Butyl acetate	Ave	0.3228	0.2952		0.0229	0.0250	-8.6	50.0
1-Chlorohexane	Ave	0.4392	0.4186		0.0238	0.0250	-4.7	50.0
Cyclohexanone	Ave	0.0084	0.0055		0.164	0.250	-34.4	50.0
Pentachloroethane	Lin1		0.3213		0.0447	0.0500	-10.6	50.0
1,2,3-Trimethylbenzene	Ave	3.300	3.148		0.0238	0.0250	-4.6	50.0
Benzyl chloride	Qua		0.0649		0.0239	0.0250	-4.4	50.0
1,3,5-Trichlorobenzene	Ave	1.266	1.105		0.0218	0.0250	-12.7	50.0
2-Methylnaphthalene	Ave	1.138	0.6373		0.0280	0.0500	-44.0	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: BFB8847.D BFB Injection Date: 01/10/2019

Instrument ID: A3UX8 BFB Injection Time: 02:24

Analysis Batch No.: 363459

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	28.4	
75	30.0 - 60.0 % of mass 95	52.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	76.7	
175	5.0 - 9.0 % of mass 174	5.7	(7.4) 1
176	95.0 - 101.0 % of mass 174	74.0	(96.4) 1
177	5.0 - 9.0 % of mass 176	4.9	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-363459/5	UX82184.D	01/10/2019	03:21
	CCVIS 240-363459/6	UX82185.D	01/10/2019	03:44
	MB 240-363459/8	UX82187.D	01/10/2019	04:30
	LCS 240-363459/9	UX82188.D	01/10/2019	04:54
SB-MW154-9-10	240-106686-2	UX82201.D	01/10/2019	10:00
SB-MW154-10-12	240-106686-3	UX82202.D	01/10/2019	10:23
SB-MW154-12-13	240-106686-4	UX82203.D	01/10/2019	10:47
SB-MW155-8-9	240-106686-5	UX82204.D	01/10/2019	11:10
SB-MW155-9-11	240-106686-6	UX82205.D	01/10/2019	11:33
SB-MW155-11-12	240-106686-7	UX82206.D	01/10/2019	11:55
SB-MW158-9-10	240-106686-8	UX82207.D	01/10/2019	12:18
SB-MW158-10-11	240-106686-9	UX82208.D	01/10/2019	12:42
SB-MW158-11-12	240-106686-10	UX82209.D	01/10/2019	13:05
SB-MW158-11-12 MS	240-106686-10 MS	UX82210.D	01/10/2019	13:28
SB-MW158-11-12 MSD	240-106686-10 MSD	UX82211.D	01/10/2019	13:51

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCV 240-363459/5 Calibration Date: 01/10/2019 03:21

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 07:16

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 10:15

Lab File ID: UX82184.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0358	0.0345		0.193	0.200	-3.6	50.0
Diisopropyl ether	Ave	0.2263	0.2015		0.0178	0.0200	-11.0	50.0
2-Chloro-1,3-butadiene	Ave	0.6843	0.5994		0.0175	0.0200	-12.4	50.0
Ethyl tert-butyl ether	Ave	0.8664	0.6635		0.0153	0.0200	-23.4	50.0
Ethyl acetate	Ave	0.2385	0.2473		0.0415	0.0400	3.7	50.0
Propionitrile	Ave	0.0314	0.0336		0.214	0.200	7.1	50.0
Methacrylonitrile	Ave	0.1781	0.1841		0.207	0.200	3.4	50.0
Tert-amyl methyl ether	Ave	0.5626	0.4754		0.0169	0.0200	-15.5	50.0
n-Butanol	Ave	0.0044	0.0042		0.483	0.500	-3.4	50.0
Ethyl acrylate	Ave	0.2183	0.2232		0.0204	0.0200	2.2	50.0
Methyl methacrylate	Ave	0.2142	0.2183		0.0408	0.0400	1.9	50.0
2-Nitropropane	Qua		0.0402		0.0538	0.0400	34.5	50.0
n-Butyl acetate	Ave	0.3228	0.2878		0.0178	0.0200	-10.8	50.0
1-Chlorohexane	Ave	0.4392	0.3640		0.0166	0.0200	-17.1	50.0
Cyclohexanone	Ave	0.0084	0.0063		0.151	0.200	-24.5	50.0
Pentachloroethane	Lin1		0.2932		0.0335	0.0400	-16.3	50.0
1,2,3-Trimethylbenzene	Ave	3.300	2.853		0.0173	0.0200	-13.6	50.0
Benzyl chloride	Qua		0.0708		0.0220	0.0200	10.2	50.0
1,3,5-Trichlorobenzene	Ave	1.266	0.9942		0.0157	0.0200	-21.5	50.0
2-Methylnaphthalene	Ave	1.138	0.5721		0.0201	0.0400	-49.7	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-363459/6 Calibration Date: 01/10/2019 03:44

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 03:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 06:53

Lab File ID: UX82185.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3456	0.3589		0.0208	0.0200	3.8	50.0
Chloromethane	Ave	0.4792	0.4111	0.1000	0.0172	0.0200	-14.2	50.0
Vinyl chloride	Ave	0.3248	0.2936		0.0181	0.0200	-9.6	20.0
Butadiene	Ave	0.4212	0.3849		0.0183	0.0200	-8.6	50.0
Bromomethane	Ave	0.1820	0.1658		0.0182	0.0200	-8.9	50.0
Chloroethane	Ave	0.2062	0.1837		0.0178	0.0200	-10.9	50.0
Dichlorofluoromethane	Ave	0.4630	0.4504		0.0195	0.0200	-2.7	50.0
Trichlorofluoromethane	Ave	0.4255	0.4471		0.0210	0.0200	5.1	50.0
Ethyl ether	Ave	0.2276	0.2514		0.0221	0.0200	10.5	50.0
Acrolein	Ave	0.0375	0.0262		0.0699	0.100	-30.1	50.0
1,1-Dichloroethene	Ave	0.2680	0.2892		0.0216	0.0200	7.9	20.0
1,1,2-Trichlorotrifluoroethane	Lin1		0.2341		0.0210	0.0200	5.1	50.0
Acetone	Lin1		0.0967		0.0415	0.0400	3.8	50.0
Iodomethane	Ave	0.4389	0.4400		0.0200	0.0200	0.2	50.0
Carbon disulfide	Ave	0.7778	0.8155		0.0210	0.0200	4.8	50.0
3-Chloro-1-propene	Ave	0.1527	0.1605		0.0210	0.0200	5.1	50.0
Methyl acetate	Ave	0.2016	0.2057		0.0408	0.0400	2.0	50.0
Methylene Chloride	Lin1		0.3109		0.0195	0.0200	-2.7	50.0
tert-Butyl alcohol	Lin1		0.0190		0.240	0.200	20.2	50.0
Acrylonitrile	Ave	0.0873	0.0942		0.216	0.200	8.0	50.0
Methyl tert-butyl ether	Ave	0.5906	0.6039		0.0204	0.0200	2.2	50.0
trans-1,2-Dichloroethene	Ave	0.3069	0.3269		0.0213	0.0200	6.5	50.0
Hexane	Ave	0.0854	0.0929		0.0217	0.0200	8.7	20.0
1,1-Dichloroethane	Ave	0.5941	0.5966	0.1000	0.0201	0.0200	0.4	50.0
Vinyl acetate	Ave	0.4716	0.5313		0.0225	0.0200	12.7	50.0
2-Butanone (MEK)	Ave	0.1183	0.1472		0.0498	0.0400	24.4	50.0
cis-1,2-Dichloroethene	Ave	0.3210	0.3341		0.0208	0.0200	4.1	50.0
2,2-Dichloropropane	Ave	0.3623	0.2947		0.0163	0.0200	-18.7	50.0
Bromochloromethane	Ave	0.1222	0.1365		0.0223	0.0200	11.7	50.0
Tetrahydrofuran	Ave	0.0730	0.0731		0.0400	0.0400	0.1	50.0
Chloroform	Ave	0.5263	0.5621		0.0214	0.0200	6.8	20.0
1,1,1-Trichloroethane	Ave	0.4496	0.4550		0.0202	0.0200	1.2	50.0
Cyclohexane	Ave	0.6736	0.6761		0.0201	0.0200	0.4	50.0
1,1-Dichloropropene	Ave	0.4037	0.4389		0.0217	0.0200	8.7	50.0
Carbon tetrachloride	Ave	0.3867	0.4023		0.0208	0.0200	4.0	50.0
Isobutyl alcohol	Ave	0.0093	0.0106		0.569	0.500	13.9	50.0
1,2-Dichloroethane	Ave	0.4287	0.4451		0.0208	0.0200	3.8	50.0
Benzene	Ave	1.159	1.240		0.0214	0.0200	7.0	50.0
n-Heptane	Ave	0.0819	0.0967		0.0236	0.0200	18.0	50.0
Trichloroethene	Ave	0.2794	0.3050		0.0218	0.0200	9.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-363459/6 Calibration Date: 01/10/2019 03:44

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 03:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 06:53

Lab File ID: UX82185.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.5291	0.5687		0.0215	0.0200	7.5	50.0
1,2-Dichloropropane	Ave	0.2775	0.2821		0.0203	0.0200	1.7	20.0
Dibromomethane	Ave	0.1230	0.1468		0.0239	0.0200	19.3	50.0
1,4-Dioxane	Ave	0.0016	0.0019		0.462	0.400	15.6	50.0
Bromodichloromethane	Ave	0.3046	0.3279		0.0215	0.0200	7.7	50.0
2-Chloroethyl vinyl ether	Ave	0.0769	0.0907		0.0472	0.0400	17.9	50.0
cis-1,3-Dichloropropene	Ave	0.3028	0.2973		0.0196	0.0200	-1.8	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2143	0.2437		0.0455	0.0400	13.7	50.0
Toluene	Ave	1.701	1.795		0.0211	0.0200	5.5	20.0
trans-1,3-Dichloropropene	Ave	0.3740	0.3264		0.0175	0.0200	-12.7	50.0
Ethyl methacrylate	Ave	0.2818	0.3129		0.0222	0.0200	11.0	50.0
1,1,2-Trichloroethane	Ave	0.2502	0.2824		0.0226	0.0200	12.9	50.0
1,3-Dichloropropane	Ave	0.4585	0.4838		0.0211	0.0200	5.5	50.0
Tetrachloroethene	Ave	0.3536	0.3775		0.0213	0.0200	6.7	50.0
2-Hexanone	Ave	0.2308	0.2530		0.0439	0.0400	9.6	50.0
Chlorodibromomethane	Ave	0.2437	0.2686		0.0220	0.0200	10.2	50.0
1,2-Dibromoethane	Ave	0.2225	0.2512		0.0226	0.0200	12.9	50.0
Chlorobenzene	Ave	1.103	1.103	0.3000	0.0200	0.0200	0.0	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3377	0.3692		0.0219	0.0200	9.3	50.0
Ethylbenzene	Ave	0.5783	0.6170		0.0213	0.0200	6.7	20.0
m-Xylene & p-Xylene	Ave	0.7038	0.7289		0.0207	0.0200	3.6	50.0
o-Xylene	Ave	0.6869	0.7247		0.0211	0.0200	5.5	50.0
Styrene	Ave	1.106	1.145		0.0207	0.0200	3.6	50.0
Bromoform	Ave	0.1271	0.1289	0.1000	0.0203	0.0200	1.4	50.0
Isopropylbenzene	Ave	1.977	1.998		0.0202	0.0200	1.1	50.0
1,1,2,2-Tetrachloroethane	Ave	0.5343	0.6565	0.3000	0.0246	0.0200	22.9	50.0
Bromobenzene	Ave	0.8222	0.8358		0.0203	0.0200	1.7	50.0
1,2,3-Trichloropropane	Ave	0.1899	0.2290		0.0241	0.0200	20.6	50.0
trans-1,4-Dichloro-2-butene	Ave	0.2057	0.2148		0.0209	0.0200	4.4	50.0
N-Propylbenzene	Ave	1.006	1.035		0.0206	0.0200	2.9	50.0
2-Chlorotoluene	Ave	0.8453	0.8730		0.0207	0.0200	3.3	50.0
1,3,5-Trimethylbenzene	Ave	3.274	3.263		0.0199	0.0200	-0.3	50.0
4-Chlorotoluene	Ave	0.8710	0.8988		0.0206	0.0200	3.2	50.0
tert-Butylbenzene	Ave	2.906	2.805		0.0193	0.0200	-3.5	50.0
1,2,4-Trimethylbenzene	Ave	3.305	3.360		0.0203	0.0200	1.7	50.0
sec-Butylbenzene	Ave	4.277	4.208		0.0197	0.0200	-1.6	50.0
1,3-Dichlorobenzene	Ave	1.708	1.762		0.0206	0.0200	3.2	50.0
4-Isopropyltoluene	Ave	3.526	3.540		0.0201	0.0200	0.4	50.0
1,4-Dichlorobenzene	Ave	1.808	1.795		0.0199	0.0200	-0.7	50.0
n-Butylbenzene	Ave	3.122	3.123		0.0200	0.0200	0.0	50.0
1,2-Dichlorobenzene	Ave	1.596	1.688		0.0212	0.0200	5.8	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-363459/6 Calibration Date: 01/10/2019 03:44

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 03:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 06:53

Lab File ID: UX82185.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.0678	0.0702		0.0207	0.0200	3.6	50.0
1,2,4-Trichlorobenzene	Ave	0.9606	0.8720		0.0182	0.0200	-9.2	50.0
Hexachlorobutadiene	Ave	0.6588	0.5410		0.0164	0.0200	-17.9	50.0
Naphthalene	Ave	1.571	1.529		0.0195	0.0200	-2.7	50.0
1,2,3-Trichlorobenzene	Ave	0.8818	0.8109		0.0184	0.0200	-8.0	50.0
Dibromofluoromethane (Surr)	Ave	0.2492	0.2181		0.0438	0.0500	-12.5	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3333	0.2821		0.0423	0.0500	-15.4	50.0
Toluene-d8 (Surr)	Ave	1.420	1.223		0.0431	0.0500	-13.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5460	0.4546		0.0416	0.0500	-16.7	50.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Sample No.: ICIS 240-357692/7 Date Analyzed: 11/30/2018 05:24

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UX81317.D Heated Purge: (Y/N) Y

Calibration ID: 48276

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		790737	5.16	506095	7.69	262114	9.88
UPPER LIMIT		1581474	5.66	1012190	8.19	524228	10.38
LOWER LIMIT		395369	4.66	253048	7.19	131057	9.38
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-357692/21		780031	5.16	502924	7.69	279431	9.88
ICV 240-357692/22		754483	5.16	524233	7.69	252903	9.88
CCVIS 240-363459/6		706804	5.16	481314	7.69	262791	9.88

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Sample No.: CCVIS 240-363459/6 Date Analyzed: 01/10/2019 03:44

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UX82185.D Heated Purge: (Y/N) Y

Calibration ID: 48278

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		706804	5.16	481314	7.69	262791	9.88
UPPER LIMIT		1413608	5.66	962628	8.19	525582	10.38
LOWER LIMIT		353402	4.66	240657	7.19	131396	9.38
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-363459/5		706799	5.16	500274	7.69	244735	9.88
MB 240-363459/8		667685	5.16	477393	7.69	246222	9.88
LCS 240-363459/9		733754	5.16	503593	7.69	276894	9.88
240-106686-2	SB-MW154-9-10	560692	5.17	404094	7.69	198574	9.88
240-106686-3	SB-MW154-10-12	632873	5.16	459601	7.69	227360	9.88
240-106686-4	SB-MW154-12-13	602387	5.16	434186	7.69	208509	9.88
240-106686-5	SB-MW155-8-9	530022	5.16	385819	7.69	178291	9.88
240-106686-6	SB-MW155-9-11	579256	5.16	412007	7.69	195091	9.88
240-106686-7	SB-MW155-11-12	581979	5.16	424789	7.69	201136	9.88
240-106686-8	SB-MW158-9-10	592697	5.16	423237	7.69	200458	9.88
240-106686-9	SB-MW158-10-11	596088	5.16	425328	7.69	213452	9.88
240-106686-10	SB-MW158-11-12	560904	5.16	398305	7.69	191912	9.88
240-106686-10 MS	SB-MW158-11-12 MS	625014	5.16	431814	7.69	241127	9.88
240-106686-10 MSD	SB-MW158-11-12 MSD	634687	5.16	425111	7.69	236214	9.88

FB = Fluorobenzene
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
CBNZd5 = Chlorobenzene-d5
Area Limit = 50%-200% of internal standard area
DCBd4 = 1,4-Dichlorobenzene-d4
RT Limit = ± 0.5 minutes of internal standard RT
DCBd4 = 1,4-Dichlorobenzene-d4

Column used to flag values outside QC limits

FORM VIII 8260B

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Instrument ID: A3UX8 Start Date: 11/30/2018 03:22

Analysis Batch Number: 357692 End Date: 11/30/2018 14:40

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-357692/1		11/30/2018 03:22	1	BFB8814.D	DB-624 0.18(mm)
STD8260 240-357692/3 IC		11/30/2018 03:55	1	UX81313.D	DB-624 0.18(mm)
STD8260 240-357692/4 IC		11/30/2018 04:18	1	UX81314.D	DB-624 0.18(mm)
STD8260 240-357692/5 IC		11/30/2018 04:40	1	UX81315.D	DB-624 0.18(mm)
STD8260 240-357692/6 IC		11/30/2018 05:01	1	UX81316.D	DB-624 0.18(mm)
ICIS 240-357692/7		11/30/2018 05:24	1	UX81317.D	DB-624 0.18(mm)
STD8260 240-357692/8 IC		11/30/2018 05:47	1	UX81318.D	DB-624 0.18(mm)
STD8260 240-357692/9 IC		11/30/2018 06:09	1	UX81319.D	DB-624 0.18(mm)
STD8260 240-357692/10 IC		11/30/2018 06:31	1	UX81320.D	DB-624 0.18(mm)
STD8260 240-357692/11 IC		11/30/2018 06:53	1	UX81321.D	DB-624 0.18(mm)
STDA9 240-357692/12 IC		11/30/2018 07:16	1	UX81322.D	DB-624 0.18(mm)
STDA9 240-357692/13 IC		11/30/2018 07:38	1	UX81323.D	DB-624 0.18(mm)
STDA9 240-357692/14 IC		11/30/2018 08:00	1	UX81324.D	DB-624 0.18(mm)
STDA9 240-357692/15 IC		11/30/2018 08:23	1	UX81325.D	DB-624 0.18(mm)
STDA9 240-357692/16 IC		11/30/2018 08:45	1	UX81326.D	DB-624 0.18(mm)
STDA9 240-357692/17 IC		11/30/2018 09:08	1	UX81327.D	DB-624 0.18(mm)
STDA9 240-357692/18 IC		11/30/2018 09:30	1	UX81328.D	DB-624 0.18(mm)
STDA9 240-357692/19 IC		11/30/2018 09:52	1	UX81329.D	DB-624 0.18(mm)
STDA9 240-357692/20 IC		11/30/2018 10:15	1	UX81330.D	DB-624 0.18(mm)
ICV 240-357692/21		11/30/2018 10:37	1	UX81331.D	DB-624 0.18(mm)
ICV 240-357692/22		11/30/2018 11:00	1	UX81332.D	DB-624 0.18(mm)
ZZZZZ		11/30/2018 12:06	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 12:28	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 13:12	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 13:34	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 13:57	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 14:19	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 14:40	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Instrument ID: A3UX8 Start Date: 01/10/2019 02:24

Analysis Batch Number: 363459 End Date: 01/10/2019 13:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-363459/1		01/10/2019 02:24	1	BFB8847.D	DB-624 0.18(mm)
CCV 240-363459/5		01/10/2019 03:21	1	UX82184.D	DB-624 0.18(mm)
CCVIS 240-363459/6		01/10/2019 03:44	1	UX82185.D	DB-624 0.18(mm)
MB 240-363459/8		01/10/2019 04:30	1	UX82187.D	DB-624 0.18(mm)
LCS 240-363459/9		01/10/2019 04:54	1	UX82188.D	DB-624 0.18(mm)
240-106686-2		01/10/2019 10:00	1	UX82201.D	DB-624 0.18(mm)
240-106686-3		01/10/2019 10:23	1	UX82202.D	DB-624 0.18(mm)
240-106686-4		01/10/2019 10:47	1	UX82203.D	DB-624 0.18(mm)
240-106686-5		01/10/2019 11:10	1	UX82204.D	DB-624 0.18(mm)
240-106686-6		01/10/2019 11:33	1	UX82205.D	DB-624 0.18(mm)
240-106686-7		01/10/2019 11:55	1	UX82206.D	DB-624 0.18(mm)
240-106686-8		01/10/2019 12:18	1	UX82207.D	DB-624 0.18(mm)
240-106686-9		01/10/2019 12:42	1	UX82208.D	DB-624 0.18(mm)
240-106686-10		01/10/2019 13:05	1	UX82209.D	DB-624 0.18(mm)
240-106686-10 MS		01/10/2019 13:28	1	UX82210.D	DB-624 0.18(mm)
240-106686-10 MSD		01/10/2019 13:51	1	UX82211.D	DB-624 0.18(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 363459 Batch Start Date: 01/10/19 02:24 Batch Analyst: Macenczak, Steven

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM568718 00013	VMAROLISTDW 00280	vmbfb 00021	VMFASAW 00263
BFB 240-363459/1		8260B		5 mL	5 mL			1 uL	
CCV 240-363459/5		8260B		5 mL	5 mL	1 uL			
CCVIS 240-363459/6		8260B		5 g	5 mL	1 uL	2 uL		
MB 240-363459/8		8260B		5 g	5 mL	1 uL			
LCS 240-363459/9		8260B		5 g	5 mL	1 uL			2.5 uL
240-106686-B-2-B	SB-MW154-9-10	8260B	T	5 g	5 mL	1 uL			
240-106686-B-3-B	SB-MW154-10-12	8260B	T	5 g	5 mL	1 uL			
240-106686-B-4-B	SB-MW154-12-13	8260B	T	5 g	5 mL	1 uL			
240-106686-B-5-B	SB-MW155-8-9	8260B	T	5 g	5 mL	1 uL			
240-106686-B-6-B	SB-MW155-9-11	8260B	T	5 g	5 mL	1 uL			
240-106686-B-7-B	SB-MW155-11-12	8260B	T	5 g	5 mL	1 uL			
240-106686-B-8-B	SB-MW158-9-10	8260B	T	5 g	5 mL	1 uL			
240-106686-B-9-B	SB-MW158-10-11	8260B	T	5 g	5 mL	1 uL			
240-106686-B-10-E	SB-MW158-11-12	8260B	T	5 g	5 mL	1 uL			
240-106686-B-10-F MS	SB-MW158-11-12	8260B	T	5 g	5 mL	1 uL			2.5 uL
240-106686-B-10-G MSD	SB-MW158-11-12	8260B	T	5 g	5 mL	1 uL			2.5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASGW 00291	VMFASPW 00284	VMRA9W 00280	VMRGAS 00277	VMRPRIMW 00317	VMUX8SS 00030
BFB 240-363459/1		8260B							
CCV 240-363459/5		8260B				2 uL			
CCVIS 240-363459/6		8260B					2 uL	2 uL	1.1547 uL
MB 240-363459/8		8260B							1.1547 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 363459 Batch Start Date: 01/10/19 02:24 Batch Analyst: Macenczak, Steven

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASGW 00291	VMFASPW 00284	VMRA9W 00280	VMRGAS 00277	VMRPRIMW 00317	VMUX8SS 00030
LCS 240-363459/9		8260B		2.5 uL	2.5 uL				1.1547 uL
240-106686-B-2-B	SB-MW154-9-10	8260B	T						1.1547 uL
240-106686-B-3-B	SB-MW154-10-12	8260B	T						1.1547 uL
240-106686-B-4-B	SB-MW154-12-13	8260B	T						1.1547 uL
240-106686-B-5-B	SB-MW155-8-9	8260B	T						1.1547 uL
240-106686-B-6-B	SB-MW155-9-11	8260B	T						1.1547 uL
240-106686-B-7-B	SB-MW155-11-12	8260B	T						1.1547 uL
240-106686-B-8-B	SB-MW158-9-10	8260B	T						1.1547 uL
240-106686-B-9-B	SB-MW158-10-11	8260B	T						1.1547 uL
240-106686-B-10-E	SB-MW158-11-12	8260B	T						1.1547 uL
240-106686-B-10-F MS	SB-MW158-11-12	8260B	T	2.5 uL	2.5 uL				1.1547 uL
240-106686-B-10-G MSD	SB-MW158-11-12	8260B	T	2.5 uL	2.5 uL				1.1547 uL

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 363484 Batch Start Date: 01/10/19 05:27 Batch Analyst: Lata, Todd

Batch Method: 5030A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount				
240-106686-B-2	SB-MW154-9-10	5030A, 8260B	T	5.36 g	5 mL				
240-106686-B-3	SB-MW154-10-12	5030A, 8260B	T	5.42 g	5 mL				
240-106686-B-4	SB-MW154-12-13	5030A, 8260B	T	5.23 g	5 mL				
240-106686-B-5	SB-MW155-8-9	5030A, 8260B	T	5.26 g	5 mL				
240-106686-B-6	SB-MW155-9-11	5030A, 8260B	T	5.20 g	5 mL				
240-106686-B-7	SB-MW155-11-12	5030A, 8260B	T	5.02 g	5 mL				
240-106686-B-8	SB-MW158-9-10	5030A, 8260B	T	5.03 g	5 mL				
240-106686-B-9	SB-MW158-10-11	5030A, 8260B	T	5.11 g	5 mL				
240-106686-B-10	SB-MW158-11-12	5030A, 8260B	T	5.39 g	5 mL				
240-106686-B-10 MS	SB-MW158-11-12	5030A, 8260B	T	5.07 g	5 mL				
240-106686-B-10 MSD	SB-MW158-11-12	5030A, 8260B	T	5.09 g	5 mL				

Batch Notes	
Balance ID	B035
Blank Matrix ID	178797

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
	MRL 240-364762/34	105	105	79	81

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	10-150
DCA = 1,2-Dichloroethane-d4 (Surr)	10-150
TOL = Toluene-d8 (Surr)	10-150
BFB = 4-Bromofluorobenzene (Surr)	10-150

Column to be used to flag recovery values

FORM II 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-010819	240-106686-1	94	94	100	95
TB-010819	240-106686-1	112	112	79	78
	MB 240-364651/6	89	92	97	90
	MB 240-364762/6	109	107	76	79
	LCS 240-364651/4	91	93	102	99
	LCS 240-364762/4	102	103	82	86
	240-107003-B-12 MS	104	107	82	88
	240-107003-B-12 MSD	114	110	78	86

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX9148.D

Lab ID: LCS 240-364651/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
tert-Butyl alcohol	100	105	105	10-161	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ7823.D

Lab ID: LCS 240-364762/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	12.1	121	80-124	
1,1,1-Trichloroethane	10.0	13.1	131	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.21	82	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	13.0	130	50-156	
1,1-Dichloroethane	10.0	10.0	100	75-133	
1,1-Dichloroethene	10.0	9.77	98	65-139	
1,1-Dichloropropene	10.0	10.2	102	78-126	
1,2,3-Trichlorobenzene	10.0	8.70	87	39-138	
1,2,3-Trichloropropane	10.0	8.59	86	66-139	
1,2,4-Trichlorobenzene	10.0	8.51	85	42-133	
1,2,4-Trimethylbenzene	10.0	8.06	81	74-120	
1,2-Dibromo-3-Chloropropane	10.0	9.05	91	46-132	
1,2-Dichlorobenzene	10.0	10.5	105	78-120	
1,2-Dichloroethane	10.0	11.6	116	71-135	
1,2-Dichloropropane	10.0	8.53	85	78-133	
1,3-Dichlorobenzene	10.0	10.0	100	78-120	
1,3-Dichloropropane	10.0	9.29	93	72-134	
1,4-Dichlorobenzene	10.0	10.3	103	78-120	
2,2-Dichloropropane	10.0	11.0	110	42-150	
2-Chloroethyl vinyl ether	10.0	7.09 J	71	55-137	
2-Chlorotoluene	10.0	9.60	96	78-123	
2-Hexanone	20.0	13.0	65	43-148	
Bromobenzene	10.0	10.4	104	74-129	
Bromochloromethane	10.0	11.6	116	74-130	
4-Chlorotoluene	10.0	9.45	94	77-125	
4-Isopropyltoluene	10.0	7.83	78	69-122	
Acetone	20.0	18.9	95	21-162	
Benzene	10.0	9.32	93	80-123	
Bromoform	10.0	13.0	130	49-141	
Bromomethane	10.0	8.46	85	41-175	
Carbon disulfide	10.0	9.66	97	60-138	
Carbon tetrachloride	10.0	12.8	128	63-140	
Chlorobenzene	10.0	10.5	105	80-121	
Chloroethane	10.0	6.86	69	33-173	
Chloroform	10.0	11.4	114	79-127	
Chloromethane	10.0	8.22	82	54-143	
cis-1,2-Dichloroethene	10.0	10.3	103	76-128	
cis-1,3-Dichloropropene	10.0	8.98	90	64-132	
Hexachlorobutadiene	10.0	7.94	79	38-136	
Dibromomethane	10.0	9.45	94	74-124	
Bromodichloromethane	10.0	11.0	110	77-125	
Dichlorodifluoromethane	10.0	12.2	122	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ7823.D

Lab ID: LCS 240-364762/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.14	91	80-120	
1,2-Dibromoethane	10.0	9.60	96	77-123	
Naphthalene	10.0	6.13	61	28-141	
m-Xylene & p-Xylene	10.0	9.53	95	80-120	
n-Butylbenzene	10.0	6.59	66	57-126	
Isopropylbenzene	10.0	9.32	93	74-120	
N-Propylbenzene	10.0	8.43	84	77-123	
2-Butanone (MEK)	20.0	13.7	68	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	14.3	72	49-143	
sec-Butylbenzene	10.0	7.26	73	68-123	
Methyl tert-butyl ether	10.0	9.29	93	51-133	
Methylene Chloride	10.0	13.1	131	70-134	
o-Xylene	10.0	9.60	96	80-120	
Styrene	10.0	9.09	91	79-120	
tert-Butylbenzene	10.0	8.15	82	70-121	
Tetrachloroethene	10.0	12.0	120	74-130	
Toluene	10.0	9.15	92	78-129	
trans-1,2-Dichloroethene	10.0	10.2	102	78-133	
trans-1,3-Dichloropropene	10.0	9.27	93	55-128	
Trichloroethene	10.0	11.6	116	76-125	
Trichlorofluoromethane	10.0	10.5	105	51-164	
Vinyl acetate	10.0	8.23	82	45-151	
Vinyl chloride	10.0	8.42	84	58-143	
tert-Butyl alcohol	100	89.6	90	10-161	
Xylenes, Total	20.0	19.1	96	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY
sample not included in SDG.

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ7850.D

Lab ID: 240-107003-B-12 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	1430	34 U	1310	92	51-138	
1,1,2,2-Tetrachloroethane	1430	19 U	858	60	60-137	
1,1,2-Trichlorotrifluoroethane	1430	59 U	1120	78	31-156	
1,1-Dichloroethane	1430	24 U	1080	76	63-136	
1,1-Dichloroethene	1430	27 U	987	69	53-140	
1,2,4-Trichlorobenzene	1430	53 J	955	63	30-126	
1,2-Dibromo-3-Chloropropane	1430	130 U	922	65	38-124	
1,2-Dichlorobenzene	1430	21 U	1140	80	64-120	
1,2-Dichloroethane	1430	30 J	1410	96	65-135	
1,2-Dichloropropane	1430	21 U	1060	74	70-132	
1,3-Dichlorobenzene	1430	21 U	1090	76	62-120	
1,4-Dichlorobenzene	1430	23 U	1180	83	63-120	
2-Hexanone	2860	77 U	1300 J	45	42-150	
Acetone	2860	770 U	2130	75	10-168	
Benzene	1430	19 U	1060	74	71-122	
Bromoform	1430	110 U	1390	97	44-129	
Bromomethane	1430	60 U	908	64	19-187	
Carbon disulfide	1430	40 U	898	63	43-144	
Carbon tetrachloride	1430	37 U	1250	88	41-143	
Chlorobenzene	1430	20 U	1110	78	70-123	
Chloroethane	1430	120 U	698	49	11-189	
Chloroform	1430	19 U	1280	90	68-130	
Chloromethane	1430	29 U	1290	91	31-154	
cis-1,2-Dichloroethene	1430	1200	2230	70	64-130	
cis-1,3-Dichloropropene	1430	87 U	1050	73	48-127	
Bromodichloromethane	1430	24 U	1270	89	64-125	
Dichlorodifluoromethane	1430	50 U	1050	74	28-136	
Ethylbenzene	1430	16 U	957	67	66-120	
1,2-Dibromoethane	1430	17 U	1130	79	71-123	
m-Xylene & p-Xylene	1430	11 U	965	68	63-121	
Isopropylbenzene	1430	13 U	870	61	59-120	
2-Butanone (MEK)	2860	170 U	1480	52	37-156	
4-Methyl-2-pentanone (MIBK)	2860	60 U	1460	51	44-143	
Methyl tert-butyl ether	1430	10 U	1030	72	41-136	
Methylene Chloride	1430	370 U	1430	100	61-130	
o-Xylene	1430	13 U	941	66	69-120	F1
Styrene	1430	14 U	992	69	68-120	
Tetrachloroethene	1430	21 U	1190	83	51-136	
Toluene	1430	20 U	1010	71	62-132	
trans-1,2-Dichloroethene	1430	27 U	1100	77	68-133	
trans-1,3-Dichloropropene	1430	96 U	1020	71	40-125	
Trichloroethene	1430	4000	5040	72	55-131	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ7850.D

Lab ID: 240-107003-B-12 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Trichlorofluoromethane	1430	64 U	956	67	37-174	
Vinyl chloride	1430	240	954	50	43-154	
Xylenes, Total	2860	21 U	1910	67	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

sample not included in SDG

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ7851.D

Lab ID: 240-107003-B-12 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1-Trichloroethane	1430	1720	120	27	27	51-138	
1,1,2,2-Tetrachloroethane	1430	1010	70	16	31	60-137	
1,1,2-Trichlorotrifluoroethane	1430	1750	123	44	35	31-156	F2
1,1-Dichloroethane	1430	1360	95	23	23	63-136	
1,1-Dichloroethene	1430	1330	93	29	35	53-140	
1,2,4-Trichlorobenzene	1430	1190	79	22	35	30-126	
1,2-Dibromo-3-Chloropropane	1430	1140	80	21	35	38-124	
1,2-Dichlorobenzene	1430	1250	88	9	30	64-120	
1,2-Dichloroethane	1430	1680	116	18	24	65-135	
1,2-Dichloropropane	1430	1230	86	15	26	70-132	
1,3-Dichlorobenzene	1430	1240	87	13	31	62-120	
1,4-Dichlorobenzene	1430	1310	91	10	28	63-120	
2-Hexanone	2860	1440	51	11	35	42-150	
Acetone	2860	2700	95	24	35	10-168	
Benzene	1430	1290	90	19	22	71-122	
Bromoform	1430	1720	120	21	28	44-129	
Bromomethane	1430	1230	86	30	35	19-187	
Carbon disulfide	1430	1300	91	37	33	43-144	F2
Carbon tetrachloride	1430	1830	128	37	30	41-143	F2
Chlorobenzene	1430	1300	91	15	23	70-123	
Chloroethane	1430	1110	78	46	35	11-189	F2
Chloroform	1430	1670	117	27	23	68-130	F2
Chloromethane	1430	1750	122	30	35	31-154	
cis-1,2-Dichloroethene	1430	2540	93	13	21	64-130	
cis-1,3-Dichloropropene	1430	1140	80	9	30	48-127	
Bromodichloromethane	1430	1460	102	14	27	64-125	
Dichlorodifluoromethane	1430	1530	107	37	35	28-136	F2
Ethylbenzene	1430	1210	85	24	24	66-120	
1,2-Dibromoethane	1430	1260	88	11	27	71-123	
m-Xylene & p-Xylene	1430	1180	82	20	25	63-121	
Isopropylbenzene	1430	1160	81	28	31	59-120	
2-Butanone (MEK)	2860	1670	58	12	35	37-156	
4-Methyl-2-pentanone (MIBK)	2860	1740	61	18	35	44-143	
Methyl tert-butyl ether	1430	1370	96	29	29	41-136	
Methylene Chloride	1430	1780	125	21	29	61-130	
o-Xylene	1430	1180	83	23	25	69-120	
Styrene	1430	1150	81	15	26	68-120	
Tetrachloroethene	1430	1480	104	22	23	51-136	
Toluene	1430	1190	83	16	23	62-132	
trans-1,2-Dichloroethene	1430	1560	109	35	24	68-133	F2
trans-1,3-Dichloropropene	1430	1090	76	6	27	40-125	
Trichloroethene	1430	5500	104	9	23	55-131	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ7851.D

Lab ID: 240-107003-B-12 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Trichlorofluoromethane	1430	1470	103	42	35	37-174	F2
Vinyl chloride	1430	1380	79	36	29	43-154	F2
Xylenes, Total	2860	2360	83	21	25	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: UXX9150.D Lab Sample ID: MB 240-364651/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX10 Date Analyzed: 01/18/2019 13:40

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-364651/4	UXX9148.D	01/18/2019 12:51
TB-010819	240-106686-1	UXX9154.D	01/18/2019 15:20

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-364651/6

Matrix: Water | Lab File ID: UXX9150.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/18/2019 13:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 364651 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	90		59-120
2037-26-5	Toluene-d8 (Surr)	97		70-123
1868-53-7	Dibromofluoromethane (Surr)	89		75-128

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: UXJ7827.D Lab Sample ID: MB 240-364762/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX11 Date Analyzed: 01/21/2019 11:53

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-364762/4	UXJ7823.D	01/21/2019 10:24
TB-010819	240-106686-1	UXJ7833.D	01/21/2019 14:05
	240-107003-B-12 MS	UXJ7850.D	01/21/2019 20:20
	240-107003-B-12 MSD	UXJ7851.D	01/21/2019 20:42

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-364762/6

Matrix: Water | Lab File ID: UXJ7827.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/21/2019 11:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 364762 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-364762/6

Matrix: Water | Lab File ID: UXJ7827.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/21/2019 11:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 364762 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.86	J	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-364762/6

Matrix: Water Lab File ID: UXJ7827.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/21/2019 11:53

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 364762 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		70-121
460-00-4	4-Bromofluorobenzene (Surr)	79		59-120
2037-26-5	Toluene-d8 (Surr)	76		70-123
1868-53-7	Dibromofluoromethane (Surr)	109		75-128

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: BFB1940.D BFB Injection Date: 10/02/2018

Instrument ID: A3UX10 BFB Injection Time: 14:58

Analysis Batch No.: 348191

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.4	
75	30.0 - 60.0 % of mass 95	52.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	1.5	(2.0) 1
174	50.0 - 120.00 % of mass 95	73.9	
175	5.0 - 9.0 % of mass 174	5.6	(7.5) 1
176	95.0 - 101.0 % of mass 174	74.0	(100.0) 1
177	5.0 - 9.0 % of mass 176	6.7	(9.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-348191/2	UXX5939.D	10/02/2018	15:27
	STD8260 240-348191/3	UXX5940.D	10/02/2018	15:52
	STD8260 240-348191/4	UXX5941.D	10/02/2018	16:17
	STD8260 240-348191/5	UXX5942.D	10/02/2018	16:42
	STD8260 240-348191/6	UXX5943.D	10/02/2018	17:06
	STD8260 240-348191/7	UXX5944.D	10/02/2018	17:31
	STD8260 240-348191/8	UXX5945.D	10/02/2018	17:56
	ICV 240-348191/9	UXX5946.D	10/02/2018	18:21
	STDA9 240-348191/10	UXX5947.D	10/02/2018	18:46
	STDA9 240-348191/11	UXX5948.D	10/02/2018	19:11
	STDA9 240-348191/12	UXX5949.D	10/02/2018	19:36
	STDA9 240-348191/13	UXX5950.D	10/02/2018	20:01
	STDA9 240-348191/14	UXX5951.D	10/02/2018	20:25
	STDA9 240-348191/15	UXX5952.D	10/02/2018	20:50
	STDA9 240-348191/16	UXX5953.D	10/02/2018	21:14
	ICV 240-348191/17	UXX5954.D	10/02/2018	21:39

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-348191/8	UXX5945.D
Level 2	STD8260 240-348191/7	UXX5944.D
Level 3	STD8260 240-348191/6	UXX5943.D
Level 4	STD8260 240-348191/5	UXX5942.D
Level 5	STD8260 240-348191/4	UXX5941.D
Level 6	STD8260 240-348191/3	UXX5940.D
Level 7	STD8260 240-348191/2	UXX5939.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3986 0.3382	0.3469 0.3117	0.3262	0.3301	0.3565	Ave		0.3440			0.1000	8.2		20.0			
Chloromethane	0.4771 0.3669	0.4153 0.3611	0.3616	0.4096	0.4292	Ave		0.4030			0.1000	10.7		20.0			
Butadiene	0.3883 0.3725	0.3775 0.3703	0.3527	0.3739	0.4108	Ave		0.3780				4.7		20.0			
Vinyl chloride	0.4026 0.3470	0.3452 0.3521	0.3372	0.3489	0.3811	Ave		0.3591			0.1000	6.6		20.0			
Bromomethane	0.2403 0.1972	0.1914 0.2205	0.2119	0.2029	0.2209	Ave		0.2122			0.0500	7.9		20.0			
Chloroethane	0.1117 0.2143	0.2186 0.2313	0.2159	0.2153	0.2303	Lin1	-0.083	0.2307			0.0500	9.5			0.9980		0.9900
Dichlorofluoromethane	0.5501 0.5074	0.4617 0.5209	0.5054	0.5164	0.5386	Ave		0.5143				5.5		20.0			
Trichlorofluoromethane	0.4682 0.3899	0.3776 0.4011	0.3751	0.3751	0.4149	Ave		0.4003			0.1000	8.4		20.0			
Ethyl ether	0.2561 0.2177	0.2417 0.2142	0.2353	0.2411	0.2397	Ave		0.2351				6.2		20.0			
Acrolein	0.0403 0.0375	0.0410 0.0339	0.0386	0.0353	0.0397	Ave		0.0380				7.0		20.0			
1,1-Dichloroethene	0.3446 0.2740	0.2791 0.2715	0.2796	0.2787	0.2876	Ave		0.2879			0.1000	8.9		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1322 0.2035	0.2059 0.2056	0.2050	0.2313	0.2165	Ave		0.2000			0.0500	15.7		20.0			
Acetone	0.1463 0.0675	0.0965 0.0644	0.0885	0.0777	0.0810	Lin1	0.1639	0.0640			0.0100	9.3			0.9950		0.9900
Iodomethane	0.5427 0.5017	0.5096 0.5092	0.5234	0.5285	0.5479	Ave		0.5233				3.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon disulfide	1.0127 0.9201	0.9409 0.9562	0.9557	0.9958	0.9910	Ave		0.9675			0.1000	3.4		20.0			
3-Chloro-1-propene	0.2357 0.2033	0.2057 0.2087	0.2074	0.2014	0.2273	Ave		0.2128				6.2		20.0			
Methyl acetate	0.1949 0.1408	0.1585 0.1440	0.1606	0.1661	0.1583	Ave		0.1605			0.1000	11.0		20.0			
Methylene Chloride	0.4013 0.3119	0.3665 0.3223	0.3560	0.3559	0.3536	Ave		0.3525			0.1000	8.3		20.0			
tert-Butyl alcohol	0.0301 0.0258	0.0299 0.0249	0.0307	0.0239	0.0295	Ave		0.0278				10.3		20.0			
Acrylonitrile	0.0977 0.0917	0.0937 0.0925	0.0997	0.0941	0.1011	Ave		0.0958				3.9		20.0			
trans-1,2-Dichloroethene	0.3348 0.3058	0.3029 0.3147	0.3236	0.3237	0.3275	Ave		0.3190			0.1000	3.7		20.0			
Methyl tert-butyl ether	0.8966 0.8291	0.8616 0.8787	0.9302	0.8910	0.9034	Ave		0.8844			0.1000	3.7		20.0			
Hexane	0.0638 0.0462	0.0514 0.0518	0.0557	0.0504	0.0584	Ave		0.0540				10.8		20.0			
1,1-Dichloroethane	0.6013 0.5343	0.5352 0.5612	0.5907	0.5768	0.5836	Ave		0.5690			0.2000	4.6		20.0			
Vinyl acetate	0.4651 0.4165	0.4611 0.4455	0.4553	0.4524	0.4613	Ave		0.4510				3.7		20.0			
cis-1,2-Dichloroethene	0.3394 0.3093	0.3313 0.3253	0.3471	0.3356	0.3565	Ave		0.3349			0.1000	4.5		20.0			
2,2-Dichloropropane	0.1122 0.0904	0.0933 0.0944	0.0896	0.0949	0.0920	Ave		0.0953				8.1		20.0			
2-Butanone (MEK)	0.0989 0.0762	0.1048 0.0805	0.0993	0.0843	0.1037	Ave		0.0926			0.0100	12.8		20.0			
Chlorobromomethane	0.1660 0.1357	0.1344 0.1470	0.1502	0.1576	0.1564	Ave		0.1496				7.8		20.0			
Tetrahydrofuran	0.0829 0.0579	0.0682 0.0560	0.0714	0.0638	0.0664	Ave		0.0667				13.5		20.0			
Chloroform	0.5292 0.4519	0.4814 0.4740	0.4981	0.5143	0.5073	Ave		0.4937			0.2000	5.3		20.0			
1,1,1-Trichloroethane	0.5311 0.4378	0.4701 0.4721	0.4782	0.4982	0.4838	Ave		0.4816			0.1000	5.9		20.0			
Cyclohexane	0.5437 0.5052	0.5073 0.5448	0.5405	0.5590	0.5488	Ave		0.5356			0.1000	3.9		20.0			
1,1-Dichloropropene	0.3852 0.3109	0.3326 0.3420	0.3441	0.3617	0.3598	Ave		0.3480				6.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon tetrachloride	0.4279 0.3710	0.3569 0.3965	0.3801	0.3987	0.4092	Ave		0.3915			0.1000	6.1		20.0			
Isobutyl alcohol	0.0108 0.0076	0.0096 0.0079	0.0104	0.0082	0.0095	Ave		0.0091				13.5		20.0			
Benzene	1.2600 1.0302	1.1482 1.1226	1.1302	1.1667	1.1698	Ave		1.1468			0.5000	6.0		20.0			
1,2-Dichloroethane	0.4897 0.3706	0.4209 0.3931	0.4112	0.4346	0.4186	Ave		0.4198			0.1000	8.9		20.0			
n-Heptane	0.0494 0.0413	0.0394 0.0413	0.0433	0.0511	0.0432	Ave		0.0441				9.9		20.0			
Trichloroethene	0.3156 0.2617	0.2659 0.2787	0.2980	0.2867	0.2938	Ave		0.2858			0.1500	6.6		20.0			
Methylcyclohexane	0.4067 0.3851	0.3951 0.3940	0.3993	0.4239	0.4117	Ave		0.4023			0.1000	3.2		20.0			
1,2-Dichloropropane	0.3159 0.2729	0.2918 0.2858	0.2942	0.3131	0.3103	Ave		0.2977			0.1000	5.4		20.0			
Dibromomethane	0.1949 0.1463	0.1721 0.1554	0.1696	0.1743	0.1697	Ave		0.1689				9.1		20.0			
1,4-Dioxane	0.0027 0.0025	0.0034 0.0021	0.0025	0.0023	0.0032	Ave		0.0027				17.2		20.0			
Dichlorobromomethane	0.3945 0.3317	0.3718 0.3664	0.3726	0.3885	0.3911	Ave		0.3738			0.1500	5.8		20.0			
2-Chloroethyl vinyl ether	0.1630 0.1498	0.1513 0.1529	0.1583	0.1630	0.1603	Ave		0.1569				3.5		20.0			
cis-1,3-Dichloropropene	0.4299 0.3874	0.3932 0.4199	0.4217	0.4239	0.4223	Ave		0.4140			0.1500	4.0		20.0			
4-Methyl-2-pentanone (MIBK)	0.2462 0.2049	0.2263 0.2115	0.2414	0.2454	0.2341	Ave		0.2300			0.0500	7.2		20.0			
Toluene	1.6334 1.3415	1.5205 1.5700	1.5373	1.5169	1.5509	Ave		1.5244			0.4000	5.9		20.0			
trans-1,3-Dichloropropene	0.4811 0.4083	0.4262 0.4652	0.4474	0.4658	0.4662	Ave		0.4515			0.1000	5.7		20.0			
Ethyl methacrylate	0.3847 0.3241	0.3570 0.3716	0.3779	0.3963	0.3796	Ave		0.3702				6.4		20.0			
1,1,2-Trichloroethane	0.3190 0.2429	0.2893 0.2789	0.2791	0.2838	0.2918	Ave		0.2836			0.1000	8.0		20.0			
Tetrachloroethene	0.2711 0.2317	0.2798 0.2653	0.2578	0.2769	0.2759	Ave		0.2655			0.1500	6.3		20.0			
1,3-Dichloropropane	0.5727 0.4146	0.4670 0.4596	0.4848	0.5094	0.4964	Ave		0.4864				10.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Hexanone	0.2005 0.1601	0.1931 0.1646	0.2046	0.1909	0.1907	Ave		0.1864			0.0500	9.2		20.0			
Chlorodibromomethane	0.3016 0.2988	0.2926 0.3369	0.3271	0.3245	0.3319	Ave		0.3162				5.7		20.0			
Ethylene Dibromide	0.3003 0.2550	0.2684 0.2802	0.2701	0.2818	0.2992	Ave		0.2793				5.9		20.0			
Chlorobenzene	1.0444 0.8960	1.0188 1.0039	0.9937	0.9947	1.0128	Ave		0.9949			0.3000	4.7		20.0			
1,1,1,2-Tetrachloroethane	0.3982 0.3308	0.3718 0.3876	0.3847	0.3675	0.3862	Ave		0.3753				5.9		20.0			
Ethylbenzene	0.6089 0.5076	0.5249 0.5575	0.5496	0.5604	0.5762	Ave		0.5550				6.0		20.0			
m-Xylene & p-Xylene	0.7544 0.6259	0.6871 0.7113	0.6580	0.6907	0.6851	Ave		0.6875				5.9		20.0			
o-Xylene	0.7596 0.6453	0.7221 0.7473	0.6952	0.7106	0.7318	Ave		0.7160				5.3		20.0			
Styrene	1.1786 1.0718	1.1098 1.2402	1.0656	1.1379	1.1730	Ave		1.1396			0.3000	5.5		20.0			
Bromoform	0.1792 0.1903	0.1888 0.2289	0.1821	0.1866	0.2026	Ave		0.1941			0.1000	8.8		20.0			
Isopropylbenzene	1.8296 1.5815	1.6753 1.9166	1.7107	1.7237	1.7825	Ave		1.7457			0.1000	6.2		20.0			
1,1,2,2-Tetrachloroethane	0.7123 0.5621	0.6782 0.5883	0.7162	0.7613	0.7109	Ave		0.6756			0.3000	10.8		20.0			
Bromobenzene	0.7588 0.6600	0.7936 0.7327	0.7832	0.8349	0.8102	Ave		0.7676				7.5		20.0			
1,2,3-Trichloropropane	0.2209 0.1826	0.2336 0.1825	0.2254	0.2224	0.2166	Ave		0.2120				9.8		20.0			
trans-1,4-Dichloro-2-butene	0.0971 0.1237	0.1507 0.1392	0.1591	0.1362	0.1485	Ave		0.1364				15.2		20.0			
N-Propylbenzene	0.7888 0.7117	0.7971 0.7749	0.8072	0.8562	0.8507	Ave		0.7981				6.1		20.0			
2-Chlorotoluene	0.8519 0.6536	0.6781 0.7034	0.7591	0.7984	0.7975	Ave		0.7489				9.7		20.0			
1,3,5-Trimethylbenzene	2.4725 2.2872	2.4258 2.5026	2.5932	2.6801	2.6778	Ave		2.5199				5.6		20.0			
4-Chlorotoluene	0.7474 0.6827	0.7494 0.7252	0.7413	0.8080	0.7621	Ave		0.7451				5.1		20.0			
tert-Butylbenzene	2.1833 1.7620	2.1298 1.9882	1.9822	2.1193	2.1556	Ave		2.0458				7.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,4-Trimethylbenzene	3.0184 2.4470	2.7364 2.6608	2.8336	2.7881	2.8564	Ave		2.7630				6.5		20.0			
sec-Butylbenzene	2.8650 2.4842	2.7533 2.7550	2.7314	2.8090	2.9317	Ave		2.7614				5.1		20.0			
1,3-Dichlorobenzene	1.6396 1.3415	1.5060 1.4575	1.5179	1.5621	1.5464	Ave		1.5102			0.6000	6.2		20.0			
4-Isopropyltoluene	2.4637 2.1908	2.2931 2.4151	2.4682	2.4741	2.5061	Ave		2.4016				4.8		20.0			
1,4-Dichlorobenzene	1.5988 1.3676	1.5405 1.5084	1.5328	1.6208	1.5998	Ave		1.5384			0.5000	5.6		20.0			
n-Butylbenzene	1.9641 1.7432	1.9760 1.8954	1.9703	2.0006	2.0286	Ave		1.9397				4.9		20.0			
1,2-Dichlorobenzene	1.5565 1.3671	1.5596 1.4796	1.5968	1.5809	1.6164	Ave		1.5367			0.4000	5.6		20.0			
1,2-Dibromo-3-Chloropropane	0.1680 0.1243	0.1634 0.1389	0.1712	0.1562	0.1559	Ave		0.1540			0.0500	10.9		20.0			
1,2,4-Trichlorobenzene	1.0593 0.8110	1.0103 0.8100	0.9076	0.9011	1.0217	Ave		0.9316			0.2000	10.9		20.0			
Hexachlorobutadiene	0.4119 0.2653	0.3002 0.2445	0.2971	0.2897	0.3260	Ave		0.3050				17.7		20.0			
Naphthalene	2.6504 2.1132	2.4882 2.0761	2.5897	2.4549	2.6105	Ave		2.4261				9.8		20.0			
1,2,3-Trichlorobenzene	1.0673 0.7835	0.9878 0.7246	0.9377	0.8773	0.9727	Ave		0.9073				13.3		20.0			
Dibromofluoromethane (Surr)	0.2613 0.2569	0.2591 0.2541	0.2664	0.2702	0.2708	Ave		0.2627				2.5		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3641 0.3199	0.3549 0.3210	0.3402	0.3167	0.3329	Ave		0.3357				5.5		20.0			
Toluene-d8 (Surr)	1.2871 1.1605	1.3529 1.2930	1.2292	1.2496	1.2649	Ave		1.2625				4.7		20.0			
4-Bromofluorobenzene (Surr)	0.4660 0.4795	0.4708 0.5146	0.4769	0.4653	0.4919	Ave		0.4807				3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-348191/8	UXX5945.D
Level 2	STD8260 240-348191/7	UXX5944.D
Level 3	STD8260 240-348191/6	UXX5943.D
Level 4	STD8260 240-348191/5	UXX5942.D
Level 5	STD8260 240-348191/4	UXX5941.D
Level 6	STD8260 240-348191/3	UXX5940.D
Level 7	STD8260 240-348191/2	UXX5939.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	29702 514557	49306 983706	96492	125358	281542	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Chloromethane	FB	Ave	35559 558142	59028 1139409	106974	155540	339023	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Butadiene	FB	Ave	28939 566804	53656 1168420	104330	141964	324473	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Vinyl chloride	FB	Ave	30003 527876	49059 1111107	99749	132484	300976	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Bromomethane	FB	Ave	17909 299966	27208 695854	62698	77029	174504	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Chloroethane	FB	Lin1	8326 326090	31062 729967	63869	81755	181873	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	40997 771948	65618 1643670	149507	196060	425393	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	34895 593135	53671 1265887	110955	142428	327669	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethyl ether	FB	Ave	19083 331251	34347 675875	69595	91555	189334	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Acrolein	FB	Ave	15013 285095	29169 534864	57102	67032	156817	5.00 100	10.0 200	20.0	25.0	50.0
1,1-Dichloroethene	FB	Ave	25681 416816	39664 856734	82722	105838	227156	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,2-Trichloro-1,2,2-trifluoroetha ne	FB	Ave	9855 309577	29262 648736	60642	87826	171003	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Acetone	FB	Lin1	21800 205299	27438 406703	52366	59024	127962	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Iodomethane	FB	Ave	40446 763308	72419 1606886	154849	200675	432735	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Carbon disulfide	FB	Ave	75471 1399853	133722 3017501	282734	378111	782683	1.00 20.0	2.00 40.0	4.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
3-Chloro-1-propene	FB	Ave	17566 309282	29228 658534	61342	76468	179488	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Methyl acetate	FB	Ave	29045 428545	45042 909030	95048	126100	249995	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Methylene Chloride	FB	Ave	29904 474592	52083 1017150	105307	135144	279268	1.00 20.0	2.00 40.0	4.00	5.00	10.0
tert-Butyl alcohol	FB	Ave	22408 392784	42479 785080	90900	90591	233093	10.0 200	20.0 400	40.0	50.0	100
Acrylonitrile	FB	Ave	72831 1395587	133123 2918908	294885	357275	798555	10.0 200	20.0 400	40.0	50.0	100
trans-1,2-Dichloroethene	FB	Ave	24954 465280	43043 993015	95719	122892	258631	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Methyl tert-butyl ether	FB	Ave	66819 1261437	122456 2773005	275180	338334	713524	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Hexane	FB	Ave	4752 70252	7303 163590	16483	19143	46098	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1-Dichloroethane	FB	Ave	44813 812922	76059 1771078	174733	219004	460948	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Vinyl acetate	FB	Ave	34661 633638	65528 1405879	134694	171771	364316	1.00 20.0	2.00 40.0	4.00	5.00	10.0
cis-1,2-Dichloroethene	FB	Ave	25292 470642	47089 1026709	102678	127410	281579	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2,2-Dichloropropane	FB	Ave	8364 137490	13262 297781	26495	36034	72680	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	14745 231977	29788 508179	58774	64038	163857	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Chlorobromomethane	FB	Ave	12372 206532	19102 464023	44433	59842	123496	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Tetrahydrofuran	FB	Ave	12349 176156	19381 353680	42256	48442	104928	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Chloroform	FB	Ave	39440 687485	68417 1495865	147357	195295	400639	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,1-Trichloroethane	FB	Ave	39579 666091	66817 1489765	141477	189167	382116	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Cyclohexane	FB	Ave	40517 768592	72096 1719352	159885	212264	433465	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	28707 473071	47265 1079383	101794	137348	284153	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Carbon tetrachloride	FB	Ave	31891 564380	50727 1251286	112446	151393	323195	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Isobutyl alcohol	CBNZ d5	Ave	15567 252528	25786 508277	61586	65605	150525	25.0 500	50.0 1000	100	125	250

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	93899 1567390	163180 3542746	334335	443011	923963	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dichloroethane	FB	Ave	36495 563877	59820 1240480	121653	165013	330637	1.00 20.0	2.00 40.0	4.00	5.00	10.0
n-Heptane	FB	Ave	3680 62798	5603 130324	12823	19398	34121	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Trichloroethene	FB	Ave	23518 398156	37793 879438	88143	108876	232021	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Methylcyclohexane	FB	Ave	30311 585934	56155 1243335	118131	160970	325155	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dichloropropane	FB	Ave	23541 415183	41474 902011	87035	118902	245104	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Dibromomethane	FB	Ave	14524 222579	24453 490472	50177	66172	134033	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,4-Dioxane	FB	Ave	3984 77487	9548 133459	14536	17749	51135	20.0 400	40.0 800	80.0	100	200
Dichlorobromomethane	FB	Ave	29398 504627	52845 1156392	110220	147502	308915	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Ave	24294 455859	43002 964865	93684	123818	253171	2.00 40.0	4.00 80.0	8.00	10.0	20.0
cis-1,3-Dichloropropene	FB	Ave	32036 589452	55884 1325129	124749	160953	333506	1.00 20.0	2.00 40.0	4.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	36693 623507	64321 1335139	142818	186347	369803	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Toluene	CBNZ d5	Ave	94411 1773988	163738 4022193	364924	486520	987739	1.00 20.0	2.00 40.0	4.00	5.00	10.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	27810 539870	45894 1191800	106207	149395	296932	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Ave	22235 428540	38450 952039	89700	127102	241738	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,2-Trichloroethane	CBNZ d5	Ave	18441 321237	31150 714597	66256	91013	185848	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	15669 306405	30127 679783	61206	88799	175682	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,3-Dichloropropane	CBNZ d5	Ave	33102 548275	50296 1177346	115086	163398	316160	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Hexanone	CBNZ d5	Ave	23174 423322	41590 843364	97136	122476	242960	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Chlorodibromomethane	CBNZ d5	Ave	17431 395090	31514 863135	77635	104067	211372	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethylene Dibromide	CBNZ d5	Ave	17360 337253	28905 717928	64125	90394	190578	1.00 20.0	2.00 40.0	4.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorobenzene	CBNZ d5	Ave	60368 1184812	109713 2571998	235880	319037	645008	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	23016 437489	40039 993121	91323	117864	245955	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	35195 671218	56525 1428374	130454	179744	366978	1.00 20.0	2.00 40.0	4.00	5.00	10.0
m-Xylene & p-Xylene	CBNZ d5	Ave	43604 827660	73996 1822298	156186	221524	436330	1.00 20.0	2.00 40.0	4.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	43905 853338	77759 1914562	165032	227919	466041	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Styrene	CBNZ d5	Ave	68125 1417346	119516 3177334	252959	364983	747052	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Bromoform	CBNZ d5	Ave	10359 251662	20327 586449	43222	59836	129035	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Isopropylbenzene	CBNZ d5	Ave	105750 2091262	180416 4910038	406092	552849	1135218	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	22805 447641	40471 975654	92437	130252	253276	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Bromobenzene	DCBd 4	Ave	24293 525557	47356 1215279	101075	142846	288667	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	7073 145421	13937 302742	29093	38050	77183	1.00 20.0	2.00 40.0	4.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	3110 98479	8994 230911	20531	23302	52920	1.00 20.0	2.00 40.0	4.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	25253 566807	47561 1285152	104182	146487	303075	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	27274 520503	40464 1166610	97963	136591	284129	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	79157 1821446	144751 4150687	334679	458536	954033	1.00 20.0	2.00 40.0	4.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	23929 543666	44716 1202708	95669	138235	271503	1.00 20.0	2.00 40.0	4.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	69898 1403191	127089 3297539	255822	362585	767980	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	96634 1948656	163283 4413140	365703	477013	1017650	1.00 20.0	2.00 40.0	4.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	91722 1978322	164294 4569258	352509	480582	1044498	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	52492 1068286	89865 2417404	195901	267256	550957	1.00 20.0	2.00 40.0	4.00	5.00	10.0
4-Isopropyltoluene	DCBd 4	Ave	78874 1744696	136832 4005507	318550	423296	892863	1.00 20.0	2.00 40.0	4.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,4-Dichlorobenzene	DCBd 4	Ave	51185 1089088	91925 2501722	197818	277301	569972	1.00 20.0	2.00 40.0	4.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	62879 1388235	117911 3143613	254281	342280	722754	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	49830 1088688	93064 2454053	206076	270475	575895	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	5380 98986	9748 230360	22093	26723	55531	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	33912 645835	60286 1343492	117135	154166	364018	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	13186 211312	17916 405483	38345	49562	116162	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Naphthalene	DCBd 4	Ave	84851 1682830	148471 3443386	334226	420006	930050	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	34169 623919	58942 1201706	121014	150099	346559	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Dibromofluoromethane (Surr)	FB	Ave	19470 390826	36825 801982	78811	102613	213883	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	27137 486740	50442 1012863	100639	120256	262894	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Toluene-d8 (Surr)	CBNZ d5	Ave	74395 1534612	145690 3312433	291793	400786	805597	1.00 20.0	2.00 40.0	4.00	5.00	10.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	26936 634068	50696 1318259	113207	149244	313290	1.00 20.0	2.00 40.0	4.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-348191/8	UXX5945.D
Level 2	STD8260 240-348191/7	UXX5944.D
Level 3	STD8260 240-348191/6	UXX5943.D
Level 4	STD8260 240-348191/5	UXX5942.D
Level 5	STD8260 240-348191/4	UXX5941.D
Level 6	STD8260 240-348191/3	UXX5940.D
Level 7	STD8260 240-348191/2	UXX5939.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Chloroethane	-15.4						50					
Acetone	0.5						50					

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 18:46 Calibration End Date: 10/02/2018 21:14 Calibration ID: 47201

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-348191/16	UXX5953.D
Level 2	STDA9 240-348191/15	UXX5952.D
Level 3	STDA9 240-348191/14	UXX5951.D
Level 4	STDA9 240-348191/13	UXX5950.D
Level 5	STDA9 240-348191/12	UXX5949.D
Level 6	STDA9 240-348191/11	UXX5948.D
Level 7	STDA9 240-348191/10	UXX5947.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0248 0.0296	0.0311 0.0264	0.0282	0.0312	0.0284	Ave		0.0285				8.2		20.0			
Isopropyl ether	0.2859 0.2638	0.2629 0.2534	0.2649	0.2723	0.2646	Ave		0.2668				3.8		20.0			
2-Chloro-1,3-butadiene	0.4236 0.4837	0.4595 0.4524	0.4515	0.4761	0.4654	Ave		0.4589				4.3		20.0			
Tert-butyl ethyl ether	1.0369 1.0942	0.9995 1.0362	1.0293	1.0578	1.0486	Ave		1.0432				2.8		20.0			
Ethyl acetate	0.2091 0.1720	0.1829 0.1636	0.1787	0.1860	0.1711	Ave		0.1805				8.2		20.0			
Propionitrile	0.0327 0.0321	0.0314 0.0306	0.0317	0.0320	0.0329	Ave		0.0319				2.5		20.0			
Methacrylonitrile	0.1174 0.1215	0.1197 0.1236	0.1186	0.1246	0.1236	Ave		0.1213				2.3		20.0			
Tert-amyl methyl ether	0.8449 0.9108	0.8409 0.9077	0.8518	0.8930	0.8686	Ave		0.8740				3.4		20.0			
n-Butanol	0.0094 0.0094	0.0104 0.0091	0.0094	0.0104	0.0102	Ave		0.0098				5.7		20.0			
Ethyl acrylate	0.2971 0.3127	0.2852 0.2955	0.2858	0.2870	0.3039	Ave		0.2953				3.5		20.0			
Methyl methacrylate	0.1717 0.1995	0.1871 0.1831	0.1835	0.1882	0.1902	Ave		0.1862				4.5		20.0			
2-Nitropropane	0.0593 0.0612	0.0509 0.0587	0.0587	0.0583	0.0573	Ave		0.0577				5.6		20.0			
n-Butyl acetate	0.2208 0.2176	0.2132 0.2092	0.2211	0.2002	0.2094	Ave		0.2130				3.5		20.0			
1-Chlorohexane	0.3743 0.3924	0.3510 0.3842	0.3756	0.3874	0.3754	Ave		0.3772				3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 18:46 Calibration End Date: 10/02/2018 21:14 Calibration ID: 47201

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0233 0.0229	0.0243 0.0206	0.0225	0.0241	0.0251	Ave		0.0233				6.3		20.0			
Pentachloroethane	0.1982 0.2161	0.2248 0.2345	0.2157	0.2370	0.1404	Ave		0.2095				15.8		20.0			
1,2,3-Trimethylbenzene	2.9755 2.9408	2.8944 3.1097	2.9076	3.0893	3.0441	Ave		2.9945				2.9		20.0			
Benzyl chloride	0.1638 0.2485	0.2107 0.2719	0.2081	0.2393	0.2290	Ave		0.2245				15.4		20.0			
1,3,5-Trichlorobenzene	0.9634 0.9263	0.9863 0.9788	0.9363	0.9645	0.9837	Ave		0.9627				2.4		20.0			
2-Methylnaphthalene	1.6895 1.6058	1.6701 1.2588	1.5009	1.8260	1.7931	Ave		1.6206				11.9		20.0			
1-Chloro-1-fluoroethane TIC	0.0942 0.3249	0.0025 0.2953	0.3001	0.3142	0.3074	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 18:46 Calibration End Date: 10/02/2018 21:14 Calibration ID: 47201

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-348191/16	UXX5953.D
Level 2	STDA9 240-348191/15	UXX5952.D
Level 3	STDA9 240-348191/14	UXX5951.D
Level 4	STDA9 240-348191/13	UXX5950.D
Level 5	STDA9 240-348191/12	UXX5949.D
Level 6	STDA9 240-348191/11	UXX5948.D
Level 7	STDA9 240-348191/10	UXX5947.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Ave	19137 454628	47410 867840	84488	116568	222121	10.0 200	20.0 400	40.0	50.0	100
Isopropyl ether	FB	Ave	22027 405742	40081 832328	79251	101900	206714	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Chloro-1,3-butadiene	FB	Ave	32630 743875	70056 1485985	135097	178161	363629	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Tert-butyl ethyl ether	FB	Ave	79881 1682708	152392 3403919	307994	395810	819238	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethyl acetate	FB	Ave	32221 528949	55781 1074531	106957	139212	267326	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Propionitrile	FB	Ave	25229 493812	47812 1006421	94964	119883	257293	10.0 200	20.0 400	40.0	50.0	100
Methacrylonitrile	FB	Ave	90439 1867794	182524 4061695	354745	466075	965823	10.0 200	20.0 400	40.0	50.0	100
Tert-amyl methyl ether	FB	Ave	65092 1400675	128206 2981774	254884	334155	678568	1.00 20.0	2.00 40.0	4.00	5.00	10.0
n-Butanol	CBNZ d5	Ave	14074 308942	30403 575535	54972	75335	156071	25.0 500	50.0 1000	100	125	250
Ethyl acrylate	FB	Ave	22889 480847	43483 970669	85531	107388	237448	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Methyl methacrylate	FB	Ave	26456 613559	57067 1202793	109790	140851	297125	2.00 40.0	4.00 80.0	8.00	10.0	20.0
2-Nitropropane	FB	Ave	9135 188156	15519 385413	35101	43638	89460	2.00 40.0	4.00 80.0	8.00	10.0	20.0
n-Butyl acetate	CBNZ d5	Ave	13244 286447	24986 527034	51779	57817	128200	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1-Chlorohexane	CBNZ d5	Ave	22455 516619	41143 968020	87976	111904	229854	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Cyclohexanone	DCBd 4	Ave	7065 158799	15056 280311	28227	37360	79413	10.0 200	20.0 400	40.0	50.0	100

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 18:46 Calibration End Date: 10/02/2018 21:14 Calibration ID: 47201

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Pentachloroethane	CBNZ d5	Ave	23778 568960	52694 1181839	101051	136893	171916	2.00 40.0	4.00 80.0	8.00	10.0	20.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	90130 2042284	179035 4222901	365175	479512	964178	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Benzyl chloride	DCBd 4	Ave	4961 172601	13030 369230	26134	37138	72546	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	29182 643263	61009 1329156	117587	149702	311582	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Methylnaphthalene	DCBd 4	Ave	102348 2230272	206615 3418791	377018	566840	1135847	2.00 40.0	4.00 80.0	8.00	10.0	20.0
1-Chloro-1-fluoroethane TIC	FB	None	7259 499667	387 969913	89798	117578	240192	1.00 20.0	2.00 40.0	4.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
None = No Calib Curve

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

opnly affects tert-butyl alcohol

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-348191/9 Calibration Date: 10/02/2018 18:21

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX5946.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3440	0.3451	0.1000	0.0100	0.0100	0.3	30.0
Chloromethane	Ave	0.4030	0.3613	0.1000	0.00896	0.0100	-10.4	30.0
Butadiene	Ave	0.3780	0.3331		0.00881	0.0100	-11.9	30.0
Vinyl chloride	Ave	0.3591	0.3452	0.1000	0.00961	0.0100	-3.9	30.0
Bromomethane	Ave	0.2122	0.1913	0.0500	0.00901	0.0100	-9.9	30.0
Chloroethane	Lin1		0.1940	0.0500	0.00877	0.0100	-12.3	30.0
Dichlorofluoromethane	Ave	0.5143	0.4937		0.00960	0.0100	-4.0	30.0
Trichlorofluoromethane	Ave	0.4003	0.3666	0.1000	0.00916	0.0100	-8.4	30.0
Ethyl ether	Ave	0.2351	0.2403		0.0102	0.0100	2.2	30.0
Acrolein	Ave	0.0380	0.0424		0.0557	0.0500	11.4	50.0
1,1-Dichloroethene	Ave	0.2879	0.3055	0.1000	0.0106	0.0100	6.1	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2000	0.2166	0.0500	0.0108	0.0100	8.3	30.0
Acetone	Lin1		0.0612	0.0100	0.0166	0.0200	-17.2	50.0
Iodomethane	Ave	0.5233	0.5267		0.0101	0.0100	0.7	30.0
Carbon disulfide	Ave	0.9675	0.9637	0.1000	0.00996	0.0100	-0.4	30.0
3-Chloro-1-propene	Ave	0.2128	0.2096		0.00985	0.0100	-1.5	30.0
Methyl acetate	Ave	0.1605	0.1565	0.1000	0.0195	0.0200	-2.5	30.0
Methylene Chloride	Ave	0.3525	0.3388	0.1000	0.00961	0.0100	-3.9	50.0
tert-Butyl alcohol	Ave	0.0278	0.0215		0.0774	0.100	-22.6	50.0
Acrylonitrile	Ave	0.0958	0.0915		0.0955	0.100	-4.5	30.0
Methyl tert-butyl ether	Ave	0.8844	0.8779	0.1000	0.00993	0.0100	-0.7	30.0
trans-1,2-Dichloroethene	Ave	0.3190	0.3363	0.1000	0.0105	0.0100	5.4	30.0
Hexane	Ave	0.0540	0.0562		0.0104	0.0100	4.1	30.0
1,1-Dichloroethane	Ave	0.5690	0.5736	0.2000	0.0101	0.0100	0.8	30.0
Vinyl acetate	Ave	0.4510	0.4649		0.0103	0.0100	3.1	50.0
2,2-Dichloropropane	Ave	0.0953	0.0924		0.00970	0.0100	-3.0	30.0
2-Butanone (MEK)	Ave	0.0926	0.0789	0.0100	0.0171	0.0200	-14.7	30.0
cis-1,2-Dichloroethene	Ave	0.3349	0.3388	0.1000	0.0101	0.0100	1.2	30.0
Chlorobromomethane	Ave	0.1496	0.1507		0.0101	0.0100	0.7	30.0
Tetrahydrofuran	Ave	0.0667	0.0564		0.0169	0.0200	-15.4	30.0
Chloroform	Ave	0.4937	0.4935	0.2000	0.0100	0.0100	-0.0	30.0
1,1,1-Trichloroethane	Ave	0.4816	0.4753	0.1000	0.00987	0.0100	-1.3	30.0
Cyclohexane	Ave	0.5356	0.5471	0.1000	0.0102	0.0100	2.1	30.0
1,1-Dichloropropene	Ave	0.3480	0.3613		0.0104	0.0100	3.8	30.0
Carbon tetrachloride	Ave	0.3915	0.3928	0.1000	0.0100	0.0100	0.3	30.0
Isobutyl alcohol	Ave	0.0091	0.0077		0.211	0.250	-15.8	30.0
Benzene	Ave	1.147	1.145	0.5000	0.00999	0.0100	-0.1	30.0
1,2-Dichloroethane	Ave	0.4198	0.4202	0.1000	0.0100	0.0100	0.1	30.0
n-Heptane	Ave	0.0441	0.0488		0.0111	0.0100	10.6	30.0
Trichloroethene	Ave	0.2858	0.2864	0.1500	0.0100	0.0100	0.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-348191/9 Calibration Date: 10/02/2018 18:21

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX5946.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4023	0.3992	0.1000	0.00992	0.0100	-0.8	30.0
1,2-Dichloropropane	Ave	0.2977	0.3081	0.1000	0.0103	0.0100	3.5	30.0
1,4-Dioxane	Ave	0.0027	0.0016		0.120	0.200	-40.1	50.0
Dibromomethane	Ave	0.1689	0.1608		0.00952	0.0100	-4.8	30.0
Dichlorobromomethane	Ave	0.3738	0.3860	0.1500	0.0103	0.0100	3.3	30.0
2-Chloroethyl vinyl ether	Ave	0.1569	0.1547		0.00985	0.0100	-1.5	30.0
cis-1,3-Dichloropropene	Ave	0.4140	0.4330	0.1500	0.0105	0.0100	4.6	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2300	0.2246	0.0500	0.0195	0.0200	-2.3	30.0
Toluene	Ave	1.524	1.527	0.4000	0.0100	0.0100	0.2	30.0
trans-1,3-Dichloropropene	Ave	0.4515	0.4624	0.1000	0.0102	0.0100	2.4	30.0
Ethyl methacrylate	Ave	0.3702	0.3874		0.0105	0.0100	4.7	30.0
1,1,2-Trichloroethane	Ave	0.2836	0.2833	0.1000	0.00999	0.0100	-0.0	30.0
Tetrachloroethene	Ave	0.2655	0.2614	0.1500	0.00984	0.0100	-1.6	30.0
1,3-Dichloropropane	Ave	0.4864	0.4763		0.00979	0.0100	-2.1	30.0
2-Hexanone	Ave	0.1864	0.1863	0.0500	0.0200	0.0200	-0.0	30.0
Chlorodibromomethane	Ave	0.3162	0.3326		0.0105	0.0100	5.2	30.0
Ethylene Dibromide	Ave	0.2793	0.2762		0.00989	0.0100	-1.1	30.0
Chlorobenzene	Ave	0.9949	0.9762	0.3000	0.00981	0.0100	-1.9	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3753	0.3601		0.00960	0.0100	-4.0	30.0
Ethylbenzene	Ave	0.5550	0.5421		0.00977	0.0100	-2.3	30.0
m-Xylene & p-Xylene	Ave	0.6875	0.6797		0.00989	0.0100	-1.1	30.0
o-Xylene	Ave	0.7160	0.6810		0.00951	0.0100	-4.9	30.0
Styrene	Ave	1.140	1.099	0.3000	0.00965	0.0100	-3.5	30.0
Bromoform	Ave	0.1941	0.1912	0.1000	0.00985	0.0100	-1.5	30.0
Isopropylbenzene	Ave	1.746	1.691	0.1000	0.00969	0.0100	-3.1	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6756	0.6826	0.3000	0.0101	0.0100	1.0	30.0
Bromobenzene	Ave	0.7676	0.7690		0.0100	0.0100	0.2	30.0
1,2,3-Trichloropropane	Ave	0.2120	0.2116		0.00998	0.0100	-0.2	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1364	0.1573		0.0115	0.0100	15.3	30.0
N-Propylbenzene	Ave	0.7981	0.8486		0.0106	0.0100	6.3	30.0
2-Chlorotoluene	Ave	0.7489	0.7353		0.00982	0.0100	-1.8	30.0
1,3,5-Trimethylbenzene	Ave	2.520	2.599		0.0103	0.0100	3.2	30.0
4-Chlorotoluene	Ave	0.7451	0.7947		0.0107	0.0100	6.6	30.0
tert-Butylbenzene	Ave	2.046	2.073		0.0101	0.0100	1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.763	2.787		0.0101	0.0100	0.9	30.0
sec-Butylbenzene	Ave	2.761	2.810		0.0102	0.0100	1.8	30.0
1,3-Dichlorobenzene	Ave	1.510	1.514	0.6000	0.0100	0.0100	0.3	30.0
4-Isopropyltoluene	Ave	2.402	2.473		0.0103	0.0100	3.0	30.0
1,4-Dichlorobenzene	Ave	1.538	1.522	0.5000	0.00989	0.0100	-1.1	30.0
n-Butylbenzene	Ave	1.940	1.904		0.00981	0.0100	-1.9	30.0
1,2-Dichlorobenzene	Ave	1.537	1.510	0.4000	0.00983	0.0100	-1.7	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-348191/9 Calibration Date: 10/02/2018 18:21

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX5946.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1540	0.1474	0.0500	0.00957	0.0100	-4.3	50.0
1,2,4-Trichlorobenzene	Ave	0.9316	0.8227	0.2000	0.00883	0.0100	-11.7	50.0
Hexachlorobutadiene	Ave	0.3050	0.2234		0.00733	0.0100	-26.7	30.0
Naphthalene	Ave	2.426	2.081		0.00858	0.0100	-14.2	50.0
1,2,3-Trichlorobenzene	Ave	0.9073	0.7077		0.00780	0.0100	-22.0	30.0
Dibromofluoromethane (Surr)	Ave	0.2627	0.2751		0.0105	0.0100	4.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3357	0.3486		0.0104	0.0100	3.9	30.0
Toluene-d8 (Surr)	Ave	1.262	1.312		0.0104	0.0100	3.9	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4807	0.4846		0.0101	0.0100	0.8	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-348191/17 Calibration Date: 10/02/2018 21:39

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 18:46

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 21:14

Lab File ID: UXX5954.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0285	0.0258		0.0905	0.100	-9.5	30.0
Isopropyl ether	Ave	0.2668	0.2824		0.0106	0.0100	5.9	30.0
2-Chloro-1,3-butadiene	Ave	0.4589	0.4729		0.0103	0.0100	3.1	30.0
Tert-butyl ethyl ether	Ave	1.043	1.055		0.0101	0.0100	1.2	30.0
Ethyl acetate	Ave	0.1805	0.1894		0.0210	0.0200	4.9	50.0
Propionitrile	Ave	0.0319	0.0345		0.108	0.100	7.9	30.0
Methacrylonitrile	Ave	0.1213	0.1277		0.105	0.100	5.3	30.0
Tert-amyl methyl ether	Ave	0.8740	0.8858		0.0101	0.0100	1.4	30.0
n-Butanol	Ave	0.0098	0.0093		0.238	0.250	-4.7	30.0
Ethyl acrylate	Ave	0.2953	0.3009		0.0102	0.0100	1.9	30.0
Methyl methacrylate	Ave	0.1862	0.1870		0.0201	0.0200	0.4	30.0
2-Nitropropane	Ave	0.0577	0.0602		0.0208	0.0200	4.2	30.0
n-Butyl acetate	Ave	0.2130	0.2141		0.0100	0.0100	0.5	30.0
1-Chlorohexane	Ave	0.3772	0.3855		0.0102	0.0100	2.2	30.0
Cyclohexanone	Ave	0.0233	0.0197		0.0846	0.100	-15.4	30.0
Pentachloroethane	Ave	0.2095	0.2180		0.0208	0.0200	4.0	30.0
1,2,3-Trimethylbenzene	Ave	2.994	2.955		0.00987	0.0100	-1.3	30.0
Benzyl chloride	Ave	0.2245	0.2556		0.0114	0.0100	13.9	30.0
1,3,5-Trichlorobenzene	Ave	0.9627	0.9202		0.00956	0.0100	-4.4	30.0
2-Methylnaphthalene	Ave	1.621	1.137		0.0140	0.0200	-29.9	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: BFB2123.D BFB Injection Date: 01/18/2019

Instrument ID: A3UX10 BFB Injection Time: 11:33

Analysis Batch No.: 364651

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	26.0	
75	30.0 - 60.0 % of mass 95	55.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	1.0	(1.3) 1
174	50.0 - 120.00 % of mass 95	77.9	
175	5.0 - 9.0 % of mass 174	5.4	(7.0) 1
176	95.0 - 101.0 % of mass 174	74.4	(95.6) 1
177	5.0 - 9.0 % of mass 176	4.1	(5.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-364651/2	UXX9146.D	01/18/2019	12:01
	CCV 240-364651/3	UXX9147.D	01/18/2019	12:26
	LCS 240-364651/4	UXX9148.D	01/18/2019	12:51
	MB 240-364651/6	UXX9150.D	01/18/2019	13:40
TB-010819	240-106686-1	UXX9154.D	01/18/2019	15:20

only affects tert-butyl alcohol

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-364651/2 Calibration Date: 01/18/2019 12:01

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX9146.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3440	0.3179	0.1000	0.00924	0.0100	-7.6	20.0
Chloromethane	Ave	0.4030	0.5166	0.1000	0.0128	0.0100	28.2*	20.0
Butadiene	Ave	0.3780	0.4527		0.0120	0.0100	19.8	20.0
Vinyl chloride	Ave	0.3591	0.4143	0.1000	0.0115	0.0100	15.4	20.0
Bromomethane	Ave	0.2122	0.2249	0.0500	0.0106	0.0100	6.0	20.0
Chloroethane	Lin1		0.2465	0.0500	0.0110	0.0100	10.5	20.0
Dichlorofluoromethane	Ave	0.5143	0.5389		0.0105	0.0100	4.8	20.0
Trichlorofluoromethane	Ave	0.4003	0.3834	0.1000	0.00958	0.0100	-4.2	20.0
Ethyl ether	Ave	0.2351	0.2464		0.0105	0.0100	4.8	20.0
Acrolein	Ave	0.0380	0.0370		0.0486	0.0500	-2.8	50.0
1,1-Dichloroethene	Ave	0.2879	0.2801	0.1000	0.00973	0.0100	-2.7	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2000	0.2265	0.0500	0.0113	0.0100	13.2	20.0
Acetone	Lin1		0.0756	0.0100	0.0211	0.0200	5.3	50.0
Iodomethane	Ave	0.5233	0.5306		0.0101	0.0100	1.4	20.0
Carbon disulfide	Ave	0.9675	1.073	0.1000	0.0111	0.0100	10.9	20.0
3-Chloro-1-propene	Ave	0.2128	0.2057		0.00967	0.0100	-3.3	20.0
Methyl acetate	Ave	0.1605	0.1562	0.1000	0.0195	0.0200	-2.7	20.0
Methylene Chloride	Ave	0.3525	0.4177	0.1000	0.0118	0.0100	18.5	50.0
tert-Butyl alcohol	Ave	0.0278	0.0261		0.0938	0.100	-6.2	50.0
Acrylonitrile	Ave	0.0958	0.0982		0.103	0.100	2.5	20.0
Methyl tert-butyl ether	Ave	0.8844	0.8607	0.1000	0.00973	0.0100	-2.7	20.0
trans-1,2-Dichloroethene	Ave	0.3190	0.3083	0.1000	0.00966	0.0100	-3.4	20.0
Hexane	Ave	0.0540	0.0484		0.00896	0.0100	-10.4	20.0
1,1-Dichloroethane	Ave	0.5690	0.5933	0.2000	0.0104	0.0100	4.3	20.0
Vinyl acetate	Ave	0.4510	0.4024		0.00892	0.0100	-10.8	50.0
2,2-Dichloropropane	Ave	0.0953	0.0926		0.00973	0.0100	-2.7	20.0
cis-1,2-Dichloroethene	Ave	0.3349	0.3246	0.1000	0.00969	0.0100	-3.1	20.0
2-Butanone (MEK)	Ave	0.0926	0.0845	0.0100	0.0183	0.0200	-8.7	20.0
Chlorobromomethane	Ave	0.1496	0.1298		0.00868	0.0100	-13.2	20.0
Tetrahydrofuran	Ave	0.0667	0.0580		0.0174	0.0200	-13.0	20.0
Chloroform	Ave	0.4937	0.4901	0.2000	0.00993	0.0100	-0.7	20.0
1,1,1-Trichloroethane	Ave	0.4816	0.4646	0.1000	0.00965	0.0100	-3.5	20.0
Cyclohexane	Ave	0.5356	0.6134	0.1000	0.0115	0.0100	14.5	20.0
1,1-Dichloropropene	Ave	0.3480	0.3086		0.00887	0.0100	-11.3	20.0
Carbon tetrachloride	Ave	0.3915	0.3681	0.1000	0.00940	0.0100	-6.0	20.0
Isobutyl alcohol	Ave	0.0091	0.0112		0.305	0.250	22.1*	20.0
Benzene	Ave	1.147	1.118	0.5000	0.00975	0.0100	-2.5	20.0
1,2-Dichloroethane	Ave	0.4198	0.3913	0.1000	0.00932	0.0100	-6.8	20.0
n-Heptane	Ave	0.0441	0.0343		0.00776	0.0100	-22.4*	20.0
Trichloroethene	Ave	0.2858	0.2406	0.1500	0.00842	0.0100	-15.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-364651/2 Calibration Date: 01/18/2019 12:01

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX9146.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4023	0.3662	0.1000	0.00910	0.0100	-9.0	20.0
1,2-Dichloropropane	Ave	0.2977	0.3089	0.1000	0.0104	0.0100	3.7	20.0
Dibromomethane	Ave	0.1689	0.1443		0.00854	0.0100	-14.6	20.0
1,4-Dioxane	Ave	0.0027	0.0016		0.119	0.200	-40.5	50.0
Dichlorobromomethane	Ave	0.3738	0.3583	0.1500	0.00959	0.0100	-4.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1569	0.1119		0.0143	0.0200	-28.7*	20.0
cis-1,3-Dichloropropene	Ave	0.4140	0.3572	0.1500	0.00863	0.0100	-13.7	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2300	0.2270	0.0500	0.0197	0.0200	-1.3	20.0
Toluene	Ave	1.524	1.501	0.4000	0.00984	0.0100	-1.6	20.0
trans-1,3-Dichloropropene	Ave	0.4515	0.4277	0.1000	0.00947	0.0100	-5.3	20.0
Ethyl methacrylate	Ave	0.3702	0.3375		0.00912	0.0100	-8.8	20.0
1,1,2-Trichloroethane	Ave	0.2836	0.2540	0.1000	0.00896	0.0100	-10.4	20.0
Tetrachloroethene	Ave	0.2655	0.2207	0.1500	0.00831	0.0100	-16.9	20.0
1,3-Dichloropropane	Ave	0.4864	0.4710		0.00968	0.0100	-3.2	20.0
2-Hexanone	Ave	0.1864	0.2041	0.0500	0.0219	0.0200	9.5	20.0
Chlorodibromomethane	Ave	0.3162	0.2839		0.00898	0.0100	-10.2	20.0
Ethylene Dibromide	Ave	0.2793	0.2562		0.00917	0.0100	-8.3	20.0
Chlorobenzene	Ave	0.9949	0.9235	0.3000	0.00928	0.0100	-7.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3753	0.3646		0.00971	0.0100	-2.9	20.0
Ethylbenzene	Ave	0.5550	0.5030		0.00906	0.0100	-9.4	20.0
m-Xylene & p-Xylene	Ave	0.6875	0.6078		0.00884	0.0100	-11.6	20.0
o-Xylene	Ave	0.7160	0.6711		0.00937	0.0100	-6.3	20.0
Styrene	Ave	1.140	1.039	0.3000	0.00911	0.0100	-8.9	20.0
Bromoform	Ave	0.1941	0.1438	0.1000	0.00741	0.0100	-25.9*	20.0
Isopropylbenzene	Ave	1.746	1.662	0.1000	0.00952	0.0100	-4.8	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6756	0.6966	0.3000	0.0103	0.0100	3.1	20.0
Bromobenzene	Ave	0.7676	0.7188		0.00936	0.0100	-6.4	20.0
1,2,3-Trichloropropane	Ave	0.2120	0.1808		0.00853	0.0100	-14.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1364	0.1956		0.0143	0.0100	43.4*	20.0
N-Propylbenzene	Ave	0.7981	0.7431		0.00931	0.0100	-6.9	20.0
2-Chlorotoluene	Ave	0.7489	0.7240		0.00967	0.0100	-3.3	20.0
1,3,5-Trimethylbenzene	Ave	2.520	2.737		0.0109	0.0100	8.6	20.0
4-Chlorotoluene	Ave	0.7451	0.7104		0.00953	0.0100	-4.7	20.0
tert-Butylbenzene	Ave	2.046	2.014		0.00985	0.0100	-1.5	20.0
1,2,4-Trimethylbenzene	Ave	2.763	2.784		0.0101	0.0100	0.7	20.0
sec-Butylbenzene	Ave	2.761	2.780		0.0101	0.0100	0.7	20.0
1,3-Dichlorobenzene	Ave	1.510	1.398	0.6000	0.00926	0.0100	-7.4	20.0
4-Isopropyltoluene	Ave	2.402	2.383		0.00992	0.0100	-0.8	20.0
1,4-Dichlorobenzene	Ave	1.538	1.442	0.5000	0.00937	0.0100	-6.3	20.0
n-Butylbenzene	Ave	1.940	1.986		0.0102	0.0100	2.4	20.0
1,2-Dichlorobenzene	Ave	1.537	1.496	0.4000	0.00974	0.0100	-2.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-364651/2 Calibration Date: 01/18/2019 12:01

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX9146.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1540	0.1246	0.0500	0.00809	0.0100	-19.1	50.0
1,2,4-Trichlorobenzene	Ave	0.9316	0.8066	0.2000	0.00866	0.0100	-13.4	50.0
Hexachlorobutadiene	Ave	0.3050	0.2207		0.00724	0.0100	-27.6*	20.0
Naphthalene	Ave	2.426	1.871		0.00771	0.0100	-22.9	50.0
1,2,3-Trichlorobenzene	Ave	0.9073	0.6730		0.00742	0.0100	-25.8*	20.0
Dibromofluoromethane (Surr)	Ave	0.2627	0.2396		0.00912	0.0100	-8.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3357	0.3006		0.00895	0.0100	-10.5	20.0
Toluene-d8 (Surr)	Ave	1.262	1.274		0.0101	0.0100	0.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4807	0.4411		0.00918	0.0100	-8.2	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: J80807A.D BFB Injection Date: 08/07/2018

Instrument ID: A3UX11 BFB Injection Time: 09:44

Analysis Batch No.: 339716

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.7	
75	30.0 - 60.0 % of mass 95	52.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	5.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	83.4	
175	5.0 - 9.0 % of mass 174	6.5	(7.8) 1
176	95.0 - 101.0 % of mass 174	80.3	(96.3) 1
177	5.0 - 9.0 % of mass 176	5.3	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-339716/2	UXJ3440.D	08/07/2018	10:19
	STD8260 240-339716/3	UXJ3441.D	08/07/2018	10:41
	STD8260 240-339716/4	UXJ3442.D	08/07/2018	11:03
	STD8260 240-339716/5	UXJ3443.D	08/07/2018	11:26
	STD8260 240-339716/6	UXJ3444.D	08/07/2018	11:48
	STD8260 240-339716/7	UXJ3445.D	08/07/2018	12:10
	ICV 240-339716/14	UXJ3446.D	08/07/2018	12:33
	STD6 240-339716/8	UXJ3447.D	08/07/2018	12:55
	STD5 240-339716/9	UXJ3448.D	08/07/2018	13:17
	STD4 240-339716/10	UXJ3449.D	08/07/2018	13:39
	STD3 240-339716/11	UXJ3450.D	08/07/2018	14:02
	STD2 240-339716/12	UXJ3451.D	08/07/2018	14:24
	STD1 240-339716/13	UXJ3452.D	08/07/2018	14:46
	ICV 240-339716/15	UXJ3453.D	08/07/2018	15:08

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-339716/7	UXJ3445.D
Level 2	STD8260 240-339716/6	UXJ3444.D
Level 3	STD8260 240-339716/5	UXJ3443.D
Level 4	STD8260 240-339716/4	UXJ3442.D
Level 5	STD8260 240-339716/3	UXJ3441.D
Level 6	STD8260 240-339716/2	UXJ3440.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2113 0.2754	0.2205	0.2514	0.2701	0.2552	Ave		0.2473			0.1000	10.5		20.0			
Chloromethane	0.2966 0.2658	0.2669	0.2369	0.2642	0.2510	Ave		0.2636			0.1000	7.5		20.0			
Butadiene	0.2900 0.2983	0.2996	0.2687	0.3063	0.2906	Ave		0.2922				4.5		20.0			
Vinyl chloride	0.3410 0.3462	0.2906	0.2962	0.3301	0.3303	Ave		0.3224			0.1000	7.3		20.0			
Bromomethane	0.2143 0.2276	0.2109	0.1862	0.2232	0.2234	Ave		0.2143			0.0500	7.0		20.0			
Chloroethane	0.2081 0.2175	0.1820	0.1874	0.2169	0.2056	Ave		0.2029			0.0500	7.4		20.0			
Dichlorofluoromethane	0.4987 0.4862	0.4843	0.4363	0.4824	0.4794	Ave		0.4779				4.5		20.0			
Trichlorofluoromethane	0.4391 0.4677	0.4073	0.4077	0.4518	0.4481	Ave		0.4369			0.1000	5.6		20.0			
Ethyl ether	0.2465 0.2533	0.2557	0.2353	0.2364	0.2339	Ave		0.2435				4.0		20.0			
Acrolein	0.0759 0.0704	0.0703	0.0643	0.0544	0.0664	Ave		0.0670				10.9		20.0			
1,1-Dichloroethene	0.2835 0.2705	0.2694	0.2278	0.2497	0.2218	Ave		0.2538			0.1000	9.8		20.0			
1,1,2-Trichlorotrifluoroethane	0.1886 0.2004	0.1793	0.1651	0.1792	0.1891	Ave		0.1836			0.0500	6.5		20.0			
Acetone	+++++ 0.1256	0.1097	0.1140	0.0844	0.1085	Ave		0.1084			0.0100	13.9		20.0			
Iodomethane	0.3765 0.3938	0.3974	0.3709	0.3713	0.3649	Ave		0.3791				3.5		20.0			
Carbon disulfide	0.7838 0.8002	0.8291	0.7111	0.7182	0.7157	Ave		0.7597			0.1000	6.7		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1842 0.1931	0.1799	0.1853	0.1883	0.1745	Ave		0.1842				3.5		20.0			
Methyl acetate	0.3120 0.2718	0.3005	0.2764	0.2441	0.2852	Ave		0.2816			0.1000	8.4		20.0			
Methylene Chloride	0.2465 0.2541	0.2600	0.2384	0.2463	0.2371	Ave		0.2471			0.1000	3.6		20.0			
2-Methyl-2-propanol	0.0449 0.0482	0.0271	0.0375	0.0294	0.0406	Ave		0.0379				22.1	*	20.0			
Acrylonitrile	0.1530 0.1402	0.1434	0.1325	0.1156	0.1393	Ave		0.1373				9.2		20.0			
trans-1,2-Dichloroethene	0.3173 0.2799	0.2938	0.2593	0.2627	0.2556	Ave		0.2781			0.1000	8.6		20.0			
Methyl tert-butyl ether	0.7025 0.7293	0.7524	0.6521	0.7053	0.7147	Ave		0.7094			0.1000	4.7		20.0			
Hexane	0.0938 0.0874	0.0868	0.0886	0.0782	0.0870	Ave		0.0870				5.8		20.0			
1,1-Dichloroethane	0.4671 0.4860	0.5026	0.4549	0.4627	0.4600	Ave		0.4722			0.2000	3.9		20.0			
Vinyl acetate	0.6550 0.5994	0.6109	0.5939	0.5414	0.6173	Ave		0.6030				6.1		20.0			
cis-1,2-Dichloroethene	0.3206 0.2886	0.3118	0.2909	0.2867	0.2694	Ave		0.2947			0.1000	6.3		20.0			
2,2-Dichloropropane	0.3140 0.3009	0.3134	0.2669	0.2887	0.2881	Ave		0.2953				6.1		20.0			
2-Butanone (MEK)	0.2472 0.1771	0.2101	0.2018	0.1738	0.2098	Ave		0.2033			0.0100	13.2		20.0			
Bromochloromethane	0.1318 0.1289	0.1340	0.1263	0.1173	0.1214	Ave		0.1266				5.0		20.0			
Tetrahydrofuran	0.1508 0.1185	0.1488	0.1299	0.1111	0.1419	Ave		0.1335				12.3		20.0			
Chloroform	0.4501 0.4385	0.4667	0.4153	0.4412	0.4277	Ave		0.4399			0.2000	4.0		20.0			
1,1,1-Trichloroethane	0.3505 0.3769	0.3912	0.3364	0.3638	0.3835	Ave		0.3670			0.1000	5.7		20.0			
Cyclohexane	0.4465 0.4693	0.4545	0.4480	0.4464	0.4630	Ave		0.4546			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3360 0.3907	0.4134	0.3824	0.3708	0.3879	Ave		0.3802				6.8		20.0			
Carbon tetrachloride	0.3518 0.3442	0.3644	0.3271	0.3395	0.3353	Ave		0.3437			0.1000	3.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0232 0.0262	0.0226	0.0234	0.0215	0.0234	Ave		0.0234				6.6		20.0			
Benzene	1.1222 1.0686	1.1019	1.0204	1.0205	1.0586	Ave		1.0654			0.5000	3.9		20.0			
1,2-Dichloroethane	0.3988 0.3589	0.3944	0.3421	0.3584	0.3661	Ave		0.3698			0.1000	6.0		20.0			
n-Heptane	0.0871 0.0904	0.0824	0.0879	0.0817	0.0951	Ave		0.0874				5.8		20.0			
Trichloroethene	0.3118 0.2724	0.2870	0.2668	0.2668	0.2765	Ave		0.2802			0.1500	6.1		20.0			
Methylcyclohexane	0.4796 0.5195	0.4976	0.4828	0.4753	0.4956	Ave		0.4917			0.1000	3.3		20.0			
1,2-Dichloropropane	0.2481 0.2339	0.2676	0.2413	0.2322	0.2578	Ave		0.2468			0.1000	5.6		20.0			
Dibromomethane	0.1916 0.1495	0.1735	0.1559	0.1491	0.1584	Ave		0.1630				10.2		20.0			
1,4-Dioxane	0.0018 0.0033	0.0024	0.0024	0.0031	0.0033	Lin1	-0.039	0.0033				10.4			0.9970		0.9900
Bromodichloromethane	0.3350 0.3199	0.3431	0.3269	0.3198	0.3511	Ave		0.3326			0.1500	3.8		20.0			
2-Chloroethyl vinyl ether	0.1977 0.1548	0.1743	0.1871	0.1596	0.2016	Ave		0.1792				10.9		20.0			
cis-1,3-Dichloropropene	0.4612 0.3848	0.4081	0.4004	0.3785	0.4269	Ave		0.4100			0.1500	7.4		20.0			
4-Methyl-2-pentanone (MIBK)	0.4093 0.3080	0.3605	0.3540	0.3413	0.3856	Ave		0.3598			0.0500	9.8		20.0			
Toluene	1.7043 1.7429	1.6573	1.5865	1.5729	1.6036	Ave		1.6446			0.4000	4.2		20.0			
trans-1,3-Dichloropropene	0.5821 0.5592	0.5801	0.5507	0.5256	0.5622	Ave		0.5600			0.1000	3.7		20.0			
Ethyl methacrylate	0.5398 0.5010	0.4957	0.4938	0.4974	0.5240	Ave		0.5086				3.7		20.0			
1,1,2-Trichloroethane	0.3576 0.3110	0.3495	0.3053	0.3019	0.3142	Ave		0.3232			0.1000	7.4		20.0			
Tetrachloroethene	0.3108 0.3162	0.3056	0.3023	0.2968	0.3015	Ave		0.3055			0.1500	2.3		20.0			
1,3-Dichloropropane	0.6243 0.5618	0.5686	0.5628	0.5497	0.5759	Ave		0.5738				4.6		20.0			
2-Hexanone	0.4399 0.3405	0.4417	0.4008	0.4080	0.4290	Ave		0.4100			0.0500	9.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.3603 0.3658	0.3663	0.3459	0.3625	0.3623	Ave		0.3605				2.1		20.0			
1,2-Dibromoethane	0.3783 0.3173	0.3326	0.3203	0.3113	0.3285	Ave		0.3314				7.3		20.0			
Chlorobenzene	1.0540 0.9885	1.0242	0.9549	0.9534	0.9623	Ave		0.9896			0.3000	4.2		20.0			
1,1,1,2-Tetrachloroethane	0.3479 0.3526	0.3676	0.3148	0.3480	0.3192	Ave		0.3417				6.0		20.0			
Ethylbenzene	0.5165 0.5598	0.5941	0.5439	0.5446	0.5431	Ave		0.5503				4.7		20.0			
m-Xylene & p-Xylene	0.6867 0.6950	0.6556	0.6501	0.6526	0.6632	Ave		0.6672				2.8		20.0			
o-Xylene	0.5987 0.6716	0.6053	0.5917	0.6313	0.6267	Ave		0.6209				4.7		20.0			
Styrene	1.0210 1.1055	1.0931	1.0019	1.0434	1.0703	Ave		1.0559			0.3000	3.9		20.0			
Bromoform	0.2735 0.2509	0.2607	0.2468	0.2535	0.2508	Ave		0.2560			0.1000	3.8		20.0			
Isopropylbenzene	1.7319 1.8318	1.7227	1.6269	1.6508	1.6772	Ave		1.7069			0.1000	4.3		20.0			
1,1,2,2-Tetrachloroethane	1.1031 0.9672	1.0518	0.9569	0.9397	0.9566	Ave		0.9959			0.3000	6.6		20.0			
Bromobenzene	0.7755 0.7728	0.8428	0.7858	0.7561	0.7689	Ave		0.7837				3.9		20.0			
1,2,3-Trichloropropane	0.3314 0.3089	0.4042	0.3343	0.3161	0.3211	Ave		0.3360				10.3		20.0			
trans-1,4-Dichloro-2-butene	0.3422 0.2837	0.3748	0.3406	0.3053	0.3210	Ave		0.3279				9.7		20.0			
N-Propylbenzene	0.9682 0.9979	1.0752	0.9566	0.9342	0.9606	Ave		0.9821				5.1		20.0			
2-Chlorotoluene	0.8084 0.8069	0.8134	0.7783	0.7502	0.7658	Ave		0.7872				3.3		20.0			
1,3,5-Trimethylbenzene	2.8352 3.0005	2.8313	2.6946	2.6857	2.7266	Ave		2.7957				4.3		20.0			
4-Chlorotoluene	0.8308 0.8083	0.8444	0.7792	0.7838	0.8006	Ave		0.8078				3.2		20.0			
tert-Butylbenzene	2.4727 2.6589	2.3455	2.3803	2.2804	2.5152	Ave		2.4422				5.6		20.0			
1,2,4-Trimethylbenzene	2.9497 2.9942	2.9370	2.7123	2.7345	2.8285	Ave		2.8593				4.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	3.4706 4.0032	3.6555	3.5136	3.4874	3.7065	Ave		3.6395				5.6		20.0			
1,3-Dichlorobenzene	1.4827 1.4294	1.5563	1.4178	1.3884	1.4512	Ave		1.4543			0.6000	4.1		20.0			
4-Isopropyltoluene	3.0208 3.2959	2.9682	2.9564	2.9783	3.0893	Ave		3.0515				4.2		20.0			
1,4-Dichlorobenzene	1.6181 1.4192	1.5822	1.4416	1.3856	1.4486	Ave		1.4826			0.5000	6.4		20.0			
1,2-Dichlorobenzene	1.4461 1.3943	1.3583	1.2761	1.3011	1.3169	Ave		1.3488			0.4000	4.7		20.0			
n-Butylbenzene	2.7917 2.9438	2.8420	2.6351	2.6422	2.8208	Ave		2.7793				4.3		20.0			
1,2-Dibromo-3-Chloropropane	0.3099 0.2581	0.3427	0.2561	0.2752	0.2727	Ave		0.2858			0.0500	11.9		20.0			
1,2,4-Trichlorobenzene	1.0343 0.9847	0.9843	0.7977	0.9054	0.8895	Ave		0.9327			0.2000	9.2		20.0			
Hexachlorobutadiene	0.4843 0.4537	0.4398	0.3857	0.4171	0.4414	Ave		0.4370				7.6		20.0			
Naphthalene	3.4842 3.3259	3.4926	2.6724	2.9660	3.0196	Ave		3.1601				10.4		20.0			
1,2,3-Trichlorobenzene	1.0474 0.9738	0.9604	0.7324	0.8501	0.8838	Ave		0.9080				12.2		20.0			
Dibromofluoromethane (Surr)	0.2447 0.2301	0.2304	0.2188	0.2371	0.2276	Ave		0.2315				3.8		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3450 0.2970	0.3032	0.3004	0.2852	0.2919	Ave		0.3038				7.0		20.0			
Toluene-d8 (Surr)	1.4697 1.5033	1.4153	1.3785	1.4367	1.3796	Ave		1.4305				3.5		20.0			
4-Bromofluorobenzene (Surr)	0.4653 0.4235	0.4605	0.4377	0.4361	0.4275	Ave		0.4418				3.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-339716/7	UXJ3445.D
Level 2	STD8260 240-339716/6	UXJ3444.D
Level 3	STD8260 240-339716/5	UXJ3443.D
Level 4	STD8260 240-339716/4	UXJ3442.D
Level 5	STD8260 240-339716/3	UXJ3441.D
Level 6	STD8260 240-339716/2	UXJ3440.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	11447 680542	24307	78668	149776	299562	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	16064 656815	29429	74130	146467	294607	1.00 40.0	2.00	5.00	10.0	20.0
Butadiene	FB	Ave	15707 737188	33026	84061	169822	341072	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	18472 855669	32033	92669	183026	387649	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	11609 562463	23252	58260	123749	262162	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	11273 537569	20060	58618	120262	241257	1.00 40.0	2.00	5.00	10.0	20.0
Dichlorofluoromethane	FB	Ave	27013 1201481	53394	136517	267487	562616	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	23783 1155720	44898	127566	250505	525921	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	13350 626092	28188	73608	131078	274472	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	20554 869540	38758	100650	150752	389886	5.00 200	10.0	25.0	50.0	100
1,1-Dichloroethene	FB	Ave	15357 668425	29702	71260	138473	260337	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichlorotrifluoroethane	FB	Ave	10215 495336	19766	51665	99374	221945	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Ave	+++++ 620984	24190	71322	93553	254621	+++++ 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	20393 973158	43807	116037	205879	428259	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	42453 1977439	91401	222489	398185	839958	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	9976 477102	19836	57973	104381	204745	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	33796 1343182	66247	172965	270646	669329	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Ave	13349 628048	28664	74577	136538	278311	1.00 40.0	2.00	5.00	10.0	20.0
2-Methyl-2-propanol	FB	Ave	24332 1190225	29851	117292	162902	476148	10.0 400	20.0	50.0	100	200
Acrylonitrile	FB	Ave	82887 3464418	158046	414552	640991	1634644	10.0 400	20.0	50.0	100	200
trans-1,2-Dichloroethene	FB	Ave	17186 691777	32394	81111	145636	299988	1.00 40.0	2.00	5.00	10.0	20.0
Methyl tert-butyl ether	FB	Ave	38047 1802263	82947	204029	391069	838756	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	5081 215881	9568	27721	43367	102155	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	25297 1201087	55413	142321	256570	539873	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	35474 1481308	67352	185806	300206	724519	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	17367 713342	34379	91004	158946	316134	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	17008 743537	34552	83505	160045	338075	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone (MEK)	FB	Ave	26778 875113	46317	126300	192750	492424	2.00 80.0	4.00	10.0	20.0	40.0
Bromochloromethane	FB	Ave	7138 318611	14777	39523	65062	142518	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	16339 585780	32813	81294	123173	333033	2.00 80.0	4.00	10.0	20.0	40.0
Chloroform	FB	Ave	24379 1083638	51449	129926	244613	501955	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	18983 931388	43130	105256	201707	450056	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	24183 1159678	50101	140158	247503	543404	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	18196 965529	45576	119651	205613	455305	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	19054 850585	40172	102346	188229	393530	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	CBNZ d5	Ave	21575 957042	38424	122584	186697	480963	25.0 1000	50.0	125	250	500
Benzene	FB	Ave	60783 2640949	121475	319255	565813	1242477	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	21600 886906	43476	107027	198704	429725	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	4716 223487	9082	27500	45282	111633	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	16887 673282	31643	83470	147933	324527	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	25977 1283821	54859	151042	263525	581668	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	13436 577957	29503	75481	128767	302581	1.00 40.0	2.00	5.00	10.0	20.0
Dibromomethane	FB	Ave	10376 369432	19130	48788	82671	185891	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Lin1	1918 162405	5338	14931	34216	78610	20.0 800	40.0	100	200	400
Bromodichloromethane	FB	Ave	18145 790624	37827	102276	177327	412016	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	21411 765103	38440	117064	176954	473304	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Ave	24977 950990	44990	125258	209879	501026	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	44337 1522147	79494	221502	378476	905194	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBNZ d5	Ave	63519 2549041	112761	332828	546511	1320444	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	21693 817796	39470	115532	182616	462927	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBNZ d5	Ave	20120 732749	33729	103598	172832	431485	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBNZ d5	Ave	13327 454815	23780	64042	104891	258691	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBNZ d5	Ave	11584 462493	20793	63410	103114	248308	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBNZ d5	Ave	23267 821677	38684	118078	190991	474232	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBNZ d5	Ave	32791 996108	60100	168177	283510	706466	2.00 80.0	4.00	10.0	20.0	40.0
Chlorodibromomethane	CBNZ d5	Ave	13430 535056	24924	72573	125959	298297	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBNZ d5	Ave	14101 464134	22631	67192	108178	270470	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBNZ d5	Ave	39284 1445704	69684	200325	331254	792434	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	12967 515655	25008	66047	120907	262847	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBNZ d5	Ave	19250 818805	40421	114108	189214	447245	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBNZ d5	Ave	25593 1016432	44605	136385	226746	546104	1.00 40.0	2.00	5.00	10.0	20.0
o-Xylene	CBNZ d5	Ave	22312 982329	41183	124136	219346	516074	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBNZ d5	Ave	38054 1616898	74370	210192	362539	881322	1.00 40.0	2.00	5.00	10.0	20.0
Bromoform	CBNZ d5	Ave	10193 367005	17740	51778	88073	206508	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBNZ d5	Ave	64547 2679188	117205	341312	573572	1381113	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	19176 691868	33798	93320	156931	380086	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCBd 4	Ave	13480 552835	27082	76632	126278	305507	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCBd 4	Ave	5760 220975	12987	32603	52789	127593	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	5949 202931	12042	33220	50989	127538	1.00 40.0	2.00	5.00	10.0	20.0
N-Propylbenzene	DCBd 4	Ave	16830 713853	34550	93283	156009	381705	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCBd 4	Ave	14053 577244	26138	75895	125283	304270	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	49285 2146431	90977	262780	448521	1083408	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCBd 4	Ave	14441 578262	27131	75986	130897	318105	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCBd 4	Ave	42983 1902063	75366	232129	380825	999390	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	51274 2141910	94372	264501	456670	1123868	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCBd 4	Ave	60330 2863772	117460	342649	582400	1472736	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	25774 1022537	50007	138268	231863	576608	1.00 40.0	2.00	5.00	10.0	20.0
4-Isopropyltoluene	DCBd 4	Ave	52511 2357752	95376	288310	497384	1227502	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCBd 4	Ave	28127 1015242	50840	140588	231395	575598	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichlorobenzene	DCBd 4	Ave	25138 997412	43644	124444	217283	523269	1.00 40.0	2.00	5.00	10.0	20.0
n-Butylbenzene	DCBd 4	Ave	48529 2105884	91321	256969	441254	1120808	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	5387 184621	11011	24972	45966	108371	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	17979 704390	31628	77795	151209	353429	1.00 40.0	2.00	5.00	10.0	20.0
Hexachlorobutadiene	DCBd 4	Ave	8418 324575	14131	37618	69657	175378	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCBd 4	Ave	60566 2379214	112226	260613	495330	1199814	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	18207 696616	30859	71420	141976	351154	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	13254 568670	25405	68445	131439	267150	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	18685 734090	33428	93994	158114	342588	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBNZ d5	Ave	54774 2198709	96293	289196	499207	1136029	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	17342 619411	31328	91818	151542	352027	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-339716/7	UXJ3445.D
Level 2	STD8260 240-339716/6	UXJ3444.D
Level 3	STD8260 240-339716/5	UXJ3443.D
Level 4	STD8260 240-339716/4	UXJ3442.D
Level 5	STD8260 240-339716/3	UXJ3441.D
Level 6	STD8260 240-339716/2	UXJ3440.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
1,4-Dioxane	12.0						50					

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 12:55 Calibration End Date: 08/07/2018 14:46 Calibration ID: 46385

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-339716/13	UXJ3452.D
Level 2	STD2 240-339716/12	UXJ3451.D
Level 3	STD3 240-339716/11	UXJ3450.D
Level 4	STD4 240-339716/10	UXJ3449.D
Level 5	STD5 240-339716/9	UXJ3448.D
Level 6	STD6 240-339716/8	UXJ3447.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0504 0.0338	0.0225	0.0412	0.0369	0.0398	Ave		0.0374				24.6	*	20.0			
2-Chloro-1,3-butadiene	0.4031 0.4070	0.4129	0.4184	0.4459	0.4336	Ave		0.4202				3.9		20.0			
Diisopropyl ether	0.2076 0.2133	0.2205	0.2186	0.2234	0.2226	Ave		0.2177				2.8		20.0			
Ethyl tert-butyl ether	0.6780 0.6534	0.6925	0.6983	0.6895	0.7178	Ave		0.6883				3.1		20.0			
Propionitrile	0.0592 0.0508	0.0616	0.0631	0.0547	0.0601	Ave		0.0583				7.9		20.0			
Ethyl acetate	0.3997 0.3455	0.3384	0.3311	0.3182	0.3412	Ave		0.3457				8.1		20.0			
Methacrylonitrile	0.2199 0.2139	0.2003	0.2005	0.2025	0.2141	Ave		0.2085				4.1		20.0			
Tert-amyl methyl ether	0.8494 0.7274	0.7941	0.7968	0.7870	0.7877	Ave		0.7904				4.9		20.0			
n-Butanol	0.0224 0.0191	0.0206	0.0232	0.0211	0.0253	Ave		0.0220				9.9		20.0			
Ethyl acrylate	0.4425 0.4331	0.3506	0.3690	0.3745	0.3787	Ave		0.3914				9.5		20.0			
Methyl methacrylate	0.2765 0.2861	0.2395	0.2436	0.2468	0.2551	Ave		0.2579				7.4		20.0			
2-Nitropropane	0.1202 0.1120	0.1061	0.1059	0.1047	0.1112	Ave		0.1100				5.3		20.0			
n-Butyl acetate	0.4934 0.4597	0.4116	0.4118	0.4058	0.4258	Ave		0.4347				8.0		20.0			
1-Chlorohexane	0.5927 0.5351	0.5084	0.4904	0.5382	0.5407	Ave		0.5342				6.5		20.0			
Cyclohexanone	0.0623 0.0494	0.0662	0.0591	0.0576	0.0718	Ave		0.0611				12.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 12:55 Calibration End Date: 08/07/2018 14:46 Calibration ID: 46385

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.2149 0.2210	0.2243	0.2152	0.2259	0.2345	Ave		0.2226				3.3		20.0			
1,2,3-Trimethylbenzene	2.7583 2.9261	2.7403	2.7042	2.8828	3.0256	Ave		2.8395				4.4		20.0			
Benzyl chloride	0.3040 0.4246	0.3146	0.3526	0.3957	0.4116	Ave		0.3672				13.9		20.0			
1,3,5-Trichlorobenzene	1.1377 1.0486	1.0259	1.0232	1.0488	1.1163	Ave		1.0668				4.5		20.0			
2-Methylnaphthalene	2.2775 1.8631	2.3102	2.2390	1.9982	2.2702	Ave		2.1597				8.5		20.0			
1-Chloro-1-fluoroethane TIC	0.2557 0.2668	0.2672	0.2782	0.2489	0.2713	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 12:55 Calibration End Date: 08/07/2018 14:46 Calibration ID: 46385

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-339716/13	UXJ3452.D
Level 2	STD2 240-339716/12	UXJ3451.D
Level 3	STD3 240-339716/11	UXJ3450.D
Level 4	STD4 240-339716/10	UXJ3449.D
Level 5	STD5 240-339716/9	UXJ3448.D
Level 6	STD6 240-339716/8	UXJ3447.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Ave	25553 740177	22780	102139	207823	424313	10.0 400	20.0	50.0	100	200
2-Chloro-1,3-butadiene	FB	Ave	20425 892252	41778	103841	250984	462681	1.00 40.0	2.00	5.00	10.0	20.0
Diisopropyl ether	FB	Ave	10521 467561	22310	54238	125758	237468	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl tert-butyl ether	FB	Ave	34352 1432261	70076	173285	388158	765868	1.00 40.0	2.00	5.00	10.0	20.0
Propionitrile	FB	Ave	29980 1114170	62332	156678	307855	641035	10.0 400	20.0	50.0	100	200
Ethyl acetate	FB	Ave	40502 1514661	68481	164324	358250	728108	2.00 80.0	4.00	10.0	20.0	40.0
Methacrylonitrile	FB	Ave	111420 4689243	202644	497655	1139678	2283823	10.0 400	20.0	50.0	100	200
Tert-amyl methyl ether	FB	Ave	43040 1594508	80350	197729	443007	840453	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	CBNZ d5	Ave	19309 700971	33014	91107	183825	411170	25.0 1000	50.0	125	250	500
Ethyl acrylate	FB	Ave	22420 949489	35472	91584	210808	404016	1.00 40.0	2.00	5.00	10.0	20.0
Methyl methacrylate	FB	Ave	28021 1254285	48475	120914	277911	544258	2.00 80.0	4.00	10.0	20.0	40.0
2-Nitropropane	FB	Ave	12179 490974	21475	52555	117900	237344	2.00 80.0	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Ave	25002 1007633	41644	102193	228436	454274	1.00 40.0	2.00	5.00	10.0	20.0
1-Chlorohexane	CBNZ d5	Ave	20476 784692	32535	77134	187155	350920	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexanone	DCBd 4	Ave	10365 337885	20423	44442	94477	220253	10.0 400	20.0	50.0	100	200
Pentachloroethane	CBNZ d5	Ave	14846 648119	28711	67693	157131	304403	2.00 80.0	4.00	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 12:55 Calibration End Date: 08/07/2018 14:46 Calibration ID: 46385

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCBd 4	Ave	45880 2000640	84513	203284	473023	927608	1.00 40.0	2.00	5.00	10.0	20.0
Benzyl chloride	DCBd 4	Ave	5056 290282	9704	26509	64933	126187	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	18924 716926	31641	76919	172099	342234	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCBd 4	Ave	75765 2547751	142498	336620	655753	1392029	2.00 80.0	4.00	10.0	20.0	40.0
1-Chloro-1-fluoroethane TIC	FB	None	12958 584926	27033	69048	140085	289412	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
None = No Calib Curve

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-339716/14 Calibration Date: 08/07/2018 12:33

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 12:10

Lab File ID: UXJ3446.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2473	0.2531	0.1000	0.0102	0.0100	2.3	30.0
Chloromethane	Ave	0.2636	0.2421	0.1000	0.00919	0.0100	-8.1	30.0
Butadiene	Ave	0.2922	0.2582		0.00883	0.0100	-11.7	30.0
Vinyl chloride	Ave	0.3224	0.3029	0.1000	0.00940	0.0100	-6.0	30.0
Bromomethane	Ave	0.2143	0.1941	0.0500	0.00906	0.0100	-9.4	30.0
Chloroethane	Ave	0.2029	0.1980	0.0500	0.00976	0.0100	-2.4	30.0
Dichlorofluoromethane	Ave	0.4779	0.4509		0.00943	0.0100	-5.7	30.0
Trichlorofluoromethane	Ave	0.4369	0.4246	0.1000	0.00972	0.0100	-2.8	30.0
Ethyl ether	Ave	0.2435	0.2553		0.0105	0.0100	4.9	30.0
Acrolein	Ave	0.0670	0.0382		0.0285	0.0500	-42.9	50.0
1,1-Dichloroethene	Ave	0.2538	0.2622	0.1000	0.0103	0.0100	3.3	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.1836	0.1904	0.0500	0.0104	0.0100	3.7	30.0
Acetone	Ave	0.1084	0.0853	0.0100	0.0157	0.0200	-21.4	50.0
Iodomethane	Ave	0.3791	0.3949		0.0104	0.0100	4.2	30.0
Carbon disulfide	Ave	0.7597	0.7656	0.1000	0.0101	0.0100	0.8	30.0
3-Chloro-1-propene	Ave	0.1842	0.1988		0.0108	0.0100	7.9	30.0
Methyl acetate	Ave	0.2816	0.2330	0.1000	0.0165	0.0200	-17.3	30.0
Methylene Chloride	Ave	0.2471	0.2557	0.1000	0.0103	0.0100	3.5	50.0
2-Methyl-2-propanol	Ave	0.0379	0.0268		0.0707	0.100	-29.3	50.0
Acrylonitrile	Ave	0.1373	0.1135		0.0827	0.100	-17.3	30.0
trans-1,2-Dichloroethene	Ave	0.2781	0.2923	0.1000	0.0105	0.0100	5.1	30.0
Methyl tert-butyl ether	Ave	0.7094	0.7342	0.1000	0.0104	0.0100	3.5	30.0
Hexane	Ave	0.0870	0.0882		0.0101	0.0100	1.5	30.0
1,1-Dichloroethane	Ave	0.4722	0.5009	0.2000	0.0106	0.0100	6.1	30.0
Vinyl acetate	Ave	0.6030	0.5266		0.00873	0.0100	-12.7	50.0
2,2-Dichloropropane	Ave	0.2953	0.2889		0.00978	0.0100	-2.2	30.0
cis-1,2-Dichloroethene	Ave	0.2947	0.2913	0.1000	0.00989	0.0100	-1.1	30.0
2-Butanone (MEK)	Ave	0.2033	0.1491	0.0100	0.0147	0.0200	-26.6	30.0
Bromochloromethane	Ave	0.1266	0.1362		0.0108	0.0100	7.5	30.0
Tetrahydrofuran	Ave	0.1335	0.1084		0.0162	0.0200	-18.8	30.0
Chloroform	Ave	0.4399	0.4597	0.2000	0.0104	0.0100	4.5	30.0
1,1,1-Trichloroethane	Ave	0.3670	0.3888	0.1000	0.0106	0.0100	5.9	30.0
Cyclohexane	Ave	0.4546	0.4751	0.1000	0.0105	0.0100	4.5	30.0
1,1-Dichloropropene	Ave	0.3802	0.3927		0.0103	0.0100	3.3	30.0
Carbon tetrachloride	Ave	0.3437	0.3680	0.1000	0.0107	0.0100	7.1	30.0
Isobutyl alcohol	Ave	0.0234	0.0188		0.201	0.250	-19.4	30.0
Benzene	Ave	1.065	1.076	0.5000	0.0101	0.0100	1.0	30.0
1,2-Dichloroethane	Ave	0.3698	0.3676	0.1000	0.00994	0.0100	-0.6	30.0
n-Heptane	Ave	0.0874	0.0887		0.0101	0.0100	1.5	30.0
Trichloroethene	Ave	0.2802	0.2827	0.1500	0.0101	0.0100	0.9	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-339716/14 Calibration Date: 08/07/2018 12:33

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 12:10

Lab File ID: UXJ3446.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4917	0.4942	0.1000	0.0101	0.0100	0.5	30.0
1,2-Dichloropropane	Ave	0.2468	0.2525	0.1000	0.0102	0.0100	2.3	30.0
Dibromomethane	Ave	0.1630	0.1515		0.00929	0.0100	-7.1	30.0
1,4-Dioxane	Lin1		0.0024		0.153	0.200	-23.6	50.0
Bromodichloromethane	Ave	0.3326	0.3375	0.1500	0.0101	0.0100	1.4	30.0
2-Chloroethyl vinyl ether	Ave	0.1792	0.1585		0.00885	0.0100	-11.5	30.0
cis-1,3-Dichloropropene	Ave	0.4100	0.4046	0.1500	0.00987	0.0100	-1.3	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3598	0.2976	0.0500	0.0165	0.0200	-17.3	30.0
Toluene	Ave	1.645	1.713	0.4000	0.0104	0.0100	4.1	30.0
trans-1,3-Dichloropropene	Ave	0.5600	0.5330	0.1000	0.00952	0.0100	-4.8	30.0
Ethyl methacrylate	Ave	0.5086	0.5175		0.0102	0.0100	1.7	30.0
1,1,2-Trichloroethane	Ave	0.3232	0.3355	0.1000	0.0104	0.0100	3.8	30.0
Tetrachloroethene	Ave	0.3055	0.3233	0.1500	0.0106	0.0100	5.8	30.0
1,3-Dichloropropane	Ave	0.5738	0.5544		0.00966	0.0100	-3.4	30.0
2-Hexanone	Ave	0.4100	0.3457	0.0500	0.0169	0.0200	-15.7	30.0
Chlorodibromomethane	Ave	0.3605	0.3794		0.0105	0.0100	5.2	30.0
1,2-Dibromoethane	Ave	0.3314	0.3225		0.00973	0.0100	-2.7	30.0
Chlorobenzene	Ave	0.9896	0.997	0.3000	0.0101	0.0100	0.8	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3417	0.3525		0.0103	0.0100	3.2	30.0
Ethylbenzene	Ave	0.5503	0.5639		0.0102	0.0100	2.5	30.0
m-Xylene & p-Xylene	Ave	0.6672	0.6995		0.0105	0.0100	4.8	30.0
o-Xylene	Ave	0.6209	0.6635		0.0107	0.0100	6.9	30.0
Styrene	Ave	1.056	1.090	0.3000	0.0103	0.0100	3.2	30.0
Bromoform	Ave	0.2560	0.2510	0.1000	0.00980	0.0100	-2.0	30.0
Isopropylbenzene	Ave	1.707	1.780	0.1000	0.0104	0.0100	4.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.996	0.9709	0.3000	0.00975	0.0100	-2.5	30.0
Bromobenzene	Ave	0.7837	0.7974		0.0102	0.0100	1.8	30.0
1,2,3-Trichloropropane	Ave	0.3360	0.3229		0.00961	0.0100	-3.9	30.0
trans-1,4-Dichloro-2-butene	Ave	0.3279	0.3185		0.00971	0.0100	-2.9	30.0
N-Propylbenzene	Ave	0.9821	1.034		0.0105	0.0100	5.3	30.0
2-Chlorotoluene	Ave	0.7872	0.8272		0.0105	0.0100	5.1	30.0
1,3,5-Trimethylbenzene	Ave	2.796	2.874		0.0103	0.0100	2.8	30.0
4-Chlorotoluene	Ave	0.8078	0.7903		0.00978	0.0100	-2.2	30.0
tert-Butylbenzene	Ave	2.442	2.520		0.0103	0.0100	3.2	30.0
1,2,4-Trimethylbenzene	Ave	2.859	2.894		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	3.639	3.786		0.0104	0.0100	4.0	30.0
1,3-Dichlorobenzene	Ave	1.454	1.448	0.6000	0.00996	0.0100	-0.4	30.0
4-Isopropyltoluene	Ave	3.051	3.147		0.0103	0.0100	3.1	30.0
1,4-Dichlorobenzene	Ave	1.483	1.508	0.5000	0.0102	0.0100	1.7	30.0
1,2-Dichlorobenzene	Ave	1.349	1.403	0.4000	0.0104	0.0100	4.0	30.0
n-Butylbenzene	Ave	2.779	2.781		0.0100	0.0100	0.0	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-339716/14 Calibration Date: 08/07/2018 12:33

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 12:10

Lab File ID: UXJ3446.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.2858	0.2452	0.0500	0.00858	0.0100	-14.2	50.0
1,2,4-Trichlorobenzene	Ave	0.9327	0.8708	0.2000	0.00934	0.0100	-6.6	50.0
Hexachlorobutadiene	Ave	0.4370	0.4181		0.00957	0.0100	-4.3	30.0
Naphthalene	Ave	3.160	2.756		0.00872	0.0100	-12.8	50.0
1,2,3-Trichlorobenzene	Ave	0.9080	0.8430		0.00928	0.0100	-7.2	30.0
Dibromofluoromethane (Surr)	Ave	0.2315	0.2470		0.0213	0.0200	6.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3038	0.3037		0.0200	0.0200	-0.0	30.0
Toluene-d8 (Surr)	Ave	1.431	1.484		0.0208	0.0200	3.8	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4418	0.4465		0.0202	0.0200	1.1	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-339716/15 Calibration Date: 08/07/2018 15:08

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 12:10

Lab File ID: UXJ3453.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2315	0.2532		0.0219	0.0200	9.4	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3038	0.3257		0.0214	0.0200	7.2	30.0
Toluene-d8 (Surr)	Ave	1.431	1.510		0.0211	0.0200	5.6	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4418	0.4573		0.0207	0.0200	3.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-339716/15 Calibration Date: 08/07/2018 15:08

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 12:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 14:46

Lab File ID: UXJ3453.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0374	0.0408		0.109	0.100	9.1	30.0
2-Chloro-1,3-butadiene	Ave	0.4202	0.4117		0.00980	0.0100	-2.0	30.0
Diisopropyl ether	Ave	0.2177	0.2091		0.00961	0.0100	-3.9	30.0
Ethyl tert-butyl ether	Ave	0.6883	0.6814		0.00990	0.0100	-1.0	30.0
Propionitrile	Ave	0.0583	0.0539		0.0925	0.100	-7.5	30.0
Ethyl acetate	Ave	0.3457	0.2992		0.0173	0.0200	-13.4	50.0
Methacrylonitrile	Ave	0.2085	0.1939		0.0930	0.100	-7.0	30.0
Tert-amyl methyl ether	Ave	0.7904	0.7617		0.00964	0.0100	-3.6	30.0
n-Butanol	Ave	0.0220	0.0168		0.191	0.250	-23.7	30.0
Ethyl acrylate	Ave	0.3914	0.3507		0.00896	0.0100	-10.4	30.0
Methyl methacrylate	Ave	0.2579	0.2382		0.0185	0.0200	-7.7	30.0
2-Nitropropane	Ave	0.1100	0.0996		0.0181	0.0200	-9.5	30.0
n-Butyl acetate	Ave	0.4347	0.4016		0.00924	0.0100	-7.6	30.0
1-Chlorohexane	Ave	0.5342	0.5239		0.00981	0.0100	-1.9	30.0
Cyclohexanone	Ave	0.0611	0.0386		0.0631	0.100	-36.9*	30.0
Pentachloroethane	Ave	0.2226	0.1821		0.0164	0.0200	-18.2	30.0
1,2,3-Trimethylbenzene	Ave	2.840	2.866		0.0101	0.0100	0.9	30.0
Benzyl chloride	Ave	0.3672	0.3176		0.00865	0.0100	-13.5	30.0
1,3,5-Trichlorobenzene	Ave	1.067	1.015		0.00952	0.0100	-4.8	30.0
2-Methylnaphthalene	Ave	2.160	1.857		0.0172	0.0200	-14.0	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: BFB121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX11 BFB Injection Time: 09:28

Analysis Batch No.: 364762

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.6	
75	30.0 - 60.0 % of mass 95	52.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	1.1	(1.1) 1
174	50.0 - 120.00 % of mass 95	102.0	
175	5.0 - 9.0 % of mass 174	8.6	(8.5) 1
176	95.0 - 101.0 % of mass 174	100.0	(98.1) 1
177	5.0 - 9.0 % of mass 176	7.2	(7.2) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-364762/2	UXJ7822.D	01/21/2019	10:02
	LCS 240-364762/4	UXJ7823.D	01/21/2019	10:24
	CCV 240-364762/3	UXJ7824.D	01/21/2019	10:47
	MRL 240-364762/34	UXJ7826.D	01/21/2019	11:31
	MB 240-364762/6	UXJ7827.D	01/21/2019	11:53
TB-010819	240-106686-1	UXJ7833.D	01/21/2019	14:05
	240-107003-B-12 MS	UXJ7850.D	01/21/2019	20:20
	240-107003-B-12 MSD	UXJ7851.D	01/21/2019	20:42

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-364762/2 Calibration Date: 01/21/2019 10:02

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 12:10

Lab File ID: UXJ7822.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2473	0.3403	0.1000	0.0138	0.0100	37.6*	20.0
Chloromethane	Ave	0.2636	0.2532	0.1000	0.00961	0.0100	-3.9	20.0
Butadiene	Ave	0.2922	0.2487		0.00851	0.0100	-14.9	20.0
Vinyl chloride	Ave	0.3224	0.2758	0.1000	0.00855	0.0100	-14.5	20.0
Bromomethane	Ave	0.2143	0.1896	0.0500	0.00885	0.0100	-11.5	20.0
Chloroethane	Ave	0.2029	0.1502	0.0500	0.00740	0.0100	-26.0*	20.0
Dichlorofluoromethane	Ave	0.4779	0.4084		0.00855	0.0100	-14.5	20.0
Trichlorofluoromethane	Ave	0.4369	0.4825	0.1000	0.0110	0.0100	10.4	20.0
Ethyl ether	Ave	0.2435	0.2025		0.00832	0.0100	-16.8	20.0
Acrolein	Ave	0.0670	0.0297		0.0221	0.0500	-55.7*	50.0
1,1-Dichloroethene	Ave	0.2538	0.2445	0.1000	0.00963	0.0100	-3.7	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.1836	0.2187	0.0500	0.0119	0.0100	19.1	20.0
Acetone	Ave	0.1084	0.1054	0.0100	0.0194	0.0200	-2.8	50.0
Iodomethane	Ave	0.3791	0.4725		0.0125	0.0100	24.6*	20.0
Carbon disulfide	Ave	0.7597	0.7489	0.1000	0.00986	0.0100	-1.4	20.0
3-Chloro-1-propene	Ave	0.1842	0.1552		0.00843	0.0100	-15.7	20.0
Methyl acetate	Ave	0.2816	0.2030	0.1000	0.0144	0.0200	-27.9*	20.0
Methylene Chloride	Ave	0.2471	0.3246	0.1000	0.0131	0.0100	31.4	50.0
2-Methyl-2-propanol	Ave	0.0379	0.0354		0.0932	0.100	-6.8	50.0
Acrylonitrile	Ave	0.1373	0.0995		0.0724	0.100	-27.6*	20.0
trans-1,2-Dichloroethene	Ave	0.2781	0.2742	0.1000	0.00986	0.0100	-1.4	20.0
Methyl tert-butyl ether	Ave	0.7094	0.6605	0.1000	0.00931	0.0100	-6.9	20.0
Hexane	Ave	0.0870	0.0714		0.00821	0.0100	-17.9	20.0
1,1-Dichloroethane	Ave	0.4722	0.4665	0.2000	0.00988	0.0100	-1.2	20.0
Vinyl acetate	Ave	0.6030	0.4629		0.00768	0.0100	-23.2	50.0
2,2-Dichloropropane	Ave	0.2953	0.3136		0.0106	0.0100	6.2	20.0
cis-1,2-Dichloroethene	Ave	0.2947	0.2919	0.1000	0.00991	0.0100	-0.9	20.0
2-Butanone (MEK)	Ave	0.2033	0.1274	0.0100	0.0125	0.0200	-37.3*	20.0
Bromochloromethane	Ave	0.1266	0.1463		0.0116	0.0100	15.5	20.0
Tetrahydrofuran	Ave	0.1335	0.0759		0.0114	0.0200	-43.1*	20.0
Chloroform	Ave	0.4399	0.4847	0.2000	0.0110	0.0100	10.2	20.0
1,1,1-Trichloroethane	Ave	0.3670	0.4413	0.1000	0.0120	0.0100	20.2*	20.0
Cyclohexane	Ave	0.4546	0.3659	0.1000	0.00805	0.0100	-19.5	20.0
1,1-Dichloropropene	Ave	0.3802	0.3551		0.00934	0.0100	-6.6	20.0
Carbon tetrachloride	Ave	0.3437	0.4409	0.1000	0.0128	0.0100	28.3*	20.0
Isobutyl alcohol	Ave	0.0234	0.0177		0.190	0.250	-24.1*	20.0
Benzene	Ave	1.065	0.9799	0.5000	0.00920	0.0100	-8.0	20.0
1,2-Dichloroethane	Ave	0.3698	0.3966	0.1000	0.0107	0.0100	7.2	20.0
n-Heptane	Ave	0.0874	0.0620		0.00709	0.0100	-29.1*	20.0
Trichloroethene	Ave	0.2802	0.3281	0.1500	0.0117	0.0100	17.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-364762/2 Calibration Date: 01/21/2019 10:02

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 12:10

Lab File ID: UXJ7822.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4917	0.3835	0.1000	0.00780	0.0100	-22.0*	20.0
1,2-Dichloropropane	Ave	0.2468	0.1987	0.1000	0.00805	0.0100	-19.5	20.0
Dibromomethane	Ave	0.1630	0.1550		0.00951	0.0100	-4.9	20.0
1,4-Dioxane	Lin1		0.0029		0.186	0.200	-7.2	50.0
Bromodichloromethane	Ave	0.3326	0.3656	0.1500	0.0110	0.0100	9.9	20.0
2-Chloroethyl vinyl ether	Ave	0.1792	0.1328		0.0148	0.0200	-25.9*	20.0
cis-1,3-Dichloropropene	Ave	0.4100	0.3565	0.1500	0.00869	0.0100	-13.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3598	0.2191	0.0500	0.0122	0.0200	-39.1*	20.0
Toluene	Ave	1.645	1.499	0.4000	0.00912	0.0100	-8.8	20.0
trans-1,3-Dichloropropene	Ave	0.5600	0.5094	0.1000	0.00910	0.0100	-9.0	20.0
Ethyl methacrylate	Ave	0.5086	0.3668		0.00721	0.0100	-27.9*	20.0
1,1,2-Trichloroethane	Ave	0.3232	0.2918	0.1000	0.00903	0.0100	-9.7	20.0
Tetrachloroethene	Ave	0.3055	0.3857	0.1500	0.0126	0.0100	26.2*	20.0
1,3-Dichloropropane	Ave	0.5738	0.5130		0.00894	0.0100	-10.6	20.0
2-Hexanone	Ave	0.4100	0.2212	0.0500	0.0108	0.0200	-46.1*	20.0
Chlorodibromomethane	Ave	0.3605	0.3875		0.0107	0.0100	7.5	20.0
1,2-Dibromoethane	Ave	0.3314	0.3048		0.00920	0.0100	-8.0	20.0
Chlorobenzene	Ave	0.9896	0.9511	0.3000	0.00961	0.0100	-3.9	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3417	0.3924		0.0115	0.0100	14.8	20.0
Ethylbenzene	Ave	0.5503	0.4770		0.00867	0.0100	-13.3	20.0
m-Xylene & p-Xylene	Ave	0.6672	0.5925		0.00888	0.0100	-11.2	20.0
o-Xylene	Ave	0.6209	0.5828		0.00939	0.0100	-6.1	20.0
Styrene	Ave	1.056	0.9737	0.3000	0.00922	0.0100	-7.8	20.0
Bromoform	Ave	0.2560	0.3018	0.1000	0.0118	0.0100	17.9	20.0
Isopropylbenzene	Ave	1.707	1.505	0.1000	0.00882	0.0100	-11.8	20.0
Bromobenzene	Ave	0.7837	0.8012		0.0102	0.0100	2.2	20.0
1,1,2,2-Tetrachloroethane	Ave	0.996	0.7210	0.3000	0.00724	0.0100	-27.6*	20.0
1,2,3-Trichloropropane	Ave	0.3360	0.2706		0.00805	0.0100	-19.5	20.0
trans-1,4-Dichloro-2-butene	Ave	0.3279	0.2354		0.00718	0.0100	-28.2*	20.0
N-Propylbenzene	Ave	0.9821	0.7949		0.00809	0.0100	-19.1	20.0
2-Chlorotoluene	Ave	0.7872	0.7248		0.00921	0.0100	-7.9	20.0
1,3,5-Trimethylbenzene	Ave	2.796	2.266		0.00810	0.0100	-19.0	20.0
4-Chlorotoluene	Ave	0.8078	0.7247		0.00897	0.0100	-10.3	20.0
tert-Butylbenzene	Ave	2.442	1.980		0.00811	0.0100	-18.9	20.0
1,2,4-Trimethylbenzene	Ave	2.859	2.309		0.00808	0.0100	-19.2	20.0
sec-Butylbenzene	Ave	3.639	2.647		0.00727	0.0100	-27.3*	20.0
1,3-Dichlorobenzene	Ave	1.454	1.414	0.6000	0.00973	0.0100	-2.7	20.0
4-Isopropyltoluene	Ave	3.051	2.281		0.00748	0.0100	-25.2*	20.0
1,4-Dichlorobenzene	Ave	1.483	1.472	0.5000	0.00993	0.0100	-0.7	20.0
1,2-Dichlorobenzene	Ave	1.349	1.394	0.4000	0.0103	0.0100	3.4	20.0
n-Butylbenzene	Ave	2.779	1.871		0.00673	0.0100	-32.7*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-364762/2 Calibration Date: 01/21/2019 10:02

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 12:10

Lab File ID: UXJ7822.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.2858	0.2349	0.0500	0.00822	0.0100	-17.8	50.0
1,2,4-Trichlorobenzene	Ave	0.9327	0.8594	0.2000	0.00921	0.0100	-7.9	50.0
Hexachlorobutadiene	Ave	0.4370	0.3569		0.00817	0.0100	-18.3	20.0
Naphthalene	Ave	3.160	2.107		0.00667	0.0100	-33.3	50.0
1,2,3-Trichlorobenzene	Ave	0.9080	0.8591		0.00946	0.0100	-5.4	20.0
Dibromofluoromethane (Surr)	Ave	0.2315	0.2418		0.0209	0.0200	4.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3038	0.3213		0.0212	0.0200	5.8	20.0
Toluene-d8 (Surr)	Ave	1.431	1.207		0.0169	0.0200	-15.6	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4418	0.3840		0.0174	0.0200	-13.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCV 240-364762/3 Calibration Date: 01/21/2019 10:47

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 12:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 14:46

Lab File ID: UXJ7824.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0374	0.0248		0.0663	0.100	-33.7*	20.0
2-Chloro-1,3-butadiene	Ave	0.4202	0.4090		0.00973	0.0100	-2.7	20.0
Diisopropyl ether	Ave	0.2177	0.1762		0.00810	0.0100	-19.0	20.0
Ethyl tert-butyl ether	Ave	0.6883	0.5256		0.00764	0.0100	-23.6*	20.0
Propionitrile	Ave	0.0583	0.0332		0.0570	0.100	-43.0*	20.0
Ethyl acetate	Ave	0.3457	0.2124		0.0123	0.0200	-38.6	50.0
Methacrylonitrile	Ave	0.2085	0.1455		0.0698	0.100	-30.2*	20.0
Tert-amyl methyl ether	Ave	0.7904	0.5591		0.00707	0.0100	-29.3*	20.0
n-Butanol	Ave	0.0220	0.0125		0.142	0.250	-43.1*	20.0
Ethyl acrylate	Ave	0.3914	0.2290		0.00585	0.0100	-41.5*	20.0
Methyl methacrylate	Ave	0.2579	0.1645		0.0128	0.0200	-36.2*	20.0
2-Nitropropane	Ave	0.1100	0.0750		0.0136	0.0200	-31.8*	20.0
n-Butyl acetate	Ave	0.4347	0.2324		0.00535	0.0100	-46.5*	20.0
1-Chlorohexane	Ave	0.5342	0.3947		0.00739	0.0100	-26.1*	20.0
Cyclohexanone	Ave	0.0611	0.0232		0.0380	0.100	-62.0*	20.0
Pentachloroethane	Ave	0.2226	0.2620		0.0235	0.0200	17.7	20.0
1,2,3-Trimethylbenzene	Ave	2.840	2.132		0.00751	0.0100	-24.9*	20.0
Benzyl chloride	Ave	0.3672	0.3417		0.00931	0.0100	-6.9	20.0
1,3,5-Trichlorobenzene	Ave	1.067	0.9107		0.00854	0.0100	-14.6	20.0
2-Methylnaphthalene	Ave	2.160	0.6228		0.00577	0.0200	-71.2*	20.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Sample No.: STD8260 240-348191/4 Date Analyzed: 10/02/2018 16:17

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXX5941.D Heated Purge: (Y/N) N

Calibration ID: 47199

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		789818	5.57	636861	8.25	356275	10.49
UPPER LIMIT		1579636	6.07	1273722	8.75	712550	10.99
LOWER LIMIT		394909	5.07	318431	7.75	178138	9.99
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-348191/9		756139	5.57	615440	8.25	331268	10.49
ICV 240-348191/17		812172	5.57	634991	8.25	333549	10.49
CCVIS 240-364651/2		637142	5.57	467571	8.25	243214	10.49

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Sample No.: CCVIS 240-364651/2 Date Analyzed: 01/18/2019 12:01

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXX9146.D Heated Purge: (Y/N) N

Calibration ID: 47201

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		637142	5.57	467571	8.25	243214	10.49
UPPER LIMIT		1274284	6.07	935142	8.75	486428	10.99
LOWER LIMIT		318571	5.07	233786	7.75	121607	9.99
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-364651/3		614456	5.56	463133	8.24	228521	10.49
LCS 240-364651/4		717618	5.57	515748	8.25	260603	10.49
MB 240-364651/6		679036	5.56	517797	8.25	254923	10.49
240-106686-1	TB-010819	671900	5.57	482881	8.25	262402	10.49

FB = Fluorobenzene
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
CBNZd5 = Chlorobenzene-d5
Area Limit = 50%-200% of internal standard area
DCBd4 = 1,4-Dichlorobenzene-d4
RT Limit = ± 0.5 minutes of internal standard RT
DCBd4 = 1,4-Dichlorobenzene-d4

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Sample No.: STD8260 240-339716/4 Date Analyzed: 08/07/2018 11:03

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ3442.D Heated Purge: (Y/N) N

Calibration ID: 46382

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1108911	4.66	694915	7.31	334003	9.52
UPPER LIMIT		2217822	5.16	1389830	7.81	668006	10.02
LOWER LIMIT		554456	4.16	347458	6.81	167002	9.02
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-339716/14		1156749	4.66	715134	7.31	341994	9.52
ICV 240-339716/15		1010902	4.66	619828	7.31	295366	9.52
CCVIS 240-364762/2		1024747	4.65	677209	7.30	366219	9.52

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Sample No.: CCVIS 240-364762/2 Date Analyzed: 01/21/2019 10:02

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ7822.D Heated Purge: (Y/N) N

Calibration ID: 46388

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1024747	4.65	677209	7.30	366219	9.52
UPPER LIMIT		2049494	5.15	1354418	7.80	732438	10.02
LOWER LIMIT		512374	4.15	338605	6.80	183110	9.02
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-364762/4		909627	4.66	626755	7.30	346262	9.52
CCV 240-364762/3		923948	4.65	596547	7.30	295096	9.52
MRL 240-364762/34		874043	4.65	592277	7.30	299439	9.52
MB 240-364762/6		800559	4.65	571884	7.30	292210	9.52
240-106686-1	TB-010819	808075	4.66	538263	7.30	269867	9.52
240-107003-B-12 MS		897913	4.65	628642	7.30	340245	9.52
240-107003-B-12 MSD		794302	4.66	552631	7.30	319215	9.52

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4
Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Instrument ID: A3UX11 Start Date: 08/07/2018 09:44

Analysis Batch Number: 339716 End Date: 08/07/2018 18:07

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-339716/1		08/07/2018 09:44	1	J80807A.D	DB-624 0.18(mm)
STD8260 240-339716/2 IC		08/07/2018 10:19	1	UXJ3440.D	DB-624 0.18(mm)
STD8260 240-339716/3 IC		08/07/2018 10:41	1	UXJ3441.D	DB-624 0.18(mm)
STD8260 240-339716/4 ICIS		08/07/2018 11:03	1	UXJ3442.D	DB-624 0.18(mm)
STD8260 240-339716/5 IC		08/07/2018 11:26	1	UXJ3443.D	DB-624 0.18(mm)
STD8260 240-339716/6 IC		08/07/2018 11:48	1	UXJ3444.D	DB-624 0.18(mm)
STD8260 240-339716/7 IC		08/07/2018 12:10	1	UXJ3445.D	DB-624 0.18(mm)
ICV 240-339716/14		08/07/2018 12:33	1	UXJ3446.D	DB-624 0.18(mm)
STD6 240-339716/8 IC		08/07/2018 12:55	1	UXJ3447.D	DB-624 0.18(mm)
STD5 240-339716/9 IC		08/07/2018 13:17	1	UXJ3448.D	DB-624 0.18(mm)
STD4 240-339716/10 IC		08/07/2018 13:39	1	UXJ3449.D	DB-624 0.18(mm)
STD3 240-339716/11 IC		08/07/2018 14:02	1	UXJ3450.D	DB-624 0.18(mm)
STD2 240-339716/12 IC		08/07/2018 14:24	1	UXJ3451.D	DB-624 0.18(mm)
STD1 240-339716/13 IC		08/07/2018 14:46	1	UXJ3452.D	DB-624 0.18(mm)
ICV 240-339716/15		08/07/2018 15:08	1	UXJ3453.D	DB-624 0.18(mm)
STD 240-339716/16 IC		08/07/2018 15:31	1		DB-624 0.18(mm)
STD 240-339716/17 IC		08/07/2018 15:53	1		DB-624 0.18(mm)
STD 240-339716/18 IC		08/07/2018 16:15	1		DB-624 0.18(mm)
STD 240-339716/19 IC		08/07/2018 16:37	1		DB-624 0.18(mm)
STD 240-339716/20 IC		08/07/2018 17:00	1		DB-624 0.18(mm)
STD 240-339716/21 IC		08/07/2018 17:22	1		DB-624 0.18(mm)
MRL 240-339716/22 MDLV		08/07/2018 17:45	1		DB-624 0.18(mm)
MRL 240-339716/23 MDLV		08/07/2018 18:07	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Instrument ID: A3UX10 Start Date: 10/02/2018 14:58

Analysis Batch Number: 348191 End Date: 10/02/2018 21:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-348191/1		10/02/2018 14:58	1	BFB1940.D	DB-624 0.18(mm)
STD8260 240-348191/2 IC		10/02/2018 15:27	1	UXX5939.D	DB-624 0.18(mm)
STD8260 240-348191/3 IC		10/02/2018 15:52	1	UXX5940.D	DB-624 0.18(mm)
STD8260 240-348191/4 ICIS		10/02/2018 16:17	1	UXX5941.D	DB-624 0.18(mm)
STD8260 240-348191/5 IC		10/02/2018 16:42	1	UXX5942.D	DB-624 0.18(mm)
STD8260 240-348191/6 IC		10/02/2018 17:06	1	UXX5943.D	DB-624 0.18(mm)
STD8260 240-348191/7 IC		10/02/2018 17:31	1	UXX5944.D	DB-624 0.18(mm)
STD8260 240-348191/8 IC		10/02/2018 17:56	1	UXX5945.D	DB-624 0.18(mm)
ICV 240-348191/9		10/02/2018 18:21	1	UXX5946.D	DB-624 0.18(mm)
STDA9 240-348191/10 IC		10/02/2018 18:46	1	UXX5947.D	DB-624 0.18(mm)
STDA9 240-348191/11 IC		10/02/2018 19:11	1	UXX5948.D	DB-624 0.18(mm)
STDA9 240-348191/12 IC		10/02/2018 19:36	1	UXX5949.D	DB-624 0.18(mm)
STDA9 240-348191/13 IC		10/02/2018 20:01	1	UXX5950.D	DB-624 0.18(mm)
STDA9 240-348191/14 IC		10/02/2018 20:25	1	UXX5951.D	DB-624 0.18(mm)
STDA9 240-348191/15 IC		10/02/2018 20:50	1	UXX5952.D	DB-624 0.18(mm)
STDA9 240-348191/16 IC		10/02/2018 21:14	1	UXX5953.D	DB-624 0.18(mm)
ICV 240-348191/17		10/02/2018 21:39	1	UXX5954.D	DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Instrument ID: A3UX10 Start Date: 01/18/2019 11:33

Analysis Batch Number: 364651 End Date: 01/18/2019 15:20

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-364651/1		01/18/2019 11:33	1	BFB2123.D	DB-624 0.18(mm)
CCVIS 240-364651/2		01/18/2019 12:01	1	UXX9146.D	DB-624 0.18(mm)
CCV 240-364651/3		01/18/2019 12:26	1	UXX9147.D	DB-624 0.18(mm)
LCS 240-364651/4		01/18/2019 12:51	1	UXX9148.D	DB-624 0.18(mm)
MB 240-364651/6		01/18/2019 13:40	1	UXX9150.D	DB-624 0.18(mm)
240-106686-1		01/18/2019 15:20	1	UXX9154.D	DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Instrument ID: A3UX11 Start Date: 01/21/2019 09:28

Analysis Batch Number: 364762 End Date: 01/21/2019 20:42

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-364762/1		01/21/2019 09:28	1	BFB121.D	DB-624 0.18(mm)
CCVIS 240-364762/2		01/21/2019 10:02	1	UXJ7822.D	DB-624 0.18(mm)
LCS 240-364762/4		01/21/2019 10:24	1	UXJ7823.D	DB-624 0.18(mm)
CCV 240-364762/3		01/21/2019 10:47	1	UXJ7824.D	DB-624 0.18(mm)
MRL 240-364762/5 MDLV		01/21/2019 11:09	1		DB-624 0.18(mm)
MRL 240-364762/34		01/21/2019 11:31	1	UXJ7826.D	DB-624 0.18(mm)
MB 240-364762/6		01/21/2019 11:53	1	UXJ7827.D	DB-624 0.18(mm)
ZZZZZ		01/21/2019 12:37	12.5		DB-624 0.18(mm)
ZZZZZ		01/21/2019 12:59	500		DB-624 0.18(mm)
ZZZZZ		01/21/2019 13:20	10		DB-624 0.18(mm)
ZZZZZ		01/21/2019 13:42	5		DB-624 0.18(mm)
240-106686-1		01/21/2019 14:05	1	UXJ7833.D	DB-624 0.18(mm)
ZZZZZ		01/21/2019 14:27	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 14:49	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 15:11	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 15:33	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 15:55	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 16:17	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 16:39	142.86		DB-624 0.18(mm)
ZZZZZ		01/21/2019 17:01	142.86		DB-624 0.18(mm)
ZZZZZ		01/21/2019 17:23	142.86		DB-624 0.18(mm)
ZZZZZ		01/21/2019 19:13	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 19:35	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 19:57	142.86		DB-624 0.18(mm)
240-107003-B-12 MS		01/21/2019 20:20	142.86	UXJ7850.D	DB-624 0.18(mm)
240-107003-B-12 MSD		01/21/2019 20:42	142.86	UXJ7851.D	DB-624 0.18(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 339716 Batch Start Date: 08/07/18 09:44 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	vm50is_stk_A 00001	vm50ss_stk 00077	vm50ss_stk 00078	VMAROLISTDW 00258
BFB 240-339716/1		8260C		5 mL	5 mL				
STD8260 240-339716/2 IC		8260C		5 mL	5 mL	2 uL	32 uL		32 uL
STD8260 240-339716/3 IC		8260C		5 mL	5 mL	2 uL	16 uL		16 uL
STD8260 240-339716/4 ICIS		8260C		5 mL	5 mL	2 uL	8 uL		8 uL
STD8260 240-339716/5 IC		8260C		5 mL	5 mL	2 uL	4 uL		4 uL
STD8260 240-339716/6 IC		8260C		5 mL	5 mL	2 uL	1.6 uL		1.6 uL
STD8260 240-339716/7 IC		8260C		5 mL	5 mL	2 uL	0.8 uL		0.8 uL
STD6 240-339716/8 IC		8260C		5 mL	5 mL	2 uL			
STD5 240-339716/9 IC		8260C		5 mL	5 mL	2 uL			
STD4 240-339716/10 IC		8260C		5 mL	5 mL	2 uL			
STD3 240-339716/11 IC		8260C		5 mL	5 mL	2 uL			
STD2 240-339716/12 IC		8260C		5 mL	5 mL	2 uL			
STD1 240-339716/13 IC		8260C		5 mL	5 mL	2 uL			
ICV 240-339716/14		8260C		5 mL	5 mL	2 uL		2 uL	
ICV 240-339716/15		8260C		5 mL	5 mL	2 uL		2 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00020	VMFASA9W 00196	VMFASAW 00243	VMFASGW 00269	VMFASPW 00261	VMRA9W 00260
BFB 240-339716/1		8260C		1 uL					
STD8260 240-339716/2 IC		8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 339716 Batch Start Date: 08/07/18 09:44 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00020	VMFASA9W 00196	VMFASAW 00243	VMFASGW 00269	VMFASPW 00261	VMRA9W 00260
STD8260 240-339716/3 IC		8260C							
STD8260 240-339716/4 ICIS		8260C							
STD8260 240-339716/5 IC		8260C							
STD8260 240-339716/6 IC		8260C							
STD8260 240-339716/7 IC		8260C							
STD6 240-339716/8 IC		8260C							32 uL
STD5 240-339716/9 IC		8260C							16 uL
STD4 240-339716/10 IC		8260C							8 uL
STD3 240-339716/11 IC		8260C							4 uL
STD2 240-339716/12 IC		8260C							1.6 uL
STD1 240-339716/13 IC		8260C							0.8 uL
ICV 240-339716/14		8260C				8 uL	8 uL	8 uL	
ICV 240-339716/15		8260C			8 uL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRGAS 00256	VMRPRIMW 00295				
BFB 240-339716/1		8260C							
STD8260 240-339716/2 IC		8260C		32 uL	32 uL				
STD8260 240-339716/3 IC		8260C		16 uL	16 uL				
STD8260 240-339716/4 ICIS		8260C		8 uL	8 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 339716 Batch Start Date: 08/07/18 09:44 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRGAS 00256	VMRPRIMW 00295				
STD8260 240-339716/5 IC		8260C		4 uL	4 uL				
STD8260 240-339716/6 IC		8260C		1.6 uL	1.6 uL				
STD8260 240-339716/7 IC		8260C		0.8 uL	0.8 uL				
STD6 240-339716/8 IC		8260C							
STD5 240-339716/9 IC		8260C							
STD4 240-339716/10 IC		8260C							
STD3 240-339716/11 IC		8260C							
STD2 240-339716/12 IC		8260C							
STD1 240-339716/13 IC		8260C							
ICV 240-339716/14		8260C							
ICV 240-339716/15		8260C							

Batch Notes	
pH Indicator ID	HC746949

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 348191 Batch Start Date: 10/02/18 14:58 Batch Analyst: Williams, Larry

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM50IS 00071	vm50ss 00337	VMAROLISTDW 00267	vmbfb 00020
BFB 240-348191/1		8260C		5 mL	5 mL				1 uL
STD8260 240-348191/2 IC		8260C		5 mL	5 mL	1 uL	32 uL	32 uL	
STD8260 240-348191/3 IC		8260C		5 mL	5 mL	1 uL	16 uL	16 uL	
STD8260 240-348191/4 ICIS		8260C		5 mL	5 mL	1 uL	8 uL	8 uL	
STD8260 240-348191/5 IC		8260C		5 mL	5 mL	1 uL	4 uL	4 uL	
STD8260 240-348191/6 IC		8260C		5 mL	5 mL	1 uL	3.2 uL	3.2 uL	
STD8260 240-348191/7 IC		8260C		5 mL	5 mL	1 uL	1.6 uL	1.6 uL	
STD8260 240-348191/8 IC		8260C		5 mL	5 mL	1 uL	0.8 uL	0.8 uL	
ICV 240-348191/9		8260C		5 mL	5 mL	1 uL	8 uL		
STDA9 240-348191/10 IC		8260C		5 mL	5 mL	1 uL			
STDA9 240-348191/11 IC		8260C		5 mL	5 mL	1 uL			
STDA9 240-348191/12 IC		8260C		5 mL	5 mL	1 uL			
STDA9 240-348191/13 IC		8260C		5 mL	5 mL	1 uL			
STDA9 240-348191/14 IC		8260C		5 mL	5 mL	1 uL			
STDA9 240-348191/15 IC		8260C		5 mL	5 mL	1 uL			
STDA9 240-348191/16 IC		8260C		5 mL	5 mL	1 uL			
ICV 240-348191/17		8260C		5 mL	5 mL	1 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 348191 Batch Start Date: 10/02/18 14:58 Batch Analyst: Williams, Larry

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00203	VMFASAW 00250	VMFASGW 00276	VMFASPW 00269	VMRA9W 00267	VMRGAS 00263
BFB 240-348191/1		8260C							
STD8260 240-348191/2 IC		8260C							32 uL
STD8260 240-348191/3 IC		8260C							16 uL
STD8260 240-348191/4 ICIS		8260C							8 uL
STD8260 240-348191/5 IC		8260C							4 uL
STD8260 240-348191/6 IC		8260C							3.2 uL
STD8260 240-348191/7 IC		8260C							1.6 uL
STD8260 240-348191/8 IC		8260C							0.8 uL
ICV 240-348191/9		8260C			8 uL	8 uL	8 uL		
STDA9 240-348191/10 IC		8260C						32 uL	
STDA9 240-348191/11 IC		8260C						16 uL	
STDA9 240-348191/12 IC		8260C						8 uL	
STDA9 240-348191/13 IC		8260C						4 uL	
STDA9 240-348191/14 IC		8260C						3.2 uL	
STDA9 240-348191/15 IC		8260C						1.6 uL	
STDA9 240-348191/16 IC		8260C						0.8 uL	
ICV 240-348191/17		8260C		8 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 348191 Batch Start Date: 10/02/18 14:58 Batch Analyst: Williams, Larry

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00303					
BFB 240-348191/1		8260C							
STD8260 240-348191/2 IC		8260C		32 uL					
STD8260 240-348191/3 IC		8260C		16 uL					
STD8260 240-348191/4 ICIS		8260C		8 uL					
STD8260 240-348191/5 IC		8260C		4 uL					
STD8260 240-348191/6 IC		8260C		3.2 uL					
STD8260 240-348191/7 IC		8260C		1.6 uL					
STD8260 240-348191/8 IC		8260C		0.8 uL					
ICV 240-348191/9		8260C							
STDA9 240-348191/10 IC		8260C							
STDA9 240-348191/11 IC		8260C							
STDA9 240-348191/12 IC		8260C							
STDA9 240-348191/13 IC		8260C							
STDA9 240-348191/14 IC		8260C							
STDA9 240-348191/15 IC		8260C							
STDA9 240-348191/16 IC		8260C							
ICV 240-348191/17		8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 348191 Batch Start Date: 10/02/18 14:58 Batch Analyst: Williams, Larry

Batch Method: 8260C Batch End Date:

Batch Notes	
pH Indicator ID	HC746949

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 364651 Batch Start Date: 01/18/19 11:33 Batch Analyst: Williams, Larry

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00074	vm50ss_stk 00079	VMAROLISTDW 00281
BFB 240-364651/1		8260C		5 mL	5 mL				
CCVIS 240-364651/2		8260C		5 mL	5 mL		1 uL	1 uL	8 uL
CCV 240-364651/3		8260C		5 mL	5 mL		1 uL		
LCS 240-364651/4		8260C		5 mL	5 mL		1 uL	1 uL	
MB 240-364651/6		8260C		5 mL	5 mL		1 uL	1 uL	
240-106686-B-1	TB-010819	8260C	T	5 mL	5 mL	<2 SU	1 uL	1 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMBFB 00021	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00281	VMRGAS 00278
BFB 240-364651/1		8260C		1 uL					
CCVIS 240-364651/2		8260C							8 uL
CCV 240-364651/3		8260C						8 uL	
LCS 240-364651/4		8260C			8 uL	8 uL	8 uL		
MB 240-364651/6		8260C							
240-106686-B-1	TB-010819	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
BFB 240-364651/1		8260C							
CCVIS 240-364651/2		8260C		8 uL					
CCV 240-364651/3		8260C							
LCS 240-364651/4		8260C							
MB 240-364651/6		8260C							
240-106686-B-1	TB-010819	8260C	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 364651 Batch Start Date: 01/18/19 11:33 Batch Analyst: Williams, Larry

Batch Method: 8260C Batch End Date:

Batch Notes	
pH Indicator ID	hc861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 364762 Batch Start Date: 01/21/19 09:28 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00073	vm50ss_stk 00079	VMAROLISTDW 00281
BFB 240-364762/1		8260C		5 mL	5 mL				
CCVIS 240-364762/2		8260C		5 mL	5 mL		2 uL	2 uL	8 uL
CCV 240-364762/3		8260C		5 mL	5 mL		2 uL		
LCS 240-364762/4		8260C		5 mL	5 mL		2 uL	2 uL	
MB 240-364762/6		8260C		5 mL	5 mL		2 uL	2 uL	
MRL 240-364762/34		8260C		5 mL	5 mL		2 uL	2 uL	
240-106686-A-1	TB-010819	8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	
240-107003-B-12 MS		8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	
240-107003-B-12 MSD		8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
BFB 240-364762/1		8260C		1 uL					
CCVIS 240-364762/2		8260C							8 uL
CCV 240-364762/3		8260C						8 uL	
LCS 240-364762/4		8260C			8 uL	8 uL	8 uL		
MB 240-364762/6		8260C							
MRL 240-364762/34		8260C						0.8 uL	
240-106686-A-1	TB-010819	8260C	T						
240-107003-B-12 MS		8260C	T		8 uL	8 uL	8 uL		
240-107003-B-12 MSD		8260C	T		8 uL	8 uL	8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
BFB 240-364762/1		8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 364762 Batch Start Date: 01/21/19 09:28 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
CCVIS 240-364762/2		8260C		8 uL					
CCV 240-364762/3		8260C							
LCS 240-364762/4		8260C							
MB 240-364762/6		8260C							
MRL 240-364762/34		8260C							
240-106686-A-1	TB-010819	8260C	T						
240-107003-B-12 MS		8260C	T						
240-107003-B-12 MSD		8260C	T						

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

VOC Calibration Calculations:

Initial Calibration 11/30/2018
Instrument A3UX8

Carbon disulfide

Analyte Concentration	Analyte Response	Internal Standard Response	Internal Standard Amount	RRF	Reported RRF
1	9772	781170	50	0.62547	0.6255
2	18848	772034	50	0.61034	0.6103
5	67608	756044	50	0.89423	0.8942
10	129123	874740	50	0.73807	0.7381
20	244291	790737	50	0.77235	0.7724
50	651749	768605	50	0.84796	0.848
100	1395081	805018	50	0.86649	0.8665
200	2724689	866098	50	0.78648	0.7865
250	3492065	812894	50	0.85917	0.8592
			Average	0.77784	0.7778
			Standard Deviation	0.1036	
			RSD	0.1332	
			%RSD	13.32163	13.3

Continuing Calibration 01/10/2019 @3:44
Instrument A3UX8

Carbon disulfide

Analyte Concentration	Analyte Response	Internal Standard Response	Internal Standard Amount	RRF	%D	Reported RRF	Reported %D
20	230558	706804	50	0.8155	4.8463383	0.8155	4.8

Sample Calculation
Sample Identification SB-MW158-11-12 MS
Compound Carbon disulfide 26 ug/kg

Compound Area	217460		Percent Solids	0.848
Internal Standard Amount (ng)	50		Volume Purged (ml)	5
Dilution Factor	1		Injection Volume (µl)	1
Internal Standard Area	625014		Sample Weight (g)	5.07
Average RRF	0.77784			
Concentration	26.01	ug/L		

Surrogate Dibromofluoromethane

Compound Area	144288			
Internal Standard Amount (ng)	50			
Dilution Factor	1		Volume Extract (ml)	1
Internal Standard Area	625014		Injection Volume (µl)	1
Average RRF	0.2492			
Concentration	46.319348			
Surrogate %R	92.64	Spike amount	50	

LCS %R 680-520101/4

Carbon disulfide	Spike amount	LCS concentration
82.80	25	20.70

MS/MSD
Sample ID SB-MW158-11-12 (no detected results)

MS Concentration	26.00	ug/kg
Sample Concentration	0	ug/kg
MS Spike added	29.1	ug/kg
MS %Rec	89.35	%
MSD Concentration	25.60	ug/kg
MSD Spike added	29	ug/kg
MSD %Rec	88.28	%
MS/MSD RPD	1.55	

Tune
11/30/2018 @ 3:22 A3UX8

Raw Abundance m/z 95	Raw Abundance m/z 50	% Abundance
175936	54936	31.22

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190110-83575.b\UX82210.D
Lims ID: 240-106686-B-10-F MS
Client ID:
Sample Type: MS
Inject. Date: 10-Jan-2019 13:28:30 ALS Bottle#: 29 Worklist Smp#: 31
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083575-031
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190110-83575.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 10-Jan-2019 14:50:38 Calib Date: 30-Nov-2018 10:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: macenczaks Date: 10-Jan-2019 14:29:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.157	5.157	0.000	98	625014	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.690	7.689	0.001	97	431814	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.879	9.878	0.001	96	241127	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.637	4.636	0.001	93	144288	50.0	46.3	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.897	4.896	0.001	99	192158	50.0	46.1	
$ 6 Toluene-d8 (Surr)	98	6.435	6.435	0.000	95	549469	50.0	44.8	
$ 7 4-Bromofluorobenzene (Surr	95	8.766	8.766	0.000	85	205686	50.0	43.6	
9 Dichlorodifluoromethane	85	1.596	1.595	0.001	98	92082	25.0	21.3	
10 Chloromethane	50	1.773	1.773	0.000	100	122382	25.0	20.4	
11 Vinyl chloride	62	1.891	1.891	0.000	100	89836	25.0	22.1	
13 Bromomethane	94	2.187	2.187	0.000	94	48504	25.0	21.3	
14 Chloroethane	64	2.282	2.281	0.001	95	55390	25.0	21.5	
16 Trichlorofluoromethane	101	2.507	2.506	0.001	100	124387	25.0	23.4	
19 1,1-Dichloroethene	96	2.933	2.932	0.001	96	78776	25.0	23.5	
20 1,1,2-Trichloro-1,2,2-trif	151	2.945	2.944	0.001	96	62399	25.0	22.6	
21 Acetone	43	2.968	2.968	0.000	97	64084	50.0	56.7	
24 Carbon disulfide	76	3.122	3.121	0.001	98	217460	25.0	22.4	
28 Methylene Chloride	84	3.311	3.311	0.000	94	93615	25.0	24.3	
29 2-Methyl-2-propanol	59	3.394	3.394	0.000	86	46224	250.0	233.6	
31 trans-1,2-Dichloroethene	96	3.524	3.524	0.000	92	93738	25.0	24.4	
32 Methyl tert-butyl ether	73	3.524	3.524	0.000	93	169335	25.0	22.9	
34 1,1-Dichloroethane	63	3.844	3.843	0.001	98	169206	25.0	22.8	
35 Vinyl acetate	43	3.868	3.867	0.001	97	114848	25.0	19.5	
36 Isopropyl ether	87		3.891					ND	
38 Tert-butyl ethyl ether	59		4.164					ND	
40 2-Butanone (MEK)	43	4.282	4.281	0.001	54	78356	50.0	53.0	
39 cis-1,2-Dichloroethene	96	4.282	4.281	0.001	89	95434	25.0	23.8	
41 2,2-Dichloropropane	77	4.293	4.293	0.000	72	72601	25.0	16.0	
45 Chlorobromomethane	128	4.459	4.459	0.000	90	39439	25.0	25.8	
47 Chloroform	83	4.518	4.506	0.012	99	156527	25.0	23.8	
48 1,1,1-Trichloroethane	97	4.672	4.672	0.000	95	128927	25.0	22.9	
50 1,1-Dichloropropene	75	4.790	4.790	0.000	85	113028	25.0	22.4	

TestAmerica Canton
Recovery Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190110-83575.b\UX82210.D
Lims ID: 240-106686-B-10-F MS
Client ID:
Sample Type: MS
Inject. Date: 10-Jan-2019 13:28:30 ALS Bottle#: 29 Worklist Smp#: 31
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083575-031
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190110-83575.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 10-Jan-2019 14:50:38 Calib Date: 30-Nov-2018 10:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: macenczaks Date: 10-Jan-2019 14:29:32

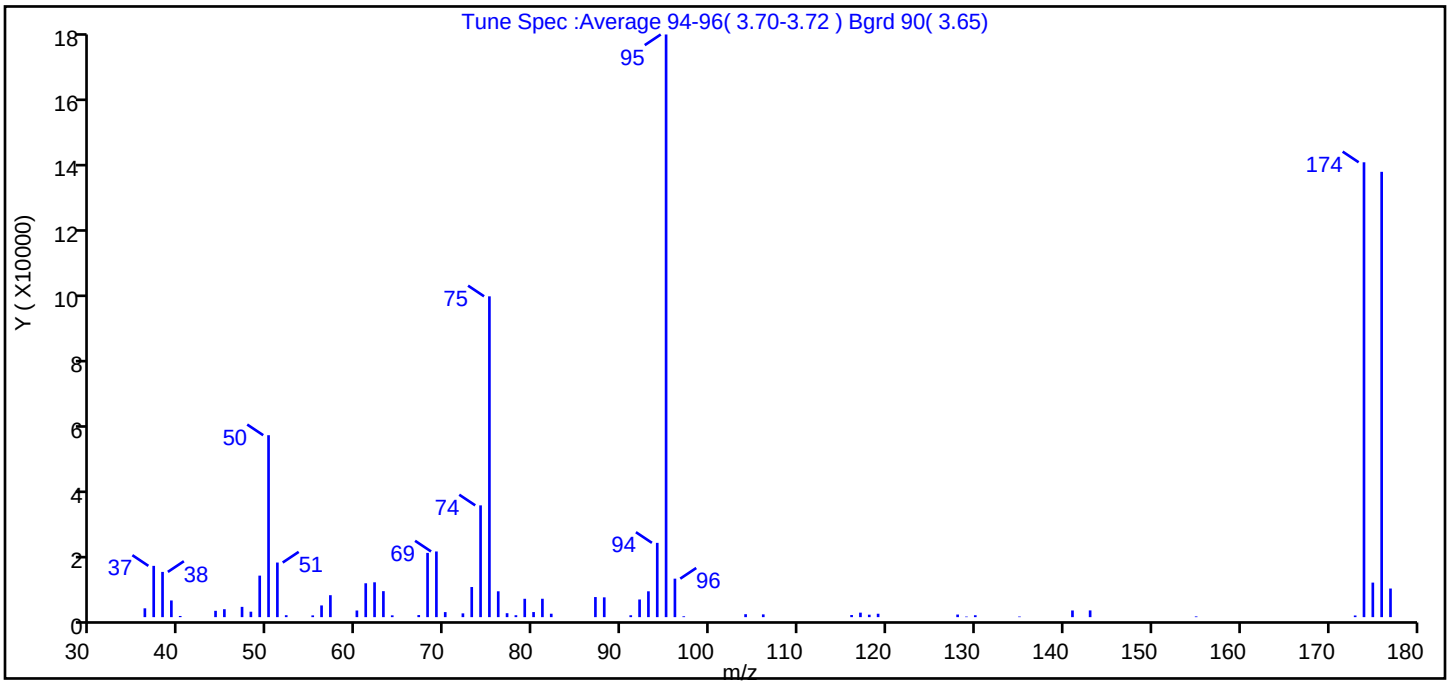
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	46.3	92.66
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	46.1	92.23
$ 6 Toluene-d8 (Surr)	50.0	44.8	89.62
$ 7 4-Bromofluorobenzene (Surr)	50.0	43.6	87.24

MS Tune Report

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\BFB8814.D
Injection Date: 30-Nov-2018 03:22:30 Instrument ID: A3UX8
Lims ID: BFB
Client ID:
Operator ID: 402279 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	31.2
75	30 to 60% of m/z 95	55.1
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.3 (0.4)
174	50 to 120% of m/z 95	78.1
175	5 to 9% of m/z 174	5.9 (7.6)
176	Greater than 95% but less than 101% of m/z 174	76.4 (97.9)
177	5 to 9% of m/z 176	4.9 (6.4)

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\BFB8814.D\8260_8.rslt\spectra.d
Injection Date: 30-Nov-2018 03:22:30
Spectrum: Tune Spec :Average 94-96(3.70-3.72) Bgrd 90(3.65)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 63

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2666	60.00	2006	79.00	5546	117.00	1355
37.00	15484	61.00	10227	80.00	1537	118.00	739
38.00	13662	62.00	10522	81.00	5555	119.00	1030
39.00	5040	63.00	7848	82.00	1037	128.00	784
40.00	353	64.00	544	87.00	6064	129.00	173
44.00	1911	67.00	626	88.00	5981	130.00	570
45.00	2395	68.00	19400	91.00	566	135.00	184
47.00	3103	69.00	19832	92.00	5333	141.00	2016
48.00	1645	70.00	1523	93.00	7803	143.00	2032
49.00	12538	72.00	1142	94.00	22432	155.00	219
50.00	54936	73.00	9093	95.00	175936	173.00	498
51.00	16488	74.00	33752	96.00	11620	174.00	137344
52.00	583	75.00	96872	97.00	254	175.00	10429
55.00	530	76.00	7806	104.00	890	176.00	134464
56.00	3537	77.00	1191	106.00	835	177.00	8642
57.00	6629	78.00	581	116.00	637		

TETRA TECH INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **APRIL 19, 2019**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION – VOC / PCBH / METALS / MISCELLANEOUS PARAMETERS**
MRC BLOCK E/F MASS DISCHARGE – FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) 240-107706-1

SAMPLES: 4 / Water /

MRC-MW155A-020519	MRC-MW157A-020519
MRC-MW159A-020519	TB-020519

OVERVIEW

The sample set for MRC Block E/F Mass Discharge, SDG 240-107706-1, consists of three (3) water environmental samples and one (1) trip blank. Samples were analyzed for volatile organic compounds (VOC), polychlorinated biphenyl homologs (PCBH), metals, and miscellaneous parameters (alkalinity, bromide, hardness as CaCO3, nitrite/nitrate-N, salinity, sulfate, and total dissolved solids (TDS). No field duplicate pairs are included in this SDG.

The samples were collected by Tetra Tech on February 5, 2019 and analyzed by Test America. Analyses were conducted in accordance with EPA SW-846 Methods 8260C (VOC), 6010C/6020A (metals), and 9056A (anions) as well as EPA Method 680 (PCBH), MCAWW Method 300.0 (bromide), and Standard Methods 2320B-2011 (alkalinity), 2340C-2011 (hardness), 4500 NO3 F (nitrite/nitrate-N), 2520B (salinity), and 2540C-2011 (TDS) analytical and reporting protocols. Iron and manganese were analyzed by both Methods 6010C and 6020A - remaining metals were analyzed by Method 6020A only.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, initial/continuing calibrations, laboratory method blank results, laboratory control sample/laboratory control sample results, matrix spike/matrix spike duplicate results, surrogate spike recoveries, laboratory control sample results, interference check sample results, compound identification, analyte quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

MAJOR PROBLEMS

- The laboratory case narrative report states that 2-chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample, and all VOC samples were preserved in hydrochloric acid. Non-detected results for 2-chloroethyl vinyl ether were rejected (UR) in all samples.

MINOR PROBLEMS

- The VOC continuing calibration verification (CCV) performed on 02/08/19 at 12:55 on instrument A3UX15 had percent differences (%Ds) that were greater than the 20% quality control limit for vinyl acetate, 2-chloroethyl vinyl ether, 4-methyl-2-pentanone, trans-1,3-dichloropropene, 2-hexanone, bromoform, 1,1,2,2-tetratechloroethane, 1,2-dibromo-3-chloropropane, and naphthalene. All samples were affected. Non-detected results for the aforementioned analytes were qualified as estimated (UJ).

- The VOC CCV performed on 02/08/19 at 13:39 on instrument A3UX15 had a %D for tert-amyl methyl ether that was greater than the 20% quality control limit. All samples were affected. Non-detected results for tert-amyl methyl ether were qualified as estimated (UJ).

- The PCBH CCV performed on 02/21/19 at 16:43 on instrument CMSX had a %D that was greater than the 20% quality control limit for decachlorobiphenyl (PCB-209). Sample MRC-MW159A-090519 was affected. The non-detected results for decachlorobiphenyl and nonachlorobiphenyls were qualified as estimated (UJ) in the affected sample.

- Detected results reported below the reporting limit (RL) but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Non-detected results were reported to the MDL.

VOC results in sample MRC-MW157A-020519 were analyzed at a dilution factor of 125.

The following metal was detected in the method blanks at the following maximum concentration:

Analyte	Maximum Concentration	< or > RL
Manganese	3.66 ug/L(1)	< RL

1 - Detected in method blank associated with preparation batch 240-367176 and the 6020A analysis affecting all samples.

No qualification was necessary because all associated manganese results were greater than the RL.

Nitrate/nitrite as N was detected in the calibration blanks the following maximum concentration:

Analyte	Maximum Concentration	< or > RL
Nitrate/nitrite-N	0.0463 mg/L(1)	< RL

1 - Detected in calibration blank analyzed on 02/17/19 at 13:13 affecting all samples.

No qualification was necessary because all associated nitrate/nitrite-N results were greater than the RL.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Some non-detected VOC and PCBH results were qualified due to calibration noncompliance.

Other Factors Affecting Data Quality: Detected results reported below the RL but above the MDL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA “National Functional Guidelines for Organic Superfund Methods Data Review” (January 2017) and the “National Functional Guidelines for Inorganic Superfund Methods Data Review” (January 2017). The text of this report has been formulated to address only those problem areas affecting data quality.

Leigh A. Ciofani

Tetra Tech
Leigh Ciofani
Environmental Scientist/Data Validator

Joseph A. Samchuck

Tetra Tech
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08784	NSAMPLE	MRC-MW155A-020519			MRC-MW157A-020519			MRC-MW159A-020519			TB-020519		
SDG: 240-107706-1	LAB_ID	240-107706-2			240-107706-4			240-107706-3			240-107706-1		
FRACTION: OV	SAMP_DATE	2/5/2019			2/5/2019			2/5/2019			2/5/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U		18	U		0.14	U		0.14	U	
1,1,1-TRICHLOROETHANE		0.24	U		30	U		0.24	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	UJ	C	16	UJ	C	0.13	UJ	C	0.13	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U		51	U		0.41	U		0.41	U	
1,1-DICHLOROETHANE		0.17	U		21	U		0.17	U		0.17	U	
1,1-DICHLOROETHENE		0.19	U		24	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.14	U		18	U		0.14	U		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	U		68	U		0.54	U		0.54	U	
1,2,3-TRICHLOROPROPANE		0.24	U		30	U		0.24	U		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	U		18	U		0.14	U		0.14	U	
1,2,4-TRICHLOROBENZENE		0.26	U		33	U		0.26	U		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U		8.8	U		0.07	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	UJ	C	110	UJ	C	0.91	UJ	C	0.91	UJ	C
1,2-DIBROMOETHANE		0.12	U		15	U		0.12	U		0.12	U	
1,2-DICHLOROBENZENE		0.15	U		19	U		0.15	U		0.15	U	
1,2-DICHLOROETHANE		0.21	U		26	U		0.21	U		0.21	U	
1,2-DICHLOROPROPANE		0.15	U		19	U		0.15	U		0.15	U	
1,3-DICHLOROBENZENE		0.15	U		19	U		0.15	U		0.15	U	
1,3-DICHLOROPROPANE		0.21	U		26	U		0.21	U		0.21	U	
1,4-DICHLOROBENZENE		0.16	U		20	U		0.16	U		0.16	U	
2,2-DICHLOROPROPANE		0.31	U		57	J	P	0.31	U		0.31	U	
2-BUTANONE		1.2	U		150	U		1.2	U		1.2	U	
2-CHLOROETHYL VINYL ETHER		0.26	UR	M	33	UR	M	0.26	UR	M	0.26	UR	M
2-CHLOROTOLUENE		0.15	U		19	U		0.15	U		0.15	U	
2-HEXANONE		0.54	UJ	C	68	UJ	C	0.54	UJ	C	0.54	UJ	C
4-CHLOROTOLUENE		0.09	U		11	U		0.09	U		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U		16	U		0.13	U		0.13	U	
4-METHYL-2-PENTANONE		0.42	UJ	C	53	UJ	C	0.42	UJ	C	0.42	UJ	C
ACETONE		5.4	U		680	U		5.4	U		5.4	U	
BENZENE		0.13	U		16	U		0.13	U		0.13	U	
BROMOBENZENE		0.12	U		15	U		0.12	U		0.12	U	
BROMOCHLOROMETHANE		0.14	U		18	U		0.14	U		0.14	U	
BROMODICHLOROMETHANE		0.17	U		21	U		0.17	U		0.17	U	
BROMOFORM		0.76	UJ	C	95	UJ	C	0.76	UJ	C	0.76	UJ	C
BROMOMETHANE		0.42	U		53	U		0.42	U		0.42	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW155A-020519			MRC-MW157A-020519			MRC-MW159A-020519			TB-020519		
SDG: 240-107706-1	LAB_ID	240-107706-2			240-107706-4			240-107706-3			240-107706-1		
FRACTION: OV	SAMP_DATE	2/5/2019			2/5/2019			2/5/2019			2/5/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.28	U		35	U		0.28	U		0.28	U	
CARBON TETRACHLORIDE		0.26	U		33	U		0.26	U		0.26	U	
CHLOROBENZENE		0.14	U		18	U		0.14	U		0.14	U	
CHLORODIBROMOMETHANE		0.39	U		49	U		0.39	U		0.39	U	
CHLOROETHANE		0.83	U		100	U		0.83	U		0.83	U	
CHLOROFORM		0.13	U		16	U		0.13	U		0.13	U	
CHLOROMETHANE		0.2	U		25	U		0.2	U		0.2	U	
CIS-1,2-DICHLOROETHENE		0.16	U		330			0.16	U		0.16	U	
CIS-1,3-DICHLOROPROPENE		0.61	U		76	U		0.61	U		0.61	U	
DIBROMOMETHANE		0.09	U		11	U		0.09	U		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	U		44	U		0.35	U		0.35	U	
DIISOPROPYL ETHER		0.17	U		21	U		0.17	U		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	U		19	U		0.15	U		0.15	U	
ETHYLBENZENE		0.11	U		14	U		0.11	U		0.11	U	
HEXACHLOROBUTADIENE		0.83	U		100	U		0.83	U		0.83	U	
ISOPROPYLBENZENE		0.09	U		11	U		0.09	U		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U		8.8	U		0.07	U		0.07	U	
METHYLENE CHLORIDE		2.6	U		330	U		2.6	U		2.6	U	
NAPHTHALENE		0.32	UJ	C	40	UJ	C	0.32	UJ	C	0.32	UJ	C
N-BUTYLBENZENE		0.14	U		18	U		0.14	U		0.14	U	
N-PROPYLBENZENE		0.15	U		19	U		0.15	U		0.15	U	
SEC-BUTYLBENZENE		0.13	U		16	U		0.13	U		0.13	U	
STYRENE		0.1	U		13	U		0.1	U		0.1	U	
TERT-AMYL METHYL ETHER		0.11	UJ	C	14	UJ	C	0.11	UJ	C	0.11	UJ	C
TERT-BUTYLBENZENE		0.14	U		18	U		0.14	U		0.14	U	
TERTIARY-BUTYL ALCOHOL		1.7	U		210	U		1.7	U		1.7	U	
TETRACHLOROETHENE		0.15	U		19	U		0.15	U		0.15	U	
TOLUENE		0.14	U		18	U		0.14	U		0.14	U	
TOTAL XYLENES		0.15	U		19	U		0.15	U		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		24	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.67	UJ	C	84	UJ	C	0.67	UJ	C	0.67	UJ	C
TRICHLOROETHENE		0.15	J	P	2600			0.17	J	P	0.1	U	
TRICHLOROFLUOROMETHANE		0.45	U		56	U		0.45	U		0.45	U	
VINYL ACETATE		0.19	UJ	C	24	UJ	C	0.19	UJ	C	0.19	UJ	C
VINYL CHLORIDE		0.2	U		25	U		0.2	U		0.2	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW155A-020519			MRC-MW157A-020519			MRC-MW159A-020519		
SDG: 240-107706-1	LAB_ID	240-107706-2			240-107706-4			240-107706-3		
FRACTION: PCB	SAMP_DATE	2/5/2019			2/5/2019			2/5/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.069	U		0.09	U		0.069	UJ	C
DICHLOROBIPHENYLS		0.0054	U		0.0069	U		0.0053	U	
HEPTACHLOROBIPHENYLS		0.03	U		0.039	U		0.029	U	
HEXACHLOROBIPHENYLS		0.015	U		0.019	U		0.015	U	
MONOCHLOROBIPHENYLS		0.0056	U		0.0072	U		0.0055	U	
NONACHLOROBIPHENYLS		0.049	U		0.063	U		0.048	UJ	C
OCTACHLOROBIPHENYLS		0.038	U		0.049	U		0.037	U	
PENTACHLOROBIPHENYLS		0.014	U		0.018	U		0.014	U	
TETRACHLOROBIPHENYLS		0.013	U		0.017	U		0.013	U	
TRICHLOROBIPHENYLS		0.0064	U		0.0084	U		0.0064	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW155A-020519			MRC-MW155A-020519-RE			MRC-MW157A-020519			MRC-MW157A-020519-RE		
SDG: 240-107706-1	LAB_ID	240-107706-2			240-107706-2			240-107706-4			240-107706-4		
FRACTION: M	SAMP_DATE	2/5/2019			2/5/2019			2/5/2019			2/5/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		77						310					
ANTIMONY		0.57	U					0.57	U				
ARSENIC		0.75	U					0.75	U				
BARIUM		44						62					
BERYLLIUM		0.64	J	P				0.31	U				
CADMIUM		0.21	U					0.21	U				
CALCIUM		60000						32000					
CHROMIUM		1.4	J	P				1.3	J	P			
COBALT		0.49	J	P				5.1					
COPPER		35						13					
IRON		140	J	P	140			370			360		
LEAD		0.45	U					0.49	J	P			
MAGNESIUM		14000						5900					
MANGANESE		15			17			96			96		
NICKEL		2.2						9.4					
POTASSIUM		1600						21000					
SELENIUM		0.89	U					0.89	U				
SILVER		0.053	U					0.053	U				
SODIUM		100000						16000					
THALLIUM		0.2	U					0.2	U				
VANADIUM		0.82	U					2.1	J	P			
ZINC		24						29					

PROJ_NO: 08784	NSAMPLE	MRC-MW159A-020519			MRC-MW159A-020519-RE		
SDG: 240-107706-1	LAB_ID	240-107706-3			240-107706-3		
FRACTION: M	SAMP_DATE	2/5/2019			2/5/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		150					
ANTIMONY		1.8	J	P			
ARSENIC		0.75	U				
BARIUM		60					
BERYLLIUM		0.94	J	P			
CADMIUM		0.21	U				
CALCIUM		130000					
CHROMIUM		0.98	U				
COBALT		5.6					
COPPER		4.7					
IRON		430			380		
LEAD		0.45	U				
MAGNESIUM		32000					
MANGANESE		150			140		
NICKEL		2.5					
POTASSIUM		12000					
SELENIUM		0.89	U				
SILVER		0.053	U				
SODIUM		7900					
THALLIUM		0.2	U				
VANADIUM		1.1	J	P			
ZINC		15	U				

PROJ_NO: 08784	NSAMPLE	MRC-MW155A-020519						MRC-MW157A-020519					
SDG: 240-107706-1	LAB_ID	240-107706-2						240-107706-4					
FRACTION: MISC	SAMP_DATE	2/5/2019						2/5/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY	150						94					
BROMIDE	0.14	J	P				0.044	U				
HARDNESS AS CACO3	250						130					
NITRITE/NITRATE-N	0.4						0.35					
SALINITY				2	U					2	U	
SULFATE	34						68					
TOTAL DISSOLVED SOLIDS	550						240					

PROJ_NO: 08784	NSAMPLE	MRC-MW159A-020519					
SDG: 240-107706-1	LAB_ID	240-107706-3					
FRACTION: MISC	SAMP_DATE	2/5/2019					
MEDIA: WATER	QC_TYPE	NM					
	UNITS	MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		210					
BROMIDE		0.044	U				
HARDNESS AS CACO3		540					
NITRITE/NITRATE-N		0.23					
SALINITY					2	U	
SULFATE		190					
TOTAL DISSOLVED SOLIDS		660					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW155A-020519 | Lab Sample ID: 240-107706-2

Matrix: Water | Lab File ID: UXC8744.D

Analysis Method: 8260C | Date Collected: 02/05/2019 09:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW155A-020519 | Lab Sample ID: 240-107706-2

Matrix: Water | Lab File ID: UXC8744.D

Analysis Method: 8260C | Date Collected: 02/05/2019 09:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.15	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW155A-020519 Lab Sample ID: 240-107706-2

Matrix: Water Lab File ID: UXC8744.D

Analysis Method: 8260C Date Collected: 02/05/2019 09:00

Sample wt/vol: 5(mL) Date Analyzed: 02/08/2019 16:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367370 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	88		70-123
1868-53-7	Dibromofluoromethane (Surr)	87		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW157A-020519 | Lab Sample ID: 240-107706-4

Matrix: Water | Lab File ID: UXC8746.D

Analysis Method: 8260C | Date Collected: 02/05/2019 12:55

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:56

Soil Aliquot Vol: | Dilution Factor: 125

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	18	U	130	18
71-55-6	1,1,1-Trichloroethane	30	U	130	30
79-34-5	1,1,2,2-Tetrachloroethane	16	U	130	16
76-13-1	1,1,2-Trichlorotrifluoroethane	51	U	130	51
75-34-3	1,1-Dichloroethane	21	U	130	21
75-35-4	1,1-Dichloroethene	24	U	130	24
563-58-6	1,1-Dichloropropene	18	U	130	18
87-61-6	1,2,3-Trichlorobenzene	68	U	130	68
96-18-4	1,2,3-Trichloropropane	30	U	130	30
526-73-8	1,2,3-Trimethylbenzene	18	U	630	18
120-82-1	1,2,4-Trichlorobenzene	33	U	130	33
95-63-6	1,2,4-Trimethylbenzene	8.8	U	130	8.8
96-12-8	1,2-Dibromo-3-Chloropropane	110	U	250	110
95-50-1	1,2-Dichlorobenzene	19	U	130	19
107-06-2	1,2-Dichloroethane	26	U	130	26
78-87-5	1,2-Dichloropropane	19	U	130	19
541-73-1	1,3-Dichlorobenzene	19	U	130	19
142-28-9	1,3-Dichloropropane	26	U	130	26
106-46-7	1,4-Dichlorobenzene	20	U	130	20
594-20-7	2,2-Dichloropropane	57	J	130	39
110-75-8	2-Chloroethyl vinyl ether	33	U	1300	33
95-49-8	2-Chlorotoluene	19	U	130	19
591-78-6	2-Hexanone	68	U	1300	68
108-86-1	Bromobenzene	15	U	130	15
74-97-5	Bromochloromethane	18	U	130	18
106-43-4	4-Chlorotoluene	11	U	130	11
99-87-6	4-Isopropyltoluene	16	U	130	16
67-64-1	Acetone	680	U	1300	680
71-43-2	Benzene	16	U	130	16
75-25-2	Bromoform	95	U	130	95
74-83-9	Bromomethane	53	U	130	53
75-15-0	Carbon disulfide	35	U	130	35
56-23-5	Carbon tetrachloride	33	U	130	33
108-90-7	Chlorobenzene	18	U	130	18
75-00-3	Chloroethane	100	U	130	100
67-66-3	Chloroform	16	U	130	16

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW157A-020519 | Lab Sample ID: 240-107706-4

Matrix: Water | Lab File ID: UXC8746.D

Analysis Method: 8260C | Date Collected: 02/05/2019 12:55

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:56

Soil Aliquot Vol: | Dilution Factor: 125

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	25	U	130	25
156-59-2	cis-1,2-Dichloroethene	330		130	20
10061-01-5	cis-1,3-Dichloropropene	76	U	130	76
87-68-3	Hexachlorobutadiene	100	U	130	100
74-95-3	Dibromomethane	11	U	130	11
75-27-4	Bromodichloromethane	21	U	130	21
75-71-8	Dichlorodifluoromethane	44	U	130	44
100-41-4	Ethylbenzene	14	U	130	14
106-93-4	1,2-Dibromoethane	15	U	130	15
108-20-3	Diisopropyl ether	21	U	1300	21
91-20-3	Naphthalene	40	U	130	40
104-51-8	n-Butylbenzene	18	U	130	18
98-82-8	Isopropylbenzene	11	U	130	11
103-65-1	N-Propylbenzene	19	U	130	19
78-93-3	2-Butanone (MEK)	150	U	1300	150
108-10-1	4-Methyl-2-pentanone (MIBK)	53	U	1300	53
135-98-8	sec-Butylbenzene	16	U	130	16
1634-04-4	Methyl tert-butyl ether	8.8	U	130	8.8
994-05-8	Tert-amyl methyl ether	14	U	630	14
75-09-2	Methylene Chloride	330	U	630	330
100-42-5	Styrene	13	U	130	13
637-92-3	Ethyl tert-butyl ether	19	U	630	19
98-06-6	tert-Butylbenzene	18	U	130	18
127-18-4	Tetrachloroethene	19	U	130	19
108-88-3	Toluene	18	U	130	18
156-60-5	trans-1,2-Dichloroethene	24	U	130	24
10061-02-6	trans-1,3-Dichloropropene	84	U	130	84
79-01-6	Trichloroethene	2600		130	13
75-69-4	Trichlorofluoromethane	56	U	130	56
108-05-4	Vinyl acetate	24	U	250	24
75-01-4	Vinyl chloride	25	U	130	25
75-65-0	tert-Butyl alcohol	210	U	6300	210
1330-20-7	Xylenes, Total	19	U	250	19
124-48-1	Chlorodibromomethane	49	U	130	49

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW157A-020519 | Lab Sample ID: 240-107706-4

Matrix: Water | Lab File ID: UXC8746.D

Analysis Method: 8260C | Date Collected: 02/05/2019 12:55

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:56

Soil Aliquot Vol: | Dilution Factor: 125

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-121
460-00-4	4-Bromofluorobenzene (Surr)	86		59-120
2037-26-5	Toluene-d8 (Surr)	92		70-123
1868-53-7	Dibromofluoromethane (Surr)	93		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW159A-020519 | Lab Sample ID: 240-107706-3

Matrix: Water | Lab File ID: UXC8745.D

Analysis Method: 8260C | Date Collected: 02/05/2019 10:14

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW159A-020519 | Lab Sample ID: 240-107706-3

Matrix: Water | Lab File ID: UXC8745.D

Analysis Method: 8260C | Date Collected: 02/05/2019 10:14

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.17	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW159A-020519 | Lab Sample ID: 240-107706-3

Matrix: Water | Lab File ID: UXC8745.D

Analysis Method: 8260C | Date Collected: 02/05/2019 10:14

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		70-121
460-00-4	4-Bromofluorobenzene (Surr)	80		59-120
2037-26-5	Toluene-d8 (Surr)	87		70-123
1868-53-7	Dibromofluoromethane (Surr)	86		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: TB-020519 | Lab Sample ID: 240-107706-1

Matrix: Water | Lab File ID: UXC8743.D

Analysis Method: 8260C | Date Collected: 02/05/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 15:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: TB-020519 | Lab Sample ID: 240-107706-1

Matrix: Water | Lab File ID: UXC8743.D

Analysis Method: 8260C | Date Collected: 02/05/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 15:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: TB-020519 | Lab Sample ID: 240-107706-1

Matrix: Water | Lab File ID: UXC8743.D

Analysis Method: 8260C | Date Collected: 02/05/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 15:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		70-121
460-00-4	4-Bromofluorobenzene (Surr)	84		59-120
2037-26-5	Toluene-d8 (Surr)	89		70-123
1868-53-7	Dibromofluoromethane (Surr)	89		75-128

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW155A-020519 | Lab Sample ID: 240-107706-2

Matrix: Water | Lab File ID: xb2513.D

Analysis Method: 680 | Date Collected: 02/05/2019 09:00

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1007.9(mL) | Date Analyzed: 02/25/2019 16:56

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559536 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.099	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.069	U	0.50	0.069
25512-42-9	Dichlorobiphenyl	0.0054	U	0.099	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0064	U	0.099	0.0064

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	35		25-113

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW157A-020519 | Lab Sample ID: 240-107706-4

Matrix: Water | Lab File ID: xb2709.D

Analysis Method: 680 | Date Collected: 02/05/2019 12:55

Extract. Method: 680 | Date Extracted: 02/26/2019 13:54

Sample wt/vol: 777.5(mL) | Date Analyzed: 02/27/2019 17:46

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559821 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.039	U	0.39	0.039
26601-64-9	Hexachlorobiphenyl	0.019	U	0.26	0.019
53742-07-7	Nonachlorobiphenyl	0.063	U	0.64	0.063
55722-26-4	Octachlorobiphenyl	0.049	U	0.39	0.049
27323-18-8	Monochlorobiphenyl	0.0072	U	0.13	0.0072
2051-24-3	DCB Decachlorobiphenyl	0.090	U	0.64	0.090
25512-42-9	Dichlorobiphenyl	0.0069	U	0.13	0.0069
25429-29-2	Pentachlorobiphenyl	0.018	U	0.26	0.018
26914-33-0	Tetrachlorobiphenyl	0.017	U	0.26	0.017
25323-68-6	Trichlorobiphenyl	0.0084	U	0.13	0.0084

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW159A-020519 | Lab Sample ID: 240-107706-3

Matrix: Water | Lab File ID: xb2041.D

Analysis Method: 680 | Date Collected: 02/05/2019 10:14

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1021.7(mL) | Date Analyzed: 02/21/2019 11:58

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.029	U	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.048	U	0.49	0.048
55722-26-4	Octachlorobiphenyl	0.037	U	0.29	0.037
27323-18-8	Monochlorobiphenyl	0.0055	U	0.098	0.0055
2051-24-3	DCB Decachlorobiphenyl	0.069	U	0.49	0.069
25512-42-9	Dichlorobiphenyl	0.0053	U	0.098	0.0053
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0064	U	0.098	0.0064

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	47		25-113

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW155A-020519 Lab Sample ID: 240-107706-2

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 09:00

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	140	200	26	ug/L	J		1	6010C
7439-96-5	Manganese	15	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	77	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	44	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.64	1.0	0.31	ug/L	J		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	0.49	1.0	0.19	ug/L	J		1	6020A
7440-47-3	Chromium	1.4	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	35	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	140	100	47	ug/L			1	6020A
7439-96-5	Manganese	17	5.0	2.1	ug/L		B	1	6020A
7440-02-0	Nickel	2.2	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	24	20	15	ug/L			1	6020A
7440-70-2	Calcium	60000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	1600	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	14000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	100000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW157A-020519 Lab Sample ID: 240-107706-4

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 12:55

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	370	200	26	ug/L			1	6010C
7439-96-5	Manganese	96	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	310	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	62	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.31	1.0	0.31	ug/L	U		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	5.1	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	1.3	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	13	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	360	100	47	ug/L			1	6020A
7439-96-5	Manganese	96	5.0	2.1	ug/L		B	1	6020A
7440-02-0	Nickel	9.4	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.49	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	2.1	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	29	20	15	ug/L			1	6020A
7440-70-2	Calcium	32000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	21000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	5900	1000	200	ug/L			1	6020A
7440-23-5	Sodium	16000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW159A-020519 Lab Sample ID: 240-107706-3

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 10:14

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	430	200	26	ug/L			1	6010C
7439-96-5	Manganese	150	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	150	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	60	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.94	1.0	0.31	ug/L	J		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	5.6	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	0.98	2.0	0.98	ug/L	U		1	6020A
7440-50-8	Copper	4.7	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	380	100	47	ug/L			1	6020A
7439-96-5	Manganese	140	5.0	2.1	ug/L		B	1	6020A
7440-02-0	Nickel	2.5	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	1.8	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	1.1	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	15	20	15	ug/L	U		1	6020A
7440-70-2	Calcium	130000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	12000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	32000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	7900	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW155A-020519 Lab Sample ID: 240-107706-2

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 09:00

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	250	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	150	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	550	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.14	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	34	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW155A-020519 Lab Sample ID: 240-107706-2

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 09:00

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.40	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW155A-020519 Lab Sample ID: 240-107706-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 09:00

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW157A-020519 Lab Sample ID: 240-107706-4

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 12:55

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	130	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	94	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	240	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	68	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW157A-020519 Lab Sample ID: 240-107706-4

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 12:55

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.35	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW157A-020519 Lab Sample ID: 240-107706-4

Lab Name: TestAmerica Pittsburgh Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 12:55

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW159A-020519 Lab Sample ID: 240-107706-3

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 10:14

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	540	25	12	mg/L			1	2340C-2011
	Alkalinity	210	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	660	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	190	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW159A-020519 Lab Sample ID: 240-107706-3

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 10:14

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.23	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW159A-020519 Lab Sample ID: 240-107706-3

Lab Name: TestAmerica Pittsburgh Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 10:14

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

APPENDIX C

SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass Discharge

Report Number: 240-107706-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The PCB by 680 and NO2/NO3 analysis were performed at TestAmerica Nashville Laboratory. The Specific Conductance and Salinity analysis were performed at TestAmerica Pittsburgh Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 2/6/2019 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-020519 (240-107706-1), MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/08/2019.

Sample MRC-MW157A-020519 (240-107706-4)[125X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 367370 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TB-020519 (240-107706-1), MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following samples were received in hydrochloric acid preserved vials: TB-020519 (240-107706-1), MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The samples were prepared on 02/19/2019 and 02/26/2019 and analyzed on 02/21/2019, 02/25/2019 and 02/27/2019.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batches 680-558728 and 680-559624.

The SOP for the 680 Method allows that for soils the CCVIS has a limit of <30%D for each analyte and for liquids <20%D for each analyte . It also allows that the capping CCV for soils has the limit of <30% average %D with no analyte >60%D and for liquids <20% average D with no analyte >40%D. Due to software limitations for this method, the limits are set at <20%D. (CCV 680-559059/21)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/07/2019 and analyzed on 02/08/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 02/07/2019 and analyzed on 02/08/2019.

Manganese was detected in method blank MB 240-367176/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 02/11/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 02/08/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 02/08/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for anions in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 02/08/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for Salinity in accordance with SM 2520B. The samples were analyzed on 02/19/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 02/17/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107706-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
680	Liquid-Liquid Extraction (Separatory Funnel)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107706-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107706-1	TB-020519	Water	02/05/19 00:00	02/06/19 09:50
240-107706-2	MRC-MW155A-020519	Water	02/05/19 09:00	02/06/19 09:40
240-107706-3	MRC-MW159A-020519	Water	02/05/19 10:14	02/06/19 09:40
240-107706-4	MRC-MW157A-020519	Water	02/05/19 12:55	02/06/19 09:40

2.8|2.8

North Canton
4101 Shuffel Street, N. W.

North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

Baltimore
Chain of Custody Record #201

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Mike Martin	Site Contact: Walt Pryor	Date: 2/5/19	COC No:
20251 Century Blvd, Suite 200	**Analysis Turnaround Time**			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) _____			
(301) 528-3021 Phone	TAT if different from Below: **STANDARD TAT**			SDG No.
(301) 528-3000 FAX	☐ 2 weeks			
Project Name: MRC BLOCK E/F MASS DISCHARGE	☐ 1 week Standard			
Site: MRC BLOCK E	☐ 2 days			
PO # 112IC08784	☐ 1 day			Sampler: Walt Pryor

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (SW0846 8260C)	Total Metals/Hardness (6020A, 2340C)	Sulfate, Nitrates, TDS (9056A, 4500-NO3E, 2540C)	Bromide (300)	Iron and Manganese (6010C)	Alkalinity (SM 2320B)	Salinity (2520B)	PCBs (680)	Sample Specific Notes:
TB- 020519	2/5/19	–	GRAB	WATER	2		x	–	–	–	–	–	–	–	
MRC-MW155A-020519	↓	0900	↓	↓	11		3	1	1	1	1	1	1	2	
MRC-MW159A-020519	↓	1014	↓	↓	11		3	1	1	1	1	1	1	2	
MRC-MW152A-020519	↓	1255	↓	↓	11		3	1	1	1	1	1	1	2	
							2	4	6	1	4	1	1	1	

240-107706 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☒ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☒ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: Block E/F Mass discharge well sampling

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt P	TA INC	2/5/19 1530	[signature]	2/5/19 1530	
[signature]		2/5/19 1530	[signature]	TA	2-6-19 0940

Form No. CA-C-WI-002, Rev. 2, dated 03/06/2012

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 107706
Canton Facility

Client TA Site Name _____ Cooler unpacked by: Ryan Cribley

Cooler Received on 2-6-19 Opened on 2-6-19 0940

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam (Plastic Bag) None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 2.8 °C Corrected Cooler Temp. 2.8 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered (Yes) No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW155A-020519	240-107706-F-2	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW155A-020519	240-107706-G-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW155A-020519	240-107706-I-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW159A-020519	240-107706-F-3	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW159A-020519	240-107706-G-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW159A-020519	240-107706-I-3	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW157A-020519	240-107706-F-4	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW157A-020519	240-107706-G-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW157A-020519	240-107706-I-4	Plastic 500ml - with Nitric Acid	<2	_____	_____

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-020519	240-107706-1	89	94	89	84
MRC-MW155A-020519	240-107706-2	87	92	88	83
MRC-MW159A-020519	240-107706-3	86	91	87	80
MRC-MW157A-020519	240-107706-4	93	97	92	86
	MB 240-367370/6	85	89	85	82
	LCS 240-367370/4	94	88	89	88

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab File ID: UXC8740.D Lab Sample ID: MB 240-367370/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/08/2019 14:45

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367370/4	UXC8736.D	02/08/2019 13:17
TB-020519	240-107706-1	UXC8743.D	02/08/2019 15:50
MRC-MW155A-020519	240-107706-2	UXC8744.D	02/08/2019 16:12
MRC-MW159A-020519	240-107706-3	UXC8745.D	02/08/2019 16:34
MRC-MW157A-020519	240-107706-4	UXC8746.D	02/08/2019 16:56

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367370/6

Matrix: Water | Lab File ID: UXC8740.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367370/6

Matrix: Water | Lab File ID: UXC8740.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367370/6

Matrix: Water | Lab File ID: UXC8740.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		70-121
460-00-4	4-Bromofluorobenzene (Surr)	82		59-120
2037-26-5	Toluene-d8 (Surr)	85		70-123
1868-53-7	Dibromofluoromethane (Surr)	85		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8736.D

Lab ID: LCS 240-367370/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.17	92	80-124	
1,1,1-Trichloroethane	10.0	10.8	108	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.21	82	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	10.2	102	50-156	
1,1-Dichloroethane	10.0	10.5	105	75-133	
1,1-Dichloroethene	10.0	9.19	92	65-139	
1,1-Dichloropropene	10.0	10.1	101	78-126	
1,2,3-Trichlorobenzene	10.0	8.78	88	39-138	
1,2,3-Trichloropropane	10.0	8.35	84	66-139	
1,2,4-Trichlorobenzene	10.0	8.64	86	42-133	
1,2,4-Trimethylbenzene	10.0	9.51	95	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.73	57	46-132	
1,2-Dichlorobenzene	10.0	9.69	97	78-120	
1,2-Dichloroethane	10.0	10.1	101	71-135	
1,2-Dichloropropane	10.0	10.1	101	78-133	
1,3-Dichlorobenzene	10.0	9.51	95	78-120	
1,3-Dichloropropane	10.0	9.13	91	72-134	
1,4-Dichlorobenzene	10.0	9.55	95	78-120	
2,2-Dichloropropane	10.0	10.4	104	42-150	
2-Chloroethyl vinyl ether	10.0	7.38 J	74	55-137	
2-Chlorotoluene	10.0	9.72	97	78-123	
2-Hexanone	20.0	14.3	72	43-148	
Bromobenzene	10.0	9.58	96	74-129	
Bromochloromethane	10.0	10.6	106	74-130	
4-Chlorotoluene	10.0	9.42	94	77-125	
4-Isopropyltoluene	10.0	9.69	97	69-122	
Acetone	20.0	19.0	95	21-162	
Benzene	10.0	10.5	105	80-123	
Bromoform	10.0	6.23	62	49-141	
Bromomethane	10.0	8.36	84	41-175	
Carbon disulfide	10.0	8.25	83	60-138	
Carbon tetrachloride	10.0	9.80	98	63-140	
Chlorobenzene	10.0	9.81	98	80-121	
Chloroethane	10.0	8.53	85	33-173	
Chloroform	10.0	10.4	104	79-127	
Chloromethane	10.0	8.12	81	54-143	
cis-1,2-Dichloroethene	10.0	10.5	105	76-128	
cis-1,3-Dichloropropene	10.0	8.99	90	64-132	
Hexachlorobutadiene	10.0	8.65	86	38-136	
Dibromomethane	10.0	9.44	94	74-124	
Bromodichloromethane	10.0	9.01	90	77-125	
Dichlorodifluoromethane	10.0	7.28	73	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8736.D

Lab ID: LCS 240-367370/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.91	99	80-120	
1,2-Dibromoethane	10.0	8.62	86	77-123	
Naphthalene	10.0	7.16	72	28-141	
m-Xylene & p-Xylene	10.0	9.78	98	80-120	
n-Butylbenzene	10.0	9.13	91	57-126	
Isopropylbenzene	10.0	10.1	101	74-120	
N-Propylbenzene	10.0	9.47	95	77-123	
2-Butanone (MEK)	20.0	17.1	85	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	15.2	76	49-143	
sec-Butylbenzene	10.0	9.51	95	68-123	
Methyl tert-butyl ether	10.0	8.59	86	51-133	
Methylene Chloride	10.0	9.56	96	70-134	
o-Xylene	10.0	10.1	101	80-120	
Styrene	10.0	9.27	93	79-120	
tert-Butylbenzene	10.0	9.14	91	70-121	
Tetrachloroethene	10.0	10.2	102	74-130	
Toluene	10.0	9.99	100	78-129	
trans-1,2-Dichloroethene	10.0	10.8	108	78-133	
trans-1,3-Dichloropropene	10.0	7.58	76	55-128	
Trichloroethene	10.0	10.3	103	76-125	
Trichlorofluoromethane	10.0	9.81	98	51-164	
Vinyl acetate	10.0	8.23	82	45-151	
Vinyl chloride	10.0	9.17	92	58-143	
tert-Butyl alcohol	100	72.4	72	10-161	
Xylenes, Total	20.0	19.9	99	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	47729 2392918	112693	296202	593761	1222220	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	58046 2319242	119628	276149	585358	1207742	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	57558 2025909	104647	261470	574312	1027051	1.00 40.0	2.00	5.00	10.0	20.0
Butadiene	FB	Ave	71088 2665435	148568	361713	698736	1378009	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	47411 1506749	100403	198900	423055	791041	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	40558 1406432	82718	182320	372694	733356	1.00 40.0	2.00	5.00	10.0	20.0
Dichlorofluoromethane	FB	Ave	103682 3477509	201291	471934	910063	1834172	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	68568 3407867	157640	408598	855986	1703371	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	44605 1653914	87432	212667	419544	869536	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	32229 1148055	55282	144856	290454	603583	5.00 200	10.0	25.0	50.0	100
1,1-Dichloroethene	FB	Ave	57094 2182381	120279	277159	516876	1125076	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichlorotrifluoroethane	FB	Ave	42550 1880984	91700	228498	462285	967763	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Lin1	17181 332724	23252	50751	89168	190030	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	93588 3255913	156089	446819	909454	1760595	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	160687 5174431	283969	742305	1445567	2744114	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	27003 1418141	58477	154763	317161	716236	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	79740 3067156	150240	380996	723073	1550490	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	154915 2032773	198393	338417	580808	1097865	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	36240 1508945	82343	184510	328142	832907	10.0 400	20.0	50.0	100	200
Acrylonitrile	FB	Ave	175156 7643188	352291	868795	1699336	3768272	10.0 400	20.0	50.0	100	200
Methyl tert-butyl ether	FB	Ave	139955 6078083	285516	714788	1439491	3075308	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,2-Dichloroethene	FB	Ave	54736 2072831	103155	251570	500088	1069131	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	10725 455555	22194	51427	104918	230317	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	81126 3448011	166930	409730	832192	1773410	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	88027 4206187	177639	476538	992089	2098831	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	57035 2264494	116480	278759	565374	1189038	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	11684 445323	21907	58586	120845	241048	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone (MEK)	FB	Ave	12505 511818	24387	59681	120010	256717	2.00 80.0	4.00	10.0	20.0	40.0
Bromochloromethane	FB	Ave	28543 1150919	56716	140018	275468	595090	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	31985 1272086	62314	150812	279158	634219	2.00 80.0	4.00	10.0	20.0	40.0
Chloroform	FB	Ave	83929 3460990	169874	422474	847597	1793716	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	63803 2533663	130349	334136	689229	1356966	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	68915 3105972	144320	368473	742256	1592895	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	66437 2816568	140972	343617	688186	1474449	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	56945 2706723	124489	318843	648774	1385341	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	31904 1496664	73133	177736	322275	821992	25.0 1000	50.0	125	250	500
Benzene	FB	Ave	207184 8390558	412777	1016161	2024145	4352726	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	68031 2877185	142414	350758	707702	1492475	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	8801 415529	19095	48491	101813	218160	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	59121 2403531	120531	296310	593061	1274454	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	60130 2723193	127322	326169	654672	1428283	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	43707 1981074	97800	239856	483376	1020861	1.00 40.0	2.00	5.00	10.0	20.0
Dibromomethane	FB	Ave	31111 1256838	65366	157375	317664	664429	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Ave	5185 326819	14227	39232	71764	183906	20.0 800	40.0	100	200	400
Bromodichloromethane	FB	Ave	57382 2704273	121869	306036	637533	1409597	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	61442 2796269	123378	319533	640886	1383920	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Ave	62099 3274371	138202	356486	746312	1652896	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	98299 4186633	187250	495239	970866	2114735	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBNZ d5	Ave	209687 9034071	428381	1080197	2172974	4691174	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	57707 3169409	125256	333930	706531	1578892	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBNZ d5	Ave	61421 2869285	129112	316654	647349	1421429	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBNZ d5	Ave	41853 1840913	87521	218933	437245	940456	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBNZ d5	Ave	44889 1992562	95990	241473	482895	1049416	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBNZ d5	Ave	72217 3294456	153833	378264	779324	1663194	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBNZ d5	Ave	58616 2937075	135481	337296	666112	1487023	2.00 80.0	4.00	10.0	20.0	40.0
Chlorodibromomethane	CBNZ d5	Ave	36977 2200067	82891	222991	469828	1084488	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBNZ d5	Ave	45295 1979685	91132	237763	469490	999728	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBNZ d5	Ave	138107 6035718	286159	714138	1441533	3072375	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	46702 2220799	95060	253355	522591	1113186	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBNZ d5	Ave	73699 3208633	146696	374569	758362	1624425	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBNZ d5	Ave	168049 7830315	351787	872988	1818169	3890600	1.00 40.0	2.00	5.00	10.0	20.0
o-Xylene	CBNZ d5	Ave	88147 3825283	176986	449671	918350	1968397	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBNZ d5	Ave	137740 6714209	289260	754758	1550959	3394736	1.00 40.0	2.00	5.00	10.0	20.0
Bromoform	CBNZ d5	Lin1	19867 1639155	51580	138461	306750	770158	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBNZ d5	Ave	198841 9246149	416807	1070139	2200366	4695119	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	54865 2441270	112833	283791	577712	1238040	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCBd 4	Ave	63640 2849353	131876	330598	678570	1450127	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCBd 4	Ave	18846 848462	40526	99350	201010	423192	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	3277 574750	16039	23872	66363	276245	1.00 40.0	2.00	5.00	10.0	20.0
N-Propylbenzene	DCBd 4	Ave	54874 2529942	117423	290505	601438	1274023	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCBd 4	Ave	53702 2322347	107735	275264	555062	1188057	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	160683 7300680	332591	840604	1766210	3784392	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCBd 4	Ave	170473 7526400	356628	881245	1798133	3844885	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCBd 4	Ave	141080 6973779	300630	749194	1551899	3285832	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	169136 7660047	359918	876431	1848645	3917785	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCBd 4	Ave	173094 7876504	373619	937713	1935865	4155710	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	113176 4738373	229119	572540	1168047	2462678	1.00 40.0	2.00	5.00	10.0	20.0
4-Isopropyltoluene	DCBd 4	Ave	154318 7046098	334169	830781	1751242	3739399	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCBd 4	Ave	119243 4936571	241629	582208	1199185	2527274	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
n-Butylbenzene	DCBd 4	Ave	127428 5435677	263153	659506	1384405	2918965	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCBd 4	Ave	109056 4571601	224899	556492	1159176	2381785	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	10572 585195	24334	65389	138143	306515	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	73453 2553990	145803	356465	739836	1510157	1.00 40.0	2.00	5.00	10.0	20.0
Hexachlorobutadiene	DCBd 4	Ave	41867 1091039	78276	175613	359850	696597	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCBd 4	Ave	172653 6820199	348942	926474	1891386	3879317	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	65430 2286670	131338	324635	663704	1364016	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	41840 1806247	80448	225163	447792	947952	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	55383 2257190	106482	288691	573781	1190875	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBNZ d5	Ave	174193 7359833	333303	912990	1816996	3883966	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	60446 2700470	120695	328418	649263	1374232	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Acetone	5.5						50					
Methylene Chloride	5.1						50					
Bromoform	19.5						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Ave	43776 1719436	78140	216790	375778	846508	10.0 400	20.0	50.0	100	200
Diisopropyl ether	FB	Ave	43843 1750827	82274	218424	423417	889067	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloro-1,3-butadiene	FB	Ave	78005 3085189	151016	379041	729996	1534644	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl tert-butyl ether	FB	Ave	140382 5753247	273366	703226	1363608	2849689	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl acetate	FB	Ave	90776 3822356	173055	465746	871063	1885113	2.00 80.0	4.00	10.0	20.0	40.0
Propionitrile	FB	Ave	60838 2683433	120712	346296	618722	1307620	10.0 400	20.0	50.0	100	200
Methacrylonitrile	FB	Ave	299007 13192364	589937	1557675	3048167	6587251	10.0 400	20.0	50.0	100	200
Tert-amyl methyl ether	FB	Ave	139226 5803487	265089	690261	1376169	2893429	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Ave	27517 1141061	53519	142999	252385	538091	25.0 1000	50.0	125	250	500
Ethyl acrylate	FB	Ave	55889 2595809	111797	311313	570379	1269397	1.00 40.0	2.00	5.00	10.0	20.0
Methyl methacrylate	FB	Ave	82902 3746376	164974	443947	839432	1854426	2.00 80.0	4.00	10.0	20.0	40.0
2-Nitropropane	FB	Ave	24091 1187179	51098	135714	254301	578091	2.00 80.0	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Ave	62560 3081411	130855	371884	688240	1496211	1.00 40.0	2.00	5.00	10.0	20.0
1-Chlorohexane	CBNZ d5	Ave	56623 2299838	112915	287030	522245	1142204	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexanone	DCBd 4	Lin1	18061 496922	26838	72655	115834	240064	10.0 400	20.0	50.0	100	200
Pentachloroethane	CBNZ d5	Ave	49671 2629484	105733	282130	577976	1287207	2.00 80.0	4.00	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCBd 4	Ave	159891 7509792	343441	887789	1750222	3743187	1.00 40.0	2.00	5.00	10.0	20.0
Benzyl chloride	DCBd 4	Ave	18125 1117019	36545	113409	234360	534799	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	70436 2856330	145613	362674	730581	1512196	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCBd 4	Ave	146578 6396329	332448	834898	1722729	3597249	2.00 80.0	4.00	10.0	20.0	40.0
1-Chloro-1-fluoroethane TIC	FB	None	38810 1466901	1184	184959	389588	796152	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
None = No Calib Curve

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Cyclohexanone	4.9						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab File ID: BFB0208.D BFB Injection Date: 02/08/2019

Instrument ID: A3UX15 BFB Injection Time: 12:12

Analysis Batch No.: 367370

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.8	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	100.8	
175	5.0 - 9.0 % of mass 174	6.6	(6.5) 1
176	95.0 - 101.0 % of mass 174	99.3	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.1	(6.1) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367370/2	UXC8735.D	02/08/2019	12:55
	LCS 240-367370/4	UXC8736.D	02/08/2019	13:17
	CCV 240-367370/3	UXC8737.D	02/08/2019	13:39
	MB 240-367370/6	UXC8740.D	02/08/2019	14:45
TB-020519	240-107706-1	UXC8743.D	02/08/2019	15:50
MRC-MW155A-020519	240-107706-2	UXC8744.D	02/08/2019	16:12
MRC-MW159A-020519	240-107706-3	UXC8745.D	02/08/2019	16:34
MRC-MW157A-020519	240-107706-4	UXC8746.D	02/08/2019	16:56

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCVIS 240-367370/2 Calibration Date: 02/08/2019 12:55

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8735.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3194	0.1000	0.0104	0.0100	4.0	20.0
Chloromethane	Ave	0.3135	0.2905	0.1000	0.00927	0.0100	-7.3	20.0
Vinyl chloride	Ave	0.2885	0.3042	0.1000	0.0105	0.0100	5.5	20.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	20.0
Bromomethane	Ave	0.2308	0.2169	0.0500	0.00940	0.0100	-6.0	20.0
Chloroethane	Ave	0.2041	0.1953	0.0500	0.00957	0.0100	-4.3	20.0
Dichlorofluoromethane	Ave	0.5102	0.4818		0.00944	0.0100	-5.6	20.0
Trichlorofluoromethane	Ave	0.4337	0.4764	0.1000	0.0110	0.0100	9.9	20.0
Ethyl ether	Ave	0.2310	0.2244		0.00971	0.0100	-2.9	20.0
Acrolein	Ave	0.0317	0.0364		0.0575	0.0500	14.9	50.0
1,1-Dichloroethene	Ave	0.3005	0.2918	0.1000	0.00971	0.0100	-2.9	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2537	0.0500	0.0103	0.0100	2.8	20.0
Acetone	Lin1		0.0226	0.0100	0.0186	0.0200	-7.1	50.0
Iodomethane	Ave	0.4675	0.4990		0.0107	0.0100	6.7	20.0
Carbon disulfide	Ave	0.7741	0.6903	0.1000	0.00892	0.0100	-10.8	20.0
3-Chloro-1-propene	Ave	0.1698	0.1713		0.0101	0.0100	0.9	20.0
Methyl acetate	Ave	0.2050	0.1764	0.1000	0.0172	0.0200	-14.0	20.0
Methylene Chloride	Lin1		0.3159	0.1000	0.0102	0.0100	2.5	50.0
tert-Butyl alcohol	Ave	0.0203	0.0166		0.0819	0.100	-18.1	50.0
Acrylonitrile	Ave	0.0962	0.0873		0.0907	0.100	-9.3	20.0
Methyl tert-butyl ether	Ave	0.7834	0.7001	0.1000	0.00894	0.0100	-10.6	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.3041	0.1000	0.0109	0.0100	8.8	20.0
Hexane	Ave	0.0586	0.0589		0.0100	0.0100	0.4	20.0
1,1-Dichloroethane	Ave	0.4517	0.4927	0.2000	0.0109	0.0100	9.1	20.0
Vinyl acetate	Ave	0.5198	0.3775		0.00726	0.0100	-27.4	50.0
2,2-Dichloropropane	Ave	0.0624	0.0684		0.0110	0.0100	9.7	20.0
2-Butanone (MEK)	Ave	0.0333	0.0273	0.0100	0.0164	0.0200	-18.0	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3454	0.1000	0.0112	0.0100	12.2	20.0
Bromochloromethane	Ave	0.1531	0.1636		0.0107	0.0100	6.9	20.0
Tetrahydrofuran	Ave	0.0828	0.0671		0.0162	0.0200	-18.9	20.0
Chloroform	Ave	0.4606	0.5082	0.2000	0.0110	0.0100	10.3	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3911	0.1000	0.0110	0.0100	10.3	20.0
Cyclohexane	Ave	0.3993	0.4126	0.1000	0.0103	0.0100	3.3	20.0
1,1-Dichloropropene	Ave	0.3748	0.3983		0.0106	0.0100	6.3	20.0
Carbon tetrachloride	Ave	0.3441	0.3477	0.1000	0.0101	0.0100	1.1	20.0
Isobutyl alcohol	Ave	0.0077	0.0064		0.208	0.250	-16.9	20.0
Benzene	Ave	1.116	1.233	0.5000	0.0110	0.0100	10.5	20.0
1,2-Dichloroethane	Ave	0.3820	0.3936	0.1000	0.0103	0.0100	3.0	20.0
n-Heptane	Ave	0.0532	0.0494		0.00928	0.0100	-7.2	20.0
Trichloroethene	Ave	0.3240	0.3645	0.1500	0.0112	0.0100	12.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCVIS 240-367370/2 Calibration Date: 02/08/2019 12:55

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8735.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3636	0.1000	0.0103	0.0100	3.2	20.0
1,2-Dichloropropane	Ave	0.2590	0.2663	0.1000	0.0103	0.0100	2.8	20.0
1,4-Dioxane	Ave	0.0020	0.0024		0.244	0.200	22.2	50.0
Dibromomethane	Ave	0.1717	0.1647		0.00959	0.0100	-4.1	20.0
Bromodichloromethane	Ave	0.3410	0.3312	0.1500	0.00971	0.0100	-2.9	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1324		0.0152	0.0200	-24.1*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3663	0.1500	0.00929	0.0100	-7.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2024	0.0500	0.0151	0.0200	-24.4*	20.0
Toluene	Ave	1.476	1.516	0.4000	0.0103	0.0100	2.7	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3705	0.1000	0.00798	0.0100	-20.2*	20.0
Ethyl methacrylate	Ave	0.4442	0.3497		0.00787	0.0100	-21.3*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2764	0.1000	0.00927	0.0100	-7.3	20.0
Tetrachloroethene	Ave	0.3268	0.3439	0.1500	0.0105	0.0100	5.2	20.0
1,3-Dichloropropane	Ave	0.5243	0.4843		0.00924	0.0100	-7.6	20.0
2-Hexanone	Ave	0.2283	0.1700	0.0500	0.0149	0.0200	-25.5*	20.0
Chlorodibromomethane	Ave	0.3116	0.2744		0.00881	0.0100	-11.9	20.0
1,2-Dibromoethane	Ave	0.3191	0.2759		0.00865	0.0100	-13.5	20.0
Chlorobenzene	Ave	0.9777	1.001	0.3000	0.0102	0.0100	2.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3362		0.00974	0.0100	-2.6	20.0
Ethylbenzene	Ave	0.5145	0.5207		0.0101	0.0100	1.2	20.0
m-Xylene & p-Xylene	Ave	1.221	1.236		0.0101	0.0100	1.2	20.0
o-Xylene	Ave	0.6189	0.6449		0.0104	0.0100	4.2	20.0
Styrene	Ave	1.036	1.065	0.3000	0.0103	0.0100	2.8	20.0
Bromoform	Lin1		0.1666	0.1000	0.00718	0.0100	-28.2*	20.0
Isopropylbenzene	Ave	1.463	1.541	0.1000	0.0105	0.0100	5.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5642	0.3000	0.00796	0.0100	-20.4*	20.0
Bromobenzene	Ave	0.8274	0.8129		0.00982	0.0100	-1.8	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2011		0.00815	0.0100	-18.5	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.1211		0.0119	0.0100	19.5	20.0
N-Propylbenzene	Ave	0.7286	0.7102		0.00975	0.0100	-2.5	20.0
2-Chlorotoluene	Ave	0.6821	0.6719		0.00985	0.0100	-1.5	20.0
1,3,5-Trimethylbenzene	Ave	2.119	2.073		0.00978	0.0100	-2.2	20.0
4-Chlorotoluene	Ave	2.205	2.114		0.00959	0.0100	-4.1	20.0
tert-Butylbenzene	Ave	1.897	1.770		0.00933	0.0100	-6.7	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.225		0.00999	0.0100	-0.1	20.0
sec-Butylbenzene	Ave	2.327	2.217		0.00953	0.0100	-4.7	20.0
1,3-Dichlorobenzene	Ave	1.425	1.407	0.6000	0.00988	0.0100	-1.2	20.0
4-Isopropyltoluene	Ave	2.083	2.024		0.00972	0.0100	-2.8	20.0
1,4-Dichlorobenzene	Ave	1.477	1.455	0.5000	0.00985	0.0100	-1.5	20.0
n-Butylbenzene	Ave	1.649	1.548		0.00939	0.0100	-6.1	20.0
1,2-Dichlorobenzene	Ave	1.387	1.375	0.4000	0.00992	0.0100	-0.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCVIS 240-367370/2 Calibration Date: 02/08/2019 12:55

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8735.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0938	0.0500	0.00582	0.0100	-41.8	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7725	0.2000	0.00879	0.0100	-12.1	50.0
Hexachlorobutadiene	Ave	0.4386	0.3567		0.00813	0.0100	-18.7	20.0
Naphthalene	Ave	2.209	1.532		0.00694	0.0100	-30.6	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6880		0.00871	0.0100	-12.9	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2260		0.00761	0.00797	-4.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2747		0.00720	0.00797	-9.7	20.0
Toluene-d8 (Surr)	Ave	1.214	1.098		0.00721	0.00797	-9.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3929		0.00721	0.00797	-9.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCV 240-367370/3 Calibration Date: 02/08/2019 13:39

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8737.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0288		0.125	0.100	24.8*	20.0
Diisopropyl ether	Ave	0.2405	0.2487		0.0103	0.0100	3.4	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4165		0.00983	0.0100	-1.7	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6880		0.00882	0.0100	-11.8	20.0
Ethyl acetate	Ave	0.2538	0.2069		0.0163	0.0200	-18.5	50.0
Propionitrile	Ave	0.0357	0.0342		0.0958	0.100	-4.2	20.0
Methacrylonitrile	Ave	0.1733	0.1557		0.0898	0.100	-10.2	20.0
Tert-amyl methyl ether	Ave	0.7765	0.6043		0.00778	0.0100	-22.2*	20.0
n-Butanol	Ave	0.0061	0.0038		0.156	0.250	-37.7*	20.0
Ethyl acrylate	Ave	0.3330	0.2516		0.00755	0.0100	-24.5*	20.0
Methyl methacrylate	Ave	0.2430	0.1957		0.0161	0.0200	-19.5	20.0
2-Nitropropane	Ave	0.0745	0.0303		0.00814	0.0200	-59.3*	20.0
n-Butyl acetate	Ave	0.3918	0.2938		0.00750	0.0100	-25.0*	20.0
1-Chlorohexane	Ave	0.3968	0.3306		0.00833	0.0100	-16.7	20.0
Cyclohexanone	Lin1		0.0113		0.0690	0.100	-31.0*	20.0
Pentachloroethane	Ave	0.2034	0.1799		0.0177	0.0200	-11.6	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.229		0.00970	0.0100	-3.0	20.0
Benzyl chloride	Ave	0.2963	0.1422		0.00480	0.0100	-52.0*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9064		0.00958	0.0100	-4.2	20.0
2-Methylnaphthalene	Ave	1.076	0.7065		0.0131	0.0200	-34.3*	20.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-367370/2		1771075	5.20	1445689	7.88	859854	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Sample No.: CCVIS 240-367370/2 Date Analyzed: 02/08/2019 12:55

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8735.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1771075	5.20	1445689	7.88	859854	10.12
UPPER LIMIT		3542150	5.70	2891378	8.38	1719708	10.62
LOWER LIMIT		885538	4.70	722845	7.38	429927	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367370/4		1859981	5.20	1523524	7.88	880859	10.12
CCV 240-367370/3		1723888	5.20	1390828	7.88	755414	10.12
MB 240-367370/6		1756530	5.20	1437868	7.88	809655	10.12
240-107706-1	TB-020519	1745781	5.20	1437450	7.88	793753	10.12
240-107706-2	MRC-MW155A-020519	1739716	5.20	1452316	7.88	804599	10.12
240-107706-3	MRC-MW159A-020519	1791125	5.20	1454708	7.88	800696	10.12
240-107706-4	MRC-MW157A-020519	1675267	5.20	1320006	7.88	762108	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

SAMPLE IDENTIFICATION	MRC-MW155A-020519	
COMPOUND	Trichloroethene	
COMPOUND AREA	8653	
INTERNAL STANDARD AMOUNT (ug)	10	
DILUTION FACTOR	1	
INTERNAL STANDARD AREA	1739716	
AVERAGE RRF	0.324	
8653 x 10 / 1739716 x 0.324	0.1535	ug/L
0.153512355599746 x 1	0.15	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW155A-020519 | Lab Sample ID: 240-107706-2

Matrix: Water | Lab File ID: UXC8744.D

Analysis Method: 8260C | Date Collected: 02/05/2019 09:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW155A-020519 | Lab Sample ID: 240-107706-2

Matrix: Water | Lab File ID: UXC8744.D

Analysis Method: 8260C | Date Collected: 02/05/2019 09:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.15	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW155A-020519 Lab Sample ID: 240-107706-2

Matrix: Water Lab File ID: UXC8744.D

Analysis Method: 8260C Date Collected: 02/05/2019 09:00

Sample wt/vol: 5(mL) Date Analyzed: 02/08/2019 16:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367370 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	88		70-123
1868-53-7	Dibromofluoromethane (Surr)	87		75-128

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX15\20190208-84351.b\UXC8744.D
Lims ID: 240-107706-A-2
Client ID: MRC-MW155A-020519
Sample Type: Client
Inject. Date: 08-Feb-2019 16:12:30 ALS Bottle#: 10 Worklist Smp#: 35
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0084351-035
Misc. Info.: C90208A,8260LLUX15,,43582
Operator ID: Instrument ID: A3UX15

Method: \\chromna\Canton\ChromData\A3UX15\20190208-84351.b\8260_15.m
Limit Group: MSV 8260C ICAL
Last Update: 11-Feb-2019 08:55:13 Calib Date: 21-Jan-2019 19:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX15\20190121-83824.b\UXC8431.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0321

First Level Reviewer: evansle Date: 11-Feb-2019 08:43:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.196	5.196	0.000	99	1739716	10.0	
* 2 Chlorobenzene-d5	117	7.876	7.876	0.000	84	1452316	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.117	10.117	0.000	93	804599	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.639	4.639	0.001	95	284445	6.91	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.923	4.923	0.000	100	389562	7.36	
$ 6 Toluene-d8 (Surr)	98	6.560	6.560	0.000	93	1232014	6.99	
$ 7 4-Bromofluorobenzene (Surr	95	8.991	8.979	0.012	96	417969	6.63	
9 Dichlorodifluoromethane	85		1.532				ND	
10 Chloromethane	50		1.686				ND	
11 Vinyl chloride	62		1.781				ND	
13 Bromomethane	94		2.065				ND	
14 Chloroethane	64		2.148				ND	
16 Trichlorofluoromethane	101		2.362				ND	
19 1,1-Dichloroethene	96		2.777				ND	
20 1,1,2-Trichloro-1,2,2-trif	151		2.789				ND	
22 Acetone	58	2.824	2.824	0.000	98	12636	0.9627	
24 Carbon disulfide	76		2.978				ND	
28 Methylene Chloride	84		3.180				ND	
29 2-Methyl-2-propanol	59		3.263				ND	
31 Methyl tert-butyl ether	73		3.405				ND	
30 trans-1,2-Dichloroethene	96		3.405				ND	
34 1,1-Dichloroethane	63		3.761				ND	
36 Vinyl acetate	43		3.785				ND	
35 Isopropyl ether	87		3.796				ND	
38 Tert-butyl ethyl ether	59		4.093				ND	
41 2-Butanone (MEK)	72		4.247				ND	
40 2,2-Dichloropropane	97		4.247				ND	
39 cis-1,2-Dichloroethene	96		4.247				ND	
45 Chlorobromomethane	128		4.449				ND	
47 Chloroform	83		4.496				ND	
48 1,1,1-Trichloroethane	97		4.662				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 1,1-Dichloropropene	75		4.793				ND	
50 Carbon tetrachloride	117		4.805				ND	
53 Benzene	78		4.971				ND	
54 1,2-Dichloroethane	62		4.982				ND	
55 Tert-amyl methyl ether	73		5.042				ND	
58 Trichloroethene	130	5.504	5.504	0.000	89	8653	0.1535	
61 1,2-Dichloropropane	63		5.706				ND	
63 Dibromomethane	93		5.812				ND	
65 Dichlorobromomethane	83		5.931				ND	
67 2-Chloroethyl vinyl ether	63		6.180				ND	
68 cis-1,3-Dichloropropene	75		6.322				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.453				ND	
70 Toluene	91		6.619				ND	
71 trans-1,3-Dichloropropene	75		6.809				ND	
74 Tetrachloroethene	164		7.117				ND	
75 1,3-Dichloropropane	76		7.129				ND	
76 2-Hexanone	43		7.188				ND	
79 Chlorodibromomethane	129		7.342				ND	
80 Ethylene Dibromide	107		7.461				ND	
82 Chlorobenzene	112		7.900				ND	
83 1,1,1,2-Tetrachloroethane	131		7.971				ND	
84 Ethylbenzene	106		7.994				ND	
85 m-Xylene & p-Xylene	91		8.101				ND	
86 o-Xylene	106		8.481				ND	
87 Styrene	104		8.493				ND	
88 Bromoform	173		8.682				ND	
89 Isopropylbenzene	105		8.825				ND	
93 1,1,2,2-Tetrachloroethane	83		9.121				ND	
92 Bromobenzene	156		9.145				ND	
94 1,2,3-Trichloropropane	110		9.168				ND	
96 N-Propylbenzene	120		9.228				ND	
97 2-Chlorotoluene	126		9.323				ND	
99 4-Chlorotoluene	91		9.417				ND	
101 tert-Butylbenzene	119		9.714				ND	
103 1,2,4-Trimethylbenzene	105		9.761				ND	
105 sec-Butylbenzene	105		9.927				ND	
106 1,3-Dichlorobenzene	146		10.046				ND	
107 4-Isopropyltoluene	119		10.070				ND	
108 1,4-Dichlorobenzene	146		10.141				ND	
109 1,2,3-Trimethylbenzene	105		10.176				ND	
111 n-Butylbenzene	91		10.473				ND	
112 1,2-Dichlorobenzene	146		10.508				ND	
113 1,2-Dibromo-3-Chloropropan	157		11.291				ND	
115 1,2,4-Trichlorobenzene	180		12.109				ND	
116 Hexachlorobutadiene	225		12.275				ND	
117 Naphthalene	128		12.358				ND	
118 1,2,3-Trichlorobenzene	180		12.607				ND	
S 129 Xylenes, Total	106		16.530				ND	

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

Method 680

Polychlorinated Biphenyls (PCBs) (GC/MS) by Method 680

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13CDCB #
MRC-MW155A-020519	240-107706-2	35
MRC-MW159A-020519	240-107706-3	47
MRC-MW157A-020519	240-107706-4	71
	MB 680-558728/12-A	71
	MB 680-559624/3-A	65
	LCS 680-558728/13-A	75
	LCS 680-559624/4-A	82
	LCSD 680-558728/14-A	68
	LCSD 680-559624/5-A	85

	QC LIMITS
13CDCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab File ID: xb2031.D Lab Sample ID: MB 680-558728/12-A

Matrix: Water Date Extracted: 02/19/2019 13:42

Instrument ID: CMSX Date Analyzed: 02/21/2019 07:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-558728/13-A	xb2032.D	02/21/2019 07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019 08:10
MRC-MW159A-020519	240-107706-3	xb2041.D	02/21/2019 11:58
MRC-MW155A-020519	240-107706-2	xb2513.D	02/25/2019 16:56

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107706-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-558728/12-A

Matrix: Water | Lab File ID: xb2031.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2032.D

Lab ID: LCS 680-558728/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.67	78	62-130	
Hexachlorobiphenyl	4.00	3.37	84	62-130	
Nonachlorobiphenyl	10.0	14.6	146	70-195	
Octachlorobiphenyl	6.00	5.09	85	64-130	
Monochlorobiphenyl	2.00	1.08	54	42-130	
DCB Decachlorobiphenyl	10.0	7.81	78	59-130	
Dichlorobiphenyl	2.00	1.32	66	49-130	
Pentachlorobiphenyl	4.00	3.47	87	63-130	
Tetrachlorobiphenyl	4.00	2.93	73	54-130	
Trichlorobiphenyl	2.00	1.47	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2033.D

Lab ID: LCSD 680-558728/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.45	74	5	40	62-130	
Hexachlorobiphenyl	4.00	3.21	80	5	40	62-130	
Nonachlorobiphenyl	10.0	13.2	132	10	40	70-195	
Octachlorobiphenyl	6.00	4.75	79	7	40	64-130	
Monochlorobiphenyl	2.00	1.36	68	23	40	42-130	
DCB Decachlorobiphenyl	10.0	7.14	71	9	40	59-130	
Dichlorobiphenyl	2.00	1.47	73	11	40	49-130	
Pentachlorobiphenyl	4.00	3.33	83	4	40	63-130	
Tetrachlorobiphenyl	4.00	3.04	76	4	40	54-130	
Trichlorobiphenyl	2.00	1.52	76	3	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab File ID: xb2706.D Lab Sample ID: MB 680-559624/3-A

Matrix: Water Date Extracted: 02/26/2019 13:54

Instrument ID: CMSX Date Analyzed: 02/27/2019 16:20

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-559624/4-A	xb2707.D	02/27/2019 16:49
	LCSD 680-559624/5-A	xb2708.D	02/27/2019 17:18
MRC-MW157A-020519	240-107706-4	xb2709.D	02/27/2019 17:46

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107706-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-559624/3-A

Matrix: Water | Lab File ID: xb2706.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/26/2019 13:54

Sample wt/vol: 1000(mL) | Date Analyzed: 02/27/2019 16:20

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559821 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	65		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2707.D

Lab ID: LCS 680-559624/4-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.59	77	62-130	
Hexachlorobiphenyl	4.00	3.25	81	62-130	
Nonachlorobiphenyl	10.0	15.2	152	70-195	
Octachlorobiphenyl	6.00	4.98	83	64-130	
Monochlorobiphenyl	2.00	1.29	65	42-130	
DCB Decachlorobiphenyl	10.0	8.61	86	59-130	
Dichlorobiphenyl	2.00	1.41	70	49-130	
Pentachlorobiphenyl	4.00	3.26	81	63-130	
Tetrachlorobiphenyl	4.00	2.94	74	54-130	
Trichlorobiphenyl	2.00	1.46	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2708.D

Lab ID: LCSD 680-559624/5-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.93	82	7	40	62-130	
Hexachlorobiphenyl	4.00	3.53	88	8	40	62-130	
Nonachlorobiphenyl	10.0	16.1	161	6	40	70-195	
Octachlorobiphenyl	6.00	5.33	89	7	40	64-130	
Monochlorobiphenyl	2.00	1.43	71	10	40	42-130	
DCB Decachlorobiphenyl	10.0	9.10	91	5	40	59-130	
Dichlorobiphenyl	2.00	1.56	78	10	40	49-130	
Pentachlorobiphenyl	4.00	3.51	88	7	40	63-130	
Tetrachlorobiphenyl	4.00	3.25	81	10	40	54-130	
Trichlorobiphenyl	2.00	1.59	79	9	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab File ID: xa0805.D DFTPP Injection Date: 01/08/2019

Instrument ID: CMSX DFTPP Injection Time: 14:10

Analysis Batch No.: 554469

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.9
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	25.1
365	Greater than 1% of mass 198	3.8
441	Present but less than mass 443	13.7 (87.5) 2
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	15.6 (18.3) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-554469/3	xa0807.D	01/08/2019	15:11
	IC 680-554469/5	xa0809.D	01/08/2019	16:08
	IC 680-554469/6	xa0810.D	01/08/2019	16:37
	IC 680-554469/27	xa0850.D	01/08/2019	17:05
	IC 680-554469/7	xa0811.D	01/08/2019	17:34
	IC 680-554469/8	xa0812.D	01/08/2019	18:02
	ICV 680-554469/9	xa0813.D	01/08/2019	18:31

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107706-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 240-107706-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Monochlorobiphenyl	CRY	Ave	8242 813481	15382	70279	157619	299489	0.0500 5.00	0.100	0.500	1.00	2.00
Dichlorobiphenyl	CRY	Ave	5634 599778	10649	48537	112170	214973	0.0500 5.00	0.100	0.500	1.00	2.00
Trichlorobiphenyl	CRY	Ave	3987 441580	7502	35031	81047	154555	0.0500 5.00	0.100	0.500	1.00	2.00
Tetrachlorobiphenyl	CRY	Ave	5574 615833	10606	50081	113059	216849	0.100 10.0	0.200	1.00	2.00	4.00
Pentachlorobiphenyl	CRY	Ave	4430 525344	8255	40050	94602	179296	0.100 10.0	0.200	1.00	2.00	4.00
Hexachlorobiphenyl	CRY	Ave	4409 515192	8063	39570	95892	180616	0.100 10.0	0.200	1.00	2.00	4.00
Heptachlorobiphenyl	CRY	Ave	8087 711849	13173	54642	129695	247124	0.150 15.0	0.300	1.50	3.00	6.00
Octachlorobiphenyl	CRY	Ave	5679 662783	10462	52287	120191	235791	0.150 15.0	0.300	1.50	3.00	6.00
Nonachlorobiphenyl	CRY	Ave				55196					5.00	
DCB Decachlorobiphenyl	CRY	Ave	1830 243534	3384	17538	42007	81970	0.250 25.0	0.500	2.50	5.00	10.0
Decachlorobiphenyl-13C12	CRY	Ave	2369 234805	4106	24902	55313	103476	0.250 20.0	0.500	2.50	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 680-554469/9 Calibration Date: 01/08/2019 18:31

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xa0813.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8517		1.03	1.00	2.6	20.0
Dichlorobiphenyl	Ave	0.5847	0.5801		0.992	1.00	-0.8	20.0
Trichlorobiphenyl	Ave	0.4198	0.4573		1.09	1.00	8.9	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.3118		2.11	2.00	5.6	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2531		2.11	2.00	5.5	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2508		2.10	2.00	5.2	20.0
Heptachlorobiphenyl	Ave	0.2376	0.2274		2.87	3.00	-4.3	20.0
Octachlorobiphenyl	Ave	0.2054	0.2183		3.19	3.00	6.3	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0419		5.00	5.00	-0.0	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0577		5.35	5.00	7.1	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab File ID: xb2028.D DFTPP Injection Date: 02/21/2019

Instrument ID: CMSX DFTPP Injection Time: 05:43

Analysis Batch No.: 559059

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	59.5
197	Less than 1 % of mass 198	0.9
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	28.0
365	Greater than 1% of mass 198	3.5
441	Present but less than mass 443	15.1 (86.3) 2
442	Greater than 40% of mass 198	96.2
443	17 - 23% of mass 442	17.5 (18.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559059/2	xb2029.D	02/21/2019	06:14
	CCVIS 680-559059/3	xb2030.D	02/21/2019	06:44
	MB 680-558728/12-A	xb2031.D	02/21/2019	07:13
	LCS 680-558728/13-A	xb2032.D	02/21/2019	07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019	08:10
MRC-MW159A-020519	240-107706-3	xb2041.D	02/21/2019	11:58
	CCV 680-559059/21	xb2051.D	02/21/2019	16:43

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCVIS 680-559059/3 Calibration Date: 02/21/2019 06:44

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2030.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.7268		0.875	1.00	-12.5	20.0
Dichlorobiphenyl	Ave	0.5847	0.5079		0.869	1.00	-13.1	20.0
Trichlorobiphenyl	Ave	0.4198	0.3597		0.857	1.00	-14.3	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2563		1.74	2.00	-13.2	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2131		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2136		1.79	2.00	-10.4	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1920		2.42	3.00	-19.2	20.0
Octachlorobiphenyl	Ave	0.2054	0.1725		2.52	3.00	-16.0	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0343		4.08	5.00	-18.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0462		4.29	5.00	-14.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCV 680-559059/21 Calibration Date: 02/21/2019 16:43

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2051.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8070		0.972	1.00	-2.8	20.0
Dichlorobiphenyl	Ave	0.5847	0.5601		0.958	1.00	-4.2	20.0
Trichlorobiphenyl	Ave	0.4198	0.4000		0.953	1.00	-4.7	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2879		1.95	2.00	-2.4	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2300		1.92	2.00	-4.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2246		1.88	2.00	-5.8	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1938		2.45	3.00	-18.4	20.0
Octachlorobiphenyl	Ave	0.2054	0.1765		2.58	3.00	-14.1	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0315		3.75	5.00	-25.0*	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0422		3.92	5.00	-21.6*	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab File ID: xb2502.D DFTPP Injection Date: 02/25/2019

Instrument ID: CMSX DFTPP Injection Time: 11:57

Analysis Batch No.: 559536

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	57.2
197	Less than 1 % of mass 198	0.6
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	7.2
275	10 - 30% of mass 198	25.4
365	Greater than 1% of mass 198	3.9
441	Present but less than mass 443	12.6 (74.1) 2
442	Greater than 40% of mass 198	85.2
443	17 - 23% of mass 442	17.0 (20.0) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559536/2	xb2503.D	02/25/2019	12:28
	ICISAV 680-559536/3	xb2504.D	02/25/2019	13:07
	IC 680-559536/4	xb2507.D	02/25/2019	14:04
	IC 680-559536/8	xb2508.D	02/25/2019	14:33
	IC 680-559536/9	xb2509.D	02/25/2019	15:02
	IC 680-559536/10	xb2510.D	02/25/2019	15:30
	IC 680-559536/11	xb2511.D	02/25/2019	15:59
	ICV 680-559536/12	xb2512.D	02/25/2019	16:27
MRC-MW155A-020519	240-107706-2	xb2513.D	02/25/2019	16:56
	CCV 680-559536/7	xb2515.D	02/25/2019	17:53

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107706-1 Analy Batch No.: 559536

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/25/2019 13:07 Calibration End Date: 02/25/2019 15:59 Calibration ID: 63879

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-559536/11	xb2511.D
Level 2	IC 680-559536/10	xb2510.D
Level 3	IC 680-559536/9	xb2509.D
Level 4	ICISAV 680-559536/3	xb2504.D
Level 5	IC 680-559536/8	xb2508.D
Level 6	IC 680-559536/4	xb2507.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.7768 0.8303	0.7679	0.7192	0.7084	0.8005	Ave		0.7672				6.1		20.0			
Dichlorobiphenyl	0.5231 0.6057	0.5247	0.4982	0.4848	0.5644	Ave		0.5335				8.4		20.0			
Trichlorobiphenyl	0.3701 0.4389	0.3719	0.3515	0.3760	0.4066	Ave		0.3858				8.2		20.0			
PCB-104				0.3059		Ave		0.3059						30.0			
Tetrachlorobiphenyl	0.2496 0.3004	0.2491	0.2474	0.2506	0.2786	Ave		0.2626				8.4		20.0			
Pentachlorobiphenyl	0.1904 0.2506	0.1911	0.1944	0.1975	0.2274	Ave		0.2085				11.9		20.0			
PCB-77				0.4052		Ave		0.4052						30.0			
Hexachlorobiphenyl	0.1811 0.2345	0.1804	0.1856	0.1913	0.2198	Ave		0.1988				11.5		20.0			
Heptachlorobiphenyl	0.2199 0.2149	0.1886	0.1711	0.1710	0.1962	Ave		0.1936				10.8		20.0			
Octachlorobiphenyl	0.1586 0.1992	0.1499	0.1557	0.1606	0.1806	Ave		0.1674				11.2		20.0			
PCB-208				0.0538		Ave		0.0538						30.0			
DCB Decachlorobiphenyl	0.0264 0.0421	0.0261	0.0293	0.0289	0.0338	Ave		0.0311				19.5		20.0			
Decachlorobiphenyl-13C12	0.0369 0.0537	0.0343	0.0421	0.0410	0.0451	Ave		0.0422				16.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 240-107706-1 Analy Batch No.: 559536

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/25/2019 13:07 Calibration End Date: 02/25/2019 15:59 Calibration ID: 63879

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-559536/11	xb2511.D
Level 2	IC 680-559536/10	xb2510.D
Level 3	IC 680-559536/9	xb2509.D
Level 4	ICISAV 680-559536/3	xb2504.D
Level 5	IC 680-559536/8	xb2508.D
Level 6	IC 680-559536/4	xb2507.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Monochlorobiphenyl	CRY	Ave	7419 831971	15897	77564	157105	335414	0.0500 5.00	0.100	0.500	1.00	2.00
Dichlorobiphenyl	CRY	Ave	4996 606979	10862	53734	107521	236477	0.0500 5.00	0.100	0.500	1.00	2.00
Trichlorobiphenyl	CRY	Ave	3535 439760	7698	37905	83389	170369	0.0500 5.00	0.100	0.500	1.00	2.00
PCB-104	CRY	Ave				135693					2.00	
Tetrachlorobiphenyl	CRY	Ave	4767 601944	10313	53368	111139	233496	0.100 10.0	0.200	1.00	2.00	4.00
Pentachlorobiphenyl	CRY	Ave	3637 502135	7911	41923	87585	190549	0.100 10.0	0.200	1.00	2.00	4.00
PCB-77	CRY	Ave				179738					2.00	
Hexachlorobiphenyl	CRY	Ave	3459 469969	7470	40027	84870	184183	0.100 10.0	0.200	1.00	2.00	4.00
Heptachlorobiphenyl	CRY	Ave	6300 646151	11710	55348	113769	246590	0.150 15.0	0.300	1.50	3.00	6.00
Octachlorobiphenyl	CRY	Ave	4543 598796	9312	50383	106848	226947	0.150 15.0	0.300	1.50	3.00	6.00
PCB-208	CRY	Ave				47750					4.00	
DCB Decachlorobiphenyl	CRY	Ave	1260 210942	2698	15783	32060	70810	0.250 25.0	0.500	2.50	5.00	10.0
Decachlorobiphenyl-13C12	CRY	Ave	1762 215192	3550	22714	45456	94422	0.250 20.0	0.500	2.50	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 680-559536/12 Calibration Date: 02/25/2019 16:27

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2512.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nonachlorobiphenyl	Ave	0.0526	0.0562		7.22	4.00	6.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 680-559536/12 Calibration Date: 02/25/2019 16:27

Instrument ID: CMSX Calib Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 02/25/2019 15:59

Lab File ID: xb2512.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.7672	0.7447		0.971	1.00	-2.9	20.0
Dichlorobiphenyl	Ave	0.5335	0.5015		0.940	1.00	-6.0	20.0
Trichlorobiphenyl	Ave	0.3858	0.3920		1.02	1.00	1.6	20.0
Tetrachlorobiphenyl	Ave	0.2626	0.2641		2.01	2.00	0.6	20.0
Pentachlorobiphenyl	Ave	0.2085	0.2083		2.00	2.00	-0.1	20.0
Hexachlorobiphenyl	Ave	0.1988	0.1999		2.01	2.00	0.6	20.0
Heptachlorobiphenyl	Ave	0.1936	0.1805		2.80	3.00	-6.8	20.0
Octachlorobiphenyl	Ave	0.1674	0.1674		3.00	3.00	-0.0	20.0
DCB Decachlorobiphenyl	Ave	0.0311	0.0310		4.98	5.00	-0.3	20.0
Decachlorobiphenyl-13C12	Ave	0.0422	0.0433		5.13	5.00	2.6	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCV 680-559536/7 Calibration Date: 02/25/2019 17:53

Instrument ID: CMSX Calib Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 02/25/2019 15:59

Lab File ID: xb2515.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.7672	0.6514		0.849	1.00	-15.1	20.0
Dichlorobiphenyl	Ave	0.5335	0.4435		0.831	1.00	-16.9	20.0
Trichlorobiphenyl	Ave	0.3858	0.3522		0.913	1.00	-8.7	20.0
Tetrachlorobiphenyl	Ave	0.2626	0.2346		1.79	2.00	-10.7	20.0
Pentachlorobiphenyl	Ave	0.2085	0.1851		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.1988	0.1774		1.78	2.00	-10.8	20.0
Heptachlorobiphenyl	Ave	0.1936	0.1620		2.51	3.00	-16.3	20.0
Octachlorobiphenyl	Ave	0.1674	0.1519		2.72	3.00	-9.3	20.0
DCB Decachlorobiphenyl	Ave	0.0311	0.0288		4.63	5.00	-7.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0422	0.0401		4.75	5.00	-5.0	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab File ID: xb2702.D DFTPP Injection Date: 02/27/2019

Instrument ID: CMSX DFTPP Injection Time: 14:22

Analysis Batch No.: 559821

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	58.6
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.1
275	10 - 30% of mass 198	25.6
365	Greater than 1% of mass 198	3.1
441	Present but less than mass 443	14.7 (90.3) 2
442	Greater than 40% of mass 198	87.5
443	17 - 23% of mass 442	16.3 (18.6) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559821/2	xb2703.D	02/27/2019	14:53
	CCVIS 680-559821/3	xb2704.D	02/27/2019	15:23
	MB 680-559624/3-A	xb2706.D	02/27/2019	16:20
	LCS 680-559624/4-A	xb2707.D	02/27/2019	16:49
	LCSD 680-559624/5-A	xb2708.D	02/27/2019	17:18
MRC-MW157A-020519	240-107706-4	xb2709.D	02/27/2019	17:46
	CCV 680-559821/13	xb2714.D	02/27/2019	20:09

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCVIS 680-559821/3 Calibration Date: 02/27/2019 15:23

Instrument ID: CMSX Calib Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 02/25/2019 15:59

Lab File ID: xb2704.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.7672	0.6938		0.904	1.00	-9.6	20.0
Dichlorobiphenyl	Ave	0.5335	0.4921		0.922	1.00	-7.8	20.0
Trichlorobiphenyl	Ave	0.3858	0.3486		0.904	1.00	-9.6	20.0
Tetrachlorobiphenyl	Ave	0.2626	0.2434		1.85	2.00	-7.3	20.0
Pentachlorobiphenyl	Ave	0.2085	0.1957		1.88	2.00	-6.2	20.0
Hexachlorobiphenyl	Ave	0.1988	0.1943		1.95	2.00	-2.3	20.0
Heptachlorobiphenyl	Ave	0.1936	0.1723		2.67	3.00	-11.0	20.0
Octachlorobiphenyl	Ave	0.1674	0.1579		2.83	3.00	-5.7	20.0
DCB Decachlorobiphenyl	Ave	0.0311	0.0305		4.91	5.00	-1.8	20.0
Decachlorobiphenyl-13C12	Ave	0.0422	0.0407		4.83	5.00	-3.4	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCV 680-559821/13 Calibration Date: 02/27/2019 20:09

Instrument ID: CMSX Calib Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 02/25/2019 15:59

Lab File ID: xb2714.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.7672	0.6740		0.879	1.00	-12.1	20.0
Dichlorobiphenyl	Ave	0.5335	0.4750		0.890	1.00	-11.0	20.0
Trichlorobiphenyl	Ave	0.3858	0.3417		0.886	1.00	-11.4	20.0
Tetrachlorobiphenyl	Ave	0.2626	0.2363		1.80	2.00	-10.0	20.0
Pentachlorobiphenyl	Ave	0.2085	0.1929		1.85	2.00	-7.5	20.0
Hexachlorobiphenyl	Ave	0.1988	0.1864		1.87	2.00	-6.3	20.0
Heptachlorobiphenyl	Ave	0.1936	0.1675		2.60	3.00	-13.5	20.0
Octachlorobiphenyl	Ave	0.1674	0.1554		2.79	3.00	-7.2	20.0
DCB Decachlorobiphenyl	Ave	0.0311	0.0303		4.87	5.00	-2.6	20.0
Decachlorobiphenyl-13C12	Ave	0.0422	0.0403		4.78	5.00	-4.5	20.0

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Sample No.: CCVIS 680-559059/3 Date Analyzed: 02/21/2019 06:44

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2030.D Heated Purge: (Y/N) N

Calibration ID: 63054

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		170892	12.41	169663	18.67		
UPPER LIMIT		222160	12.91	220562	19.17		
LOWER LIMIT		119624	11.91	118764	18.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-558728/12-A		143915	12.41	132159	18.67		
LCS 680-558728/13-A		164188	12.41	171582	18.67		
LCSD 680-558728/14-A		179669	12.41	188862	18.67		
240-107706-3	MRC-MW159A-020519	186609	12.41	188056	18.67		
CCV 680-559059/21		159076	12.41	142687	18.67		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Instrument ID: CMSX Calibration Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calibration End Date: 02/25/2019 15:59

Calibration ID: 63879

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		161613	12.38	155674	18.63		
UPPER LIMIT		242420	12.88	233511	19.13		
LOWER LIMIT		80807	11.88	77837	18.13		
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 680-559536/12		159287	12.38	149107	18.63		
240-107706-2	MRC-MW155A-020519	145532	12.38	157221	18.63		
CCV 680-559536/7		180140	12.38	185267	18.63		
CCVIS 680-559821/3		174833	12.38	172131	18.63		
MB 680-559624/3-A		157619	12.38	166079	18.63		
LCS 680-559624/4-A		189494	12.38	201227	18.63		
LCSD 680-559624/5-A		142733	12.38	147833	18.63		
240-107706-4	MRC-MW157A-020519	158071	12.38	159192	18.63		
CCV 680-559821/13		174038	12.38	179097	18.63		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Sample No.: CCVIS 680-559821/3 Date Analyzed: 02/27/2019 15:23

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2704.D Heated Purge: (Y/N) N

Calibration ID: 63879

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		174833	12.38	172131	18.63		
UPPER LIMIT		227283	12.88	223770	19.13		
LOWER LIMIT		122383	11.88	120492	18.13		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-559624/3-A		157619	12.38	166079	18.63		
LCS 680-559624/4-A		189494	12.38	201227	18.63		
LCSD 680-559624/5-A		142733	12.38	147833	18.63		
240-107706-4	MRC-MW157A-020519	158071	12.38	159192	18.63		
CCV 680-559821/13		174038	12.38	179097	18.63		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

SAMPLE IDENTIFICATION	LCS 680-558728/13-A
COMPOUND	Monochlorobiphenyl
COMPOUND AREA	205079
INTERNAL STANDARD AMOUNT (ng)	0.75
DILUTION FACTOR	1
INTERNAL STANDARD AREA	171582
AVERAGE RRF	0.8305

205079 x 0.75 x 1 / 171582 x 0.8305 = 1.0794 ng/ml

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107706-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 680-558728/13-A

Matrix: Water | Lab File ID: xb2032.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:41

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	4.67		0.30	0.030
26601-64-9	Hexachlorobiphenyl	3.37		0.20	0.015
53742-07-7	Nonachlorobiphenyl	14.6		0.50	0.049
55722-26-4	Octachlorobiphenyl	5.09		0.30	0.038
27323-18-8	Monochlorobiphenyl	1.08		0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	7.81		0.50	0.070
25512-42-9	Dichlorobiphenyl	1.32		0.10	0.0054
25429-29-2	Pentachlorobiphenyl	3.47		0.20	0.014
26914-33-0	Tetrachlorobiphenyl	2.93		0.20	0.013
25323-68-6	Trichlorobiphenyl	1.47		0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	75		25-113

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\xb2032.D
Lims ID: LCS 680-558728/13-A
Client ID:
Sample Type: LCS
Inject. Date: 21-Feb-2019 07:41:30 ALS Bottle#: 26 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: LCS 680-558728/13-A
Misc. Info.: 680-0053932-005
Operator ID: Instrument ID: CMSX

Method: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\680_CMSX.m
Limit Group: 680
Last Update: 22-Feb-2019 09:37:47 Calib Date: 08-Jan-2019 18:02:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Savannah\ChromData\CMSX\20190108-53107.b\xa0812.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: CTX0319

First Level Reviewer: davisn Date: 22-Feb-2019 09:37:47

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/ml	Flags
A 23 Total Monochlorobiphenyls	188	9.762	9.265 - 10.260		0	205079	1.08	
A 24 Total Dichlorobiphenyls	222	11.569	10.603 - 12.535		0	176787	1.32	
* 5 Phenanthrene-d10	188	12.409	12.409	0.0	100	164188	0.7500	
A 25 Total Trichlorobiphenyls	256	13.255	11.910 - 14.600		0	141116	1.47	
A 26 Total Tetrachlorobiphenyls	292	14.773	13.047 - 16.499		0	197767	2.93	
A 27 Total Pentachlorobiphenyls	326	16.192	14.339 - 18.045		0	190369	3.47	
A 28 Total Hexachlorobiphenyls	360	17.480	15.502 - 19.457		0	183545	3.37	
* 15 Chrysene-d12	240	18.669	18.668	0.001	100	171582	0.7500	a
A 29 Total Heptachlorobiphenyls	394	18.749	17.146 - 20.353		0	253613	4.67	
A 30 Total Octachlorobiphenyls	430	19.718	18.642 - 20.795		0	238961	5.09	
A 31 Total Nonachlorobiphenyls	464	20.250	18.500 - 22.000		0	139953	14.6	
19 PCB-208	464	20.286	20.286	0.0	96	140097	0	
$ 22 Decachlorobiphenyl-13C12	510	21.797	21.796	0.001	77	23217	1.88	a
32 DCB Decachlorobiphenyl	498	21.797	21.796	0.001	77	74989	7.81	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

WorkSheet Quantitation Report

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 23 Total Monochlorobiphenyls									
188	9.328	9.265 -	10.260	22	205079	1.08			
190	9.328				66572		2.5- 3.5	3.1	
152	9.328				115591		50.7- 50.7	0.6	
153	9.328				48419		23.2- 23.2	1.4	
A 24 Total Dichlorobiphenyls									
222	11.569	10.603 -	12.535	23	176787	1.32			
224	11.569				113344		1.3- 1.7	1.6	
152	11.554				139546		31.7- 111.7	0.8	
153	11.554				17682		0.0- 49.1	6.4	
186	11.554				16961		0.0- 48.9	6.7	
188	11.569				6120		0.0- 43.3	18.5	
* 5 Phenanthrene-d10									
188	12.409	12.409	0.0	100	164188	0.7500			
189	12.409	12.409	0.0		24329		5.9- 7.5	6.7	
A 25 Total Trichlorobiphenyls									
256	13.087	11.910 -	14.600	95	141116	1.47			
258	13.087				135077		0.8- 1.2	1.0	
186	13.087				95422		26.5- 106.5	1.4	
188	13.087				30921		0.0- 61.5	4.4	
A 26 Total Tetrachlorobiphenyls									
292	13.367	13.047 -	16.499	0	197767	2.93			
290	13.367				154086		1.1- 1.5	1.3	
220	13.353				193028		58.1- 138.1	0.8	
222	13.353				123321		22.9- 102.9	1.2	
A 27 Total Pentachlorobiphenyls									
326	16.249	14.339 -	18.045	91	190369	3.47			
324	16.249				119339		1.4- 1.8	1.6	
254	16.231				142739		41.9- 121.9	0.8	
256	16.249				136737		38.2- 118.2	0.9	
258	16.249				44114		0.0- 65.4	2.7	
A 28 Total Hexachlorobiphenyls									
360	16.439	15.502 -	19.457	59	183545	3.37			
362	16.439				145798		1.0- 1.4	1.3	
288	16.439				111244		61.3- 61.3	1.3	
290	16.439				141842		220.6- 220.6	1.0	
292	16.439				67177		0.0- 0.0	2.2	
* 15 Chrysene-d12									a
240	18.669	18.668	0.001	100	171582	0.7500			a
241	18.669	18.668	0.001		33019		4.3- 5.9	5.2	
A 29 Total Heptachlorobiphenyls									
394	17.217	17.146 -	20.353	97	253613	4.67			
396	17.217				240228		0.8- 1.2	1.1	
322	17.199				110283		48.3- 48.3	2.2	
324	17.199				176673		77.4- 77.4	1.4	

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 30 Total Octachlorobiphenyls									
430	18.859	18.642	-20.795	96	238961	5.09			
428	18.859				217376		0.9- 1.3	1.1	
356	18.842				88632		39.6- 39.6	2.5	
358	18.842				166788		75.2- 75.2	1.3	
360	18.842				132602		59.6- 59.6	1.6	
A 31 Total Nonachlorobiphenyls									
464	20.286	18.500	-22.000	66	139953	14.6			
466	20.286				101255		1.1- 1.5	1.4	
390	20.286				70728		0.0- 0.0	1.4	
392	20.286				152776		0.0- 0.0	0.7	
394	20.286				142469		0.0- 0.0	0.7	
$ 22 Decachlorobiphenyl-13C12									a
510	21.797	21.796	0.001	77	23217	1.88			a
512	21.797	21.796	0.001		17660		0.9- 1.3	1.3	
32 DCB Decachlorobiphenyl									
498	21.797	21.796	0.001	77	74989	7.81			
500	21.797	21.796	0.001		60499		0.9- 1.3	1.2	
424	21.797	21.796	0.001		35328		0.0- 0.0	1.0	
426	21.797	21.796	0.001		86957		0.0- 0.0	1.0	
428	21.797	21.796	0.001		93723		0.0- 0.0	1.0	
430	21.797	21.796	0.001		58374		0.0- 0.0	1.0	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107706-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW155A-020519	240-107706-2
MRC-MW159A-020519	240-107706-3
MRC-MW157A-020519	240-107706-4

Comments:

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-367445/4 02/08/2019 09:42				CCV 240-367445/30 02/08/2019 11:43				CCV 240-367445/42 02/08/2019 12:38			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	13100		12500	105	23900		25000	95	24900		25000	100
Manganese	1530		1500	102	1900		2000	95	1960		2000	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	CCV 240-367445/54 02/08/2019 13:33											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	23700		25000	95								
Manganese	1880		2000	94								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-367445/6 02/08/2019 09:52				CCVL 240-367445/56 02/08/2019 13:42							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	204		200	102	192	J	200	96				
Manganese	12.7	J	15.0	85	12.4	J	15.0	83				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-367464/7 02/08/2019 12:57				CCV 240-367464/97 02/08/2019 16:26				CCV 240-367464/109 02/08/2019 16:54			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	188		200	94	236		250	95	239		250	96
Antimony	38.9		40.0	97	50.8		50.0	102	52.0		50.0	104
Arsenic	38.3		40.0	96	46.0		50.0	92	48.0		50.0	96
Barium	36.1		40.0	90	47.7		50.0	95	49.4		50.0	99
Beryllium	38.1		40.0	95	48.7		50.0	97	50.8		50.0	102
Cadmium	36.4		40.0	91	47.2		50.0	94	48.2		50.0	96
Calcium	18700		20000	94	24400		25000	98	24700		25000	99
Chromium	38.4		40.0	96	49.9		50.0	100	50.4		50.0	101
Cobalt	37.3		40.0	93	46.3		50.0	93	47.8		50.0	96
Copper	38.0		40.0	95	47.0		50.0	94	48.2		50.0	96
Iron	9130		10000	91	11400		12500	92	11700		12500	94
Lead	38.9		40.0	97	48.9		50.0	98	50.1		50.0	100
Magnesium	18800		20000	94	23500		25000	94	24200		25000	97
Manganese	188		200	94	246		250	98	248		250	99
Nickel	38.6		40.0	97	46.1		50.0	92	48.3		50.0	97
Potassium	19300		20000	97	24400		25000	98	24800		25000	99
Selenium	37.9		40.0	95	48.6		50.0	97	50.0		50.0	100
Silver	38.6		40.0	97	50.0		50.0	100	50.5		50.0	101
Sodium	18900		20000	94	23500		25000	94	24100		25000	96
Thallium	38.0		40.0	95	49.0		50.0	98	50.1		50.0	100
Vanadium	37.7		40.0	94	49.9		50.0	100	50.5		50.0	101
Zinc	37.6		40.0	94	46.0		50.0	92	48.2		50.0	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	CCV 240-367464/116 02/08/2019 17:10											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	244		250	97								
Antimony	52.4		50.0	105								
Arsenic	48.1		50.0	96								
Barium	49.7		50.0	99								
Beryllium	47.9		50.0	96								
Cadmium	48.2		50.0	96								
Calcium	24800		25000	99								
Chromium	49.7		50.0	99								
Cobalt	48.7		50.0	97								
Copper	48.7		50.0	97								
Iron	12000		12500	96								
Lead	48.7		50.0	97								
Magnesium	24600		25000	99								
Manganese	248		250	99								
Nickel	48.5		50.0	97								
Potassium	25200		25000	101								
Selenium	48.5		50.0	97								
Silver	50.6		50.0	101								
Sodium	24400		25000	98								
Thallium	48.7		50.0	97								
Vanadium	49.9		50.0	100								
Zinc	48.1		50.0	96								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICV Source: MTMSCRI6020AW_00079 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00079

Analyte	ICVL 240-367464/9 02/08/2019 13:01				CCVL 240-367464/118 02/08/2019 17:15							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	44.4	J	50.0	89	44.2	J	50.0	88				
Antimony	2.00		2.00	100	2.01		2.00	101				
Arsenic	5.00		5.00	100	4.71	J	5.00	94				
Barium	4.82	J	5.00	96	5.06		5.00	101				
Beryllium	0.981	J	1.00	98	1.05		1.00	105				
Cadmium	0.929	J	1.00	93	1.03		1.00	103				
Calcium	939	J	1000	94	948	J	1000	95				
Chromium	1.97	J	2.00	98	1.99	J	2.00	100				
Cobalt	0.944	J	1.00	94	0.967	J	1.00	97				
Copper	1.96	J	2.00	98	2.00		2.00	100				
Iron	97.4	J	100	97	96.9	J	100	97				
Lead	1.03		1.00	103	1.06		1.00	106				
Magnesium	991	J	1000	99	982	J	1000	98				
Manganese	4.57	J	5.00	91	4.81	J	5.00	96				
Nickel	1.90	J	2.00	95	1.59	J	2.00	79				
Potassium	1020		1000	102	1040		1000	104				
Selenium	4.61	J	5.00	92	4.86	J	5.00	97				
Silver	1.00		1.00	100	0.999	J	1.00	100				
Sodium	980	J	1000	98	1020		1000	102				
Thallium	1.01		1.00	101	1.03		1.00	103				
Vanadium	4.80	J	5.00	96	4.78	J	5.00	96				
Zinc	18.2	J	20.0	91	18.2	J	20.0	91				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367445/5 02/08/2019 09:47		CCB 240-367445/31 02/08/2019 11:47		CCB 240-367445/43 02/08/2019 12:43		CCB 240-367445/55 02/08/2019 13:37	
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U	26	U
Manganese	15	2.1	U	2.1	U	2.1	U	2.1	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367464/8 02/08/2019 12:59		CCB 240-367464/98 02/08/2019 16:28		CCB 240-367464/110 02/08/2019 16:56		CCB 240-367464/117 02/08/2019 17:13	
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367176/1-A

Instrument Code: I12 Batch No.: 367445

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	26	U		6010C
7439-96-5	Manganese	2.1	U		6010C

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367176/1-A

Instrument Code: I14 Batch No.: 367464

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	1.7	U		6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	3.66	J		6020A
7440-02-0	Nickel	1.5	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICSA 240-367445/8 Instrument ID: I12

Lab File ID: I12020819A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**181740**	**91**
Manganese		**-1.48**	
Aluminum	*500000*	*490620*	*98*
Antimony		*-0.233*	
Arsenic		*-7.18*	
Barium		*0.0948*	
Beryllium		*0.383*	
Boron		*0.286*	
Cadmium		*0.922*	
Calcium	*500000*	*458860*	*92*
Chromium		*3.15*	
Cobalt		*-4.75*	
Copper		*-0.459*	
Lead		*2.49*	
Lithium		*22.6*	
Magnesium	*500000*	*495590*	*99*
Molybdenum		*-1.28*	
Nickel		*3.61*	
Potassium		*-6.25*	
Selenium		*0.650*	
Silicon		*6.55*	
Silver		*-1.26*	
Sodium		*69.4*	
Strontium		*8.16*	
Thallium		*-3.39*	
Tin		*0.678*	
Titanium		*-1.72*	
Vanadium		*0.444*	
Zinc		*-2.40*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICSAB 240-367445/9 Instrument ID: I12

Lab File ID: I12020819A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Iron	**200000**	**181690**	**91**
Manganese	**500**	**469**	**94**
Aluminum	*500000*	*486790*	*97*
Antimony	*1000*	*982*	*98*
Arsenic	*1000*	*986*	*99*
Barium	*500*	*480*	*96*
Beryllium	*500*	*462*	*92*
Boron	*500*	*501*	*100*
Cadmium	*1000*	*994*	*99*
Calcium	*500000*	*465920*	*93*
Chromium	*500*	*464*	*93*
Cobalt	*500*	*495*	*99*
Copper	*500*	*525*	*105*
Lead	*1000*	*864*	*86*
Lithium	*500*	*529*	*106*
Magnesium	*500000*	*498270*	*100*
Molybdenum	*1000*	*950*	*95*
Nickel	*1000*	*984*	*98*
Potassium	*10000*	*10003*	*100*
Selenium	*1000*	*979*	*98*
Silicon	*10000*	*9631*	*96*
Silver	*1000*	*1078*	*108*
Sodium	*10000*	*10023*	*100*
Strontium	*1500*	*1354*	*90*
Thallium	*1000*	*933*	*93*
Tin	*500*	*500*	*100*
Titanium	*500*	*495*	*99*
Vanadium	*500*	*465*	*93*
Zinc	*1000*	*987*	*99*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICSA 240-367464/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**47785**	**96**
Antimony		**0.0310**	
Arsenic		**0.0730**	
Barium		**0.0280**	
Beryllium		**-0.0060**	
Cadmium		**0.169**	
Calcium	**50000**	**47102**	**94**
Chromium		**0.170**	
Cobalt		**0.0080**	
Copper		**0.118**	
Iron	**50000**	**46913**	**94**
Lead		**0.0370**	
Magnesium	**50000**	**47397**	**95**
Manganese		**0.0170**	
Nickel		**0.0720**	
Potassium	**50000**	**47781**	**96**
Selenium		**0.0690**	
Silver		**0.0100**	
Sodium	**50000**	**47478**	**95**
Thallium		**0.0020**	
Vanadium		**0.118**	
Zinc		**-0.558**	
Boron		*2.42*	
Lithium		*0.107*	
Molybdenum	*1000*	*1063*	*106*
Strontium		*0.432*	
Tin		*-0.194*	
Titanium	*1000*	*988*	*99*
Tungsten		*0.105*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICSAB 240-367464/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Aluminum	**50000**	**46948**	**94**
Antimony	**100**	**102**	**102**
Arsenic	**100**	**94.9**	**95**
Barium	**100**	**95.6**	**96**
Beryllium	**100**	**95.8**	**96**
Cadmium	**100**	**93.8**	**94**
Calcium	**50000**	**46932**	**94**
Chromium	**100**	**93.7**	**94**
Cobalt	**100**	**93.1**	**93**
Copper	**100**	**92.3**	**92**
Iron	**50000**	**45597**	**91**
Lead	**100**	**96.5**	**97**
Magnesium	**50000**	**46615**	**93**
Manganese	**100**	**94.5**	**94**
Nickel	**100**	**92.7**	**93**
Potassium	**50000**	**46821**	**94**
Selenium	**100**	**97.7**	**98**
Silver	**100**	**98.2**	**98**
Sodium	**50000**	**46352**	**93**
Thallium	**100**	**93.8**	**94**
Vanadium	**100**	**93.7**	**94**
Zinc	**100**	**94.1**	**94**
Boron	*100*	*93.8*	*94*
Lithium	*100*	*99.6*	*100*
Molybdenum	*1100*	*1146*	*104*
Strontium	*100*	*95.4*	*95*
Tin	*100*	*103*	*103*
Titanium	*1100*	*1068*	*97*
Tungsten	*100*	*100*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW155A-020519 MS
Lab ID: 240-107706-2 MS
Lab Name: TestAmerica Canton
Job No.: 240-107706-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Iron	1100		140	J	1000	96	75-125		6010C
Manganese	495		15		500	96	75-125		6010C
Silver	96.2		0.053	U	100	96	75-125		6020A
Aluminum	9590		77		10000	95	75-125		6020A
Arsenic	916		0.75	U	1000	92	75-125		6020A
Barium	966		44		1000	92	75-125		6020A
Beryllium	957		0.64	J	1000	96	75-125		6020A
Cadmium	896		0.21	U	1000	90	75-125		6020A
Cobalt	919		0.49	J	1000	92	75-125		6020A
Chromium	950		1.4	J	1000	95	75-125		6020A
Copper	946		35		1000	91	75-125		6020A
Iron	9130		140		10000	90	75-125		6020A
Manganese	964		17		1000	95	75-125		6020A
Nickel	905		2.2		1000	90	75-125		6020A
Lead	942		0.45	U	1000	94	75-125		6020A
Antimony	96.7		0.57	U	100	97	75-125		6020A
Selenium	941		0.89	U	1000	94	75-125		6020A
Thallium	236		0.20	U	250	95	75-125		6020A
Vanadium	955		0.82	U	1000	96	75-125		6020A
Zinc	929		24		1000	91	75-125		6020A
Calcium	66400		60000		10000	64	75-125	4	6020A
Potassium	11000		1600		10000	93	75-125		6020A
Magnesium	22700		14000		10000	91	75-125		6020A
Sodium	112000		100000		10000	89	75-125	4	6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW155A-020519 MSD | Lab ID: 240-107706-2 MSD

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Iron	1120		1000	98	75-125	2	20		6010C
Manganese	499		500	97	75-125	1	20		6010C
Silver	96.8		100	97	75-125	1	20		6020A
Aluminum	9580		10000	95	75-125	0	20		6020A
Arsenic	913		1000	91	75-125	0	20		6020A
Barium	963		1000	92	75-125	0	20		6020A
Beryllium	963		1000	96	75-125	1	20		6020A
Cadmium	897		1000	90	75-125	0	20		6020A
Cobalt	917		1000	92	75-125	0	20		6020A
Chromium	947		1000	95	75-125	0	20		6020A
Copper	938		1000	90	75-125	1	20		6020A
Iron	9010		10000	89	75-125	1	20		6020A
Manganese	949		1000	93	75-125	2	20		6020A
Nickel	899		1000	90	75-125	1	20		6020A
Lead	960		1000	96	75-125	2	20		6020A
Antimony	97.1		100	97	75-125	0	20		6020A
Selenium	933		1000	93	75-125	1	20		6020A
Thallium	236		250	94	75-125	0	20		6020A
Vanadium	950		1000	95	75-125	1	20		6020A
Zinc	936		1000	91	75-125	1	20		6020A
Calcium	66000		10000	61	75-125	1	20	4	6020A
Potassium	10900		10000	92	75-125	1	20		6020A
Magnesium	22500		10000	90	75-125	1	20		6020A
Sodium	112000		10000	87	75-125	0	20	4	6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367176/2-A

Lab Name: TestAmerica Canton Job No.: 240-107706-1

Sample Matrix: Water LCS Source: MTICP1_00079

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	1020		102	80	120		6010C
Manganese	500	501		100	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367176/3-A

Lab Name: TestAmerica Canton Job No.: 240-107706-1

Sample Matrix: Water LCS Source: MTICPMSB_00037

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	96.9		97	80	120		6020A
Aluminum	10000	9520		95	80	120		6020A
Arsenic	1000	878		88	80	120		6020A
Barium	1000	919		92	80	120		6020A
Beryllium	1000	914		91	80	120		6020A
Cadmium	1000	898		90	80	120		6020A
Cobalt	1000	914		91	80	120		6020A
Chromium	1000	945		95	80	120		6020A
Copper	1000	904		90	80	120		6020A
Iron	10000	8860		89	80	120		6020A
Manganese	1000	973		97	80	120		6020A
Nickel	1000	910		91	80	120		6020A
Lead	1000	964		96	80	120		6020A
Antimony	100	96.1		96	80	120		6020A
Selenium	1000	917		92	80	120		6020A
Thallium	250	238		95	80	120		6020A
Vanadium	1000	941		94	80	120		6020A
Zinc	1000	920		92	80	120		6020A
Calcium	10000	8650		87	80	120		6020A
Potassium	10000	9610		96	80	120		6020A
Magnesium	10000	9320		93	80	120		6020A
Sodium	10000	9320		93	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107706-2

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107706-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Iron	140	J	133	J	NC		6010C
Manganese	15		15.5	J	NC		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107706-2

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107706-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Silver	0.053	U	0.27	U	NC		6020A
Aluminum	77		170	U	NC		6020A
Arsenic	0.75	U	3.8	U	NC		6020A
Barium	44		43.5		NC		6020A
Beryllium	0.64	J	1.5	U	NC		6020A
Cadmium	0.21	U	1.1	U	NC		6020A
Cobalt	0.49	J	0.95	U	NC		6020A
Chromium	1.4	J	4.9	U	NC		6020A
Copper	35		34.4		NC		6020A
Iron	140		240	U	NC		6020A
Manganese	17		17.2	J	NC		6020A
Nickel	2.2		7.4	U	NC		6020A
Lead	0.45	U	2.3	U	NC		6020A
Antimony	0.57	U	2.9	U	NC		6020A
Selenium	0.89	U	4.5	U	NC		6020A
Thallium	0.20	U	1.0	U	NC		6020A
Vanadium	0.82	U	4.1	U	NC		6020A
Zinc	24		75	U	NC		6020A
Calcium	60000		61700		NC		6020A
Potassium	1600		1650	J	NC		6020A
Magnesium	14000		14000		NC		6020A
Sodium	100000		106000		2.8		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG No.:

ICP-AES Instrument ID: I12 Date: 12/21/2018

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	V	
Aluminum										0.034040				0.056989	
Antimony		-0.00006			-0.000422			-0.000035						0.002232	
Arsenic		0.000009			-0.000202	0.00931			-0.0003555	0.00123617					
Beryllium														0.000235	
Cadmium			0.012308					0.000004							
Chromium									0.000415						
Cobalt													0.002128		
Copper				0.000018	0.000361			-0.000032					-0.003157		
Lead		-0.000091					0.00057707	0.000048			0.000131	0.000025			
Lithium				0.000011											
Nickel					0.000518			0.000059							
Selenium		-0.000032							0.000338						
Thallium		0.000034			0.003802			-0.000025	-0.00062023					0.001371	
Vanadium								0.000064							
Zinc						-0.001092									

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107706-1

SDG No.:

Instrument ID: I12 Date: 01/28/2019 12:19

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		15000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107706-1

SDG No.:

Instrument ID: I14 Date: 10/02/2018 11:17

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367176/1-A	02/07/2019 14:00	367176		50	50
LCS 240-367176/2-A	02/07/2019 14:00	367176		50	50
240-107706-2	02/07/2019 14:00	367176		50	50
240-107706-2 MS	02/07/2019 14:00	367176		50	50
240-107706-2 MSD	02/07/2019 14:00	367176		50	50
240-107706-3	02/07/2019 14:00	367176		50	50
240-107706-4	02/07/2019 14:00	367176		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367176/1-A	02/07/2019 14:00	367176		50	50
LCS 240-367176/3-A	02/07/2019 14:00	367176		50	50
240-107706-2	02/07/2019 14:00	367176		50	50
240-107706-2 MS	02/07/2019 14:00	367176		50	50
240-107706-2 MSD	02/07/2019 14:00	367176		50	50
240-107706-3	02/07/2019 14:00	367176		50	50
240-107706-4	02/07/2019 14:00	367176		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/08/2019 09:28 End Date: 02/08/2019 18:33

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ICIS 240-367445/1	1		09:28	X	X																								
CALSTD 240-367445/2 IC			09:33	X	X																								
CALSTD 240-367445/3 IC			09:38	X	X																								
ICV 240-367445/4	1		09:42	X	X																								
ICB 240-367445/5	1		09:47	X	X																								
ICVL 240-367445/6	1		09:52	X	X																								
ZZZZZZ			09:56																										
ICSA 240-367445/8	1		10:01	X	X																								
ICSAB 240-367445/9	1		10:06	X	X																								
CCV 240-367445/10			10:10																										
CCB 240-367445/11			10:15																										
ZZZZZZ			10:19																										
ZZZZZZ			10:24																										
ZZZZZZ			10:29																										
ZZZZZZ			10:33																										
ZZZZZZ			10:38																										
ZZZZZZ			10:43																										
CCV 240-367445/18			10:48																										
CCB 240-367445/19			10:52																										
ZZZZZZ			10:57																										
ZZZZZZ			11:02																										
HIGHSTD 240-367445/22 IC			11:06	X	X																								
ZZZZZZ			11:11																										
ZZZZZZ			11:16																										
ZZZZZZ			11:20																										
ZZZZZZ			11:25																										
ZZZZZZ			11:29																										
ZZZZZZ			11:34																										
ZZZZZZ			11:38																										
CCV 240-367445/30	1		11:43	X	X																								
CCB 240-367445/31	1		11:47	X	X																								
ZZZZZZ			11:52																										
ZZZZZZ			11:56																										
ZZZZZZ			12:01																										
ZZZZZZ			12:06																										
ZZZZZZ			12:10																										
ZZZZZZ			12:15																										
MB 240-367176/1-A	1	R	12:20	X	X																								
LCS 240-367176/2-A	1	R	12:25	X	X																								
240-107706-2	1	R	12:29	X	X																								
240-107706-2 SD	5	R	12:34	X	X																								
CCV 240-367445/42	1		12:38	X	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/08/2019 09:28 End Date: 02/08/2019 18:33

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
CCB 240-367445/43	1		12:43	X	X																							
ZZZZZZ			12:47																									
240-107706-2 MS	1	R	12:52	X	X																							
240-107706-2 MSD	1	R	12:56	X	X																							
240-107706-3	1	R	13:00	X	X																							
240-107706-4	1	R	13:05	X	X																							
ZZZZZZ			13:10																									
ZZZZZZ			13:14																									
ZZZZZZ			13:19																									
ZZZZZZ			13:24																									
ZZZZZZ			13:28																									
CCV 240-367445/54	1		13:33	X	X																							
CCB 240-367445/55	1		13:37	X	X																							
CCVL 240-367445/56	1		13:42	X	X																							
ZZZZZZ			13:47																									
ZZZZZZ			13:51																									
ZZZZZZ			13:56																									
ZZZZZZ			14:01																									
ZZZZZZ			14:05																									
ZZZZZZ			14:10																									
ZZZZZZ			14:15																									
ZZZZZZ			14:19																									
ZZZZZZ			14:24																									
CCV 240-367445/66			14:29																									
CCB 240-367445/67			14:33																									
ZZZZZZ			14:38																									
ZZZZZZ			14:42																									
ZZZZZZ			14:47																									
ZZZZZZ			14:51																									
ZZZZZZ			14:56																									
ZZZZZZ			15:00																									
ZZZZZZ			15:05																									
ZZZZZZ			15:10																									
ZZZZZZ			15:14																									
ZZZZZZ			15:18																									
CCV 240-367445/78			15:23																									
CCB 240-367445/79			15:27																									
ZZZZZZ			15:32																									
ZZZZZZ			15:37																									
ZZZZZZ			15:41																									
ZZZZZZ			15:46																									
ZZZZZZ			15:50																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/08/2019 09:28 End Date: 02/08/2019 18:33

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			15:55																									
ZZZZZZ			15:59																									
ZZZZZZ			16:04																									
ZZZZZZ			16:08																									
ZZZZZZ			16:13																									
CCV 240-367445/90			16:18																									
CCB 240-367445/91			16:22																									
ZZZZZZ			16:27																									
ZZZZZZ			16:32																									
ZZZZZZ			16:36																									
ZZZZZZ			16:41																									
ZZZZZZ			16:46																									
ZZZZZZ			16:51																									
ZZZZZZ			16:55																									
ZZZZZZ			17:00																									
ZZZZZZ			17:04																									
ZZZZZZ			17:09																									
CCV 240-367445/102			17:14																									
CCB 240-367445/103			17:18																									
ZZZZZZ			17:23																									
ZZZZZZ			17:27																									
ZZZZZZ			17:32																									
ZZZZZZ			17:37																									
ZZZZZZ			17:42																									
ZZZZZZ			17:46																									
ZZZZZZ			17:51																									
ZZZZZZ			17:55																									
ZZZZZZ			18:00																									
ZZZZZZ			18:05																									
CCV 240-367445/114			18:10																									
CCB 240-367445/115			18:14																									
ZZZZZZ			18:19																									
ZZZZZZ			18:24																									
CCV 240-367445/118			18:28																									
CCB 240-367445/119			18:33																									

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/08/2019 12:42 End Date: 02/08/2019 17:25

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn						
RINSE 240-367464/1			12:42																												
ICIS 240-367464/2			12:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD1 240-367464/3 IC	1		12:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD2 240-367464/4 IC	1		12:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD3 240-367464/5 IC	1		12:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD4 240-367464/6 IC	1		12:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICV 240-367464/7	1		12:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICB 240-367464/8	1		12:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICVL 240-367464/9	1		13:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSA 240-367464/10	1		13:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSAB 240-367464/11	1		13:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-367464/12			13:08																												
CCB 240-367464/13			13:11																												
ZZZZZZ			13:13																												
ZZZZZZ			13:16																												
ZZZZZZ			13:18																												
ZZZZZZ			13:20																												
ZZZZZZ			13:22																												
ZZZZZZ			13:25																												
ZZZZZZ			13:27																												
ZZZZZZ			13:29																												
ZZZZZZ			13:31																												
ZZZZZZ			13:33																												
CCV 240-367464/24			13:36																												
CCB 240-367464/25			13:38																												
ZZZZZZ			13:40																												
ZZZZZZ			13:43																												
ZZZZZZ			13:45																												
ZZZZZZ			13:47																												
ZZZZZZ			13:50																												
ZZZZZZ			13:52																												
ZZZZZZ			13:54																												
ZZZZZZ			13:57																												
ZZZZZZ			13:59																												
ZZZZZZ			14:01																												
CCV 240-367464/36			14:04																												
CCB 240-367464/37			14:06																												
ZZZZZZ			14:09																												
ZZZZZZ			14:11																												
ZZZZZZ			14:13																												
ZZZZZZ			14:16																												
ZZZZZZ			14:18																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/08/2019 12:42 End Date: 02/08/2019 17:25

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			14:20																												
ZZZZZZ			14:23																												
ZZZZZZ			14:25																												
ZZZZZZ			14:27																												
ZZZZZZ			14:30																												
CCV 240-367464/48			14:32																												
CCB 240-367464/49			14:34																												
ZZZZZZ			14:37																												
ZZZZZZ			14:39																												
ZZZZZZ			14:41																												
ZZZZZZ			14:44																												
ZZZZZZ			14:46																												
ZZZZZZ			14:49																												
ZZZZZZ			14:51																												
ZZZZZZ			14:53																												
ZZZZZZ			14:56																												
ZZZZZZ			14:58																												
CCV 240-367464/60			15:00																												
CCB 240-367464/61			15:03																												
ZZZZZZ			15:05																												
ZZZZZZ			15:07																												
CCV 240-367464/64			15:10																												
CCB 240-367464/65			15:12																												
CCVL 240-367464/66			15:14																												
ZZZZZZ			15:17																												
ZZZZZZ			15:19																												
ZZZZZZ			15:21																												
ZZZZZZ			15:24																												
ZZZZZZ			15:26																												
ZZZZZZ			15:28																												
ZZZZZZ			15:30																												
ZZZZZZ			15:32																												
ZZZZZZ			15:35																												
CCV 240-367464/76			15:37																												
CCB 240-367464/77			15:39																												
ZZZZZZ			15:42																												
ZZZZZZ			15:44																												
ZZZZZZ			15:46																												
ZZZZZZ			15:49																												
ZZZZZZ			15:51																												
ZZZZZZ			15:53																												
ZZZZZZ			15:56																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/08/2019 12:42 End Date: 02/08/2019 17:25

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn							
ZZZZZZ			15:58																												
ZZZZZZ			16:00																												
ZZZZZZ			16:03																												
CCV 240-367464/88			16:05																												
CCB 240-367464/89			16:07																												
ZZZZZZ			16:10																												
ZZZZZZ			16:12																												
ZZZZZZ			16:14																												
ZZZZZZ			16:17																												
ZZZZZZ			16:19																												
ZZZZZZ			16:21																												
ZZZZZZ			16:24																												
CCV 240-367464/97	1		16:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-367464/98	1		16:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCVL 240-367464/99			16:31																												
ZZZZZZ			16:33																												
MB 240-367176/1-A	1	R	16:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
LCS 240-367176/3-A	1	R	16:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107706-2	1	R	16:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107706-2 SD	5	R	16:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			16:45																												
240-107706-2 MS	1	R	16:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107706-2 MSD	1	R	16:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107706-3	1	R	16:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-367464/109	1		16:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-367464/110	1		16:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107706-4	1	R	16:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			17:01																												
ZZZZZZ			17:03																												
ZZZZZZ			17:06																												
ZZZZZZ			17:08																												
CCV 240-367464/116	1		17:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-367464/117	1		17:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCVL 240-367464/118	1		17:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			17:18																												
ZZZZZZ			17:20																												
CCV 240-367464/121			17:22																												
CCB 240-367464/122			17:25																												

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICP Instrument ID: I12 Start Date: 02/08/2019 End Date: 02/08/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-367445/1	09:28										
ICV 240-367445/4	09:42	90		97		97		101			
ICB 240-367445/5	09:47	99		99		100		101			
ICVL 240-367445/6	09:52	96		98		99		101			
ICSA 240-367445/8	10:01	73		86		85		98			
ICSAB 240-367445/9	10:06	72		86		84		98			
CCV 240-367445/30	11:43	83		93		94		99			
CCB 240-367445/31	11:47	98		97		99		99			
MB 240-367176/1-A	12:20	99		99		100		102			
LCS 240-367176/2-A	12:25	86		94		94		100			
240-107706-2	12:29	87		95		94		100			
240-107706-2 SD	12:34	95		98		98		101			
CCV 240-367445/42	12:38	85		95		94		100			
CCB 240-367445/43	12:43	97		98		98		98			
240-107706-2 MS	12:52	82		92		92		100			
240-107706-2 MSD	12:56	82		92		92		99			
240-107706-3	13:00	88		94		95		100			
240-107706-4	13:05	92		97		98		102			
CCV 240-367445/54	13:33	84		94		95		101			
CCB 240-367445/55	13:37	99		99		101		102			
CCVL 240-367445/56	13:42	96		98		99		101			

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/08/2019 End Date: 02/08/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-367464/3 IC	12:47	96		98		100		100		99	
STD2 240-367464/4 IC	12:49	94		96		100		99		96	
STD3 240-367464/5 IC	12:52	91		95		99		99		94	
STD4 240-367464/6 IC	12:54	96		99		103		101		101	
ICV 240-367464/7	12:57	93		99		102		101		99	
ICB 240-367464/8	12:59	97		101		103		103		104	
ICVL 240-367464/9	13:01	98		101		104		104		105	
ICSA 240-367464/10	13:04	92		95		96		95		89	
ICSAB 240-367464/11	13:06	84		93		96		94		90	
CCV 240-367464/97	16:26	79		96		100		97		98	
CCB 240-367464/98	16:28	80		97		103		95		104	
MB 240-367176/1-A	16:36	84		99		107		99		106	
LCS 240-367176/3-A	16:38	91		99		102		95		98	
240-107706-2	16:40	83		98		101		96		97	
240-107706-2 SD	16:42	82		97		100		97		100	
240-107706-2 MS	16:47	83		94		97		92		91	
240-107706-2 MSD	16:49	82		95		98		94		92	
240-107706-3	16:51	83		95		100		93		96	
CCV 240-367464/109	16:54	74		88		94		91		92	
CCB 240-367464/110	16:56	82		94		98		92		99	
240-107706-4	16:58	83		95		98		93		94	
CCV 240-367464/116	17:10	81		90		92		87		90	
CCB 240-367464/117	17:13	86		94		96		92		98	
CCVL 240-367464/118	17:15	86		94		95		91		95	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/08/2019 End Date: 02/08/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-367464/3 IC	12:47	100		99		100		100		101	
STD2 240-367464/4 IC	12:49	96		97		96		101		100	
STD3 240-367464/5 IC	12:52	96		97		95		100		101	
STD4 240-367464/6 IC	12:54	103		103		102		102		102	
ICV 240-367464/7	12:57	100		100		101		102		101	
ICB 240-367464/8	12:59	104		102		104		105		105	
ICVL 240-367464/9	13:01	105		105		105		105		106	
ICSA 240-367464/10	13:04	94		94		95		102		102	
ICSAB 240-367464/11	13:06	94		95		94		101		101	
CCV 240-367464/97	16:26	102		104		103		106		107	
CCB 240-367464/98	16:28	104		106		103		103		104	
MB 240-367176/1-A	16:36	104		107		105		105		105	
LCS 240-367176/3-A	16:38	99		103		99		102		103	
240-107706-2	16:40	97		101		99		100		102	
240-107706-2 SD	16:42	100		102		103		102		103	
240-107706-2 MS	16:47	93		98		95		99		101	
240-107706-2 MSD	16:49	95		98		97		100		101	
240-107706-3	16:51	97		100		97		102		102	
CCV 240-367464/109	16:54	95		94		94		97		97	
CCB 240-367464/110	16:56	99		102		98		101		101	
240-107706-4	16:58	95		99		98		100		101	
CCV 240-367464/116	17:10	88		90		88		93		94	
CCB 240-367464/117	17:13	97		97		97		98		97	
CCVL 240-367464/118	17:15	95		96		95		96		95	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/08/2019 End Date: 02/08/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-367464/3 IC	12:47	99									
STD2 240-367464/4 IC	12:49	98									
STD3 240-367464/5 IC	12:52	96									
STD4 240-367464/6 IC	12:54	100									
ICV 240-367464/7	12:57	99									
ICB 240-367464/8	12:59	104									
ICVL 240-367464/9	13:01	105									
ICSA 240-367464/10	13:04	98									
ICSAB 240-367464/11	13:06	98									
CCV 240-367464/97	16:26	103									
CCB 240-367464/98	16:28	102									
MB 240-367176/1-A	16:36	104									
LCS 240-367176/3-A	16:38	100									
240-107706-2	16:40	95									
240-107706-2 SD	16:42	98									
240-107706-2 MS	16:47	95									
240-107706-2 MSD	16:49	98									
240-107706-3	16:51	99									
CCV 240-367464/109	16:54	94									
CCB 240-367464/110	16:56	98									
240-107706-4	16:58	98									
CCV 240-367464/116	17:10	89									
CCB 240-367464/117	17:13	95									
CCVL 240-367464/118	17:15	94									

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367176 Batch Start Date: 02/07/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/07/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00079	MTICP2A 00090	MTTMHCL 00235
MB 240-367176/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-367176/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107706-I-2	MRC-MW155A-020519	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107706-I-2 MS	MRC-MW155A-020519	3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107706-I-2 MSD	MRC-MW155A-020519	3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107706-I-3	MRC-MW159A-020519	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107706-I-4	MRC-MW157A-020519	3005A, 6010C	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-367176/1		3005A, 6010C		1 mL					
LCS 240-367176/2		3005A, 6010C		1 mL					
240-107706-I-2	MRC-MW155A-020519	3005A, 6010C	R	1 mL					
240-107706-I-2 MS	MRC-MW155A-020519	3005A, 6010C	R	1 mL					
240-107706-I-2 MSD	MRC-MW155A-020519	3005A, 6010C	R	1 mL					
240-107706-I-3	MRC-MW159A-020519	3005A, 6010C	R	1 mL					
240-107706-I-4	MRC-MW157A-020519	3005A, 6010C	R	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367176 Batch Start Date: 02/07/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/07/19 22:00

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb2
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367176 Batch Start Date: 02/07/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/07/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00038	MTICPMSB 00037	MTTMHCL 00235
MB 240-367176/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-367176/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107706-I-2	MRC-MW155A-020519	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107706-I-2 MS	MRC-MW155A-020519	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107706-I-2 MSD	MRC-MW155A-020519	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107706-I-3	MRC-MW159A-020519	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107706-I-4	MRC-MW157A-020519	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-367176/1		3005A, 6020A		1 mL					
LCS 240-367176/3		3005A, 6020A		1 mL					
240-107706-I-2	MRC-MW155A-020519	3005A, 6020A	R	1 mL					
240-107706-I-2 MS	MRC-MW155A-020519	3005A, 6020A	R	1 mL					
240-107706-I-2 MSD	MRC-MW155A-020519	3005A, 6020A	R	1 mL					
240-107706-I-3	MRC-MW159A-020519	3005A, 6020A	R	1 mL					
240-107706-I-4	MRC-MW157A-020519	3005A, 6020A	R	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367176 Batch Start Date: 02/07/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/07/19 22:00

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb2
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW155A-020519 Lab Sample ID: 240-107706-2

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 09:00

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	140	200	26	ug/L	J		1	6010C
7439-96-5	Manganese	15	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	77	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	44	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.64	1.0	0.31	ug/L	J		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	0.49	1.0	0.19	ug/L	J		1	6020A
7440-47-3	Chromium	1.4	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	35	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	140	100	47	ug/L			1	6020A
7439-96-5	Manganese	17	5.0	2.1	ug/L		B	1	6020A
7440-02-0	Nickel	2.2	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	24	20	15	ug/L			1	6020A
7440-70-2	Calcium	60000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	1600	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	14000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	100000	1000	330	ug/L			1	6020A

Sample Report

Sample Name	240-107706-i-2-a
File Name	103SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\I14020819E.b
Acq Time	2019-02-08 16:40:36
Sample Type	Sample
Total Dilution	1.0000
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	0.311	ug/l	18.1	30792.44	10000	
Be	9	6	No Gas	0.640	ug/l	8.8	671.13	2000	
B	11	45	No Gas	38.534	ug/l	1.9	26564.27	300	
Na	23	45	He	103543.349	ug/l	0.4	43770403.82	500000	
Mg	24	45	He	13563.853	ug/l	0.9	3155611.96	500000	
Al	27	45	He	77.145	ug/l	5.3	9084.64	200000	
K	39	45	He	1647.024	ug/l	0.5	497439.68	500000	
Ca	44	45	He	59981.588	ug/l	2.7	419230.70	500000	
Ti	47	45	He	2.364	ug/l	13.6	196.67	2500	
V	51	45	He	0.462	ug/l	22.8	591.50	10000	
Cr	52	45	He	1.446	ug/l	2.4	4663.03	10000	
Mn	55	45	He	16.827	ug/l	0.1	34187.91	10000	
Fe	56	103	He	138.342	ug/l	0.9	365107.24	200000	
Co	59	103	He	0.489	ug/l	1.5	2170.19	5000	
Ni	60	103	He	2.165	ug/l	4.2	3381.55	10000	
Cu	63	103	He	34.516	ug/l	1.8	102885.49	10000	
Zn	66	103	He	23.744	ug/l	0.9	16354.04	10000	
As	75	103	He	0.419	ug/l	58.1	293.87	10000	
Se	78	103	H2	0.363	ug/l	10.4	67.67	10000	
Sr	88	103	He	189.965	ug/l	2.0	620997.46	10000	
Mo	95	103	He	1.002	ug/l	6.2	1600.11	2000	
Ag	107	103	He	0.009	ug/l	29.6	75.56	100	
Cd	111	115	He	0.114	ug/l	20.9	119.89	4000	
Sn	118	115	He	1.052	ug/l	12.4	4032.86	2000	
Sb	123	115	He	0.218	ug/l	14.6	588.91	200	
Ba	137	115	He	43.672	ug/l	2.0	51406.68	10000	
W	182	159	He	0.112	ug/l	27.8	683.36	2500	
Tl	205	165	He	0.086	ug/l	18.6	852.26	2000	
Pb	208	165	He	0.291	ug/l	2.0	4310.34	4000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li6	6	No Gas	553452.28	0.7	666212.45	83.07	59.5	120.4	
Sc	45	No Gas	1713975.00	0.5	1751895.83	97.84	59.5	120.4	
Sc	45	H2	1419264.33	3.2	1404452.75	101.05	59.5	120.4	
Sc	45	He	310484.67	0.3	322556.35	96.26	59.5	120.4	
Rh	103	H2	380718.70	3.2	393369.47	96.78	59.5	120.4	

Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Rh	103	He	1791307.22	1.5	1852367.57	96.7	59.5	120.4	
In	115	H2	2099852.00	1.9	2085755.83	100.68	59.5	120.4	
In	115	He	1173320.84	2.1	1187350.75	98.82	59.5	120.4	
Tb	159	He	2489690.39	1.2	2484591.22	100.21	59.5	120.4	
Ho	165	He	2467679.97	2.0	2419999.97	101.97	59.5	120.4	
Bi	209	He	1513346.22	1.5	1588325.74	95.28	59.5	120.4	

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW155A-020519	240-107706-2
MRC-MW159A-020519	240-107706-3
MRC-MW157A-020519	240-107706-4

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107706-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW155A-020519	240-107706-2
MRC-MW159A-020519	240-107706-3
MRC-MW157A-020519	240-107706-4

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107706-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW155A-020519	240-107706-2
MRC-MW159A-020519	240-107706-3
MRC-MW157A-020519	240-107706-4

Comments:

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Analyst: LKG Batch Start Date: 08/07/2018

Reporting Units: mg/L Analytical Batch No.: 339523

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:20	Sulfate	52.9	50.0	106	90-110		WCICLCS_00669
11	ICB	15:41	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Analyst: JMB Batch Start Date: 02/08/2019

Reporting Units: mg/L Analytical Batch No.: 367366

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	12:48	Sulfate	52.0	50.0	104	90-110		WCICCCV_00860
2	CCB	13:08	Sulfate	0.35				U	
13	CCV	16:56	Sulfate	52.0	50.0	104	90-110		WCICCCV_00860
14	CCB	17:17	Sulfate	0.35				U	
25	CCV	21:05	Sulfate	52.3	50.0	105	90-110		WCICCCV_00860
26	CCB	21:26	Sulfate	0.35				U	
37	CCV	01:13	Sulfate	52.5	50.0	105	90-110		WCICCCV_00860
38	CCB	01:34	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG No.:

Analyst: MSP Batch Start Date: 02/17/2019

Reporting Units: mg/L Analytical Batch No.: 575925

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:50	Nitrate Nitrite as N	3.26	3.00	109	90-110		W_ICAl_00027
2	ICB	12:51	Nitrate Nitrite as N	0.040				U	
3	CCV	12:52	Nitrate Nitrite as N	4.88	5.00	98	90-110		W_Nitrate_00020
4	CCV	12:53	Nitrate Nitrite as N	4.93	5.00	99	90-110		IC Primary_00012
5	CCB	12:54	Nitrate Nitrite as N	0.040				U	
20	CCV	13:12	Nitrate Nitrite as N	4.76	5.00	95	90-110		W_Nitrate_00020
21	CCB	13:13	Nitrate Nitrite as N	0.0463				J	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 367751	Date: 02/11/2019 16:56						
2320B-2011	MB 240-367751/3	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 367926	Date: 02/13/2019 13:29						
2340C-2011	MB 240-367926/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 367321	Date: 02/08/2019 09:13						
2540 C-2011	MB 240-367321/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 367366	Date: 02/08/2019 13:29						
9056A	MB 240-367366/3	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-367366/3	Sulfate	0.35	U	mg/L	1.0	1

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575925 Date: 02/17/2019 12:55							
SM 4500 NO3 F	MB 490-575925/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107706-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 270629 Date: 02/19/2019 06:40							
SM 2520B	MB 180-270629/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367366 Date: 02/08/2019 22:28											
300.0	240-107706-4	Bromide	0.044	U	mg/L						
300.0	240-107706-4 MS	Bromide	10.8		mg/L	10.0	108	80-120			
Batch ID: 367366 Date: 02/08/2019 22:28											
9056A	240-107706-4	Sulfate	68		mg/L						
9056A	240-107706-4 MS	Sulfate	118		mg/L	50.0	101	80-120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367366 Date: 02/08/2019 22:48											
300.0	240-107706-4 MSD	Bromide	10.9		mg/L	10.0	109	80-120	1	15	
Batch ID: 367366 Date: 02/08/2019 22:48											
9056A	240-107706-4 MSD	Sulfate	119		mg/L	50.0	102	80-120	0	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 367751 Date: 02/11/2019 19:36								
2320B-2011	MRC-MW159A-020519	240-107706-3	Alkalinity	210	mg/L			
2320B-2011	MRC-MW159A-020519	240-107706-3 DU	Alkalinity	211	mg/L	1	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367751	Date: 02/11/2019 16:52										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-367751/2	Alkalinity	261		mg/L	271	96	86-123			
Batch ID: 367926	Date: 02/13/2019 13:34										
						LCS Source: WCHARDNESS_00031					
2340C-2011	LCS 240-367926/2	Hardness as calcium carbonate	264		mg/L	246	107	90-110			
Batch ID: 367321	Date: 02/08/2019 09:13										
						LCS Source: WCPHENOVSOLID_00038					
2540 C-2011	LCS 240-367321/2	Total Dissolved Solids	204		mg/L	204	100	80-120			
Batch ID: 367366	Date: 02/08/2019 13:50										
						LCS Source: WCICLCS_00695					
9056A	LCS 240-367366/4	Sulfate	51.7		mg/L	50.0	103	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925	Date: 02/17/2019 12:57										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575925/7	Nitrate Nitrite as N	3.23		mg/L	3.00	108	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 02/13/2019 13:29 End Date: 02/13/2019 16:00

Lab Sample Id	D/F	Type	Time	Analytes
				HardCC
MB 240-367926/1	1	T	13:29	X
LCS 240-367926/2	1	T	13:34	X
ZZZZZZ			13:39	
ZZZZZZ			13:44	
ZZZZZZ			13:49	
ZZZZZZ			13:55	
ZZZZZZ			14:00	
ZZZZZZ			14:05	
ZZZZZZ			14:10	
240-107706-2	1	T	14:16	X
240-107706-3	1	T	14:21	X
240-107706-4	1	T	14:26	X
ZZZZZZ			14:31	
ZZZZZZ			14:37	
ZZZZZZ			14:42	
ZZZZZZ			14:47	
ZZZZZZ			14:52	
ZZZZZZ			14:57	
ZZZZZZ			15:03	
ZZZZZZ			15:08	
ZZZZZZ			15:13	
ZZZZZZ			15:18	
ZZZZZZ			15:24	
ZZZZZZ			15:29	
ZZZZZZ			15:34	
ZZZZZZ			15:39	
ZZZZZZ			15:45	
ZZZZZZ			15:50	
ZZZZZZ			15:55	
ZZZZZZ			16:00	

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/11/2019 16:47 End Date: 02/11/2019 20:34

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			16:47																									
LCS 240-367751/2	1	T	16:52	X																								
MB 240-367751/3	1	T	16:56	X																								
ZZZZZZ			17:01																									
ZZZZZZ			17:05																									
ZZZZZZ			17:10																									
ZZZZZZ			17:15																									
ZZZZZZ			17:19																									
ZZZZZZ			17:24																									
ZZZZZZ			17:28																									
ZZZZZZ			17:34																									
ZZZZZZ			17:35																									
ZZZZZZ			17:39																									
ZZZZZZ			17:43																									
ZZZZZZ			17:47																									
ZZZZZZ			17:51																									
ZZZZZZ			17:55																									
ZZZZZZ			17:58																									
ZZZZZZ			18:02																									
ZZZZZZ			18:07																									
ZZZZZZ			18:10																									
ZZZZZZ			18:14																									
ZZZZZZ			18:15																									
ZZZZZZ			18:18																									
ZZZZZZ			18:22																									
ZZZZZZ			18:26																									
ZZZZZZ			18:29																									
ZZZZZZ			18:32																									
ZZZZZZ			18:35																									
ZZZZZZ			18:40																									
ZZZZZZ			18:46																									
ZZZZZZ			18:51																									
ZZZZZZ			18:57																									
ZZZZZZ			18:59																									
ZZZZZZ			19:05																									
ZZZZZZ			19:10																									
ZZZZZZ			19:17																									
ZZZZZZ			19:23																									
240-107706-2	1	T	19:27	X																								
240-107706-3	1	T	19:31	X																								
240-107706-3 DU	1	T	19:36	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/11/2019 16:47 End Date: 02/11/2019 20:34

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
240-107706-4	1	T	19:41	X																								
ZZZZZZ			19:45																									
ZZZZZZ			19:49																									
ZZZZZZ			19:51																									
ZZZZZZ			19:56																									
ZZZZZZ			20:00																									
ZZZZZZ			20:04																									
ZZZZZZ			20:09																									
ZZZZZZ			20:13																									
ZZZZZZ			20:18																									
ZZZZZZ			20:22																									
ZZZZZZ			20:27																									
ZZZZZZ			20:32																									
ZZZZZZ			20:34																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 02/08/2019 09:13 End Date: 02/08/2019 09:13

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-367321/1	1	T	09:13	X																								
LCS 240-367321/2	1	T	09:13	X																								
ZZZZZZ			09:13																									
ZZZZZZ			09:13																									
ZZZZZZ			09:13																									
ZZZZZZ			09:13																									
ZZZZZZ			09:13																									
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ZZZZZZ			09:13																									
ZZZZZZ			09:13																									
ZZZZZZ			09:13																									
ZZZZZZ			09:13																									
ZZZZZZ			09:13																									
240-107706-3	1	T	09:13	X																								
240-107706-4	1	T	09:13	X																								
ZZZZZZ			09:13																									
240-107706-2	1	T	09:13	X																								
ZZZZZZ			09:13																									
ZZZZZZ			09:13																									

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 08/07/2018 12:13 End Date: 08/07/2018 15:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339523/1 IC	1		12:13	X																								
STD2 240-339523/2 IC	1		12:34	X																								
STD3 240-339523/3 IC	1		12:55	X																								
STD4 240-339523/4 IC	1		13:16	X																								
STD5 240-339523/5 ICRT	1		13:36	X																								
STD6 240-339523/6 IC	1		13:57	X																								
STD7 240-339523/7 IC	1		14:18	X																								
STD8 240-339523/8 IC	1		14:39	X																								
STD9 240-339523/9 IC	1		14:59	X																								
ICV 240-339523/10	1		15:20	X																								
ICB 240-339523/11	1		15:41	X																								

Prep Types:
=

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 02/08/2019 12:48 End Date: 02/09/2019 07:47

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
CCV 240-367366/1	1		12:48		X																								
CCB 240-367366/2	1		13:08		X																								
MB 240-367366/3	1	T	13:29		X																								
LCS 240-367366/4	1	T	13:50		X																								
ZZZZZZ			14:31																										
ZZZZZZ			14:52																										
ZZZZZZ			15:13																										
ZZZZZZ			15:34																										
ZZZZZZ			15:54																										
ZZZZZZ			16:15																										
ZZZZZZ			16:36																										
CCV 240-367366/13	1		16:56		X																								
CCB 240-367366/14	1		17:17		X																								
ZZZZZZ			17:38																										
ZZZZZZ			17:59																										
ZZZZZZ			18:19																										
ZZZZZZ			18:40																										
ZZZZZZ			19:01																										
ZZZZZZ			19:21																										
ZZZZZZ			19:42																										
240-107706-2	1	T	20:03	X	X																								
ZZZZZZ			20:23																										
240-107706-3	1	T	20:44	X	X																								
CCV 240-367366/25	1		21:05		X																								
CCB 240-367366/26	1		21:26		X																								
ZZZZZZ			21:46																										
240-107706-4	1	T	22:07	X	X																								
240-107706-4 MS	1	T	22:28	X	X																								
240-107706-4 MSD	1	T	22:48	X	X																								
ZZZZZZ			23:50																										
ZZZZZZ			00:11																										
ZZZZZZ			00:32																										
ZZZZZZ			00:52																										
CCV 240-367366/37	1		01:13		X																								
CCB 240-367366/38	1		01:34		X																								
ZZZZZZ			01:55																										
ZZZZZZ			02:15																										
ZZZZZZ			02:36																										
ZZZZZZ			02:57																										
ZZZZZZ			03:18																										
ZZZZZZ			03:38																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 02/08/2019 12:48 End Date: 02/09/2019 07:47

Lab Sample Id	D/F	Type	Time	Analytes																								
				Br	SO4																							
ZZZZZZ			03:59																									
ZZZZZZ			04:20																									
ZZZZZZ			04:40																									
ZZZZZZ			05:01																									
CCV 240-367366/49			05:22																									
CCB 240-367366/50			05:42																									
ZZZZZZ			06:03																									
ZZZZZZ			06:24																									
ZZZZZZ			06:45																									
ZZZZZZ			07:05																									
CCV 240-367366/55			07:26																									
CCB 240-367366/56			07:47																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/17/2019 12:50 End Date: 02/17/2019 13:27

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575925/1	1		12:50	X																								
ICB 490-575925/2	1		12:51	X																								
CCV 490-575925/3	1		12:52	X																								
CCV 490-575925/4	1		12:53	X																								
CCB 490-575925/5	1		12:54	X																								
MB 490-575925/6	1	T	12:55	X																								
LCS 490-575925/7	1	T	12:57	X																								
240-107706-2	1	T	12:58	X																								
240-107706-3	1	T	12:59	X																								
240-107706-4	1	T	13:00	X																								
ZZZZZZ			13:01																									
ZZZZZZ			13:02																									
ZZZZZZ			13:04																									
ZZZZZZ			13:05																									
ZZZZZZ			13:06																									
ZZZZZZ			13:07																									
ZZZZZZ			13:08																									
ZZZZZZ			13:10																									
ZZZZZZ			13:11																									
CCV 490-575925/20	1		13:12	X																								
CCB 490-575925/21	1		13:13	X																								
ZZZZZZ			13:14																									
ZZZZZZ			13:15																									
ZZZZZZ			13:17																									
ZZZZZZ			13:18																									
ZZZZZZ			13:19																									
ZZZZZZ			13:20																									
ZZZZZZ			13:21																									
ZZZZZZ			13:23																									
ZZZZZZ			13:24																									
ZZZZZZ			13:25																									
CCV 490-575925/32			13:26																									
CCB 490-575925/33			13:27																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107706-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/19/2019 06:40 End Date: 02/19/2019 06:40

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-270629/1	1	T	06:40	X																								
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
240-107706-2	1	T	06:40	X																								
240-107706-3	1	T	06:40	X																								
240-107706-4	1	T	06:40	X																								
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367926 Batch Start Date: 02/13/19 13:29 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 02/13/19 16:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCHARDNESS 00031		
MB 240-367926/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-367926/2		2340C-2011		25 mL	25 mL	6.60 mL	25 mL		
240-107706-G-2	MRC-MW155A-020519	2340C-2011	T	25 mL	25 mL	6.30 mL			
240-107706-G-3	MRC-MW159A-020519	2340C-2011	T	5 mL	25 mL	2.70 mL			
240-107706-G-4	MRC-MW157A-020519	2340C-2011	T	25 mL	25 mL	3.25 mL			

Batch Notes	
Batch Comment	BEAKERS--4010980
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C9, E3
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367751 Batch Start Date: 02/11/19 16:47 Batch Analyst: Carson, Monica

Batch Method: 2320B-2011 Batch End Date: 02/12/19 14:03

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-367751/2		2320B-2011		InitialAmount is blank	10 mL				
MB 240-367751/3		2320B-2011		InitialAmount is blank					
240-107706-H-2	MRC-MW155A-020519	2320B-2011	T	InitialAmount is blank					
240-107706-H-3	MRC-MW159A-020519	2320B-2011	T	InitialAmount is blank					
240-107706-H-3 DU	MRC-MW159A-020519	2320B-2011	T	InitialAmount is blank					
240-107706-H-4	MRC-MW157A-020519	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4- 4005008
pH Buffer 2 ID	7- 4017506
pH Buffer 3 ID	10- 3892955
pH Buffer 4 ID	12- 3891579
Nominal Amount Used	10 mL
pH Meter ID	severus
Probe ID	WCP 137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367321 Batch Start Date: 02/08/19 09:13 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-367321/1		2540 C-2011			3.3414 g	100 mL	3.3413 g	3.3412 g	0 g
LCS 240-367321/2		2540 C-2011			3.3643 g	100 mL	3.3847 g	3.3847 g	0 g
240-107706-H-3	MRC-MW159A-020519	2540 C-2011	T	999 umhos/cm	3.2987 g	100 mL	3.3650 g	3.3645 g	0 g
240-107706-H-4	MRC-MW157A-020519	2540 C-2011	T	373 umhos/cm	3.2743 g	100 mL	3.2980 g	3.2984 g	0 g
240-107706-H-2	MRC-MW155A-020519	2540 C-2011	T	940 umhos/cm	3.2668 g	100 mL	3.3224 g	3.3219 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 240-367321/1		2540 C-2011		Pass No Unit	N/A No Unit	N/A	-0.0001 g	-0.0002 g	N/A g
LCS 240-367321/2		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0204 g	0.0204 g	N/A g
240-107706-H-3	MRC-MW159A-020519	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0663 g	0.0658 g	N/A g
240-107706-H-4	MRC-MW157A-020519	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0237 g	0.0241 g	N/A g
240-107706-H-2	MRC-MW155A-020519	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0556 g	0.0551 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID00038		
MB 240-367321/1		2540 C-2011		N/A g	100 mL	OK			
LCS 240-367321/2		2540 C-2011		N/A g	100 mL	OK	100 mL		
240-107706-H-3	MRC-MW159A-020519	2540 C-2011	T	N/A g	100 mL	OK			
240-107706-H-4	MRC-MW157A-020519	2540 C-2011	T	N/A g	100 mL	OK			
240-107706-H-2	MRC-MW155A-020519	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367321 Batch Start Date: 02/08/19 09:13 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date:

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/11/2019 12:19
Date/Time - Out - CW (WT2)	02/11/2019 13:30
Temperature - Start - CW (WT2) - Correct	180 Celsius
Temperature - End - CW (WT2) - Correct	181 Celsius
Temperature - Start-CW(WT2) -Uncorrected	180 Celsius
Temperature - End-CW(WT2) -Uncorrected	181 Celsius
Temperature - Start - Corrected	105 Celsius
Temperature - End - Corrected	105 Celsius
Date/Time - In	02/08/2019 10:05
Date/Time - Out	02/11/2019 08:04
Filter ID	60020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O06
Thermometer ID - Low Temperature	84922
Thermometer ID	181417084
Temperature - Start - Uncorrected	105 Celsius
Temperature - End - Uncorrected	105 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/11/2019 08:05 No Unit
Weight(WT1) Date/Time Out	02/11/2019 09:51
Weight(WT1) Start Temp	182 Celsius
Weight(WT1) Temp Out	181 Celsius
Uncorrected Weight(WT1) Start Temp	182 Celsius
Uncorrected Weight(WT1) Temp Out	181 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339523/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339523/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339523/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339523/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339523/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339523/6 IC		300.0		5 mL	2 mL				
STD7 240-339523/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339523/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339523/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367366 Batch Start Date: 02/08/19 12:48 Batch Analyst: Burns, Jill

Batch Method: 300.0 Batch End Date: 02/09/19 07:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICSOLNA1 00018	WCICSOLNB1 00018		
240-107706-E-2	MRC-MW155A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-2	MRC-MW155A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-3	MRC-MW159A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-3	MRC-MW159A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-4	MRC-MW157A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-4 MS	MRC-MW157A-020519	300.0 & 9056A	T	5 mL	5 mL	0.1 mL	0.1 mL		
240-107706-E-4 MSD	MRC-MW157A-020519	300.0 & 9056A	T	5 mL	5 mL	0.1 mL	0.1 mL		

Batch Notes	
Eluent 1 ID	WATER

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICLCS 00669			
ICV 240-339523/10		9056A		5 mL	1.0 mL	5 mL			
ICB 240-339523/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367366 Batch Start Date: 02/08/19 12:48 Batch Analyst: Burns, Jill

Batch Method: 9056A Batch End Date: 02/09/19 07:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICSOLNA1 00018	WCICSOLNB1 00018		
240-107706-E-2	MRC-MW155A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-2	MRC-MW155A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-3	MRC-MW159A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-3	MRC-MW159A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-4	MRC-MW157A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-4 MS	MRC-MW157A-020519	300.0 & 9056A	T	5 mL	5 mL	0.1 mL	0.1 mL		
240-107706-E-4 MSD	MRC-MW157A-020519	300.0 & 9056A	T	5 mL	5 mL	0.1 mL	0.1 mL		

Batch Notes	
Eluent 1 ID	WATER

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367366 Batch Start Date: 02/08/19 12:48 Batch Analyst: Burns, Jill

Batch Method: 9056A Batch End Date: 02/09/19 07:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICCCV 00860	WCICLCS 00695		
CCV 240-367366/1		9056A		5 mL	5 mL	5 mL			
CCB 240-367366/2		9056A		5 mL	5 mL				
MB 240-367366/3		9056A		5 mL	5 mL				
LCS 240-367366/4		9056A		5 mL	5 mL		5 mL		
CCV 240-367366/13		9056A		5 mL	5 mL	5 mL			
CCB 240-367366/14		9056A		5 mL	5 mL				
CCV 240-367366/25		9056A		5 mL	5 mL	5 mL			
CCB 240-367366/26		9056A		5 mL	5 mL				
CCV 240-367366/37		9056A		5 mL	5 mL	5 mL			
CCB 240-367366/38		9056A		5 mL	5 mL				

Batch Notes	
Eluent 1 ID	WATER

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575925/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575925/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575925/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575925/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575925/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575925/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575925/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
240-107706-F-2	MRC-MW155A-020519	SM 4500 NO3 F	T	50 mL	50 mL				6.91
240-107706-F-3	MRC-MW159A-020519	SM 4500 NO3 F	T	50 mL	50 mL				8.85
240-107706-F-4	MRC-MW157A-020519	SM 4500 NO3 F	T	50 mL	50 mL				5.63
CCV 490-575925/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/21		SM 4500 NO3 F		50 mL	50 mL				

Batch Notes	
Acid used for pH adjustment	4547067
Base used for pH adjustment	4273883
Batch Comment	cent tubes 809161; pH probe VVZ10915; pH meter AB92340683
Buffer Reagent ID	4832283
Carrier Identification	DI water
Color Reagent ID	4832299
Filter ID	180611314
Pipette/Syringe/Dispenser ID	26061004, 26121028

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TETRA TECH INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **MAY 1, 2019**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION – VOC / PCBH / METALS / MISCELLANEOUS PARAMETERS**
MRC BLOCK E/F MASS DISCHARGE – FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) 240-107850-1

SAMPLES: 5 / Water / VOC / Metals / Miscellaneous Parameters

MRC-MW144B-020719 MRC-MW146B-020719 MRC-MW147B-020719
TB-020719

1 / Water / PCBH

MRC-MW156A-020719

OVERVIEW

The sample set for MRC Block E/F Mass Discharge, SDG 240-107850-1, consists of four (4) water environmental samples and one (1) trip blank. Samples were analyzed for volatile organic compounds (VOC), polychlorinated biphenyl homologs (PCBH), metals, and miscellaneous parameters (alkalinity, bromide, hardness as CaCO3, nitrite/nitrate-N, salinity, sulfate, and total dissolved solids [TDS]). No field duplicate pairs are included in this SDG.

The samples were collected by Tetra Tech on February 7, 2019 and analyzed by Test America. Analyses were conducted in accordance with EPA SW-846 Methods 8260C (VOC), 6010C/6020A (metals), and 9056A (anions) as well as EPA Method 680 (PCBH), MCAWW Method 300.0 (bromide), and Standard Methods 2320B-2011 (alkalinity), 2340C-2011 (hardness), 4500 NO3 F (nitrite/nitrate-N), 2520B (salinity), and 2540C-2011 (TDS) analytical and reporting protocols. Iron and manganese were analyzed by both Methods 6010C and 6020A - remaining metals were analyzed by Method 6020A only.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, initial/continuing calibrations, laboratory method blank results, laboratory control sample/laboratory control sample duplicate results, matrix spike/matrix spike duplicate results, surrogate spike recoveries, interference check sample results, compound identification, analyte quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

MAJOR PROBLEMS

- The laboratory case narrative report states that 2-chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample, and all VOC samples were preserved in hydrochloric acid. Non-detected results for 2-chloroethyl vinyl ether were rejected (UR) in all samples.

MINOR PROBLEMS

- The VOC continuing calibration verification (CCV) performed on 02/11/19 at 10:51 on instrument A3UX15 had percent differences (%Ds) that were greater than the 20% quality control limit for carbon disulfide, tertiary-butyl alcohol, vinyl acetate, 2-chloroethyl vinyl ether, cis-1,3-dichloropropene, 4-

methyl-2-pentanone, trans-1,3-dichloropropene, 2-hexanone, chlorodibromomethane, bromoform, 1,1,2,2-tetrachloroethane, and 1,2-dibromo-3-chloropropane. Sample TB-020719 was affected. Detected and non-detected results for the aforementioned analytes were qualified as estimated (J and UJ, respectively) in sample TB-020719.

- The VOC CCV performed on 02/11/19 at 11:35 on instrument A3UX15 had a %D for tert-amyl methyl ether that was greater than the 20% quality control limit. Sample TB-020719 was affected. The non-detected result for tert-amyl methyl ether was qualified as estimated (UJ) in the affected sample.

- The VOC CCV performed on 02/13/19 at 11:48 on instrument A3UX15 had %Ds that were greater than the 20% quality control limit for carbon disulfide, methylene chloride, 2-chloroethyl vinyl ether, trans-1,3-dichloropropene, bromoform, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, and 1,2,3-trichlorobenzene. Samples MRC-MW144B-020719 and MRC-MW147B-020719 were affected. Non-detected results for the aforementioned analytes were qualified as estimated (UJ) in the affected samples.

- The VOC CCV performed on 02/13/19 at 12:32 on instrument A3UX15 had %Ds that were greater than the 20% quality control limit for ethyl tert-butyl ether and tert-amyl methyl ether. Samples MRC-MW144B-020719 and MRC-MW147B-020719 were affected. Non-detected results for the aforementioned analytes were qualified as non-detected (UJ) in the affected samples.

- The VOC CCV performed on 02/14/19 at 11:10 on instrument A3UX15 had %Ds that were greater than the 20% quality control limit for chloromethane, tertiary-butyl alcohol, vinyl acetate, 2-chloroethyl vinyl ether, 4-methyl-2-pentanone, trans-1,3-dichloropropene, 2-hexanone, bromoform, 1,1,2,2-tetrachloroethane, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, and 1,2,3-trichlorobenzene. Samples MRC-MW156A-020719 and MRC-MW146B-020719 were affected. Non-detected results for the aforementioned analytes were qualified as estimated (UJ) in the affected samples.

- The VOC CCV performed on 02/14/10 at 11:54 on instrument A3UX15 had %Ds that were greater than the 20% quality control limit for ethyl tert-butyl ether and tert-amyl methyl ether. Samples MRC-MW156A-020719 and MRC-MW146B-020719 were affected. Non-detected results for these analytes were qualified as estimated (UJ) in the affected samples.

- The VOC matrix spike (MS)/matrix spike duplicate (MSD) analysis performed on sample MRC-MW147B-020719 had MS and MSD percent recoveries (%Rs) that were less than laboratory quality control limits for tertiary-butyl alcohol. Additionally, relative percent differences (RPDs) were greater than the laboratory quality control limit for 1,1,2-trichlorotrifluoroethane, dichlorodifluoromethane, and trichlorofluoromethane. No qualification was necessary for 1,1,2-trichlorotrifluoroethane, dichlorodifluoromethane, and trichlorofluoromethane, as results for these analytes were non-detected in sample MRC-MW147B-020719. The non-detected result for tertiary-butyl alcohol in sample MRC-MW147B-020719 was qualified as estimated (UJ).

- The following VOCs were detected in the trip blank at the following maximum concentration:

Analyte	Maximum Concentration	< or > Reporting Limit (RL)
Chloromethane	0.21 ug/L(1)	< RL
Tertiary-butyl alcohol	1.9 ug/L(1)	< RL
Trichloroethene	0.17 ug/L(1)	< RL

1 - Detected in trip blank TB-020719 affecting all samples.

The detected trichloroethene result in sample MRC-MW156A-020719 was less than the RL and was qualified as non-detected (U) due to trip blank contamination.

- The following metal was detected in the method blanks at the following maximum concentration:

Analyte	Maximum Concentration	< or > RL
Copper	2.19 ug/L(1)	< RL

1 - Detected in method blank (> LOQ) associated with preparation batch 240-367484 affecting all samples.

Detected copper results in samples MRC-MW147B-020719 and MRC-MW156A-020719 were less than 10x the blank concentration and were qualified as non-detected (U) due to method blank contamination.

- Detected results reported below the RL but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Non-detected results were reported to the MDL.

VOC results in samples MRC-MW144B-020719 and MRC-MW147B-020719 were analyzed at a dilution factors of 142.86 and 200, respectively.

The PCBH CCV performed on 02/21/19 at 16:43 on instrument CMSX had a %D that was greater than the 20% quality control limit for decachlorobiphenyl. No qualification was necessary because no environmental samples from this SDG were associated with this CCV.

Nitrate/nitrite as N was detected in the calibration blanks the following maximum concentration:

Analyte	Maximum Concentration	< or > RL
Nitrate/nitrite-N	0.0463 mg/L(1)	< RL

1 - Detected in calibration blank analyzed on 02/17/19 at 13:13 affecting all samples.

No qualification was necessary because all associated nitrate/nitrite-N results were either non-detected or detected at a concentration greater than the RL.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Some non-detected VOC results were qualified due to calibration noncompliance. Several metals results were qualified due to method blank contamination.

Other Factors Affecting Data Quality: Results for 2-chloroethyl vinyl ether in water samples were rejected due to sample preservation noncompliance. One VOC result was qualified as non-detected due to trip blank contamination. One VOC result was qualified due to MS/MSD noncompliance. Detected results reported below the RL but above the MDL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA “National Functional Guidelines for Organic Superfund Methods Data Review” (January 2017) and the “National Functional Guidelines for Inorganic Superfund Methods Data Review” (January 2017). The text of this report has been formulated to address only those problem areas affecting data quality.

Leigh A. Ciofani

Tetra Tech
Leigh Ciofani
Environmental Scientist/Data Validator

Joseph A. Samchuck

Tetra Tech
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08784	NSAMPLE	MRC-MW144B-020719			MRC-MW146B-020719			MRC-MW147B-020719			MRC-MW156A-020719		
SDG: 240-107850-1	LAB_ID	240-107850-3			240-107850-4			240-107850-5			240-107850-2		
FRACTION: OV	SAMP_DATE	2/7/2019			2/7/2019			2/7/2019			2/7/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		20	U		0.14	U		28	U		0.14	U	
1,1,1-TRICHLOROETHANE		34	U		0.24	U		48	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		19	U		0.13	UJ	C	26	U		0.13	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		59	U		0.41	U		82	U		0.41	U	
1,1-DICHLOROETHANE		24	U		0.17	U		34	U		0.17	U	
1,1-DICHLOROETHENE		27	U		0.19	U		38	U		0.19	U	
1,1-DICHLOROPROPENE		20	U		0.14	U		28	U		0.14	U	
1,2,3-TRICHLOROBENZENE		77	UJ	C	0.54	UJ	C	110	UJ	C	0.54	UJ	C
1,2,3-TRICHLOROPROPANE		34	U		0.24	U		48	U		0.24	U	
1,2,3-TRIMETHYLBENZENE		20	U		0.14	U		28	U		0.14	U	
1,2,4-TRICHLOROBENZENE		37	UJ	C	0.26	UJ	C	52	UJ	C	0.26	UJ	C
1,2,4-TRIMETHYLBENZENE		10	U		0.07	U		14	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		130	UJ	C	0.91	UJ	C	180	UJ	C	0.91	UJ	C
1,2-DIBROMOETHANE		17	U		0.12	U		24	U		0.12	U	
1,2-DICHLOROBENZENE		21	U		0.15	U		30	U		0.15	U	
1,2-DICHLOROETHANE		30	U		0.21	U		42	U		0.21	U	
1,2-DICHLOROPROPANE		21	U		0.15	U		30	U		0.15	U	
1,3-DICHLOROBENZENE		21	U		0.15	U		30	U		0.15	U	
1,3-DICHLOROPROPANE		30	U		0.21	U		42	U		0.21	U	
1,4-DICHLOROBENZENE		23	U		0.16	U		32	U		0.16	U	
2,2-DICHLOROPROPANE		44	U		0.31	U		62	U		0.31	U	
2-BUTANONE		170	U		1.2	U		230	U		1.2	U	
2-CHLOROETHYL VINYL ETHER		37	UR	M	0.26	UR	M	52	UR	M	0.26	UR	M
2-CHLOROTOLUENE		21	U		0.15	U		30	U		0.15	U	
2-HEXANONE		77	U		0.54	UJ	C	110	U		0.54	UJ	C
4-CHLOROTOLUENE		13	U		0.09	U		18	U		0.09	U	
4-ISOPROPYLTOLUENE		19	U		0.13	U		26	U		0.13	U	
4-METHYL-2-PENTANONE		60	U		0.42	UJ	C	84	U		0.42	UJ	C
ACETONE		770	U		5.4	U		1100	U		5.4	U	
BENZENE		19	U		0.13	U		26	U		0.13	U	
BROMOBENZENE		17	U		0.12	U		24	U		0.12	U	
BROMOCHLOROMETHANE		20	U		0.14	U		28	U		0.14	U	
BROMODICHLOROMETHANE		24	U		0.17	U		34	U		0.17	U	
BROMOFORM		110	UJ	C	0.76	UJ	C	150	UJ	C	0.76	UJ	C
BROMOMETHANE		60	U		0.42	U		84	U		0.42	U	

PROJ_NO: 08784	NSAMPLE	TB-020719		
SDG: 240-107850-1	LAB_ID	240-107850-1		
FRACTION: OV	SAMP_DATE	2/7/2019		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U	
1,1,1-TRICHLOROETHANE		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U	
1,1-DICHLOROETHANE		0.17	U	
1,1-DICHLOROETHENE		0.19	U	
1,1-DICHLOROPROPENE		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	U	
1,2,3-TRICHLOROPROPANE		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	U	
1,2,4-TRICHLOROBENZENE		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	UJ	C
1,2-DIBROMOETHANE		0.12	U	
1,2-DICHLOROBENZENE		0.15	U	
1,2-DICHLOROETHANE		0.21	U	
1,2-DICHLOROPROPANE		0.15	U	
1,3-DICHLOROBENZENE		0.15	U	
1,3-DICHLOROPROPANE		0.21	U	
1,4-DICHLOROBENZENE		0.16	U	
2,2-DICHLOROPROPANE		0.31	U	
2-BUTANONE		1.2	U	
2-CHLOROETHYL VINYL ETHER		0.26	UR	M
2-CHLOROTOLUENE		0.15	U	
2-HEXANONE		0.54	UJ	C
4-CHLOROTOLUENE		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U	
4-METHYL-2-PENTANONE		0.42	UJ	C
ACETONE		5.4	U	
BENZENE		0.13	U	
BROMOBENZENE		0.12	U	
BROMOCHLOROMETHANE		0.14	U	
BROMODICHLOROMETHANE		0.17	U	
BROMOFORM		0.76	UJ	C
BROMOMETHANE		0.42	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW144B-020719			MRC-MW146B-020719			MRC-MW147B-020719			MRC-MW156A-020719		
SDG: 240-107850-1	LAB_ID	240-107850-3			240-107850-4			240-107850-5			240-107850-2		
FRACTION: OV	SAMP_DATE	2/7/2019			2/7/2019			2/7/2019			2/7/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		40	UJ	C	0.28	U		56	UJ	C	0.28	U	
CARBON TETRACHLORIDE		37	U		0.26	U		52	U		0.26	U	
CHLOROBENZENE		20	U		0.14	U		28	U		0.14	U	
CHLORODIBROMOMETHANE		56	U		0.39	U		78	U		0.39	U	
CHLOROETHANE		120	U		0.83	U		170	U		0.83	U	
CHLOROFORM		19	U		0.13	U		26	U		0.13	U	
CHLOROMETHANE		29	U		0.2	UJ	C	40	U		0.2	UJ	C
CIS-1,2-DICHLOROETHENE		54	J	P	4.6			33	J	P	0.16	U	
CIS-1,3-DICHLOROPROPENE		87	U		0.61	U		120	U		0.61	U	
DIBROMOMETHANE		13	U		0.09	U		18	U		0.09	U	
DICHLORODIFLUOROMETHANE		50	U		0.35	U		70	U		0.35	U	
DIISOPROPYL ETHER		24	U		0.17	U		34	U		0.17	U	
ETHYL TERT-BUTYL ETHER		21	UJ	C	0.15	UJ	C	30	UJ	C	0.15	UJ	C
ETHYLBENZENE		16	U		0.11	U		22	U		0.11	U	
HEXACHLOROBUTADIENE		120	UJ	C	0.83	UJ	C	170	UJ	C	0.83	UJ	C
ISOPROPYLBENZENE		13	U		0.09	U		18	U		0.09	U	
METHYL TERT-BUTYL ETHER		10	U		0.07	U		14	U		0.07	U	
METHYLENE CHLORIDE		370	UJ	C	2.6	U		520	UJ	C	2.6	U	
NAPHTHALENE		46	UJ	C	0.32	UJ	C	64	UJ	C	0.32	UJ	C
N-BUTYLBENZENE		20	U		0.14	U		28	U		0.14	U	
N-PROPYLBENZENE		21	U		0.15	U		30	U		0.15	U	
SEC-BUTYLBENZENE		19	U		0.13	U		26	U		0.13	U	
STYRENE		14	U		0.1	U		20	U		0.1	U	
TERT-AMYL METHYL ETHER		16	UJ	C	0.11	UJ	C	22	UJ	C	0.11	UJ	C
TERT-BUTYLBENZENE		20	U		0.14	U		28	U		0.14	U	
TERTIARY-BUTYL ALCOHOL		240	U		1.7	UJ	C	340	UJ	D	1.7	UJ	C
TETRACHLOROETHENE		21	U		0.15	U		30	U		0.15	U	
TOLUENE		20	U		0.14	U		28	U		0.14	U	
TOTAL XYLENES		21	U		0.15	U		30	U		0.15	U	
TRANS-1,2-DICHLOROETHENE		27	U		0.19	U		38	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		96	UJ	C	0.67	UJ	C	130	UJ	C	0.67	UJ	C
TRICHLOROETHENE		3600			20			3500			0.14	U	B
TRICHLOROFLUOROMETHANE		64	U		0.45	U		90	U		0.45	U	
VINYL ACETATE		27	U		0.19	UJ	C	38	U		0.19	UJ	C
VINYL CHLORIDE		29	U		0.2	U		40	U		0.2	U	

PROJ_NO: 08784	NSAMPLE	TB-020719		
SDG: 240-107850-1	LAB_ID	240-107850-1		
FRACTION: OV	SAMP_DATE	2/7/2019		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CARBON DISULFIDE		0.28	UJ	C
CARBON TETRACHLORIDE		0.26	U	
CHLOROBENZENE		0.14	U	
CHLORODIBROMOMETHANE		0.39	UJ	C
CHLOROETHANE		0.83	U	
CHLOROFORM		0.13	U	
CHLOROMETHANE		0.21	J	P
CIS-1,2-DICHLOROETHENE		0.16	U	
CIS-1,3-DICHLOROPROPENE		0.61	UJ	C
DIBROMOMETHANE		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	U	
DIISOPROPYL ETHER		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	U	
ETHYLBENZENE		0.11	U	
HEXACHLOROBUTADIENE		0.83	U	
ISOPROPYLBENZENE		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U	
METHYLENE CHLORIDE		2.6	U	
NAPHTHALENE		0.32	U	
N-BUTYLBENZENE		0.14	U	
N-PROPYLBENZENE		0.15	U	
SEC-BUTYLBENZENE		0.13	U	
STYRENE		0.1	U	
TERT-AMYL METHYL ETHER		0.11	UJ	C
TERT-BUTYLBENZENE		0.14	U	
TERTIARY-BUTYL ALCOHOL		1.9	J	CP
TETRACHLOROETHENE		0.15	U	
TOLUENE		0.14	U	
TOTAL XYLENES		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.67	UJ	C
TRICHLOROETHENE		0.17	J	P
TRICHLOROFLUOROMETHANE		0.45	U	
VINYL ACETATE		0.19	UJ	C
VINYL CHLORIDE		0.2	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW156A-020719		
SDG: 240-107850-1	LAB_ID	240-107850-2		
FRACTION: PCB	SAMP_DATE	2/7/2019		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.08	U	
DICHLOROBIPHENYLS		0.0062	U	
HEPTACHLOROBIPHENYLS		0.034	U	
HEXACHLOROBIPHENYLS		0.017	U	
MONOCHLOROBIPHENYLS		0.0064	U	
NONACHLOROBIPHENYLS		0.056	U	
OCTACHLOROBIPHENYLS		0.044	U	
PENTACHLOROBIPHENYLS		0.016	U	
TETRACHLOROBIPHENYLS		0.015	U	
TRICHLOROBIPHENYLS		0.0075	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW144B-020719			MRC-MW144B-020719-RE			MRC-MW146B-020719			MRC-MW146B-020719-RE		
SDG: 240-107850-1	LAB_ID	240-107850-3			240-107850-3			240-107850-4			240-107850-4		
FRACTION: M	SAMP_DATE	2/7/2019			2/7/2019			2/7/2019			2/7/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		140						3000					
ANTIMONY		0.57	U					0.57	U				
ARSENIC		0.75	U					0.75	U				
BARIUM		60						130					
BERYLLIUM		1.7						22					
CADMIUM		0.21	U					1					
CALCIUM		14000						18000					
CHROMIUM		1.3	J	P				3.4					
COBALT		37						260					
COPPER		26						240					
IRON		2400			2400			2300			2500		
LEAD		0.57	J	P				0.56	J	P			
MAGNESIUM		4300						28000					
MANGANESE		140			140			530			600		
NICKEL		67						420					
POTASSIUM		16000						3500					
SELENIUM		0.89	U					0.89	U				
SILVER		0.08	J	P				0.053	U				
SODIUM		34000						190000					
THALLIUM		0.2	U					0.2	U				
VANADIUM		1.1	J	P				0.82	U				
ZINC		90						690					

PROJ_NO: 08784	NSAMPLE	MRC-MW147B-020719			MRC-MW147B-020719-RE			MRC-MW156A-020719			MRC-MW156A-020719-RE		
SDG: 240-107850-1	LAB_ID	240-107850-5			240-107850-5			240-107850-2			240-107850-2		
FRACTION: M	SAMP_DATE	2/7/2019			2/7/2019			2/7/2019			2/7/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		220						87					
ANTIMONY		0.57	U					0.57	U				
ARSENIC		0.75	U					0.75	U				
BARIUM		63						23					
BERYLLIUM		1.7						0.31	U				
CADMIUM		0.21	U					0.21	U				
CALCIUM		6400						110000					
CHROMIUM		1.3	J	P				1.1	J	P			
COBALT		33						0.7	J	P			
COPPER		21	U	A				2.1	U	A			
IRON		2500			2300			290			290		
LEAD		1.1						0.45	U				
MAGNESIUM		4300						30000					
MANGANESE		160			180			44			46		
NICKEL		49						2.2					
POTASSIUM		14000						11000					
SELENIUM		0.89	U					0.89	U				
SILVER		0.053	U					0.053	U				
SODIUM		28000						20000					
THALLIUM		0.2	U					0.2	U				
VANADIUM		0.85	J	P				0.82	U				
ZINC		84						15	U				

PROJ_NO: 08784	NSAMPLE	MRC-MW144B-020719						MRC-MW146B-020719					
SDG: 240-107850-1	LAB_ID	240-107850-3						240-107850-4					
FRACTION: MISC	SAMP_DATE	2/7/2019						2/7/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY	44						2.6	U				
BROMIDE	0.28	J	P				0.13	J	P			
HARDNESS AS CACO3	62						200					
NITRITE/NITRATE-N	0.28						2.4					
SALINITY				2	U					2	U	
SULFATE	15						160					
TOTAL DISSOLVED SOLIDS	190						770					

PROJ_NO: 08784	NSAMPLE	MRC-MW147B-020719						MRC-MW156A-020719					
SDG: 240-107850-1	LAB_ID	240-107850-5						240-107850-2					
FRACTION: MISC	SAMP_DATE	2/7/2019						2/7/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		27						280					
BROMIDE		0.79						0.044	U				
HARDNESS AS CACO3		46						440					
NITRITE/NITRATE-N		0.43						0.04	U				
SALINITY					2	U					2	U	
SULFATE		11						190					
TOTAL DISSOLVED SOLIDS		130						570					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW144B-020719 | Lab Sample ID: 240-107850-3

Matrix: Water | Lab File ID: UXC8817.D

Analysis Method: 8260C | Date Collected: 02/07/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:49

Soil Aliquot Vol: | Dilution Factor: 142.86

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	20	U	140	20
71-55-6	1,1,1-Trichloroethane	34	U	140	34
79-34-5	1,1,2,2-Tetrachloroethane	19	U	140	19
76-13-1	1,1,2-Trichlorotrifluoroethane	59	U	140	59
75-34-3	1,1-Dichloroethane	24	U	140	24
75-35-4	1,1-Dichloroethene	27	U	140	27
563-58-6	1,1-Dichloropropene	20	U	140	20
87-61-6	1,2,3-Trichlorobenzene	77	U	140	77
96-18-4	1,2,3-Trichloropropane	34	U	140	34
526-73-8	1,2,3-Trimethylbenzene	20	U	710	20
120-82-1	1,2,4-Trichlorobenzene	37	U	140	37
95-63-6	1,2,4-Trimethylbenzene	10	U	140	10
96-12-8	1,2-Dibromo-3-Chloropropane	130	U	290	130
95-50-1	1,2-Dichlorobenzene	21	U	140	21
107-06-2	1,2-Dichloroethane	30	U	140	30
78-87-5	1,2-Dichloropropane	21	U	140	21
541-73-1	1,3-Dichlorobenzene	21	U	140	21
142-28-9	1,3-Dichloropropane	30	U	140	30
106-46-7	1,4-Dichlorobenzene	23	U	140	23
594-20-7	2,2-Dichloropropane	44	U	140	44
110-75-8	2-Chloroethyl vinyl ether	37	U	1400	37
95-49-8	2-Chlorotoluene	21	U	140	21
591-78-6	2-Hexanone	77	U	1400	77
108-86-1	Bromobenzene	17	U	140	17
74-97-5	Bromochloromethane	20	U	140	20
106-43-4	4-Chlorotoluene	13	U	140	13
99-87-6	4-Isopropyltoluene	19	U	140	19
67-64-1	Acetone	770	U	1400	770
71-43-2	Benzene	19	U	140	19
75-25-2	Bromoform	110	U	140	110
74-83-9	Bromomethane	60	U	140	60
75-15-0	Carbon disulfide	40	U	140	40
56-23-5	Carbon tetrachloride	37	U	140	37
108-90-7	Chlorobenzene	20	U	140	20
75-00-3	Chloroethane	120	U	140	120
67-66-3	Chloroform	19	U	140	19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW144B-020719 | Lab Sample ID: 240-107850-3

Matrix: Water | Lab File ID: UXC8817.D

Analysis Method: 8260C | Date Collected: 02/07/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:49

Soil Aliquot Vol: | Dilution Factor: 142.86

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	29	U	140	29
156-59-2	cis-1,2-Dichloroethene	54	J	140	23
10061-01-5	cis-1,3-Dichloropropene	87	U	140	87
87-68-3	Hexachlorobutadiene	120	U	140	120
74-95-3	Dibromomethane	13	U	140	13
75-27-4	Bromodichloromethane	24	U	140	24
75-71-8	Dichlorodifluoromethane	50	U	140	50
100-41-4	Ethylbenzene	16	U	140	16
106-93-4	1,2-Dibromoethane	17	U	140	17
108-20-3	Diisopropyl ether	24	U	1400	24
91-20-3	Naphthalene	46	U	140	46
104-51-8	n-Butylbenzene	20	U	140	20
98-82-8	Isopropylbenzene	13	U	140	13
103-65-1	N-Propylbenzene	21	U	140	21
78-93-3	2-Butanone (MEK)	170	U	1400	170
108-10-1	4-Methyl-2-pentanone (MIBK)	60	U	1400	60
135-98-8	sec-Butylbenzene	19	U	140	19
1634-04-4	Methyl tert-butyl ether	10	U	140	10
994-05-8	Tert-amyl methyl ether	16	U	710	16
75-09-2	Methylene Chloride	370	U	710	370
100-42-5	Styrene	14	U	140	14
637-92-3	Ethyl tert-butyl ether	21	U	710	21
98-06-6	tert-Butylbenzene	20	U	140	20
127-18-4	Tetrachloroethene	21	U	140	21
108-88-3	Toluene	20	U	140	20
156-60-5	trans-1,2-Dichloroethene	27	U	140	27
10061-02-6	trans-1,3-Dichloropropene	96	U	140	96
79-01-6	Trichloroethene	3600		140	14
75-69-4	Trichlorofluoromethane	64	U	140	64
108-05-4	Vinyl acetate	27	U	290	27
75-01-4	Vinyl chloride	29	U	140	29
75-65-0	tert-Butyl alcohol	240	U	7100	240
1330-20-7	Xylenes, Total	21	U	290	21
124-48-1	Chlorodibromomethane	56	U	140	56

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW144B-020719 | Lab Sample ID: 240-107850-3

Matrix: Water | Lab File ID: UXC8817.D

Analysis Method: 8260C | Date Collected: 02/07/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:49

Soil Aliquot Vol: | Dilution Factor: 142.86

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	90		70-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW146B-020719 | Lab Sample ID: 240-107850-4

Matrix: Water | Lab File ID: UXC8832.D

Analysis Method: 8260C | Date Collected: 02/07/2019 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 14:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW146B-020719 | Lab Sample ID: 240-107850-4

Matrix: Water | Lab File ID: UXC8832.D

Analysis Method: 8260C | Date Collected: 02/07/2019 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 14:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	4.6		1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	20		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW146B-020719 | Lab Sample ID: 240-107850-4

Matrix: Water | Lab File ID: UXC8832.D

Analysis Method: 8260C | Date Collected: 02/07/2019 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 14:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		70-121
460-00-4	4-Bromofluorobenzene (Surr)	78		59-120
2037-26-5	Toluene-d8 (Surr)	84		70-123
1868-53-7	Dibromofluoromethane (Surr)	89		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW147B-020719 | Lab Sample ID: 240-107850-5

Matrix: Water | Lab File ID: UXC8819.D

Analysis Method: 8260C | Date Collected: 02/07/2019 13:55

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 17:32

Soil Aliquot Vol: | Dilution Factor: 200

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	28	U	200	28
71-55-6	1,1,1-Trichloroethane	48	U	200	48
79-34-5	1,1,2,2-Tetrachloroethane	26	U	200	26
76-13-1	1,1,2-Trichlorotrifluoroethane	82	U F2	200	82
75-34-3	1,1-Dichloroethane	34	U	200	34
75-35-4	1,1-Dichloroethene	38	U	200	38
563-58-6	1,1-Dichloropropene	28	U	200	28
87-61-6	1,2,3-Trichlorobenzene	110	U	200	110
96-18-4	1,2,3-Trichloropropane	48	U	200	48
526-73-8	1,2,3-Trimethylbenzene	28	U	1000	28
120-82-1	1,2,4-Trichlorobenzene	52	U	200	52
95-63-6	1,2,4-Trimethylbenzene	14	U	200	14
96-12-8	1,2-Dibromo-3-Chloropropane	180	U	400	180
95-50-1	1,2-Dichlorobenzene	30	U	200	30
107-06-2	1,2-Dichloroethane	42	U	200	42
78-87-5	1,2-Dichloropropane	30	U	200	30
541-73-1	1,3-Dichlorobenzene	30	U	200	30
142-28-9	1,3-Dichloropropane	42	U	200	42
106-46-7	1,4-Dichlorobenzene	32	U	200	32
594-20-7	2,2-Dichloropropane	62	U	200	62
110-75-8	2-Chloroethyl vinyl ether	52	U	2000	52
95-49-8	2-Chlorotoluene	30	U	200	30
591-78-6	2-Hexanone	110	U	2000	110
108-86-1	Bromobenzene	24	U	200	24
74-97-5	Bromochloromethane	28	U	200	28
106-43-4	4-Chlorotoluene	18	U	200	18
99-87-6	4-Isopropyltoluene	26	U	200	26
67-64-1	Acetone	1100	U	2000	1100
71-43-2	Benzene	26	U	200	26
75-25-2	Bromoform	150	U	200	150
74-83-9	Bromomethane	84	U	200	84
75-15-0	Carbon disulfide	56	U	200	56
56-23-5	Carbon tetrachloride	52	U	200	52
108-90-7	Chlorobenzene	28	U	200	28
75-00-3	Chloroethane	170	U	200	170
67-66-3	Chloroform	26	U	200	26

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW147B-020719 | Lab Sample ID: 240-107850-5

Matrix: Water | Lab File ID: UXC8819.D

Analysis Method: 8260C | Date Collected: 02/07/2019 13:55

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 17:32

Soil Aliquot Vol: | Dilution Factor: 200

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	40	U	200	40
156-59-2	cis-1,2-Dichloroethene	33	J	200	32
10061-01-5	cis-1,3-Dichloropropene	120	U	200	120
87-68-3	Hexachlorobutadiene	170	U	200	170
74-95-3	Dibromomethane	18	U	200	18
75-27-4	Bromodichloromethane	34	U	200	34
75-71-8	Dichlorodifluoromethane	70	U F2	200	70
100-41-4	Ethylbenzene	22	U	200	22
106-93-4	1,2-Dibromoethane	24	U	200	24
108-20-3	Diisopropyl ether	34	U	2000	34
91-20-3	Naphthalene	64	U	200	64
104-51-8	n-Butylbenzene	28	U	200	28
98-82-8	Isopropylbenzene	18	U	200	18
103-65-1	N-Propylbenzene	30	U	200	30
78-93-3	2-Butanone (MEK)	230	U	2000	230
108-10-1	4-Methyl-2-pentanone (MIBK)	84	U	2000	84
135-98-8	sec-Butylbenzene	26	U	200	26
1634-04-4	Methyl tert-butyl ether	14	U	200	14
994-05-8	Tert-amyl methyl ether	22	U	1000	22
75-09-2	Methylene Chloride	520	U	1000	520
100-42-5	Styrene	20	U	200	20
637-92-3	Ethyl tert-butyl ether	30	U	1000	30
98-06-6	tert-Butylbenzene	28	U	200	28
127-18-4	Tetrachloroethene	30	U	200	30
108-88-3	Toluene	28	U	200	28
156-60-5	trans-1,2-Dichloroethene	38	U	200	38
10061-02-6	trans-1,3-Dichloropropene	130	U	200	130
79-01-6	Trichloroethene	3500		200	20
75-69-4	Trichlorofluoromethane	90	U F2	200	90
108-05-4	Vinyl acetate	38	U	400	38
75-01-4	Vinyl chloride	40	U	200	40
75-65-0	tert-Butyl alcohol	340	U F1	10000	340
1330-20-7	Xylenes, Total	30	U	400	30
124-48-1	Chlorodibromomethane	78	U	200	78

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW147B-020719 | Lab Sample ID: 240-107850-5

Matrix: Water | Lab File ID: UXC8819.D

Analysis Method: 8260C | Date Collected: 02/07/2019 13:55

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 17:32

Soil Aliquot Vol: | Dilution Factor: 200

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	88		70-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW156A-020719 | Lab Sample ID: 240-107850-2

Matrix: Water | Lab File ID: UXC8831.D

Analysis Method: 8260C | Date Collected: 02/07/2019 08:50

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 13:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW156A-020719 | Lab Sample ID: 240-107850-2

Matrix: Water | Lab File ID: UXC8831.D

Analysis Method: 8260C | Date Collected: 02/07/2019 08:50

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 13:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.14	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW156A-020719 | Lab Sample ID: 240-107850-2

Matrix: Water | Lab File ID: UXC8831.D

Analysis Method: 8260C | Date Collected: 02/07/2019 08:50

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 13:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		70-121
460-00-4	4-Bromofluorobenzene (Surr)	78		59-120
2037-26-5	Toluene-d8 (Surr)	82		70-123
1868-53-7	Dibromofluoromethane (Surr)	87		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: TB-020719 | Lab Sample ID: 240-107850-1

Matrix: Water | Lab File ID: UXC8775.D

Analysis Method: 8260C | Date Collected: 02/07/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 14:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: TB-020719 | Lab Sample ID: 240-107850-1

Matrix: Water | Lab File ID: UXC8775.D

Analysis Method: 8260C | Date Collected: 02/07/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 14:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.21	J	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.17	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.9	J	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: TB-020719 | Lab Sample ID: 240-107850-1

Matrix: Water | Lab File ID: UXC8775.D

Analysis Method: 8260C | Date Collected: 02/07/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 14:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		70-121
460-00-4	4-Bromofluorobenzene (Surr)	80		59-120
2037-26-5	Toluene-d8 (Surr)	86		70-123
1868-53-7	Dibromofluoromethane (Surr)	83		75-128

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW156A-020719 | Lab Sample ID: 240-107850-2

Matrix: Water | Lab File ID: xb2514.D

Analysis Method: 680 | Date Collected: 02/07/2019 08:50

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 871.6(mL) | Date Analyzed: 02/25/2019 17:24

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559536 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.034	U	0.34	0.034
26601-64-9	Hexachlorobiphenyl	0.017	U	0.23	0.017
53742-07-7	Nonachlorobiphenyl	0.056	U	0.57	0.056
55722-26-4	Octachlorobiphenyl	0.044	U	0.34	0.044
27323-18-8	Monochlorobiphenyl	0.0064	U	0.11	0.0064
2051-24-3	DCB Decachlorobiphenyl	0.080	U	0.57	0.080
25512-42-9	Dichlorobiphenyl	0.0062	U	0.11	0.0062
25429-29-2	Pentachlorobiphenyl	0.016	U	0.23	0.016
26914-33-0	Tetrachlorobiphenyl	0.015	U	0.23	0.015
25323-68-6	Trichlorobiphenyl	0.0075	U	0.11	0.0075

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	66		25-113

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW144B-020719 Lab Sample ID: 240-107850-3

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 11:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	2400	200	26	ug/L			1	6010C
7439-96-5	Manganese	140	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.080	1.0	0.053	ug/L	J		1	6020A
7429-90-5	Aluminum	140	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	60	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.7	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	37	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	1.3	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	26	2.0	1.7	ug/L		B	1	6020A
7439-89-6	Iron	2400	100	47	ug/L			1	6020A
7439-96-5	Manganese	140	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	67	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.57	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	1.1	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	90	20	15	ug/L			1	6020A
7440-70-2	Calcium	14000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	16000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	4300	1000	200	ug/L			1	6020A
7440-23-5	Sodium	34000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW146B-020719 Lab Sample ID: 240-107850-4

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	2300	200	26	ug/L			1	6010C
7439-96-5	Manganese	530	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	3000	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	130	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	22	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	1.0	1.0	0.21	ug/L			1	6020A
7440-48-4	Cobalt	260	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	3.4	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	240	2.0	1.7	ug/L		B	1	6020A
7439-89-6	Iron	2500	100	47	ug/L			1	6020A
7439-96-5	Manganese	600	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	420	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.56	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	690	20	15	ug/L			1	6020A
7440-70-2	Calcium	18000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	3500	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	28000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	190000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW147B-020719 Lab Sample ID: 240-107850-5

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:55

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	2500	200	26	ug/L			1	6010C
7439-96-5	Manganese	160	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	220	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	63	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.7	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	33	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	1.3	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	21	2.0	1.7	ug/L		B	1	6020A
7439-89-6	Iron	2300	100	47	ug/L			1	6020A
7439-96-5	Manganese	180	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	49	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	1.1	1.0	0.45	ug/L			1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.85	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	84	20	15	ug/L			1	6020A
7440-70-2	Calcium	6400	1000	580	ug/L			1	6020A
7440-09-7	Potassium	14000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	4300	1000	200	ug/L			1	6020A
7440-23-5	Sodium	28000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW156A-020719 Lab Sample ID: 240-107850-2

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 08:50

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	290	200	26	ug/L			1	6010C
7439-96-5	Manganese	44	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	87	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	23	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.31	1.0	0.31	ug/L	U		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	0.70	1.0	0.19	ug/L	J		1	6020A
7440-47-3	Chromium	1.1	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	2.1	2.0	1.7	ug/L		B	1	6020A
7439-89-6	Iron	290	100	47	ug/L			1	6020A
7439-96-5	Manganese	46	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	2.2	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	15	20	15	ug/L	U		1	6020A
7440-70-2	Calcium	110000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	11000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	30000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	20000	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW144B-020719 Lab Sample ID: 240-107850-3

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 11:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	62	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	44	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	190	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.28	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	15	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW144B-020719 Lab Sample ID: 240-107850-3

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 11:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.28	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW144B-020719 Lab Sample ID: 240-107850-3

Lab Name: TestAmerica Pittsburgh Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 11:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW146B-020719 Lab Sample ID: 240-107850-4

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	200	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	2.6	5.0	2.6	mg/L	U		1	2320B-2011
	Total Dissolved Solids	770	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.13	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	160	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW146B-020719 Lab Sample ID: 240-107850-4

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	2.4	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW146B-020719 Lab Sample ID: 240-107850-4

Lab Name: TestAmerica Pittsburgh Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW147B-020719 Lab Sample ID: 240-107850-5

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:55

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	46	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	27	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	130	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.79	0.50	0.044	mg/L			1	300.0
14808-79-8	Sulfate	11	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW147B-020719 Lab Sample ID: 240-107850-5

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:55

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.43	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW147B-020719 Lab Sample ID: 240-107850-5

Lab Name: TestAmerica Pittsburgh Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:55

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW156A-020719 Lab Sample ID: 240-107850-2

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 08:50

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	440	25	12	mg/L			1	2340C-2011
	Alkalinity	280	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	570	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	190	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW156A-020719 Lab Sample ID: 240-107850-2

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 08:50

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.040	0.10	0.040	mg/L	U		1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW156A-020719 Lab Sample ID: 240-107850-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 08:50

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

APPENDIX C

SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass Discharge

Report Number: 240-107850-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The 680 Polychlorinated Biphenyls analysis was performed at the TestAmerica Savannah laboratory. The 4500NO3-F Nitrate Nitrite as N analysis was performed at the TestAmerica Nashville laboratory. The 9050A Specific Conductance and the 2520-B Salinity analyses were performed at the TestAmerica Pittsburgh laboratory.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 2/8/2019 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.5º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-020719 (240-107850-1), MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/11/2019, 02/13/2019 and 02/14/2019.

Methylene Chloride was detected in method blank MB 240-367892/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Samples MRC-MW144B-020719 (240-107850-3)[142.86X] and MRC-MW147B-020719 (240-107850-5)[200X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 307509 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TB-020719 (240-107850-1)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following samples were received in hydrochloric preserved vials: TB-020719 (240-107850-1), MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5)

The continuing calibration verification (CCV) for analytical batch 367892 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. MRC-MW144B-020719 (240-107850-3) and MRC-MW147B-020719 (240-107850-5)

No MS/MSD in batch due to an incorrect dilution. Batch contained the following samples: MRC-MW156A-020719 (240-107850-2) and

MRC-MW146B-020719 (240-107850-4)

The continuing calibration verification (CCV) for analytical batch 368049 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. MRC-MW156A-020719 (240-107850-2) and MRC-MW146B-020719 (240-107850-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)
Sample MRC-MW156A-020719 (240-107850-2) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The sample was prepared on 02/19/2019 and analyzed on 02/25/2019.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 680-558728.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/11/2019 and analyzed on 02/12/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 02/11/2019 and analyzed on 02/13/2019.

Copper was detected in method blank MB 240-367484/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 02/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 02/19/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 02/12/2019 and 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for anions in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 02/12/2019 and 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for Salinity in accordance with SM 2520B. The samples were analyzed on 02/27/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 02/17/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-107850-1
Project/Site: MRC Block E/F Mass Discharge

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
680	Liquid-Liquid Extraction (Separatory Funnel)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107850-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107850-1	TB-020719	Water	02/07/19 00:00	02/08/19 10:00
240-107850-2	MRC-MW156A-020719	Water	02/07/19 08:50	02/08/19 10:00
240-107850-3	MRC-MW144B-020719	Water	02/07/19 11:00	02/08/19 10:00
240-107850-4	MRC-MW146B-020719	Water	02/07/19 13:00	02/08/19 10:00
240-107850-5	MRC-MW147B-020719	Water	02/07/19 13:55	02/08/19 10:00

North Canton
4101 Shuffel Street, N. W.

North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

0.5/0.5

Chain of Custody Record

Baltimore #201

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Mike Martin	Site Contact: Walt Pryor	Date: 2/7/19	COC No:
20251 Century Blvd, Suite 200	Analysis Turnaround Time			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W)			
(301) 528-3021 Phone	TAT if different from Below STANDARD TAT			SDG No.
(301) 528-3000 FAX	☐ 2 weeks			
Project Name: MRC BLOCK E/F MASS DISCHARGE	☐ 1 week			
Site: MRC BLOCK E	☐ 2 days			Sampler: Walt Pryor
PO # 112IC08784	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (SW0846 8260C)	Total Metals/Hardness (6020A, 2340C)	Sulfate, Nitrates, TDS (9056A, 4500-NO3E, 2540C	Bromide (300)	Iron and Manganese (6010C	Alkalinity (SM 2320B)	Salinity (2520B)	PCBs (680)	Sample Specific Notes:
TB-020719	2/7/19	—	GRAB	WATER	2		x								
MRC-MW156A-020719	↓	0850	GRAB	↓	10		X	X	X	A	X	a	X	X	* Not enough water for 2 aliquots
MRC-MW144B-020719		1100	↓		9		X	X	X	X	X	a	X		
MRC-MW146B-020719		1300			9		X	X	X	X	X	X	X		
MRC-MW147B-020719		1355			9		X	X	X	X	X	X	X		
				2/7/19											

240-107850 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

2	4	6	1	4	1	1	1

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: Block E/F Mass discharge well sampling. MW156A only has one amber due to insufficient volume in well
NEED TB FROM TA COURIER

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Tetra Tech Inc	2/7/19		TA	2/7/19 1500
	TA	2/7/19 1700		TA	2-8-19 1000

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 107850**
Canton Facility

Client TA Site Name

Cooler Received on 2-8-19 Opened on 2-8-19 1000

Cooler unpacked by: Ryan Cribley

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # TA Foam Box Client Cooler Box Other

Packing material used: (Bubble Wrap) Foam (Plastic Bag) None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 0.5 °C Corrected Cooler Temp. 0.5 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Coord (Yes) No
16. Was a LL Hg or Me Hg trip blank present? Yes (No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

~~Trip Blanks were labeled to stay in cooler.~~ SC

18. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW156A-020719	240-107850-F-2	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW156A-020719	240-107850-G-2	Plastic 250ml - with Nitric Acid	<2		
MRC-MW156A-020719	240-107850-I-2	Plastic 500ml - with Nitric Acid	<2		
MRC-MW144B-020719	240-107850-F-3	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW144B-020719	240-107850-G-3	Plastic 250ml - with Nitric Acid	<2		
MRC-MW144B-020719	240-107850-I-3	Plastic 500ml - with Nitric Acid	<2		
MRC-MW146B-020719	240-107850-F-4	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW146B-020719	240-107850-G-4	Plastic 250ml - with Nitric Acid	<2		
MRC-MW146B-020719	240-107850-I-4	Plastic 500ml - with Nitric Acid	<2		
MRC-MW147B-020719	240-107850-F-5	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW147B-020719	240-107850-G-5	Plastic 250ml - with Nitric Acid	<2		
MRC-MW147B-020719	240-107850-I-5	Plastic 500ml - with Nitric Acid	<2		

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-020719	240-107850-1	83	90	86	80
MRC-MW156A-020719	240-107850-2	87	93	82	78
MRC-MW144B-020719	240-107850-3	91	99	90	83
MRC-MW146B-020719	240-107850-4	89	93	84	78
MRC-MW147B-020719	240-107850-5	91	98	88	81
	MB 240-367509/6	86	92	86	81
	MB 240-367892/6	91	97	89	85
	MB 240-368049/6	88	95	86	83
	LCS 240-367509/4	97	94	94	92
	LCS 240-367892/4	90	88	84	84
	LCS 240-368049/4	90	87	85	85
MRC-MW147B-020719 MS	240-107850-5 MS	91	89	86	85
MRC-MW147B-020719 MSD	240-107850-5 MSD	89	89	88	85

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab File ID: UXC8770.D Lab Sample ID: MB 240-367509/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/11/2019 12:40

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367509/4	UXC8766.D	02/11/2019 11:13
TB-020719	240-107850-1	UXC8775.D	02/11/2019 14:30

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	86		70-123
1868-53-7	Dibromofluoromethane (Surr)	86		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.03	90	80-124	
1,1,1-Trichloroethane	10.0	10.5	105	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.69	87	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.62	96	50-156	
1,1-Dichloroethane	10.0	10.5	105	75-133	
1,1-Dichloroethene	10.0	9.12	91	65-139	
1,1-Dichloropropene	10.0	9.95	99	78-126	
1,2,3-Trichlorobenzene	10.0	8.95	90	39-138	
1,2,3-Trichloropropane	10.0	8.85	88	66-139	
1,2,4-Trichlorobenzene	10.0	8.66	87	42-133	
1,2,4-Trimethylbenzene	10.0	9.49	95	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.72	57	46-132	
1,2-Dichlorobenzene	10.0	9.87	99	78-120	
1,2-Dichloroethane	10.0	10.3	103	71-135	
1,2-Dichloropropane	10.0	10.6	106	78-133	
1,3-Dichlorobenzene	10.0	9.58	96	78-120	
1,3-Dichloropropane	10.0	9.50	95	72-134	
1,4-Dichlorobenzene	10.0	9.63	96	78-120	
2,2-Dichloropropane	10.0	10.5	105	42-150	
2-Chloroethyl vinyl ether	10.0	8.08 J	81	55-137	
2-Chlorotoluene	10.0	9.67	97	78-123	
2-Hexanone	20.0	15.5	77	43-148	
Bromobenzene	10.0	9.69	97	74-129	
Bromochloromethane	10.0	10.7	107	74-130	
4-Chlorotoluene	10.0	9.49	95	77-125	
4-Isopropyltoluene	10.0	9.40	94	69-122	
Acetone	20.0	17.4	87	21-162	
Benzene	10.0	10.6	106	80-123	
Bromoform	10.0	5.03	50	49-141	
Bromomethane	10.0	8.44	84	41-175	
Carbon disulfide	10.0	7.88	79	60-138	
Carbon tetrachloride	10.0	9.20	92	63-140	
Chlorobenzene	10.0	10.0	100	80-121	
Chloroethane	10.0	8.43	84	33-173	
Chloroform	10.0	10.5	105	79-127	
Chloromethane	10.0	8.83	88	54-143	
cis-1,2-Dichloroethene	10.0	10.6	106	76-128	
cis-1,3-Dichloropropene	10.0	8.94	89	64-132	
Hexachlorobutadiene	10.0	8.16	82	38-136	
Dibromomethane	10.0	9.67	97	74-124	
Bromodichloromethane	10.0	8.78	88	77-125	
Dichlorodifluoromethane	10.0	7.36	74	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.78	98	80-120	
1,2-Dibromoethane	10.0	8.95	89	77-123	
Naphthalene	10.0	7.76	78	28-141	
m-Xylene & p-Xylene	10.0	9.69	97	80-120	
n-Butylbenzene	10.0	8.82	88	57-126	
Isopropylbenzene	10.0	9.80	98	74-120	
N-Propylbenzene	10.0	9.40	94	77-123	
2-Butanone (MEK)	20.0	17.5	87	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.8	84	49-143	
sec-Butylbenzene	10.0	9.10	91	68-123	
Methyl tert-butyl ether	10.0	8.88	89	51-133	
Methylene Chloride	10.0	9.41	94	70-134	
o-Xylene	10.0	9.98	100	80-120	
Styrene	10.0	9.34	93	79-120	
tert-Butylbenzene	10.0	9.02	90	70-121	
Tetrachloroethene	10.0	9.77	98	74-130	
Toluene	10.0	10.0	100	78-129	
trans-1,2-Dichloroethene	10.0	10.7	107	78-133	
trans-1,3-Dichloropropene	10.0	7.22	72	55-128	
Trichloroethene	10.0	10.3	103	76-125	
Trichlorofluoromethane	10.0	9.69	97	51-164	
Vinyl acetate	10.0	8.28	83	45-151	
Vinyl chloride	10.0	8.69	87	58-143	
tert-Butyl alcohol	100	59.8	60	10-161	
Xylenes, Total	20.0	19.7	98	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab File ID: UXC8811.D Lab Sample ID: MB 240-367892/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/13/2019 13:38

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367892/4	UXC8807.D	02/13/2019 12:10
MRC-MW144B-020719	240-107850-3	UXC8817.D	02/13/2019 16:49
MRC-MW147B-020719	240-107850-5	UXC8819.D	02/13/2019 17:32
MRC-MW147B-020719 MS	240-107850-5 MS	UXC8821.D	02/13/2019 18:16
MRC-MW147B-020719 MSD	240-107850-5 MSD	UXC8822.D	02/13/2019 18:38

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367892/6

Matrix: Water | Lab File ID: UXC8811.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367892/6

Matrix: Water | Lab File ID: UXC8811.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.78	J	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367892/6

Matrix: Water | Lab File ID: UXC8811.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-121
460-00-4	4-Bromofluorobenzene (Surr)	85		59-120
2037-26-5	Toluene-d8 (Surr)	89		70-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.60	86	80-124	
1,1,1-Trichloroethane	10.0	10.1	101	69-134	
1,1,2,2-Tetrachloroethane	10.0	7.96	80	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.94	99	50-156	
1,1-Dichloroethane	10.0	10.0	100	75-133	
1,1-Dichloroethene	10.0	8.97	90	65-139	
1,1-Dichloropropene	10.0	9.59	96	78-126	
1,2,3-Trichlorobenzene	10.0	8.32	83	39-138	
1,2,3-Trichloropropane	10.0	8.35	84	66-139	
1,2,4-Trichlorobenzene	10.0	8.22	82	42-133	
1,2,4-Trimethylbenzene	10.0	8.77	88	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.66	57	46-132	
1,2-Dichlorobenzene	10.0	9.22	92	78-120	
1,2-Dichloroethane	10.0	9.95	99	71-135	
1,2-Dichloropropane	10.0	9.85	99	78-133	
1,3-Dichlorobenzene	10.0	8.91	89	78-120	
1,3-Dichloropropane	10.0	8.96	90	72-134	
1,4-Dichlorobenzene	10.0	8.98	90	78-120	
2,2-Dichloropropane	10.0	9.68	97	42-150	
2-Chloroethyl vinyl ether	10.0	7.11 J	71	55-137	
2-Chlorotoluene	10.0	8.99	90	78-123	
2-Hexanone	20.0	15.3	77	43-148	
Bromobenzene	10.0	9.08	91	74-129	
Bromochloromethane	10.0	10.2	102	74-130	
4-Chlorotoluene	10.0	8.70	87	77-125	
4-Isopropyltoluene	10.0	8.79	88	69-122	
Acetone	20.0	16.3	81	21-162	
Benzene	10.0	10.1	101	80-123	
Bromoform	10.0	5.22	52	49-141	
Bromomethane	10.0	7.90	79	41-175	
Carbon disulfide	10.0	7.70	77	60-138	
Carbon tetrachloride	10.0	8.94	89	63-140	
Chlorobenzene	10.0	9.44	94	80-121	
Chloroethane	10.0	7.96	80	33-173	
Chloroform	10.0	10.1	101	79-127	
Chloromethane	10.0	7.52	75	54-143	
cis-1,2-Dichloroethene	10.0	10.1	101	76-128	
cis-1,3-Dichloropropene	10.0	8.48	85	64-132	
Hexachlorobutadiene	10.0	7.72	77	38-136	
Dibromomethane	10.0	9.26	93	74-124	
Bromodichloromethane	10.0	8.40	84	77-125	
Dichlorodifluoromethane	10.0	5.94	59	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.29	93	80-120	
1,2-Dibromoethane	10.0	8.51	85	77-123	
Naphthalene	10.0	7.20	72	28-141	
m-Xylene & p-Xylene	10.0	9.41	94	80-120	
n-Butylbenzene	10.0	8.24	82	57-126	
Isopropylbenzene	10.0	9.54	95	74-120	
N-Propylbenzene	10.0	8.77	88	77-123	
2-Butanone (MEK)	20.0	17.0	85	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	15.5	78	49-143	
sec-Butylbenzene	10.0	8.62	86	68-123	
Methyl tert-butyl ether	10.0	8.10	81	51-133	
Methylene Chloride	10.0	13.1	131	70-134	
o-Xylene	10.0	9.59	96	80-120	
Styrene	10.0	9.02	90	79-120	
tert-Butylbenzene	10.0	8.40	84	70-121	
Tetrachloroethene	10.0	9.78	98	74-130	
Toluene	10.0	9.59	96	78-129	
trans-1,2-Dichloroethene	10.0	10.2	102	78-133	
trans-1,3-Dichloropropene	10.0	6.92	69	55-128	
Trichloroethene	10.0	9.91	99	76-125	
Trichlorofluoromethane	10.0	8.99	90	51-164	
Vinyl acetate	10.0	7.96	80	45-151	
Vinyl chloride	10.0	7.98	80	58-143	
tert-Butyl alcohol	100	60.7	61	10-161	
Xylenes, Total	20.0	19.0	95	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8821.D

Lab ID: 240-107850-5 MS Client ID: MRC-MW147B-020719 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	2000	28 U	1540	77	67-123	
1,1,1-Trichloroethane	2000	48 U	1730	86	51-138	
1,1,2,2-Tetrachloroethane	2000	26 U	1540	77	60-137	
1,1,2-Trichlorotrifluoroethane	2000	82 U	822	41	31-156	
1,1-Dichloroethane	2000	34 U	1900	95	63-136	
1,1-Dichloroethene	2000	38 U	1610	80	53-140	
1,1-Dichloropropene	2000	28 U	1690	84	62-127	
1,2,3-Trichlorobenzene	2000	110 U	1530	76	34-123	
1,2,3-Trichloropropane	2000	48 U	1610	80	61-143	
1,2,4-Trichlorobenzene	2000	52 U	1470	73	30-126	
1,2,4-Trimethylbenzene	2000	14 U	1600	80	62-120	
1,2-Dibromo-3-Chloropropane	2000	180 U	962	48	38-124	
1,2-Dichlorobenzene	2000	30 U	1750	87	64-120	
1,2-Dichloroethane	2000	42 U	1920	96	65-135	
1,2-Dichloropropane	2000	30 U	1900	95	70-132	
1,3-Dichlorobenzene	2000	30 U	1680	84	62-120	
1,3-Dichloropropane	2000	42 U	1750	88	68-135	
1,4-Dichlorobenzene	2000	32 U	1720	86	63-120	
2,2-Dichloropropane	2000	62 U	1560	78	27-132	
2-Chloroethyl vinyl ether	2000	52 U	1170 J	59	10-120	
2-Chlorotoluene	2000	30 U	1660	83	64-123	
2-Hexanone	4000	110 U	2960	74	42-150	
Bromobenzene	2000	24 U	1700	85	66-127	
Bromochloromethane	2000	28 U	1930	96	73-120	
4-Chlorotoluene	2000	18 U	1630	82	63-126	
4-Isopropyltoluene	2000	26 U	1500	75	59-120	
Acetone	4000	1100 U	3680	92	10-168	
Benzene	2000	26 U	1950	97	71-122	
Bromoform	2000	150 U	926	46	44-129	
Bromomethane	2000	84 U	1350	68	19-187	
Carbon disulfide	2000	56 U	1150	58	43-144	
Carbon tetrachloride	2000	52 U	1360	68	41-143	
Chlorobenzene	2000	28 U	1840	92	70-123	
Chloroethane	2000	170 U	1450	72	11-189	
Chloroform	2000	26 U	1950	98	68-130	
Chloromethane	2000	40 U	1630	81	31-154	
cis-1,2-Dichloroethene	2000	33 J	1980	97	64-130	
cis-1,3-Dichloropropene	2000	120 U	1500	75	48-127	
Hexachlorobutadiene	2000	170 U	1160	58	32-128	
Dibromomethane	2000	18 U	1780	89	71-120	
Bromodichloromethane	2000	34 U	1550	77	64-125	
Dichlorodifluoromethane	2000	70 U	666	33	28-136	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8821.D

Lab ID: 240-107850-5 MS Client ID: MRC-MW147B-020719 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethylbenzene	2000	22 U	1750	87	66-120	
1,2-Dibromoethane	2000	24 U	1630	82	71-123	
Naphthalene	2000	64 U	1330	66	31-142	
m-Xylene & p-Xylene	2000	16 U	1750	87	63-121	
n-Butylbenzene	2000	28 U	1340	67	51-120	
Isopropylbenzene	2000	18 U	1700	85	59-120	
N-Propylbenzene	2000	30 U	1560	78	61-123	
2-Butanone (MEK)	4000	230 U	3380	85	37-156	
4-Methyl-2-pentanone (MIBK)	4000	84 U	3030	76	44-143	
sec-Butylbenzene	2000	26 U	1430	71	60-120	
Methyl tert-butyl ether	2000	14 U	1470	74	41-136	
Methylene Chloride	2000	520 U	1860	93	61-130	
o-Xylene	2000	18 U	1770	89	69-120	
Styrene	2000	20 U	1720	86	68-120	
tert-Butylbenzene	2000	28 U	1460	73	61-120	
Tetrachloroethene	2000	30 U	1690	85	51-136	
Toluene	2000	28 U	1820	91	62-132	
trans-1,2-Dichloroethene	2000	38 U	1960	98	68-133	
trans-1,3-Dichloropropene	2000	130 U	1210	60	40-125	
Trichloroethene	2000	3500	5230	87	55-131	
Trichlorofluoromethane	2000	90 U	1130	57	37-174	
Vinyl acetate	2000	38 U	1410	70	37-148	
Vinyl chloride	2000	40 U	1340	67	43-154	
tert-Butyl alcohol	20000	340 U	12600	63	70-130	F1
Xylenes, Total	4000	30 U	3520	88	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8822.D

Lab ID: 240-107850-5 MSD Client ID: MRC-MW147B-020719 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	2000	1650	83	7	13	67-123	
1,1,1-Trichloroethane	2000	1890	95	9	27	51-138	
1,1,2,2-Tetrachloroethane	2000	1650	83	7	31	60-137	
1,1,2-Trichlorotrifluoroethane	2000	1970	99	82	35	31-156	F2
1,1-Dichloroethane	2000	1950	97	2	23	63-136	
1,1-Dichloroethene	2000	1770	88	9	35	53-140	
1,1-Dichloropropene	2000	1910	95	12	20	62-127	
1,2,3-Trichlorobenzene	2000	1680	84	10	35	34-123	
1,2,3-Trichloropropane	2000	1730	86	7	22	61-143	
1,2,4-Trichlorobenzene	2000	1590	79	8	35	30-126	
1,2,4-Trimethylbenzene	2000	1710	85	6	27	62-120	
1,2-Dibromo-3-Chloropropane	2000	1040	52	8	35	38-124	
1,2-Dichlorobenzene	2000	1820	91	4	30	64-120	
1,2-Dichloroethane	2000	1990	99	4	24	65-135	
1,2-Dichloropropane	2000	1970	99	4	26	70-132	
1,3-Dichlorobenzene	2000	1750	88	5	31	62-120	
1,3-Dichloropropane	2000	1840	92	5	15	68-135	
1,4-Dichlorobenzene	2000	1790	90	4	28	63-120	
2,2-Dichloropropane	2000	1740	87	11	18	27-132	
2-Chloroethyl vinyl ether	2000	1240 J	62	6	35	10-120	
2-Chlorotoluene	2000	1740	87	5	20	64-123	
2-Hexanone	4000	3030	76	2	35	42-150	
Bromobenzene	2000	1800	90	6	19	66-127	
Bromochloromethane	2000	2010	100	4	15	73-120	
4-Chlorotoluene	2000	1730	87	6	20	63-126	
4-Isopropyltoluene	2000	1680	84	11	24	59-120	
Acetone	4000	3940	99	7	35	10-168	
Benzene	2000	2000	100	3	22	71-122	
Bromoform	2000	921	46	1	28	44-129	
Bromomethane	2000	1470	74	8	35	19-187	
Carbon disulfide	2000	1360	68	17	33	43-144	
Carbon tetrachloride	2000	1650	82	19	30	41-143	
Chlorobenzene	2000	1900	95	3	23	70-123	
Chloroethane	2000	1540	77	6	35	11-189	
Chloroform	2000	1980	99	1	23	68-130	
Chloromethane	2000	1630	82	0	35	31-154	
cis-1,2-Dichloroethene	2000	2010	99	1	21	64-130	
cis-1,3-Dichloropropene	2000	1580	79	5	30	48-127	
Hexachlorobutadiene	2000	1440	72	21	35	32-128	
Dibromomethane	2000	1860	93	4	16	71-120	
Bromodichloromethane	2000	1620	81	4	27	64-125	
Dichlorodifluoromethane	2000	1270	64	63	35	28-136	F2

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8822.D

Lab ID: 240-107850-5 MSD Client ID: MRC-MW147B-020719 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	2000	1820	91	4	24	66-120	
1,2-Dibromoethane	2000	1720	86	5	27	71-123	
Naphthalene	2000	1490	75	12	35	31-142	
m-Xylene & p-Xylene	2000	1780	89	1	25	63-121	
n-Butylbenzene	2000	1540	77	14	27	51-120	
Isopropylbenzene	2000	1830	92	7	31	59-120	
N-Propylbenzene	2000	1710	85	9	20	61-123	
2-Butanone (MEK)	4000	3740	93	10	35	37-156	
4-Methyl-2-pentanone (MIBK)	4000	3200	80	6	35	44-143	
sec-Butylbenzene	2000	1650	82	14	24	60-120	
Methyl tert-butyl ether	2000	1550	78	5	29	41-136	
Methylene Chloride	2000	1920	96	3	29	61-130	
o-Xylene	2000	1850	93	4	25	69-120	
Styrene	2000	1770	89	3	26	68-120	
tert-Butylbenzene	2000	1630	81	11	20	61-120	
Tetrachloroethene	2000	1950	98	14	23	51-136	
Toluene	2000	1890	94	4	23	62-132	
trans-1,2-Dichloroethene	2000	2000	100	2	24	68-133	
trans-1,3-Dichloropropene	2000	1250	62	3	27	40-125	
Trichloroethene	2000	5300	91	1	23	55-131	
Trichlorofluoromethane	2000	1800	90	45	35	37-174	F2
Vinyl acetate	2000	1550	77	9	18	37-148	
Vinyl chloride	2000	1530	77	14	29	43-154	
tert-Butyl alcohol	20000	11800	59	7	35	70-130	F1
Xylenes, Total	4000	3630	91	3	25	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab File ID: UXC8829.D Lab Sample ID: MB 240-368049/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/14/2019 12:59

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-368049/4	UXC8825.D	02/14/2019 11:32
MRC-MW156A-020719	240-107850-2	UXC8831.D	02/14/2019 13:44
MRC-MW146B-020719	240-107850-4	UXC8832.D	02/14/2019 14:06

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-368049/6

Matrix: Water | Lab File ID: UXC8829.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-368049/6

Matrix: Water | Lab File ID: UXC8829.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-368049/6

Matrix: Water Lab File ID: UXC8829.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 02/14/2019 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 368049 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	86		70-123
1868-53-7	Dibromofluoromethane (Surr)	88		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8825.D

Lab ID: LCS 240-368049/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.68	87	80-124	
1,1,1-Trichloroethane	10.0	9.99	100	69-134	
1,1,2,2-Tetrachloroethane	10.0	7.99	80	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.92	99	50-156	
1,1-Dichloroethane	10.0	10.1	101	75-133	
1,1-Dichloroethene	10.0	8.79	88	65-139	
1,1-Dichloropropene	10.0	9.74	97	78-126	
1,2,3-Trichlorobenzene	10.0	8.31	83	39-138	
1,2,3-Trichloropropane	10.0	8.56	86	66-139	
1,2,4-Trichlorobenzene	10.0	8.23	82	42-133	
1,2,4-Trimethylbenzene	10.0	8.91	89	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.72	57	46-132	
1,2-Dichlorobenzene	10.0	9.18	92	78-120	
1,2-Dichloroethane	10.0	10.1	101	71-135	
1,2-Dichloropropane	10.0	10.2	102	78-133	
1,3-Dichlorobenzene	10.0	9.10	91	78-120	
1,3-Dichloropropane	10.0	9.06	91	72-134	
1,4-Dichlorobenzene	10.0	9.15	91	78-120	
2,2-Dichloropropane	10.0	9.11	91	42-150	
2-Chloroethyl vinyl ether	10.0	7.34 J	73	55-137	
2-Chlorotoluene	10.0	9.06	91	78-123	
2-Hexanone	20.0	15.6	78	43-148	
Bromobenzene	10.0	9.08	91	74-129	
Bromochloromethane	10.0	10.2	102	74-130	
4-Chlorotoluene	10.0	8.93	89	77-125	
4-Isopropyltoluene	10.0	8.88	89	69-122	
Acetone	20.0	18.1	90	21-162	
Benzene	10.0	10.3	103	80-123	
Bromoform	10.0	6.36	64	49-141	
Bromomethane	10.0	7.29	73	41-175	
Carbon disulfide	10.0	7.34	73	60-138	
Carbon tetrachloride	10.0	9.09	91	63-140	
Chlorobenzene	10.0	9.64	96	80-121	
Chloroethane	10.0	8.11	81	33-173	
Chloroform	10.0	10.2	102	79-127	
Chloromethane	10.0	8.29	83	54-143	
cis-1,2-Dichloroethene	10.0	10.2	102	76-128	
cis-1,3-Dichloropropene	10.0	8.87	89	64-132	
Hexachlorobutadiene	10.0	7.85	78	38-136	
Dibromomethane	10.0	9.41	94	74-124	
Bromodichloromethane	10.0	8.85	88	77-125	
Dichlorodifluoromethane	10.0	6.20	62	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8825.D

Lab ID: LCS 240-368049/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.35	93	80-120	
1,2-Dibromoethane	10.0	8.56	86	77-123	
Naphthalene	10.0	6.94	69	28-141	
m-Xylene & p-Xylene	10.0	9.43	94	80-120	
n-Butylbenzene	10.0	8.30	83	57-126	
Isopropylbenzene	10.0	9.46	95	74-120	
N-Propylbenzene	10.0	9.04	90	77-123	
2-Butanone (MEK)	20.0	18.5	92	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.1	80	49-143	
sec-Butylbenzene	10.0	8.72	87	68-123	
Methyl tert-butyl ether	10.0	8.09	81	51-133	
Methylene Chloride	10.0	9.59	96	70-134	
o-Xylene	10.0	9.46	95	80-120	
Styrene	10.0	9.05	91	79-120	
tert-Butylbenzene	10.0	8.51	85	70-121	
Tetrachloroethene	10.0	10.1	101	74-130	
Toluene	10.0	9.72	97	78-129	
trans-1,2-Dichloroethene	10.0	10.4	104	78-133	
trans-1,3-Dichloropropene	10.0	7.26	73	55-128	
Trichloroethene	10.0	10.2	102	76-125	
Trichlorofluoromethane	10.0	8.94	89	51-164	
Vinyl acetate	10.0	7.85	78	45-151	
Vinyl chloride	10.0	7.70	77	58-143	
tert-Butyl alcohol	100	69.5	70	10-161	
Xylenes, Total	20.0	18.9	94	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	47729 2392918	112693	296202	593761	1222220	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	58046 2319242	119628	276149	585358	1207742	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	57558 2025909	104647	261470	574312	1027051	1.00 40.0	2.00	5.00	10.0	20.0
Butadiene	FB	Ave	71088 2665435	148568	361713	698736	1378009	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	47411 1506749	100403	198900	423055	791041	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	40558 1406432	82718	182320	372694	733356	1.00 40.0	2.00	5.00	10.0	20.0
Dichlorofluoromethane	FB	Ave	103682 3477509	201291	471934	910063	1834172	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	68568 3407867	157640	408598	855986	1703371	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	44605 1653914	87432	212667	419544	869536	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	32229 1148055	55282	144856	290454	603583	5.00 200	10.0	25.0	50.0	100
1,1-Dichloroethene	FB	Ave	57094 2182381	120279	277159	516876	1125076	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichlorotrifluoroethane	FB	Ave	42550 1880984	91700	228498	462285	967763	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Lin1	17181 332724	23252	50751	89168	190030	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	93588 3255913	156089	446819	909454	1760595	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	160687 5174431	283969	742305	1445567	2744114	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	27003 1418141	58477	154763	317161	716236	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	79740 3067156	150240	380996	723073	1550490	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	154915 2032773	198393	338417	580808	1097865	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	36240 1508945	82343	184510	328142	832907	10.0 400	20.0	50.0	100	200
Acrylonitrile	FB	Ave	175156 7643188	352291	868795	1699336	3768272	10.0 400	20.0	50.0	100	200
Methyl tert-butyl ether	FB	Ave	139955 6078083	285516	714788	1439491	3075308	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,2-Dichloroethene	FB	Ave	54736 2072831	103155	251570	500088	1069131	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	10725 455555	22194	51427	104918	230317	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	81126 3448011	166930	409730	832192	1773410	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	88027 4206187	177639	476538	992089	2098831	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	57035 2264494	116480	278759	565374	1189038	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	11684 445323	21907	58586	120845	241048	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone (MEK)	FB	Ave	12505 511818	24387	59681	120010	256717	2.00 80.0	4.00	10.0	20.0	40.0
Bromochloromethane	FB	Ave	28543 1150919	56716	140018	275468	595090	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	31985 1272086	62314	150812	279158	634219	2.00 80.0	4.00	10.0	20.0	40.0
Chloroform	FB	Ave	83929 3460990	169874	422474	847597	1793716	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	63803 2533663	130349	334136	689229	1356966	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	68915 3105972	144320	368473	742256	1592895	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	66437 2816568	140972	343617	688186	1474449	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	56945 2706723	124489	318843	648774	1385341	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	31904 1496664	73133	177736	322275	821992	25.0 1000	50.0	125	250	500
Benzene	FB	Ave	207184 8390558	412777	1016161	2024145	4352726	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	68031 2877185	142414	350758	707702	1492475	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	8801 415529	19095	48491	101813	218160	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	59121 2403531	120531	296310	593061	1274454	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	60130 2723193	127322	326169	654672	1428283	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	43707 1981074	97800	239856	483376	1020861	1.00 40.0	2.00	5.00	10.0	20.0
Dibromomethane	FB	Ave	31111 1256838	65366	157375	317664	664429	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Ave	5185 326819	14227	39232	71764	183906	20.0 800	40.0	100	200	400
Bromodichloromethane	FB	Ave	57382 2704273	121869	306036	637533	1409597	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	61442 2796269	123378	319533	640886	1383920	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Ave	62099 3274371	138202	356486	746312	1652896	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	98299 4186633	187250	495239	970866	2114735	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBNZ d5	Ave	209687 9034071	428381	1080197	2172974	4691174	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	57707 3169409	125256	333930	706531	1578892	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBNZ d5	Ave	61421 2869285	129112	316654	647349	1421429	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBNZ d5	Ave	41853 1840913	87521	218933	437245	940456	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBNZ d5	Ave	44889 1992562	95990	241473	482895	1049416	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBNZ d5	Ave	72217 3294456	153833	378264	779324	1663194	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBNZ d5	Ave	58616 2937075	135481	337296	666112	1487023	2.00 80.0	4.00	10.0	20.0	40.0
Chlorodibromomethane	CBNZ d5	Ave	36977 2200067	82891	222991	469828	1084488	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBNZ d5	Ave	45295 1979685	91132	237763	469490	999728	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBNZ d5	Ave	138107 6035718	286159	714138	1441533	3072375	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	46702 2220799	95060	253355	522591	1113186	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBNZ d5	Ave	73699 3208633	146696	374569	758362	1624425	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBNZ d5	Ave	168049 7830315	351787	872988	1818169	3890600	1.00 40.0	2.00	5.00	10.0	20.0
o-Xylene	CBNZ d5	Ave	88147 3825283	176986	449671	918350	1968397	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBNZ d5	Ave	137740 6714209	289260	754758	1550959	3394736	1.00 40.0	2.00	5.00	10.0	20.0
Bromoform	CBNZ d5	Lin1	19867 1639155	51580	138461	306750	770158	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBNZ d5	Ave	198841 9246149	416807	1070139	2200366	4695119	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	54865 2441270	112833	283791	577712	1238040	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCBd 4	Ave	63640 2849353	131876	330598	678570	1450127	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCBd 4	Ave	18846 848462	40526	99350	201010	423192	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	3277 574750	16039	23872	66363	276245	1.00 40.0	2.00	5.00	10.0	20.0
N-Propylbenzene	DCBd 4	Ave	54874 2529942	117423	290505	601438	1274023	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCBd 4	Ave	53702 2322347	107735	275264	555062	1188057	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	160683 7300680	332591	840604	1766210	3784392	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCBd 4	Ave	170473 7526400	356628	881245	1798133	3844885	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCBd 4	Ave	141080 6973779	300630	749194	1551899	3285832	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	169136 7660047	359918	876431	1848645	3917785	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCBd 4	Ave	173094 7876504	373619	937713	1935865	4155710	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	113176 4738373	229119	572540	1168047	2462678	1.00 40.0	2.00	5.00	10.0	20.0
4-Isopropyltoluene	DCBd 4	Ave	154318 7046098	334169	830781	1751242	3739399	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCBd 4	Ave	119243 4936571	241629	582208	1199185	2527274	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
n-Butylbenzene	DCBd 4	Ave	127428 5435677	263153	659506	1384405	2918965	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCBd 4	Ave	109056 4571601	224899	556492	1159176	2381785	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	10572 585195	24334	65389	138143	306515	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	73453 2553990	145803	356465	739836	1510157	1.00 40.0	2.00	5.00	10.0	20.0
Hexachlorobutadiene	DCBd 4	Ave	41867 1091039	78276	175613	359850	696597	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCBd 4	Ave	172653 6820199	348942	926474	1891386	3879317	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	65430 2286670	131338	324635	663704	1364016	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	41840 1806247	80448	225163	447792	947952	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	55383 2257190	106482	288691	573781	1190875	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBNZ d5	Ave	174193 7359833	333303	912990	1816996	3883966	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	60446 2700470	120695	328418	649263	1374232	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Acetone	5.5						50					
Methylene Chloride	5.1						50					
Bromoform	19.5						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Ave	43776 1719436	78140	216790	375778	846508	10.0 400	20.0	50.0	100	200
Diisopropyl ether	FB	Ave	43843 1750827	82274	218424	423417	889067	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloro-1,3-butadiene	FB	Ave	78005 3085189	151016	379041	729996	1534644	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl tert-butyl ether	FB	Ave	140382 5753247	273366	703226	1363608	2849689	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl acetate	FB	Ave	90776 3822356	173055	465746	871063	1885113	2.00 80.0	4.00	10.0	20.0	40.0
Propionitrile	FB	Ave	60838 2683433	120712	346296	618722	1307620	10.0 400	20.0	50.0	100	200
Methacrylonitrile	FB	Ave	299007 13192364	589937	1557675	3048167	6587251	10.0 400	20.0	50.0	100	200
Tert-amyl methyl ether	FB	Ave	139226 5803487	265089	690261	1376169	2893429	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Ave	27517 1141061	53519	142999	252385	538091	25.0 1000	50.0	125	250	500
Ethyl acrylate	FB	Ave	55889 2595809	111797	311313	570379	1269397	1.00 40.0	2.00	5.00	10.0	20.0
Methyl methacrylate	FB	Ave	82902 3746376	164974	443947	839432	1854426	2.00 80.0	4.00	10.0	20.0	40.0
2-Nitropropane	FB	Ave	24091 1187179	51098	135714	254301	578091	2.00 80.0	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Ave	62560 3081411	130855	371884	688240	1496211	1.00 40.0	2.00	5.00	10.0	20.0
1-Chlorohexane	CBNZ d5	Ave	56623 2299838	112915	287030	522245	1142204	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexanone	DCBd 4	Lin1	18061 496922	26838	72655	115834	240064	10.0 400	20.0	50.0	100	200
Pentachloroethane	CBNZ d5	Ave	49671 2629484	105733	282130	577976	1287207	2.00 80.0	4.00	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCBd 4	Ave	159891 7509792	343441	887789	1750222	3743187	1.00 40.0	2.00	5.00	10.0	20.0
Benzyl chloride	DCBd 4	Ave	18125 1117019	36545	113409	234360	534799	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	70436 2856330	145613	362674	730581	1512196	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCBd 4	Ave	146578 6396329	332448	834898	1722729	3597249	2.00 80.0	4.00	10.0	20.0	40.0
1-Chloro-1-fluoroethane TIC	FB	None	38810 1466901	1184	184959	389588	796152	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
None = No Calib Curve

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Cyclohexanone	4.9						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab File ID: BFB0211.D BFB Injection Date: 02/11/2019

Instrument ID: A3UX15 BFB Injection Time: 10:27

Analysis Batch No.: 367509

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.1	
75	30.0 - 60.0 % of mass 95	50.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.7	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	101.9	
175	5.0 - 9.0 % of mass 174	6.3	(6.2) 1
176	95.0 - 101.0 % of mass 174	100.4	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367509/2	UXC8765.D	02/11/2019	10:51
	LCS 240-367509/4	UXC8766.D	02/11/2019	11:13
	CCV 240-367509/3	UXC8767.D	02/11/2019	11:35
	MB 240-367509/6	UXC8770.D	02/11/2019	12:40
TB-020719	240-107850-1	UXC8775.D	02/11/2019	14:30

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3306	0.1000	0.0108	0.0100	7.6	20.0
Chloromethane	Ave	0.3135	0.3315	0.1000	0.0106	0.0100	5.7	20.0
Butadiene	Ave	0.3794	0.3395		0.00895	0.0100	-10.5	20.0
Vinyl chloride	Ave	0.2885	0.2932	0.1000	0.0102	0.0100	1.6	20.0
Bromomethane	Ave	0.2308	0.2097	0.0500	0.00908	0.0100	-9.2	20.0
Chloroethane	Ave	0.2041	0.1903	0.0500	0.00932	0.0100	-6.8	20.0
Dichlorofluoromethane	Ave	0.5102	0.4772		0.00935	0.0100	-6.5	20.0
Trichlorofluoromethane	Ave	0.4337	0.4369	0.1000	0.0101	0.0100	0.7	20.0
Ethyl ether	Ave	0.2310	0.2152		0.00932	0.0100	-6.8	20.0
Acrolein	Ave	0.0317	0.0415		0.0654	0.0500	30.8	50.0
1,1-Dichloroethene	Ave	0.3005	0.2630	0.1000	0.00875	0.0100	-12.5	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2317	0.0500	0.00939	0.0100	-6.1	20.0
Acetone	Lin1		0.0215	0.0100	0.0175	0.0200	-12.3	50.0
Iodomethane	Ave	0.4675	0.4437		0.00949	0.0100	-5.1	20.0
Carbon disulfide	Ave	0.7741	0.6041	0.1000	0.00780	0.0100	-22.0*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1568		0.00923	0.0100	-7.7	20.0
Methyl acetate	Ave	0.2050	0.1752	0.1000	0.0171	0.0200	-14.6	20.0
Methylene Chloride	Lin1		0.2911	0.1000	0.00925	0.0100	-7.5	50.0
tert-Butyl alcohol	Ave	0.0203	0.0152		0.0751	0.100	-24.9	50.0
Acrylonitrile	Ave	0.0962	0.0865		0.0899	0.100	-10.1	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6912	0.1000	0.00882	0.0100	-11.8	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2769	0.1000	0.00990	0.0100	-1.0	20.0
Hexane	Ave	0.0586	0.0490		0.00835	0.0100	-16.5	20.0
1,1-Dichloroethane	Ave	0.4517	0.4471	0.2000	0.00990	0.0100	-1.0	20.0
Vinyl acetate	Ave	0.5198	0.3452		0.00664	0.0100	-33.6	50.0
2,2-Dichloropropane	Ave	0.0624	0.0620		0.00994	0.0100	-0.6	20.0
2-Butanone (MEK)	Ave	0.0333	0.0269	0.0100	0.0162	0.0200	-19.0	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3120	0.1000	0.0101	0.0100	1.4	20.0
Bromochloromethane	Ave	0.1531	0.1522		0.00994	0.0100	-0.6	20.0
Tetrahydrofuran	Ave	0.0828	0.0641		0.0155	0.0200	-22.5*	20.0
Chloroform	Ave	0.4606	0.4672	0.2000	0.0101	0.0100	1.4	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3486	0.1000	0.00983	0.0100	-1.7	20.0
Cyclohexane	Ave	0.3993	0.3736	0.1000	0.00936	0.0100	-6.4	20.0
1,1-Dichloropropene	Ave	0.3748	0.3470		0.00926	0.0100	-7.4	20.0
Carbon tetrachloride	Ave	0.3441	0.3064	0.1000	0.00891	0.0100	-10.9	20.0
Isobutyl alcohol	Ave	0.0077	0.0067		0.216	0.250	-13.5	20.0
Benzene	Ave	1.116	1.108	0.5000	0.00992	0.0100	-0.8	20.0
1,2-Dichloroethane	Ave	0.3820	0.3654	0.1000	0.00957	0.0100	-4.3	20.0
n-Heptane	Ave	0.0532	0.0432		0.00811	0.0100	-18.9	20.0
Trichloroethene	Ave	0.3240	0.3113	0.1500	0.00961	0.0100	-3.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3263	0.1000	0.00926	0.0100	-7.4	20.0
1,2-Dichloropropane	Ave	0.2590	0.2427	0.1000	0.00937	0.0100	-6.3	20.0
1,4-Dioxane	Ave	0.0020	0.0017		0.174	0.200	-13.1	50.0
Dibromomethane	Ave	0.1717	0.1548		0.00901	0.0100	-9.9	20.0
Bromodichloromethane	Ave	0.3410	0.2813	0.1500	0.00825	0.0100	-17.5	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1175		0.0135	0.0200	-32.7*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3121	0.1500	0.00791	0.0100	-20.9*	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2001	0.0500	0.0149	0.0200	-25.3*	20.0
Toluene	Ave	1.476	1.394	0.4000	0.00944	0.0100	-5.6	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3270	0.1000	0.00704	0.0100	-29.6*	20.0
Ethyl methacrylate	Ave	0.4442	0.3282		0.00739	0.0100	-26.1*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2666	0.1000	0.00894	0.0100	-10.6	20.0
Tetrachloroethene	Ave	0.3268	0.3095	0.1500	0.00947	0.0100	-5.3	20.0
1,3-Dichloropropane	Ave	0.5243	0.4627		0.00882	0.0100	-11.8	20.0
2-Hexanone	Ave	0.2283	0.1734	0.0500	0.0152	0.0200	-24.1*	20.0
Chlorodibromomethane	Ave	0.3116	0.2276		0.00730	0.0100	-27.0*	20.0
1,2-Dibromoethane	Ave	0.3191	0.2642		0.00828	0.0100	-17.2	20.0
Chlorobenzene	Ave	0.9777	0.9075	0.3000	0.00928	0.0100	-7.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3172		0.00919	0.0100	-8.1	20.0
Ethylbenzene	Ave	0.5145	0.4715		0.00916	0.0100	-8.4	20.0
m-Xylene & p-Xylene	Ave	1.221	1.096		0.00898	0.0100	-10.2	20.0
o-Xylene	Ave	0.6189	0.5994		0.00969	0.0100	-3.1	20.0
Styrene	Ave	1.036	0.9417	0.3000	0.00909	0.0100	-9.1	20.0
Bromoform	Lin1		0.1219	0.1000	0.00542	0.0100	-45.8*	20.0
Isopropylbenzene	Ave	1.463	1.403	0.1000	0.00959	0.0100	-4.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5572	0.3000	0.00786	0.0100	-21.4*	20.0
Bromobenzene	Ave	0.8274	0.7248		0.00876	0.0100	-12.4	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.1984		0.00804	0.0100	-19.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0703		0.00693	0.0100	-30.7*	20.0
N-Propylbenzene	Ave	0.7286	0.6321		0.00867	0.0100	-13.3	20.0
2-Chlorotoluene	Ave	0.6821	0.6150		0.00902	0.0100	-9.8	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.928		0.00910	0.0100	-9.0	20.0
4-Chlorotoluene	Ave	2.205	1.890		0.00857	0.0100	-14.3	20.0
tert-Butylbenzene	Ave	1.897	1.667		0.00878	0.0100	-12.2	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.035		0.00914	0.0100	-8.6	20.0
sec-Butylbenzene	Ave	2.327	2.095		0.00901	0.0100	-9.9	20.0
1,3-Dichlorobenzene	Ave	1.425	1.263	0.6000	0.00887	0.0100	-11.3	20.0
4-Isopropyltoluene	Ave	2.083	1.884		0.00904	0.0100	-9.6	20.0
1,4-Dichlorobenzene	Ave	1.477	1.296	0.5000	0.00877	0.0100	-12.3	20.0
n-Butylbenzene	Ave	1.649	1.400		0.00849	0.0100	-15.1	20.0
1,2-Dichlorobenzene	Ave	1.387	1.288	0.4000	0.00928	0.0100	-7.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0961	0.0500	0.00596	0.0100	-40.4	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7988	0.2000	0.00909	0.0100	-9.1	50.0
Hexachlorobutadiene	Ave	0.4386	0.3511		0.00801	0.0100	-19.9	20.0
Naphthalene	Ave	2.209	1.776		0.00804	0.0100	-19.6	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7384		0.00934	0.0100	-6.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2646		0.00693	0.00797	-13.0	20.0
Toluene-d8 (Surr)	Ave	1.214	1.077		0.00707	0.00797	-11.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3688		0.00677	0.00797	-15.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCV 240-367509/3 Calibration Date: 02/11/2019 11:35

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8767.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0259		0.112	0.100	12.2	20.0
Diisopropyl ether	Ave	0.2405	0.2296		0.00955	0.0100	-4.5	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3804		0.00898	0.0100	-10.2	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6235		0.00800	0.0100	-20.0	20.0
Ethyl acetate	Ave	0.2538	0.1979		0.0156	0.0200	-22.0	50.0
Propionitrile	Ave	0.0357	0.0334		0.0937	0.100	-6.3	20.0
Methacrylonitrile	Ave	0.1733	0.1482		0.0855	0.100	-14.5	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5715		0.00736	0.0100	-26.4*	20.0
n-Butanol	Ave	0.0061	0.0037		0.154	0.250	-38.5*	20.0
Ethyl acrylate	Ave	0.3330	0.2421		0.00727	0.0100	-27.3*	20.0
Methyl methacrylate	Ave	0.2430	0.1897		0.0156	0.0200	-21.9*	20.0
2-Nitropropane	Ave	0.0745	0.0280		0.00753	0.0200	-62.4*	20.0
n-Butyl acetate	Ave	0.3918	0.2807		0.00716	0.0100	-28.4*	20.0
1-Chlorohexane	Ave	0.3968	0.2920		0.00736	0.0100	-26.4*	20.0
Cyclohexanone	Lin1		0.0104		0.0631	0.100	-36.9*	20.0
Pentachloroethane	Ave	0.2034	0.1517		0.0149	0.0200	-25.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.013		0.00876	0.0100	-12.4	20.0
Benzyl chloride	Ave	0.2963	0.1293		0.00436	0.0100	-56.4*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8316		0.00879	0.0100	-12.1	20.0
2-Methylnaphthalene	Ave	1.076	0.6690		0.0124	0.0200	-37.8*	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab File ID: BFB0213.D BFB Injection Date: 02/13/2019

Instrument ID: A3UX15 BFB Injection Time: 11:22

Analysis Batch No.: 367892

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.8	
75	30.0 - 60.0 % of mass 95	50.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.6	(0.5) 1
174	50.0 - 120.00 % of mass 95	105.7	
175	5.0 - 9.0 % of mass 174	7.0	(6.6) 1
176	95.0 - 101.0 % of mass 174	101.4	(96.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367892/2	UXC8806.D	02/13/2019	11:48
	LCS 240-367892/4	UXC8807.D	02/13/2019	12:10
	CCV 240-367892/3	UXC8808.D	02/13/2019	12:32
	MB 240-367892/6	UXC8811.D	02/13/2019	13:38
MRC-MW144B-020719	240-107850-3	UXC8817.D	02/13/2019	16:49
MRC-MW147B-020719	240-107850-5	UXC8819.D	02/13/2019	17:32
MRC-MW147B-020719 MS	240-107850-5 MS	UXC8821.D	02/13/2019	18:16
MRC-MW147B-020719 MSD	240-107850-5 MSD	UXC8822.D	02/13/2019	18:38

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.2644	0.1000	0.00861	0.0100	-13.9	20.0
Chloromethane	Ave	0.3135	0.2740	0.1000	0.00874	0.0100	-12.6	20.0
Butadiene	Ave	0.3794	0.2948		0.00777	0.0100	-22.3*	20.0
Vinyl chloride	Ave	0.2885	0.2406	0.1000	0.00834	0.0100	-16.6	20.0
Bromomethane	Ave	0.2308	0.1961	0.0500	0.00850	0.0100	-15.0	20.0
Chloroethane	Ave	0.2041	0.1732	0.0500	0.00848	0.0100	-15.2	20.0
Dichlorofluoromethane	Ave	0.5102	0.4461		0.00874	0.0100	-12.6	20.0
Trichlorofluoromethane	Ave	0.4337	0.4175	0.1000	0.00963	0.0100	-3.7	20.0
Ethyl ether	Ave	0.2310	0.2280		0.00987	0.0100	-1.3	20.0
Acrolein	Ave	0.0317	0.0400		0.0631	0.0500	26.2	50.0
1,1-Dichloroethene	Ave	0.3005	0.2646	0.1000	0.00881	0.0100	-11.9	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2394	0.0500	0.00970	0.0100	-3.0	20.0
Acetone	Lin1		0.0240	0.0100	0.0198	0.0200	-0.9	50.0
Iodomethane	Ave	0.4675	0.4375		0.00936	0.0100	-6.4	20.0
Carbon disulfide	Ave	0.7741	0.5971	0.1000	0.00771	0.0100	-22.9*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1633		0.00962	0.0100	-3.8	20.0
Methyl acetate	Ave	0.2050	0.1768	0.1000	0.0172	0.0200	-13.8	20.0
Methylene Chloride	Lin1		0.4011	0.1000	0.0137	0.0100	36.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0163		0.0803	0.100	-19.7	50.0
Acrylonitrile	Ave	0.0962	0.0916		0.0952	0.100	-4.8	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6712	0.1000	0.00857	0.0100	-14.3	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2866	0.1000	0.0103	0.0100	2.5	20.0
Hexane	Ave	0.0586	0.0527		0.00899	0.0100	-10.1	20.0
1,1-Dichloroethane	Ave	0.4517	0.4693	0.2000	0.0104	0.0100	3.9	20.0
Vinyl acetate	Ave	0.5198	0.4189		0.00806	0.0100	-19.4	50.0
2,2-Dichloropropane	Ave	0.0624	0.0587		0.00942	0.0100	-5.8	20.0
2-Butanone (MEK)	Ave	0.0333	0.0305	0.0100	0.0184	0.0200	-8.2	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3242	0.1000	0.0105	0.0100	5.3	20.0
Bromochloromethane	Ave	0.1531	0.1616		0.0106	0.0100	5.5	20.0
Tetrahydrofuran	Ave	0.0828	0.0686		0.0166	0.0200	-17.1	20.0
Chloroform	Ave	0.4606	0.4880	0.2000	0.0106	0.0100	6.0	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3575	0.1000	0.0101	0.0100	0.8	20.0
Cyclohexane	Ave	0.3993	0.3773	0.1000	0.00945	0.0100	-5.5	20.0
1,1-Dichloropropene	Ave	0.3748	0.3719		0.00992	0.0100	-0.8	20.0
Carbon tetrachloride	Ave	0.3441	0.3171	0.1000	0.00922	0.0100	-7.8	20.0
Isobutyl alcohol	Ave	0.0077	0.0070		0.227	0.250	-9.4	20.0
Benzene	Ave	1.116	1.180	0.5000	0.0106	0.0100	5.7	20.0
1,2-Dichloroethane	Ave	0.3820	0.3993	0.1000	0.0105	0.0100	4.5	20.0
n-Heptane	Ave	0.0532	0.0463		0.00870	0.0100	-13.0	20.0
Trichloroethene	Ave	0.3240	0.3428	0.1500	0.0106	0.0100	5.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3350	0.1000	0.00950	0.0100	-5.0	20.0
1,2-Dichloropropane	Ave	0.2590	0.2611	0.1000	0.0101	0.0100	0.8	20.0
1,4-Dioxane	Ave	0.0020	0.0026		0.260	0.200	30.1	50.0
Dibromomethane	Ave	0.1717	0.1669		0.00972	0.0100	-2.8	20.0
Bromodichloromethane	Ave	0.3410	0.3135	0.1500	0.00919	0.0100	-8.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1388		0.0159	0.0200	-20.5*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3525	0.1500	0.00894	0.0100	-10.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2257	0.0500	0.0169	0.0200	-15.7	20.0
Toluene	Ave	1.476	1.435	0.4000	0.00972	0.0100	-2.8	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3495	0.1000	0.00752	0.0100	-24.8*	20.0
Ethyl methacrylate	Ave	0.4442	0.3465		0.00780	0.0100	-22.0*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2780	0.1000	0.00932	0.0100	-6.8	20.0
Tetrachloroethene	Ave	0.3268	0.3212	0.1500	0.00983	0.0100	-1.7	20.0
1,3-Dichloropropane	Ave	0.5243	0.4898		0.00934	0.0100	-6.6	20.0
2-Hexanone	Ave	0.2283	0.1843	0.0500	0.0161	0.0200	-19.3	20.0
Chlorodibromomethane	Ave	0.3116	0.2594		0.00833	0.0100	-16.7	20.0
1,2-Dibromoethane	Ave	0.3191	0.2750		0.00862	0.0100	-13.8	20.0
Chlorobenzene	Ave	0.9777	0.9502	0.3000	0.00972	0.0100	-2.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.2977		0.00863	0.0100	-13.7	20.0
Ethylbenzene	Ave	0.5145	0.4912		0.00955	0.0100	-4.5	20.0
m-Xylene & p-Xylene	Ave	1.221	1.165		0.00955	0.0100	-4.5	20.0
o-Xylene	Ave	0.6189	0.5935		0.00959	0.0100	-4.1	20.0
Styrene	Ave	1.036	1.012	0.3000	0.00977	0.0100	-2.3	20.0
Bromoform	Lin1		0.1557	0.1000	0.00675	0.0100	-32.5*	20.0
Isopropylbenzene	Ave	1.463	1.374	0.1000	0.00939	0.0100	-6.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5684	0.3000	0.00802	0.0100	-19.8	20.0
Bromobenzene	Ave	0.8274	0.7586		0.00917	0.0100	-8.3	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2002		0.00811	0.0100	-18.9	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.1131		0.0112	0.0100	11.5	20.0
N-Propylbenzene	Ave	0.7286	0.6484		0.00890	0.0100	-11.0	20.0
2-Chlorotoluene	Ave	0.6821	0.6162		0.00903	0.0100	-9.7	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.868		0.00882	0.0100	-11.8	20.0
4-Chlorotoluene	Ave	2.205	1.951		0.00885	0.0100	-11.5	20.0
tert-Butylbenzene	Ave	1.897	1.591		0.00839	0.0100	-16.1	20.0
1,2,4-Trimethylbenzene	Ave	2.227	1.990		0.00894	0.0100	-10.6	20.0
sec-Butylbenzene	Ave	2.327	1.997		0.00858	0.0100	-14.2	20.0
1,3-Dichlorobenzene	Ave	1.425	1.317	0.6000	0.00924	0.0100	-7.6	20.0
4-Isopropyltoluene	Ave	2.083	1.821		0.00874	0.0100	-12.6	20.0
1,4-Dichlorobenzene	Ave	1.477	1.350	0.5000	0.00914	0.0100	-8.6	20.0
n-Butylbenzene	Ave	1.649	1.338		0.00812	0.0100	-18.8	20.0
1,2-Dichlorobenzene	Ave	1.387	1.278	0.4000	0.00921	0.0100	-7.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0952	0.0500	0.00591	0.0100	-40.9	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.6817	0.2000	0.00776	0.0100	-22.4	50.0
Hexachlorobutadiene	Ave	0.4386	0.3104		0.00708	0.0100	-29.2*	20.0
Naphthalene	Ave	2.209	1.476		0.00668	0.0100	-33.2	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6052		0.00766	0.0100	-23.4*	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2175		0.00732	0.00797	-8.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2720		0.00713	0.00797	-10.6	20.0
Toluene-d8 (Surr)	Ave	1.214	1.047		0.00687	0.00797	-13.8	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3760		0.00690	0.00797	-13.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCV 240-367892/3 Calibration Date: 02/13/2019 12:32

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8808.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0282		0.122	0.100	22.1*	20.0
Diisopropyl ether	Ave	0.2405	0.2294		0.00954	0.0100	-4.6	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3741		0.00883	0.0100	-11.7	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.5945		0.00762	0.0100	-23.8*	20.0
Ethyl acetate	Ave	0.2538	0.2228		0.0176	0.0200	-12.2	50.0
Propionitrile	Ave	0.0357	0.0361		0.101	0.100	1.1	20.0
Methacrylonitrile	Ave	0.1733	0.1604		0.0925	0.100	-7.5	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5323		0.00686	0.0100	-31.4*	20.0
n-Butanol	Ave	0.0061	0.0040		0.163	0.250	-34.7*	20.0
Ethyl acrylate	Ave	0.3330	0.2775		0.00833	0.0100	-16.7	20.0
Methyl methacrylate	Ave	0.2430	0.2131		0.0175	0.0200	-12.3	20.0
2-Nitropropane	Ave	0.0745	0.0279		0.00750	0.0200	-62.5*	20.0
n-Butyl acetate	Ave	0.3918	0.3008		0.00768	0.0100	-23.2*	20.0
1-Chlorohexane	Ave	0.3968	0.3067		0.00773	0.0100	-22.7*	20.0
Cyclohexanone	Lin1		0.0109		0.0663	0.100	-33.7*	20.0
Pentachloroethane	Ave	0.2034	0.1499		0.0147	0.0200	-26.3*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.035		0.00886	0.0100	-11.4	20.0
Benzyl chloride	Ave	0.2963	0.1196		0.00404	0.0100	-59.6*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8253		0.00872	0.0100	-12.8	20.0
2-Methylnaphthalene	Ave	1.076	0.6682		0.0124	0.0200	-37.9*	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab File ID: BFB0214.D BFB Injection Date: 02/14/2019

Instrument ID: A3UX15 BFB Injection Time: 10:42

Analysis Batch No.: 368049

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.5	
75	30.0 - 60.0 % of mass 95	51.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.4	
173	Less than 2.0 % of mass 174	0.4	(0.4) 1
174	50.0 - 120.00 % of mass 95	102.4	
175	5.0 - 9.0 % of mass 174	7.1	(6.9) 1
176	95.0 - 101.0 % of mass 174	100.3	(98.0) 1
177	5.0 - 9.0 % of mass 176	7.0	(7.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-368049/2	UXC8824.D	02/14/2019	11:10
	LCS 240-368049/4	UXC8825.D	02/14/2019	11:32
	CCV 240-368049/3	UXC8826.D	02/14/2019	11:54
	MB 240-368049/6	UXC8829.D	02/14/2019	12:59
MRC-MW156A-020719	240-107850-2	UXC8831.D	02/14/2019	13:44
MRC-MW146B-020719	240-107850-4	UXC8832.D	02/14/2019	14:06

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-368049/2 Calibration Date: 02/14/2019 11:10

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8824.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.2526	0.1000	0.00822	0.0100	-17.8	20.0
Chloromethane	Ave	0.3135	0.2499	0.1000	0.00797	0.0100	-20.3*	20.0
Vinyl chloride	Ave	0.2885	0.2559	0.1000	0.00887	0.0100	-11.3	20.0
Butadiene	Ave	0.3794	0.2859		0.00754	0.0100	-24.6*	20.0
Bromomethane	Ave	0.2308	0.1929	0.0500	0.00836	0.0100	-16.4	20.0
Chloroethane	Ave	0.2041	0.1682	0.0500	0.00824	0.0100	-17.6	20.0
Dichlorofluoromethane	Ave	0.5102	0.4278		0.00838	0.0100	-16.2	20.0
Trichlorofluoromethane	Ave	0.4337	0.4066	0.1000	0.00938	0.0100	-6.2	20.0
Ethyl ether	Ave	0.2310	0.2185		0.00946	0.0100	-5.4	20.0
Acrolein	Ave	0.0317	0.0374		0.0590	0.0500	18.0	50.0
1,1-Dichloroethene	Ave	0.3005	0.2669	0.1000	0.00888	0.0100	-11.2	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2293	0.0500	0.00929	0.0100	-7.1	20.0
Acetone	Lin1		0.0233	0.0100	0.0192	0.0200	-4.1	50.0
Iodomethane	Ave	0.4675	0.5127		0.0110	0.0100	9.7	20.0
Carbon disulfide	Ave	0.7741	0.6532	0.1000	0.00844	0.0100	-15.6	20.0
3-Chloro-1-propene	Ave	0.1698	0.1570		0.00924	0.0100	-7.6	20.0
Methyl acetate	Ave	0.2050	0.1668	0.1000	0.0163	0.0200	-18.7	20.0
Methylene Chloride	Lin1		0.3179	0.1000	0.0103	0.0100	3.3	50.0
tert-Butyl alcohol	Ave	0.0203	0.0148		0.0732	0.100	-26.8	50.0
Acrylonitrile	Ave	0.0962	0.0885		0.0920	0.100	-8.0	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6717	0.1000	0.00857	0.0100	-14.3	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2900	0.1000	0.0104	0.0100	3.7	20.0
Hexane	Ave	0.0586	0.0506		0.00863	0.0100	-13.7	20.0
1,1-Dichloroethane	Ave	0.4517	0.4652	0.2000	0.0103	0.0100	3.0	20.0
Vinyl acetate	Ave	0.5198	0.3887		0.00748	0.0100	-25.2	50.0
2,2-Dichloropropane	Ave	0.0624	0.0653		0.0105	0.0100	4.6	20.0
2-Butanone (MEK)	Ave	0.0333	0.0290	0.0100	0.0174	0.0200	-12.8	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3223	0.1000	0.0105	0.0100	4.7	20.0
Bromochloromethane	Ave	0.1531	0.1616		0.0106	0.0100	5.5	20.0
Tetrahydrofuran	Ave	0.0828	0.0674		0.0163	0.0200	-18.6	20.0
Chloroform	Ave	0.4606	0.4815	0.2000	0.0105	0.0100	4.5	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3716	0.1000	0.0105	0.0100	4.8	20.0
Cyclohexane	Ave	0.3993	0.3661	0.1000	0.00917	0.0100	-8.3	20.0
1,1-Dichloropropene	Ave	0.3748	0.3672		0.00980	0.0100	-2.0	20.0
Carbon tetrachloride	Ave	0.3441	0.3195	0.1000	0.00929	0.0100	-7.1	20.0
Isobutyl alcohol	Ave	0.0077	0.0064		0.210	0.250	-16.2	20.0
Benzene	Ave	1.116	1.162	0.5000	0.0104	0.0100	4.0	20.0
1,2-Dichloroethane	Ave	0.3820	0.3829	0.1000	0.0100	0.0100	0.2	20.0
n-Heptane	Ave	0.0532	0.0437		0.00821	0.0100	-17.9	20.0
Trichloroethene	Ave	0.3240	0.3445	0.1500	0.0106	0.0100	6.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-368049/2 Calibration Date: 02/14/2019 11:10

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8824.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3270	0.1000	0.00928	0.0100	-7.2	20.0
1,2-Dichloropropane	Ave	0.2590	0.2549	0.1000	0.00984	0.0100	-1.6	20.0
1,4-Dioxane	Ave	0.0020	0.0021		0.215	0.200	7.3	50.0
Dibromomethane	Ave	0.1717	0.1624		0.00946	0.0100	-5.4	20.0
Bromodichloromethane	Ave	0.3410	0.3103	0.1500	0.00910	0.0100	-9.0	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1276		0.0146	0.0200	-26.9*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3391	0.1500	0.00860	0.0100	-14.0	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2059	0.0500	0.0154	0.0200	-23.1*	20.0
Toluene	Ave	1.476	1.436	0.4000	0.00973	0.0100	-2.7	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3353	0.1000	0.00722	0.0100	-27.8*	20.0
Ethyl methacrylate	Ave	0.4442	0.3208		0.00722	0.0100	-27.8*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2727	0.1000	0.00915	0.0100	-8.5	20.0
Tetrachloroethene	Ave	0.3268	0.3236	0.1500	0.00990	0.0100	-1.0	20.0
1,3-Dichloropropane	Ave	0.5243	0.4667		0.00890	0.0100	-11.0	20.0
2-Hexanone	Ave	0.2283	0.1666	0.0500	0.0146	0.0200	-27.0*	20.0
Chlorodibromomethane	Ave	0.3116	0.2572		0.00825	0.0100	-17.5	20.0
1,2-Dibromoethane	Ave	0.3191	0.2670		0.00837	0.0100	-16.3	20.0
Chlorobenzene	Ave	0.9777	0.9406	0.3000	0.00962	0.0100	-3.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3114		0.00903	0.0100	-9.7	20.0
Ethylbenzene	Ave	0.5145	0.4866		0.00946	0.0100	-5.4	20.0
m-Xylene & p-Xylene	Ave	1.221	1.155		0.00946	0.0100	-5.4	20.0
o-Xylene	Ave	0.6189	0.5980		0.00966	0.0100	-3.4	20.0
Styrene	Ave	1.036	0.9862	0.3000	0.00952	0.0100	-4.8	20.0
Bromoform	Lin1		0.1511	0.1000	0.00657	0.0100	-34.3*	20.0
Isopropylbenzene	Ave	1.463	1.406	0.1000	0.00961	0.0100	-3.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5615	0.3000	0.00792	0.0100	-20.8*	20.0
Bromobenzene	Ave	0.8274	0.7521		0.00909	0.0100	-9.1	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2018		0.00818	0.0100	-18.2	20.0
N-Propylbenzene	Ave	0.7286	0.6446		0.00885	0.0100	-11.5	20.0
2-Chlorotoluene	Ave	0.6821	0.6171		0.00905	0.0100	-9.5	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.880		0.00887	0.0100	-11.3	20.0
4-Chlorotoluene	Ave	2.205	1.953		0.00885	0.0100	-11.5	20.0
tert-Butylbenzene	Ave	1.897	1.610		0.00848	0.0100	-15.2	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.021		0.00907	0.0100	-9.3	20.0
sec-Butylbenzene	Ave	2.327	1.987		0.00854	0.0100	-14.6	20.0
1,3-Dichlorobenzene	Ave	1.425	1.285	0.6000	0.00902	0.0100	-9.8	20.0
4-Isopropyltoluene	Ave	2.083	1.792		0.00860	0.0100	-14.0	20.0
1,4-Dichlorobenzene	Ave	1.477	1.334	0.5000	0.00903	0.0100	-9.7	20.0
n-Butylbenzene	Ave	1.649	1.331		0.00807	0.0100	-19.3	20.0
1,2-Dichlorobenzene	Ave	1.387	1.271	0.4000	0.00916	0.0100	-8.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0915	0.0500	0.00568	0.0100	-43.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-368049/2 Calibration Date: 02/14/2019 11:10

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8824.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	0.8784	0.6857	0.2000	0.00781	0.0100	-21.9	50.0
Hexachlorobutadiene	Ave	0.4386	0.3070		0.00700	0.0100	-30.0*	20.0
Naphthalene	Ave	2.209	1.497		0.00678	0.0100	-32.2	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6311		0.00799	0.0100	-20.1*	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2700		0.00707	0.00797	-11.2	20.0
Toluene-d8 (Surr)	Ave	1.214	1.044		0.00686	0.00797	-13.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3636		0.00668	0.00797	-16.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCV 240-368049/3 Calibration Date: 02/14/2019 11:54

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8826.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0273		0.118	0.100	18.0	20.0
Diisopropyl ether	Ave	0.2405	0.2223		0.00924	0.0100	-7.6	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3741		0.00883	0.0100	-11.7	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.5815		0.00746	0.0100	-25.4*	20.0
Ethyl acetate	Ave	0.2538	0.2009		0.0158	0.0200	-20.9	50.0
Propionitrile	Ave	0.0357	0.0333		0.0932	0.100	-6.8	20.0
Methacrylonitrile	Ave	0.1733	0.1466		0.0846	0.100	-15.4	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5032		0.00648	0.0100	-35.2*	20.0
n-Butanol	Ave	0.0061	0.0038		0.155	0.250	-37.9*	20.0
Ethyl acrylate	Ave	0.3330	0.2448		0.00735	0.0100	-26.5*	20.0
Methyl methacrylate	Ave	0.2430	0.1881		0.0155	0.0200	-22.6*	20.0
2-Nitropropane	Ave	0.0745	0.0239		0.00643	0.0200	-67.9*	20.0
n-Butyl acetate	Ave	0.3918	0.2683		0.00685	0.0100	-31.5*	20.0
1-Chlorohexane	Ave	0.3968	0.2933		0.00739	0.0100	-26.1*	20.0
Cyclohexanone	Lin1		0.0104		0.0625	0.100	-37.5*	20.0
Pentachloroethane	Ave	0.2034	0.1529		0.0150	0.0200	-24.8*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	1.985		0.00864	0.0100	-13.6	20.0
Benzyl chloride	Ave	0.2963	0.1066		0.00360	0.0100	-64.0*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8256		0.00872	0.0100	-12.8	20.0
2-Methylnaphthalene	Ave	1.076	0.6060		0.0113	0.0200	-43.7*	20.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-367509/2		1607043	5.20	1260395	7.88	745296	10.12
CCVIS 240-367892/2		1803643	5.20	1542696	7.88	927814	10.12
CCVIS 240-368049/2		1842664	5.20	1527265	7.88	903648	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Sample No.: CCVIS 240-367509/2 Date Analyzed: 02/11/2019 10:51

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8765.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1607043	5.20	1260395	7.88	745296	10.12
UPPER LIMIT		3214086	5.70	2520790	8.38	1490592	10.62
LOWER LIMIT		803522	4.70	630198	7.38	372648	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367509/4		1796449	5.20	1507511	7.88	863122	10.12
CCV 240-367509/3		1829504	5.20	1503859	7.88	817203	10.12
MB 240-367509/6		1730580	5.20	1472271	7.88	810355	10.12
240-107850-1	TB-020719	1832192	5.21	1526034	7.88	853603	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Sample No.: CCVIS 240-367892/2 Date Analyzed: 02/13/2019 11:48

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8806.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1803643	5.20	1542696	7.88	927814	10.12
UPPER LIMIT		3607286	5.70	3085392	8.38	1855628	10.62
LOWER LIMIT		901822	4.70	771348	7.38	463907	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367892/4		1866937	5.20	1555716	7.88	933071	10.12
CCV 240-367892/3		1758419	5.20	1529185	7.88	842177	10.12
MB 240-367892/6		1565514	5.20	1326978	7.88	735680	10.12
240-107850-3	MRC-MW144B-020719	1638268	5.20	1401974	7.88	786422	10.12
240-107850-5	MRC-MW147B-020719	1660523	5.20	1436462	7.88	799087	10.12
240-107850-5 MS	MRC-MW147B-020719 MS	1797266	5.20	1524370	7.88	921656	10.12
240-107850-5 MSD	MRC-MW147B-020719 MSD	1839508	5.20	1544658	7.88	912568	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Sample No.: CCVIS 240-368049/2 Date Analyzed: 02/14/2019 11:10

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8824.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1842664	5.20	1527265	7.88	903648	10.12
UPPER LIMIT		3685328	5.70	3054530	8.38	1807296	10.62
LOWER LIMIT		921332	4.70	763633	7.38	451824	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-368049/4		1842575	5.20	1560050	7.88	925493	10.12
CCV 240-368049/3		1808303	5.20	1558249	7.88	859508	10.12
MB 240-368049/6		1708617	5.20	1477578	7.88	817829	10.12
240-107850-2	MRC-MW156A-020719	1699856	5.20	1485516	7.88	808646	10.12
240-107850-4	MRC-MW146B-020719	1682802	5.20	1463130	7.88	805086	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

SAMPLE IDENTIFICATION	MRC-MW144B-020719	
COMPOUND	Trichloroethene	
COMPOUND AREA	1349881	
INTERNAL STANDARD AMOUNT (ug)	10	
DILUTION FACTOR	142.86	
INTERNAL STANDARD AREA	1638268	
AVERAGE RRF	0.324	
1349881 x 10 / 1638268 x 0.324	25.4311	ug/L
25.4311222749639 x 142.86	3633.09	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW144B-020719 | Lab Sample ID: 240-107850-3

Matrix: Water | Lab File ID: UXC8817.D

Analysis Method: 8260C | Date Collected: 02/07/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:49

Soil Aliquot Vol: | Dilution Factor: 142.86

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	20	U	140	20
71-55-6	1,1,1-Trichloroethane	34	U	140	34
79-34-5	1,1,2,2-Tetrachloroethane	19	U	140	19
76-13-1	1,1,2-Trichlorotrifluoroethane	59	U	140	59
75-34-3	1,1-Dichloroethane	24	U	140	24
75-35-4	1,1-Dichloroethene	27	U	140	27
563-58-6	1,1-Dichloropropene	20	U	140	20
87-61-6	1,2,3-Trichlorobenzene	77	U	140	77
96-18-4	1,2,3-Trichloropropane	34	U	140	34
526-73-8	1,2,3-Trimethylbenzene	20	U	710	20
120-82-1	1,2,4-Trichlorobenzene	37	U	140	37
95-63-6	1,2,4-Trimethylbenzene	10	U	140	10
96-12-8	1,2-Dibromo-3-Chloropropane	130	U	290	130
95-50-1	1,2-Dichlorobenzene	21	U	140	21
107-06-2	1,2-Dichloroethane	30	U	140	30
78-87-5	1,2-Dichloropropane	21	U	140	21
541-73-1	1,3-Dichlorobenzene	21	U	140	21
142-28-9	1,3-Dichloropropane	30	U	140	30
106-46-7	1,4-Dichlorobenzene	23	U	140	23
594-20-7	2,2-Dichloropropane	44	U	140	44
110-75-8	2-Chloroethyl vinyl ether	37	U	1400	37
95-49-8	2-Chlorotoluene	21	U	140	21
591-78-6	2-Hexanone	77	U	1400	77
108-86-1	Bromobenzene	17	U	140	17
74-97-5	Bromochloromethane	20	U	140	20
106-43-4	4-Chlorotoluene	13	U	140	13
99-87-6	4-Isopropyltoluene	19	U	140	19
67-64-1	Acetone	770	U	1400	770
71-43-2	Benzene	19	U	140	19
75-25-2	Bromoform	110	U	140	110
74-83-9	Bromomethane	60	U	140	60
75-15-0	Carbon disulfide	40	U	140	40
56-23-5	Carbon tetrachloride	37	U	140	37
108-90-7	Chlorobenzene	20	U	140	20
75-00-3	Chloroethane	120	U	140	120
67-66-3	Chloroform	19	U	140	19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW144B-020719 | Lab Sample ID: 240-107850-3

Matrix: Water | Lab File ID: UXC8817.D

Analysis Method: 8260C | Date Collected: 02/07/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:49

Soil Aliquot Vol: | Dilution Factor: 142.86

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	29	U	140	29
156-59-2	cis-1,2-Dichloroethene	54	J	140	23
10061-01-5	cis-1,3-Dichloropropene	87	U	140	87
87-68-3	Hexachlorobutadiene	120	U	140	120
74-95-3	Dibromomethane	13	U	140	13
75-27-4	Bromodichloromethane	24	U	140	24
75-71-8	Dichlorodifluoromethane	50	U	140	50
100-41-4	Ethylbenzene	16	U	140	16
106-93-4	1,2-Dibromoethane	17	U	140	17
108-20-3	Diisopropyl ether	24	U	1400	24
91-20-3	Naphthalene	46	U	140	46
104-51-8	n-Butylbenzene	20	U	140	20
98-82-8	Isopropylbenzene	13	U	140	13
103-65-1	N-Propylbenzene	21	U	140	21
78-93-3	2-Butanone (MEK)	170	U	1400	170
108-10-1	4-Methyl-2-pentanone (MIBK)	60	U	1400	60
135-98-8	sec-Butylbenzene	19	U	140	19
1634-04-4	Methyl tert-butyl ether	10	U	140	10
994-05-8	Tert-amyl methyl ether	16	U	710	16
75-09-2	Methylene Chloride	370	U	710	370
100-42-5	Styrene	14	U	140	14
637-92-3	Ethyl tert-butyl ether	21	U	710	21
98-06-6	tert-Butylbenzene	20	U	140	20
127-18-4	Tetrachloroethene	21	U	140	21
108-88-3	Toluene	20	U	140	20
156-60-5	trans-1,2-Dichloroethene	27	U	140	27
10061-02-6	trans-1,3-Dichloropropene	96	U	140	96
79-01-6	Trichloroethene	3600	✓	140	14
75-69-4	Trichlorofluoromethane	64	U	140	64
108-05-4	Vinyl acetate	27	U	290	27
75-01-4	Vinyl chloride	29	U	140	29
75-65-0	tert-Butyl alcohol	240	U	7100	240
1330-20-7	Xylenes, Total	21	U	290	21
124-48-1	Chlorodibromomethane	56	U	140	56

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW144B-020719 Lab Sample ID: 240-107850-3

Matrix: Water Lab File ID: UXC8817.D

Analysis Method: 8260C Date Collected: 02/07/2019 11:00

Sample wt/vol: 5(mL) Date Analyzed: 02/13/2019 16:49

Soil Aliquot Vol: Dilution Factor: 142.86

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367892 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	90		70-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-128

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX15\20190213-84450.b\UXC8817.D
Lims ID: 240-107850-B-3
Client ID: MRC-MW144B-020719
Sample Type: Client
Inject. Date: 13-Feb-2019 16:49:30 ALS Bottle#: 12 Worklist Smp#: 39
Purge Vol: 5.000 mL Dil. Factor: 142.8600
Sample Info: 240-0084450-039
Misc. Info.: C90213A,8260LLUX15,,43582
Operator ID: Instrument ID: A3UX15

Method: \\chromna\Canton\ChromData\A3UX15\20190213-84450.b\8260_15.m
Limit Group: MSV 8260C ICAL
Last Update: 14-Feb-2019 09:53:08 Calib Date: 21-Jan-2019 19:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX15\20190121-83824.b\UXC8431.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0301

First Level Reviewer: evansle Date: 14-Feb-2019 09:41:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.196	5.196	0.000	99	1638268	10.0	
* 2 Chlorobenzene-d5	117	7.876	7.876	0.000	84	1401974	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.117	10.117	0.000	93	786422	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.639	4.639	0.000	95	281766	7.27	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.923	4.923	0.000	100	392657	7.88	
$ 6 Toluene-d8 (Surr)	98	6.560	6.560	0.000	93	1222350	7.18	
$ 7 4-Bromofluorobenzene (Surr	95	8.991	8.991	0.000	96	400684	6.58	
9 Dichlorodifluoromethane	85		1.532				ND	
10 Chloromethane	50		1.698				ND	
11 Vinyl chloride	62		1.793				ND	
13 Bromomethane	94		2.065				ND	
14 Chloroethane	64		2.148				ND	
16 Trichlorofluoromethane	101		2.362				ND	
19 1,1-Dichloroethene	96		2.777				ND	
20 1,1,2-Trichloro-1,2,2-trif	151		2.801				ND	
22 Acetone	58		2.824				ND	
24 Carbon disulfide	76		2.990				ND	
28 Methylene Chloride	84		3.180				ND	
29 2-Methyl-2-propanol	59		3.263				ND	
31 Methyl tert-butyl ether	73		3.405				ND	
30 trans-1,2-Dichloroethene	96		3.417				ND	
34 1,1-Dichloroethane	63		3.761				ND	
36 Vinyl acetate	43		3.785				ND	
35 Isopropyl ether	87		3.797				ND	
38 Tert-butyl ethyl ether	59		4.093				ND	
41 2-Butanone (MEK)	72		4.247				ND	
40 2,2-Dichloropropane	97		4.247				ND	
39 cis-1,2-Dichloroethene	96	4.236	4.247	-0.011	77	19159	0.3799	
45 Chlorobromomethane	128		4.449				ND	
47 Chloroform	83		4.496				ND	
48 1,1,1-Trichloroethane	97		4.662				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 1,1-Dichloropropene	75		4.793				ND	
50 Carbon tetrachloride	117		4.805				ND	
53 Benzene	78		4.971				ND	
54 1,2-Dichloroethane	62		4.994				ND	
55 Tert-amyl methyl ether	73		5.042				ND	
58 Trichloroethene	130	5.504	5.516	-0.012	95	1349881	25.4	
61 1,2-Dichloropropane	63		5.706				ND	
63 Dibromomethane	93		5.813				ND	
65 Dichlorobromomethane	83		5.931				ND	
67 2-Chloroethyl vinyl ether	63		6.180				ND	
68 cis-1,3-Dichloropropene	75		6.323				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.453				ND	
70 Toluene	91		6.619				ND	
71 trans-1,3-Dichloropropene	75		6.809				ND	
74 Tetrachloroethene	164		7.117				ND	
75 1,3-Dichloropropane	76		7.141				ND	
76 2-Hexanone	43		7.200				ND	
79 Chlorodibromomethane	129		7.342				ND	
80 Ethylene Dibromide	107		7.461				ND	
82 Chlorobenzene	112		7.900				ND	
83 1,1,1,2-Tetrachloroethane	131		7.983				ND	
84 Ethylbenzene	106		7.995				ND	
85 m-Xylene & p-Xylene	91		8.101				ND	
86 o-Xylene	106		8.481				ND	
87 Styrene	104		8.493				ND	
88 Bromoform	173		8.682				ND	
89 Isopropylbenzene	105		8.837				ND	
93 1,1,2,2-Tetrachloroethane	83		9.121				ND	
92 Bromobenzene	156		9.145				ND	
94 1,2,3-Trichloropropane	110		9.169				ND	
96 N-Propylbenzene	120		9.228				ND	
97 2-Chlorotoluene	126		9.323				ND	
99 4-Chlorotoluene	91		9.429				ND	
101 tert-Butylbenzene	119		9.714				ND	
103 1,2,4-Trimethylbenzene	105		9.762				ND	
105 sec-Butylbenzene	105		9.928				ND	
106 1,3-Dichlorobenzene	146		10.046				ND	
107 4-Isopropyltoluene	119		10.070				ND	
108 1,4-Dichlorobenzene	146		10.141				ND	
109 1,2,3-Trimethylbenzene	105		10.176				ND	
111 n-Butylbenzene	91		10.473				ND	
112 1,2-Dichlorobenzene	146		10.509				ND	
113 1,2-Dibromo-3-Chloropropan	157		11.291				ND	
115 1,2,4-Trichlorobenzene	180		12.109				ND	
116 Hexachlorobutadiene	225		12.276				ND	
117 Naphthalene	128		12.359				ND	
118 1,2,3-Trichlorobenzene	180		12.608				ND	
S 129 Xylenes, Total	106		16.530				ND	

Method 680

Polychlorinated Biphenyls (PCBs) (GC/MS) by Method 680

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13CDCB #
MRC-MW156A-020719	240-107850-2	66
	MB 680-558728/12-A	71
	LCS 680-558728/13-A	75
	LCSD 680-558728/14-A	68

	QC LIMITS
13CDCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab File ID: xb2031.D Lab Sample ID: MB 680-558728/12-A

Matrix: Water Date Extracted: 02/19/2019 13:42

Instrument ID: CMSX Date Analyzed: 02/21/2019 07:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-558728/13-A	xb2032.D	02/21/2019 07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019 08:10
MRC-MW156A-020719	240-107850-2	xb2514.D	02/25/2019 17:24

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-558728/12-A

Matrix: Water | Lab File ID: xb2031.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2032.D

Lab ID: LCS 680-558728/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.67	78	62-130	
Hexachlorobiphenyl	4.00	3.37	84	62-130	
Nonachlorobiphenyl	10.0	14.6	146	70-195	
Octachlorobiphenyl	6.00	5.09	85	64-130	
Monochlorobiphenyl	2.00	1.08	54	42-130	
DCB Decachlorobiphenyl	10.0	7.81	78	59-130	
Dichlorobiphenyl	2.00	1.32	66	49-130	
Pentachlorobiphenyl	4.00	3.47	87	63-130	
Tetrachlorobiphenyl	4.00	2.93	73	54-130	
Trichlorobiphenyl	2.00	1.47	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2033.D

Lab ID: LCSD 680-558728/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.45	74	5	40	62-130	
Hexachlorobiphenyl	4.00	3.21	80	5	40	62-130	
Nonachlorobiphenyl	10.0	13.2	132	10	40	70-195	
Octachlorobiphenyl	6.00	4.75	79	7	40	64-130	
Monochlorobiphenyl	2.00	1.36	68	23	40	42-130	
DCB Decachlorobiphenyl	10.0	7.14	71	9	40	59-130	
Dichlorobiphenyl	2.00	1.47	73	11	40	49-130	
Pentachlorobiphenyl	4.00	3.33	83	4	40	63-130	
Tetrachlorobiphenyl	4.00	3.04	76	4	40	54-130	
Trichlorobiphenyl	2.00	1.52	76	3	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab File ID: xa0805.D DFTPP Injection Date: 01/08/2019

Instrument ID: CMSX DFTPP Injection Time: 14:10

Analysis Batch No.: 554469

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.9
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	25.1
365	Greater than 1% of mass 198	3.8
441	Present but less than mass 443	13.7 (87.5) 2
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	15.6 (18.3) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-554469/3	xa0807.D	01/08/2019	15:11
	IC 680-554469/5	xa0809.D	01/08/2019	16:08
	IC 680-554469/6	xa0810.D	01/08/2019	16:37
	IC 680-554469/27	xa0850.D	01/08/2019	17:05
	IC 680-554469/7	xa0811.D	01/08/2019	17:34
	IC 680-554469/8	xa0812.D	01/08/2019	18:02
	ICV 680-554469/9	xa0813.D	01/08/2019	18:31

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107850-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Total Dichlorobiphenyls	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Total Trichlorobiphenyls	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Total Tetrachlorobiphenyls	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Total Pentachlorobiphenyls	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 240-107850-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Monochlorobiphenyl	CRY	Ave	8242 813481	15382	70279	157619	299489	0.0500 5.00	0.100	0.500	1.00	2.00
Total Dichlorobiphenyls	CRY	Ave	5634 599778	10649	48537	112170	214973	0.0500 5.00	0.100	0.500	1.00	2.00
Total Trichlorobiphenyls	CRY	Ave	3987 441580	7502	35031	81047	154555	0.0500 5.00	0.100	0.500	1.00	2.00
Total Tetrachlorobiphenyls	CRY	Ave	5574 615833	10606	50081	113059	216849	0.100 10.0	0.200	1.00	2.00	4.00
Total Pentachlorobiphenyls	CRY	Ave	4430 525344	8255	40050	94602	179296	0.100 10.0	0.200	1.00	2.00	4.00
Hexachlorobiphenyl	CRY	Ave	4409 515192	8063	39570	95892	180616	0.100 10.0	0.200	1.00	2.00	4.00
Heptachlorobiphenyl	CRY	Ave	8087 711849	13173	54642	129695	247124	0.150 15.0	0.300	1.50	3.00	6.00
Octachlorobiphenyl	CRY	Ave	5679 662783	10462	52287	120191	235791	0.150 15.0	0.300	1.50	3.00	6.00
Nonachlorobiphenyl	CRY	Ave				55196					5.00	
DCB Decachlorobiphenyl	CRY	Ave	1830 243534	3384	17538	42007	81970	0.250 25.0	0.500	2.50	5.00	10.0
Decachlorobiphenyl-13C12	CRY	Ave	2369 234805	4106	24902	55313	103476	0.250 20.0	0.500	2.50	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 680-554469/9 Calibration Date: 01/08/2019 18:31

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xa0813.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8517		1.03	1.00	2.6	20.0
Total Dichlorobiphenyls	Ave	0.5847	0.5801		0.992	1.00	-0.8	20.0
Total Trichlorobiphenyls	Ave	0.4198	0.4573		1.09	1.00	8.9	20.0
Total Tetrachlorobiphenyls	Ave	0.2951	0.3118		2.11	2.00	5.6	20.0
Total Pentachlorobiphenyls	Ave	0.2400	0.2531		2.11	2.00	5.5	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2508		2.10	2.00	5.2	20.0
Heptachlorobiphenyl	Ave	0.2376	0.2274		2.87	3.00	-4.3	20.0
Octachlorobiphenyl	Ave	0.2054	0.2183		3.19	3.00	6.3	20.0
Nonachlorobiphenyl	Ave	0.0526	0.0779		7.42	4.00	48.0*	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0419		5.00	5.00	-0.0	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0577		5.35	5.00	7.1	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab File ID: xb2028.D DFTPP Injection Date: 02/21/2019

Instrument ID: CMSX DFTPP Injection Time: 05:43

Analysis Batch No.: 559059

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	59.5
197	Less than 1 % of mass 198	0.9
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	28.0
365	Greater than 1% of mass 198	3.5
441	Present but less than mass 443	15.1 (86.3) 2
442	Greater than 40% of mass 198	96.2
443	17 - 23% of mass 442	17.5 (18.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559059/2	xb2029.D	02/21/2019	06:14
	CCVIS 680-559059/3	xb2030.D	02/21/2019	06:44
	MB 680-558728/12-A	xb2031.D	02/21/2019	07:13
	LCS 680-558728/13-A	xb2032.D	02/21/2019	07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019	08:10
	CCV 680-559059/21	xb2051.D	02/21/2019	16:43

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 680-559059/3 Calibration Date: 02/21/2019 06:44

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2030.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.7268		0.875	1.00	-12.5	20.0
Total Dichlorobiphenyls	Ave	0.5847	0.5079		0.869	1.00	-13.1	20.0
Total Trichlorobiphenyls	Ave	0.4198	0.3597		0.857	1.00	-14.3	20.0
Total Tetrachlorobiphenyls	Ave	0.2951	0.2563		1.74	2.00	-13.2	20.0
Total Pentachlorobiphenyls	Ave	0.2400	0.2131		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2136		1.79	2.00	-10.4	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1920		2.42	3.00	-19.2	20.0
Octachlorobiphenyl	Ave	0.2054	0.1725		2.52	3.00	-16.0	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0343		4.08	5.00	-18.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0462		4.29	5.00	-14.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCV 680-559059/21 Calibration Date: 02/21/2019 16:43

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2051.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8070		0.972	1.00	-2.8	20.0
Total Dichlorobiphenyls	Ave	0.5847	0.5601		0.958	1.00	-4.2	20.0
Total Trichlorobiphenyls	Ave	0.4198	0.4000		0.953	1.00	-4.7	20.0
Total Tetrachlorobiphenyls	Ave	0.2951	0.2879		1.95	2.00	-2.4	20.0
Total Pentachlorobiphenyls	Ave	0.2400	0.2300		1.92	2.00	-4.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2246		1.88	2.00	-5.8	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1938		2.45	3.00	-18.4	20.0
Octachlorobiphenyl	Ave	0.2054	0.1765		2.58	3.00	-14.1	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0315		3.75	5.00	-25.0*	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0422		3.92	5.00	-21.6*	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab File ID: xb2502.D DFTPP Injection Date: 02/25/2019

Instrument ID: CMSX DFTPP Injection Time: 11:57

Analysis Batch No.: 559536

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	57.2
197	Less than 1 % of mass 198	0.6
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	7.2
275	10 - 30% of mass 198	25.4
365	Greater than 1% of mass 198	3.9
441	Present but less than mass 443	12.6 (74.1) 2
442	Greater than 40% of mass 198	85.2
443	17 - 23% of mass 442	17.0 (20.0) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559536/2	xb2503.D	02/25/2019	12:28
	ICISAV 680-559536/3	xb2504.D	02/25/2019	13:07
	IC 680-559536/4	xb2507.D	02/25/2019	14:04
	IC 680-559536/8	xb2508.D	02/25/2019	14:33
	IC 680-559536/9	xb2509.D	02/25/2019	15:02
	IC 680-559536/10	xb2510.D	02/25/2019	15:30
	IC 680-559536/11	xb2511.D	02/25/2019	15:59
	ICV 680-559536/12	xb2512.D	02/25/2019	16:27
MRC-MW156A-020719	240-107850-2	xb2514.D	02/25/2019	17:24
	CCV 680-559536/7	xb2515.D	02/25/2019	17:53

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107850-1 Analy Batch No.: 559536

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/25/2019 13:07 Calibration End Date: 02/25/2019 15:59 Calibration ID: 63879

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-559536/11	xb2511.D
Level 2	IC 680-559536/10	xb2510.D
Level 3	IC 680-559536/9	xb2509.D
Level 4	ICISAV 680-559536/3	xb2504.D
Level 5	IC 680-559536/8	xb2508.D
Level 6	IC 680-559536/4	xb2507.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.7768 0.8303	0.7679	0.7192	0.7084	0.8005	Ave		0.7672				6.1		20.0			
Dichlorobiphenyl	0.5231 0.6057	0.5247	0.4982	0.4848	0.5644	Ave		0.5335				8.4		20.0			
Trichlorobiphenyl	0.3701 0.4389	0.3719	0.3515	0.3760	0.4066	Ave		0.3858				8.2		20.0			
PCB-104				0.3059		Ave		0.3059						30.0			
Tetrachlorobiphenyl	0.2496 0.3004	0.2491	0.2474	0.2506	0.2786	Ave		0.2626				8.4		20.0			
Pentachlorobiphenyl	0.1904 0.2506	0.1911	0.1944	0.1975	0.2274	Ave		0.2085				11.9		20.0			
PCB-77				0.4052		Ave		0.4052						30.0			
Hexachlorobiphenyl	0.1811 0.2345	0.1804	0.1856	0.1913	0.2198	Ave		0.1988				11.5		20.0			
Heptachlorobiphenyl	0.2199 0.2149	0.1886	0.1711	0.1710	0.1962	Ave		0.1936				10.8		20.0			
Octachlorobiphenyl	0.1586 0.1992	0.1499	0.1557	0.1606	0.1806	Ave		0.1674				11.2		20.0			
PCB-208				0.0538		Ave		0.0538						30.0			
DCB Decachlorobiphenyl	0.0264 0.0421	0.0261	0.0293	0.0289	0.0338	Ave		0.0311				19.5		20.0			
Decachlorobiphenyl-13C12	0.0369 0.0537	0.0343	0.0421	0.0410	0.0451	Ave		0.0422				16.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 240-107850-1 Analy Batch No.: 559536

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/25/2019 13:07 Calibration End Date: 02/25/2019 15:59 Calibration ID: 63879

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-559536/11	xb2511.D
Level 2	IC 680-559536/10	xb2510.D
Level 3	IC 680-559536/9	xb2509.D
Level 4	ICISAV 680-559536/3	xb2504.D
Level 5	IC 680-559536/8	xb2508.D
Level 6	IC 680-559536/4	xb2507.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Monochlorobiphenyl	CRY	Ave	7419 831971	15897	77564	157105	335414	0.0500 5.00	0.100	0.500	1.00	2.00
Dichlorobiphenyl	CRY	Ave	4996 606979	10862	53734	107521	236477	0.0500 5.00	0.100	0.500	1.00	2.00
Trichlorobiphenyl	CRY	Ave	3535 439760	7698	37905	83389	170369	0.0500 5.00	0.100	0.500	1.00	2.00
PCB-104	CRY	Ave				135693					2.00	
Tetrachlorobiphenyl	CRY	Ave	4767 601944	10313	53368	111139	233496	0.100 10.0	0.200	1.00	2.00	4.00
Pentachlorobiphenyl	CRY	Ave	3637 502135	7911	41923	87585	190549	0.100 10.0	0.200	1.00	2.00	4.00
PCB-77	CRY	Ave				179738					2.00	
Hexachlorobiphenyl	CRY	Ave	3459 469969	7470	40027	84870	184183	0.100 10.0	0.200	1.00	2.00	4.00
Heptachlorobiphenyl	CRY	Ave	6300 646151	11710	55348	113769	246590	0.150 15.0	0.300	1.50	3.00	6.00
Octachlorobiphenyl	CRY	Ave	4543 598796	9312	50383	106848	226947	0.150 15.0	0.300	1.50	3.00	6.00
PCB-208	CRY	Ave				47750					4.00	
DCB Decachlorobiphenyl	CRY	Ave	1260 210942	2698	15783	32060	70810	0.250 25.0	0.500	2.50	5.00	10.0
Decachlorobiphenyl-13C12	CRY	Ave	1762 215192	3550	22714	45456	94422	0.250 20.0	0.500	2.50	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 680-559536/12 Calibration Date: 02/25/2019 16:27

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2512.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nonachlorobiphenyl	Ave	0.0526	0.0562		7.22	4.00	6.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 680-559536/12 Calibration Date: 02/25/2019 16:27

Instrument ID: CMSX Calib Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 02/25/2019 15:59

Lab File ID: xb2512.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.7672	0.7447		0.971	1.00	-2.9	20.0
Dichlorobiphenyl	Ave	0.5335	0.5015		0.940	1.00	-6.0	20.0
Trichlorobiphenyl	Ave	0.3858	0.3920		1.02	1.00	1.6	20.0
Tetrachlorobiphenyl	Ave	0.2626	0.2641		2.01	2.00	0.6	20.0
Pentachlorobiphenyl	Ave	0.2085	0.2083		2.00	2.00	-0.1	20.0
Hexachlorobiphenyl	Ave	0.1988	0.1999		2.01	2.00	0.6	20.0
Heptachlorobiphenyl	Ave	0.1936	0.1805		2.80	3.00	-6.8	20.0
Octachlorobiphenyl	Ave	0.1674	0.1674		3.00	3.00	-0.0	20.0
DCB Decachlorobiphenyl	Ave	0.0311	0.0310		4.98	5.00	-0.3	20.0
Decachlorobiphenyl-13C12	Ave	0.0422	0.0433		5.13	5.00	2.6	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCV 680-559536/7 Calibration Date: 02/25/2019 17:53

Instrument ID: CMSX Calib Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 02/25/2019 15:59

Lab File ID: xb2515.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.7672	0.6514		0.849	1.00	-15.1	20.0
Dichlorobiphenyl	Ave	0.5335	0.4435		0.831	1.00	-16.9	20.0
Trichlorobiphenyl	Ave	0.3858	0.3522		0.913	1.00	-8.7	20.0
Tetrachlorobiphenyl	Ave	0.2626	0.2346		1.79	2.00	-10.7	20.0
Pentachlorobiphenyl	Ave	0.2085	0.1851		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.1988	0.1774		1.78	2.00	-10.8	20.0
Heptachlorobiphenyl	Ave	0.1936	0.1620		2.51	3.00	-16.3	20.0
Octachlorobiphenyl	Ave	0.1674	0.1519		2.72	3.00	-9.3	20.0
DCB Decachlorobiphenyl	Ave	0.0311	0.0288		4.63	5.00	-7.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0422	0.0401		4.75	5.00	-5.0	20.0

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Sample No.: CCVIS 680-559059/3 Date Analyzed: 02/21/2019 06:44

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2030.D Heated Purge: (Y/N) N

Calibration ID: 63054

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		170892	12.41	169663	18.67		
UPPER LIMIT		222160	12.91	220562	19.17		
LOWER LIMIT		119624	11.91	118764	18.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-558728/12-A		143915	12.41	132159	18.67		
LCS 680-558728/13-A		164188	12.41	171582	18.67		
LCSD 680-558728/14-A		179669	12.41	188862	18.67		
CCV 680-559059/21		159076	12.41	142687	18.67		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Instrument ID: CMSX Calibration Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calibration End Date: 02/25/2019 15:59

Calibration ID: 63879

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		161613	12.38	155674	18.63		
UPPER LIMIT		242420	12.88	233511	19.13		
LOWER LIMIT		80807	11.88	77837	18.13		
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 680-559536/12		159287	12.38	149107	18.63		
240-107850-2	MRC-MW156A-020719	178186	12.38	200138	18.63		
CCV 680-559536/7		180140	12.38	185267	18.63		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

SAMPLE IDENTIFICATION	LCS 680-558728/13-A
COMPOUND	Monochlorobiphenyl
COMPOUND AREA	205079
INTERNAL STANDARD AMOUNT (ng)	0.75
DILUTION FACTOR	1
INTERNAL STANDARD AREA	171582
AVERAGE RRF	0.8305

205079 x 0.75 x 1 / 171582 x 0.8305 = 1.0794 ng/ml

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 680-558728/13-A

Matrix: Water | Lab File ID: xb2032.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:41

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	4.67		0.30	0.030
26601-64-9	Hexachlorobiphenyl	3.37		0.20	0.015
53742-07-7	Nonachlorobiphenyl	14.6		0.50	0.049
55722-26-4	Octachlorobiphenyl	5.09		0.30	0.038
27323-18-8	Monochlorobiphenyl	1.08		0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	7.81		0.50	0.070
25512-42-9	Dichlorobiphenyl	1.32		0.10	0.0054
25429-29-2	Pentachlorobiphenyl	3.47		0.20	0.014
26914-33-0	Tetrachlorobiphenyl	2.93		0.20	0.013
25323-68-6	Trichlorobiphenyl	1.47		0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	75		25-113

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\xb2032.D
Lims ID: LCS 680-558728/13-A
Client ID:
Sample Type: LCS
Inject. Date: 21-Feb-2019 07:41:30 ALS Bottle#: 26 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: LCS 680-558728/13-A
Misc. Info.: 680-0053932-005
Operator ID: Instrument ID: CMSX

Method: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\680_CMSX.m
Limit Group: 680
Last Update: 22-Feb-2019 09:37:47 Calib Date: 08-Jan-2019 18:02:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Savannah\ChromData\CMSX\20190108-53107.b\xa0812.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: CTX0319

First Level Reviewer: davisn Date: 22-Feb-2019 09:37:47

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/ml	Flags
A 23 Total Monochlorobiphenyls	188	9.762	9.265 - 10.260		0	205079	1.08	
A 24 Total Dichlorobiphenyls	222	11.569	10.603 - 12.535		0	176787	1.32	
* 5 Phenanthrene-d10	188	12.409	12.409	0.0	100	164188	0.7500	
A 25 Total Trichlorobiphenyls	256	13.255	11.910 - 14.600		0	141116	1.47	
A 26 Total Tetrachlorobiphenyls	292	14.773	13.047 - 16.499		0	197767	2.93	
A 27 Total Pentachlorobiphenyls	326	16.192	14.339 - 18.045		0	190369	3.47	
A 28 Total Hexachlorobiphenyls	360	17.480	15.502 - 19.457		0	183545	3.37	
* 15 Chrysene-d12	240	18.669	18.668	0.001	100	171582	0.7500	a
A 29 Total Heptachlorobiphenyls	394	18.749	17.146 - 20.353		0	253613	4.67	
A 30 Total Octachlorobiphenyls	430	19.718	18.642 - 20.795		0	238961	5.09	
A 31 Total Nonachlorobiphenyls	464	20.250	18.500 - 22.000		0	139953	14.6	
19 PCB-208	464	20.286	20.286	0.0	96	140097	0	
$ 22 Decachlorobiphenyl-13C12	510	21.797	21.796	0.001	77	23217	1.88	a
32 DCB Decachlorobiphenyl	498	21.797	21.796	0.001	77	74989	7.81	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

WorkSheet Quantitation Report

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 23 Total Monochlorobiphenyls									
188	9.328	9.265 -	10.260	22	205079	1.08			
190	9.328				66572		2.5- 3.5	3.1	
152	9.328				115591		50.7- 50.7	0.6	
153	9.328				48419		23.2- 23.2	1.4	
A 24 Total Dichlorobiphenyls									
222	11.569	10.603 -	12.535	23	176787	1.32			
224	11.569				113344		1.3- 1.7	1.6	
152	11.554				139546		31.7- 111.7	0.8	
153	11.554				17682		0.0- 49.1	6.4	
186	11.554				16961		0.0- 48.9	6.7	
188	11.569				6120		0.0- 43.3	18.5	
* 5 Phenanthrene-d10									
188	12.409	12.409	0.0	100	164188	0.7500			
189	12.409	12.409	0.0		24329		5.9- 7.5	6.7	
A 25 Total Trichlorobiphenyls									
256	13.087	11.910 -	14.600	95	141116	1.47			
258	13.087				135077		0.8- 1.2	1.0	
186	13.087				95422		26.5- 106.5	1.4	
188	13.087				30921		0.0- 61.5	4.4	
A 26 Total Tetrachlorobiphenyls									
292	13.367	13.047 -	16.499	0	197767	2.93			
290	13.367				154086		1.1- 1.5	1.3	
220	13.353				193028		58.1- 138.1	0.8	
222	13.353				123321		22.9- 102.9	1.2	
A 27 Total Pentachlorobiphenyls									
326	16.249	14.339 -	18.045	91	190369	3.47			
324	16.249				119339		1.4- 1.8	1.6	
254	16.231				142739		41.9- 121.9	0.8	
256	16.249				136737		38.2- 118.2	0.9	
258	16.249				44114		0.0- 65.4	2.7	
A 28 Total Hexachlorobiphenyls									
360	16.439	15.502 -	19.457	59	183545	3.37			
362	16.439				145798		1.0- 1.4	1.3	
288	16.439				111244		61.3- 61.3	1.3	
290	16.439				141842		220.6- 220.6	1.0	
292	16.439				67177		0.0- 0.0	2.2	
* 15 Chrysene-d12									a
240	18.669	18.668	0.001	100	171582	0.7500			a
241	18.669	18.668	0.001		33019		4.3- 5.9	5.2	
A 29 Total Heptachlorobiphenyls									
394	17.217	17.146 -	20.353	97	253613	4.67			
396	17.217				240228		0.8- 1.2	1.1	
322	17.199				110283		48.3- 48.3	2.2	
324	17.199				176673		77.4- 77.4	1.4	

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 30 Total Octachlorobiphenyls									
430	18.859	18.642	-20.795	96	238961	5.09			
428	18.859				217376		0.9- 1.3	1.1	
356	18.842				88632		39.6- 39.6	2.5	
358	18.842				166788		75.2- 75.2	1.3	
360	18.842				132602		59.6- 59.6	1.6	
A 31 Total Nonachlorobiphenyls									
464	20.286	18.500	-22.000	66	139953	14.6			
466	20.286				101255		1.1- 1.5	1.4	
390	20.286				70728		0.0- 0.0	1.4	
392	20.286				152776		0.0- 0.0	0.7	
394	20.286				142469		0.0- 0.0	0.7	
$ 22 Decachlorobiphenyl-13C12									a
510	21.797	21.796	0.001	77	23217	1.88			a
512	21.797	21.796	0.001		17660		0.9- 1.3	1.3	
32 DCB Decachlorobiphenyl									
498	21.797	21.796	0.001	77	74989	7.81			
500	21.797	21.796	0.001		60499		0.9- 1.3	1.2	
424	21.797	21.796	0.001		35328		0.0- 0.0	1.0	
426	21.797	21.796	0.001		86957		0.0- 0.0	1.0	
428	21.797	21.796	0.001		93723		0.0- 0.0	1.0	
430	21.797	21.796	0.001		58374		0.0- 0.0	1.0	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107850-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Total Dichlorobiphenyls	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Total Trichlorobiphenyls	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Total Tetrachlorobiphenyls	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Total Pentachlorobiphenyls	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW156A-020719	240-107850-2
MRC-MW144B-020719	240-107850-3
MRC-MW146B-020719	240-107850-4
MRC-MW147B-020719	240-107850-5

Comments:

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-367825/4 02/12/2019 11:07				CCV 240-367825/102 02/12/2019 18:13				CCV 240-367825/114 02/12/2019 19:05			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	12700		12500	101	24400		25000	98	24100		25000	96
Manganese	1500		1500	100	2040		2000	102	2030		2000	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	CCV 240-367825/126 02/12/2019 19:56											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	24300		25000	97								
Manganese	2020		2000	101								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-367825/6 02/12/2019 11:16				CCVL 240-367825/195 02/13/2019 08:02							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	201		200	100	201		200	100				
Manganese	13.5	J	15.0	90	14.5	J	15.0	97				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-368010/7 02/13/2019 14:10				CCV 240-368010/108 02/13/2019 18:03				CCV 240-368010/120 02/13/2019 18:31			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	192		200	96	255		250	102	256		250	103
Antimony	39.5		40.0	99	50.4		50.0	101	50.3		50.0	101
Arsenic	39.5		40.0	99	46.5		50.0	93	45.8		50.0	92
Barium	37.8		40.0	94	49.2		50.0	98	48.6		50.0	97
Beryllium	38.8		40.0	97	48.1		50.0	96	49.6		50.0	99
Cadmium	38.4		40.0	96	48.6		50.0	97	48.6		50.0	97
Calcium	20400		20000	102	26300		25000	105	26200		25000	105
Chromium	39.6		40.0	99	50.9		50.0	102	50.9		50.0	102
Cobalt	39.4		40.0	98	48.3		50.0	97	48.3		50.0	97
Copper	39.5		40.0	99	48.6		50.0	97	48.5		50.0	97
Iron	9600		10000	96	12100		12500	97	12200		12500	97
Lead	39.8		40.0	99	49.3		50.0	99	49.9		50.0	100
Magnesium	19200		20000	96	25800		25000	103	26100		25000	105
Manganese	194		200	97	251		250	100	252		250	101
Nickel	39.7		40.0	99	48.2		50.0	96	48.1		50.0	96
Potassium	19300		20000	97	25500		25000	102	25500		25000	102
Selenium	38.9		40.0	97	50.2		50.0	100	51.2		50.0	102
Silver	40.8		40.0	102	48.6		50.0	97	49.0		50.0	98
Sodium	19600		20000	98	25800		25000	103	26600		25000	106
Thallium	38.8		40.0	97	49.4		50.0	99	49.8		50.0	100
Vanadium	39.1		40.0	98	50.4		50.0	101	50.5		50.0	101
Zinc	38.9		40.0	97	47.7		50.0	95	48.1		50.0	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	CCV 240-368010/132 02/13/2019 18:59				CCV 240-368010/144 02/13/2019 19:26							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	254		250	102	259		250	104				
Antimony	49.9		50.0	100	51.0		50.0	102				
Arsenic	45.3		50.0	91	46.1		50.0	92				
Barium	48.8		50.0	98	49.3		50.0	99				
Beryllium	48.6		50.0	97	47.7		50.0	95				
Cadmium	48.6		50.0	97	48.8		50.0	98				
Calcium	26100		25000	104	26600		25000	107				
Chromium	51.3		50.0	103	51.6		50.0	103				
Cobalt	47.9		50.0	96	48.0		50.0	96				
Copper	49.0		50.0	98	48.2		50.0	96				
Iron	12100		12500	97	12100		12500	97				
Lead	49.9		50.0	100	49.9		50.0	100				
Magnesium	26000		25000	104	26200		25000	105				
Manganese	254		250	101	256		250	102				
Nickel	47.7		50.0	95	47.7		50.0	95				
Potassium	25500		25000	102	25900		25000	104				
Selenium	51.5		50.0	103	50.8		50.0	102				
Silver	49.1		50.0	98	48.9		50.0	98				
Sodium	26300		25000	105	26400		25000	106				
Thallium	49.8		50.0	100	49.9		50.0	100				
Vanadium	50.6		50.0	101	51.4		50.0	103				
Zinc	47.8		50.0	96	47.7		50.0	95				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICV Source: MTMSCRI6020AW_00079 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00079

Analyte	ICVL 240-368010/9 02/13/2019 14:14				CCVL 240-368010/153 02/13/2019 19:47							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	51.4		50.0	103	51.5		50.0	103				
Antimony	2.08		2.00	104	2.04		2.00	102				
Arsenic	4.87	J	5.00	97	4.53	J	5.00	91				
Barium	5.36		5.00	107	5.19		5.00	104				
Beryllium	1.01		1.00	101	0.995	J	1.00	100				
Cadmium	1.05		1.00	105	1.07		1.00	107				
Calcium	1110		1000	111	1100		1000	110				
Chromium	2.00		2.00	100	2.05		2.00	102				
Cobalt	1.02		1.00	102	1.01		1.00	101				
Copper	2.14		2.00	107	2.11		2.00	105				
Iron	110		100	110	104		100	104				
Lead	1.12		1.00	112	1.11		1.00	111				
Magnesium	1080		1000	108	1090		1000	109				
Manganese	5.02		5.00	100	5.05		5.00	101				
Nickel	2.05		2.00	102	1.96	J	2.00	98				
Potassium	1120		1000	112	1110		1000	111				
Selenium	5.06		5.00	101	5.05		5.00	101				
Silver	1.05		1.00	105	1.04		1.00	104				
Sodium	1080		1000	108	1130		1000	113				
Thallium	1.08		1.00	108	1.08		1.00	108				
Vanadium	5.01		5.00	100	4.92	J	5.00	98				
Zinc	20.3		20.0	101	19.6	J	20.0	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367825/5 02/12/2019 11:11		CCB 240-367825/103 02/12/2019 18:17		CCB 240-367825/115 02/12/2019 19:09		CCB 240-367825/127 02/12/2019 20:00	
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U	26	U
Manganese	15	2.1	U	2.1	U	2.1	U	2.1	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-368010/8 02/13/2019 14:12		CCB 240-368010/109 02/13/2019 18:06		CCB 240-368010/121 02/13/2019 18:34		CCB 240-368010/133 02/13/2019 19:01	
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-368010/145 02/13/2019 19:29							
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U						
Antimony	2.0	0.57	U						
Arsenic	5.0	0.75	U						
Barium	5.0	2.2	U						
Beryllium	1.0	0.31	U						
Cadmium	1.0	0.21	U						
Calcium	1000	580	U						
Chromium	2.0	0.98	U						
Cobalt	1.0	0.19	U						
Copper	2.0	1.7	U						
Iron	100	47	U						
Lead	1.0	0.45	U						
Magnesium	1000	200	U						
Manganese	5.0	2.1	U						
Nickel	2.0	1.5	U						
Potassium	1000	220	U						
Selenium	5.0	0.89	U						
Silver	1.0	0.053	U						
Sodium	1000	330	U						
Thallium	1.0	0.20	U						
Vanadium	5.0	0.82	U						
Zinc	20	15	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367484/1-A

Instrument Code: I9 Batch No.: 367825

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	26	U		6010C
7439-96-5	Manganese	2.1	U		6010C

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367484/1-A

Instrument Code: I14 Batch No.: 368010

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	2.19			6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	2.1	U		6020A
7440-02-0	Nickel	1.5	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICSA 240-367825/8 Instrument ID: I9

Lab File ID: I9021219A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**189110**	**95**
Manganese		**0.0456**	
Aluminum	*500000*	*491470*	*98*
Antimony		*-0.612*	
Arsenic		*-7.05*	
Barium		*-0.107*	
Beryllium		*-0.151*	
Boron		*-2.91*	
Cadmium		*1.16*	
Calcium	*500000*	*460700*	*92*
Chromium		*3.99*	
Cobalt		*-1.66*	
Copper		*-0.261*	
Lead		*2.09*	
Lithium		*11.2*	
Magnesium	*500000*	*486490*	*97*
Molybdenum		*0.292*	
Nickel		*3.93*	
Potassium		*23.8*	
Selenium		*-0.513*	
Silicon		*0.0766*	
Silver		*-0.424*	
Sodium		*66.5*	
Strontium		*6.45*	
Thallium		*-8.76*	
Tin		*4.17*	
Titanium		*-0.555*	
Vanadium		*-1.57*	
Zinc		*0.579*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICSAB 240-367825/9 Instrument ID: I9

Lab File ID: I9021219A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Iron	**200000**	**187120**	**94**
Manganese	**500**	**484**	**97**
Aluminum	*500000*	*481610*	*96*
Antimony	*1000*	*1005*	*101*
Arsenic	*1000*	*968*	*97*
Barium	*500*	*485*	*97*
Beryllium	*500*	*469*	*94*
Boron	*500*	*521*	*104*
Cadmium	*1000*	*1022*	*102*
Calcium	*500000*	*461300*	*92*
Chromium	*500*	*485*	*97*
Cobalt	*500*	*478*	*96*
Copper	*500*	*546*	*109*
Lead	*1000*	*947*	*95*
Lithium	*500*	*539*	*108*
Magnesium	*500000*	*478220*	*96*
Molybdenum	*1000*	*1013*	*101*
Nickel	*1000*	*944*	*94*
Potassium	*10000*	*10054*	*101*
Selenium	*1000*	*973*	*97*
Silicon	*10000*	*9623*	*96*
Silver	*1000*	*1054*	*105*
Sodium	*10000*	*10150*	*102*
Strontium	*1500*	*1404*	*94*
Thallium	*1000*	*998*	*100*
Tin	*500*	*498*	*100*
Titanium	*500*	*506*	*101*
Vanadium	*500*	*465*	*93*
Zinc	*1000*	*910*	*91*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICSA 240-368010/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**45542**	**91**
Antimony		**0.0380**	
Arsenic		**-0.0330**	
Barium		**0.0400**	
Beryllium		**0.0080**	
Cadmium		**0.288**	
Calcium	**50000**	**47833**	**96**
Chromium		**0.0920**	
Cobalt		**0.0040**	
Copper		**0.169**	
Iron	**50000**	**48740**	**97**
Lead		**0.0430**	
Magnesium	**50000**	**48632**	**97**
Manganese		**-0.0670**	
Nickel		**0.130**	
Potassium	**50000**	**48649**	**97**
Selenium		**0.0330**	
Silver		**0.0100**	
Sodium	**50000**	**48626**	**97**
Thallium		**0.0030**	
Vanadium		**-0.0730**	
Zinc		**0.527**	
Boron		*6.05*	
Lithium		*-0.0360*	
Molybdenum	*1000*	*1018*	*102*
Strontium		*0.455*	
Tin		*0.0210*	
Titanium	*1000*	*989*	*99*
Tungsten		*0.111*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICSAB 240-368010/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Aluminum	**50000**	**44122**	**88**
Antimony	**100**	**97.9**	**98**
Arsenic	**100**	**96.5**	**96**
Barium	**100**	**94.8**	**95**
Beryllium	**100**	**94.6**	**95**
Cadmium	**100**	**94.2**	**94**
Calcium	**50000**	**46933**	**94**
Chromium	**100**	**95.6**	**96**
Cobalt	**100**	**97.2**	**97**
Copper	**100**	**95.1**	**95**
Iron	**50000**	**47246**	**94**
Lead	**100**	**97.2**	**97**
Magnesium	**50000**	**47843**	**96**
Manganese	**100**	**95.8**	**96**
Nickel	**100**	**97.3**	**97**
Potassium	**50000**	**47152**	**94**
Selenium	**100**	**98.0**	**98**
Silver	**100**	**100**	**100**
Sodium	**50000**	**47743**	**95**
Thallium	**100**	**94.2**	**94**
Vanadium	**100**	**96.3**	**96**
Zinc	**100**	**96.1**	**96**
Boron	*100*	*97.4*	*97*
Lithium	*100*	*93.3*	*93*
Molybdenum	*1100*	*1097*	*100*
Strontium	*100*	*96.1*	*96*
Tin	*100*	*99.8*	*100*
Titanium	*1100*	*1066*	*97*
Tungsten	*100*	*97.3*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367484/2-A

Lab Name: TestAmerica Canton Job No.: 240-107850-1

Sample Matrix: Water LCS Source: MTICP1_00082

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	878		88	80	120		6010C
Manganese	500	456		91	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367484/3-A

Lab Name: TestAmerica Canton Job No.: 240-107850-1

Sample Matrix: Water LCS Source: MTICPMSB_00039

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	95.8		96	80	120		6020A
Aluminum	10000	9030		90	80	120		6020A
Arsenic	1000	835		83	80	120		6020A
Barium	1000	929		93	80	120		6020A
Beryllium	1000	926		93	80	120		6020A
Cadmium	1000	928		93	80	120		6020A
Cobalt	1000	895		90	80	120		6020A
Chromium	1000	953		95	80	120		6020A
Copper	1000	893		89	80	120		6020A
Iron	10000	8880		89	80	120		6020A
Manganese	1000	939		94	80	120		6020A
Nickel	1000	908		91	80	120		6020A
Lead	1000	966		97	80	120		6020A
Antimony	100	92.1		92	80	120		6020A
Selenium	1000	940		94	80	120		6020A
Thallium	250	237		95	80	120		6020A
Vanadium	1000	939		94	80	120		6020A
Zinc	1000	878		88	80	120		6020A
Calcium	10000	10100		101	80	120		6020A
Potassium	10000	9480		95	80	120		6020A
Magnesium	10000	9680		97	80	120		6020A
Sodium	10000	9860		99	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG No.:

ICP-AES Instrument ID: I9 Date: 01/25/2019

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	Tl	V
Aluminum										0.01401160					0.026101
Antimony		-0.000056			-0.000451			-0.000015							0.002940
Arsenic		0.000005			-0.000198	0.00022072			-0.000355	0.00045569					
Barium															
Beryllium															0.000086
Boron															
Cadmium			0.008775					-0.00001							
Calcium															
Chromium															
Cobalt													0.001923		
Copper				0.000018	0.000453			-0.000018					-0.000463		
Iron															
Lead		-0.000129					0.00001699	0.000043			0.000260	0.000066831			
Lithium															
Magnesium															
Manganese															
Molybdenum															
Nickel					0.000799			0.000054							
Potassium															
Selenium		-0.000049							0.000231						
Silver															
Sodium															
Strontium															
Thallium		-0.000010			0.003994			0.000007	0.00168520				-0.000498		-0.000210
Tin															
Titanium															
Vanadium								0.000027							
Zinc						-0.000286									

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107850-1

SDG No.:

Instrument ID: I9 Date: 01/28/2019 12:15

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		10000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107850-1

SDG No.:

Instrument ID: I14 Date: 10/02/2018 11:17

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367484/1-A	02/11/2019 14:00	367484		50	50
LCS 240-367484/2-A	02/11/2019 14:00	367484		50	50
240-107850-2	02/11/2019 14:00	367484		50	50
240-107850-3	02/11/2019 14:00	367484		50	50
240-107850-4	02/11/2019 14:00	367484		50	50
240-107850-5	02/11/2019 14:00	367484		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367484/1-A	02/11/2019 14:00	367484		50	50
LCS 240-367484/3-A	02/11/2019 14:00	367484		50	50
240-107850-2	02/11/2019 14:00	367484		50	50
240-107850-3	02/11/2019 14:00	367484		50	50
240-107850-4	02/11/2019 14:00	367484		50	50
240-107850-5	02/11/2019 14:00	367484		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ICIS 240-367825/1	1		10:54	X	X																								
CALSTD 240-367825/2 IC			10:59	X	X																								
CALSTD 240-367825/3 IC			11:03	X	X																								
ICV 240-367825/4	1		11:07	X	X																								
ICB 240-367825/5	1		11:11	X	X																								
ICVL 240-367825/6	1		11:16	X	X																								
ZZZZZZ			11:20																										
ICSA 240-367825/8	1		11:25	X	X																								
ICSAB 240-367825/9	1		11:29	X	X																								
CCV 240-367825/10			11:33																										
CCB 240-367825/11			11:37																										
ZZZZZZ			11:42																										
ZZZZZZ			11:46																										
ZZZZZZ			11:50																										
ZZZZZZ			11:55																										
ZZZZZZ			11:59																										
ZZZZZZ			12:04																										
CCV 240-367825/18			12:08																										
CCB 240-367825/19			12:12																										
ZZZZZZ			12:17																										
ZZZZZZ			12:21																										
ZZZZZZ			12:26																										
ZZZZZZ			12:30																										
ZZZZZZ			12:34																										
ZZZZZZ			12:39																										
ZZZZZZ			12:43																										
ZZZZZZ			12:47																										
ZZZZZZ			12:51																										
ZZZZZZ			12:56																										
CCV 240-367825/30			13:00																										
CCB 240-367825/31			13:04																										
ZZZZZZ			13:09																										
ZZZZZZ			13:13																										
ZZZZZZ			13:17																										
ZZZZZZ			13:22																										
ZZZZZZ			13:26																										
ZZZZZZ			13:31																										
ZZZZZZ			13:35																										
ZZZZZZ			13:39																										
ZZZZZZ			13:44																										
ZZZZZZ			13:49																										
CCV 240-367825/42			13:53																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
CCB 240-367825/43			13:57																									
ZZZZZZ			14:01																									
ZZZZZZ			14:06																									
ZZZZZZ			14:10																									
ZZZZZZ			14:15																									
ZZZZZZ			14:19																									
ZZZZZZ			14:23																									
ZZZZZZ			14:27																									
ZZZZZZ			14:32																									
ZZZZZZ			14:36																									
ZZZZZZ			14:40																									
CCV 240-367825/54			14:44																									
CCB 240-367825/55			14:48																									
ZZZZZZ			14:53																									
ZZZZZZ			14:57																									
ZZZZZZ			15:01																									
ZZZZZZ			15:05																									
ZZZZZZ			15:10																									
ZZZZZZ			15:14																									
ZZZZZZ			15:18																									
ZZZZZZ			15:23																									
ZZZZZZ			15:28																									
ZZZZZZ			15:32																									
CCV 240-367825/66			15:37																									
CCB 240-367825/67			15:41																									
ZZZZZZ			15:45																									
ZZZZZZ			15:50																									
ZZZZZZ			15:54																									
ZZZZZZ			15:58																									
ZZZZZZ			16:03																									
ZZZZZZ			16:07																									
ZZZZZZ			16:12																									
ZZZZZZ			16:16																									
ZZZZZZ			16:20																									
ZZZZZZ			16:25																									
CCV 240-367825/78			16:29																									
CCB 240-367825/79			16:33																									
CCVL 240-367825/80			16:38																									
ZZZZZZ			16:42																									
ZZZZZZ			16:47																									
ZZZZZZ			16:51																									
ZZZZZZ			16:55																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			16:59																										
ZZZZZZ			17:04																										
ZZZZZZ			17:08																										
ZZZZZZ			17:12																										
ZZZZZZ			17:16																										
CCV 240-367825/90			17:21																										
CCB 240-367825/91			17:25																										
ZZZZZZ			17:29																										
ZZZZZZ			17:34																										
ZZZZZZ			17:38																										
ZZZZZZ			17:42																										
ZZZZZZ			17:47																										
ZZZZZZ			17:51																										
ZZZZZZ			17:56																										
ZZZZZZ			18:00																										
ZZZZZZ			18:05																										
ZZZZZZ			18:09																										
CCV 240-367825/102	1		18:13	X	X																								
CCB 240-367825/103	1		18:17	X	X																								
ZZZZZZ			18:22																										
ZZZZZZ			18:26																										
ZZZZZZ			18:30																										
ZZZZZZ			18:35																										
ZZZZZZ			18:39																										
ZZZZZZ			18:44																										
ZZZZZZ			18:48																										
MB 240-367484/1-A	1	R	18:52	X	X																								
LCS 240-367484/2-A	1	R	18:57	X	X																								
ZZZZZZ			19:01																										
CCV 240-367825/114	1		19:05	X	X																								
CCB 240-367825/115	1		19:09	X	X																								
ZZZZZZ			19:14																										
ZZZZZZ			19:18																										
ZZZZZZ			19:22																										
ZZZZZZ			19:26																										
ZZZZZZ			19:30																										
240-107850-2	1	R	19:34	X	X																								
240-107850-3	1	R	19:39	X	X																								
240-107850-4	1	R	19:43	X	X																								
240-107850-5	1	R	19:47	X	X																								
ZZZZZZ			19:52																										
CCV 240-367825/126	1		19:56	X	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
CCB 240-367825/127	1		20:00	X	X																								
ZZZZZZ			20:05																										
ZZZZZZ			20:09																										
ZZZZZZ			20:13																										
ZZZZZZ			20:18																										
ZZZZZZ			20:22																										
ZZZZZZ			20:26																										
ZZZZZZ			20:31																										
ZZZZZZ			20:35																										
ZZZZZZ			20:40																										
ZZZZZZ			20:44																										
CCV 240-367825/138			20:49																										
CCB 240-367825/139			20:53																										
ZZZZZZ			20:57																										
ZZZZZZ			21:01																										
ZZZZZZ			21:06																										
ZZZZZZ			21:10																										
ZZZZZZ			21:15																										
ZZZZZZ			21:19																										
ZZZZZZ			21:23																										
ZZZZZZ			21:27																										
ZZZZZZ			21:31																										
ZZZZZZ			21:36																										
CCV 240-367825/150			21:40																										
CCB 240-367825/151			21:44																										
ZZZZZZ			21:49																										
ZZZZZZ			21:53																										
ZZZZZZ			21:57																										
ZZZZZZ			22:02																										
ZZZZZZ			22:06																										
ZZZZZZ			22:11																										
ZZZZZZ			22:15																										
ZZZZZZ			22:20																										
ZZZZZZ			22:24																										
ZZZZZZ			22:28																										
CCV 240-367825/162			22:33																										
CCB 240-367825/163			22:37																										
ZZZZZZ			22:41																										
ZZZZZZ			22:45																										
ZZZZZZ			22:50																										
ZZZZZZ			22:54																										
ZZZZZZ			22:59																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			23:03																										
ZZZZZZ			23:07																										
ZZZZZZ			23:12																										
ZZZZZZ			23:16																										
ZZZZZZ			23:20																										
CCV 240-367825/174			23:24																										
CCB 240-367825/175			23:28																										
ZZZZZZ			23:32																										
ZZZZZZ			23:36																										
ZZZZZZ			23:40																										
ZZZZZZ			23:45																										
ZZZZZZ			23:49																										
ZZZZZZ			23:54																										
ZZZZZZ			23:58																										
ZZZZZZ			00:02																										
ZZZZZZ			00:07																										
ZZZZZZ			00:11																										
CCV 240-367825/186			00:16																										
CCB 240-367825/187			00:20																										
ZZZZZZ			00:24																										
ZZZZZZ			00:28																										
ccv-4012001 CCV			00:33																										
CCB 240-367825/191			00:37																										
ZZZZZZ			00:42																										
CCV 240-367825/193			00:46																										
CCB 240-367825/194			00:50																										
CCVL 240-367825/195	1		08:02	X	X																								

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/13/2019 13:56 End Date: 02/13/2019 21:07

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn							
RINSE 240-368010/1			13:56																												
ICIS 240-368010/2			13:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD1 240-368010/3 IC	1		14:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD2 240-368010/4 IC	1		14:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD3 240-368010/5 IC	1		14:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD4 240-368010/6 IC	1		14:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICV 240-368010/7	1		14:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICB 240-368010/8	1		14:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICVL 240-368010/9	1		14:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICSA 240-368010/10	1		14:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICSAB 240-368010/11	1		14:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCV 240-368010/12			14:21																												
CCB 240-368010/13			14:24																												
ZZZZZZ			14:26																												
ZZZZZZ			14:29																												
ZZZZZZ			14:31																												
ZZZZZZ			14:33																												
ZZZZZZ			14:35																												
ZZZZZZ			14:38																												
ZZZZZZ			14:40																												
ZZZZZZ			14:42																												
ZZZZZZ			14:45																												
ZZZZZZ			14:47																												
CCV 240-368010/24			14:49																												
CCB 240-368010/25			14:51																												
ZZZZZZ			14:54																												
ZZZZZZ			14:56																												
ZZZZZZ			14:58																												
ZZZZZZ			15:01																												
ZZZZZZ			15:03																												
ZZZZZZ			15:05																												
ZZZZZZ			15:08																												
ZZZZZZ			15:10																												
ZZZZZZ			15:12																												
ZZZZZZ			15:15																												
CCV 240-368010/36			15:17																												
CCB 240-368010/37			15:19																												
ZZZZZZ			15:22																												
ZZZZZZ			15:24																												
ZZZZZZ			15:26																												
ZZZZZZ			15:29																												
ZZZZZZ			15:31																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/13/2019 13:56 End Date: 02/13/2019 21:07

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			15:33																												
ZZZZZZ			15:36																												
ZZZZZZ			15:38																												
ZZZZZZ			15:40																												
ZZZZZZ			15:42																												
CCV 240-368010/48			15:45																												
CCB 240-368010/49			15:47																												
ZZZZZZ			15:49																												
ZZZZZZ			15:52																												
ZZZZZZ			15:54																												
ZZZZZZ			15:56																												
ZZZZZZ			15:59																												
ZZZZZZ			16:01																												
ZZZZZZ			16:03																												
ZZZZZZ			16:06																												
ZZZZZZ			16:08																												
ZZZZZZ			16:10																												
CCV 240-368010/60			16:13																												
CCB 240-368010/61			16:15																												
ZZZZZZ			16:17																												
ZZZZZZ			16:20																												
ZZZZZZ			16:22																												
ZZZZZZ			16:24																												
ZZZZZZ			16:27																												
ZZZZZZ			16:29																												
ZZZZZZ			16:31																												
ZZZZZZ			16:34																												
ZZZZZZ			16:36																												
ZZZZZZ			16:38																												
CCV 240-368010/72			16:40																												
CCB 240-368010/73			16:43																												
ZZZZZZ			16:45																												
ZZZZZZ			16:48																												
ZZZZZZ			16:50																												
ZZZZZZ			16:52																												
ZZZZZZ			16:55																												
ZZZZZZ			16:57																												
ZZZZZZ			16:59																												
ZZZZZZ			17:02																												
ZZZZZZ			17:04																												
ZZZZZZ			17:06																												
CCV 240-368010/84			17:09																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/13/2019 13:56 End Date: 02/13/2019 21:07

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
CCB 240-368010/85			17:11																												
ZZZZZZ			17:13																												
ZZZZZZ			17:16																												
ZZZZZZ			17:18																												
ZZZZZZ			17:20																												
ZZZZZZ			17:23																												
ZZZZZZ			17:25																												
ZZZZZZ			17:27																												
ZZZZZZ			17:29																												
ZZZZZZ			17:31																												
ZZZZZZ			17:33																												
CCV 240-368010/96			17:36																												
CCB 240-368010/97			17:38																												
ZZZZZZ			17:40																												
ZZZZZZ			17:43																												
ZZZZZZ			17:45																												
ZZZZZZ			17:47																												
ZZZZZZ			17:49																												
ZZZZZZ			17:52																												
ZZZZZZ			17:54																												
ZZZZZZ			17:56																												
ZZZZZZ			17:59																												
ZZZZZZ			18:01																												
CCV 240-368010/108	1		18:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368010/109	1		18:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			18:08																												
ZZZZZZ			18:10																												
ZZZZZZ			18:13																												
ZZZZZZ			18:15																												
ZZZZZZ			18:18																												
ZZZZZZ			18:20																												
ZZZZZZ			18:22																												
ZZZZZZ			18:25																												
ZZZZZZ			18:27																												
MB 240-367484/1-A	1	R	18:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-368010/120	1		18:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368010/121	1		18:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
LCS 240-367484/3-A	1	R	18:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			18:38																												
ZZZZZZ			18:41																												
ZZZZZZ			18:43																												
ZZZZZZ			18:45																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/13/2019 13:56 End Date: 02/13/2019 21:07

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn							
ZZZZZZ			18:47																												
ZZZZZZ			18:49																												
240-107850-2	1	R	18:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107850-3	1	R	18:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107850-4	1	R	18:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-368010/132	1		18:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368010/133	1		19:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107850-5	1	R	19:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			19:06																												
ZZZZZZ			19:08																												
ZZZZZZ			19:10																												
ZZZZZZ			19:13																												
ZZZZZZ			19:15																												
ZZZZZZ			19:17																												
ZZZZZZ			19:19																												
ZZZZZZ			19:22																												
ZZZZZZ			19:24																												
CCV 240-368010/144	1		19:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368010/145	1		19:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			19:31																												
ZZZZZZ			19:33																												
ZZZZZZ			19:36																												
ZZZZZZ			19:38																												
ZZZZZZ			19:40																												
CCV 240-368010/151			19:43																												
CCB 240-368010/152			19:45																												
CCVL 240-368010/153	1		19:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			19:50																												
ZZZZZZ			19:52																												
ZZZZZZ			19:55																												
ZZZZZZ			19:57																												
ZZZZZZ			19:59																												
ZZZZZZ			20:01																												
ZZZZZZ			20:03																												
ZZZZZZ			20:05																												
ZZZZZZ			20:07																												
CCV 240-368010/163			20:10																												
CCB 240-368010/164			20:12																												
ZZZZZZ			20:14																												
ZZZZZZ			20:17																												
ZZZZZZ			20:19																												
ZZZZZZ			20:21																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/13/2019 13:56 End Date: 02/13/2019 21:07

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
CCV 240-368010/169			20:24																												
CCB 240-368010/170			20:26																												
CCVL 240-368010/171			20:28																												
ZZZZZZ			20:31																												
ZZZZZZ			20:33																												
ZZZZZZ			20:35																												
ZZZZZZ			20:37																												
ZZZZZZ			20:40																												
ZZZZZZ			20:42																												
ZZZZZZ			20:44																												
ZZZZZZ			20:46																												
CCV 240-368010/180			20:48																												
CCB 240-368010/181			20:51																												
ZZZZZZ			20:53																												
ZZZZZZ			20:55																												
CCV 240-368010/184			20:58																												
CCB 240-368010/185			21:00																												
ZZZZZZ			21:02																												
CCV 240-368010/187			21:04																												
CCB 240-368010/188			21:07																												

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICP Instrument ID: I9 Start Date: 02/12/2019 End Date: 02/13/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-367825/1	10:54										
ICV 240-367825/4	11:07	100		99		99		100			
ICB 240-367825/5	11:11	99		100		98		100			
ICVL 240-367825/6	11:16	99		100		99		101			
ICSA 240-367825/8	11:25	90		89		91		95			
ICSAB 240-367825/9	11:29	91		91		94		97			
CCV 240-367825/102	18:13	98		96		100		98			
CCB 240-367825/103	18:17	98		98		99		99			
MB 240-367484/1-A	18:52	102		101		103		105			
LCS 240-367484/2-A	18:57	101		99		102		102			
CCV 240-367825/114	19:05	99		97		101		101			
CCB 240-367825/115	19:09	99		99		101		102			
240-107850-2	19:34	101		98		103		100			
240-107850-3	19:39	102		100		102		103			
240-107850-4	19:43	104		111		113		110			
240-107850-5	19:47	103		100		103		101			
CCV 240-367825/126	19:56	99		97		100		99			
CCB 240-367825/127	20:00	99		98		100		100			
CCVL 240-367825/195	08:02	113		105		101		103			

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/13/2019 End Date: 02/13/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-368010/3 IC	14:00	101		100		99		100		97	
STD2 240-368010/4 IC	14:03	97		99		99		100		96	
STD3 240-368010/5 IC	14:05	99		100		99		100		94	
STD4 240-368010/6 IC	14:07	104		103		102		102		101	
ICV 240-368010/7	14:10	99		102		102		101		96	
ICB 240-368010/8	14:12	102		103		102		102		100	
ICVL 240-368010/9	14:14	100		102		103		102		100	
ICSA 240-368010/10	14:17	93		97		99		98		93	
ICSAB 240-368010/11	14:19	92		98		97		97		90	
CCV 240-368010/108	18:03	94		98		97		93		88	
CCB 240-368010/109	18:06	95		99		102		96		94	
MB 240-367484/1-A	18:29	102		101		102		95		94	
CCV 240-368010/120	18:31	97		98		100		93		88	
CCB 240-368010/121	18:34	100		100		100		95		92	
LCS 240-367484/3-A	18:36	97		97		99		92		88	
240-107850-2	18:52	93		98		98		92		84	
240-107850-3	18:54	94		96		100		92		87	
240-107850-4	18:56	90		95		97		91		83	
CCV 240-368010/132	18:59	93		96		98		92		85	
CCB 240-368010/133	19:01	96		99		100		93		90	
240-107850-5	19:03	94		97		99		92		86	
CCV 240-368010/144	19:26	97		102		102		95		91	
CCB 240-368010/145	19:29	98		103		104		97		95	
CCVL 240-368010/153	19:47	98		100		99		94		91	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/13/2019 End Date: 02/13/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-368010/3 IC	14:00	98		98		99		99		98	
STD2 240-368010/4 IC	14:03	97		96		96		99		98	
STD3 240-368010/5 IC	14:05	96		96		95		98		99	
STD4 240-368010/6 IC	14:07	102		101		102		102		100	
ICV 240-368010/7	14:10	98		99		99		101		100	
ICB 240-368010/8	14:12	101		102		101		102		101	
ICVL 240-368010/9	14:14	101		102		101		101		100	
ICSA 240-368010/10	14:17	94		95		94		98		98	
ICSAB 240-368010/11	14:19	93		94		95		100		99	
CCV 240-368010/108	18:03	96		97		94		99		98	
CCB 240-368010/109	18:06	100		103		98		101		101	
MB 240-367484/1-A	18:29	101		102		100		103		101	
CCV 240-368010/120	18:31	97		98		96		101		100	
CCB 240-368010/121	18:34	101		102		99		102		102	
LCS 240-367484/3-A	18:36	97		101		95		101		100	
240-107850-2	18:52	95		98		95		99		99	
240-107850-3	18:54	96		102		97		101		100	
240-107850-4	18:56	93		97		94		102		102	
CCV 240-368010/132	18:59	96		99		95		101		100	
CCB 240-368010/133	19:01	101		102		99		102		102	
240-107850-5	19:03	96		101		97		100		100	
CCV 240-368010/144	19:26	100		102		99		102		102	
CCB 240-368010/145	19:29	103		104		101		103		103	
CCVL 240-368010/153	19:47	99		100		99		99		99	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/13/2019 End Date: 02/13/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-368010/3 IC	14:00	99									
STD2 240-368010/4 IC	14:03	96									
STD3 240-368010/5 IC	14:05	95									
STD4 240-368010/6 IC	14:07	103									
ICV 240-368010/7	14:10	99									
ICB 240-368010/8	14:12	101									
ICVL 240-368010/9	14:14	100									
ICSA 240-368010/10	14:17	96									
ICSAB 240-368010/11	14:19	95									
CCV 240-368010/108	18:03	97									
CCB 240-368010/109	18:06	100									
MB 240-367484/1-A	18:29	103									
CCV 240-368010/120	18:31	98									
CCB 240-368010/121	18:34	102									
LCS 240-367484/3-A	18:36	100									
240-107850-2	18:52	96									
240-107850-3	18:54	100									
240-107850-4	18:56	96									
CCV 240-368010/132	18:59	99									
CCB 240-368010/133	19:01	102									
240-107850-5	19:03	100									
CCV 240-368010/144	19:26	100									
CCB 240-368010/145	19:29	103									
CCVL 240-368010/153	19:47	99									

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367484 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00082	MTICP2A 00090	MTTMHCL 00235
MB 240-367484/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-367484/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107850-I-2	MRC-MW156A-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107850-I-3	MRC-MW144B-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107850-I-4	MRC-MW146B-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107850-I-5	MRC-MW147B-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-367484/1		3005A, 6010C		1 mL					
LCS 240-367484/2		3005A, 6010C		1 mL					
240-107850-I-2	MRC-MW156A-020719	3005A, 6010C	R	1 mL					
240-107850-I-3	MRC-MW144B-020719	3005A, 6010C	R	1 mL					
240-107850-I-4	MRC-MW146B-020719	3005A, 6010C	R	1 mL					
240-107850-I-5	MRC-MW147B-020719	3005A, 6010C	R	1 mL					

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb4
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367484 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367484 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00038	MTICPMSB 00039	MTTMHCL 00235
MB 240-367484/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-367484/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107850-I-2	MRC-MW156A-020719	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107850-I-3	MRC-MW144B-020719	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107850-I-4	MRC-MW146B-020719	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107850-I-5	MRC-MW147B-020719	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-367484/1		3005A, 6020A		1 mL					
LCS 240-367484/3		3005A, 6020A		1 mL					
240-107850-I-2	MRC-MW156A-020719	3005A, 6020A	R	1 mL					
240-107850-I-3	MRC-MW144B-020719	3005A, 6020A	R	1 mL					
240-107850-I-4	MRC-MW146B-020719	3005A, 6020A	R	1 mL					
240-107850-I-5	MRC-MW147B-020719	3005A, 6020A	R	1 mL					

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb4
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367484 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW156A-020719 Lab Sample ID: 240-107850-2

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 08:50

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	290	200	26	ug/L			1	6010C
7439-96-5	Manganese	44	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	87	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	23	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.31	1.0	0.31	ug/L	U		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	0.70	1.0	0.19	ug/L	J		1	6020A
7440-47-3	Chromium	1.1	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	2.1	2.0	1.7	ug/L		B	1	6020A
7439-89-6	Iron	290	100	47	ug/L			1	6020A
7439-96-5	Manganese	46	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	2.2	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	15	20	15	ug/L	U		1	6020A
7440-70-2	Calcium	110000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	11000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	30000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	20000	1000	330	ug/L			1	6020A

Sample Report

Sample Name	240-107850-i-2-a
File Name	129SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\I14021319B.b
Acq Time	2019-02-13 18:52:08
Sample Type	Sample
Total Dilution	1.0000
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	45	No Gas	-0.042	ug/l	N/A	64851.45	10000	
Be	9	45	No Gas	0.175	ug/l	14.0	400.01	2000	
B	11	45	No Gas	8.212	ug/l	2.8	50389.64	300	
Na	23	45	He	19975.663	ug/l	1.2	15272706.61	500000	
Mg	24	45	He	30457.052	ug/l	1.3	12574191.17	500000	
Al	27	45	He	86.516	ug/l	2.6	18013.22	200000	
K	39	45	He	10658.128	ug/l	1.2	4725997.59	500000	
Ca	44	45	He	110650.078	ug/l	1.2	1167465.40	500000	
Ti	47	45	He	2.726	ug/l	14.0	370.01	2500	
V	51	45	He	0.235	ug/l	71.3	710.48	10000	
Cr	52	45	He	1.050	ug/l	1.8	5987.99	10000	
Mn	55	45	He	45.525	ug/l	0.3	136257.63	10000	
Fe	56	103	He	285.931	ug/l	1.7	1139885.58	200000	
Co	59	103	He	0.699	ug/l	1.1	4859.77	5000	
Ni	60	103	He	2.153	ug/l	3.2	3921.70	10000	
Cu	63	103	He	2.099	ug/l	2.3	10316.08	10000	
Zn	66	103	He	4.344	ug/l	1.5	4734.18	10000	
As	75	103	He	0.243	ug/l	132.4	216.10	10000	
Se	78	103	H2	0.214	ug/l	13.8	57.67	10000	
Sr	88	103	He	256.347	ug/l	0.9	1145069.78	10000	
Mo	95	103	He	5.387	ug/l	2.3	12211.07	2000	
Ag	107	103	He	0.008	ug/l	12.4	82.22	100	
Cd	111	115	He	0.066	ug/l	13.7	85.81	4000	
Sn	118	115	He	0.385	ug/l	5.9	2502.48	2000	
Sb	123	115	He	0.215	ug/l	4.0	707.80	200	
Ba	137	115	He	23.382	ug/l	2.2	32989.34	10000	
W	182	159	He	0.042	ug/l	76.9	577.87	2500	
Tl	205	165	He	0.064	ug/l	11.1	814.48	2000	
Pb	208	165	He	0.212	ug/l	6.6	4035.87	4000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li6	6	No Gas	1133474.97	0.9	1219118.63	92.97	59.5	120.4	
Sc	45	No Gas	2424189.97	0.5	2483599.62	97.61	59.5	120.4	
Sc	45	H2	2246972.17	4.1	2303513.67	97.55	59.5	120.4	
Sc	45	He	522627.06	0.3	570373.81	91.63	59.5	120.4	
Rh	103	H2	507475.48	4.3	604171.92	84	59.5	120.4	

Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Rh	103	He	2499162.96	0.8	2639313.99	94.69	59.5	120.4	
In	115	H2	2948010.83	2.3	3014873	97.78	59.5	120.4	
In	115	He	1557840.57	1.5	1636259.79	95.21	59.5	120.4	
Tb	159	He	3205746.47	0.5	3241940.5	98.88	59.5	120.4	
Ho	165	He	3269035.36	2.0	3293241.61	99.26	59.5	120.4	
Bi	209	He	2013483.95	2.0	2090729.01	96.31	59.5	120.4	

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367484 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00082	MTICP2A 00090	MTTMHCL 00235
MB 240-367484/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-367484/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107835-B-2 MS		3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107835-B-2 MSD		3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107850-I-2	MRC-MW156A-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107850-I-3	MRC-MW144B-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107850-I-4	MRC-MW146B-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107850-I-5	MRC-MW147B-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-367484/1		3005A, 6010C		1 mL					
LCS 240-367484/2		3005A, 6010C		1 mL					
240-107835-B-2 MS		3005A, 6010C	R	1 mL					
240-107835-B-2 MSD		3005A, 6010C	R	1 mL					
240-107850-I-2	MRC-MW156A-020719	3005A, 6010C	R	1 mL					
240-107850-I-3	MRC-MW144B-020719	3005A, 6010C	R	1 mL					
240-107850-I-4	MRC-MW146B-020719	3005A, 6010C	R	1 mL					
240-107850-I-5	MRC-MW147B-020719	3005A, 6010C	R	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW156A-020719	240-107850-2
MRC-MW144B-020719	240-107850-3
MRC-MW146B-020719	240-107850-4
MRC-MW147B-020719	240-107850-5

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107850-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW156A-020719	240-107850-2
MRC-MW144B-020719	240-107850-3
MRC-MW146B-020719	240-107850-4
MRC-MW147B-020719	240-107850-5

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107850-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW156A-020719	240-107850-2
MRC-MW144B-020719	240-107850-3
MRC-MW146B-020719	240-107850-4
MRC-MW147B-020719	240-107850-5

Comments:

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Analyst: LKG Batch Start Date: 08/07/2018

Reporting Units: mg/L Analytical Batch No.: 339523

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:20	Sulfate	52.9	50.0	106	90-110		WCICLCS_00669
11	ICB	15:41	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Analyst: JWW Batch Start Date: 02/12/2019

Reporting Units: mg/L Analytical Batch No.: 367774

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	13:08	Sulfate	52.8	50.0	106	90-110		WCICCCV_00861
2	CCB	13:29	Sulfate	0.35				U	
13	CCV	17:17	Sulfate	52.0	50.0	104	90-110		WCICCCV_00861
14	CCB	17:38	Sulfate	0.35				U	
25	CCV	21:25	Sulfate	52.8	50.0	106	90-110		WCICCCV_00861
26	CCB	21:46	Sulfate	0.35				U	
37	CCV	01:34	Sulfate	52.8	50.0	106	90-110		WCICCCV_00861
38	CCB	01:54	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG No.:

Analyst: MSP Batch Start Date: 02/17/2019

Reporting Units: mg/L Analytical Batch No.: 575925

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:50	Nitrate Nitrite as N	3.26	3.00	109	90-110		W_ICAl_00027
2	ICB	12:51	Nitrate Nitrite as N	0.040				U	
3	CCV	12:52	Nitrate Nitrite as N	4.88	5.00	98	90-110		W_Nitrate_00020
4	CCV	12:53	Nitrate Nitrite as N	4.93	5.00	99	90-110		IC Primary_00012
5	CCB	12:54	Nitrate Nitrite as N	0.040				U	
20	CCV	13:12	Nitrate Nitrite as N	4.76	5.00	95	90-110		W_Nitrate_00020
21	CCB	13:13	Nitrate Nitrite as N	0.0463				J	
32	CCV	13:26	Nitrate Nitrite as N	4.62	5.00	92	90-110		W_Nitrate_00020
33	CCB	13:27	Nitrate Nitrite as N	0.040				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 368201 Date: 02/14/2019 13:58							
2320B-2011	MB 240-368201/30	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 368671 Date: 02/19/2019 14:05							
2340C-2011	MB 240-368671/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 367870 Date: 02/13/2019 09:33							
2540 C-2011	MB 240-367870/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 367774 Date: 02/12/2019 13:49							
9056A	MB 240-367774/3	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-367774/3	Sulfate	0.35	U	mg/L	1.0	1

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575925 Date: 02/17/2019 12:55							
SM 4500 NO3 F	MB 490-575925/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107850-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 271440 Date: 02/27/2019 08:00							
SM 2520B	MB 180-271440/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 368671 Date: 02/19/2019 14:13								
2340C-2011	MRC-MW156A-020719	240-107850-2	Hardness as calcium carbonate	440	mg/L			
2340C-2011	MRC-MW156A-020719	240-107850-2 DU	Hardness as calcium carbonate	450	mg/L	2	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107850-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 271440 Date: 02/27/2019 08:00								
SM 2520B	MRC-MW156A-020719	240-107850-2	Salinity	2.0	No Unit			U
SM 2520B	MRC-MW156A-020719	240-107850-2 DU	Salinity	2.0	No Unit	NC	20	U

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 368201	Date: 02/14/2019 13:54										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-368201/29	Alkalinity	259		mg/L	271	96	86-123			
Batch ID: 368671	Date: 02/19/2019 14:09										
						LCS Source: WCHARDNESS_00031					
2340C-2011	LCS 240-368671/2	Hardness as calcium carbonate	254		mg/L	246	103	90-110			
Batch ID: 367870	Date: 02/13/2019 09:33										
						LCS Source: WCPHENOVSOLID_00039					
2540 C-2011	LCS 240-367870/2	Total Dissolved Solids	218		mg/L	202	108	80-120			
Batch ID: 367774	Date: 02/12/2019 14:10										
						LCS Source: WCICLCS_00696					
9056A	LCS 240-367774/4	Sulfate	52.4		mg/L	50.0	105	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925	Date: 02/17/2019 12:57										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575925/7	Nitrate Nitrite as N	3.23		mg/L	3.00	108	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 02/19/2019 14:05 End Date: 02/19/2019 16:07

Lab Sample Id	D/F	Type	Time	Analytes
				HardCC
MB 240-368671/1	1	T	14:05	X
LCS 240-368671/2	1	T	14:09	X
240-107850-2 DU	1	T	14:13	X
240-107850-2	1	T	14:17	X
240-107850-3	1	T	14:21	X
240-107850-4	1	T	14:26	X
240-107850-5	1	T	14:30	X
ZZZZZZ			14:34	
ZZZZZZ			14:38	
ZZZZZZ			14:43	
ZZZZZZ			14:47	
ZZZZZZ			14:51	
ZZZZZZ			14:55	
ZZZZZZ			15:00	
ZZZZZZ			15:04	
ZZZZZZ			15:08	
ZZZZZZ			15:12	
ZZZZZZ			15:16	
ZZZZZZ			15:21	
ZZZZZZ			15:25	
ZZZZZZ			15:29	
ZZZZZZ			15:33	
ZZZZZZ			15:38	
ZZZZZZ			15:42	
ZZZZZZ			15:46	
ZZZZZZ			15:50	
ZZZZZZ			15:55	
ZZZZZZ			15:59	
ZZZZZZ			16:03	
ZZZZZZ			16:07	

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/14/2019 11:41 End Date: 02/14/2019 15:39

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			11:41																									
ZZZZZZ			11:52																									
ZZZZZZ			11:57																									
ZZZZZZ			12:01																									
ZZZZZZ			12:05																									
ZZZZZZ			12:10																									
ZZZZZZ			12:15																									
ZZZZZZ			12:20																									
ZZZZZZ			12:25																									
ZZZZZZ			12:30																									
ZZZZZZ			12:34																									
ZZZZZZ			12:39																									
ZZZZZZ			12:41																									
ZZZZZZ			12:45																									
ZZZZZZ			12:50																									
ZZZZZZ			12:55																									
ZZZZZZ			13:00																									
ZZZZZZ			13:05																									
ZZZZZZ			13:09																									
ZZZZZZ			13:14																									
ZZZZZZ			13:19																									
ZZZZZZ			13:24																									
ZZZZZZ			13:29																									
ZZZZZZ			13:30																									
ZZZZZZ			13:35																									
ZZZZZZ			13:40																									
ZZZZZZ			13:45																									
ZZZZZZ			13:49																									
LCS 240-368201/29	1	T	13:54	X																								
MB 240-368201/30	1	T	13:58	X																								
ZZZZZZ			14:02																									
ZZZZZZ			14:07																									
ZZZZZZ			14:12																									
ZZZZZZ			14:16																									
ZZZZZZ			14:18																									
ZZZZZZ			14:23																									
ZZZZZZ			14:28																									
ZZZZZZ			14:33																									
ZZZZZZ			14:37																									
ZZZZZZ			14:42																									
ZZZZZZ			14:46																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/14/2019 11:41 End Date: 02/14/2019 15:39

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			14:51																									
ZZZZZZ			14:56																									
ZZZZZZ			15:01																									
ZZZZZZ			15:06																									
ZZZZZZ			15:08																									
240-107850-2	1	T	15:13	X																								
240-107850-3	1	T	15:17	X																								
240-107850-4	1	T	15:20	X																								
240-107850-5	1	T	15:24	X																								
ZZZZZZ			15:27																									
ZZZZZZ			15:32																									
ZZZZZZ			15:37																									
ZZZZZZ			15:39																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 02/13/2019 09:33 End Date: 02/13/2019 09:33

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-367870/1	1	T	09:33	X																								
LCS 240-367870/2	1	T	09:33	X																								
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
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ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
240-107850-2	1	T	09:33	X																								
240-107850-3	1	T	09:33	X																								
240-107850-4	1	T	09:33	X																								
240-107850-5	1	T	09:33	X																								
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 08/07/2018 12:13 End Date: 08/07/2018 15:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339523/1 IC	1		12:13	X																								
STD2 240-339523/2 IC	1		12:34	X																								
STD3 240-339523/3 IC	1		12:55	X																								
STD4 240-339523/4 IC	1		13:16	X																								
STD5 240-339523/5 ICRT	1		13:36	X																								
STD6 240-339523/6 IC	1		13:57	X																								
STD7 240-339523/7 IC	1		14:18	X																								
STD8 240-339523/8 IC	1		14:39	X																								
STD9 240-339523/9 IC	1		14:59	X																								
ICV 240-339523/10	1		15:20	X																								
ICB 240-339523/11	1		15:41	X																								

Prep Types:
=

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 02/12/2019 13:08 End Date: 02/13/2019 01:54

Lab Sample Id	D/F	Type	Time	Analytes																								
				Br	SO4																							
CCV 240-367774/1	1		13:08		X																							
CCB 240-367774/2	1		13:29		X																							
MB 240-367774/3	1	T	13:49		X																							
LCS 240-367774/4	1	T	14:10		X																							
ZZZZZZ			14:31																									
ZZZZZZ			14:52																									
ZZZZZZ			15:13																									
ZZZZZZ			15:33																									
ZZZZZZ			15:54																									
ZZZZZZ			16:15																									
ZZZZZZ			16:35																									
ZZZZZZ			16:56																									
CCV 240-367774/13	1		17:17		X																							
CCB 240-367774/14	1		17:38		X																							
ZZZZZZ			17:58																									
ZZZZZZ			18:19																									
ZZZZZZ			18:40																									
ZZZZZZ			19:00																									
ZZZZZZ			19:21																									
ZZZZZZ			19:42																									
ZZZZZZ			20:03																									
ZZZZZZ			20:23																									
ZZZZZZ			20:44																									
ZZZZZZ			21:05																									
CCV 240-367774/25	1		21:25		X																							
CCB 240-367774/26	1		21:46		X																							
ZZZZZZ			22:07																									
ZZZZZZ			22:27																									
ZZZZZZ			22:48																									
ZZZZZZ			23:09																									
240-107850-2	1	T	23:30	X	X																							
ZZZZZZ			23:50																									
240-107850-3	1	T	00:11	X	X																							
240-107850-4	1	T	00:32	X	X																							
ZZZZZZ			00:52																									
240-107850-5	1	T	01:13	X	X																							
CCV 240-367774/37	1		01:34		X																							
CCB 240-367774/38	1		01:54		X																							

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/17/2019 12:50 End Date: 02/17/2019 13:27

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575925/1	1		12:50	X																								
ICB 490-575925/2	1		12:51	X																								
CCV 490-575925/3	1		12:52	X																								
CCV 490-575925/4	1		12:53	X																								
CCB 490-575925/5	1		12:54	X																								
MB 490-575925/6	1	T	12:55	X																								
LCS 490-575925/7	1	T	12:57	X																								
ZZZZZZ			12:58																									
ZZZZZZ			12:59																									
ZZZZZZ			13:00																									
ZZZZZZ			13:01																									
ZZZZZZ			13:02																									
ZZZZZZ			13:04																									
ZZZZZZ			13:05																									
ZZZZZZ			13:06																									
ZZZZZZ			13:07																									
ZZZZZZ			13:08																									
240-107850-2	1	T	13:10	X																								
240-107850-3	1	T	13:11	X																								
CCV 490-575925/20	1		13:12	X																								
CCB 490-575925/21	1		13:13	X																								
ZZZZZZ			13:14																									
240-107850-5	1	T	13:15	X																								
ZZZZZZ			13:17																									
ZZZZZZ			13:18																									
ZZZZZZ			13:19																									
ZZZZZZ			13:20																									
ZZZZZZ			13:21																									
ZZZZZZ			13:23																									
ZZZZZZ			13:24																									
240-107850-4	1	T	13:25	X																								
CCV 490-575925/32	1		13:26	X																								
CCB 490-575925/33	1		13:27	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107850-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/27/2019 08:00 End Date: 02/27/2019 08:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-271440/1	1	T	08:00	X																								
240-107850-2	1	T	08:00	X																								
240-107850-2 DU	1	T	08:00	X																								
240-107850-3	1	T	08:00	X																								
240-107850-4	1	T	08:00	X																								
240-107850-5	1	T	08:00	X																								
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 368671 Batch Start Date: 02/19/19 14:05 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 02/19/19 16:12

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCHARDNESS 00031		
MB 240-368671/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-368671/2		2340C-2011		25 mL	25 mL	6.35 mL	25 mL		
240-107850-G-2 DU	MRC-MW156A-020719	2340C-2011	T	5 mL	25 mL	2.25 mL			
240-107850-G-2	MRC-MW156A-020719	2340C-2011	T	5 mL	25 mL	2.20 mL			
240-107850-G-3	MRC-MW144B-020719	2340C-2011	T	25 mL	25 mL	1.55 mL			
240-107850-G-4	MRC-MW146B-020719	2340C-2011	T	25 mL	25 mL	5.05 mL			
240-107850-G-5	MRC-MW147B-020719	2340C-2011	T	25 mL	25 mL	1.15 mL			

Batch Notes	
Batch Comment	BEAKERS--4010979
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C9
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 368201 Batch Start Date: 02/14/19 11:41 Batch Analyst: Carson, Monica

Batch Method: 2320B-2011 Batch End Date: 02/15/19 08:57

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-368201/29		2320B-2011		InitialAmount is blank	10 mL				
MB 240-368201/30		2320B-2011		InitialAmount is blank					
240-107850-D-2	MRC-MW156A-020719	2320B-2011	T	InitialAmount is blank					
240-107850-D-3	MRC-MW144B-020719	2320B-2011	T	InitialAmount is blank					
240-107850-D-4	MRC-MW146B-020719	2320B-2011	T	InitialAmount is blank					
240-107850-D-5	MRC-MW147B-020719	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4- 4005008
pH Buffer 2 ID	7- 4017506
pH Buffer 3 ID	10- 3892955
pH Buffer 4 ID	12- 3891579
Nominal Amount Used	10 mL
pH Meter ID	severus
Probe ID	WCP 137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367870 Batch Start Date: 02/13/19 09:33 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-367870/1		2540 C-2011			3.6984 g	100 mL	3.6983 g	3.6984 g	0 g
LCS 240-367870/2		2540 C-2011			3.7122 g	100 mL	3.7341 g	3.7340 g	0 g
240-107850-D-2	MRC-MW156A-020719	2540 C-2011	T	790 umhos/cm	3.7343 g	100 mL	3.7907 g	3.7909 g	0 g
240-107850-D-3	MRC-MW144B-020719	2540 C-2011	T	327 umhos/cm	3.6615 g	100 mL	3.6809 g	3.6806 g	0 g
240-107850-D-4	MRC-MW146B-020719	2540 C-2011	T	1313 umhos/cm	3.6708 g	100 mL	3.7479 g	3.7475 g	0 g
240-107850-D-5	MRC-MW147B-020719	2540 C-2011	T	256 umhos/cm	3.6810 g	100 mL	3.6942 g	3.6941 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 240-367870/1		2540 C-2011		Pass No Unit	N/A No Unit	N/A	-0.0001 g	0 g	N/A g
LCS 240-367870/2		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0219 g	0.0218 g	N/A g
240-107850-D-2	MRC-MW156A-020719	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0564 g	0.0566 g	N/A g
240-107850-D-3	MRC-MW144B-020719	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0194 g	0.0191 g	N/A g
240-107850-D-4	MRC-MW146B-020719	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0771 g	0.0767 g	N/A g
240-107850-D-5	MRC-MW147B-020719	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0132 g	0.0131 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00039		
MB 240-367870/1		2540 C-2011		N/A g	100 mL	OK			
LCS 240-367870/2		2540 C-2011		N/A g	100 mL	OK	100 mL		
240-107850-D-2	MRC-MW156A-020719	2540 C-2011	T	N/A g	100 mL	OK			
240-107850-D-3	MRC-MW144B-020719	2540 C-2011	T	N/A g	100 mL	OK			
240-107850-D-4	MRC-MW146B-020719	2540 C-2011	T	N/A g	100 mL	OK			
240-107850-D-5	MRC-MW147B-020719	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367870 Batch Start Date: 02/13/19 09:33 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date:

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/14/2019 11:52
Date/Time - Out - CW (WT2)	02/14/2019 12:57
Temperature - Start - CW (WT2) - Correct	181 Celsius
Temperature - End - CW (WT2) - Correct	182 Celsius
Temperature - Start-CW(WT2) -Uncorrected	181 Celsius
Temperature - End-CW(WT2) -Uncorrected	182 Celsius
Temperature - Start - Corrected	104 Celsius
Temperature - End - Corrected	105 Celsius
Date/Time - In	02/13/2019 10:17
Date/Time - Out	02/14/2019 08:08
Filter ID	60020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O06
Pipette/Syringe/Dispenser ID	A1, B12, E12
Thermometer ID - Low Temperature	84922
Thermometer ID	181417084
Temperature - Start - Uncorrected	104 Celsius
Temperature - End - Uncorrected	105 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/14/2019 08:09 No Unit
Weight(WT1) Date/Time Out	02/14/2019 10:02
Weight(WT1) Start Temp	182 Celsius
Weight(WT1) Temp Out	182 Celsius
Uncorrected Weight(WT1) Start Temp	182 Celsius
Uncorrected Weight(WT1) Temp Out	182 Celsius

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367870 Batch Start Date: 02/13/19 09:33 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339523/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339523/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339523/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339523/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339523/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339523/6 IC		300.0		5 mL	2 mL				
STD7 240-339523/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339523/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339523/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367774 Batch Start Date: 02/12/19 13:08 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107850-H-2	MRC-MW156A-020719	300.0 & 9056A	T	5 mL					
240-107850-H-2	MRC-MW156A-020719	300.0 & 9056A	T	5 mL					
240-107850-H-3	MRC-MW144B-020719	300.0 & 9056A	T	5 mL					
240-107850-H-4	MRC-MW146B-020719	300.0 & 9056A	T	5 mL					
240-107850-H-4	MRC-MW146B-020719	300.0 & 9056A	T	5 mL					
240-107850-H-5	MRC-MW147B-020719	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICLCS 00669			
ICV 240-339523/10		9056A		5 mL	1.0 mL	5 mL			
ICB 240-339523/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367774 Batch Start Date: 02/12/19 13:08 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107850-H-2	MRC-MW156A-020719	300.0 & 9056A	T	5 mL					
240-107850-H-2	MRC-MW156A-020719	300.0 & 9056A	T	5 mL					
240-107850-H-3	MRC-MW144B-020719	300.0 & 9056A	T	5 mL					
240-107850-H-4	MRC-MW146B-020719	300.0 & 9056A	T	5 mL					
240-107850-H-4	MRC-MW146B-020719	300.0 & 9056A	T	5 mL					
240-107850-H-5	MRC-MW147B-020719	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367774 Batch Start Date: 02/12/19 13:08 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00861	WCICLCS 00696			
CCV 240-367774/1		9056A		5 mL	5 mL				
CCB 240-367774/2		9056A		5 mL					
MB 240-367774/3		9056A		5 mL					
LCS 240-367774/4		9056A		5 mL		5 mL			
CCV 240-367774/13		9056A		5 mL	5 mL				
CCB 240-367774/14		9056A		5 mL					
CCV 240-367774/25		9056A		5 mL	5 mL				
CCB 240-367774/26		9056A		5 mL					
CCV 240-367774/37		9056A		5 mL	5 mL				
CCB 240-367774/38		9056A		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575925/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575925/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575925/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575925/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575925/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575925/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575925/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
240-107850-F-2	MRC-MW156A-020719	SM 4500 NO3 F	T	50 mL	50 mL				7.38
240-107850-F-3	MRC-MW144B-020719	SM 4500 NO3 F	T	50 mL	50 mL				7.82
CCV 490-575925/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/21		SM 4500 NO3 F		50 mL	50 mL				
240-107850-F-5	MRC-MW147B-020719	SM 4500 NO3 F	T	50 mL	50 mL				5.7
240-107850-F-4	MRC-MW146B-020719	SM 4500 NO3 F	T	50 mL	50 mL				5.22
CCV 490-575925/32		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/33		SM 4500 NO3 F		50 mL	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Batch Notes	
Acid used for pH adjustment	4547067
Base used for pH adjustment	4273883
Batch Comment	cent tubes 809161; pH probe VVZ10915; pH meter AB92340683
Buffer Reagent ID	4832283
Carrier Identification	DI water
Color Reagent ID	4832299
Filter ID	180611314
Pipette/Syringe/Dispenser ID	26061004, 26121028

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **APRIL 11, 2019**

FROM: **J. KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **DATA VALIDATION – VOC, OVG, PCB, METALS, MISC**
MRC BLOCK E/F MASS DISCHARGE
SAMPLE DELIVERY GROUP (SDG) 240-107924-1

SAMPLES: **2 / Aqueous – VOC, METALS, MISC**

MRC-MW149B-020819 MRC-MW150B-020819

1 / Aqueous – VOC

TB-020819

Overview

The sample set for MRC Block E/F Mass Discharge, SDG 240-107924-1, consisted of two (2) aqueous samples and one (1) aqueous trip blank sample. The two (2) aqueous sample and the one (1) aqueous trip blank sample were analyzed for volatile organic compounds (VOCs) as listed above. The two (2) aqueous samples were also analyzed for metals, and the miscellaneous analyses alkalinity, bromide, hardness as CaCO3, nitrite/nitrate-N, salinity, sulfate, and total suspended solids (TSS), as listed above. No field duplicate sample pairs were included in the sample delivery group (SDG).

The samples were collected by Tetra Tech on February 8, 2019 and analyzed by TestAmerica Laboratories Inc., North Canton, Nashville, and Pittsburgh, for all analyses. All analyses were conducted in accordance with EPA SW-846 Methods 8260C for VOCs, 6020A (ICP/MS) for metals, 6010C (ICP) for metals, 9056A for anions, Standard Method (SM) 2320B for total alkalinity, SM 2340C for total hardness, SM 2540C for total dissolved solids (TSS), SM 2520B for salinity (electrical conductivity), SM 4500 NO3 F for nitrate-N, and MCAWW Method 300.0 for anions, analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, blank results, blank spike/blank spike duplicate results, matrix spike/matrix spike duplicate results, surrogate spike recoveries, internal standard recoveries, chromatographic resolution, ICP interference results, ICP serial dilution results, analyte identification, analyte quantitation, and detection limits. Areas of concern are listed below.

Major Problems

- The laboratory narrative indicated that the samples were acid preserved for the VOC analysis. The VOC analyte 2-chlororethyl vinyl ether is known to rapidly deteriorate under acidic conditions. All sample non-detected results for 2-chloroethyl vinyl ether were qualified rejected, (UR), due to the laboratory narrative indicating that the samples were acid preserved.

Minor Problems

- Detected results reported below the quantitation limit but above the method detection limit (MDL) were qualified as estimated, (J).

- The VOC continuing calibration verification (CCV) percent differences (%Ds) were greater than the 20% quality control (QC) limit for carbon disulfide, tert-butyl alcohol, vinyl acetate, 2-chloroethyl vinyl ether, cis-1,3-dichloropropene, 4-methyl-2-pentanone, trans-1,3-dichloropropene, 2-hexanone, chlorodibromomethane, bromoform, 1,1,2,2-tetrachloroethane, and tert-amyl methyl ether for instrument A3UX15 on 02/11/19 @ 10:51 & @ 11:35 affecting VOC sample TB-020819. The sample TB-020819 had non-detected results for the aforementioned analytes which were qualified estimated, (UJ), with the exception of the 2-chloroethyl vinyl ether results which were rejected for the sample preservation issue.

- The VOC CCV %Ds were greater than the 20% quality control (QC) limit for carbon disulfide, methylene chloride, 2-chloroethyl vinyl ether, trans-1,3-dichloropropene, bromoform, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, 1,2,3-trichlorobenzene, ethyl tert-butyl ether, and tert-amyl methyl ether for instrument A3UX15 on 02/13/19 @ 11:48 & @ 12:32 affecting VOC samples MRC-MW149B-020819 and MRC-MW150B-020819. The samples detected and non-detected results for the aforementioned analytes were qualified estimated, (J) and (UJ), respectively, with the exception of the 2-chloroethyl vinyl ether results which were rejected for the sample preservation issue.

Notes

Sample MRC-MW150B-020819 was diluted 2.5X for VOCs resulting in elevated levels reported for non-detected VOC analytes.

The VOC methylene chloride was detected in the method blank MB 240-367892/6. The associated SDG samples had non-detected results for methylene chloride and no action was taken.

Nitrate-Nitrite as N was detected in a continuing calibration blank, CCB @ 13:13 on 02/17/19, at 0.0463 mg/l <RL, affecting both SDG samples analyzed for nitrate-nitrite as N. No action was taken as the samples nitrate-nitrite as N concentrations were >RL.

Samples MRC-MW149B-020819 and MRC-MW150B-020819 were analyzed for iron and manganese using both Method 6010C and 6020A. No explanation was given in the laboratory narrative.

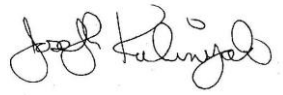
Non-detected sample analyte results were reported to the Method Detection Limit.

EXECUTIVE SUMMARY

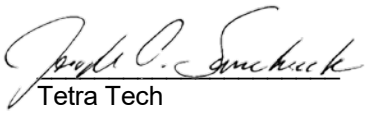
Laboratory Performance Issues: VOC results were qualified for CCV %D QC limit exceedances.

Other Factors Affecting Data Quality: Detected results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J). The sample and trip blank sample non-detected VOC 2-chlororethyl vinyl ether results were rejected due to sample acidification as noted in the laboratory narrative.

The data for these analyses were reviewed with reference to the USEPA National Functional Guidelines for Superfund Organic Methods Data Review (January 2017) and USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review (January 2017).



Tetra Tech
Joseph Kalinyak
Data Validator/Environmental Scientist



Tetra Tech
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08784	NSAMPLE	MRC-MW149B-020819			MRC-MW150B-020819			TB-020819		
SDG: 240-107924-1	LAB_ID	240-107924-2			240-107924-3			240-107924-1		
FRACTION: OV	SAMP_DATE	2/8/2019			2/8/2019			2/8/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U		0.35	U		0.14	UJ	C
1,1,1-TRICHLOROETHANE		0.24	U		0.6	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	U		0.33	U		0.13	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U		1	U		0.41	U	
1,1-DICHLOROETHANE		0.17	U		0.43	U		0.17	U	
1,1-DICHLOROETHENE		0.19	U		0.48	U		0.19	U	
1,1-DICHLOROPROPENE		0.14	U		0.35	U		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	UJ	C	1.4	UJ	C	0.54	U	
1,2,3-TRICHLOROPROPANE		0.24	U		0.6	U		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	U		0.35	U		0.14	U	
1,2,4-TRICHLOROBENZENE		0.26	UJ	C	0.65	UJ	C	0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U		0.18	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	UJ	C	2.3	UJ	C	0.91	UJ	C
1,2-DIBROMOETHANE		0.12	U		0.3	U		0.12	U	
1,2-DICHLOROBENZENE		0.15	U		0.38	U		0.15	U	
1,2-DICHLOROETHANE		0.21	U		0.53	U		0.21	U	
1,2-DICHLOROPROPANE		0.15	U		0.38	U		0.15	U	
1,3-DICHLOROBENZENE		0.15	U		0.38	U		0.15	U	
1,3-DICHLOROPROPANE		0.21	U		0.53	U		0.21	U	
1,4-DICHLOROBENZENE		0.16	U		0.4	U		0.16	U	
2,2-DICHLOROPROPANE		0.31	U		0.78	U		0.31	U	
2-BUTANONE		1.2	U		2.9	U		1.2	U	
2-CHLOROETHYL VINYL ETHER		0.26	UR	M	0.65	UR	M	0.26	UR	M
2-CHLOROTOLUENE		0.15	U		0.38	U		0.15	U	
2-HEXANONE		0.54	U		1.4	U		0.54	UJ	C
4-CHLOROTOLUENE		0.09	U		0.23	U		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U		0.33	U		0.13	U	
4-METHYL-2-PENTANONE		0.42	U		1.1	U		0.42	UJ	C
ACETONE		5.4	U		14	U		5.4	U	
BENZENE		0.13	U		0.33	U		0.13	U	
BROMOBENZENE		0.12	U		0.3	U		0.12	U	
BROMOCHLOROMETHANE		0.14	U		0.35	U		0.14	U	
BROMODICHLOROMETHANE		0.17	U		0.43	U		0.17	U	
BROMOFORM		0.76	UJ	C	1.9	UJ	C	0.76	UJ	C
BROMOMETHANE		0.42	U		1.1	U		0.42	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW149B-020819			MRC-MW150B-020819			TB-020819		
SDG: 240-107924-1	LAB_ID	240-107924-2			240-107924-3			240-107924-1		
FRACTION: OV	SAMP_DATE	2/8/2019			2/8/2019			2/8/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.62	J	CP	0.7	UJ	C	0.28	UJ	C
CARBON TETRACHLORIDE		0.26	U		0.65	U		0.26	U	
CHLOROBENZENE		0.14	U		0.35	U		0.14	U	
CHLORODIBROMOMETHANE		0.39	U		0.98	U		0.39	UJ	C
CHLOROETHANE		0.83	U		2.1	U		0.83	U	
CHLOROFORM		0.16	J	P	0.33	U		0.13	U	
CHLOROMETHANE		0.2	U		0.5	U		0.2	U	
CIS-1,2-DICHLOROETHENE		2.8			47			0.16	U	
CIS-1,3-DICHLOROPROPENE		0.61	U		1.5	U		0.61	UJ	C
DIBROMOMETHANE		0.09	U		0.23	U		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	U		0.88	U		0.35	U	
DIISOPROPYL ETHER		0.17	U		0.43	U		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	UJ	C	0.38	UJ	C	0.15	U	
ETHYLBENZENE		0.11	U		0.28	U		0.11	U	
HEXACHLOROBUTADIENE		0.83	UJ	C	2.1	UJ	C	0.83	U	
ISOPROPYLBENZENE		0.09	U		0.23	U		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U		0.18	U		0.07	U	
METHYLENE CHLORIDE		2.6	UJ	C	6.6	UJ	C	2.6	U	
NAPHTHALENE		0.32	UJ	C	0.8	UJ	C	0.32	U	
N-BUTYLBENZENE		0.14	U		0.35	U		0.14	U	
N-PROPYLBENZENE		0.15	U		0.38	U		0.15	U	
SEC-BUTYLBENZENE		0.13	U		0.33	U		0.13	U	
STYRENE		0.1	U		0.25	U		0.1	U	
TERT-AMYL METHYL ETHER		0.11	UJ	C	0.28	UJ	C	0.11	UJ	C
TERT-BUTYLBENZENE		0.14	U		0.35	U		0.14	U	
TERTIARY-BUTYL ALCOHOL		1.7	U		4.2	U		1.7	UJ	C
TETRACHLOROETHENE		0.15	U		0.38	U		0.15	U	
TOLUENE		0.14	U		0.35	U		0.14	U	
TOTAL XYLENES		0.15	U		0.38	U		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.48	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.67	UJ	C	1.7	UJ	C	0.67	UJ	C
TRICHLOROETHENE		4.3			79			0.1	U	
TRICHLOROFLUOROMETHANE		0.45	U		1.1	U		0.45	U	
VINYL ACETATE		0.19	U		0.48	U		0.19	UJ	C
VINYL CHLORIDE		0.2	U		1.8	J	P	0.2	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW149B-020819			MRC-MW150B-020819		
SDG: 240-107924-1	LAB_ID	240-107924-2			240-107924-3		
FRACTION: M	SAMP_DATE	2/8/2019			2/8/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		1700			150		
ANTIMONY		0.57	U		0.57	U	
ARSENIC		0.75	U		0.75	U	
BARIUM		63			70		
BERYLLIUM		8.1			1.3		
CADMIUM		0.27	J	P	0.21	U	
CALCIUM		16000			7100		
CHROMIUM		2.8			1.4	J	P
COBALT		33			20		
COPPER		84			36		
IRON		1600			1400		
LEAD		0.45	U		0.45	U	
MAGNESIUM		8400			3400		
MANGANESE		190			210		
NICKEL		63			20		
POTASSIUM		2800			4700		
SELENIUM		0.89	U		0.89	U	
SILVER		0.053	U		0.053	U	
SODIUM		170000			12000		
THALLIUM		0.2	J	P	0.2	U	
VANADIUM		0.82	U		0.82	U	
ZINC		250			70		

PROJ_NO: 08784	NSAMPLE	MRC-MW149B-020819						MRC-MW150B-020819					
SDG: 240-107924-1	LAB_ID	240-107924-2						240-107924-3					
FRACTION: MISC	SAMP_DATE	2/8/2019						2/8/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		2.6	U					9					
BROMIDE		0.097	J	P				0.08	J	P			
HARDNESS AS CACO3		100						40					
NITRITE/NITRATE-N		0.83						0.46					
SALINITY					2	U					2	U	
SULFATE		51						21					
TOTAL DISSOLVED SOLIDS		710						120					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: TB-020819 | Lab Sample ID: 240-107924-1

Matrix: Water | Lab File ID: UXC8784.D

Analysis Method: 8260C | Date Collected: 02/08/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 19:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: TB-020819 | Lab Sample ID: 240-107924-1

Matrix: Water | Lab File ID: UXC8784.D

Analysis Method: 8260C | Date Collected: 02/08/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 19:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: TB-020819 | Lab Sample ID: 240-107924-1

Matrix: Water | Lab File ID: UXC8784.D

Analysis Method: 8260C | Date Collected: 02/08/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 19:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	87		70-123
1868-53-7	Dibromofluoromethane (Surr)	90		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: MRC-MW149B-020819 | Lab Sample ID: 240-107924-2

Matrix: Water | Lab File ID: UXC8813.D

Analysis Method: 8260C | Date Collected: 02/08/2019 09:25

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 14:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.62	J	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.16	J	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: MRC-MW149B-020819 | Lab Sample ID: 240-107924-2

Matrix: Water | Lab File ID: UXC8813.D

Analysis Method: 8260C | Date Collected: 02/08/2019 09:25

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 14:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	2.8		1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	4.3		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: MRC-MW149B-020819 | Lab Sample ID: 240-107924-2

Matrix: Water | Lab File ID: UXC8813.D

Analysis Method: 8260C | Date Collected: 02/08/2019 09:25

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 14:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	88		70-123
1868-53-7	Dibromofluoromethane (Surr)	92		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: MRC-MW150B-020819 | Lab Sample ID: 240-107924-3

Matrix: Water | Lab File ID: UXC8820.D

Analysis Method: 8260C | Date Collected: 02/08/2019 11:10

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 17:54

Soil Aliquot Vol: | Dilution Factor: 2.5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.35	U	2.5	0.35
71-55-6	1,1,1-Trichloroethane	0.60	U	2.5	0.60
79-34-5	1,1,2,2-Tetrachloroethane	0.33	U	2.5	0.33
76-13-1	1,1,2-Trichlorotrifluoroethane	1.0	U	2.5	1.0
75-34-3	1,1-Dichloroethane	0.43	U	2.5	0.43
75-35-4	1,1-Dichloroethene	0.48	U	2.5	0.48
563-58-6	1,1-Dichloropropene	0.35	U	2.5	0.35
87-61-6	1,2,3-Trichlorobenzene	1.4	U	2.5	1.4
96-18-4	1,2,3-Trichloropropane	0.60	U	2.5	0.60
526-73-8	1,2,3-Trimethylbenzene	0.35	U	13	0.35
120-82-1	1,2,4-Trichlorobenzene	0.65	U	2.5	0.65
95-63-6	1,2,4-Trimethylbenzene	0.18	U	2.5	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	2.3	U	5.0	2.3
95-50-1	1,2-Dichlorobenzene	0.38	U	2.5	0.38
107-06-2	1,2-Dichloroethane	0.53	U	2.5	0.53
78-87-5	1,2-Dichloropropane	0.38	U	2.5	0.38
541-73-1	1,3-Dichlorobenzene	0.38	U	2.5	0.38
142-28-9	1,3-Dichloropropane	0.53	U	2.5	0.53
106-46-7	1,4-Dichlorobenzene	0.40	U	2.5	0.40
594-20-7	2,2-Dichloropropane	0.78	U	2.5	0.78
110-75-8	2-Chloroethyl vinyl ether	0.65	U	25	0.65
95-49-8	2-Chlorotoluene	0.38	U	2.5	0.38
591-78-6	2-Hexanone	1.4	U	25	1.4
108-86-1	Bromobenzene	0.30	U	2.5	0.30
74-97-5	Bromochloromethane	0.35	U	2.5	0.35
106-43-4	4-Chlorotoluene	0.23	U	2.5	0.23
99-87-6	4-Isopropyltoluene	0.33	U	2.5	0.33
67-64-1	Acetone	14	U	25	14
71-43-2	Benzene	0.33	U	2.5	0.33
75-25-2	Bromoform	1.9	U	2.5	1.9
74-83-9	Bromomethane	1.1	U	2.5	1.1
75-15-0	Carbon disulfide	0.70	U	2.5	0.70
56-23-5	Carbon tetrachloride	0.65	U	2.5	0.65
108-90-7	Chlorobenzene	0.35	U	2.5	0.35
75-00-3	Chloroethane	2.1	U	2.5	2.1
67-66-3	Chloroform	0.33	U	2.5	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: MRC-MW150B-020819 | Lab Sample ID: 240-107924-3

Matrix: Water | Lab File ID: UXC8820.D

Analysis Method: 8260C | Date Collected: 02/08/2019 11:10

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 17:54

Soil Aliquot Vol: | Dilution Factor: 2.5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.50	U	2.5	0.50
156-59-2	cis-1,2-Dichloroethene	47		2.5	0.40
10061-01-5	cis-1,3-Dichloropropene	1.5	U	2.5	1.5
87-68-3	Hexachlorobutadiene	2.1	U	2.5	2.1
74-95-3	Dibromomethane	0.23	U	2.5	0.23
75-27-4	Bromodichloromethane	0.43	U	2.5	0.43
75-71-8	Dichlorodifluoromethane	0.88	U	2.5	0.88
100-41-4	Ethylbenzene	0.28	U	2.5	0.28
106-93-4	1,2-Dibromoethane	0.30	U	2.5	0.30
108-20-3	Diisopropyl ether	0.43	U	25	0.43
91-20-3	Naphthalene	0.80	U	2.5	0.80
104-51-8	n-Butylbenzene	0.35	U	2.5	0.35
98-82-8	Isopropylbenzene	0.23	U	2.5	0.23
103-65-1	N-Propylbenzene	0.38	U	2.5	0.38
78-93-3	2-Butanone (MEK)	2.9	U	25	2.9
108-10-1	4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1
135-98-8	sec-Butylbenzene	0.33	U	2.5	0.33
1634-04-4	Methyl tert-butyl ether	0.18	U	2.5	0.18
994-05-8	Tert-amyl methyl ether	0.28	U	13	0.28
75-09-2	Methylene Chloride	6.6	U	13	6.6
100-42-5	Styrene	0.25	U	2.5	0.25
637-92-3	Ethyl tert-butyl ether	0.38	U	13	0.38
98-06-6	tert-Butylbenzene	0.35	U	2.5	0.35
127-18-4	Tetrachloroethene	0.38	U	2.5	0.38
108-88-3	Toluene	0.35	U	2.5	0.35
156-60-5	trans-1,2-Dichloroethene	0.48	U	2.5	0.48
10061-02-6	trans-1,3-Dichloropropene	1.7	U	2.5	1.7
79-01-6	Trichloroethene	79		2.5	0.25
75-69-4	Trichlorofluoromethane	1.1	U	2.5	1.1
108-05-4	Vinyl acetate	0.48	U	5.0	0.48
75-01-4	Vinyl chloride	1.8	J	2.5	0.50
75-65-0	tert-Butyl alcohol	4.2	U	130	4.2
1330-20-7	Xylenes, Total	0.38	U	5.0	0.38
124-48-1	Chlorodibromomethane	0.98	U	2.5	0.98

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Client Sample ID: MRC-MW150B-020819 Lab Sample ID: 240-107924-3

Matrix: Water Lab File ID: UXC8820.D

Analysis Method: 8260C Date Collected: 02/08/2019 11:10

Sample wt/vol: 5(mL) Date Analyzed: 02/13/2019 17:54

Soil Aliquot Vol: Dilution Factor: 2.5

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367892 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	85		70-123
1868-53-7	Dibromofluoromethane (Surr)	92		75-128

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW149B-020819 Lab Sample ID: 240-107924-2

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 09:25

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	1600	200	26	ug/L			1	6010C
7439-96-5	Manganese	190	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	1700	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	63	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	8.1	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.27	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	33	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.8	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	84	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	1600	100	47	ug/L			1	6020A
7439-96-5	Manganese	180	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	63	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	J		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	250	20	15	ug/L			1	6020A
7440-70-2	Calcium	16000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	2800	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	8400	1000	200	ug/L			1	6020A
7440-23-5	Sodium	170000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW150B-020819 Lab Sample ID: 240-107924-3

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 11:10

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	1400	200	26	ug/L			1	6010C
7439-96-5	Manganese	210	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	150	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	70	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.3	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	20	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	1.4	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	36	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	1300	100	47	ug/L			1	6020A
7439-96-5	Manganese	190	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	20	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	70	20	15	ug/L			1	6020A
7440-70-2	Calcium	7100	1000	580	ug/L			1	6020A
7440-09-7	Potassium	4700	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	3400	1000	200	ug/L			1	6020A
7440-23-5	Sodium	12000	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW149B-020819 Lab Sample ID: 240-107924-2

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 09:25

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	100	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	2.6	5.0	2.6	mg/L	U		1	2320B-2011
	Total Dissolved Solids	710	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.097	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	51	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW150B-020819 Lab Sample ID: 240-107924-3

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 11:10

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	40	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	9.0	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	120	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.080	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	21	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW149B-020819 Lab Sample ID: 240-107924-2

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 09:25

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.83	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW150B-020819 Lab Sample ID: 240-107924-3

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 11:10

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.46	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW149B-020819 Lab Sample ID: 240-107924-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 09:25

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW150B-020819 Lab Sample ID: 240-107924-3

Lab Name: TestAmerica Pittsburgh Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 11:10

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

APPENDIX C

SUPPORT DOCUMENTATION

1.0/1.0

North Canton
4101 Shuffel Street, N. W.

North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

Baltimore #201

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Mike Martin	Site Contact: Walt Pryor	Date: 2/8/19	COC No:
20251 Century Blvd, Suite 200	Analysis Turnaround Time			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W)			
(301) 528-3021 Phone	TAT if different from Below: STANDARD TAT			SDG No.
(301) 528-3000 FAX	☐ 2 weeks			
Project Name: MRC BLOCK E/F MASS DISCHARGE	☐ 1 week			
Site: MRC BLOCK E	☐ 2 days			Sampler: Walt Pryor
PO # 112IC08784	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (SW0846 8260C)	Total Metals/Hardness (6020A, 2340C)	Sulfate, Nitrates, TDS (9056A, 4500-NO3F, 2540C	Bromide (300)	Iron and Manganese (6010C	Alkalinity (SM 2320B)	Salinity (2520B)	PCBs (680)	Sample Specific Notes:
TB-020819	2/8/19	0000	GRAB	WATER	2		x								
MRC-MW149B-020719	↓	0925	↓	↓	9		x	x	x	x	x	x	x	0	No PCBs
MRC-MW150B-020819	↓	1110	↓	↓	9		x	x	x	x	x	x	x	0	No PCBs

2/8/19



Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other	2	4	6	1	4	1	1	1

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: Block E/F Mass discharge well sampling

Relinquished by:	Company: Tetra Tech	Date/Time: 2/8/19	Received by:	Company: TA	Date/Time: 2/8/19 1306
Relinquished by:	Company: TA	Date/Time: 2/8/19 1700	Received by:	Company: TA	Date/Time: 2/8/19 940
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 2, dated 03/06/2012

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 107924**
Canton Facility

Client MRC Site Name _____ Cooler unpacked by:

Cooler Received on 2/9/16 Opened on 2/9/16

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # NA Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 1.0 °C Corrected Cooler Temp. 1.0 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____.

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW149B-020819	240-107924-F-2	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW149B-020819	240-107924-G-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW149B-020819	240-107924-I-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW150B-020819	240-107924-F-3	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW150B-020819	240-107924-G-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW150B-020819	240-107924-I-3	Plastic 500ml - with Nitric Acid	<2	_____	_____

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass Discharge

Report Number: 240-107924-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The 4500NO3-F Nitrate Nitrite as N analysis was performed at the TestAmerica Nashville laboratory. The 9050A Specific Conductance and the 2520B Salinity analyses were performed at the TestAmerica Pittsburgh laboratory.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 2/9/2019 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.0º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-020819 (240-107924-1), MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/11/2019 and 02/13/2019.

Methylene Chloride was detected in method blank MB 240-367892/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

tert-Butyl alcohol failed the recovery criteria low for the MS of sample 240-107850-5 in batch 240-367892.

tert-Butyl alcohol failed the recovery criteria low for the MSD of sample 240-107850-5 in batch 240-367892.
1,1,2-Trichlorotrifluoroethane, Dichlorodifluoromethane and Trichlorofluoromethane exceeded the RPD limit.

Refer to the QC report for details.

Sample MRC-MW150B-020819 (240-107924-3)[2.5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260C: The continuing calibration verification (CCV) for analytical batch 307509 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required.

TB-020819 (240-107924-1)

Method(s) 8260C: The preservative used in the sample containers received is not compatible with the analytes requested. 2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample.

TB-020819 (240-107924-1)

Method(s) 8260C: The continuing calibration verification (CCV) for analytical batch 367892 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required.

MRC-MW149B-020819 (240-107924-2), MRC-MW150B-020819 (240-107924-3) and (240-107850-B-5)

Method(s) 8260C: The preservative used in the sample containers received is not compatible with the analytes requested. 2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample.

MRC-MW149B-020819 (240-107924-2), MRC-MW150B-020819 (240-107924-3) and (240-107850-B-5)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/11/2019 and analyzed on 02/12/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 02/11/2019 and analyzed on 02/12/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 02/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 02/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 02/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for anions in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 02/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for Salinity in accordance with SM 2520B. The samples were analyzed on 02/27/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE

Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 02/17/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107924-1

GC/MS VOA

Analysis Batch: 367509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-1	TB-020819	Total/NA	Water	8260C	
MB 240-367509/6	Method Blank	Total/NA	Water	8260C	
LCS 240-367509/4	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 367892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total/NA	Water	8260C	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	8260C	
MB 240-367892/6	Method Blank	Total/NA	Water	8260C	
LCS 240-367892/4	Lab Control Sample	Total/NA	Water	8260C	

Metals

Prep Batch: 367490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total Recoverable	Water	3005A	
240-107924-3	MRC-MW150B-020819	Total Recoverable	Water	3005A	
MB 240-367490/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-367490/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-367490/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 367822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total Recoverable	Water	6020A	367490
240-107924-3	MRC-MW150B-020819	Total Recoverable	Water	6020A	367490
MB 240-367490/1-A	Method Blank	Total Recoverable	Water	6020A	367490
LCS 240-367490/3-A	Lab Control Sample	Total Recoverable	Water	6020A	367490

Analysis Batch: 367825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total Recoverable	Water	6010C	367490
240-107924-3	MRC-MW150B-020819	Total Recoverable	Water	6010C	367490
MB 240-367490/1-A	Method Blank	Total Recoverable	Water	6010C	367490
LCS 240-367490/2-A	Lab Control Sample	Total Recoverable	Water	6010C	367490

General Chemistry

Analysis Batch: 271440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total/NA	Water	SM 2520B	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	SM 2520B	
MB 180-271440/1	Method Blank	Total/NA	Water	SM 2520B	

Analysis Batch: 367926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total/NA	Water	2340C-2011	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	2340C-2011	
MB 240-367926/1	Method Blank	Total/NA	Water	2340C-2011	
LCS 240-367926/2	Lab Control Sample	Total/NA	Water	2340C-2011	

General Chemistry (Continued)

Analysis Batch: 368035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total/NA	Water	2540 C-2011	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	2540 C-2011	
MB 240-368035/1	Method Blank	Total/NA	Water	2540 C-2011	
LCS 240-368035/2	Lab Control Sample	Total/NA	Water	2540 C-2011	

Analysis Batch: 368146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total/NA	Water	300.0	
240-107924-2	MRC-MW149B-020819	Total/NA	Water	9056A	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	300.0	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	9056A	
MB 240-368146/3	Method Blank	Total/NA	Water	9056A	
LCS 240-368146/4	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 368201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total/NA	Water	2320B-2011	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	2320B-2011	
MB 240-368201/30	Method Blank	Total/NA	Water	2320B-2011	
LCS 240-368201/29	Lab Control Sample	Total/NA	Water	2320B-2011	

Analysis Batch: 575925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total/NA	Water	SM 4500 NO3 F	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	SM 4500 NO3 F	
MB 490-575925/6	Method Blank	Total/NA	Water	SM 4500 NO3 F	
LCS 490-575925/7	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107924-1

Client Sample ID: TB-020819
Date Collected: 02/08/19 00:00
Date Received: 02/09/19 09:40

Lab Sample ID: 240-107924-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	367509	02/11/19 19:03	LEE	TAL CAN

Client Sample ID: MRC-MW149B-020819
Date Collected: 02/08/19 09:25
Date Received: 02/09/19 09:40

Lab Sample ID: 240-107924-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	367892	02/13/19 14:21	LEE	TAL CAN
Total Recoverable	Prep	3005A			367490	02/11/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6010C		1	367825	02/12/19 18:44	WKD	TAL CAN
Total Recoverable	Prep	3005A			367490	02/11/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6020A		1	367822	02/12/19 20:42	RKT	TAL CAN
Total/NA	Analysis	2320B-2011		1	368201	02/14/19 15:27	MAC	TAL CAN
Total/NA	Analysis	2340C-2011		1	367926	02/13/19 15:29	JMB	TAL CAN
Total/NA	Analysis	2540 C-2011		1	368035	02/14/19 09:55	AMT	TAL CAN
Total/NA	Analysis	300.0		1	368146	02/14/19 22:30	JWW	TAL CAN
Total/NA	Analysis	9056A		1	368146	02/14/19 22:30	JWW	TAL CAN
Total/NA	Analysis	SM 2520B		1	271440	02/27/19 08:00	CLL	TAL PIT
Total/NA	Analysis	SM 4500 NO3 F		1	575925	02/17/19 13:17	MSP	TAL NSH

Client Sample ID: MRC-MW150B-020819
Date Collected: 02/08/19 11:10
Date Received: 02/09/19 09:40

Lab Sample ID: 240-107924-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2.5	367892	02/13/19 17:54	LEE	TAL CAN
Total Recoverable	Prep	3005A			367490	02/11/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6010C		1	367825	02/12/19 18:48	WKD	TAL CAN
Total Recoverable	Prep	3005A			367490	02/11/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6020A		1	367822	02/12/19 20:45	RKT	TAL CAN
Total/NA	Analysis	2320B-2011		1	368201	02/14/19 15:32	MAC	TAL CAN
Total/NA	Analysis	2340C-2011		1	367926	02/13/19 15:34	JMB	TAL CAN
Total/NA	Analysis	2540 C-2011		1	368035	02/14/19 09:55	AMT	TAL CAN
Total/NA	Analysis	300.0		1	368146	02/14/19 23:10	JWW	TAL CAN
Total/NA	Analysis	9056A		1	368146	02/14/19 23:10	JWW	TAL CAN
Total/NA	Analysis	SM 2520B		1	271440	02/27/19 08:00	CLL	TAL PIT
Total/NA	Analysis	SM 4500 NO3 F		1	575925	02/17/19 13:18	MSP	TAL NSH

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-107924-1
Project/Site: MRC Block E/F Mass Discharge

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SM = "Standard Methods For The Examination Of Water And Wastewater"
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107924-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107924-1	TB-020819	Water	02/08/19 00:00	02/09/19 09:40
240-107924-2	MRC-MW149B-020819	Water	02/08/19 09:25	02/09/19 09:40
240-107924-3	MRC-MW150B-020819	Water	02/08/19 11:10	02/09/19 09:40

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab File ID: BFB0211.D BFB Injection Date: 02/11/2019

Instrument ID: A3UX15 BFB Injection Time: 10:27

Analysis Batch No.: 367509

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.1	
75	30.0 - 60.0 % of mass 95	50.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.7	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	101.9	
175	5.0 - 9.0 % of mass 174	6.3	(6.2) 1
176	95.0 - 101.0 % of mass 174	100.4	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367509/2	UXC8765.D	02/11/2019	10:51
	LCS 240-367509/4	UXC8766.D	02/11/2019	11:13
	CCV 240-367509/3	UXC8767.D	02/11/2019	11:35
	MB 240-367509/6	UXC8770.D	02/11/2019	12:40
	240-107725-C-2 MS	UXC8773.D	02/11/2019	13:46
	240-107725-C-2 MSD	UXC8774.D	02/11/2019	14:08
TB-020819	240-107924-1	UXC8784.D	02/11/2019	19:03

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3306	0.1000	0.0108	0.0100	7.6	20.0
Chloromethane	Ave	0.3135	0.3315	0.1000	0.0106	0.0100	5.7	20.0
Butadiene	Ave	0.3794	0.3395		0.00895	0.0100	-10.5	20.0
Vinyl chloride	Ave	0.2885	0.2932	0.1000	0.0102	0.0100	1.6	20.0
Bromomethane	Ave	0.2308	0.2097	0.0500	0.00908	0.0100	-9.2	20.0
Chloroethane	Ave	0.2041	0.1903	0.0500	0.00932	0.0100	-6.8	20.0
Dichlorofluoromethane	Ave	0.5102	0.4772		0.00935	0.0100	-6.5	20.0
Trichlorofluoromethane	Ave	0.4337	0.4369	0.1000	0.0101	0.0100	0.7	20.0
Ethyl ether	Ave	0.2310	0.2152		0.00932	0.0100	-6.8	20.0
Acrolein	Ave	0.0317	0.0415		0.0654	0.0500	30.8	50.0
1,1-Dichloroethene	Ave	0.3005	0.2630	0.1000	0.00875	0.0100	-12.5	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2317	0.0500	0.00939	0.0100	-6.1	20.0
Acetone	Lin1		0.0215	0.0100	0.0175	0.0200	-12.3	50.0
Iodomethane	Ave	0.4675	0.4437		0.00949	0.0100	-5.1	20.0
Carbon disulfide	Ave	0.7741	0.6041	0.1000	0.00780	0.0100	-22.0*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1568		0.00923	0.0100	-7.7	20.0
Methyl acetate	Ave	0.2050	0.1752	0.1000	0.0171	0.0200	-14.6	20.0
Methylene Chloride	Lin1		0.2911	0.1000	0.00925	0.0100	-7.5	50.0
tert-Butyl alcohol	Ave	0.0203	0.0152		0.0751	0.100	-24.9	50.0
Acrylonitrile	Ave	0.0962	0.0865		0.0899	0.100	-10.1	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6912	0.1000	0.00882	0.0100	-11.8	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2769	0.1000	0.00990	0.0100	-1.0	20.0
Hexane	Ave	0.0586	0.0490		0.00835	0.0100	-16.5	20.0
1,1-Dichloroethane	Ave	0.4517	0.4471	0.2000	0.00990	0.0100	-1.0	20.0
Vinyl acetate	Ave	0.5198	0.3452		0.00664	0.0100	-33.6	50.0
2,2-Dichloropropane	Ave	0.0624	0.0620		0.00994	0.0100	-0.6	20.0
2-Butanone (MEK)	Ave	0.0333	0.0269	0.0100	0.0162	0.0200	-19.0	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3120	0.1000	0.0101	0.0100	1.4	20.0
Bromochloromethane	Ave	0.1531	0.1522		0.00994	0.0100	-0.6	20.0
Tetrahydrofuran	Ave	0.0828	0.0641		0.0155	0.0200	-22.5*	20.0
Chloroform	Ave	0.4606	0.4672	0.2000	0.0101	0.0100	1.4	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3486	0.1000	0.00983	0.0100	-1.7	20.0
Cyclohexane	Ave	0.3993	0.3736	0.1000	0.00936	0.0100	-6.4	20.0
1,1-Dichloropropene	Ave	0.3748	0.3470		0.00926	0.0100	-7.4	20.0
Carbon tetrachloride	Ave	0.3441	0.3064	0.1000	0.00891	0.0100	-10.9	20.0
Isobutyl alcohol	Ave	0.0077	0.0067		0.216	0.250	-13.5	20.0
Benzene	Ave	1.116	1.108	0.5000	0.00992	0.0100	-0.8	20.0
1,2-Dichloroethane	Ave	0.3820	0.3654	0.1000	0.00957	0.0100	-4.3	20.0
n-Heptane	Ave	0.0532	0.0432		0.00811	0.0100	-18.9	20.0
Trichloroethene	Ave	0.3240	0.3113	0.1500	0.00961	0.0100	-3.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3263	0.1000	0.00926	0.0100	-7.4	20.0
1,2-Dichloropropane	Ave	0.2590	0.2427	0.1000	0.00937	0.0100	-6.3	20.0
1,4-Dioxane	Ave	0.0020	0.0017		0.174	0.200	-13.1	50.0
Dibromomethane	Ave	0.1717	0.1548		0.00901	0.0100	-9.9	20.0
Bromodichloromethane	Ave	0.3410	0.2813	0.1500	0.00825	0.0100	-17.5	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1175		0.0135	0.0200	-32.7*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3121	0.1500	0.00791	0.0100	-20.9*	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2001	0.0500	0.0149	0.0200	-25.3*	20.0
Toluene	Ave	1.476	1.394	0.4000	0.00944	0.0100	-5.6	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3270	0.1000	0.00704	0.0100	-29.6*	20.0
Ethyl methacrylate	Ave	0.4442	0.3282		0.00739	0.0100	-26.1*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2666	0.1000	0.00894	0.0100	-10.6	20.0
Tetrachloroethene	Ave	0.3268	0.3095	0.1500	0.00947	0.0100	-5.3	20.0
1,3-Dichloropropane	Ave	0.5243	0.4627		0.00882	0.0100	-11.8	20.0
2-Hexanone	Ave	0.2283	0.1734	0.0500	0.0152	0.0200	-24.1*	20.0
Chlorodibromomethane	Ave	0.3116	0.2276		0.00730	0.0100	-27.0*	20.0
1,2-Dibromoethane	Ave	0.3191	0.2642		0.00828	0.0100	-17.2	20.0
Chlorobenzene	Ave	0.9777	0.9075	0.3000	0.00928	0.0100	-7.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3172		0.00919	0.0100	-8.1	20.0
Ethylbenzene	Ave	0.5145	0.4715		0.00916	0.0100	-8.4	20.0
m-Xylene & p-Xylene	Ave	1.221	1.096		0.00898	0.0100	-10.2	20.0
o-Xylene	Ave	0.6189	0.5994		0.00969	0.0100	-3.1	20.0
Styrene	Ave	1.036	0.9417	0.3000	0.00909	0.0100	-9.1	20.0
Bromoform	Lin1		0.1219	0.1000	0.00542	0.0100	-45.8*	20.0
Isopropylbenzene	Ave	1.463	1.403	0.1000	0.00959	0.0100	-4.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5572	0.3000	0.00786	0.0100	-21.4*	20.0
Bromobenzene	Ave	0.8274	0.7248		0.00876	0.0100	-12.4	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.1984		0.00804	0.0100	-19.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0703		0.00693	0.0100	-30.7*	20.0
N-Propylbenzene	Ave	0.7286	0.6321		0.00867	0.0100	-13.3	20.0
2-Chlorotoluene	Ave	0.6821	0.6150		0.00902	0.0100	-9.8	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.928		0.00910	0.0100	-9.0	20.0
4-Chlorotoluene	Ave	2.205	1.890		0.00857	0.0100	-14.3	20.0
tert-Butylbenzene	Ave	1.897	1.667		0.00878	0.0100	-12.2	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.035		0.00914	0.0100	-8.6	20.0
sec-Butylbenzene	Ave	2.327	2.095		0.00901	0.0100	-9.9	20.0
1,3-Dichlorobenzene	Ave	1.425	1.263	0.6000	0.00887	0.0100	-11.3	20.0
4-Isopropyltoluene	Ave	2.083	1.884		0.00904	0.0100	-9.6	20.0
1,4-Dichlorobenzene	Ave	1.477	1.296	0.5000	0.00877	0.0100	-12.3	20.0
n-Butylbenzene	Ave	1.649	1.400		0.00849	0.0100	-15.1	20.0
1,2-Dichlorobenzene	Ave	1.387	1.288	0.4000	0.00928	0.0100	-7.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0961	0.0500	0.00596	0.0100	-40.4	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7988	0.2000	0.00909	0.0100	-9.1	50.0
Hexachlorobutadiene	Ave	0.4386	0.3511		0.00801	0.0100	-19.9	20.0
Naphthalene	Ave	2.209	1.776		0.00804	0.0100	-19.6	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7384		0.00934	0.0100	-6.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2646		0.00693	0.00797	-13.0	20.0
Toluene-d8 (Surr)	Ave	1.214	1.077		0.00707	0.00797	-11.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3688		0.00677	0.00797	-15.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCV 240-367509/3 Calibration Date: 02/11/2019 11:35

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8767.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0259		0.112	0.100	12.2	20.0
Diisopropyl ether	Ave	0.2405	0.2296		0.00955	0.0100	-4.5	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3804		0.00898	0.0100	-10.2	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6235		0.00800	0.0100	-20.0	20.0
Ethyl acetate	Ave	0.2538	0.1979		0.0156	0.0200	-22.0	50.0
Propionitrile	Ave	0.0357	0.0334		0.0937	0.100	-6.3	20.0
Methacrylonitrile	Ave	0.1733	0.1482		0.0855	0.100	-14.5	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5715		0.00736	0.0100	-26.4*	20.0
n-Butanol	Ave	0.0061	0.0037		0.154	0.250	-38.5*	20.0
Ethyl acrylate	Ave	0.3330	0.2421		0.00727	0.0100	-27.3*	20.0
Methyl methacrylate	Ave	0.2430	0.1897		0.0156	0.0200	-21.9*	20.0
2-Nitropropane	Ave	0.0745	0.0280		0.00753	0.0200	-62.4*	20.0
n-Butyl acetate	Ave	0.3918	0.2807		0.00716	0.0100	-28.4*	20.0
1-Chlorohexane	Ave	0.3968	0.2920		0.00736	0.0100	-26.4*	20.0
Cyclohexanone	Lin1		0.0104		0.0631	0.100	-36.9*	20.0
Pentachloroethane	Ave	0.2034	0.1517		0.0149	0.0200	-25.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.013		0.00876	0.0100	-12.4	20.0
Benzyl chloride	Ave	0.2963	0.1293		0.00436	0.0100	-56.4*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8316		0.00879	0.0100	-12.1	20.0
2-Methylnaphthalene	Ave	1.076	0.6690		0.0124	0.0200	-37.8*	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab File ID: UXC8770.D Lab Sample ID: MB 240-367509/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/11/2019 12:40

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367509/4	UXC8766.D	02/11/2019 11:13
	240-107725-C-2 MS	UXC8773.D	02/11/2019 13:46
	240-107725-C-2 MSD	UXC8774.D	02/11/2019 14:08
TB-020819	240-107924-1	UXC8784.D	02/11/2019 19:03

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-367509/6

Matrix: Water Lab File ID: UXC8770.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367509 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	86		70-123
1868-53-7	Dibromofluoromethane (Surr)	86		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.03	90	80-124	
1,1,1-Trichloroethane	10.0	10.5	105	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.69	87	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.62	96	50-156	
1,1-Dichloroethane	10.0	10.5	105	75-133	
1,1-Dichloroethene	10.0	9.12	91	65-139	
1,1-Dichloropropene	10.0	9.95	99	78-126	
1,2,3-Trichlorobenzene	10.0	8.95	90	39-138	
1,2,3-Trichloropropane	10.0	8.85	88	66-139	
1,2,4-Trichlorobenzene	10.0	8.66	87	42-133	
1,2,4-Trimethylbenzene	10.0	9.49	95	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.72	57	46-132	
1,2-Dichlorobenzene	10.0	9.87	99	78-120	
1,2-Dichloroethane	10.0	10.3	103	71-135	
1,2-Dichloropropane	10.0	10.6	106	78-133	
1,3-Dichlorobenzene	10.0	9.58	96	78-120	
1,3-Dichloropropane	10.0	9.50	95	72-134	
1,4-Dichlorobenzene	10.0	9.63	96	78-120	
2,2-Dichloropropane	10.0	10.5	105	42-150	
2-Chloroethyl vinyl ether	10.0	8.08 J	81	55-137	
2-Chlorotoluene	10.0	9.67	97	78-123	
2-Hexanone	20.0	15.5	77	43-148	
Bromobenzene	10.0	9.69	97	74-129	
Bromochloromethane	10.0	10.7	107	74-130	
4-Chlorotoluene	10.0	9.49	95	77-125	
4-Isopropyltoluene	10.0	9.40	94	69-122	
Acetone	20.0	17.4	87	21-162	
Benzene	10.0	10.6	106	80-123	
Bromoform	10.0	5.03	50	49-141	
Bromomethane	10.0	8.44	84	41-175	
Carbon disulfide	10.0	7.88	79	60-138	
Carbon tetrachloride	10.0	9.20	92	63-140	
Chlorobenzene	10.0	10.0	100	80-121	
Chloroethane	10.0	8.43	84	33-173	
Chloroform	10.0	10.5	105	79-127	
Chloromethane	10.0	8.83	88	54-143	
cis-1,2-Dichloroethene	10.0	10.6	106	76-128	
cis-1,3-Dichloropropene	10.0	8.94	89	64-132	
Hexachlorobutadiene	10.0	8.16	82	38-136	
Dibromomethane	10.0	9.67	97	74-124	
Bromodichloromethane	10.0	8.78	88	77-125	
Dichlorodifluoromethane	10.0	7.36	74	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.78	98	80-120	
1,2-Dibromoethane	10.0	8.95	89	77-123	
Naphthalene	10.0	7.76	78	28-141	
m-Xylene & p-Xylene	10.0	9.69	97	80-120	
n-Butylbenzene	10.0	8.82	88	57-126	
Isopropylbenzene	10.0	9.80	98	74-120	
N-Propylbenzene	10.0	9.40	94	77-123	
2-Butanone (MEK)	20.0	17.5	87	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.8	84	49-143	
sec-Butylbenzene	10.0	9.10	91	68-123	
Methyl tert-butyl ether	10.0	8.88	89	51-133	
Methylene Chloride	10.0	9.41	94	70-134	
o-Xylene	10.0	9.98	100	80-120	
Styrene	10.0	9.34	93	79-120	
tert-Butylbenzene	10.0	9.02	90	70-121	
Tetrachloroethene	10.0	9.77	98	74-130	
Toluene	10.0	10.0	100	78-129	
trans-1,2-Dichloroethene	10.0	10.7	107	78-133	
trans-1,3-Dichloropropene	10.0	7.22	72	55-128	
Trichloroethene	10.0	10.3	103	76-125	
Trichlorofluoromethane	10.0	9.69	97	51-164	
Vinyl acetate	10.0	8.28	83	45-151	
Vinyl chloride	10.0	8.69	87	58-143	
tert-Butyl alcohol	100	59.8	60	10-161	
Xylenes, Total	20.0	19.7	98	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab File ID: BFB0213.D BFB Injection Date: 02/13/2019

Instrument ID: A3UX15 BFB Injection Time: 11:22

Analysis Batch No.: 367892

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.8	
75	30.0 - 60.0 % of mass 95	50.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.6	(0.5) 1
174	50.0 - 120.00 % of mass 95	105.7	
175	5.0 - 9.0 % of mass 174	7.0	(6.6) 1
176	95.0 - 101.0 % of mass 174	101.4	(96.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367892/2	UXC8806.D	02/13/2019	11:48
	LCS 240-367892/4	UXC8807.D	02/13/2019	12:10
	CCV 240-367892/3	UXC8808.D	02/13/2019	12:32
	MB 240-367892/6	UXC8811.D	02/13/2019	13:38
MRC-MW149B-020819	240-107924-2	UXC8813.D	02/13/2019	14:21
MRC-MW150B-020819	240-107924-3	UXC8820.D	02/13/2019	17:54
	240-107850-B-5 MS	UXC8821.D	02/13/2019	18:16
	240-107850-B-5 MSD	UXC8822.D	02/13/2019	18:38

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.2644	0.1000	0.00861	0.0100	-13.9	20.0
Chloromethane	Ave	0.3135	0.2740	0.1000	0.00874	0.0100	-12.6	20.0
Butadiene	Ave	0.3794	0.2948		0.00777	0.0100	-22.3*	20.0
Vinyl chloride	Ave	0.2885	0.2406	0.1000	0.00834	0.0100	-16.6	20.0
Bromomethane	Ave	0.2308	0.1961	0.0500	0.00850	0.0100	-15.0	20.0
Chloroethane	Ave	0.2041	0.1732	0.0500	0.00848	0.0100	-15.2	20.0
Dichlorofluoromethane	Ave	0.5102	0.4461		0.00874	0.0100	-12.6	20.0
Trichlorofluoromethane	Ave	0.4337	0.4175	0.1000	0.00963	0.0100	-3.7	20.0
Ethyl ether	Ave	0.2310	0.2280		0.00987	0.0100	-1.3	20.0
Acrolein	Ave	0.0317	0.0400		0.0631	0.0500	26.2	50.0
1,1-Dichloroethene	Ave	0.3005	0.2646	0.1000	0.00881	0.0100	-11.9	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2394	0.0500	0.00970	0.0100	-3.0	20.0
Acetone	Lin1		0.0240	0.0100	0.0198	0.0200	-0.9	50.0
Iodomethane	Ave	0.4675	0.4375		0.00936	0.0100	-6.4	20.0
Carbon disulfide	Ave	0.7741	0.5971	0.1000	0.00771	0.0100	-22.9*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1633		0.00962	0.0100	-3.8	20.0
Methyl acetate	Ave	0.2050	0.1768	0.1000	0.0172	0.0200	-13.8	20.0
Methylene Chloride	Lin1		0.4011	0.1000	0.0137	0.0100	36.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0163		0.0803	0.100	-19.7	50.0
Acrylonitrile	Ave	0.0962	0.0916		0.0952	0.100	-4.8	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6712	0.1000	0.00857	0.0100	-14.3	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2866	0.1000	0.0103	0.0100	2.5	20.0
Hexane	Ave	0.0586	0.0527		0.00899	0.0100	-10.1	20.0
1,1-Dichloroethane	Ave	0.4517	0.4693	0.2000	0.0104	0.0100	3.9	20.0
Vinyl acetate	Ave	0.5198	0.4189		0.00806	0.0100	-19.4	50.0
2,2-Dichloropropane	Ave	0.0624	0.0587		0.00942	0.0100	-5.8	20.0
2-Butanone (MEK)	Ave	0.0333	0.0305	0.0100	0.0184	0.0200	-8.2	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3242	0.1000	0.0105	0.0100	5.3	20.0
Bromochloromethane	Ave	0.1531	0.1616		0.0106	0.0100	5.5	20.0
Tetrahydrofuran	Ave	0.0828	0.0686		0.0166	0.0200	-17.1	20.0
Chloroform	Ave	0.4606	0.4880	0.2000	0.0106	0.0100	6.0	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3575	0.1000	0.0101	0.0100	0.8	20.0
Cyclohexane	Ave	0.3993	0.3773	0.1000	0.00945	0.0100	-5.5	20.0
1,1-Dichloropropene	Ave	0.3748	0.3719		0.00992	0.0100	-0.8	20.0
Carbon tetrachloride	Ave	0.3441	0.3171	0.1000	0.00922	0.0100	-7.8	20.0
Isobutyl alcohol	Ave	0.0077	0.0070		0.227	0.250	-9.4	20.0
Benzene	Ave	1.116	1.180	0.5000	0.0106	0.0100	5.7	20.0
1,2-Dichloroethane	Ave	0.3820	0.3993	0.1000	0.0105	0.0100	4.5	20.0
n-Heptane	Ave	0.0532	0.0463		0.00870	0.0100	-13.0	20.0
Trichloroethene	Ave	0.3240	0.3428	0.1500	0.0106	0.0100	5.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3350	0.1000	0.00950	0.0100	-5.0	20.0
1,2-Dichloropropane	Ave	0.2590	0.2611	0.1000	0.0101	0.0100	0.8	20.0
1,4-Dioxane	Ave	0.0020	0.0026		0.260	0.200	30.1	50.0
Dibromomethane	Ave	0.1717	0.1669		0.00972	0.0100	-2.8	20.0
Bromodichloromethane	Ave	0.3410	0.3135	0.1500	0.00919	0.0100	-8.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1388		0.0159	0.0200	-20.5*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3525	0.1500	0.00894	0.0100	-10.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2257	0.0500	0.0169	0.0200	-15.7	20.0
Toluene	Ave	1.476	1.435	0.4000	0.00972	0.0100	-2.8	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3495	0.1000	0.00752	0.0100	-24.8*	20.0
Ethyl methacrylate	Ave	0.4442	0.3465		0.00780	0.0100	-22.0*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2780	0.1000	0.00932	0.0100	-6.8	20.0
Tetrachloroethene	Ave	0.3268	0.3212	0.1500	0.00983	0.0100	-1.7	20.0
1,3-Dichloropropane	Ave	0.5243	0.4898		0.00934	0.0100	-6.6	20.0
2-Hexanone	Ave	0.2283	0.1843	0.0500	0.0161	0.0200	-19.3	20.0
Chlorodibromomethane	Ave	0.3116	0.2594		0.00833	0.0100	-16.7	20.0
1,2-Dibromoethane	Ave	0.3191	0.2750		0.00862	0.0100	-13.8	20.0
Chlorobenzene	Ave	0.9777	0.9502	0.3000	0.00972	0.0100	-2.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.2977		0.00863	0.0100	-13.7	20.0
Ethylbenzene	Ave	0.5145	0.4912		0.00955	0.0100	-4.5	20.0
m-Xylene & p-Xylene	Ave	1.221	1.165		0.00955	0.0100	-4.5	20.0
o-Xylene	Ave	0.6189	0.5935		0.00959	0.0100	-4.1	20.0
Styrene	Ave	1.036	1.012	0.3000	0.00977	0.0100	-2.3	20.0
Bromoform	Lin1		0.1557	0.1000	0.00675	0.0100	-32.5*	20.0
Isopropylbenzene	Ave	1.463	1.374	0.1000	0.00939	0.0100	-6.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5684	0.3000	0.00802	0.0100	-19.8	20.0
Bromobenzene	Ave	0.8274	0.7586		0.00917	0.0100	-8.3	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2002		0.00811	0.0100	-18.9	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.1131		0.0112	0.0100	11.5	20.0
N-Propylbenzene	Ave	0.7286	0.6484		0.00890	0.0100	-11.0	20.0
2-Chlorotoluene	Ave	0.6821	0.6162		0.00903	0.0100	-9.7	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.868		0.00882	0.0100	-11.8	20.0
4-Chlorotoluene	Ave	2.205	1.951		0.00885	0.0100	-11.5	20.0
tert-Butylbenzene	Ave	1.897	1.591		0.00839	0.0100	-16.1	20.0
1,2,4-Trimethylbenzene	Ave	2.227	1.990		0.00894	0.0100	-10.6	20.0
sec-Butylbenzene	Ave	2.327	1.997		0.00858	0.0100	-14.2	20.0
1,3-Dichlorobenzene	Ave	1.425	1.317	0.6000	0.00924	0.0100	-7.6	20.0
4-Isopropyltoluene	Ave	2.083	1.821		0.00874	0.0100	-12.6	20.0
1,4-Dichlorobenzene	Ave	1.477	1.350	0.5000	0.00914	0.0100	-8.6	20.0
n-Butylbenzene	Ave	1.649	1.338		0.00812	0.0100	-18.8	20.0
1,2-Dichlorobenzene	Ave	1.387	1.278	0.4000	0.00921	0.0100	-7.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0952	0.0500	0.00591	0.0100	-40.9	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.6817	0.2000	0.00776	0.0100	-22.4	50.0
Hexachlorobutadiene	Ave	0.4386	0.3104		0.00708	0.0100	-29.2*	20.0
Naphthalene	Ave	2.209	1.476		0.00668	0.0100	-33.2	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6052		0.00766	0.0100	-23.4*	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2175		0.00732	0.00797	-8.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2720		0.00713	0.00797	-10.6	20.0
Toluene-d8 (Surr)	Ave	1.214	1.047		0.00687	0.00797	-13.8	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3760		0.00690	0.00797	-13.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCV 240-367892/3 Calibration Date: 02/13/2019 12:32

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8808.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0282		0.122	0.100	22.1*	20.0
Diisopropyl ether	Ave	0.2405	0.2294		0.00954	0.0100	-4.6	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3741		0.00883	0.0100	-11.7	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.5945		0.00762	0.0100	-23.8*	20.0
Ethyl acetate	Ave	0.2538	0.2228		0.0176	0.0200	-12.2	50.0
Propionitrile	Ave	0.0357	0.0361		0.101	0.100	1.1	20.0
Methacrylonitrile	Ave	0.1733	0.1604		0.0925	0.100	-7.5	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5323		0.00686	0.0100	-31.4*	20.0
n-Butanol	Ave	0.0061	0.0040		0.163	0.250	-34.7*	20.0
Ethyl acrylate	Ave	0.3330	0.2775		0.00833	0.0100	-16.7	20.0
Methyl methacrylate	Ave	0.2430	0.2131		0.0175	0.0200	-12.3	20.0
2-Nitropropane	Ave	0.0745	0.0279		0.00750	0.0200	-62.5*	20.0
n-Butyl acetate	Ave	0.3918	0.3008		0.00768	0.0100	-23.2*	20.0
1-Chlorohexane	Ave	0.3968	0.3067		0.00773	0.0100	-22.7*	20.0
Cyclohexanone	Lin1		0.0109		0.0663	0.100	-33.7*	20.0
Pentachloroethane	Ave	0.2034	0.1499		0.0147	0.0200	-26.3*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.035		0.00886	0.0100	-11.4	20.0
Benzyl chloride	Ave	0.2963	0.1196		0.00404	0.0100	-59.6*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8253		0.00872	0.0100	-12.8	20.0
2-Methylnaphthalene	Ave	1.076	0.6682		0.0124	0.0200	-37.9*	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab File ID: UXC8811.D Lab Sample ID: MB 240-367892/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/13/2019 13:38

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367892/4	UXC8807.D	02/13/2019 12:10
MRC-MW149B-020819	240-107924-2	UXC8813.D	02/13/2019 14:21
MRC-MW150B-020819	240-107924-3	UXC8820.D	02/13/2019 17:54
	240-107850-B-5 MS	UXC8821.D	02/13/2019 18:16
	240-107850-B-5 MSD	UXC8822.D	02/13/2019 18:38

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367892/6

Matrix: Water | Lab File ID: UXC8811.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367892/6

Matrix: Water | Lab File ID: UXC8811.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.78	J	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-367892/6

Matrix: Water Lab File ID: UXC8811.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367892 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-121
460-00-4	4-Bromofluorobenzene (Surr)	85		59-120
2037-26-5	Toluene-d8 (Surr)	89		70-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.60	86	80-124	
1,1,1-Trichloroethane	10.0	10.1	101	69-134	
1,1,2,2-Tetrachloroethane	10.0	7.96	80	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.94	99	50-156	
1,1-Dichloroethane	10.0	10.0	100	75-133	
1,1-Dichloroethene	10.0	8.97	90	65-139	
1,1-Dichloropropene	10.0	9.59	96	78-126	
1,2,3-Trichlorobenzene	10.0	8.32	83	39-138	
1,2,3-Trichloropropane	10.0	8.35	84	66-139	
1,2,4-Trichlorobenzene	10.0	8.22	82	42-133	
1,2,4-Trimethylbenzene	10.0	8.77	88	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.66	57	46-132	
1,2-Dichlorobenzene	10.0	9.22	92	78-120	
1,2-Dichloroethane	10.0	9.95	99	71-135	
1,2-Dichloropropane	10.0	9.85	99	78-133	
1,3-Dichlorobenzene	10.0	8.91	89	78-120	
1,3-Dichloropropane	10.0	8.96	90	72-134	
1,4-Dichlorobenzene	10.0	8.98	90	78-120	
2,2-Dichloropropane	10.0	9.68	97	42-150	
2-Chloroethyl vinyl ether	10.0	7.11 J	71	55-137	
2-Chlorotoluene	10.0	8.99	90	78-123	
2-Hexanone	20.0	15.3	77	43-148	
Bromobenzene	10.0	9.08	91	74-129	
Bromochloromethane	10.0	10.2	102	74-130	
4-Chlorotoluene	10.0	8.70	87	77-125	
4-Isopropyltoluene	10.0	8.79	88	69-122	
Acetone	20.0	16.3	81	21-162	
Benzene	10.0	10.1	101	80-123	
Bromoform	10.0	5.22	52	49-141	
Bromomethane	10.0	7.90	79	41-175	
Carbon disulfide	10.0	7.70	77	60-138	
Carbon tetrachloride	10.0	8.94	89	63-140	
Chlorobenzene	10.0	9.44	94	80-121	
Chloroethane	10.0	7.96	80	33-173	
Chloroform	10.0	10.1	101	79-127	
Chloromethane	10.0	7.52	75	54-143	
cis-1,2-Dichloroethene	10.0	10.1	101	76-128	
cis-1,3-Dichloropropene	10.0	8.48	85	64-132	
Hexachlorobutadiene	10.0	7.72	77	38-136	
Dibromomethane	10.0	9.26	93	74-124	
Bromodichloromethane	10.0	8.40	84	77-125	
Dichlorodifluoromethane	10.0	5.94	59	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.29	93	80-120	
1,2-Dibromoethane	10.0	8.51	85	77-123	
Naphthalene	10.0	7.20	72	28-141	
m-Xylene & p-Xylene	10.0	9.41	94	80-120	
n-Butylbenzene	10.0	8.24	82	57-126	
Isopropylbenzene	10.0	9.54	95	74-120	
N-Propylbenzene	10.0	8.77	88	77-123	
2-Butanone (MEK)	20.0	17.0	85	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	15.5	78	49-143	
sec-Butylbenzene	10.0	8.62	86	68-123	
Methyl tert-butyl ether	10.0	8.10	81	51-133	
Methylene Chloride	10.0	13.1	131	70-134	
o-Xylene	10.0	9.59	96	80-120	
Styrene	10.0	9.02	90	79-120	
tert-Butylbenzene	10.0	8.40	84	70-121	
Tetrachloroethene	10.0	9.78	98	74-130	
Toluene	10.0	9.59	96	78-129	
trans-1,2-Dichloroethene	10.0	10.2	102	78-133	
trans-1,3-Dichloropropene	10.0	6.92	69	55-128	
Trichloroethene	10.0	9.91	99	76-125	
Trichlorofluoromethane	10.0	8.99	90	51-164	
Vinyl acetate	10.0	7.96	80	45-151	
Vinyl chloride	10.0	7.98	80	58-143	
tert-Butyl alcohol	100	60.7	61	10-161	
Xylenes, Total	20.0	19.0	95	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-020819	240-107924-1	90	98	87	83
MRC-MW149B-020819	240-107924-2	92	96	88	83
MRC-MW150B-020819	240-107924-3	92	97	85	81
	MB 240-367509/6	86	92	86	81
	MB 240-367892/6	91	97	89	85
	LCS 240-367509/4	97	94	94	92
	LCS 240-367892/4	90	88	84	84
	240-107725-C-2 MS	100	98	97	95
	240-107850-B-5 MS	91	89	86	85
	240-107725-C-2 MSD	91	90	88	88
	240-107850-B-5 MSD	89	89	88	85

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-367509/2		1607043	5.20	1260395	7.88	745296	10.12
CCVIS 240-367892/2		1803643	5.20	1542696	7.88	927814	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Sample No.: CCVIS 240-367509/2 Date Analyzed: 02/11/2019 10:51

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8765.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1607043	5.20	1260395	7.88	745296	10.12
UPPER LIMIT		3214086	5.70	2520790	8.38	1490592	10.62
LOWER LIMIT		803522	4.70	630198	7.38	372648	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367509/4		1796449	5.20	1507511	7.88	863122	10.12
CCV 240-367509/3		1829504	5.20	1503859	7.88	817203	10.12
MB 240-367509/6		1730580	5.20	1472271	7.88	810355	10.12
240-107725-C-2 MS		1677452	5.20	1383650	7.88	815572	10.12
240-107725-C-2 MSD		1827467	5.20	1569371	7.88	923259	10.12
240-107924-1	TB-020819	1626062	5.20	1391047	7.88	765568	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Sample No.: CCVIS 240-367892/2 Date Analyzed: 02/13/2019 11:48

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8806.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1803643	5.20	1542696	7.88	927814	10.12
UPPER LIMIT		3607286	5.70	3085392	8.38	1855628	10.62
LOWER LIMIT		901822	4.70	771348	7.38	463907	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367892/4		1866937	5.20	1555716	7.88	933071	10.12
CCV 240-367892/3		1758419	5.20	1529185	7.88	842177	10.12
MB 240-367892/6		1565514	5.20	1326978	7.88	735680	10.12
240-107924-2	MRC-MW149B-020819	1667522	5.20	1393135	7.88	792021	10.12
240-107924-3	MRC-MW150B-020819	1613680	5.20	1377621	7.88	763754	10.12
240-107850-B-5 MS		1797266	5.20	1524370	7.88	921656	10.12
240-107850-B-5 MSD		1839508	5.20	1544658	7.88	912568	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00281	vmbfb 00021
BFB 240-364786/1		8260C		5 mL	5 mL				1 uL
STD8260 240-364786/2 IC		8260C		5 mL	5 mL	1 uL	32 uL	32 uL	
STD8260 240-364786/3 IC		8260C		5 mL	5 mL	1 uL	16 uL	16 uL	
STD8260 240-364786/4 ICIS		8260C		5 mL	5 mL	1 uL	8 uL	8 uL	
STD8260 240-364786/5 IC		8260C		5 mL	5 mL	1 uL	4 uL	4 uL	
STD8260 240-364786/6 IC		8260C		5 mL	5 mL	1 uL	1.6 uL	1.6 uL	
STD8260 240-364786/7 IC		8260C		5 mL	5 mL	1 uL	0.8 uL	0.8 uL	
STD 240-364786/8 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/9 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/10 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/11 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/12 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/13 IC		8260C		5 mL	5 mL	1 uL			
ICV 240-364786/14		8260C		5 mL	5 mL	1 uL	0.797 uL		
ICV 240-364786/15		8260C		5 mL	5 mL	1 uL	0.797 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C							32 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
STD8260 240-364786/3 IC		8260C							16 uL
STD8260 240-364786/4 ICIS		8260C							8 uL
STD8260 240-364786/5 IC		8260C							4 uL
STD8260 240-364786/6 IC		8260C							1.6 uL
STD8260 240-364786/7 IC		8260C							0.8 uL
STD 240-364786/8 IC		8260C						32 uL	
STD 240-364786/9 IC		8260C						16 uL	
STD 240-364786/10 IC		8260C						8 uL	
STD 240-364786/11 IC		8260C						4 uL	
STD 240-364786/12 IC		8260C						1.6 uL	
STD 240-364786/13 IC		8260C						0.8 uL	
ICV 240-364786/14		8260C			8 uL	8 uL	8 uL		
ICV 240-364786/15		8260C		8 uL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C		32 uL					
STD8260 240-364786/3 IC		8260C		16 uL					
STD8260 240-364786/4 ICIS		8260C		8 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
STD8260 240-364786/5 IC		8260C		4 uL					
STD8260 240-364786/6 IC		8260C		1.6 uL					
STD8260 240-364786/7 IC		8260C		0.8 uL					
STD 240-364786/8 IC		8260C							
STD 240-364786/9 IC		8260C							
STD 240-364786/10 IC		8260C							
STD 240-364786/11 IC		8260C							
STD 240-364786/12 IC		8260C							
STD 240-364786/13 IC		8260C							
ICV 240-364786/14		8260C							
ICV 240-364786/15		8260C							

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367509 Batch Start Date: 02/11/19 10:27 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00284
BFB 240-367509/1		8260C		5 mL	5 mL				
CCVIS 240-367509/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-367509/3		8260C		5 mL	5 mL		1 uL		
LCS 240-367509/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-367509/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-107725-C-2 MS		8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107725-C-2 MSD		8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107924-A-1	TB-020819	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00267	VMFASGW 00295	VMFASPW 00287	VMRA9W 00284	VMRGAS 00281
BFB 240-367509/1		8260C		1 uL					
CCVIS 240-367509/2		8260C							8 uL
CCV 240-367509/3		8260C						8 uL	
LCS 240-367509/4		8260C			8 uL	8 uL	8 uL		
MB 240-367509/6		8260C							
240-107725-C-2 MS		8260C	T		8 uL	8 uL	8 uL		
240-107725-C-2 MSD		8260C	T		8 uL	8 uL	8 uL		
240-107924-A-1	TB-020819	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00320					
BFB 240-367509/1		8260C							
CCVIS 240-367509/2		8260C		8 uL					
CCV 240-367509/3		8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367509 Batch Start Date: 02/11/19 10:27 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00320					
LCS 240-367509/4		8260C							
MB 240-367509/6		8260C							
240-107725-C-2 MS		8260C	T						
240-107725-C-2 MSD		8260C	T						
240-107924-A-1	TB-020819	8260C	T						

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367892 Batch Start Date: 02/13/19 11:22 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00284
BFB 240-367892/1		8260C		5 mL	5 mL				
CCVIS 240-367892/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-367892/3		8260C		5 mL	5 mL		1 uL		
LCS 240-367892/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-367892/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-107924-B-2	MRC-MW149B-020819	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107924-B-3	MRC-MW150B-020819	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107850-B-5 MS		8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107850-B-5 MSD		8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00267	VMFASGW 00296	VMFASPW 00288	VMRA9W 00285	VMRGAS 00281
BFB 240-367892/1		8260C		1 uL					
CCVIS 240-367892/2		8260C							8 uL
CCV 240-367892/3		8260C						8 uL	
LCS 240-367892/4		8260C			8 uL	8 uL	8 uL		
MB 240-367892/6		8260C							
240-107924-B-2	MRC-MW149B-020819	8260C	T						
240-107924-B-3	MRC-MW150B-020819	8260C	T						
240-107850-B-5 MS		8260C	T		8 uL	8 uL	8 uL		
240-107850-B-5 MSD		8260C	T		8 uL	8 uL	8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00321					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367892 Batch Start Date: 02/13/19 11:22 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00321					
BFB 240-367892/1		8260C							
CCVIS 240-367892/2		8260C		8 uL					
CCV 240-367892/3		8260C							
LCS 240-367892/4		8260C							
MB 240-367892/6		8260C							
240-107924-B-2	MRC-MW149B-020819	8260C	T						
240-107924-B-3	MRC-MW150B-020819	8260C	T						
240-107850-B-5 MS		8260C	T						
240-107850-B-5 MSD		8260C	T						

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW149B-020819	240-107924-2
MRC-MW150B-020819	240-107924-3

Comments:

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ICIS 240-367825/1	1		10:54	X	X																								
CALSTD 240-367825/2 IC			10:59	X	X																								
CALSTD 240-367825/3 IC			11:03	X	X																								
ICV 240-367825/4	1		11:07	X	X																								
ICB 240-367825/5	1		11:11	X	X																								
ICVL 240-367825/6	1		11:16	X	X																								
ZZZZZZ			11:20																										
ICSA 240-367825/8	1		11:25	X	X																								
ICSAB 240-367825/9	1		11:29	X	X																								
CCV 240-367825/10			11:33																										
CCB 240-367825/11			11:37																										
ZZZZZZ			11:42																										
ZZZZZZ			11:46																										
ZZZZZZ			11:50																										
ZZZZZZ			11:55																										
ZZZZZZ			11:59																										
ZZZZZZ			12:04																										
CCV 240-367825/18			12:08																										
CCB 240-367825/19			12:12																										
ZZZZZZ			12:17																										
ZZZZZZ			12:21																										
ZZZZZZ			12:26																										
ZZZZZZ			12:30																										
ZZZZZZ			12:34																										
ZZZZZZ			12:39																										
ZZZZZZ			12:43																										
ZZZZZZ			12:47																										
ZZZZZZ			12:51																										
ZZZZZZ			12:56																										
CCV 240-367825/30			13:00																										
CCB 240-367825/31			13:04																										
ZZZZZZ			13:09																										
ZZZZZZ			13:13																										
ZZZZZZ			13:17																										
ZZZZZZ			13:22																										
ZZZZZZ			13:26																										
ZZZZZZ			13:31																										
ZZZZZZ			13:35																										
ZZZZZZ			13:39																										
ZZZZZZ			13:44																										
ZZZZZZ			13:49																										
CCV 240-367825/42			13:53																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
CCB 240-367825/43			13:57																										
ZZZZZZ			14:01																										
ZZZZZZ			14:06																										
ZZZZZZ			14:10																										
ZZZZZZ			14:15																										
ZZZZZZ			14:19																										
ZZZZZZ			14:23																										
ZZZZZZ			14:27																										
ZZZZZZ			14:32																										
ZZZZZZ			14:36																										
ZZZZZZ			14:40																										
CCV 240-367825/54			14:44																										
CCB 240-367825/55			14:48																										
ZZZZZZ			14:53																										
ZZZZZZ			14:57																										
ZZZZZZ			15:01																										
ZZZZZZ			15:05																										
ZZZZZZ			15:10																										
ZZZZZZ			15:14																										
ZZZZZZ			15:18																										
ZZZZZZ			15:23																										
ZZZZZZ			15:28																										
ZZZZZZ			15:32																										
CCV 240-367825/66			15:37																										
CCB 240-367825/67			15:41																										
ZZZZZZ			15:45																										
ZZZZZZ			15:50																										
ZZZZZZ			15:54																										
ZZZZZZ			15:58																										
ZZZZZZ			16:03																										
ZZZZZZ			16:07																										
ZZZZZZ			16:12																										
ZZZZZZ			16:16																										
ZZZZZZ			16:20																										
ZZZZZZ			16:25																										
CCV 240-367825/78	1		16:29	X	X																								
CCB 240-367825/79	1		16:33	X	X																								
CCVL 240-367825/80			16:38																										
MB 240-367490/1-A	1	R	16:42	X	X																								
LCS 240-367490/2-A	1	R	16:47	X	X																								
ZZZZZZ			16:51																										
240-107872-B-1-A SD ^5	5	R	16:55	X	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			16:59																										
240-107872-B-1-B MS	1	R	17:04	X	X																								
240-107872-B-1-C MSD	1	R	17:08	X	X																								
ZZZZZZ			17:12																										
ZZZZZZ			17:16																										
CCV 240-367825/90	1		17:21	X	X																								
CCB 240-367825/91	1		17:25	X	X																								
ZZZZZZ			17:29																										
ZZZZZZ			17:34																										
ZZZZZZ			17:38																										
ZZZZZZ			17:42																										
ZZZZZZ			17:47																										
ZZZZZZ			17:51																										
ZZZZZZ			17:56																										
ZZZZZZ			18:00																										
ZZZZZZ			18:05																										
ZZZZZZ			18:09																										
CCV 240-367825/102	1		18:13	X	X																								
CCB 240-367825/103	1		18:17	X	X																								
ZZZZZZ			18:22																										
ZZZZZZ			18:26																										
ZZZZZZ			18:30																										
ZZZZZZ			18:35																										
ZZZZZZ			18:39																										
240-107924-2	1	R	18:44	X	X																								
240-107924-3	1	R	18:48	X	X																								
ZZZZZZ			18:52																										
ZZZZZZ			18:57																										
ZZZZZZ			19:01																										
CCV 240-367825/114	1		19:05	X	X																								
CCB 240-367825/115	1		19:09	X	X																								
ZZZZZZ			19:14																										
ZZZZZZ			19:18																										
ZZZZZZ			19:22																										
ZZZZZZ			19:26																										
ZZZZZZ			19:30																										
ZZZZZZ			19:34																										
ZZZZZZ			19:39																										
ZZZZZZ			19:43																										
ZZZZZZ			19:47																										
ZZZZZZ			19:52																										
CCV 240-367825/126			19:56																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																										
				Fe	Mn																									
ZZZZZZ			23:03																											
ZZZZZZ			23:07																											
ZZZZZZ			23:12																											
ZZZZZZ			23:16																											
ZZZZZZ			23:20																											
CCV 240-367825/174			23:24																											
CCB 240-367825/175			23:28																											
ZZZZZZ			23:32																											
ZZZZZZ			23:36																											
ZZZZZZ			23:40																											
ZZZZZZ			23:45																											
ZZZZZZ			23:49																											
ZZZZZZ			23:54																											
ZZZZZZ			23:58																											
ZZZZZZ			00:02																											
ZZZZZZ			00:07																											
ZZZZZZ			00:11																											
CCV 240-367825/186			00:16																											
CCB 240-367825/187			00:20																											
ZZZZZZ			00:24																											
ZZZZZZ			00:28																											
ccv-4012001 CCV			00:33																											
CCB 240-367825/191			00:37																											
ZZZZZZ			00:42																											
CCV 240-367825/193			00:46																											
CCB 240-367825/194			00:50																											
CCVL 240-367825/195	1		08:02	X	X																									

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-367825/4 02/12/2019 11:07				CCV 240-367825/78 02/12/2019 16:29				CCV 240-367825/90 02/12/2019 17:21			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	12700		12500	101	23700		25000	95	24200		25000	97
Manganese	1500		1500	100	2010		2000	100	2050		2000	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	CCV 240-367825/102 02/12/2019 18:13				CCV 240-367825/114 02/12/2019 19:05							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	24400		25000	98	24100		25000	96				
Manganese	2040		2000	102	2030		2000	101				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-367825/6 02/12/2019 11:16				CCVL 240-367825/195 02/13/2019 08:02							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	201		200	100	201		200	100				
Manganese	13.5	J	15.0	90	14.5	J	15.0	97				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-367825/115 02/12/2019 19:09							
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U						
Manganese	15	2.1	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367490/1-A

Instrument Code: I9 Batch No.: 367825

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	26	U		6010C
7439-96-5	Manganese	2.1	U		6010C

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICSA 240-367825/8 Instrument ID: I9

Lab File ID: I9021219A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**189110**	**95**
Manganese		**0.0456**	
Aluminum	*500000*	*491470*	*98*
Antimony		*-0.612*	
Arsenic		*-7.05*	
Barium		*-0.107*	
Beryllium		*-0.151*	
Boron		*-2.91*	
Cadmium		*1.16*	
Calcium	*500000*	*460700*	*92*
Chromium		*3.99*	
Cobalt		*-1.66*	
Copper		*-0.261*	
Lead		*2.09*	
Lithium		*11.2*	
Magnesium	*500000*	*486490*	*97*
Molybdenum		*0.292*	
Nickel		*3.93*	
Potassium		*23.8*	
Selenium		*-0.513*	
Silicon		*0.0766*	
Silver		*-0.424*	
Sodium		*66.5*	
Strontium		*6.45*	
Thallium		*-8.76*	
Tin		*4.17*	
Titanium		*-0.555*	
Vanadium		*-1.57*	
Zinc		*0.579*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICSAB 240-367825/9 Instrument ID: I9

Lab File ID: I9021219A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Iron	**200000**	**187120**	**94**
Manganese	**500**	**484**	**97**
Aluminum	*500000*	*481610*	*96*
Antimony	*1000*	*1005*	*101*
Arsenic	*1000*	*968*	*97*
Barium	*500*	*485*	*97*
Beryllium	*500*	*469*	*94*
Boron	*500*	*521*	*104*
Cadmium	*1000*	*1022*	*102*
Calcium	*500000*	*461300*	*92*
Chromium	*500*	*485*	*97*
Cobalt	*500*	*478*	*96*
Copper	*500*	*546*	*109*
Lead	*1000*	*947*	*95*
Lithium	*500*	*539*	*108*
Magnesium	*500000*	*478220*	*96*
Molybdenum	*1000*	*1013*	*101*
Nickel	*1000*	*944*	*94*
Potassium	*10000*	*10054*	*101*
Selenium	*1000*	*973*	*97*
Silicon	*10000*	*9623*	*96*
Silver	*1000*	*1054*	*105*
Sodium	*10000*	*10150*	*102*
Strontium	*1500*	*1404*	*94*
Thallium	*1000*	*998*	*100*
Tin	*500*	*498*	*100*
Titanium	*500*	*506*	*101*
Vanadium	*500*	*465*	*93*
Zinc	*1000*	*910*	*91*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-107872-B-1-B MS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Iron	1000		110	J	1000	90	75-125		6010C
Manganese	492		29		500	93	75-125		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-107872-B-1-C MSD

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Iron	1010		1000	90	75-125	0	20		6010C
Manganese	500		500	94	75-125	2	20		6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107924-1

SDG No.:

Instrument ID: I9 Date: 01/28/2019 12:15

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		10000	6010C

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367490/2-A

Lab Name: TestAmerica Canton Job No.: 240-107924-1

Sample Matrix: Water LCS Source: MTICP1_00082

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	927		93	80	120		6010C
Manganese	500	474		95	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107872-B-1-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107924-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Iron	110	J	130	U	NC		6010C
Manganese	29		27.5	J	NC		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/12/2019 15:08 End Date: 02/12/2019 20:56

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn						
RINSE 240-367822/1			15:08																												
ICIS 240-367822/2			15:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD1 240-367822/3 IC	1		15:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD2 240-367822/4 IC	1		15:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD3 240-367822/5 IC	1		15:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD4 240-367822/6 IC	1		15:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICV 240-367822/7	1		15:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICB 240-367822/8	1		15:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICVL 240-367822/9	1		15:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSA 240-367822/10	1		15:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSAB 240-367822/11	1		15:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-367822/12			15:34																												
CCB 240-367822/13			15:36																												
ZZZZZZ			15:40																												
ZZZZZZ			15:43																												
ZZZZZZ			15:45																												
ZZZZZZ			15:47																												
ZZZZZZ			15:49																												
ZZZZZZ			15:51																												
ZZZZZZ			15:54																												
ZZZZZZ			15:56																												
ZZZZZZ			15:58																												
ZZZZZZ			16:01																												
CCV 240-367822/24			16:03																												
CCB 240-367822/25			16:05																												
ZZZZZZ			16:08																												
ZZZZZZ			16:10																												
ZZZZZZ			16:12																												
ZZZZZZ			16:15																												
ZZZZZZ			16:17																												
ZZZZZZ			16:19																												
ZZZZZZ			16:22																												
ZZZZZZ			16:24																												
ZZZZZZ			16:26																												
ZZZZZZ			16:29																												
CCV 240-367822/36			16:31																												
CCB 240-367822/37			16:33																												
ZZZZZZ			16:36																												
ZZZZZZ			16:38																												
ZZZZZZ			16:40																												
ZZZZZZ			16:43																												
ZZZZZZ			16:45																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/12/2019 15:08 End Date: 02/12/2019 20:56

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			18:24																												
ZZZZZZ			18:26																												
ZZZZZZ			18:28																												
ZZZZZZ			18:31																												
ZZZZZZ			18:33																												
ZZZZZZ			18:35																												
ZZZZZZ			18:37																												
CCV 240-367822/92			18:40																												
CCB 240-367822/93			18:42																												
ZZZZZZ			18:45																												
ZZZZZZ			18:47																												
CCV 240-367822/96			18:49																												
CCB 240-367822/97			18:51																												
CCVL 240-367822/98			18:54																												
ZZZZZZ			18:56																												
ZZZZZZ			18:58																												
ZZZZZZ			19:01																												
ZZZZZZ			19:03																												
ZZZZZZ			19:05																												
ZZZZZZ			19:08																												
ZZZZZZ			19:10																												
ZZZZZZ			19:13																												
ZZZZZZ			19:15																												
CCV 240-367822/108			19:17																												
CCB 240-367822/109			19:19																												
ZZZZZZ			19:22																												
ZZZZZZ			19:24																												
ZZZZZZ			19:26																												
ZZZZZZ			19:29																												
CCV 240-367822/114	1		19:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCB 240-367822/115	1		19:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCVL 240-367822/116			19:36																												
MB 240-367490/1-A	1	R	19:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
LCS 240-367490/3-A	1	R	19:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ZZZZZZ			19:42																												
240-107872-B-1-A SD	5	R	19:45	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ZZZZZZ			19:47																												
240-107872-B-1-D MS	1	R	19:49	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
240-107872-B-1-E MSD	1	R	19:51	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ZZZZZZ			19:54																												
ZZZZZZ			19:56																												
CCV 240-367822/126	1		19:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/12/2019 15:08 End Date: 02/12/2019 20:56

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
CCB 240-367822/127	1		20:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ZZZZZZ			20:03																												
ZZZZZZ			20:05																												
ZZZZZZ			20:07																												
ZZZZZZ			20:10																												
ZZZZZZ			20:12																												
ZZZZZZ			20:14																												
ZZZZZZ			20:17																												
ZZZZZZ			20:19																												
ZZZZZZ			20:21																												
ZZZZZZ			20:24																												
CCV 240-367822/138	1		20:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCB 240-367822/139	1		20:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ZZZZZZ			20:31																												
ZZZZZZ			20:33																												
ZZZZZZ			20:35																												
ZZZZZZ			20:38																												
ZZZZZZ			20:40																												
240-107924-2	1	R	20:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-107924-3	1	R	20:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCV 240-367822/147	1		20:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCB 240-367822/148	1		20:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCVL 240-367822/149	1		20:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCV 240-367822/150			20:54																												
CCB 240-367822/151			20:56																												

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-367822/7 02/12/2019 15:22				CCV 240-367822/126 02/12/2019 19:58				CCV 240-367822/138 02/12/2019 20:26			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	188		200	94	247		250	99	247		250	99
Antimony	39.1		40.0	98	52.8		50.0	106	52.5		50.0	105
Arsenic	38.1		40.0	95	49.2		50.0	98	48.7		50.0	97
Barium	37.5		40.0	94	50.4		50.0	101	50.2		50.0	100
Beryllium	38.3		40.0	96	50.5		50.0	101	48.8		50.0	98
Cadmium	37.7		40.0	94	49.0		50.0	98	48.1		50.0	96
Calcium	19400		20000	97	26200		25000	105	26100		25000	104
Chromium	38.4		40.0	96	49.0		50.0	98	48.7		50.0	97
Cobalt	38.5		40.0	96	49.8		50.0	100	49.5		50.0	99
Copper	37.6		40.0	94	49.5		50.0	99	49.6		50.0	99
Iron	9290		10000	93	12400		12500	100	12500		12500	100
Lead	38.8		40.0	97	48.7		50.0	97	49.6		50.0	99
Magnesium	18700		20000	94	24100		25000	97	23800		25000	95
Manganese	188		200	94	247		250	99	248		250	99
Nickel	38.2		40.0	95	49.1		50.0	98	49.2		50.0	98
Potassium	18700		20000	93	24600		25000	98	24600		25000	99
Selenium	37.2		40.0	93	50.0		50.0	100	51.4		50.0	103
Silver	39.1		40.0	98	50.0		50.0	100	49.7		50.0	99
Sodium	18900		20000	94	23600		25000	94	23200		25000	93
Thallium	37.7		40.0	94	48.4		50.0	97	49.4		50.0	99
Vanadium	37.7		40.0	94	49.7		50.0	99	49.9		50.0	100
Zinc	37.6		40.0	94	50.0		50.0	100	49.9		50.0	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00230

Analyte	ICV 240-367822/7 02/12/2019 15:22				CCV 240-367822/114 02/12/2019 19:31				CCV 240-367822/147 02/12/2019 20:47			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	188		200	94	240		250	96	248		250	99
Antimony	39.1		40.0	98	53.0		50.0	106	53.5		50.0	107
Arsenic	38.1		40.0	95	49.1		50.0	98	49.2		50.0	98
Barium	37.5		40.0	94	49.7		50.0	99	51.3		50.0	103
Beryllium	38.3		40.0	96	51.8		50.0	104	47.7		50.0	95
Cadmium	37.7		40.0	94	50.1		50.0	100	48.9		50.0	98
Calcium	19400		20000	97	25600		25000	102	26400		25000	105
Chromium	38.4		40.0	96	50.9		50.0	102	49.8		50.0	100
Cobalt	38.5		40.0	96	51.9		50.0	104	49.9		50.0	100
Copper	37.6		40.0	94	49.0		50.0	98	48.8		50.0	98
Iron	9290		10000	93	12100		12500	97	12300		12500	98
Lead	38.8		40.0	97	49.4		50.0	99	49.9		50.0	100
Magnesium	18700		20000	94	24200		25000	97	24000		25000	96
Manganese	188		200	94	249		250	99	250		250	100
Nickel	38.2		40.0	95	48.9		50.0	98	48.8		50.0	98
Potassium	18700		20000	93	24300		25000	97	24700		25000	99
Selenium	37.2		40.0	93	49.6		50.0	99	50.3		50.0	101
Silver	39.1		40.0	98	49.4		50.0	99	49.7		50.0	99
Sodium	18900		20000	94	24100		25000	96	23400		25000	94
Thallium	37.7		40.0	94	49.3		50.0	99	49.6		50.0	99
Vanadium	37.7		40.0	94	50.8		50.0	102	50.8		50.0	102
Zinc	37.6		40.0	94	48.6		50.0	97	49.6		50.0	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICV Source: MTMSCRI6020AW_00079 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00079

Analyte	ICVL 240-367822/9 02/12/2019 15:27				CCVL 240-367822/149 02/12/2019 20:52							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	50.1		50.0	100	51.6		50.0	103				
Antimony	2.07		2.00	104	2.11		2.00	106				
Arsenic	4.70	J	5.00	94	4.80	J	5.00	96				
Barium	5.26		5.00	105	5.43		5.00	109				
Beryllium	0.989	J	1.00	99	0.981	J	1.00	98				
Cadmium	1.00		1.00	100	1.02		1.00	102				
Calcium	1060		1000	106	1090		1000	109				
Chromium	1.96	J	2.00	98	1.99	J	2.00	99				
Cobalt	1.07		1.00	107	1.05		1.00	105				
Copper	2.12		2.00	106	2.07		2.00	104				
Iron	106		100	106	106		100	106				
Lead	1.07		1.00	107	1.10		1.00	110				
Magnesium	1040		1000	104	1010		1000	101				
Manganese	4.76	J	5.00	95	5.01		5.00	100				
Nickel	2.03		2.00	102	2.02		2.00	101				
Potassium	1080		1000	108	1060		1000	106				
Selenium	5.04		5.00	101	5.09		5.00	102				
Silver	1.07		1.00	107	1.08		1.00	108				
Sodium	1050		1000	105	983	J	1000	98				
Thallium	1.05		1.00	105	1.06		1.00	106				
Vanadium	5.02		5.00	100	4.96	J	5.00	99				
Zinc	20.1		20.0	101	20.0		20.0	100				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367822/8 02/12/2019 15:25		CCB 240-367822/115 02/12/2019 19:33		CCB 240-367822/127 02/12/2019 20:00		CCB 240-367822/139 02/12/2019 20:28	
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-367822/148 02/12/2019 20:49							
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U						
Antimony	2.0	0.57	U						
Arsenic	5.0	0.75	U						
Barium	5.0	2.2	U						
Beryllium	1.0	0.31	U						
Cadmium	1.0	0.21	U						
Calcium	1000	580	U						
Chromium	2.0	0.98	U						
Cobalt	1.0	0.19	U						
Copper	2.0	1.7	U						
Iron	100	47	U						
Lead	1.0	0.45	U						
Magnesium	1000	200	U						
Manganese	5.0	2.1	U						
Nickel	2.0	1.5	U						
Potassium	1000	220	U						
Selenium	5.0	0.89	U						
Silver	1.0	0.053	U						
Sodium	1000	330	U						
Thallium	1.0	0.20	U						
Vanadium	5.0	0.82	U						
Zinc	20	15	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367490/1-A

Instrument Code: I14 Batch No.: 367822

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	1.7	U		6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	2.1	U		6020A
7440-02-0	Nickel	1.5	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICSA 240-367822/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**47551**	**95**
Antimony		**0.0300**	
Arsenic		**0.0200**	
Barium		**0.0370**	
Beryllium		**0.0000**	
Cadmium		**0.219**	
Calcium	**50000**	**48423**	**97**
Chromium		**0.0910**	
Cobalt		**0.0030**	
Copper		**0.151**	
Iron	**50000**	**48553**	**97**
Lead		**0.0370**	
Magnesium	**50000**	**48553**	**97**
Manganese		**-0.0690**	
Nickel		**0.155**	
Potassium	**50000**	**48657**	**97**
Selenium		**0.0330**	
Silver		**0.0120**	
Sodium	**50000**	**49212**	**98**
Thallium		**0.0000**	
Vanadium		**0.0230**	
Zinc		**0.113**	
Boron		*1.72*	
Lithium		*0.246*	
Molybdenum	*1000*	*1074*	*107*
Strontium		*0.444*	
Tin		*-0.0150*	
Titanium	*1000*	*1009*	*101*
Tungsten		*0.121*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICSAB 240-367822/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Aluminum	**50000**	**45036**	**90**
Antimony	**100**	**101**	**101**
Arsenic	**100**	**95.6**	**96**
Barium	**100**	**94.5**	**95**
Beryllium	**100**	**98.1**	**98**
Cadmium	**100**	**93.8**	**94**
Calcium	**50000**	**46769**	**94**
Chromium	**100**	**93.6**	**94**
Cobalt	**100**	**96.3**	**96**
Copper	**100**	**93.7**	**94**
Iron	**50000**	**46744**	**93**
Lead	**100**	**96.7**	**97**
Magnesium	**50000**	**46140**	**92**
Manganese	**100**	**93.5**	**93**
Nickel	**100**	**94.6**	**95**
Potassium	**50000**	**46287**	**93**
Selenium	**100**	**94.4**	**94**
Silver	**100**	**97.5**	**97**
Sodium	**50000**	**46057**	**92**
Thallium	**100**	**95.5**	**95**
Vanadium	**100**	**94.6**	**95**
Zinc	**100**	**95.2**	**95**
Boron	*100*	*96.0*	*96*
Lithium	*100*	*103*	*103*
Molybdenum	*1100*	*1112*	*101*
Strontium	*100*	*93.9*	*94*
Tin	*100*	*101*	*101*
Titanium	*1100*	*1058*	*96*
Tungsten	*100*	*98.3*	*98*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-107872-B-1-D MS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Silver	92.2		0.053	U	100	92	75-125		6020A
Aluminum	8570		71		10000	85	75-125		6020A
Arsenic	951		0.75	U	1000	95	75-125		6020A
Barium	972		19		1000	95	75-125		6020A
Beryllium	972		0.74	J	1000	97	75-125		6020A
Cadmium	884		0.21	U	1000	88	75-125		6020A
Cobalt	886		0.75	J	1000	89	75-125		6020A
Chromium	885		0.98	U	1000	88	75-125		6020A
Copper	869		3.0		1000	87	75-125		6020A
Iron	9090		110		10000	90	75-125		6020A
Manganese	908		27		1000	88	75-125		6020A
Nickel	897		1.5	J	1000	90	75-125		6020A
Lead	894		0.95	J	1000	89	75-125		6020A
Antimony	98.2		0.57	U	100	98	75-125		6020A
Selenium	973		0.89	U	1000	97	75-125		6020A
Thallium	224		0.20	U	250	89	75-125		6020A
Vanadium	918		0.82	U	1000	92	75-125		6020A
Zinc	881		15	U	1000	88	75-125		6020A
Potassium	15100		6300		10000	88	75-125		6020A
Magnesium	352000		340000		10000	92	75-125	4	6020A
Sodium	79000		71000		10000	81	75-125	4	6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-107872-B-1-E MSD

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Silver	93.5		100	94	75-125	1	20		6020A
Aluminum	8620		10000	85	75-125	1	20		6020A
Arsenic	955		1000	95	75-125	0	20		6020A
Barium	982		1000	96	75-125	1	20		6020A
Beryllium	960		1000	96	75-125	1	20		6020A
Cadmium	886		1000	89	75-125	0	20		6020A
Cobalt	887		1000	89	75-125	0	20		6020A
Chromium	896		1000	90	75-125	1	20		6020A
Copper	875		1000	87	75-125	1	20		6020A
Iron	9120		10000	90	75-125	0	20		6020A
Manganese	922		1000	89	75-125	2	20		6020A
Nickel	888		1000	89	75-125	1	20		6020A
Lead	897		1000	90	75-125	0	20		6020A
Antimony	98.7		100	99	75-125	1	20		6020A
Selenium	992		1000	99	75-125	2	20		6020A
Thallium	224		250	90	75-125	0	20		6020A
Vanadium	924		1000	92	75-125	1	20		6020A
Zinc	882		1000	88	75-125	0	20		6020A
Potassium	15100		10000	88	75-125	0	20		6020A
Magnesium	354000		10000	110	75-125	1	20	4	6020A
Sodium	78900		10000	80	75-125	0	20	4	6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367490/3-A

Lab Name: TestAmerica Canton Job No.: 240-107924-1

Sample Matrix: Water LCS Source: MTICPMSB_00039

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	94.6		95	80	120		6020A
Aluminum	10000	8620		86	80	120		6020A
Arsenic	1000	890		89	80	120		6020A
Barium	1000	933		93	80	120		6020A
Beryllium	1000	965		97	80	120		6020A
Cadmium	1000	936		94	80	120		6020A
Cobalt	1000	947		95	80	120		6020A
Chromium	1000	920		92	80	120		6020A
Copper	1000	879		88	80	120		6020A
Iron	10000	8570		86	80	120		6020A
Manganese	1000	900		90	80	120		6020A
Nickel	1000	897		90	80	120		6020A
Lead	1000	939		94	80	120		6020A
Antimony	100	94.3		94	80	120		6020A
Selenium	1000	873		87	80	120		6020A
Thallium	250	233		93	80	120		6020A
Vanadium	1000	909		91	80	120		6020A
Zinc	1000	893		89	80	120		6020A
Calcium	10000	9830		98	80	120		6020A
Potassium	10000	8760		88	80	120		6020A
Magnesium	10000	8720		87	80	120		6020A
Sodium	10000	8740		87	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107872-B-1-A SD

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107924-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Silver	0.053	U	0.27	U	NC		6020A
Aluminum	71		170	U	NC		6020A
Arsenic	0.75	U	3.8	U	NC		6020A
Barium	19		18.8	J	NC		6020A
Beryllium	0.74	J	1.5	U	NC		6020A
Cadmium	0.21	U	1.1	U	NC		6020A
Cobalt	0.75	J	0.95	U	NC		6020A
Chromium	0.98	U	4.9	U	NC		6020A
Copper	3.0		8.5	U	NC		6020A
Iron	110		240	U	NC		6020A
Manganese	27		27.4		NC		6020A
Nickel	1.5	J	7.4	U	NC		6020A
Lead	0.95	J	2.3	U	NC		6020A
Antimony	0.57	U	2.9	U	NC		6020A
Selenium	0.89	U	4.5	U	NC		6020A
Thallium	0.20	U	1.0	U	NC		6020A
Vanadium	0.82	U	4.1	U	NC		6020A
Zinc	15	U	75	U	NC		6020A
Potassium	6300		6500		NC		6020A
Magnesium	340000		344000		0.48		6020A
Sodium	71000		71100		NC		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107924-1

SDG No.:

Instrument ID: I14 Date: 10/02/2018 11:17

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICP Instrument ID: I9 Start Date: 02/12/2019 End Date: 02/13/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-367825/1	10:54										
ICV 240-367825/4	11:07	100		99		99		100			
ICB 240-367825/5	11:11	99		100		98		100			
ICVL 240-367825/6	11:16	99		100		99		101			
ICSA 240-367825/8	11:25	90		89		91		95			
ICSAB 240-367825/9	11:29	91		91		94		97			
CCV 240-367825/78	16:29	96		94		97		96			
CCB 240-367825/79	16:33	97		96		98		98			
MB 240-367490/1-A	16:42	98		98		99		99			
LCS 240-367490/2-A	16:47	98		96		99		97			
240-107872-B-1-A SD ^5	16:55	100		97		101		99			
240-107872-B-1-B MS	17:04	93		92		98		94			
240-107872-B-1-C MSD	17:08	93		92		99		95			
CCV 240-367825/90	17:21	98		96		100		98			
CCB 240-367825/91	17:25	100		99		101		101			
CCV 240-367825/102	18:13	98		96		100		98			
CCB 240-367825/103	18:17	98		98		99		99			
240-107924-2	18:44	104		106		110		107			
240-107924-3	18:48	102		100		103		104			
CCV 240-367825/114	19:05	99		97		101		101			
CCB 240-367825/115	19:09	99		99		101		102			
CCVL 240-367825/195	08:02	113		105		101		103			

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/12/2019 End Date: 02/12/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-367822/3 IC	15:13	99		100		100		98		97	
STD2 240-367822/4 IC	15:15	97		98		98		97		95	
STD3 240-367822/5 IC	15:18	94		97		98		96		92	
STD4 240-367822/6 IC	15:20	100		99		100		99		101	
ICV 240-367822/7	15:22	97		100		101		99		97	
ICB 240-367822/8	15:25	97		101		104		100		101	
ICVL 240-367822/9	15:27	98		100		103		99		101	
ICSA 240-367822/10	15:29	94		98		99		95		91	
ICSAB 240-367822/11	15:32	90		98		99		95		92	
CCV 240-367822/114	19:31	83		96		101		94		95	
CCB 240-367822/115	19:33	87		99		105		96		102	
MB 240-367490/1-A	19:38	90		102		105		99		102	
LCS 240-367490/3-A	19:40	84		98		105		94		94	
240-107872-B-1-A SD	19:45	86		103		109		100		99	
240-107872-B-1-D MS	19:49	78		97		102		95		91	
240-107872-B-1-E MSD	19:51	81		101		103		94		97	
CCV 240-367822/126	19:58	90		107		106		100		107	
CCB 240-367822/127	20:00	95		109		107		103		116	
CCV 240-367822/138	20:26	97		110		106		103		115	
CCB 240-367822/139	20:28	102		115		109		104		123	
240-107924-2	20:42	97		111		103		97		108	
240-107924-3	20:45	96		107		103		98		113	
CCV 240-367822/147	20:47	92		104		100		95		108	
CCB 240-367822/148	20:49	94		105		102		97		115	
CCVL 240-367822/149	20:52	93		104		101		96		112	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/12/2019 End Date: 02/12/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-367822/3 IC	15:13	99		98		100		99		101	
STD2 240-367822/4 IC	15:15	95		95		96		99		97	
STD3 240-367822/5 IC	15:18	92		93		93		97		97	
STD4 240-367822/6 IC	15:20	100		100		99		99		99	
ICV 240-367822/7	15:22	98		99		98		100		100	
ICB 240-367822/8	15:25	101		101		100		100		100	
ICVL 240-367822/9	15:27	100		102		101		102		101	
ICSA 240-367822/10	15:29	93		95		92		97		97	
ICSAB 240-367822/11	15:32	94		96		94		98		98	
CCV 240-367822/114	19:31	97		102		97		100		101	
CCB 240-367822/115	19:33	102		108		101		102		102	
MB 240-367490/1-A	19:38	104		107		104		103		104	
LCS 240-367490/3-A	19:40	98		107		97		101		101	
240-107872-B-1-A SD	19:45	101		107		99		103		102	
240-107872-B-1-D MS	19:49	91		96		93		97		98	
240-107872-B-1-E MSD	19:51	89		97		92		96		96	
CCV 240-367822/126	19:58	97		102		101		99		100	
CCB 240-367822/127	20:00	103		104		106		101		102	
CCV 240-367822/138	20:26	99		103		105		103		103	
CCB 240-367822/139	20:28	105		108		109		105		106	
240-107924-2	20:42	93		97		99		98		100	
240-107924-3	20:45	96		102		104		101		102	
CCV 240-367822/147	20:47	94		97		98		97		98	
CCB 240-367822/148	20:49	98		101		103		100		100	
CCVL 240-367822/149	20:52	99		101		102		99		100	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/12/2019 End Date: 02/12/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-367822/3 IC	15:13	101									
STD2 240-367822/4 IC	15:15	96									
STD3 240-367822/5 IC	15:18	95									
STD4 240-367822/6 IC	15:20	101									
ICV 240-367822/7	15:22	99									
ICB 240-367822/8	15:25	101									
ICVL 240-367822/9	15:27	101									
ICSA 240-367822/10	15:29	95									
ICSAB 240-367822/11	15:32	95									
CCV 240-367822/114	19:31	98									
CCB 240-367822/115	19:33	101									
MB 240-367490/1-A	19:38	106									
LCS 240-367490/3-A	19:40	100									
240-107872-B-1-A SD	19:45	100									
240-107872-B-1-D MS	19:49	90									
240-107872-B-1-E MSD	19:51	89									
CCV 240-367822/126	19:58	97									
CCB 240-367822/127	20:00	101									
CCV 240-367822/138	20:26	101									
CCB 240-367822/139	20:28	105									
240-107924-2	20:42	93									
240-107924-3	20:45	101									
CCV 240-367822/147	20:47	94									
CCB 240-367822/148	20:49	99									
CCVL 240-367822/149	20:52	100									

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367490/1-A	02/11/2019 14:00	367490		50	50
LCS 240-367490/2-A	02/11/2019 14:00	367490		50	50
240-107872-B-1-B MS	02/11/2019 14:00	367490		50	50
240-107872-B-1-C MSD	02/11/2019 14:00	367490		50	50
240-107924-2	02/11/2019 14:00	367490		50	50
240-107924-3	02/11/2019 14:00	367490		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367490/1-A	02/11/2019 14:00	367490		50	50
LCS 240-367490/3-A	02/11/2019 14:00	367490		50	50
240-107872-B-1-D MS	02/11/2019 14:00	367490		50	50
240-107872-B-1-E MSD	02/11/2019 14:00	367490		50	50
240-107924-2	02/11/2019 14:00	367490		50	50
240-107924-3	02/11/2019 14:00	367490		50	50

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367490 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00082	MTICP2A 00090	MTTMHCL 00235
MB 240-367490/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-367490/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107872-B-1 MS		3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107872-B-1 MSD		3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107924-I-2	MRC-MW149B-020819	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107924-I-3	MRC-MW150B-020819	3005A, 6010C	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180
MB 240-367490/1		3005A, 6010C		1 mL
LCS 240-367490/2		3005A, 6010C		1 mL
240-107872-B-1 MS		3005A, 6010C	R	1 mL
240-107872-B-1 MSD		3005A, 6010C	R	1 mL
240-107924-I-2	MRC-MW149B-020819	3005A, 6010C	R	1 mL
240-107924-I-3	MRC-MW150B-020819	3005A, 6010C	R	1 mL

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb4
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367490 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367490 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00038	MTICPMSB 00039	MTTMHCL 00235
MB 240-367490/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-367490/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107872-B-1 MS		3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107872-B-1 MSD		3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107924-I-2	MRC-MW149B-020819	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107924-I-3	MRC-MW150B-020819	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-367490/1		3005A, 6020A		1 mL					
LCS 240-367490/3		3005A, 6020A		1 mL					
240-107872-B-1 MS		3005A, 6020A	R	1 mL					
240-107872-B-1 MSD		3005A, 6020A	R	1 mL					
240-107924-I-2	MRC-MW149B-020819	3005A, 6020A	R	1 mL					
240-107924-I-3	MRC-MW150B-020819	3005A, 6020A	R	1 mL					

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb4
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367490 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW149B-020819	240-107924-2
MRC-MW150B-020819	240-107924-3

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107924-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW149B-020819	240-107924-2
MRC-MW150B-020819	240-107924-3

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107924-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW149B-020819	240-107924-2
MRC-MW150B-020819	240-107924-3

Comments:

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 02/13/2019 13:29 End Date: 02/13/2019 16:00

Lab Sample Id	D/F	Type	Time	Analytes
				HardCC
MB 240-367926/1	1	T	13:29	X
LCS 240-367926/2	1	T	13:34	X
ZZZZZZ			13:39	
ZZZZZZ			13:44	
ZZZZZZ			13:49	
ZZZZZZ			13:55	
ZZZZZZ			14:00	
ZZZZZZ			14:05	
ZZZZZZ			14:10	
ZZZZZZ			14:16	
ZZZZZZ			14:21	
ZZZZZZ			14:26	
ZZZZZZ			14:31	
ZZZZZZ			14:37	
ZZZZZZ			14:42	
240-107760-A-4 MS	1	T	14:47	X
240-107760-A-4 MSD	1	T	14:52	X
ZZZZZZ			14:57	
ZZZZZZ			15:03	
ZZZZZZ			15:08	
240-107796-I-4 DU	1	T	15:13	X
ZZZZZZ			15:18	
ZZZZZZ			15:24	
240-107924-2	1	T	15:29	X
240-107924-3	1	T	15:34	X
ZZZZZZ			15:39	
ZZZZZZ			15:45	
ZZZZZZ			15:50	
ZZZZZZ			15:55	
ZZZZZZ			16:00	

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/14/2019 11:41 End Date: 02/14/2019 15:39

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			11:41																									
ZZZZZZ			11:52																									
ZZZZZZ			11:57																									
ZZZZZZ			12:01																									
ZZZZZZ			12:05																									
ZZZZZZ			12:10																									
ZZZZZZ			12:15																									
ZZZZZZ			12:20																									
ZZZZZZ			12:25																									
ZZZZZZ			12:30																									
ZZZZZZ			12:34																									
ZZZZZZ			12:39																									
ZZZZZZ			12:41																									
ZZZZZZ			12:45																									
ZZZZZZ			12:50																									
ZZZZZZ			12:55																									
ZZZZZZ			13:00																									
ZZZZZZ			13:05																									
ZZZZZZ			13:09																									
ZZZZZZ			13:14																									
ZZZZZZ			13:19																									
ZZZZZZ			13:24																									
ZZZZZZ			13:29																									
ZZZZZZ			13:30																									
ZZZZZZ			13:35																									
ZZZZZZ			13:40																									
ZZZZZZ			13:45																									
ZZZZZZ			13:49																									
LCS 240-368201/29	1	T	13:54	X																								
MB 240-368201/30	1	T	13:58	X																								
ZZZZZZ			14:02																									
ZZZZZZ			14:07																									
ZZZZZZ			14:12																									
ZZZZZZ			14:16																									
ZZZZZZ			14:18																									
ZZZZZZ			14:23																									
ZZZZZZ			14:28																									
ZZZZZZ			14:33																									
ZZZZZZ			14:37																									
ZZZZZZ			14:42																									
ZZZZZZ			14:46																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/14/2019 11:41 End Date: 02/14/2019 15:39

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			14:51																									
240-107813-M-1 DU	1	T	14:56	X																								
ZZZZZZ			15:01																									
ZZZZZZ			15:06																									
ZZZZZZ			15:08																									
ZZZZZZ			15:13																									
ZZZZZZ			15:17																									
ZZZZZZ			15:20																									
ZZZZZZ			15:24																									
240-107924-2	1	T	15:27	X																								
240-107924-3	1	T	15:32	X																								
ZZZZZZ			15:37																									
ZZZZZZ			15:39																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 02/14/2019 09:55 End Date: 02/14/2019 09:55

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-368035/1	1	T	09:55	X																								
LCS 240-368035/2	1	T	09:55	X																								
240-107997-B-2 DU	1	T	09:55	X																								
ZZZZZZ			09:55																									
ZZZZZZ			09:55																									
ZZZZZZ			09:55																									
ZZZZZZ			09:55																									
240-107924-2	1	T	09:55	X																								
240-107924-3	1	T	09:55	X																								
ZZZZZZ			09:55																									
ZZZZZZ			09:55																									
ZZZZZZ			09:55																									
ZZZZZZ			09:55																									
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ZZZZZZ			09:55																									
ZZZZZZ			09:55																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: VERONICA Analysis Method: 9056A

Start Date: 08/06/2018 12:54 End Date: 08/06/2018 16:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339515/1 IC	1		12:54	X																								
STD2 240-339515/2 IC	1		13:14	X																								
STD3 240-339515/3 IC	1		13:34	X																								
STD4 240-339515/4 IC	1		13:54	X																								
STD5 240-339515/5 ICRT	1		14:14	X																								
STD6 240-339515/6 IC	1		14:34	X																								
STD7 240-339515/7 IC	1		14:54	X																								
STD8 240-339515/8 IC	1		15:15	X																								
STD9 240-339515/9 IC	1		15:35	X																								
ICV 240-339515/10	1		15:55	X																								
ICB 240-339515/11	1		16:15	X																								

Prep Types:
=

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Analyst: LKG Batch Start Date: 08/06/2018

Reporting Units: mg/L Analytical Batch No.: 339515

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:55	Sulfate	52.4	50.0	105	90-110		WCICLCS_00669
11	ICB	16:15	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: VERONICA Analysis Method: 9056A

Start Date: 02/14/2019 17:48 End Date: 02/15/2019 04:52

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
CCV 240-368146/1	1		17:48		X																								
CCB 240-368146/2	1		18:08		X																								
MB 240-368146/3	1	T	18:28		X																								
LCS 240-368146/4	1	T	18:48		X																								
ZZZZZZ			19:09																										
240-108064-E-2 MS	1	T	19:29		X																								
240-108064-E-2 MSD	1	T	19:49		X																								
ZZZZZZ			20:09																										
ZZZZZZ			20:29																										
ZZZZZZ			20:49																										
ZZZZZZ			21:09																										
ZZZZZZ			21:29																										
CCV 240-368146/13	1		21:49		X																								
CCB 240-368146/14	1		22:10		X																								
240-107924-2	1	T	22:30	X	X																								
ZZZZZZ			22:50																										
240-107924-3	1	T	23:10	X	X																								
ZZZZZZ			23:30																										
ZZZZZZ			23:50																										
ZZZZZZ			00:10																										
ZZZZZZ			00:30																										
240-107995-A-1 MS	10	T	00:50		X																								
240-107995-A-1 MSD	10	T	01:11		X																								
ZZZZZZ			01:31																										
CCV 240-368146/25	1		01:51		X																								
CCB 240-368146/26	1		02:11		X																								
ZZZZZZ			02:31																										
ZZZZZZ			02:52																										
ZZZZZZ			03:12																										
ZZZZZZ			03:32																										
ZZZZZZ			03:52																										
ZZZZZZ			04:12																										
CCV 240-368146/33			04:32																										
CCB 240-368146/34			04:52																										

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Analyst: JWW Batch Start Date: 02/14/2019

Reporting Units: mg/L Analytical Batch No.: 368146

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	17:48	Sulfate	48.1	50.0	96	90-110		WCICCCV_00861
2	CCB	18:08	Sulfate	0.35				U	
13	CCV	21:49	Sulfate	48.0	50.0	96	90-110		WCICCCV_00861
14	CCB	22:10	Sulfate	0.35				U	
25	CCV	01:51	Sulfate	47.9	50.0	96	90-110		WCICCCV_00861
26	CCB	02:11	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/17/2019 12:50 End Date: 02/17/2019 13:27

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575925/1	1		12:50	X																								
ICB 490-575925/2	1		12:51	X																								
CCV 490-575925/3	1		12:52	X																								
CCV 490-575925/4	1		12:53	X																								
CCB 490-575925/5	1		12:54	X																								
MB 490-575925/6	1	T	12:55	X																								
LCS 490-575925/7	1	T	12:57	X																								
ZZZZZZ			12:58																									
ZZZZZZ			12:59																									
ZZZZZZ			13:00																									
ZZZZZZ			13:01																									
ZZZZZZ			13:02																									
240-107796-F-3 MS	1	T	13:04	X																								
240-107796-F-3 MSD	1	T	13:05	X																								
ZZZZZZ			13:06																									
ZZZZZZ			13:07																									
ZZZZZZ			13:08																									
ZZZZZZ			13:10																									
ZZZZZZ			13:11																									
CCV 490-575925/20	1		13:12	X																								
CCB 490-575925/21	1		13:13	X																								
ZZZZZZ			13:14																									
ZZZZZZ			13:15																									
240-107924-2	1	T	13:17	X																								
240-107924-3	1	T	13:18	X																								
ZZZZZZ			13:19																									
ZZZZZZ			13:20																									
ZZZZZZ			13:21																									
ZZZZZZ			13:23																									
ZZZZZZ			13:24																									
ZZZZZZ			13:25																									
CCV 490-575925/32	1		13:26	X																								
CCB 490-575925/33	1		13:27	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG No.:

Analyst: MSP Batch Start Date: 02/17/2019

Reporting Units: mg/L Analytical Batch No.: 575925

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:50	Nitrate Nitrite as N	3.26	3.00	109	90-110		W_ICAl_00027
2	ICB	12:51	Nitrate Nitrite as N	0.040				U	
3	CCV	12:52	Nitrate Nitrite as N	4.88	5.00	98	90-110		W_Nitrate_00020
4	CCV	12:53	Nitrate Nitrite as N	4.93	5.00	99	90-110		IC Primary_00012
5	CCB	12:54	Nitrate Nitrite as N	0.040				U	
20	CCV	13:12	Nitrate Nitrite as N	4.76	5.00	95	90-110		W_Nitrate_00020
21	CCB	13:13	Nitrate Nitrite as N	0.0463				J	
32	CCV	13:26	Nitrate Nitrite as N	4.62	5.00	92	90-110		W_Nitrate_00020
33	CCB	13:27	Nitrate Nitrite as N	0.040				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575925 Date: 02/17/2019 12:55							
SM 4500 NO3 F	MB 490-575925/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925 Date: 02/17/2019 13:04											
SM 4500 NO3 F	240-107796-F-3	Nitrate Nitrite as N	0.86		mg/L						
SM 4500 NO3 F	240-107796-F-3 MS	Nitrate Nitrite as N	3.96		mg/L	3.00	103	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925 Date: 02/17/2019 13:05											
SM 4500 NO3 F	240-107796-F-3 MSD	Nitrate Nitrite as N	4.15		mg/L	3.00	110	90-110	5	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925	Date: 02/17/2019 12:57										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575925/7	Nitrate Nitrite as N	3.23		mg/L	3.00	108	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107924-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/27/2019 08:00 End Date: 02/27/2019 08:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-271440/1	1	T	08:00	X																								
ZZZZZZ			08:00																									
240-107850-E-2 DU	1	T	08:00	X																								
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
240-107924-2	1	T	08:00	X																								
240-107924-3	1	T	08:00	X																								
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									

Prep Types:
T = Total/NA

FORM XIII-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107924-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 271440 Date: 02/27/2019 08:00							
SM 2520B	MB 180-271440/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 271440 Date: 02/27/2019 08:00								
SM 2520B		240-107850-E-2	Salinity	2.0	No Unit			U
SM 2520B		240-107850-E-2 DU	Salinity	2.0	No Unit	NC	20	U

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 368201 Date: 02/14/2019 13:58							
2320B-2011	MB 240-368201/30	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 367926 Date: 02/13/2019 13:29							
2340C-2011	MB 240-367926/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 368035 Date: 02/14/2019 09:55							
2540 C-2011	MB 240-368035/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 368146 Date: 02/14/2019 18:28							
9056A	MB 240-368146/3	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-368146/3	Sulfate	0.35	U	mg/L	1.0	1

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367926 Date: 02/13/2019 14:47											
2340C-2011	240-107760-A-4	Hardness as calcium carbonate	410		mg/L						
2340C-2011	240-107760-A-4 MS	Hardness as calcium carbonate	1420		mg/L	1000	101	80-120			
Batch ID: 368146 Date: 02/14/2019 19:29											
9056A	240-108064-E-2	Sulfate	29		mg/L						
9056A	240-108064-E-2 MS	Sulfate	80.8		mg/L	50.0	104	80-120			
Batch ID: 368146 Date: 02/15/2019 00:50											
9056A	240-107995-A-1	Sulfate	96		mg/L						
9056A	240-107995-A-1 MS	Sulfate	623		mg/L	500	106	80-120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367926 Date: 02/13/2019 14:52											
2340C-2011	240-107760-A-4 MSD	Hardness as calcium carbonate	1430		mg/L	1000	102	80-120	1	10	
Batch ID: 368146 Date: 02/14/2019 19:49											
9056A	240-108064-E-2 MSD	Sulfate	83.6		mg/L	50.0	109	80-120	3	15	
Batch ID: 368146 Date: 02/15/2019 01:11											
9056A	240-107995-A-1 MSD	Sulfate	610		mg/L	500	103	80-120	2	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 368201	Date: 02/14/2019 14:56							
2320B-2011		240-107813-M-1	Alkalinity	98	mg/L			
2320B-2011		240-107813-M-1 DU	Alkalinity	98.6	mg/L	0.4	20	
Batch ID: 367926	Date: 02/13/2019 15:13							
2340C-2011		240-107796-I-4	Hardness as calcium carbonate	76	mg/L			
2340C-2011		240-107796-I-4 DU	Hardness as calcium carbonate	76.0	mg/L	0	20	
Batch ID: 368035	Date: 02/14/2019 09:55							
2540 C-2011		240-107997-B-2	Total Dissolved Solids	910	mg/L			
2540 C-2011		240-107997-B-2 DU	Total Dissolved Solids	973	mg/L	6	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 368201	Date: 02/14/2019 13:54										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-368201/29	Alkalinity	259		mg/L	271	96	86-123			
Batch ID: 367926	Date: 02/13/2019 13:34										
						LCS Source: WCHARDNESS_00031					
2340C-2011	LCS 240-367926/2	Hardness as calcium carbonate	264		mg/L	246	107	90-110			
Batch ID: 368035	Date: 02/14/2019 09:55										
						LCS Source: WCPHENOVSOLID_00039					
2540 C-2011	LCS 240-368035/2	Total Dissolved Solids	214		mg/L	202	106	80-120			
Batch ID: 368146	Date: 02/14/2019 18:48										
						LCS Source: WCICLCS_00696					
9056A	LCS 240-368146/4	Sulfate	54.4		mg/L	50.0	109	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367926 Batch Start Date: 02/13/19 13:29 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 02/13/19 16:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCCALCIUMCARB 00018	WCHARDNESS 00031	
MB 240-367926/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-367926/2		2340C-2011		25 mL	25 mL	6.60 mL		25 mL	
240-107760-A-4 MS		2340C-2011	T	5 mL	25 mL	7.10 mL	5 mL		
240-107760-A-4 MSD		2340C-2011	T	5 mL	25 mL	7.15 mL	5 mL		
240-107796-I-4 DU		2340C-2011	T	25 mL	25 mL	1.90 mL			
240-107924-G-2	MRC-MW149B-020819	2340C-2011	T	25 mL	25 mL	2.55 mL			
240-107924-G-3	MRC-MW150B-020819	2340C-2011	T	25 mL	25 mL	1.00 mL			

Batch Notes	
Batch Comment	BEAKERS--4010980
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C9, E3
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 368201 Batch Start Date: 02/14/19 11:41 Batch Analyst: Carson, Monica

Batch Method: 2320B-2011 Batch End Date: 02/15/19 08:57

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-368201/29		2320B-2011		InitialAmount is blank	10 mL				
MB 240-368201/30		2320B-2011		InitialAmount is blank					
240-107813-M-1 DU		2320B-2011	T	InitialAmount is blank					
240-107924-E-2	MRC-MW149B-020819	2320B-2011	T	InitialAmount is blank					
240-107924-E-3	MRC-MW150B-020819	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4- 4005008
pH Buffer 2 ID	7- 4017506
pH Buffer 3 ID	10- 3892955
pH Buffer 4 ID	12- 3891579
Nominal Amount Used	10 mL
pH Meter ID	severus
Probe ID	WCP 137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 368035 Batch Start Date: 02/14/19 09:55 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date: 02/15/19 14:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-368035/1		2540 C-2011			3.2936 g	100 mL	3.2940 g	3.2942 g	0 g
LCS 240-368035/2		2540 C-2011			3.2506 g	100 mL	3.2725 g	3.2720 g	0 g
240-107997-B-2 DU		2540 C-2011	T	1259 umhos/cm	3.3286 g	100 mL	3.4263 g	3.4259 g	0 g
240-107924-H-2	MRC-MW149B-020819	2540 C-2011	T	1241 umhos/cm	3.2334 g	100 mL	3.3048 g	3.3044 g	0 g
240-107924-H-3	MRC-MW150B-020819	2540 C-2011	T	165 umhos/cm	3.2903 g	100 mL	3.3022 g	3.3018 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 240-368035/1		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0004 g	0.0006 g	N/A g
LCS 240-368035/2		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0219 g	0.0214 g	N/A g
240-107997-B-2 DU		2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0977 g	0.0973 g	N/A g
240-107924-H-2	MRC-MW149B-020819	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0714 g	0.071 g	N/A g
240-107924-H-3	MRC-MW150B-020819	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0119 g	0.0115 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00039		
MB 240-368035/1		2540 C-2011		N/A g	100 mL	OK			
LCS 240-368035/2		2540 C-2011		N/A g	100 mL	OK	100 mL		
240-107997-B-2 DU		2540 C-2011	T	N/A g	100 mL	OK			
240-107924-H-2	MRC-MW149B-020819	2540 C-2011	T	N/A g	100 mL	OK			
240-107924-H-3	MRC-MW150B-020819	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 368035 Batch Start Date: 02/14/19 09:55 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date: 02/15/19 14:06

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/15/2019 10:49
Date/Time - Out - CW (WT2)	02/15/2019 11:50
Temperature - Start - CW (WT2) - Correct	182 Celsius
Temperature - End - CW (WT2) - Correct	181 Celsius
Temperature - Start-CW(WT2) -Uncorrected	182 Celsius
Temperature - End-CW(WT2) -Uncorrected	181 Celsius
Temperature - Start - Corrected	105 Celsius
Temperature - End - Corrected	104 Celsius
Date/Time - In	02/14/2019 11:17
Date/Time - Out	02/15/2019 08:20
Filter ID	60020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O06
Pipette/Syringe/Dispenser ID	B3
Thermometer ID - Low Temperature	84922
Thermometer ID	181417084
Temperature - Start - Uncorrected	105 Celsius
Temperature - End - Uncorrected	104 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/15/2019 08:20 No Unit
Weight(WT1) Date/Time Out	02/15/2019 09:51
Weight(WT1) Start Temp	181 Celsius
Weight(WT1) Temp Out	181 Celsius
Uncorrected Weight(WT1) Start Temp	181 Celsius
Uncorrected Weight(WT1) Temp Out	181 Celsius

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 368035 Batch Start Date: 02/14/19 09:55 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date: 02/15/19 14:06

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 339515 Batch Start Date: 08/06/18 12:54 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339515/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339515/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339515/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339515/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339515/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339515/6 IC		300.0		5 mL	2 mL				
STD7 240-339515/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339515/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339515/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 368146 Batch Start Date: 02/14/19 17:48 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107924-H-2	MRC-MW149B-020819	300.0 & 9056A	T	5 mL					
240-107924-H-2	MRC-MW149B-020819	300.0 & 9056A	T	5 mL					
240-107924-H-3	MRC-MW150B-020819	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 339515 Batch Start Date: 08/06/18 12:54 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICLCS 00669				
ICV 240-339515/10		9056A		5 mL	5 mL				
ICB 240-339515/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 368146 Batch Start Date: 02/14/19 17:48 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107924-H-2	MRC-MW149B-020819	300.0 & 9056A	T	5 mL					
240-107924-H-2	MRC-MW149B-020819	300.0 & 9056A	T	5 mL					
240-107924-H-3	MRC-MW150B-020819	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 368146 Batch Start Date: 02/14/19 17:48 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00861	WCICLCS 00696	WCICSOLNA1 00018	WCICSOLNB1 00018	
CCV 240-368146/1		9056A		5 mL	5 mL				
CCB 240-368146/2		9056A		5 mL					
MB 240-368146/3		9056A		5 mL					
LCS 240-368146/4		9056A		5 mL		5 mL			
240-108064-E-2 MS		9056A	T	5 mL			0.1 mL	0.1 mL	
240-108064-E-2 MSD		9056A	T	5 mL			0.1 mL	0.1 mL	
CCV 240-368146/13		9056A		5 mL	5 mL				
CCB 240-368146/14		9056A		5 mL					
240-107995-A-1 MS		9056A	T	5 mL			0.1 mL	0.1 mL	
240-107995-A-1 MSD		9056A	T	5 mL			0.1 mL	0.1 mL	
CCV 240-368146/25		9056A		5 mL	5 mL				
CCB 240-368146/26		9056A		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575925/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575925/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575925/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575925/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575925/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575925/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575925/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
240-107796-F-3 MS		SM 4500 NO3 F	T	50 mL	50 mL		0.25 mL		8.65
240-107796-F-3 MSD		SM 4500 NO3 F	T	50 mL	50 mL		0.25 mL		8.65
CCV 490-575925/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/21		SM 4500 NO3 F		50 mL	50 mL				
240-107924-F-2	MRC-MW149B-020819	SM 4500 NO3 F	T	50 mL	50 mL				8.32
240-107924-F-3	MRC-MW150B-020819	SM 4500 NO3 F	T	50 mL	50 mL				7.6
CCV 490-575925/32		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/33		SM 4500 NO3 F		50 mL	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

VOC CALCULATION **SAMPLE**

TARGET ANALYTE	TRICHLOROETHENE	
ANALYTE RESPONSE	1661266	
INTERNAL STANDARD	FLUOROBENZENE	
I.S. RESPONSE	1613680	
I.S. CONCENTRATION	10	µg/l
ANALYTE CAL. RF	0.324	
DILUTION FACTOR (DF)	2.5	
INITIAL SAMPLE VOLUME - V1	5	ml
FINAL SAMPLE VOLUME - V2	5	ml
ON COLUMN AMOUNT	31.7743555	µg/l

$$\frac{\text{(ANALYTE RESPONSE) x (I.S. CONCENTRATION) X DF x V2}}{\text{(I.S. RESPONSE) x (CAL. R.F.) x V1}} = \mathbf{79.44}\ \mathbf{\mu g/l}$$

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: MRC-MW150B-020819 | Lab Sample ID: 240-107924-3

Matrix: Water | Lab File ID: UXC8820.D

Analysis Method: 8260C | Date Collected: 02/08/2019 11:10

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 17:54

Soil Aliquot Vol: | Dilution Factor: 2.5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.50	U	2.5	0.50
156-59-2	cis-1,2-Dichloroethene	47		2.5	0.40
10061-01-5	cis-1,3-Dichloropropene	1.5	U	2.5	1.5
87-68-3	Hexachlorobutadiene	2.1	U	2.5	2.1
74-95-3	Dibromomethane	0.23	U	2.5	0.23
75-27-4	Bromodichloromethane	0.43	U	2.5	0.43
75-71-8	Dichlorodifluoromethane	0.88	U	2.5	0.88
100-41-4	Ethylbenzene	0.28	U	2.5	0.28
106-93-4	1,2-Dibromoethane	0.30	U	2.5	0.30
108-20-3	Diisopropyl ether	0.43	U	25	0.43
91-20-3	Naphthalene	0.80	U	2.5	0.80
104-51-8	n-Butylbenzene	0.35	U	2.5	0.35
98-82-8	Isopropylbenzene	0.23	U	2.5	0.23
103-65-1	N-Propylbenzene	0.38	U	2.5	0.38
78-93-3	2-Butanone (MEK)	2.9	U	25	2.9
108-10-1	4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1
135-98-8	sec-Butylbenzene	0.33	U	2.5	0.33
1634-04-4	Methyl tert-butyl ether	0.18	U	2.5	0.18
994-05-8	Tert-amyl methyl ether	0.28	U	13	0.28
75-09-2	Methylene Chloride	6.6	U	13	6.6
100-42-5	Styrene	0.25	U	2.5	0.25
637-92-3	Ethyl tert-butyl ether	0.38	U	13	0.38
98-06-6	tert-Butylbenzene	0.35	U	2.5	0.35
127-18-4	Tetrachloroethene	0.38	U	2.5	0.38
108-88-3	Toluene	0.35	U	2.5	0.35
156-60-5	trans-1,2-Dichloroethene	0.48	U	2.5	0.48
10061-02-6	trans-1,3-Dichloropropene	1.7	U	2.5	1.7
79-01-6	Trichloroethene	79		2.5	0.25
75-69-4	Trichlorofluoromethane	1.1	U	2.5	1.1
108-05-4	Vinyl acetate	0.48	U	5.0	0.48
75-01-4	Vinyl chloride	1.8	J	2.5	0.50
75-65-0	tert-Butyl alcohol	4.2	U	130	4.2
1330-20-7	Xylenes, Total	0.38	U	5.0	0.38
124-48-1	Chlorodibromomethane	0.98	U	2.5	0.98

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX15\20190213-84450.b\UXC8820.D
Lims ID: 240-107924-B-3
Client ID: MRC-MW150B-020819
Sample Type: Client
Inject. Date: 13-Feb-2019 17:54:30 ALS Bottle#: 15 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 2.5000
Sample Info: 240-0084450-042
Misc. Info.: C90213A,8260LLUX15,,43582
Operator ID: Instrument ID: A3UX15

Method: \\chromna\Canton\ChromData\A3UX15\20190213-84450.b\8260_15.m
Limit Group: MSV 8260C ICAL
Last Update: 14-Feb-2019 09:53:08 Calib Date: 21-Jan-2019 19:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX15\20190121-83824.b\UXC8431.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0301

First Level Reviewer: evansle Date: 14-Feb-2019 09:43:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.196	5.196	0.000	99	1613680	10.0	
* 2 Chlorobenzene-d5	117	7.876	7.876	0.000	84	1377621	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.117	10.117	0.000	93	763754	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.639	4.639	0.000	95	279799	7.33	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.923	4.923	0.000	100	380199	7.75	
$ 6 Toluene-d8 (Surr)	98	6.560	6.560	0.000	93	1137027	6.80	
$ 7 4-Bromofluorobenzene (Surr	95	8.991	8.991	0.000	96	387813	6.48	
9 Dichlorodifluoromethane	85		1.532				ND	
10 Chloromethane	50		1.698				ND	
11 Vinyl chloride	62	1.793	1.793	0.000	97	32672	0.7019	
13 Bromomethane	94		2.065				ND	
14 Chloroethane	64		2.148				ND	
16 Trichlorofluoromethane	101		2.362				ND	
19 1,1-Dichloroethene	96		2.777				ND	
20 1,1,2-Trichloro-1,2,2-trif	151		2.801				ND	
22 Acetone	58		2.824				ND	
24 Carbon disulfide	76	2.990	2.990	0.000	95	19004	0.1521	
28 Methylene Chloride	84		3.180				ND	
29 2-Methyl-2-propanol	59		3.263				ND	
31 Methyl tert-butyl ether	73		3.405				ND	
30 trans-1,2-Dichloroethene	96	3.405	3.417	-0.012	92	6609	0.1465	
34 1,1-Dichloroethane	63		3.761				ND	
36 Vinyl acetate	43		3.785				ND	
35 Isopropyl ether	87		3.797				ND	
38 Tert-butyl ethyl ether	59		4.093				ND	
41 2-Butanone (MEK)	72		4.247				ND	
40 2,2-Dichloropropane	97		4.247				ND	U
39 cis-1,2-Dichloroethene	96	4.247	4.247	0.000	78	933887	18.8	
45 Chlorobromomethane	128		4.449				ND	
47 Chloroform	83		4.496				ND	
48 1,1,1-Trichloroethane	97		4.662				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 1,1-Dichloropropene	75		4.793				ND	
50 Carbon tetrachloride	117		4.805				ND	
53 Benzene	78		4.971				ND	
54 1,2-Dichloroethane	62		4.994				ND	
55 Tert-amyl methyl ether	73		5.042				ND	
58 Trichloroethene	130	5.516	5.516	0.000	95	1661266	31.8	
61 1,2-Dichloropropane	63		5.706				ND	
63 Dibromomethane	93		5.813				ND	
65 Dichlorobromomethane	83		5.931				ND	
67 2-Chloroethyl vinyl ether	63		6.180				ND	
68 cis-1,3-Dichloropropene	75		6.323				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.453				ND	
70 Toluene	91		6.619				ND	
71 trans-1,3-Dichloropropene	75		6.809				ND	
74 Tetrachloroethene	164		7.117				ND	
75 1,3-Dichloropropane	76		7.141				ND	
76 2-Hexanone	43		7.200				ND	
79 Chlorodibromomethane	129		7.342				ND	
80 Ethylene Dibromide	107		7.461				ND	
82 Chlorobenzene	112		7.900				ND	
83 1,1,1,2-Tetrachloroethane	131		7.983				ND	
84 Ethylbenzene	106		7.995				ND	
85 m-Xylene & p-Xylene	91		8.101				ND	
86 o-Xylene	106		8.481				ND	
87 Styrene	104		8.493				ND	
88 Bromoform	173		8.682				ND	
89 Isopropylbenzene	105		8.837				ND	
93 1,1,2,2-Tetrachloroethane	83		9.121				ND	
92 Bromobenzene	156		9.145				ND	
94 1,2,3-Trichloropropane	110		9.169				ND	
96 N-Propylbenzene	120		9.228				ND	
97 2-Chlorotoluene	126		9.323				ND	
99 4-Chlorotoluene	91		9.429				ND	
101 tert-Butylbenzene	119		9.714				ND	
103 1,2,4-Trimethylbenzene	105		9.762				ND	
105 sec-Butylbenzene	105		9.928				ND	
106 1,3-Dichlorobenzene	146		10.046				ND	
107 4-Isopropyltoluene	119		10.070				ND	
108 1,4-Dichlorobenzene	146		10.141				ND	
109 1,2,3-Trimethylbenzene	105		10.176				ND	
111 n-Butylbenzene	91		10.473				ND	
112 1,2-Dichlorobenzene	146		10.509				ND	
113 1,2-Dibromo-3-Chloropropan	157		11.291				ND	
115 1,2,4-Trichlorobenzene	180		12.109				ND	
116 Hexachlorobutadiene	225		12.276				ND	
117 Naphthalene	128		12.359				ND	
118 1,2,3-Trichlorobenzene	180		12.608				ND	
S 129 Xylenes, Total	106		16.530				ND	

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **APRIL 12, 2019**

FROM: **J. KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **DATA VALIDATION – VOC, PCB, METALS, MISC**
MRC BLOCK E/F MASS DISCHARGE
SAMPLE DELIVERY GROUP (SDG) 240-108064-1

SAMPLES: **3 / Aqueous – VOC, METALS, MISC**

MRC-MW145A-021319 MRC-MW148A-021319 MRC-MW154A-021319

2 / Aqueous – PCB

MRC-MW145A-021319 MRC-MW154A-021319

1 / Aqueous – VOC

TB-021319

Overview

The sample set for MRC Block E/F Mass Discharge, SDG 240-108064-1, consisted of three (3) aqueous samples and one (1) aqueous trip blank sample. The three (3) aqueous samples and the one (1) aqueous trip blank sample were analyzed for volatile organic compounds (VOCs) as listed above. The three (3) aqueous samples were also analyzed for metals and the miscellaneous analyses alkalinity, bromide, hardness as CaCO3, nitrate/nitrite-N, salinity, sulfate, and total suspended solids (TSS), as listed above. Two (2) of the aqueous samples were also analyzed for polychlorinated biphenyls (PCBs) as listed above. No field duplicate sample pairs were included in the sample delivery group (SDG).

The samples were collected by Tetra Tech on February 13, 2019 and analyzed by TestAmerica Laboratories Inc., North Canton, Savannah, Nashville, and Pittsburgh, for all analyses. All analyses were conducted in accordance with EPA SW-846 Methods 8260C for VOCs, 6020A (ICP/MS) for metals, 6010C (ICP) for metals, 9056A for anions, Standard Methods (SM) 2320B for total alkalinity, SM 2340C for total hardness, SM 2540C for total dissolved solids (TSS), SM 2520B for salinity (electrical conductivity), SM 4500 NO3 F for nitrate-N, MCAWW Method 300.0 for anions, and EPA Method 680 for PCBs, analytical and reporting protocols.

The data contained in this SDG was validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, blank results, blank spike/blank spike duplicate results, matrix spike/matrix spike duplicate results, surrogate spike recoveries, internal standard recoveries, chromatographic resolution, ICP interference results, ICP serial dilution results, analyte identification, analyte quantitation, and detection limits. Areas of concern are listed below.

Major Problems

- The laboratory narrative indicated that the samples were acid preserved for the VOC analysis. The VOC analyte 2-chlororethyl vinyl ether is known to rapidly deteriorate under acidic conditions. Both sample non-detected results for 2-chloroethyl vinyl ether were qualified rejected, (UR), due to the laboratory narrative indicating that the samples were acid preserved.

Minor Problems

- Detected results reported below the quantitation limit but above the method detection limit (MDL) were qualified as estimated, (J).

- The VOC continuing calibration verification (CCV) percent differences (%Ds) were greater than the 20% quality control (QC) limit for tert-butyl alcohol, vinyl acetate, 2-butanone, 2-chloroethyl vinyl ether, cis-1,3-dichloropropene, 4-methyl-2-pentanone, trans-1,3-dichloropropene, 2-hexanone, chlorodibromomethane, 1,2-dibromoethane, bromoform, 1,1,2,2-tetrachloroethane, 1,2,3-trichloropropane, tert-butyl benzene, n-butyl benzene, 1,2-dibromo-3-chloropropane, hexachlorobutadiene, naphthalene, ethyl tert-butyl ether, and tert-amyl methyl ether for instrument A3UX15 on 02/20/19 @ 10:45 & @ 11:29 affecting all VOC samples. The sample detected and non-detected results for the aforementioned analytes were qualified estimated, (J) and (UJ), respectively, with the exception of the 2-chloroethyl vinyl ether results which were rejected for the sample preservation issue.

- Nitrate/Nitrite-N was detected at 0.0463 mg/l, which was <RL, in a continuing calibration blank (CCB) @ 13:13 on 02/17/19, affecting all SDG samples analyzed for nitrate/nitrite-N. No action was taken for sample MRC-MW154A-021319 because the nitrate/nitrite-N concentration was >RL. Detections of nitrate/nitrite-N in samples MRC-MW145A-021319 and MRC-MW148A-021319 were <RL and were qualified non-detected, (U), due to blank contamination.

Notes

Non-detected sample analyte results were reported to the Method Detection Limit.

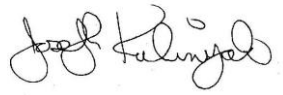
Sample MRC-MW145A-021319 was diluted 2X for the Method 6010C iron analysis.

EXECUTIVE SUMMARY

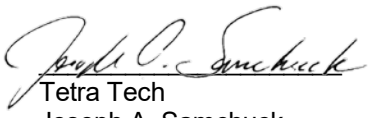
Laboratory Performance Issues: VOC results were qualified for CCV %D QC limit exceedances. Sample nitrate/nitrite-N results were qualified for CCB contamination.

Other Factors Affecting Data Quality: Detected results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J). All sample non-detected VOC 2-chlororethyl vinyl ether results were rejected due to sample acidification as noted in the laboratory narrative.

The data for these analyses were reviewed with reference to the USEPA National Functional Guidelines for Superfund Organic Methods Data Review (January 2017) and USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review (January 2017).



Tetra Tech
Joseph Kalinyak
Data Validator/Environmental Scientist



Tetra Tech
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08784	NSAMPLE	MRC-MW145A-021319			MRC-MW148A-021319			MRC-MW154A-021319			TB-021319		
SDG: 240-108064-1	LAB_ID	240-108064-3			240-108064-4			240-108064-2			240-108064-1		
FRACTION: OV	SAMP_DATE	2/13/2019			2/13/2019			2/13/2019			2/13/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	UJ	C	0.14	UJ	C	0.14	UJ	C	0.14	UJ	C
1,1,1-TRICHLOROETHANE		0.24	U		0.24	U		0.24	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	U		0.13	U		0.13	U		0.13	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U		0.41	U		0.41	U		0.41	U	
1,1-DICHLOROETHANE		0.17	U		0.17	U		0.17	U		0.17	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.14	U		0.14	U		0.14	U		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	U		0.54	U		0.54	U		0.54	U	
1,2,3-TRICHLOROPROPANE		0.24	UJ	C	0.24	UJ	C	0.24	UJ	C	0.24	UJ	C
1,2,3-TRIMETHYLBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
1,2,4-TRICHLOROBENZENE		0.26	U		0.26	U		0.26	U		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U		0.07	U		0.07	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	UJ	C	0.91	UJ	C	0.91	UJ	C	0.91	UJ	C
1,2-DIBROMOETHANE		0.12	UJ	C	0.12	UJ	C	0.12	UJ	C	0.12	UJ	C
1,2-DICHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
1,2-DICHLOROETHANE		0.21	U		0.21	U		0.21	U		0.21	U	
1,2-DICHLOROPROPANE		0.15	U		0.15	U		0.15	U		0.15	U	
1,3-DICHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
1,3-DICHLOROPROPANE		0.21	U		0.21	U		0.21	U		0.21	U	
1,4-DICHLOROBENZENE		0.16	U		0.16	U		0.16	U		0.16	U	
2,2-DICHLOROPROPANE		0.31	U		0.31	U		0.31	U		0.31	U	
2-BUTANONE		2.6	J	CP	1.4	J	CP	1.2	UJ	C	1.2	UJ	C
2-CHLOROETHYL VINYL ETHER		0.26	UR	M	0.26	UR	M	0.26	UR	M	0.26	UR	M
2-CHLOROTOLUENE		0.15	U		0.15	U		0.15	U		0.15	U	
2-HEXANONE		0.54	UJ	C	0.54	UJ	C	0.54	UJ	C	0.54	UJ	C
4-CHLOROTOLUENE		0.09	U		0.09	U		0.09	U		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U		0.13	U		0.13	U		0.13	U	
4-METHYL-2-PENTANONE		0.42	UJ	C	0.42	UJ	C	0.42	UJ	C	0.42	UJ	C
ACETONE		5.4	U		5.4	U		5.4	U		5.4	U	
BENZENE		0.13	U		0.22	J	P	0.13	U		0.13	U	
BROMOBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
BROMOCHLOROMETHANE		0.14	U		0.14	U		0.14	U		0.14	U	
BROMODICHLOROMETHANE		0.17	U		0.17	U		0.17	U		0.17	U	
BROMOFORM		0.76	UJ	C	0.76	UJ	C	0.76	UJ	C	0.76	UJ	C
BROMOMETHANE		0.42	U		0.42	U		0.42	U		0.42	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW145A-021319			MRC-MW148A-021319			MRC-MW154A-021319			TB-021319		
SDG: 240-108064-1	LAB_ID	240-108064-3			240-108064-4			240-108064-2			240-108064-1		
FRACTION: OV	SAMP_DATE	2/13/2019			2/13/2019			2/13/2019			2/13/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.28	U		0.28	U		0.28	U		0.28	U	
CARBON TETRACHLORIDE		0.26	U		0.26	U		0.26	U		0.26	U	
CHLOROBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
CHLORODIBROMOMETHANE		0.39	UJ	C	0.39	UJ	C	0.39	UJ	C	0.39	UJ	C
CHLOROETHANE		0.83	U		0.83	U		0.83	U		0.83	U	
CHLOROFORM		1.9			0.13	U		0.13	U		0.13	U	
CHLOROMETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
CIS-1,2-DICHLOROETHENE		0.38	J	P	0.29	J	P	0.16	U		0.16	U	
CIS-1,3-DICHLOROPROPENE		0.61	UJ	C	0.61	UJ	C	0.61	UJ	C	0.61	UJ	C
DIBROMOMETHANE		0.09	U		0.09	U		0.09	U		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	U		0.35	U		0.35	U		0.35	U	
DIISOPROPYL ETHER		0.17	U		0.17	U		0.17	U		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	UJ	C	0.15	UJ	C	0.15	UJ	C	0.15	UJ	C
ETHYLBENZENE		0.11	U		0.11	U		0.11	U		0.11	U	
HEXACHLOROBUTADIENE		0.83	UJ	C	0.83	UJ	C	0.83	UJ	C	0.83	UJ	C
ISOPROPYLBENZENE		0.09	U		0.09	U		0.09	U		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U		0.07	U		0.07	U		0.07	U	
METHYLENE CHLORIDE		2.6	U		2.6	U		2.6	U		2.6	U	
NAPHTHALENE		0.32	UJ	C	0.32	UJ	C	0.32	UJ	C	0.32	UJ	C
N-BUTYLBENZENE		0.14	UJ	C	0.14	UJ	C	0.14	UJ	C	0.14	UJ	C
N-PROPYLBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
STYRENE		0.1	U		0.1	U		0.1	U		0.1	U	
TERT-AMYL METHYL ETHER		0.11	UJ	C	0.11	UJ	C	0.11	UJ	C	0.11	UJ	C
TERT-BUTYLBENZENE		0.14	UJ	C	0.14	UJ	C	0.14	UJ	C	0.14	UJ	C
TERTIARY-BUTYL ALCOHOL		1.7	UJ	C	1.7	UJ	C	1.7	UJ	C	1.7	UJ	C
TETRACHLOROETHENE		0.15	U		0.15	U		0.15	U		0.15	U	
TOLUENE		0.29	J	P	0.14	U		0.14	U		0.14	U	
TOTAL XYLENES		0.15	U		0.15	U		0.15	U		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.67	UJ	C	0.67	UJ	C	0.67	UJ	C	0.67	UJ	C
TRICHLOROETHENE		3			1.1			0.1	U		0.1	U	
TRICHLOROFLUOROMETHANE		0.45	U		0.45	U		0.45	U		0.45	U	
VINYL ACETATE		0.19	UJ	C	0.19	UJ	C	0.19	UJ	C	0.19	UJ	C
VINYL CHLORIDE		0.2	U		0.2	U		0.2	U		0.2	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW145A-021319			MRC-MW154A-021319		
SDG: 240-108064-1	LAB_ID	240-108064-3			240-108064-2		
FRACTION: PCB	SAMP_DATE	2/13/2019			2/13/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLOROBIPHENYLS		0.0089	U		0.0052	U	
HEPTACHLOROBIPHENYLS		0.049	U		0.029	U	
HEXACHLOROBIPHENYLS		0.025	U		0.014	U	
MONOCHLOROBIPHENYLS		0.0092	U		0.0054	U	
NONACHLOROBIPHENYLS		0.08	U		0.047	U	
OCTACHLOROBIPHENYLS		0.062	U		0.037	U	
PENTACHLOROBIPHENYLS		0.023	U		0.013	U	
TETRACHLOROBIPHENYLS		0.021	U		0.013	U	
TRICHLOROBIPHENYLS		0.011	U		0.0063	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW145A-021319						MRC-MW148A-021319					
SDG: 240-108064-1	LAB_ID	240-108064-3						240-108064-4					
FRACTION: MISC	SAMP_DATE	2/13/2019						2/13/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		2.6	U					31					
BROMIDE		0.32	J	P				0.3	J	P			
HARDNESS AS CACO3		290						190					
NITRITE/NITRATE-N		0.042	U	A				0.073	U	A			
SALINITY					2	U					2	U	
SULFATE		110						130					
TOTAL DISSOLVED SOLIDS		1400						760					

PROJ_NO: 08784	NSAMPLE	MRC-MW154A-021319					
SDG: 240-108064-1	LAB_ID	240-108064-2					
FRACTION: MISC	SAMP_DATE	2/13/2019					
MEDIA: WATER	QC_TYPE	NM					
	UNITS	MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		81					
BROMIDE		0.094	J	P			
HARDNESS AS CACO3		74					
NITRITE/NITRATE-N		0.26					
SALINITY					2	U	
SULFATE		29					
TOTAL DISSOLVED SOLIDS		250					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: TB-021319 | Lab Sample ID: 240-108064-1

Matrix: Water | Lab File ID: UXC8941.D

Analysis Method: 8260C | Date Collected: 02/13/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 12:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: TB-021319 | Lab Sample ID: 240-108064-1

Matrix: Water | Lab File ID: UXC8941.D

Analysis Method: 8260C | Date Collected: 02/13/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 12:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: TB-021319 | Lab Sample ID: 240-108064-1

Matrix: Water | Lab File ID: UXC8941.D

Analysis Method: 8260C | Date Collected: 02/13/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 12:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		70-121
460-00-4	4-Bromofluorobenzene (Surr)	76		59-120
2037-26-5	Toluene-d8 (Surr)	84		70-123
1868-53-7	Dibromofluoromethane (Surr)	94		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW154A-021319 | Lab Sample ID: 240-108064-2

Matrix: Water | Lab File ID: UXC8942.D

Analysis Method: 8260C | Date Collected: 02/13/2019 10:20

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 13:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW154A-021319 | Lab Sample ID: 240-108064-2

Matrix: Water | Lab File ID: UXC8942.D

Analysis Method: 8260C | Date Collected: 02/13/2019 10:20

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 13:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW154A-021319 | Lab Sample ID: 240-108064-2

Matrix: Water | Lab File ID: UXC8942.D

Analysis Method: 8260C | Date Collected: 02/13/2019 10:20

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 13:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		70-121
460-00-4	4-Bromofluorobenzene (Surr)	72		59-120
2037-26-5	Toluene-d8 (Surr)	78		70-123
1868-53-7	Dibromofluoromethane (Surr)	88		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW145A-021319 | Lab Sample ID: 240-108064-3

Matrix: Water | Lab File ID: UXC8943.D

Analysis Method: 8260C | Date Collected: 02/13/2019 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 13:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	1.9		1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW145A-021319 | Lab Sample ID: 240-108064-3

Matrix: Water | Lab File ID: UXC8943.D

Analysis Method: 8260C | Date Collected: 02/13/2019 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 13:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.38	J	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	2.6	J	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.29	J	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	3.0		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW145A-021319 | Lab Sample ID: 240-108064-3

Matrix: Water | Lab File ID: UXC8943.D

Analysis Method: 8260C | Date Collected: 02/13/2019 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 13:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	88		70-121
460-00-4	4-Bromofluorobenzene (Surr)	69		59-120
2037-26-5	Toluene-d8 (Surr)	76		70-123
1868-53-7	Dibromofluoromethane (Surr)	85		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW148A-021319 | Lab Sample ID: 240-108064-4

Matrix: Water | Lab File ID: UXC8944.D

Analysis Method: 8260C | Date Collected: 02/13/2019 11:15

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 14:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.22	J	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW148A-021319 | Lab Sample ID: 240-108064-4

Matrix: Water | Lab File ID: UXC8944.D

Analysis Method: 8260C | Date Collected: 02/13/2019 11:15

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 14:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.29	J	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.4	J	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	1.1		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW148A-021319 | Lab Sample ID: 240-108064-4

Matrix: Water | Lab File ID: UXC8944.D

Analysis Method: 8260C | Date Collected: 02/13/2019 11:15

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 14:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		70-121
460-00-4	4-Bromofluorobenzene (Surr)	72		59-120
2037-26-5	Toluene-d8 (Surr)	79		70-123
1868-53-7	Dibromofluoromethane (Surr)	88		75-128

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW154A-021319 | Lab Sample ID: 240-108064-2

Matrix: Water | Lab File ID: xb2045.D

Analysis Method: 680 | Date Collected: 02/13/2019 10:20

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1038.1(mL) | Date Analyzed: 02/21/2019 13:52

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.029	U	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.014	U	0.19	0.014
53742-07-7	Nonachlorobiphenyl	0.047	U	0.48	0.047
55722-26-4	Octachlorobiphenyl	0.037	U	0.29	0.037
27323-18-8	Monochlorobiphenyl	0.0054	U	0.096	0.0054
2051-24-3	DCB Decachlorobiphenyl	0.067	U	0.48	0.067
25512-42-9	Dichlorobiphenyl	0.0052	U	0.096	0.0052
25429-29-2	Pentachlorobiphenyl	0.013	U	0.19	0.013
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.19	0.013
25323-68-6	Trichlorobiphenyl	0.0063	U	0.096	0.0063

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	50		25-113

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW145A-021319 | Lab Sample ID: 240-108064-3

Matrix: Water | Lab File ID: xb2046.D

Analysis Method: 680 | Date Collected: 02/13/2019 10:30

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 609.6(mL) | Date Analyzed: 02/21/2019 14:21

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.049	U	0.49	0.049
26601-64-9	Hexachlorobiphenyl	0.025	U	0.33	0.025
53742-07-7	Nonachlorobiphenyl	0.080	U	0.82	0.080
55722-26-4	Octachlorobiphenyl	0.062	U	0.49	0.062
27323-18-8	Monochlorobiphenyl	0.0092	U	0.16	0.0092
2051-24-3	DCB Decachlorobiphenyl	0.11	U	0.82	0.11
25512-42-9	Dichlorobiphenyl	0.0089	U	0.16	0.0089
25429-29-2	Pentachlorobiphenyl	0.023	U	0.33	0.023
26914-33-0	Tetrachlorobiphenyl	0.021	U	0.33	0.021
25323-68-6	Trichlorobiphenyl	0.011	U	0.16	0.011

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	36		25-113

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW154A-021319 Lab Sample ID: 240-108064-2

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:20

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	4400	200	26	ug/L			1	6010C
7439-96-5	Manganese	58	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	1500	50	34	ug/L			1	6020A
7440-38-2	Arsenic	1.3	5.0	0.75	ug/L	J		1	6020A
7440-39-3	Barium	63	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.58	1.0	0.31	ug/L	J		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	9.1	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	7.7	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	17	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	4200	100	47	ug/L			1	6020A
7439-96-5	Manganese	55	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	18	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	1.6	1.0	0.45	ug/L			1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	7.0	5.0	0.82	ug/L			1	6020A
7440-66-6	Zinc	61	20	15	ug/L			1	6020A
7440-70-2	Calcium	17000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	8800	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	4200	1000	200	ug/L			1	6020A
7440-23-5	Sodium	73000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW145A-021319 Lab Sample ID: 240-108064-3

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:30

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	440	400	52	ug/L			2	6010C
7439-96-5	Manganese	440	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.091	1.0	0.053	ug/L	J		1	6020A
7429-90-5	Aluminum	14000	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	87	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	44	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	1.9	1.0	0.21	ug/L			1	6020A
7440-48-4	Cobalt	320	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	24	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	630	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	500	100	47	ug/L			1	6020A
7439-96-5	Manganese	660	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	510	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	2.2	1.0	0.45	ug/L			1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	1200	20	15	ug/L			1	6020A
7440-70-2	Calcium	33000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	5100	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	38000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	410000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW148A-021319 Lab Sample ID: 240-108064-4

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 11:15

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	5100	200	26	ug/L			1	6010C
7439-96-5	Manganese	460	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	1200	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	80	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	5.7	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	1.3	1.0	0.21	ug/L			1	6020A
7440-48-4	Cobalt	79	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.0	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	31	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	5600	100	47	ug/L			1	6020A
7439-96-5	Manganese	510	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	140	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.60	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.84	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	280	20	15	ug/L			1	6020A
7440-70-2	Calcium	32000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	48000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	19000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	180000	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW154A-021319 Lab Sample ID: 240-108064-2

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:20

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	74	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	81	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	250	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.094	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	29	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW145A-021319 Lab Sample ID: 240-108064-3

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:30

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	290	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	2.6	5.0	2.6	mg/L	U		1	2320B-2011
	Total Dissolved Solids	1400	20	16	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.32	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	110	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW148A-021319 Lab Sample ID: 240-108064-4

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 11:15

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	190	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	31	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	760	20	16	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.30	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	130	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW154A-021319 Lab Sample ID: 240-108064-2

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:20

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.26	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW145A-021319 Lab Sample ID: 240-108064-3

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:30

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.042	0.10	0.040	mg/L	J		1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW148A-021319 Lab Sample ID: 240-108064-4

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 11:15

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.073	0.10	0.040	mg/L	J		1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW154A-021319 Lab Sample ID: 240-108064-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:20

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW145A-021319 Lab Sample ID: 240-108064-3

Lab Name: TestAmerica Pittsburgh Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:30

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW148A-021319 Lab Sample ID: 240-108064-4

Lab Name: TestAmerica Pittsburgh Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 11:15

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

APPENDIX C

SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass Discharge

Report Number: 240-108064-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The PCB by 680 and NO2/NO3 by SM4500_NO3_F analysis were performed at TestAmerica Savannah Laboratory. The Specific Conductance and Salinity analysis were performed at TestAmerica Pittsburgh Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 2/14/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-021319 (240-108064-1), MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/20/2019.

The continuing calibration verification (CCV) for analytical batch 368748 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TB-021319 (240-108064-1), MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3), MRC-MW148A-021319 (240-108064-4) and (240-108125-B-3)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following samples were received in hydrochloric preserved vials: TB-021319 (240-108064-1), MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples MRC-MW154A-021319 (240-108064-2) and MRC-MW145A-021319 (240-108064-3) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The samples were prepared on 02/19/2019 and analyzed on 02/21/2019.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 680-558728.

The SOP for the 680 Method allows that for soils the CCVIS has a limit of <30%D for each analyte and for liquids <20%D for each analyte . It also allows that the capping CCV for soils has the limit of <30% average %D with no analyte >60%D and for liquids <20% average D with no analyte >40%D. Due to software limitations for this method, the limits are set at <20%D. (CCV 680-559059/21)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/15/2019 and analyzed on 02/19/2019 and 02/20/2019.

Sample MRC-MW145A-021319 (240-108064-3)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 02/15/2019 and analyzed on 02/18/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 02/15/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 02/19/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 02/19/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 02/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for anions in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 02/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for Salinity in accordance with SM 2520B. The samples were analyzed on 02/27/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 02/17/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

GC/MS VOA

Analysis Batch: 368748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-1	TB-021319	Total/NA	Water	8260C	
240-108064-2	MRC-MW154A-021319	Total/NA	Water	8260C	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	8260C	
240-108064-4	MRC-MW148A-021319	Total/NA	Water	8260C	
MB 240-368748/6	Method Blank	Total/NA	Water	8260C	
LCS 240-368748/4	Lab Control Sample	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 558728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	680	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	680	
MB 680-558728/12-A	Method Blank	Total/NA	Water	680	
LCS 680-558728/13-A	Lab Control Sample	Total/NA	Water	680	
LCSD 680-558728/14-A	Lab Control Sample Dup	Total/NA	Water	680	

Analysis Batch: 559059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	680	558728
240-108064-3	MRC-MW145A-021319	Total/NA	Water	680	558728
MB 680-558728/12-A	Method Blank	Total/NA	Water	680	558728
LCS 680-558728/13-A	Lab Control Sample	Total/NA	Water	680	558728
LCSD 680-558728/14-A	Lab Control Sample Dup	Total/NA	Water	680	558728

Metals

Prep Batch: 368213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total Recoverable	Water	3005A	
240-108064-3	MRC-MW145A-021319	Total Recoverable	Water	3005A	
240-108064-4	MRC-MW148A-021319	Total Recoverable	Water	3005A	
MB 240-368213/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-368213/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-368213/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 368515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total Recoverable	Water	6020A	368213
240-108064-3	MRC-MW145A-021319	Total Recoverable	Water	6020A	368213
240-108064-4	MRC-MW148A-021319	Total Recoverable	Water	6020A	368213
MB 240-368213/1-A	Method Blank	Total Recoverable	Water	6020A	368213
LCS 240-368213/3-A	Lab Control Sample	Total Recoverable	Water	6020A	368213

Analysis Batch: 368589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total Recoverable	Water	6010C	368213
240-108064-3	MRC-MW145A-021319	Total Recoverable	Water	6010C	368213
240-108064-4	MRC-MW148A-021319	Total Recoverable	Water	6010C	368213
MB 240-368213/1-A	Method Blank	Total Recoverable	Water	6010C	368213

Metals (Continued)

Analysis Batch: 368589 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-368213/2-A	Lab Control Sample	Total Recoverable	Water	6010C	368213

Analysis Batch: 368873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-3	MRC-MW145A-021319	Total Recoverable	Water	6010C	368213

General Chemistry

Analysis Batch: 271440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	SM 2520B	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	SM 2520B	
240-108064-4	MRC-MW148A-021319	Total/NA	Water	SM 2520B	
MB 180-271440/1	Method Blank	Total/NA	Water	SM 2520B	

Analysis Batch: 368146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	300.0	
240-108064-2	MRC-MW154A-021319	Total/NA	Water	9056A	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	300.0	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	9056A	
240-108064-4	MRC-MW148A-021319	Total/NA	Water	300.0	
240-108064-4	MRC-MW148A-021319	Total/NA	Water	9056A	
MB 240-368146/3	Method Blank	Total/NA	Water	9056A	
LCS 240-368146/4	Lab Control Sample	Total/NA	Water	9056A	
240-108064-2 MS	MRC-MW154A-021319	Total/NA	Water	300.0	
240-108064-2 MS	MRC-MW154A-021319	Total/NA	Water	9056A	
240-108064-2 MSD	MRC-MW154A-021319	Total/NA	Water	300.0	
240-108064-2 MSD	MRC-MW154A-021319	Total/NA	Water	9056A	

Analysis Batch: 368399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	2320B-2011	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	2320B-2011	
240-108064-4	MRC-MW148A-021319	Total/NA	Water	2320B-2011	
MB 240-368399/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 240-368399/3	Lab Control Sample	Total/NA	Water	2320B-2011	

Analysis Batch: 368625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	2540 C-2011	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	2540 C-2011	
240-108064-4	MRC-MW148A-021319	Total/NA	Water	2540 C-2011	
MB 240-368625/1	Method Blank	Total/NA	Water	2540 C-2011	
LCS 240-368625/2	Lab Control Sample	Total/NA	Water	2540 C-2011	

Analysis Batch: 368671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	2340C-2011	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	2340C-2011	

General Chemistry (Continued)

Analysis Batch: 368671 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-4	MRC-MW148A-021319	Total/NA	Water	2340C-2011	
MB 240-368671/1	Method Blank	Total/NA	Water	2340C-2011	
LCS 240-368671/2	Lab Control Sample	Total/NA	Water	2340C-2011	
240-108064-3 DU	MRC-MW145A-021319	Total/NA	Water	2340C-2011	

Analysis Batch: 575925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	SM 4500 NO3 F	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	SM 4500 NO3 F	
240-108064-4	MRC-MW148A-021319	Total/NA	Water	SM 4500 NO3 F	
MB 490-575925/6	Method Blank	Total/NA	Water	SM 4500 NO3 F	
LCS 490-575925/7	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	

Client Sample ID: TB-021319
Date Collected: 02/13/19 00:00
Date Received: 02/14/19 09:30

Lab Sample ID: 240-108064-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	368748	02/20/19 12:57	LEE	TAL CAN

Client Sample ID: MRC-MW154A-021319
Date Collected: 02/13/19 10:20
Date Received: 02/14/19 09:30

Lab Sample ID: 240-108064-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	368748	02/20/19 13:18	LEE	TAL CAN
Total/NA	Prep	680			558728	02/19/19 13:42	CEW	TAL SAV
Total/NA	Analysis	680		1	559059	02/21/19 13:52	NED	TAL SAV
Total Recoverable	Prep	3005A			368213	02/15/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6010C		1	368589	02/19/19 19:02	WKD	TAL CAN
Total Recoverable	Prep	3005A			368213	02/15/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6020A		1	368515	02/18/19 19:39	DSH	TAL CAN
Total/NA	Analysis	2320B-2011		1	368399	02/15/19 11:55	JESW	TAL CAN
Total/NA	Analysis	2340C-2011		1	368671	02/19/19 15:33	JMB	TAL CAN
Total/NA	Analysis	2540 C-2011		1	368625	02/19/19 13:51	MAC	TAL CAN
Total/NA	Analysis	300.0		1	368146	02/14/19 19:09	JWW	TAL CAN
Total/NA	Analysis	9056A		1	368146	02/14/19 19:09	JWW	TAL CAN
Total/NA	Analysis	SM 2520B		1	271440	02/27/19 08:00	CLL	TAL PIT
Total/NA	Analysis	SM 4500 NO3 F		1	575925	02/17/19 13:19	MSP	TAL NSH

Client Sample ID: MRC-MW145A-021319
Date Collected: 02/13/19 10:30
Date Received: 02/14/19 09:30

Lab Sample ID: 240-108064-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	368748	02/20/19 13:40	LEE	TAL CAN
Total/NA	Prep	680			558728	02/19/19 13:42	CEW	TAL SAV
Total/NA	Analysis	680		1	559059	02/21/19 14:21	NED	TAL SAV
Total Recoverable	Prep	3005A			368213	02/15/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6010C		1	368589	02/19/19 19:07	WKD	TAL CAN
Total Recoverable	Prep	3005A			368213	02/15/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6010C		2	368873	02/20/19 17:49	WKD	TAL CAN
Total Recoverable	Prep	3005A			368213	02/15/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6020A		1	368515	02/18/19 19:41	DSH	TAL CAN
Total/NA	Analysis	2320B-2011		1	368399	02/15/19 11:58	JESW	TAL CAN
Total/NA	Analysis	2340C-2011		1	368671	02/19/19 15:42	JMB	TAL CAN
Total/NA	Analysis	2540 C-2011		1	368625	02/19/19 13:51	MAC	TAL CAN
Total/NA	Analysis	300.0		1	368146	02/14/19 20:09	JWW	TAL CAN
Total/NA	Analysis	9056A		1	368146	02/14/19 20:09	JWW	TAL CAN

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-108064-1

Client Sample ID: MRC-MW145A-021319

Lab Sample ID: 240-108064-3

Date Collected: 02/13/19 10:30

Matrix: Water

Date Received: 02/14/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2520B		1	271440	02/27/19 08:00	CLL	TAL PIT
Total/NA	Analysis	SM 4500 NO3 F		1	575925	02/17/19 13:20	MSP	TAL NSH

Client Sample ID: MRC-MW148A-021319

Lab Sample ID: 240-108064-4

Date Collected: 02/13/19 11:15

Matrix: Water

Date Received: 02/14/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	368748	02/20/19 14:02	LEE	TAL CAN
Total Recoverable	Prep	3005A			368213	02/15/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6010C		1	368589	02/19/19 19:11	WKD	TAL CAN
Total Recoverable	Prep	3005A			368213	02/15/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6020A		1	368515	02/18/19 19:43	DSH	TAL CAN
Total/NA	Analysis	2320B-2011		1	368399	02/15/19 12:02	JESW	TAL CAN
Total/NA	Analysis	2340C-2011		1	368671	02/19/19 15:46	JMB	TAL CAN
Total/NA	Analysis	2540 C-2011		1	368625	02/19/19 13:51	MAC	TAL CAN
Total/NA	Analysis	300.0		1	368146	02/14/19 20:49	JWW	TAL CAN
Total/NA	Analysis	9056A		1	368146	02/14/19 20:49	JWW	TAL CAN
Total/NA	Analysis	SM 2520B		1	271440	02/27/19 08:00	CLL	TAL PIT
Total/NA	Analysis	SM 4500 NO3 F		1	575925	02/17/19 13:21	MSP	TAL NSH

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-108064-1
Project/Site: MRC Block E/F Mass Discharge

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
680	Liquid-Liquid Extraction (Separatory Funnel)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-108064-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-108064-1	TB-021319	Water	02/13/19 00:00	02/14/19 09:30
240-108064-2	MRC-MW154A-021319	Water	02/13/19 10:20	02/14/19 09:30
240-108064-3	MRC-MW145A-021319	Water	02/13/19 10:30	02/14/19 09:30
240-108064-4	MRC-MW148A-021319	Water	02/13/19 11:15	02/14/19 09:30

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab File ID: BFB0220.D BFB Injection Date: 02/20/2019

Instrument ID: A3UX15 BFB Injection Time: 10:19

Analysis Batch No.: 368748

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.0	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	100.9	
175	5.0 - 9.0 % of mass 174	7.3	(7.2) 1
176	95.0 - 101.0 % of mass 174	101.4	(100.5) 1
177	5.0 - 9.0 % of mass 176	6.8	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-368748/2	UXC8935.D	02/20/2019	10:45
	LCS 240-368748/4	UXC8936.D	02/20/2019	11:07
	CCV 240-368748/3	UXC8937.D	02/20/2019	11:29
	MB 240-368748/6	UXC8940.D	02/20/2019	12:35
TB-021319	240-108064-1	UXC8941.D	02/20/2019	12:57
MRC-MW154A-021319	240-108064-2	UXC8942.D	02/20/2019	13:18
MRC-MW145A-021319	240-108064-3	UXC8943.D	02/20/2019	13:40
MRC-MW148A-021319	240-108064-4	UXC8944.D	02/20/2019	14:02

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: CCVIS 240-368748/2 Calibration Date: 02/20/2019 10:45

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8935.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3647	0.1000	0.0119	0.0100	18.7	20.0
Chloromethane	Ave	0.3135	0.3071	0.1000	0.00980	0.0100	-2.0	20.0
Vinyl chloride	Ave	0.2885	0.3167	0.1000	0.0110	0.0100	9.8	20.0
Butadiene	Ave	0.3794	0.3583		0.00944	0.0100	-5.6	20.0
Bromomethane	Ave	0.2308	0.2390	0.0500	0.0104	0.0100	3.6	20.0
Chloroethane	Ave	0.2041	0.2002	0.0500	0.00981	0.0100	-1.9	20.0
Dichlorofluoromethane	Ave	0.5102	0.4787		0.00938	0.0100	-6.2	20.0
Trichlorofluoromethane	Ave	0.4337	0.4865	0.1000	0.0112	0.0100	12.2	20.0
Ethyl ether	Ave	0.2310	0.2096		0.00907	0.0100	-9.3	20.0
Acrolein	Ave	0.0317	0.0347		0.0547	0.0500	9.4	50.0
1,1-Dichloroethene	Ave	0.3005	0.2719	0.1000	0.00905	0.0100	-9.5	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2672	0.0500	0.0108	0.0100	8.3	20.0
Acetone	Lin1		0.0218	0.0100	0.0179	0.0200	-10.7	50.0
Iodomethane	Ave	0.4675	0.5165		0.0110	0.0100	10.5	20.0
Carbon disulfide	Ave	0.7741	0.6560	0.1000	0.00847	0.0100	-15.3	20.0
3-Chloro-1-propene	Ave	0.1698	0.1612		0.00949	0.0100	-5.1	20.0
Methyl acetate	Ave	0.2050	0.1539	0.1000	0.0150	0.0200	-25.0*	20.0
Methylene Chloride	Lin1		0.3431	0.1000	0.0113	0.0100	13.4	50.0
tert-Butyl alcohol	Ave	0.0203	0.0145		0.0716	0.100	-28.4	50.0
Acrylonitrile	Ave	0.0962	0.0827		0.0860	0.100	-14.0	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6265	0.1000	0.00800	0.0100	-20.0	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2961	0.1000	0.0106	0.0100	5.9	20.0
Hexane	Ave	0.0586	0.0547		0.00933	0.0100	-6.7	20.0
1,1-Dichloroethane	Ave	0.4517	0.4678	0.2000	0.0104	0.0100	3.6	20.0
Vinyl acetate	Ave	0.5198	0.3548		0.00683	0.0100	-31.7	50.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3319	0.1000	0.0108	0.0100	7.8	20.0
2,2-Dichloropropane	Ave	0.0624	0.0651		0.0104	0.0100	4.4	20.0
2-Butanone (MEK)	Ave	0.0333	0.0262	0.0100	0.0158	0.0200	-21.1*	20.0
Bromochloromethane	Ave	0.1531	0.1619		0.0106	0.0100	5.7	20.0
Tetrahydrofuran	Ave	0.0828	0.0571		0.0138	0.0200	-31.1*	20.0
Chloroform	Ave	0.4606	0.4938	0.2000	0.0107	0.0100	7.2	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3883	0.1000	0.0109	0.0100	9.5	20.0
Cyclohexane	Ave	0.3993	0.3919	0.1000	0.00982	0.0100	-1.8	20.0
1,1-Dichloropropene	Ave	0.3748	0.3820		0.0102	0.0100	1.9	20.0
Carbon tetrachloride	Ave	0.3441	0.3304	0.1000	0.00960	0.0100	-4.0	20.0
Isobutyl alcohol	Ave	0.0077	0.0055		0.179	0.250	-28.4*	20.0
Benzene	Ave	1.116	1.173	0.5000	0.0105	0.0100	5.1	20.0
1,2-Dichloroethane	Ave	0.3820	0.3850	0.1000	0.0101	0.0100	0.8	20.0
n-Heptane	Ave	0.0532	0.0447		0.00840	0.0100	-16.0	20.0
Trichloroethene	Ave	0.3240	0.3384	0.1500	0.0104	0.0100	4.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: CCVIS 240-368748/2 Calibration Date: 02/20/2019 10:45

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8935.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3400	0.1000	0.00965	0.0100	-3.5	20.0
1,2-Dichloropropane	Ave	0.2590	0.2491	0.1000	0.00962	0.0100	-3.8	20.0
1,4-Dioxane	Ave	0.0020	0.0024		0.240	0.200	20.0	50.0
Dibromomethane	Ave	0.1717	0.1588		0.00925	0.0100	-7.5	20.0
Bromodichloromethane	Ave	0.3410	0.2988	0.1500	0.00876	0.0100	-12.4	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1160		0.0133	0.0200	-33.6*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3113	0.1500	0.00789	0.0100	-21.1*	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.1782	0.0500	0.0133	0.0200	-33.5*	20.0
Toluene	Ave	1.476	1.379	0.4000	0.00934	0.0100	-6.6	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.2893	0.1000	0.00623	0.0100	-37.7*	20.0
Ethyl methacrylate	Ave	0.4442	0.2682		0.00604	0.0100	-39.6*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2543	0.1000	0.00853	0.0100	-14.7	20.0
Tetrachloroethene	Ave	0.3268	0.3265	0.1500	0.00999	0.0100	-0.0	20.0
1,3-Dichloropropane	Ave	0.5243	0.4326		0.00825	0.0100	-17.5	20.0
2-Hexanone	Ave	0.2283	0.1385	0.0500	0.0121	0.0200	-39.3*	20.0
Chlorodibromomethane	Ave	0.3116	0.2341		0.00751	0.0100	-24.9*	20.0
1,2-Dibromoethane	Ave	0.3191	0.2477		0.00776	0.0100	-22.4*	20.0
Chlorobenzene	Ave	0.9777	0.9328	0.3000	0.00954	0.0100	-4.6	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3007		0.00872	0.0100	-12.8	20.0
Ethylbenzene	Ave	0.5145	0.4781		0.00929	0.0100	-7.1	20.0
m-Xylene & p-Xylene	Ave	1.221	1.120		0.00917	0.0100	-8.3	20.0
o-Xylene	Ave	0.6189	0.5909		0.00955	0.0100	-4.5	20.0
Styrene	Ave	1.036	0.9696	0.3000	0.00936	0.0100	-6.4	20.0
Bromoform	Lin1		0.1360	0.1000	0.00598	0.0100	-40.2*	20.0
Isopropylbenzene	Ave	1.463	1.382	0.1000	0.00944	0.0100	-5.6	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.4983	0.3000	0.00703	0.0100	-29.7*	20.0
Bromobenzene	Ave	0.8274	0.7070		0.00855	0.0100	-14.5	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.1807		0.00732	0.0100	-26.8*	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0493		0.00487	0.0100	-51.3*	20.0
N-Propylbenzene	Ave	0.7286	0.6056		0.00831	0.0100	-16.9	20.0
2-Chlorotoluene	Ave	0.6821	0.5852		0.00858	0.0100	-14.2	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.793		0.00846	0.0100	-15.4	20.0
4-Chlorotoluene	Ave	2.205	1.823		0.00827	0.0100	-17.3	20.0
tert-Butylbenzene	Ave	1.897	1.512		0.00797	0.0100	-20.3*	20.0
1,2,4-Trimethylbenzene	Ave	2.227	1.923		0.00863	0.0100	-13.7	20.0
sec-Butylbenzene	Ave	2.327	1.896		0.00815	0.0100	-18.5	20.0
1,3-Dichlorobenzene	Ave	1.425	1.255	0.6000	0.00881	0.0100	-11.9	20.0
4-Isopropyltoluene	Ave	2.083	1.760		0.00845	0.0100	-15.5	20.0
1,4-Dichlorobenzene	Ave	1.477	1.303	0.5000	0.00882	0.0100	-11.8	20.0
n-Butylbenzene	Ave	1.649	1.294		0.00785	0.0100	-21.5*	20.0
1,2-Dichlorobenzene	Ave	1.387	1.266	0.4000	0.00913	0.0100	-8.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: CCVIS 240-368748/2 Calibration Date: 02/20/2019 10:45

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8935.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0815	0.0500	0.00506	0.0100	-49.4	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7201	0.2000	0.00820	0.0100	-18.0	50.0
Hexachlorobutadiene	Ave	0.4386	0.3389		0.00773	0.0100	-22.7*	20.0
Naphthalene	Ave	2.209	1.474		0.00667	0.0100	-33.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6780		0.00858	0.0100	-14.2	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2230		0.00751	0.00797	-5.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2665		0.00698	0.00797	-12.4	20.0
Toluene-d8 (Surr)	Ave	1.214	1.023		0.00672	0.00797	-15.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3612		0.00663	0.00797	-16.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: CCV 240-368748/3 Calibration Date: 02/20/2019 11:29

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8937.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0250		0.108	0.100	8.0	20.0
Diisopropyl ether	Ave	0.2405	0.2260		0.00939	0.0100	-6.1	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3718		0.00878	0.0100	-12.2	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.5683		0.00729	0.0100	-27.1*	20.0
Ethyl acetate	Ave	0.2538	0.1595		0.0126	0.0200	-37.2	50.0
Propionitrile	Ave	0.0357	0.0299		0.0838	0.100	-16.2	20.0
Methacrylonitrile	Ave	0.1733	0.1301		0.0751	0.100	-24.9*	20.0
Tert-amyl methyl ether	Ave	0.7765	0.4762		0.00613	0.0100	-38.7*	20.0
n-Butanol	Ave	0.0061	0.0032		0.132	0.250	-47.3*	20.0
Ethyl acrylate	Ave	0.3330	0.1811		0.00544	0.0100	-45.6*	20.0
Methyl methacrylate	Ave	0.2430	0.1525		0.0125	0.0200	-37.3*	20.0
2-Nitropropane	Ave	0.0745	0.0197		0.00530	0.0200	-73.5*	20.0
n-Butyl acetate	Ave	0.3918	0.2076		0.00530	0.0100	-47.0*	20.0
1-Chlorohexane	Ave	0.3968	0.2694		0.00679	0.0100	-32.1*	20.0
Cyclohexanone	Lin1		0.0098		0.0587	0.100	-41.3*	20.0
Pentachloroethane	Ave	0.2034	0.1526		0.0150	0.0200	-25.0*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.025		0.00881	0.0100	-11.9	20.0
Benzyl chloride	Ave	0.2963	0.0851		0.00287	0.0100	-71.3*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8549		0.00903	0.0100	-9.7	20.0
2-Methylnaphthalene	Ave	1.076	0.5670		0.0105	0.0200	-47.3*	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab File ID: UXC8940.D Lab Sample ID: MB 240-368748/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/20/2019 12:35

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-368748/4	UXC8936.D	02/20/2019 11:07
TB-021319	240-108064-1	UXC8941.D	02/20/2019 12:57
MRC-MW154A-021319	240-108064-2	UXC8942.D	02/20/2019 13:18
MRC-MW145A-021319	240-108064-3	UXC8943.D	02/20/2019 13:40
MRC-MW148A-021319	240-108064-4	UXC8944.D	02/20/2019 14:02

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-368748/6

Matrix: Water | Lab File ID: UXC8940.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 12:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-368748/6

Matrix: Water | Lab File ID: UXC8940.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 12:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-368748/6

Matrix: Water | Lab File ID: UXC8940.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 12:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		70-121
460-00-4	4-Bromofluorobenzene (Surr)	71		59-120
2037-26-5	Toluene-d8 (Surr)	79		70-123
1868-53-7	Dibromofluoromethane (Surr)	87		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8936.D

Lab ID: LCS 240-368748/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.30	93	80-124	
1,1,1-Trichloroethane	10.0	11.6	116	69-134	
1,1,2,2-Tetrachloroethane	10.0	7.78	78	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	11.6	116	50-156	
1,1-Dichloroethane	10.0	11.0	110	75-133	
1,1-Dichloroethene	10.0	9.64	96	65-139	
1,1-Dichloropropene	10.0	10.9	109	78-126	
1,2,3-Trichlorobenzene	10.0	9.05	91	39-138	
1,2,3-Trichloropropane	10.0	8.21	82	66-139	
1,2,4-Trichlorobenzene	10.0	8.84	88	42-133	
1,2,4-Trimethylbenzene	10.0	9.37	94	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.51	55	46-132	
1,2-Dichlorobenzene	10.0	9.84	98	78-120	
1,2-Dichloroethane	10.0	10.7	107	71-135	
1,2-Dichloropropane	10.0	10.7	107	78-133	
1,3-Dichlorobenzene	10.0	9.60	96	78-120	
1,3-Dichloropropane	10.0	9.15	92	72-134	
1,4-Dichlorobenzene	10.0	9.69	97	78-120	
2,2-Dichloropropane	10.0	10.5	105	42-150	
2-Chloroethyl vinyl ether	10.0	7.00 J	70	55-137	
2-Chlorotoluene	10.0	9.42	94	78-123	
2-Hexanone	20.0	13.9	70	43-148	
Bromobenzene	10.0	9.35	93	74-129	
Bromochloromethane	10.0	11.2	112	74-130	
4-Chlorotoluene	10.0	9.21	92	77-125	
4-Isopropyltoluene	10.0	9.58	96	69-122	
Acetone	20.0	20.0	100	21-162	
Benzene	10.0	11.3	113	80-123	
Bromoform	10.0	6.29	63	49-141	
Bromomethane	10.0	8.42	84	41-175	
Carbon disulfide	10.0	8.39	84	60-138	
Carbon tetrachloride	10.0	10.2	102	63-140	
Chlorobenzene	10.0	10.2	102	80-121	
Chloroethane	10.0	9.07	91	33-173	
Chloroform	10.0	11.4	114	79-127	
Chloromethane	10.0	9.26	93	54-143	
cis-1,2-Dichloroethene	10.0	11.2	112	76-128	
cis-1,3-Dichloropropene	10.0	8.87	89	64-132	
Hexachlorobutadiene	10.0	8.74	87	38-136	
Dibromomethane	10.0	9.97	100	74-124	
Bromodichloromethane	10.0	9.45	95	77-125	
Dichlorodifluoromethane	10.0	11.2	112	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8936.D

Lab ID: LCS 240-368748/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.92	99	80-120	
1,2-Dibromoethane	10.0	8.53	85	77-123	
Naphthalene	10.0	7.23	72	28-141	
m-Xylene & p-Xylene	10.0	9.81	98	80-120	
n-Butylbenzene	10.0	8.82	88	57-126	
Isopropylbenzene	10.0	10.2	102	74-120	
N-Propylbenzene	10.0	9.28	93	77-123	
2-Butanone (MEK)	20.0	17.3	87	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	15.1	76	49-143	
sec-Butylbenzene	10.0	9.30	93	68-123	
Methyl tert-butyl ether	10.0	8.36	84	51-133	
Methylene Chloride	10.0	11.1	111	70-134	
o-Xylene	10.0	10.2	102	80-120	
Styrene	10.0	9.60	96	79-120	
tert-Butylbenzene	10.0	9.00	90	70-121	
Tetrachloroethene	10.0	10.9	109	74-130	
Toluene	10.0	10.3	103	78-129	
trans-1,2-Dichloroethene	10.0	11.6	116	78-133	
trans-1,3-Dichloropropene	10.0	6.76	68	55-128	
Trichloroethene	10.0	11.3	113	76-125	
Trichlorofluoromethane	10.0	10.7	107	51-164	
Vinyl acetate	10.0	7.94	79	45-151	
Vinyl chloride	10.0	9.79	98	58-143	
tert-Butyl alcohol	100	72.6	73	10-161	
Xylenes, Total	20.0	20.0	100	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-021319	240-108064-1	94	95	84	76
MRC-MW154A-021319	240-108064-2	88	91	78	72
MRC-MW145A-021319	240-108064-3	85	88	76	69
MRC-MW148A-021319	240-108064-4	88	89	79	72
	MB 240-368748/6	87	89	79	71
	LCS 240-368748/4	91	87	83	83

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-368748/2		1705396	5.20	1445534	7.88	905323	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Sample No.: CCVIS 240-368748/2 Date Analyzed: 02/20/2019 10:45

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8935.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1705396	5.20	1445534	7.88	905323	10.12
UPPER LIMIT		3410792	5.70	2891068	8.38	1810646	10.62
LOWER LIMIT		852698	4.70	722767	7.38	452662	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-368748/4		1742803	5.20	1500304	7.88	923418	10.12
CCV 240-368748/3		1590437	5.20	1346487	7.88	744324	10.12
MB 240-368748/6		1601145	5.20	1356098	7.88	758690	10.12
240-108064-1	TB-021319	1248895	5.20	1016671	7.88	601597	10.12
240-108064-2	MRC-MW154A-021319	1540481	5.20	1371599	7.88	768024	10.12
240-108064-3	MRC-MW145A-021319	1619628	5.20	1426042	7.88	787541	10.12
240-108064-4	MRC-MW148A-021319	1490789	5.20	1280309	7.88	731455	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00281	vmbfb 00021
BFB 240-364786/1		8260C		5 mL	5 mL				1 uL
STD8260 240-364786/2 IC		8260C		5 mL	5 mL	1 uL	32 uL	32 uL	
STD8260 240-364786/3 IC		8260C		5 mL	5 mL	1 uL	16 uL	16 uL	
STD8260 240-364786/4 ICIS		8260C		5 mL	5 mL	1 uL	8 uL	8 uL	
STD8260 240-364786/5 IC		8260C		5 mL	5 mL	1 uL	4 uL	4 uL	
STD8260 240-364786/6 IC		8260C		5 mL	5 mL	1 uL	1.6 uL	1.6 uL	
STD8260 240-364786/7 IC		8260C		5 mL	5 mL	1 uL	0.8 uL	0.8 uL	
STD 240-364786/8 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/9 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/10 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/11 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/12 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/13 IC		8260C		5 mL	5 mL	1 uL			
ICV 240-364786/14		8260C		5 mL	5 mL	1 uL	0.797 uL		
ICV 240-364786/15		8260C		5 mL	5 mL	1 uL	0.797 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C							32 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
STD8260 240-364786/3 IC		8260C							16 uL
STD8260 240-364786/4 ICIS		8260C							8 uL
STD8260 240-364786/5 IC		8260C							4 uL
STD8260 240-364786/6 IC		8260C							1.6 uL
STD8260 240-364786/7 IC		8260C							0.8 uL
STD 240-364786/8 IC		8260C						32 uL	
STD 240-364786/9 IC		8260C						16 uL	
STD 240-364786/10 IC		8260C						8 uL	
STD 240-364786/11 IC		8260C						4 uL	
STD 240-364786/12 IC		8260C						1.6 uL	
STD 240-364786/13 IC		8260C						0.8 uL	
ICV 240-364786/14		8260C			8 uL	8 uL	8 uL		
ICV 240-364786/15		8260C		8 uL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C		32 uL					
STD8260 240-364786/3 IC		8260C		16 uL					
STD8260 240-364786/4 ICIS		8260C		8 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
STD8260 240-364786/5 IC		8260C		4 uL					
STD8260 240-364786/6 IC		8260C		1.6 uL					
STD8260 240-364786/7 IC		8260C		0.8 uL					
STD 240-364786/8 IC		8260C							
STD 240-364786/9 IC		8260C							
STD 240-364786/10 IC		8260C							
STD 240-364786/11 IC		8260C							
STD 240-364786/12 IC		8260C							
STD 240-364786/13 IC		8260C							
ICV 240-364786/14		8260C							
ICV 240-364786/15		8260C							

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368748 Batch Start Date: 02/20/19 10:19 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00285
BFB 240-368748/1		8260C		5 mL	5 mL				
CCVIS 240-368748/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-368748/3		8260C		5 mL	5 mL		1 uL		
LCS 240-368748/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-368748/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-108064-B-1	TB-021319	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-108064-B-2	MRC-MW154A-021319	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-108064-B-3	MRC-MW145A-021319	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-108064-B-4	MRC-MW148A-021319	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00268	VMFASGW 00297	VMFASPW 00289	VMRA9W 00285	VMRGAS 00282
BFB 240-368748/1		8260C		1 uL					
CCVIS 240-368748/2		8260C							8 uL
CCV 240-368748/3		8260C						8 uL	
LCS 240-368748/4		8260C			8 uL	8 uL	8 uL		
MB 240-368748/6		8260C							
240-108064-B-1	TB-021319	8260C	T						
240-108064-B-2	MRC-MW154A-021319	8260C	T						
240-108064-B-3	MRC-MW145A-021319	8260C	T						
240-108064-B-4	MRC-MW148A-021319	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00322					
BFB 240-368748/1		8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368748 Batch Start Date: 02/20/19 10:19 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00322					
CCVIS 240-368748/2		8260C		8 uL					
CCV 240-368748/3		8260C							
LCS 240-368748/4		8260C							
MB 240-368748/6		8260C							
240-108064-B-1	TB-021319	8260C	T						
240-108064-B-2	MRC-MW154A-021319	8260C	T						
240-108064-B-3	MRC-MW145A-021319	8260C	T						
240-108064-B-4	MRC-MW148A-021319	8260C	T						

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 680

Polychlorinated Biphenyls (PCBs) (GC/MS) by Method 680

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Lab File ID: xa0805.D DFTPP Injection Date: 01/08/2019

Instrument ID: CMSX DFTPP Injection Time: 14:10

Analysis Batch No.: 554469

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.9
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	25.1
365	Greater than 1% of mass 198	3.8
441	Present but less than mass 443	13.7 (87.5) 2
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	15.6 (18.3) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-554469/3	xa0807.D	01/08/2019	15:11
	IC 680-554469/5	xa0809.D	01/08/2019	16:08
	IC 680-554469/6	xa0810.D	01/08/2019	16:37
	IC 680-554469/27	xa0850.D	01/08/2019	17:05
	IC 680-554469/7	xa0811.D	01/08/2019	17:34
	IC 680-554469/8	xa0812.D	01/08/2019	18:02
	ICV 680-554469/9	xa0813.D	01/08/2019	18:31

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-108064-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 240-108064-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Monochlorobiphenyl	CRY	Ave	8242 813481	15382	70279	157619	299489	0.0500 5.00	0.100	0.500	1.00	2.00
Dichlorobiphenyl	CRY	Ave	5634 599778	10649	48537	112170	214973	0.0500 5.00	0.100	0.500	1.00	2.00
Trichlorobiphenyl	CRY	Ave	3987 441580	7502	35031	81047	154555	0.0500 5.00	0.100	0.500	1.00	2.00
Tetrachlorobiphenyl	CRY	Ave	5574 615833	10606	50081	113059	216849	0.100 10.0	0.200	1.00	2.00	4.00
Pentachlorobiphenyl	CRY	Ave	4430 525344	8255	40050	94602	179296	0.100 10.0	0.200	1.00	2.00	4.00
Hexachlorobiphenyl	CRY	Ave	4409 515192	8063	39570	95892	180616	0.100 10.0	0.200	1.00	2.00	4.00
Heptachlorobiphenyl	CRY	Ave	8087 711849	13173	54642	129695	247124	0.150 15.0	0.300	1.50	3.00	6.00
Octachlorobiphenyl	CRY	Ave	5679 662783	10462	52287	120191	235791	0.150 15.0	0.300	1.50	3.00	6.00
Nonachlorobiphenyl	CRY	Ave				55196					5.00	
DCB Decachlorobiphenyl	CRY	Ave	1830 243534	3384	17538	42007	81970	0.250 25.0	0.500	2.50	5.00	10.0
Decachlorobiphenyl-13C12	CRY	Ave	2369 234805	4106	24902	55313	103476	0.250 20.0	0.500	2.50	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICV 680-554469/9 Calibration Date: 01/08/2019 18:31

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xa0813.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8517		1.03	1.00	2.6	20.0
Dichlorobiphenyl	Ave	0.5847	0.5801		0.992	1.00	-0.8	20.0
Trichlorobiphenyl	Ave	0.4198	0.4573		1.09	1.00	8.9	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.3118		2.11	2.00	5.6	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2531		2.11	2.00	5.5	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2508		2.10	2.00	5.2	20.0
Heptachlorobiphenyl	Ave	0.2376	0.2274		2.87	3.00	-4.3	20.0
Octachlorobiphenyl	Ave	0.2054	0.2183		3.19	3.00	6.3	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0419		5.00	5.00	-0.0	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0577		5.35	5.00	7.1	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Lab File ID: xb2028.D DFTPP Injection Date: 02/21/2019

Instrument ID: CMSX DFTPP Injection Time: 05:43

Analysis Batch No.: 559059

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	59.5
197	Less than 1 % of mass 198	0.9
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	28.0
365	Greater than 1% of mass 198	3.5
441	Present but less than mass 443	15.1 (86.3) 2
442	Greater than 40% of mass 198	96.2
443	17 - 23% of mass 442	17.5 (18.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559059/2	xb2029.D	02/21/2019	06:14
	CCVIS 680-559059/3	xb2030.D	02/21/2019	06:44
	MB 680-558728/12-A	xb2031.D	02/21/2019	07:13
	LCS 680-558728/13-A	xb2032.D	02/21/2019	07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019	08:10
MRC-MW154A-021319	240-108064-2	xb2045.D	02/21/2019	13:52
MRC-MW145A-021319	240-108064-3	xb2046.D	02/21/2019	14:21
	CCV 680-559059/21	xb2051.D	02/21/2019	16:43

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Lab Sample ID: CCVIS 680-559059/3 Calibration Date: 02/21/2019 06:44

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2030.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.7268		0.875	1.00	-12.5	20.0
Dichlorobiphenyl	Ave	0.5847	0.5079		0.869	1.00	-13.1	20.0
Trichlorobiphenyl	Ave	0.4198	0.3597		0.857	1.00	-14.3	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2563		1.74	2.00	-13.2	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2131		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2136		1.79	2.00	-10.4	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1920		2.42	3.00	-19.2	20.0
Octachlorobiphenyl	Ave	0.2054	0.1725		2.52	3.00	-16.0	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0343		4.08	5.00	-18.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0462		4.29	5.00	-14.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Lab Sample ID: CCV 680-559059/21 Calibration Date: 02/21/2019 16:43

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2051.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8070		0.972	1.00	-2.8	20.0
Dichlorobiphenyl	Ave	0.5847	0.5601		0.958	1.00	-4.2	20.0
Trichlorobiphenyl	Ave	0.4198	0.4000		0.953	1.00	-4.7	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2879		1.95	2.00	-2.4	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2300		1.92	2.00	-4.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2246		1.88	2.00	-5.8	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1938		2.45	3.00	-18.4	20.0
Octachlorobiphenyl	Ave	0.2054	0.1765		2.58	3.00	-14.1	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0315		3.75	5.00	-25.0*	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0422		3.92	5.00	-21.6*	20.0

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Lab File ID: xb2031.D Lab Sample ID: MB 680-558728/12-A

Matrix: Water Date Extracted: 02/19/2019 13:42

Instrument ID: CMSX Date Analyzed: 02/21/2019 07:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-558728/13-A	xb2032.D	02/21/2019 07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019 08:10
MRC-MW154A-021319	240-108064-2	xb2045.D	02/21/2019 13:52
MRC-MW145A-021319	240-108064-3	xb2046.D	02/21/2019 14:21

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-108064-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-558728/12-A

Matrix: Water | Lab File ID: xb2031.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2032.D

Lab ID: LCS 680-558728/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.67	78	62-130	
Hexachlorobiphenyl	4.00	3.37	84	62-130	
Nonachlorobiphenyl	10.0	14.6	146	70-195	
Octachlorobiphenyl	6.00	5.09	85	64-130	
Monochlorobiphenyl	2.00	1.08	54	42-130	
DCB Decachlorobiphenyl	10.0	7.81	78	59-130	
Dichlorobiphenyl	2.00	1.32	66	49-130	
Pentachlorobiphenyl	4.00	3.47	87	63-130	
Tetrachlorobiphenyl	4.00	2.93	73	54-130	
Trichlorobiphenyl	2.00	1.47	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2033.D

Lab ID: LCSD 680-558728/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.45	74	5	40	62-130	
Hexachlorobiphenyl	4.00	3.21	80	5	40	62-130	
Nonachlorobiphenyl	10.0	13.2	132	10	40	70-195	
Octachlorobiphenyl	6.00	4.75	79	7	40	64-130	
Monochlorobiphenyl	2.00	1.36	68	23	40	42-130	
DCB Decachlorobiphenyl	10.0	7.14	71	9	40	59-130	
Dichlorobiphenyl	2.00	1.47	73	11	40	49-130	
Pentachlorobiphenyl	4.00	3.33	83	4	40	63-130	
Tetrachlorobiphenyl	4.00	3.04	76	4	40	54-130	
Trichlorobiphenyl	2.00	1.52	76	3	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13CDCB #
MRC-MW154A-021319	240-108064-2	50
MRC-MW145A-021319	240-108064-3	36
	MB 680-558728/12-A	71
	LCS 680-558728/13-A	75
	LCSD 680-558728/14-A	68

	QC LIMITS
13CDCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Sample No.: CCVIS 680-559059/3 Date Analyzed: 02/21/2019 06:44

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2030.D Heated Purge: (Y/N) N

Calibration ID: 63054

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		170892	12.41	169663	18.67		
UPPER LIMIT		222160	12.91	220562	19.17		
LOWER LIMIT		119624	11.91	118764	18.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-558728/12-A		143915	12.41	132159	18.67		
LCS 680-558728/13-A		164188	12.41	171582	18.67		
LCSD 680-558728/14-A		179669	12.41	188862	18.67		
240-108064-2	MRC-MW154A-021319	193556	12.41	200280	18.67		
240-108064-3	MRC-MW145A-021319	186406	12.41	180173	18.67		
CCV 680-559059/21		159076	12.41	142687	18.67		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Batch Number: 558728 Batch Start Date: 02/19/19 13:42 Batch Analyst: Wilson, Charles E

Batch Method: 680 Batch End Date: 02/20/19 07:53

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ResidualChloCheck	ReceivedpH
240-108064-J-2	MRC-MW154A-021319	680, 680	T	1544.9 g	506.8 g	1038.1 mL	1 mL	N	7 SU
240-108064-J-3	MRC-MW145A-021319	680, 680	T	1114.9 g	505.3 g	609.6 mL	1 mL	N	6 SU
MB 680-558728/12		680, 680				1000 mL	1 mL	N	7 SU
LCS 680-558728/13		680, 680				1000 mL	1 mL	N	7 SU
LCSD 680-558728/14		680, 680				1000 mL	1 mL	N	7 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	680wkSPIKE 00120	680wkSURR-NEW 00035				
240-108064-J-2	MRC-MW154A-021319	680, 680	T		1 mL				
240-108064-J-3	MRC-MW145A-021319	680, 680	T		1 mL				
MB 680-558728/12		680, 680			1 mL				
LCS 680-558728/13		680, 680		1 mL	1 mL				
LCSD 680-558728/14		680, 680		1 mL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Batch Number: 558728 Batch Start Date: 02/19/19 13:42 Batch Analyst: Wilson, Charles E

Batch Method: 680 Batch End Date: 02/20/19 07:53

Batch Notes	
Balance ID	23
Batch Comment	680 box 125
Boiling Chips ID	901800
Concentration 1 Thermometer ID	50
Analyst ID - Concentration	jc
Exchange Solvent ID	5859923
Analyst ID - Extraction	CEW/CMJ
Extraction 1 End Time	02/20/2019 07:53
Extraction 1 Start Time	02/19/2019 13:42
Method/Fraction	680
pH Indicator ID	5904645
Pipette/Syringe/Dispenser ID	AA06G
Prep Solvent ID	5904693
Residual Chlorine Indicator ID	5775443
Analyst ID - Spike Analyst	CEW
Analyst ID - Spike Witness Analyst	CMJ
Sufficient Volume for Batch QC	NO

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW154A-021319	240-108064-2
MRC-MW145A-021319	240-108064-3
MRC-MW148A-021319	240-108064-4

Comments:

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/19/2019 08:35 End Date: 02/20/2019 07:31

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ICIS 240-368589/1	1		08:35	X	X																							
CALSTD 240-368589/2 IC			08:40	X	X																							
CALSTD 240-368589/3 IC			08:44	X	X																							
ICV 240-368589/4	1		08:49	X	X																							
ICB 240-368589/5	1		08:53	X	X																							
ICVL 240-368589/6	1		08:58	X	X																							
ZZZZZZ			09:03																									
ICSA 240-368589/8	1		09:07	X	X																							
ICSAB 240-368589/9	1		09:12	X	X																							
CCV 240-368589/10			09:17																									
CCB 240-368589/11			09:21																									
ZZZZZZ			09:26																									
ZZZZZZ			09:30																									
ZZZZZZ			09:35																									
ZZZZZZ			09:40																									
ZZZZZZ			09:45																									
ZZZZZZ			09:49																									
CCV 240-368589/18			09:54																									
CCB 240-368589/19			09:58																									
ZZZZZZ			10:03																									
ZZZZZZ			10:08																									
ZZZZZZ			10:13																									
ZZZZZZ			10:17																									
ZZZZZZ			10:21																									
ZZZZZZ			10:26																									
ZZZZZZ			10:31																									
ZZZZZZ			10:35																									
ZZZZZZ			10:39																									
ZZZZZZ			10:43																									
CCV 240-368589/30			10:48																									
CCB 240-368589/31			10:53																									
ZZZZZZ			11:00																									
ZZZZZZ			11:33																									
ZZZZZZ			11:38																									
ZZZZZZ			11:42																									
ZZZZZZ			11:51																									
ZZZZZZ			11:56																									
CCV 240-368589/38			12:00																									
CCB 240-368589/39			12:05																									
ZZZZZZ			12:09																									
ZZZZZZ			12:14																									
ZZZZZZ			12:19																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/19/2019 08:35 End Date: 02/20/2019 07:31

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			16:00																										
ZZZZZZ			16:05																										
ZZZZZZ			16:09																										
ZZZZZZ			16:13																										
ZZZZZZ			16:17																										
ZZZZZZ			16:22																										
ZZZZZZ			16:27																										
ZZZZZZ			16:31																										
ZZZZZZ			16:36																										
ZZZZZZ			16:41																										
CCV 240-368589/95			16:46																										
CCB 240-368589/96			16:50																										
ZZZZZZ			16:55																										
ZZZZZZ			17:00																										
ZZZZZZ			17:04																										
ZZZZZZ			17:09																										
ZZZZZZ			17:14																										
ZZZZZZ			17:19																										
ZZZZZZ			17:24																										
ZZZZZZ			17:29																										
ZZZZZZ			17:34																										
ZZZZZZ			17:38																										
CCV 240-368589/107	1		17:43	X	X																								
CCB 240-368589/108	1		17:48	X	X																								
ZZZZZZ			17:52																										
ZZZZZZ			17:57																										
ZZZZZZ			18:02																										
ZZZZZZ			18:07																										
ZZZZZZ			18:12																										
MB 240-368213/1-A	1	R	18:17	X	X																								
LCS 240-368213/2-A	1	R	18:21	X	X																								
ZZZZZZ			18:26																										
ZZZZZZ			18:30																										
ZZZZZZ			18:35																										
CCV 240-368589/119	1		18:39	X	X																								
CCB 240-368589/120	1		18:44	X	X																								
ZZZZZZ			18:48																										
ZZZZZZ			18:53																										
ZZZZZZ			18:57																										
240-108064-2	1	R	19:02	X	X																								
240-108064-3	1	R	19:07		X																								
240-108064-4	1	R	19:11	X	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/19/2019 08:35 End Date: 02/20/2019 07:31

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			19:16																									
ZZZZZZ			19:21																									
ZZZZZZ			19:25																									
ZZZZZZ			19:30																									
CCV 240-368589/131	1		19:35	X	X																							
CCB 240-368589/132	1		19:39	X	X																							
ZZZZZZ			19:44																									
ZZZZZZ			19:48																									
ZZZZZZ			19:53																									
ZZZZZZ			19:58																									
ZZZZZZ			20:02																									
ZZZZZZ			20:07																									
ZZZZZZ			20:12																									
ZZZZZZ			20:16																									
ZZZZZZ			20:21																									
ZZZZZZ			20:26																									
CCV 240-368589/143			20:30																									
CCB 240-368589/144			20:34																									
ZZZZZZ			20:39																									
ZZZZZZ			20:43																									
ZZZZZZ			20:48																									
ZZZZZZ			20:52																									
ZZZZZZ			20:57																									
ZZZZZZ			21:02																									
ZZZZZZ			21:07																									
ZZZZZZ			21:11																									
ZZZZZZ			21:16																									
ZZZZZZ			21:21																									
CCV 240-368589/155			21:25																									
CCB 240-368589/156			21:30																									
ZZZZZZ			21:34																									
ZZZZZZ			21:39																									
ZZZZZZ			21:44																									
ZZZZZZ			21:49																									
ZZZZZZ			21:53																									
ZZZZZZ			21:58																									
ZZZZZZ			22:02																									
ZZZZZZ			22:07																									
ZZZZZZ			22:12																									
ZZZZZZ			22:17																									
CCV 240-368589/167			22:21																									
CCB 240-368589/168			22:26																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/19/2019 08:35 End Date: 02/20/2019 07:31

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			22:30																									
ZZZZZZ			22:35																									
ZZZZZZ			22:40																									
ZZZZZZ			22:44																									
ZZZZZZ			22:49																									
ZZZZZZ			22:53																									
ZZZZZZ			22:58																									
ZZZZZZ			23:03																									
ZZZZZZ			23:07																									
ZZZZZZ			23:12																									
CCV 240-368589/179			23:16																									
CCB 240-368589/180			23:20																									
ZZZZZZ			23:25																									
ZZZZZZ			23:30																									
ZZZZZZ			23:34																									
ZZZZZZ			23:39																									
ZZZZZZ			23:44																									
ZZZZZZ			23:48																									
ZZZZZZ			23:53																									
ZZZZZZ			23:58																									
ZZZZZZ			00:02																									
ZZZZZZ			00:07																									
CCV 240-368589/191			00:12																									
CCB 240-368589/192			00:16																									
CCVL 240-368589/193	1		00:21	X	X																							
ZZZZZZ			00:25																									
ZZZZZZ			00:30																									
ZZZZZZ			00:35																									
ZZZZZZ			00:40																									
ZZZZZZ			00:45																									
ZZZZZZ			00:49																									
ZZZZZZ			00:54																									
ZZZZZZ			00:59																									
ZZZZZZ			01:03																									
CCV 240-368589/203			01:08																									
CCB 240-368589/204			01:12																									
ZZZZZZ			01:17																									
ZZZZZZ			01:21																									
ZZZZZZ			01:26																									
ZZZZZZ			01:30																									
ZZZZZZ			01:35																									
ZZZZZZ			01:39																									

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-368589/4 02/19/2019 08:49				CCV 240-368589/107 02/19/2019 17:43				CCV 240-368589/119 02/19/2019 18:39			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	13100		12500	105	25900		25000	104	25300		25000	101
Manganese	1550		1500	103	2080		2000	104	2060		2000	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	CCV 240-368589/131 02/19/2019 19:35											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	25500		25000	102								
Manganese	2060		2000	103								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-368589/6 02/19/2019 08:58				CCVL 240-368589/193 02/20/2019 00:21							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	207		200	103	195	J	200	98				
Manganese	14.9	J	15.0	99	14.4	J	15.0	96				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-368589/5 02/19/2019 08:53		CCB 240-368589/108 02/19/2019 17:48		CCB 240-368589/120 02/19/2019 18:44		CCB 240-368589/132 02/19/2019 19:39	
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U	26	U
Manganese	15	2.1	U	2.1	U	2.1	U	2.1	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-368213/1-A

Instrument Code: I12 Batch No.: 368589

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	26	U		6010C
7439-96-5	Manganese	2.1	U		6010C

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICSA 240-368589/8 Instrument ID: I12

Lab File ID: I12021919A.asc ICS Source: MTTRICSAW_00045

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**200580**	**100**
Manganese		**0.662**	
Aluminum	*500000*	*534400*	*107*
Antimony		*-4.30*	
Arsenic		*-1.69*	
Barium		*0.179*	
Beryllium		*0.576*	
Boron		*5.15*	
Cadmium		*0.742*	
Calcium	*500000*	*502540*	*101*
Chromium		*2.94*	
Cobalt		*-5.75*	
Copper		*-3.66*	
Lead		*0.0953*	
Lithium		*24.8*	
Magnesium	*500000*	*531480*	*106*
Molybdenum		*-0.949*	
Nickel		*3.68*	
Potassium		*34.8*	
Selenium		*7.60*	
Silicon		*13.2*	
Silver		*-2.93*	
Sodium		*25.5*	
Strontium		*14.8*	
Thallium		*-0.776*	
Tin		*-0.504*	
Titanium		*-2.08*	
Vanadium		*6.51*	
Zinc		*-1.16*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICSAB 240-368589/9 Instrument ID: I12

Lab File ID: I12021919A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Iron	**200000**	**195480**	**98**
Manganese	**500**	**505**	**101**
Aluminum	*500000*	*517820*	*104*
Antimony	*1000*	*1025*	*103*
Arsenic	*1000*	*994*	*99*
Barium	*500*	*503*	*101*
Beryllium	*500*	*491*	*98*
Boron	*500*	*524*	*105*
Cadmium	*1000*	*1036*	*104*
Calcium	*500000*	*483120*	*97*
Chromium	*500*	*498*	*100*
Cobalt	*500*	*520*	*104*
Copper	*500*	*542*	*108*
Lead	*1000*	*887*	*89*
Lithium	*500*	*549*	*110*
Magnesium	*500000*	*513460*	*103*
Molybdenum	*1000*	*985*	*98*
Nickel	*1000*	*1029*	*103*
Potassium	*10000*	*10582*	*106*
Selenium	*1000*	*1007*	*101*
Silicon	*10000*	*10203*	*102*
Silver	*1000*	*1108*	*111*
Sodium	*10000*	*10555*	*106*
Strontium	*1500*	*1456*	*97*
Thallium	*1000*	*937*	*94*
Tin	*500*	*524*	*105*
Titanium	*500*	*511*	*102*
Vanadium	*500*	*499*	*100*
Zinc	*1000*	*1035*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-368213/2-A

Lab Name: TestAmerica Canton Job No.: 240-108064-1

Sample Matrix: Water LCS Source: MTICP1_00082

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	1050		105	80	120		6010C
Manganese	500	514		103	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-108064-1

SDG No.:

Instrument ID: I12 Date: 01/28/2019 12:19

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		15000	6010C

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/20/2019 13:24 End Date: 02/21/2019 00:18

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe																								
ICIS 240-368873/1	1		13:24	X																								
CALSTD 240-368873/2 IC			13:29	X																								
CALSTD 240-368873/3 IC			13:34	X																								
ICV 240-368873/4	1		13:38	X																								
ICB 240-368873/5	1		13:43	X																								
ICVL 240-368873/6	1		13:47	X																								
ZZZZZZ			13:52																									
ICSA 240-368873/8	1		13:57	X																								
ICSAB 240-368873/9	1		14:02	X																								
CCV 240-368873/10			14:06																									
CCB 240-368873/11			14:10																									
ZZZZZZ			14:15																									
ZZZZZZ			14:20																									
ZZZZZZ			14:25																									
ZZZZZZ			14:29																									
ZZZZZZ			14:34																									
ZZZZZZ			14:39																									
CCV 240-368873/18			14:43																									
CCB 240-368873/19			14:48																									
ZZZZZZ			14:57																									
ZZZZZZ			15:01																									
ZZZZZZ			15:06																									
ZZZZZZ			15:11																									
ZZZZZZ			15:16																									
ZZZZZZ			15:20																									
ZZZZZZ			15:25																									
ZZZZZZ			15:30																									
ZZZZZZ			15:34																									
ZZZZZZ			15:39																									
CCV 240-368873/30			15:44																									
CCB 240-368873/31			15:48																									
ZZZZZZ			15:53																									
ZZZZZZ			15:58																									
ZZZZZZ			16:03																									
ZZZZZZ			16:07																									
ZZZZZZ			16:12																									
ZZZZZZ			16:17																									
ZZZZZZ			16:22																									
ZZZZZZ			16:27																									
ZZZZZZ			16:31																									
ZZZZZZ			16:36																									
CCV 240-368873/42			16:41																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/20/2019 13:24 End Date: 02/21/2019 00:18

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe																								
CCB 240-368873/43			16:45																									
ZZZZZZ			16:50																									
ZZZZZZ			16:54																									
ZZZZZZ			16:59																									
ZZZZZZ			17:04																									
ZZZZZZ			17:09																									
ZZZZZZ			17:13																									
ZZZZZZ			17:18																									
ZZZZZZ			17:22																									
ZZZZZZ			17:27																									
ZZZZZZ			17:32																									
CCV 240-368873/54	1		17:36	X																								
CCB 240-368873/55	1		17:40	X																								
ZZZZZZ			17:45																									
240-108064-3	2	R	17:49	X																								
ZZZZZZ			17:54																									
ZZZZZZ			17:59																									
ZZZZZZ			18:04																									
ZZZZZZ			18:08																									
ZZZZZZ			18:13																									
ZZZZZZ			18:18																									
ZZZZZZ			18:22																									
ZZZZZZ			18:27																									
CCV 240-368873/66	1		18:32	X																								
CCB 240-368873/67	1		18:36	X																								
CCVL 240-368873/68	1		18:41	X																								
ZZZZZZ			18:46																									
ZZZZZZ			18:50																									
ZZZZZZ			18:55																									
ZZZZZZ			19:00																									
ZZZZZZ			19:04																									
ZZZZZZ			19:09																									
ZZZZZZ			19:14																									
ZZZZZZ			19:18																									
ZZZZZZ			19:23																									
CCV 240-368873/78			19:27																									
CCB 240-368873/79			19:32																									
ZZZZZZ			19:36																									
ZZZZZZ			19:41																									
ZZZZZZ			19:45																									
ZZZZZZ			19:50																									
ZZZZZZ			19:54																									

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-368873/4 02/20/2019 13:38				CCV 240-368873/54 02/20/2019 17:36				CCV 240-368873/66 02/20/2019 18:32			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	13000		12500	104	26400		25000	105	26100		25000	105
Manganese	1550		1500	103	2110		2000	106	2110		2000	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-368873/6 02/20/2019 13:47				CCVL 240-368873/68 02/20/2019 18:41							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	201		200	101	207		200	104				
Manganese	14.8	J	15.0	99	15.7		15.0	105				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-368873/5 02/20/2019 13:43		CCB 240-368873/55 02/20/2019 17:40		CCB 240-368873/67 02/20/2019 18:36			
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U		
Manganese	15	2.1	U	2.1	U	2.1	U		

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICSA 240-368873/8 Instrument ID: I12

Lab File ID: I12022019B.asc ICS Source: MTTRICSAW_00045

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**191130**	**96**
Aluminum	*500000*	*515240*	*103*
Antimony		*1.89*	
Arsenic		*-6.80*	
Barium		*-0.0558*	
Beryllium		*0.203*	
Boron		*-3.60*	
Cadmium		*0.829*	
Calcium	*500000*	*478180*	*96*
Chromium		*2.71*	
Cobalt		*-4.98*	
Copper		*-1.48*	
Lead		*2.84*	
Lithium		*21.6*	
Magnesium	*500000*	*511090*	*102*
Manganese		*0.627*	
Molybdenum		*-0.666*	
Nickel		*2.80*	
Potassium		*-6.22*	
Selenium		*-9.91*	
Silicon		*6.03*	
Silver		*-1.95*	
Sodium		*48.2*	
Strontium		*6.48*	
Thallium		*-2.22*	
Tin		*0.380*	
Titanium		*-1.77*	
Vanadium		*-0.505*	
Zinc		*-0.637*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICSAB 240-368873/9 Instrument ID: I12

Lab File ID: I12022019B.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Iron	**200000**	**185800**	**93**
Aluminum	*500000*	*498570*	*100*
Antimony	*1000*	*1002*	*100*
Arsenic	*1000*	*964*	*96*
Barium	*500*	*482*	*96*
Beryllium	*500*	*485*	*97*
Boron	*500*	*492*	*98*
Cadmium	*1000*	*1008*	*101*
Calcium	*500000*	*464730*	*93*
Chromium	*500*	*477*	*95*
Cobalt	*500*	*502*	*100*
Copper	*500*	*531*	*106*
Lead	*1000*	*858*	*86*
Lithium	*500*	*524*	*105*
Magnesium	*500000*	*492380*	*98*
Manganese	*500*	*487*	*97*
Molybdenum	*1000*	*942*	*94*
Nickel	*1000*	*988*	*99*
Potassium	*10000*	*10025*	*100*
Selenium	*1000*	*960*	*96*
Silicon	*10000*	*9740*	*97*
Silver	*1000*	*1067*	*107*
Sodium	*10000*	*10044*	*100*
Strontium	*1500*	*1375*	*92*
Thallium	*1000*	*880*	*88*
Tin	*500*	*508*	*102*
Titanium	*500*	*500*	*100*
Vanadium	*500*	*466*	*93*
Zinc	*1000*	*989*	*99*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/18/2019 13:55 End Date: 02/18/2019 20:23

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn							
RINSE 240-368515/1			13:55																												
ICIS 240-368515/2			13:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD1 240-368515/3 IC	1		13:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD2 240-368515/4 IC	1		14:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD3 240-368515/5 IC	1		14:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD4 240-368515/6 IC	1		14:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICV 240-368515/7	1		14:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICB 240-368515/8	1		14:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICVL 240-368515/9	1		14:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICSA 240-368515/10	1		14:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICSAB 240-368515/11	1		14:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCV 240-368515/12			14:21																												
CCB 240-368515/13			14:23																												
ZZZZZZ			14:25																												
ZZZZZZ			14:30																												
ZZZZZZ			14:32																												
ZZZZZZ			14:34																												
ZZZZZZ			14:36																												
ZZZZZZ			14:39																												
ZZZZZZ			14:41																												
ZZZZZZ			14:43																												
ZZZZZZ			14:46																												
ZZZZZZ			14:48																												
CCV 240-368515/24			14:50																												
CCB 240-368515/25			14:53																												
CCV 240-368515/26			14:55																												
CCB 240-368515/27			14:57																												
ZZZZZZ			15:00																												
ZZZZZZ			15:02																												
ZZZZZZ			15:04																												
ZZZZZZ			15:07																												
ZZZZZZ			15:09																												
ZZZZZZ			15:12																												
ZZZZZZ			15:14																												
ZZZZZZ			15:16																												
ZZZZZZ			15:19																												
ZZZZZZ			15:21																												
CCV 240-368515/38			15:23																												
CCB 240-368515/39			15:26																												
ZZZZZZ			15:28																												
ZZZZZZ			15:30																												
ZZZZZZ			15:33																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/18/2019 13:55 End Date: 02/18/2019 20:23

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			17:13																												
CCV 240-368515/86			17:15																												
CCB 240-368515/87			17:17																												
ZZZZZZ			17:20																												
ZZZZZZ			17:22																												
ZZZZZZ			17:24																												
ZZZZZZ			17:26																												
ZZZZZZ			17:29																												
ZZZZZZ			17:31																												
ZZZZZZ			17:34																												
ZZZZZZ			17:36																												
ZZZZZZ			17:38																												
ZZZZZZ			17:41																												
CCV 240-368515/98			17:43																												
CCB 240-368515/99			17:45																												
ZZZZZZ			17:48																												
ZZZZZZ			17:50																												
ZZZZZZ			17:52																												
ZZZZZZ			17:55																												
ZZZZZZ			17:57																												
ZZZZZZ			17:59																												
ZZZZZZ			18:02																												
ZZZZZZ			18:04																												
ZZZZZZ			18:07																												
ZZZZZZ			18:09																												
CCV 240-368515/110			18:11																												
CCB 240-368515/111			18:14																												
ZZZZZZ			18:16																												
ZZZZZZ			18:18																												
ZZZZZZ			18:21																												
ZZZZZZ			18:23																												
ZZZZZZ			18:26																												
ZZZZZZ			18:28																												
ZZZZZZ			18:30																												
ZZZZZZ			18:32																												
ZZZZZZ			18:35																												
ZZZZZZ			18:37																												
CCV 240-368515/122	1		18:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368515/123	1		18:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			18:44																												
ZZZZZZ			18:46																												
ZZZZZZ			18:48																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/18/2019 13:55 End Date: 02/18/2019 20:23

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			18:51																												
ZZZZZZ			18:53																												
ZZZZZZ			18:55																												
ZZZZZZ			18:58																												
ZZZZZZ			19:00																												
MB 240-368213/1-A	1	R	19:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
LCS 240-368213/3-A	1	R	19:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-368515/134	1		19:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368515/135	1		19:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			19:11																												
ZZZZZZ			19:14																												
ZZZZZZ			19:16																												
ZZZZZZ			19:18																												
ZZZZZZ			19:20																												
ZZZZZZ			19:22																												
ZZZZZZ			19:25																												
ZZZZZZ			19:27																												
ZZZZZZ			19:29																												
ZZZZZZ			19:31																												
CCV 240-368515/146	1		19:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368515/147	1		19:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-108064-2	1	R	19:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-108064-3	1	R	19:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-108064-4	1	R	19:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			19:46																												
ZZZZZZ			19:48																												
ZZZZZZ			19:50																												
ZZZZZZ			19:53																												
ZZZZZZ			19:55																												
ZZZZZZ			19:57																												
ZZZZZZ			19:59																												
CCV 240-368515/158	1		20:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368515/159	1		20:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			20:06																												
ZZZZZZ			20:09																												
ZZZZZZ			20:11																												
CCV 240-368515/163			20:14																												
CCB 240-368515/164			20:16																												
CCVL 240-368515/165	1		20:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-368515/166			20:21																												
CCB 240-368515/167			20:23																												

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00230

Analyte	ICV 240-368515/7 02/18/2019 14:09				CCV 240-368515/122 02/18/2019 18:39				CCV 240-368515/134 02/18/2019 19:07			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	197		200	98	256		250	102	254		250	101
Antimony	39.3		40.0	98	50.5		50.0	101	50.6		50.0	101
Arsenic	38.7		40.0	97	50.6		50.0	101	50.7		50.0	101
Barium	37.7		40.0	94	49.2		50.0	98	49.6		50.0	99
Beryllium	39.4		40.0	98	48.5		50.0	97	47.4		50.0	95
Cadmium	37.7		40.0	94	47.8		50.0	96	48.9		50.0	98
Calcium	20000		20000	100	26100		25000	104	25800		25000	103
Chromium	39.9		40.0	100	50.3		50.0	101	50.5		50.0	101
Cobalt	38.9		40.0	97	49.3		50.0	99	49.4		50.0	99
Copper	39.2		40.0	98	49.7		50.0	99	50.0		50.0	100
Iron	9590		10000	96	12500		12500	100	12600		12500	101
Lead	39.4		40.0	99	50.4		50.0	101	49.0		50.0	98
Magnesium	19400		20000	97	25300		25000	101	25300		25000	101
Manganese	190		200	95	247		250	99	247		250	99
Nickel	39.5		40.0	99	48.9		50.0	98	49.7		50.0	99
Potassium	19600		20000	98	25300		25000	101	25400		25000	102
Selenium	38.9		40.0	97	50.5		50.0	101	50.4		50.0	101
Silver	40.4		40.0	101	49.5		50.0	99	49.4		50.0	99
Sodium	19600		20000	98	25100		25000	100	25000		25000	100
Thallium	38.5		40.0	96	50.4		50.0	101	48.4		50.0	97
Vanadium	39.5		40.0	99	50.0		50.0	100	50.1		50.0	100
Zinc	39.5		40.0	99	49.9		50.0	100	50.5		50.0	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00230

Analyte	CCV 240-368515/146 02/18/2019 19:34				CCV 240-368515/158 02/18/2019 20:02							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	261		250	104	256		250	103				
Antimony	51.4		50.0	103	51.4		50.0	103				
Arsenic	50.5		50.0	101	51.0		50.0	102				
Barium	49.7		50.0	99	49.9		50.0	100				
Beryllium	47.2		50.0	94	47.3		50.0	95				
Cadmium	49.1		50.0	98	49.2		50.0	98				
Calcium	26000		25000	104	26300		25000	105				
Chromium	50.8		50.0	102	50.9		50.0	102				
Cobalt	48.8		50.0	98	48.9		50.0	98				
Copper	48.8		50.0	98	50.0		50.0	100				
Iron	12400		12500	99	12500		12500	100				
Lead	50.0		50.0	100	50.5		50.0	101				
Magnesium	25400		25000	102	26000		25000	104				
Manganese	250		250	100	249		250	100				
Nickel	49.0		50.0	98	49.2		50.0	98				
Potassium	25800		25000	103	25700		25000	103				
Selenium	51.3		50.0	103	49.8		50.0	100				
Silver	49.6		50.0	99	49.8		50.0	100				
Sodium	25300		25000	101	25500		25000	102				
Thallium	49.7		50.0	99	50.5		50.0	101				
Vanadium	50.0		50.0	100	50.7		50.0	101				
Zinc	50.1		50.0	100	50.4		50.0	101				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MTMSCRI6020AW_00079 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00079

Analyte	ICVL 240-368515/9 02/18/2019 14:13				CCVL 240-368515/165 02/18/2019 20:18							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	50.8		50.0	102	54.1		50.0	108				
Antimony	1.98	J	2.00	99	2.00		2.00	100				
Arsenic	4.65	J	5.00	93	4.74	J	5.00	95				
Barium	5.11		5.00	102	5.10		5.00	102				
Beryllium	0.983	J	1.00	98	0.981	J	1.00	98				
Cadmium	1.00		1.00	100	1.01		1.00	101				
Calcium	1050		1000	105	1070		1000	107				
Chromium	2.03		2.00	102	2.07		2.00	103				
Cobalt	1.02		1.00	102	0.992	J	1.00	99				
Copper	2.05		2.00	102	2.11		2.00	106				
Iron	103		100	103	104		100	104				
Lead	1.03		1.00	103	1.04		1.00	104				
Magnesium	1010		1000	101	1040		1000	104				
Manganese	4.82	J	5.00	96	5.11		5.00	102				
Nickel	1.97	J	2.00	98	1.84	J	2.00	92				
Potassium	1060		1000	106	1090		1000	109				
Selenium	4.87	J	5.00	97	4.98	J	5.00	100				
Silver	1.02		1.00	102	1.03		1.00	103				
Sodium	1010		1000	101	1100		1000	110				
Thallium	1.04		1.00	104	1.01		1.00	101				
Vanadium	4.74	J	5.00	95	4.93	J	5.00	99				
Zinc	19.4	J	20.0	97	19.6	J	20.0	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-368515/8 02/18/2019 14:11		CCB 240-368515/123 02/18/2019 18:41		CCB 240-368515/135 02/18/2019 19:09		CCB 240-368515/147 02/18/2019 19:36	
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-368515/159 02/18/2019 20:04							
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U						
Antimony	2.0	0.57	U						
Arsenic	5.0	0.75	U						
Barium	5.0	2.2	U						
Beryllium	1.0	0.31	U						
Cadmium	1.0	0.21	U						
Calcium	1000	580	U						
Chromium	2.0	0.98	U						
Cobalt	1.0	0.19	U						
Copper	2.0	1.7	U						
Iron	100	47	U						
Lead	1.0	0.45	U						
Magnesium	1000	200	U						
Manganese	5.0	2.1	U						
Nickel	2.0	1.5	U						
Potassium	1000	220	U						
Selenium	5.0	0.89	U						
Silver	1.0	0.053	U						
Sodium	1000	330	U						
Thallium	1.0	0.20	U						
Vanadium	5.0	0.82	U						
Zinc	20	15	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-368213/1-A

Instrument Code: I14 Batch No.: 368515

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	1.7	U		6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	2.1	U		6020A
7440-02-0	Nickel	1.5	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICSA 240-368515/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**48140**	**96**
Antimony		**0.0300**	
Arsenic		**0.0840**	
Barium		**0.0320**	
Beryllium		**0.0130**	
Cadmium		**0.201**	
Calcium	**50000**	**49950**	**100**
Chromium		**0.140**	
Cobalt		**0.0080**	
Copper		**0.179**	
Iron	**50000**	**47713**	**95**
Lead		**-0.0030**	
Magnesium	**50000**	**48517**	**97**
Manganese		**0.0870**	
Nickel		**0.125**	
Potassium	**50000**	**48398**	**97**
Selenium		**0.0660**	
Silver		**0.0110**	
Sodium	**50000**	**48908**	**98**
Thallium		**0.0020**	
Vanadium		**-0.120**	
Zinc		**0.0850**	
Boron		*3.49*	
Lithium		*0.758*	
Molybdenum	*1000*	*1055*	*106*
Strontium		*0.453*	
Tin		*0.309*	
Titanium	*1000*	*970*	*97*
Tungsten		*0.122*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICSAB 240-368515/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Aluminum	**50000**	**47452**	**95**
Antimony	**100**	**99.8**	**100**
Arsenic	**100**	**96.6**	**97**
Barium	**100**	**95.7**	**96**
Beryllium	**100**	**95.9**	**96**
Cadmium	**100**	**95.7**	**96**
Calcium	**50000**	**49295**	**99**
Chromium	**100**	**96.9**	**97**
Cobalt	**100**	**95.5**	**95**
Copper	**100**	**95.2**	**95**
Iron	**50000**	**47505**	**95**
Lead	**100**	**97.7**	**98**
Magnesium	**50000**	**48221**	**96**
Manganese	**100**	**95.3**	**95**
Nickel	**100**	**96.5**	**97**
Potassium	**50000**	**47187**	**94**
Selenium	**100**	**95.1**	**95**
Silver	**100**	**101**	**101**
Sodium	**50000**	**48096**	**96**
Thallium	**100**	**95.8**	**96**
Vanadium	**100**	**96.7**	**97**
Zinc	**100**	**96.6**	**97**
Boron	*100*	*99.4*	*99*
Lithium	*100*	*96.2*	*96*
Molybdenum	*1100*	*1151*	*105*
Strontium	*100*	*95.2*	*95*
Tin	*100*	*101*	*101*
Titanium	*1100*	*1075*	*98*
Tungsten	*100*	*102*	*102*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-368213/3-A

Lab Name: TestAmerica Canton Job No.: 240-108064-1

Sample Matrix: Water LCS Source: MTICPMSB_00039

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	103		103	80	120		6020A
Aluminum	10000	10800		108	80	120		6020A
Arsenic	1000	1100		110	80	120		6020A
Barium	1000	1180		118	80	120		6020A
Beryllium	1000	1090		109	80	120		6020A
Cadmium	1000	1160		116	80	120		6020A
Cobalt	1000	1110		111	80	120		6020A
Chromium	1000	1150		115	80	120		6020A
Copper	1000	1090		109	80	120		6020A
Iron	10000	10200		102	80	120		6020A
Manganese	1000	1160		116	80	120		6020A
Nickel	1000	1150		115	80	120		6020A
Lead	1000	1170		117	80	120		6020A
Antimony	100	107		107	80	120		6020A
Selenium	1000	1120		112	80	120		6020A
Thallium	250	289		115	80	120		6020A
Vanadium	1000	1150		115	80	120		6020A
Zinc	1000	1110		111	80	120		6020A
Calcium	10000	11000		110	80	120		6020A
Potassium	10000	10600		106	80	120		6020A
Magnesium	10000	10500		105	80	120		6020A
Sodium	10000	10500		105	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-108064-1

SDG No.:

Instrument ID: I14 Date: 10/02/2018 11:17

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICP Instrument ID: I12 Start Date: 02/19/2019 End Date: 02/20/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-368589/1	08:35										
ICV 240-368589/4	08:49	90		98		97		99			
ICB 240-368589/5	08:53	99		100		100		99			
ICVL 240-368589/6	08:58	97		99		99		101			
ICSA 240-368589/8	09:07	74		89		86		96			
ICSAB 240-368589/9	09:12	72		87		85		96			
CCV 240-368589/107	17:43	83		94		93		96			
CCB 240-368589/108	17:48	99		99		100		98			
MB 240-368213/1-A	18:17	102		101		102		103			
LCS 240-368213/2-A	18:21	87		95		95		99			
CCV 240-368589/119	18:39	85		95		94		98			
CCB 240-368589/120	18:44	100		99		100		99			
240-108064-2	19:02	94		100		100		103			
240-108064-3	19:07	82				149					
240-108064-4	19:11	86		111		110		116			
CCV 240-368589/131	19:35	86		96		96		100			
CCB 240-368589/132	19:39	101		100		102		102			
CCVL 240-368589/193	00:21	110		106		116		131			

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICP Instrument ID: I12 Start Date: 02/20/2019 End Date: 02/20/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-368873/1	13:24										
ICV 240-368873/4	13:38	89		98		97		99			
ICB 240-368873/5	13:43	100		99		100		100			
ICVL 240-368873/6	13:47	97		98		98		99			
ICSA 240-368873/8	13:57	74		89		85		97			
ICSAB 240-368873/9	14:02	73		87		85		97			
CCV 240-368873/54	17:36	81		91		89		90			
CCB 240-368873/55	17:40	95		95		94		91			
240-108064-3	17:49	82		122		117		120			
CCV 240-368873/66	18:32	80		90		88		88			
CCB 240-368873/67	18:36	93		93		92		89			
CCVL 240-368873/68	18:41	91		92		91		88			

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/18/2019 End Date: 02/18/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-368515/3 IC	13:59	80		82		86		86		76	
STD2 240-368515/4 IC	14:02	79		82		87		86		75	
STD3 240-368515/5 IC	14:04	77		80		88		86		74	
STD4 240-368515/6 IC	14:06	80		85		91		89		80	
ICV 240-368515/7	14:09	79		83		89		89		76	
ICB 240-368515/8	14:11	98		101		105		104		103	
ICVL 240-368515/9	14:13	82		85		91		89		81	
ICSA 240-368515/10	14:16	75		80		86		82		71	
ICSAB 240-368515/11	14:18	73		79		85		84		71	
CCV 240-368515/122	18:39	83		86		90		87		81	
CCB 240-368515/123	18:41	86		91		96		92		90	
MB 240-368213/1-A	19:02	81		88		93		90		85	
LCS 240-368213/3-A	19:05	80		90		95		90		83	
CCV 240-368515/134	19:07	78		87		92		90		82	
CCB 240-368515/135	19:09	84		94		101		96		95	
CCV 240-368515/146	19:34	78		86		89		84		80	
CCB 240-368515/147	19:36	83		92		97		91		89	
240-108064-2	19:39	80		89		91		86		79	
240-108064-3	19:41	75		86		88		85		74	
240-108064-4	19:43	79		88		89		85		77	
CCV 240-368515/158	20:02	82		90		93		88		81	
CCB 240-368515/159	20:04	89		97		98		94		90	
CCVL 240-368515/165	20:18	89		95		98		91		87	

FORM XV - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/18/2019 End Date: 02/18/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-368515/3 IC	13:59	92		90		89		95		94	
STD2 240-368515/4 IC	14:02	90		90		87		94		94	
STD3 240-368515/5 IC	14:04	90		89		85		93		93	
STD4 240-368515/6 IC	14:06	97		95		91		99		97	
ICV 240-368515/7	14:09	94		93		91		97		97	
ICB 240-368515/8	14:11	105		105		102		105		102	
ICVL 240-368515/9	14:13	96		95		92		98		96	
ICSA 240-368515/10	14:16	89		88		86		95		94	
ICSAB 240-368515/11	14:18	89		90		86		95		96	
CCV 240-368515/122	18:39	93		91		92		99		98	
CCB 240-368515/123	18:41	101		99		99		104		104	
MB 240-368213/1-A	19:02	101		99		97		104		102	
LCS 240-368213/3-A	19:05	98		98		93		102		102	
CCV 240-368515/134	19:07	96		95		93		100		100	
CCB 240-368515/135	19:09	104		103		101		104		101	
CCV 240-368515/146	19:34	92		92		89		99		97	
CCB 240-368515/147	19:36	102		102		99		105		103	
240-108064-2	19:39	94		95		94		103		102	
240-108064-3	19:41	87		89		87		106		107	
240-108064-4	19:43	90		91		88		100		99	
CCV 240-368515/158	20:02	95		96		92		100		99	
CCB 240-368515/159	20:04	102		102		100		105		104	
CCVL 240-368515/165	20:18	101		100		97		102		102	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/18/2019 End Date: 02/18/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-368515/3 IC	13:59	97									
STD2 240-368515/4 IC	14:02	94									
STD3 240-368515/5 IC	14:04	92									
STD4 240-368515/6 IC	14:06	98									
ICV 240-368515/7	14:09	97									
ICB 240-368515/8	14:11	102									
ICVL 240-368515/9	14:13	97									
ICSA 240-368515/10	14:16	93									
ICSAB 240-368515/11	14:18	96									
CCV 240-368515/122	18:39	101									
CCB 240-368515/123	18:41	104									
MB 240-368213/1-A	19:02	105									
LCS 240-368213/3-A	19:05	103									
CCV 240-368515/134	19:07	99									
CCB 240-368515/135	19:09	101									
CCV 240-368515/146	19:34	97									
CCB 240-368515/147	19:36	105									
240-108064-2	19:39	101									
240-108064-3	19:41	94									
240-108064-4	19:43	96									
CCV 240-368515/158	20:02	100									
CCB 240-368515/159	20:04	105									
CCVL 240-368515/165	20:18	103									

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-368213/1-A	02/15/2019 14:00	368213		50	50
LCS 240-368213/2-A	02/15/2019 14:00	368213		50	50
240-108064-2	02/15/2019 14:00	368213		50	50
240-108064-3	02/15/2019 14:00	368213		50	50
240-108064-4	02/15/2019 14:00	368213		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-368213/1-A	02/15/2019 14:00	368213		50	50
LCS 240-368213/3-A	02/15/2019 14:00	368213		50	50
240-108064-2	02/15/2019 14:00	368213		50	50
240-108064-3	02/15/2019 14:00	368213		50	50
240-108064-4	02/15/2019 14:00	368213		50	50

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368213 Batch Start Date: 02/15/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/15/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00082	MTICP2A 00090	MTTMHCL 00235
MB 240-368213/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-368213/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-108064-I-2	MRC-MW154A-021319	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-108064-I-3	MRC-MW145A-021319	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-108064-I-4	MRC-MW148A-021319	3005A, 6010C	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180
MB 240-368213/1		3005A, 6010C		1 mL
LCS 240-368213/2		3005A, 6010C		1 mL
240-108064-I-2	MRC-MW154A-021319	3005A, 6010C	R	1 mL
240-108064-I-3	MRC-MW145A-021319	3005A, 6010C	R	1 mL
240-108064-I-4	MRC-MW148A-021319	3005A, 6010C	R	1 mL

Batch Notes	
Batch Comment	filter paper: 80327101
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb3
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368213 Batch Start Date: 02/15/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/15/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00038	MTICPMSB 00039	MTTMHCL 00235
MB 240-368213/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-368213/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-108064-I-2	MRC-MW154A-021319	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-108064-I-3	MRC-MW145A-021319	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-108064-I-4	MRC-MW148A-021319	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-368213/1		3005A, 6020A		1 mL					
LCS 240-368213/3		3005A, 6020A		1 mL					
240-108064-I-2	MRC-MW154A-021319	3005A, 6020A	R	1 mL					
240-108064-I-3	MRC-MW145A-021319	3005A, 6020A	R	1 mL					
240-108064-I-4	MRC-MW148A-021319	3005A, 6020A	R	1 mL					

Batch Notes	
Batch Comment	filter paper: 80327101
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb3
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW154A-021319	240-108064-2
MRC-MW145A-021319	240-108064-3
MRC-MW148A-021319	240-108064-4

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-108064-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW154A-021319	240-108064-2
MRC-MW145A-021319	240-108064-3
MRC-MW148A-021319	240-108064-4

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-108064-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW154A-021319	240-108064-2
MRC-MW145A-021319	240-108064-3
MRC-MW148A-021319	240-108064-4

Comments:

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 02/19/2019 14:05 End Date: 02/19/2019 16:07

Lab Sample Id	D/F	Type	Time	Analytes
				HardCC
MB 240-368671/1	1	T	14:05	X
LCS 240-368671/2	1	T	14:09	X
ZZZZZZ			14:13	
ZZZZZZ			14:17	
ZZZZZZ			14:21	
ZZZZZZ			14:26	
ZZZZZZ			14:30	
ZZZZZZ			14:34	
ZZZZZZ			14:38	
ZZZZZZ			14:43	
ZZZZZZ			14:47	
ZZZZZZ			14:51	
ZZZZZZ			14:55	
ZZZZZZ			15:00	
ZZZZZZ			15:04	
ZZZZZZ			15:08	
ZZZZZZ			15:12	
ZZZZZZ			15:16	
ZZZZZZ			15:21	
ZZZZZZ			15:25	
ZZZZZZ			15:29	
240-108064-2	1	T	15:33	X
240-108064-3 DU	1	T	15:38	X
240-108064-3	1	T	15:42	X
240-108064-4	1	T	15:46	X
ZZZZZZ			15:50	
ZZZZZZ			15:55	
ZZZZZZ			15:59	
ZZZZZZ			16:03	
ZZZZZZ			16:07	

Prep Types:
T = Total/NA

FORM XIII-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 368671 Date: 02/19/2019 15:38								
2340C-2011	MRC-MW145A-021319	240-108064-3	Hardness as calcium carbonate	290	mg/L			
2340C-2011	MRC-MW145A-021319	240-108064-3 DU	Hardness as calcium carbonate	288	mg/L	0.7	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/15/2019 10:24 End Date: 02/15/2019 12:08

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			10:24																									
ZZZZZZ			10:36																									
LCS 240-368399/3	1	T	10:41	X																								
MB 240-368399/4	1	T	10:44	X																								
ZZZZZZ			10:49																									
ZZZZZZ			10:54																									
ZZZZZZ			10:58																									
ZZZZZZ			11:03																									
ZZZZZZ			11:07																									
ZZZZZZ			11:12																									
ZZZZZZ			11:17																									
ZZZZZZ			11:21																									
ZZZZZZ			11:23																									
ZZZZZZ			11:28																									
ZZZZZZ			11:32																									
ZZZZZZ			11:36																									
ZZZZZZ			11:41																									
ZZZZZZ			11:47																									
ZZZZZZ			11:51																									
240-108064-2	1	T	11:55	X																								
240-108064-3	1	T	11:58	X																								
240-108064-4	1	T	12:02	X																								
ZZZZZZ			12:07																									
ZZZZZZ			12:08																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 02/19/2019 13:51 End Date: 02/19/2019 13:51

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-368625/1	1	T	13:51	X																								
LCS 240-368625/2	1	T	13:51	X																								
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
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ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
240-108064-2	1	T	13:51	X																								
240-108064-3	1	T	13:51	X																								
240-108064-4	1	T	13:51	X																								
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: VERONICA Analysis Method: 9056A

Start Date: 08/06/2018 12:54 End Date: 08/06/2018 16:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339515/1 IC	1		12:54	X																								
STD2 240-339515/2 IC	1		13:14	X																								
STD3 240-339515/3 IC	1		13:34	X																								
STD4 240-339515/4 IC	1		13:54	X																								
STD5 240-339515/5 ICRT	1		14:14	X																								
STD6 240-339515/6 IC	1		14:34	X																								
STD7 240-339515/7 IC	1		14:54	X																								
STD8 240-339515/8 IC	1		15:15	X																								
STD9 240-339515/9 IC	1		15:35	X																								
ICV 240-339515/10	1		15:55	X																								
ICB 240-339515/11	1		16:15	X																								

Prep Types:
=

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: VERONICA Analysis Method: 9056A

Start Date: 02/14/2019 17:48 End Date: 02/15/2019 04:52

Lab Sample Id	D/F	Type	Time	Analytes																								
				Br	SO4																							
CCV 240-368146/1	1		17:48		X																							
CCB 240-368146/2	1		18:08		X																							
MB 240-368146/3	1	T	18:28		X																							
LCS 240-368146/4	1	T	18:48		X																							
240-108064-2	1	T	19:09	X	X																							
240-108064-2 MS	1	T	19:29	X	X																							
240-108064-2 MSD	1	T	19:49	X	X																							
240-108064-3	1	T	20:09	X	X																							
ZZZZZZ			20:29																									
240-108064-4	1	T	20:49	X	X																							
ZZZZZZ			21:09																									
ZZZZZZ			21:29																									
CCV 240-368146/13	1		21:49		X																							
CCB 240-368146/14	1		22:10		X																							
ZZZZZZ			22:30																									
ZZZZZZ			22:50																									
ZZZZZZ			23:10																									
ZZZZZZ			23:30																									
ZZZZZZ			23:50																									
ZZZZZZ			00:10																									
ZZZZZZ			00:30																									
ZZZZZZ			00:50																									
ZZZZZZ			01:11																									
ZZZZZZ			01:31																									
CCV 240-368146/25			01:51																									
CCB 240-368146/26			02:11																									
ZZZZZZ			02:31																									
ZZZZZZ			02:52																									
ZZZZZZ			03:12																									
ZZZZZZ			03:32																									
ZZZZZZ			03:52																									
ZZZZZZ			04:12																									
CCV 240-368146/33			04:32																									
CCB 240-368146/34			04:52																									

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Analyst: LKG Batch Start Date: 08/06/2018

Reporting Units: mg/L Analytical Batch No.: 339515

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:55	Sulfate	52.4	50.0	105	90-110		WCICLCS_00669
11	ICB	16:15	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Analyst: JWW Batch Start Date: 02/14/2019

Reporting Units: mg/L Analytical Batch No.: 368146

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	17:48	Sulfate	48.1	50.0	96	90-110		WCICCCV_00861
2	CCB	18:08	Sulfate	0.35				U	
13	CCV	21:49	Sulfate	48.0	50.0	96	90-110		WCICCCV_00861
14	CCB	22:10	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 368146 Date: 02/14/2019 19:29											
300.0	240-108064-2	Bromide	0.094	J	mg/L						
300.0	240-108064-2 MS	Bromide	10.7		mg/L	10.0	106	80-120			
Batch ID: 368146 Date: 02/14/2019 19:29											
9056A	240-108064-2	Sulfate	29		mg/L						
9056A	240-108064-2 MS	Sulfate	80.8		mg/L	50.0	104	80-120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 368146 Date: 02/14/2019 19:49											
300.0	240-108064-2 MSD	Bromide	11.3		mg/L	10.0	112	80-120	5	15	
Batch ID: 368146 Date: 02/14/2019 19:49											
9056A	240-108064-2 MSD	Sulfate	83.6		mg/L	50.0	109	80-120	3	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/17/2019 12:50 End Date: 02/17/2019 13:27

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575925/1	1		12:50	X																								
ICB 490-575925/2	1		12:51	X																								
CCV 490-575925/3	1		12:52	X																								
CCV 490-575925/4	1		12:53	X																								
CCB 490-575925/5	1		12:54	X																								
MB 490-575925/6	1	T	12:55	X																								
LCS 490-575925/7	1	T	12:57	X																								
ZZZZZZ			12:58																									
ZZZZZZ			12:59																									
ZZZZZZ			13:00																									
ZZZZZZ			13:01																									
ZZZZZZ			13:02																									
ZZZZZZ			13:04																									
ZZZZZZ			13:05																									
ZZZZZZ			13:06																									
ZZZZZZ			13:07																									
ZZZZZZ			13:08																									
ZZZZZZ			13:10																									
ZZZZZZ			13:11																									
CCV 490-575925/20	1		13:12	X																								
CCB 490-575925/21	1		13:13	X																								
ZZZZZZ			13:14																									
ZZZZZZ			13:15																									
ZZZZZZ			13:17																									
ZZZZZZ			13:18																									
240-108064-2	1	T	13:19	X																								
240-108064-3	1	T	13:20	X																								
240-108064-4	1	T	13:21	X																								
ZZZZZZ			13:23																									
ZZZZZZ			13:24																									
ZZZZZZ			13:25																									
CCV 490-575925/32	1		13:26	X																								
CCB 490-575925/33	1		13:27	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG No.:

Analyst: MSP Batch Start Date: 02/17/2019

Reporting Units: mg/L Analytical Batch No.: 575925

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:50	Nitrate Nitrite as N	3.26	3.00	109	90-110		W_ICAl_00027
2	ICB	12:51	Nitrate Nitrite as N	0.040				U	
3	CCV	12:52	Nitrate Nitrite as N	4.88	5.00	98	90-110		W_Nitrate_00020
4	CCV	12:53	Nitrate Nitrite as N	4.93	5.00	99	90-110		IC Primary_00012
5	CCB	12:54	Nitrate Nitrite as N	0.040				U	
20	CCV	13:12	Nitrate Nitrite as N	4.76	5.00	95	90-110		W_Nitrate_00020
21	CCB	13:13	Nitrate Nitrite as N	0.0463				J	
32	CCV	13:26	Nitrate Nitrite as N	4.62	5.00	92	90-110		W_Nitrate_00020
33	CCB	13:27	Nitrate Nitrite as N	0.040				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575925 Date: 02/17/2019 12:55							
SM 4500 NO3 F	MB 490-575925/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925	Date: 02/17/2019 12:57										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575925/7	Nitrate Nitrite as N	3.23		mg/L	3.00	108	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-108064-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/27/2019 08:00 End Date: 02/27/2019 08:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-271440/1	1	T	08:00	X																								
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
240-108064-2	1	T	08:00	X																								
240-108064-3	1	T	08:00	X																								
240-108064-4	1	T	08:00	X																								

Prep Types:
T = Total/NA

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-108064-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 271440 Date: 02/27/2019 08:00							
SM 2520B	MB 180-271440/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 368399 Date: 02/15/2019 10:44							
2320B-2011	MB 240-368399/4	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 368671 Date: 02/19/2019 14:05							
2340C-2011	MB 240-368671/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 368625 Date: 02/19/2019 13:51							
2540 C-2011	MB 240-368625/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 368146 Date: 02/14/2019 18:28							
9056A	MB 240-368146/3	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-368146/3	Sulfate	0.35	U	mg/L	1.0	1

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 368399	Date: 02/15/2019 10:41										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-368399/3	Alkalinity	262		mg/L	271	97	86-123			
Batch ID: 368671	Date: 02/19/2019 14:09										
						LCS Source: WCHARDNESS_00031					
2340C-2011	LCS 240-368671/2	Hardness as calcium carbonate	254		mg/L	246	103	90-110			
Batch ID: 368625	Date: 02/19/2019 13:51										
						LCS Source: WCPHENOVSOLID_00039					
2540 C-2011	LCS 240-368625/2	Total Dissolved Solids	208		mg/L	202	103	80-120			
Batch ID: 368146	Date: 02/14/2019 18:48										
						LCS Source: WCICLCS_00696					
9056A	LCS 240-368146/4	Sulfate	54.4		mg/L	50.0	109	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368671 Batch Start Date: 02/19/19 14:05 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 02/19/19 16:12

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCHARDNESS 00031		
MB 240-368671/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-368671/2		2340C-2011		25 mL	25 mL	6.35 mL	25 mL		
240-108064-G-2	MRC-MW154A-021319	2340C-2011	T	25 mL	25 mL	1.85 mL			
240-108064-G-3 DU	MRC-MW145A-021319	2340C-2011	T	25 mL	25 mL	7.20 mL			
240-108064-G-3	MRC-MW145A-021319	2340C-2011	T	25 mL	25 mL	7.15 mL			
240-108064-G-4	MRC-MW148A-021319	2340C-2011	T	25 mL	25 mL	4.70 mL			

Batch Notes	
Batch Comment	BEAKERS--4010979
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C9
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368399 Batch Start Date: 02/15/19 10:24 Batch Analyst: Weisend, Joseph

Batch Method: 2320B-2011 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-368399/3		2320B-2011		InitialAmount is blank	10 mL				
MB 240-368399/4		2320B-2011		InitialAmount is blank					
240-108064-H-2	MRC-MW154A-021319	2320B-2011	T	InitialAmount is blank					
240-108064-H-3	MRC-MW145A-021319	2320B-2011	T	InitialAmount is blank					
240-108064-H-4	MRC-MW148A-021319	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4-4005008
pH Buffer 2 ID	7-4017506
pH Buffer 3 ID	10-3892955
pH Buffer 4 ID	12-3891579
Nominal Amount Used	10 mL
Probe ID	WCP-137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368625 Batch Start Date: 02/19/19 13:51 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-368625/1		2540 C-2011			3.2766 g	100 mL	3.2765 g	3.2766 g	0 g
LCS 240-368625/2		2540 C-2011			3.2623 g	100 mL	3.2827 g	3.2831 g	0 g
240-108064-E-2	MRC-MW154A-021319	2540 C-2011	T	431 umhos/cm	3.6458 g	100 mL	3.6710 g	3.6711 g	0 g
240-108064-E-3	MRC-MW145A-021319	2540 C-2011	T	2759 umhos/cm	3.7421 g	50 mL	3.8128 g	3.8126 g	0 g
240-108064-E-4	MRC-MW148A-021319	2540 C-2011	T	1512 umhos/cm	3.6982 g	50 mL	3.7366 g	3.7362 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 240-368625/1		2540 C-2011		Pass No Unit	N/A No Unit	N/A	-0.0001 g	0 g	N/A g
LCS 240-368625/2		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0204 g	0.0208 g	N/A g
240-108064-E-2	MRC-MW154A-021319	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0252 g	0.0253 g	N/A g
240-108064-E-3	MRC-MW145A-021319	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0707 g	0.0705 g	N/A g
240-108064-E-4	MRC-MW148A-021319	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0384 g	0.038 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID00039		
MB 240-368625/1		2540 C-2011		N/A g	100 mL	OK			
LCS 240-368625/2		2540 C-2011		N/A g	100 mL	OK	100 mL		
240-108064-E-2	MRC-MW154A-021319	2540 C-2011	T	N/A g	100 mL	OK			
240-108064-E-3	MRC-MW145A-021319	2540 C-2011	T	N/A g	100 mL	OK			
240-108064-E-4	MRC-MW148A-021319	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368625 Batch Start Date: 02/19/19 13:51 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date:

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/21/2019 15:42
Date/Time - Out - CW (WT2)	02/21/2019 16:42
Temperature - Start - CW (WT2) - Correct	181 Celsius
Temperature - End - CW (WT2) - Correct	180 Celsius
Temperature - Start-CW(WT2) -Uncorrected	181 Celsius
Temperature - End-CW(WT2) -Uncorrected	180 Celsius
Temperature - Start - Corrected	105 Celsius
Temperature - End - Corrected	104 Celsius
Date/Time - In	02/19/2019 15:09
Date/Time - Out	02/20/2019 15:45
Filter ID	600020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O02
Thermometer ID - Low Temperature	84922
Thermometer ID	NIST
Temperature - Start - Uncorrected	105 Celsius
Temperature - End - Uncorrected	104 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/20/2019 15:45 No Unit
Weight(WT1) Date/Time Out	02/21/2019 14:53
Weight(WT1) Start Temp	181.1 Celsius
Weight(WT1) Temp Out	180 Celsius
Uncorrected Weight(WT1) Start Temp	181.1 Celsius
Uncorrected Weight(WT1) Temp Out	180 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 339515 Batch Start Date: 08/06/18 12:54 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339515/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339515/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339515/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339515/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339515/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339515/6 IC		300.0		5 mL	2 mL				
STD7 240-339515/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339515/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339515/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368146 Batch Start Date: 02/14/19 17:48 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICSOLNA1 00018	WCICSOLNB1 00018			
240-108064-E-2	MRC-MW154A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-2 MS	MRC-MW154A-021319	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-108064-E-2 MSD	MRC-MW154A-021319	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-108064-E-3	MRC-MW145A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-3	MRC-MW145A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-4	MRC-MW148A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-4	MRC-MW148A-021319	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 339515 Batch Start Date: 08/06/18 12:54 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICLCS 00669				
ICV 240-339515/10		9056A		5 mL	5 mL				
ICB 240-339515/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368146 Batch Start Date: 02/14/19 17:48 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICSOLNA1 00018	WCICSOLNB1 00018			
240-108064-E-2	MRC-MW154A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-2 MS	MRC-MW154A-021319	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-108064-E-2 MSD	MRC-MW154A-021319	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-108064-E-3	MRC-MW145A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-3	MRC-MW145A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-4	MRC-MW148A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-4	MRC-MW148A-021319	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368146 Batch Start Date: 02/14/19 17:48 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00861	WCICLCS 00696			
CCV 240-368146/1		9056A		5 mL	5 mL				
CCB 240-368146/2		9056A		5 mL					
MB 240-368146/3		9056A		5 mL					
LCS 240-368146/4		9056A		5 mL		5 mL			
CCV 240-368146/13		9056A		5 mL	5 mL				
CCB 240-368146/14		9056A		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575925/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575925/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575925/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575925/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575925/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575925/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575925/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
CCV 490-575925/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/21		SM 4500 NO3 F		50 mL	50 mL				
240-108064-F-2	MRC-MW154A-021319	SM 4500 NO3 F	T	50 mL	50 mL				8.79
240-108064-F-3	MRC-MW145A-021319	SM 4500 NO3 F	T	50 mL	50 mL				8.77
240-108064-F-4	MRC-MW148A-021319	SM 4500 NO3 F	T	50 mL	50 mL				5.6
CCV 490-575925/32		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/33		SM 4500 NO3 F		50 mL	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Batch Notes	
Acid used for pH adjustment	4547067
Base used for pH adjustment	4273883
Batch Comment	cent tubes 809161; pH probe VVZ10915; pH meter AB92340683
Buffer Reagent ID	4832283
Carrier Identification	DI water
Color Reagent ID	4832299
Filter ID	180611314
Pipette/Syringe/Dispenser ID	26061004, 26121028

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

VOC CALCULATION	SAMPLE		
	MRC-MW145A-021319		
TARGET ANALYTE	TRICHLOROETHENE		
ANALYTE RESPONSE	157503		
INTERNAL STANDARD	FLUOROBENZENE		
I.S. RESPONSE	1619628		
I.S. CONCENTRATION	10	µg/l	
ANALYTE CAL. RF	0.324		
DILUTION FACTOR (DF)	1		
INITIAL SAMPLE VOLUME - V1	5	ml	
FINAL SAMPLE VOLUME - V2	5	ml	
ON COLUMN AMOUNT	3.001432245	µg/l	

$$\frac{\text{(ANALYTE RESPONSE) x (I.S. CONCENTRATION) X DF x V2}}{\text{(I.S. RESPONSE) x (CAL. R.F.) x V1}} = \textbf{3.00}\ \textbf{µg/l}$$

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW145A-021319 | Lab Sample ID: 240-108064-3

Matrix: Water | Lab File ID: UXC8943.D

Analysis Method: 8260C | Date Collected: 02/13/2019 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 13:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.38	J	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	2.6	J	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.29	J	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	3.0		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

Report Date: 21-Feb-2019 09:19:47 Chrom Revision: 2.3 11-Feb-2019 16:31:10

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX15\20190220-84612.b\UXC8943.D
Lims ID: 240-108064-B-3
Client ID: MRC-MW145A-021319
Sample Type: Client
Inject. Date: 20-Feb-2019 13:40:30 ALS Bottle#: 9 Worklist Smp#: 34
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0084612-034
Misc. Info.: C90220A,8260LLUX15,,43582
Operator ID: Instrument ID: A3UX15

Method: \\chromna\Canton\ChromData\A3UX15\20190220-84612.b\8260_15.m
Limit Group: MSV 8260C ICAL
Last Update: 21-Feb-2019 09:19:30 Calib Date: 21-Jan-2019 19:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX15\20190121-83824.b\UXC8431.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0321

First Level Reviewer: evansle Date: 21-Feb-2019 08:49:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.196	5.196	0.000	99	1619628	10.0	
* 2 Chlorobenzene-d5	117	7.876	7.876	0.000	84	1426042	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.117	10.117	0.000	93	787541	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.639	4.639	0.000	95	259800	6.78	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.923	4.923	0.000	100	345021	7.00	
$ 6 Toluene-d8 (Surr)	98	6.560	6.560	0.000	93	1041812	6.02	
$ 7 4-Bromofluorobenzene (Surr	95	8.991	8.979	0.012	96	341081	5.51	
9 Dichlorodifluoromethane	85		1.532				ND	
10 Chloromethane	50		1.674				ND	
11 Vinyl chloride	62		1.769				ND	
13 Bromomethane	94		2.053				ND	
14 Chloroethane	64		2.136				ND	
16 Trichlorofluoromethane	101		2.350				ND	
19 1,1-Dichloroethene	96		2.777				ND	
20 1,1,2-Trichloro-1,2,2-trif	151		2.789				ND	
22 Acetone	58	2.824	2.812	0.012	98	17972	2.74	
24 Carbon disulfide	76		2.967				ND	
28 Methylene Chloride	84		3.180				ND	
29 2-Methyl-2-propanol	59		3.263				ND	
31 Methyl tert-butyl ether	73		3.405				ND	
30 trans-1,2-Dichloroethene	96		3.405				ND	
34 1,1-Dichloroethane	63		3.761				ND	
36 Vinyl acetate	43		3.785				ND	
35 Isopropyl ether	87		3.797				ND	
38 Tert-butyl ethyl ether	59		4.093				ND	
39 cis-1,2-Dichloroethene	96	4.247	4.235	0.012	78	18735	0.3758	
41 2-Butanone (MEK)	72	4.247	4.247	0.000	100	13798	2.56	
40 2,2-Dichloropropane	97		4.247				ND	
45 Chlorobromomethane	128		4.449				ND	
47 Chloroform	83	4.496	4.496	0.000	93	144736	1.94	
48 1,1,1-Trichloroethane	97		4.662				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 1,1-Dichloropropene	75		4.793				ND	
50 Carbon tetrachloride	117		4.805				ND	
53 Benzene	78		4.971				ND	
54 1,2-Dichloroethane	62		4.982				ND	
55 Tert-amyl methyl ether	73		5.042				ND	
58 Trichloroethene	130	5.504	5.504	0.000	94	157503	3.00	
61 1,2-Dichloropropane	63		5.706				ND	
63 Dibromomethane	93		5.813				ND	
65 Dichlorobromomethane	83		5.931				ND	
67 2-Chloroethyl vinyl ether	63		6.180				ND	
68 cis-1,3-Dichloropropene	75		6.322				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.453				ND	
70 Toluene	91	6.619	6.619	0.000	97	60881	0.2892	
71 trans-1,3-Dichloropropene	75		6.809				ND	
74 Tetrachloroethene	164		7.117				ND	
75 1,3-Dichloropropane	76		7.129				ND	
76 2-Hexanone	43		7.188				ND	U
79 Chlorodibromomethane	129		7.342				ND	
80 Ethylene Dibromide	107		7.461				ND	
82 Chlorobenzene	112		7.900				ND	
83 1,1,1,2-Tetrachloroethane	131		7.971				ND	
84 Ethylbenzene	106		7.995				ND	
85 m-Xylene & p-Xylene	91		8.101				ND	
86 o-Xylene	106		8.481				ND	
87 Styrene	104		8.493				ND	
88 Bromoform	173		8.682				ND	
89 Isopropylbenzene	105		8.825				ND	
93 1,1,2,2-Tetrachloroethane	83		9.121				ND	
92 Bromobenzene	156		9.145				ND	
94 1,2,3-Trichloropropane	110		9.169				ND	
96 N-Propylbenzene	120		9.228				ND	
97 2-Chlorotoluene	126		9.323				ND	
99 4-Chlorotoluene	91		9.418				ND	
101 tert-Butylbenzene	119		9.714				ND	
103 1,2,4-Trimethylbenzene	105		9.761				ND	
105 sec-Butylbenzene	105		9.927				ND	
106 1,3-Dichlorobenzene	146		10.046				ND	
107 4-Isopropyltoluene	119		10.070				ND	
108 1,4-Dichlorobenzene	146		10.141				ND	
109 1,2,3-Trimethylbenzene	105		10.177				ND	
111 n-Butylbenzene	91		10.473				ND	
112 1,2-Dichlorobenzene	146		10.509				ND	
113 1,2-Dibromo-3-Chloropropan	157		11.291				ND	
115 1,2,4-Trichlorobenzene	180		12.109				ND	
116 Hexachlorobutadiene	225		12.275				ND	
117 Naphthalene	128		12.358				ND	
118 1,2,3-Trichlorobenzene	180		12.608				ND	
S 129 Xylenes, Total	106		16.530				ND	

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

TETRA TECH INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **APRIL 18, 2019**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION – VOC / PCB HOMOLOGS / METALS / MISCELLANEOUS PARAMETERS**
LM MRC BLOCK F – FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) 240-107486-1

SAMPLES: 5 / Water / VOC

MRC-MW137A-012919	MRC-MW140A-012919	MRC-MW143A-012919
MRC-MW152B-012919	TB-012919	

4 / Water / Metals / Miscellaneous

MRC-MW137A-012919	MRC-MW140A-012919	MRC-MW143A-012919
MRC-MW152B-012919		

2 / Water / PCB

MRC-MW140A-012919	MRC-MW152B-012919

OVERVIEW

The sample set for LM MRC Block F, SDG 240-107486-1, consists of four (4) water environmental samples and one (1) trip blank. Samples were analyzed for volatile organic compounds (VOC), polychlorinated biphenyl homologs (PCBH), metals, and miscellaneous parameters (alkalinity, bromide, hardness as CaCO3, nitrite/nitrate-N, salinity, sulfate, and total dissolved solids [TDS]). No field duplicate pairs are included in this SDG.

The samples were collected by Tetra Tech on January 29, 2019 and analyzed by Test America. Analyses were conducted in accordance with EPA SW-846 Methods 8260C (VOC), 6010C/6020A (metals), and 9056A (anions) as well as EPA Method 680 (PCBH), MCAWW Method 300.0 (bromide), and Standard Methods 2320B-2011 (alkalinity), 2340C-2011 (hardness), 4500 NO3 F (nitrite/nitrate-N), 2520B (salinity), and 2540C-2011 (TDS) analytical and reporting protocols. Iron and manganese were analyzed by both Methods 6010C and 6020A - remaining metals were analyzed by Method 6020A only.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, initial/continuing calibrations, laboratory method blank/trip blank results, laboratory control sample/laboratory control sample duplicate results, matrix spike/matrix spike duplicate results, surrogate spike recoveries, interference check sample results, compound identification, analyte quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

MAJOR PROBLEMS

- The laboratory case narrative report states that 2-chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample, all VOC samples were preserved in hydrochloric acid. Non-detected results for 2-chloroethyl vinyl ether were rejected (UR) in water samples.

MINOR PROBLEMS

- The VOC continuing calibration verification (CCV) performed on 02/01/19 at 10:52 on instrument A3UX15 had percent differences (%Ds) that were greater than the 20% quality control limit for bromomethane, chloroethane, carbon disulfide, vinyl acetate, 4-methyl-2-pentanone, 2-hexanone, bromoform, 1,2-dibromo-3-chloropropane, hexachlorobutadiene, naphthalene, and 1,2,3-trichlorobenzene. All VOC samples were affected. Detected and non-detected results for the aforementioned analytes were qualified as estimated (J and UJ, respectively) in the affected samples.

- The PCBH CCV performed on 02/21/19 at 16:43 on instrument CMSX had a %D that was greater than the 20% quality control limit for decachlorobiphenyl. Samples MRC-MW152B-012919 and MRC-MW140A-012919 were affected. The non-detected results for decachlorobiphenyl and nonachlorobiphenyls were qualified as estimated (UJ) in the affected samples.

- Detected results reported below the reporting limit (RL) but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Non-detected results were reported to the MDL.

The chain of custody included a sample identification of MRC-MW151A-012919 and did not include MRC-MW152B-012919. As noted in the laboratory case narrative, the laboratory report was revised per client request to change the sample identification for MRC-MW151A-012919. In the database, the sample identification for MRC-MW151A-012919 for iron and manganese by Method 6010C was changed to MRC-MW152B-012919 by the data reviewer.

VOC sample MRC-MW143A-012919 was analyzed at a dilution factor of 166.67.

The following VOC was detected in the trip blank at the following concentration:

Analyte	Maximum Concentration	< or > RL
Trichloroethene	0.14 ug/L(1)	< RL

1 - Detected in trip blank TB-012919 affecting all samples.

No qualification was necessary because trichloroethene results in the environmental samples were greater than the RL.

No qualifications were necessary for matrix spike (MS)/matrix spike duplicate (MSD) percent recoveries (%Rs) that were outside of quality control limits when the sample result was greater than four times the spike amount.

Sulfate in sample MRC-MW137A-012919 was analyzed at a dilution factor of 5. Sulfate in samples MRC-MW140A-012919 and MRC-MW143A-012919 were analyzed at a dilution factor of 10.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Some VOC PCBH results were qualified due to calibration noncompliance.

Other Factors Affecting Data Quality: Results for 2-chloroethyl vinyl ether in water samples were rejected due to sample preservation noncompliance. Detected results reported below the RL but above the MDL

were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017) and the "National Functional Guidelines for Inorganic Superfund Methods Data Review" (January 2017). The text of this report has been formulated to address only those problem areas affecting data quality.

Leigh A. Ciofani

Tetra Tech
Leigh Ciofani
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Joseph A. Samchuck

Tetra Tech
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08784	NSAMPLE	MRC-MW137A-012919			MRC-MW140A-012919			MRC-MW143A-012919			MRC-MW152B-012919		
SDG: 240-107486-1	LAB_ID	240-107486-3			240-107486-4			240-107486-5			240-107486-2		
FRACTION: OV	SAMP_DATE	1/29/2019			1/29/2019			1/29/2019			1/29/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U		0.14	U		23	U		0.14	U	
1,1,1-TRICHLOROETHANE		0.24	U		0.24	U		40	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	U		0.13	U		22	U		0.13	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U		0.41	U		68	U		0.41	U	
1,1-DICHLOROETHANE		0.17	U		0.17	U		28	U		0.2	J	P
1,1-DICHLOROETHENE		0.19	U		0.19	U		32	U		0.19	U	
1,1-DICHLOROPROPENE		0.14	U		0.14	U		23	U		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	UJ	C	0.54	UJ	C	90	UJ	C	0.54	UJ	C
1,2,3-TRICHLOROPROPANE		0.24	U		0.24	U		40	U		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	U		0.14	U		23	U		0.14	U	
1,2,4-TRICHLOROBENZENE		0.27	J	P	0.26	U		43	U		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U		0.07	U		12	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	UJ	C	0.91	UJ	C	150	UJ	C	0.91	UJ	C
1,2-DIBROMOETHANE		0.12	U		0.12	U		20	U		0.12	U	
1,2-DICHLOROBENZENE		0.15	U		0.15	U		25	U		0.15	U	
1,2-DICHLOROETHANE		0.21	U		0.21	U		35	U		0.21	U	
1,2-DICHLOROPROPANE		0.15	U		0.15	U		25	U		0.15	U	
1,3-DICHLOROBENZENE		0.15	J	P	0.15	U		25	U		0.15	U	
1,3-DICHLOROPROPANE		0.21	U		0.21	U		35	U		0.21	U	
1,4-DICHLOROBENZENE		0.19	J	P	0.16	U		27	U		0.16	U	
2,2-DICHLOROPROPANE		0.31	U		0.31	U		52	U		0.31	U	
2-BUTANONE		1.2	U		1.2	U		190	U		1.2	U	
2-CHLOROETHYL VINYL ETHER		0.26	UR	M	0.26	UR	M	43	UR	M	0.26	UR	M
2-CHLOROTOLUENE		0.15	U		0.15	U		25	U		0.15	U	
2-HEXANONE		0.54	UJ	C	0.54	UJ	C	90	UJ	C	0.54	UJ	C
4-CHLOROTOLUENE		0.09	U		0.09	U		15	U		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U		0.13	U		22	U		0.13	U	
4-METHYL-2-PENTANONE		0.42	UJ	C	0.42	UJ	C	70	UJ	C	0.42	UJ	C
ACETONE		8.5	J	P	5.4	U		900	U		5.4	U	
BENZENE		0.13	U		0.13	U		22	U		0.13	U	
BROMOBENZENE		0.12	U		0.12	U		20	U		0.12	U	
BROMOCHLOROMETHANE		0.14	U		0.14	U		23	U		0.14	U	
BROMODICHLOROMETHANE		0.17	U		0.17	U		28	U		0.17	U	
BROMOFORM		0.76	UJ	C	0.76	UJ	C	130	UJ	C	0.76	UJ	C
BROMOMETHANE		0.42	UJ	C	0.42	UJ	C	70	UJ	C	0.42	UJ	C

PROJ_NO: 08784	NSAMPLE	TB-012919		
SDG: 240-107486-1	LAB_ID	240-107486-1		
FRACTION: OV	SAMP_DATE	1/29/2019		
MEDIA: WATER	QC_TYPE	TB		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U	
1,1,1-TRICHLOROETHANE		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U	
1,1-DICHLOROETHANE		0.17	U	
1,1-DICHLOROETHENE		0.19	U	
1,1-DICHLOROPROPENE		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	UJ	C
1,2,3-TRICHLOROPROPANE		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	U	
1,2,4-TRICHLOROBENZENE		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	UJ	C
1,2-DIBROMOETHANE		0.12	U	
1,2-DICHLOROBENZENE		0.15	U	
1,2-DICHLOROETHANE		0.21	U	
1,2-DICHLOROPROPANE		0.15	U	
1,3-DICHLOROBENZENE		0.15	U	
1,3-DICHLOROPROPANE		0.21	U	
1,4-DICHLOROBENZENE		0.16	U	
2,2-DICHLOROPROPANE		0.31	U	
2-BUTANONE		1.2	U	
2-CHLOROETHYL VINYL ETHER		0.26	UR	M
2-CHLOROTOLUENE		0.15	U	
2-HEXANONE		0.54	UJ	C
4-CHLOROTOLUENE		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U	
4-METHYL-2-PENTANONE		0.42	UJ	C
ACETONE		5.4	U	
BENZENE		0.13	U	
BROMOBENZENE		0.12	U	
BROMOCHLOROMETHANE		0.14	U	
BROMODICHLOROMETHANE		0.17	U	
BROMOFORM		0.76	UJ	C
BROMOMETHANE		0.42	UJ	C

PROJ_NO: 08784	NSAMPLE	MRC-MW137A-012919			MRC-MW140A-012919			MRC-MW143A-012919			MRC-MW152B-012919		
SDG: 240-107486-1	LAB_ID	240-107486-3			240-107486-4			240-107486-5			240-107486-2		
FRACTION: OV	SAMP_DATE	1/29/2019			1/29/2019			1/29/2019			1/29/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.31	J	CP	0.28	UJ	C	47	UJ	C	0.33	J	CP
CARBON TETRACHLORIDE		0.26	U		0.26	U		43	U		0.55	J	P
CHLOROBENZENE		1.2			0.14	U		23	U		1.5		
CHLORODIBROMOMETHANE		0.39	U		0.39	U		65	U		0.39	U	
CHLOROETHANE		0.83	UJ	C	0.83	UJ	C	140	UJ	C	0.83	UJ	C
CHLOROFORM		0.17	J	P	0.13	U		22	U		0.52	J	P
CHLOROMETHANE		0.2	U		0.2	U		33	U		0.2	U	
CIS-1,2-DICHLOROETHENE		0.82	J	P	0.4	J	P	47	J	P	18		
CIS-1,3-DICHLOROPROPENE		0.61	U		0.61	U		100	U		0.61	U	
DIBROMOMETHANE		0.09	U		0.09	U		15	U		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	U		0.35	U		58	U		0.35	U	
DIISOPROPYL ETHER		0.17	U		0.17	U		28	U		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	U		0.15	U		25	U		0.15	U	
ETHYLBENZENE		0.11	U		0.11	U		18	U		0.11	U	
HEXACHLOROBUTADIENE		0.83	UJ	C	0.83	UJ	C	140	UJ	C	0.83	UJ	C
ISOPROPYLBENZENE		0.09	U		0.09	U		15	U		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U		0.07	U		12	U		2.9		
METHYLENE CHLORIDE		2.6	U		2.6	U		440	U		2.6	U	
NAPHTHALENE		0.32	UJ	C	0.32	UJ	C	53	UJ	C	0.32	UJ	C
N-BUTYLBENZENE		0.14	U		0.14	U		23	U		0.14	U	
N-PROPYLBENZENE		0.15	U		0.15	U		25	U		0.15	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		22	U		0.13	U	
STYRENE		0.1	U		0.1	U		17	U		0.1	U	
TERT-AMYL METHYL ETHER		0.11	U		0.11	U		18	U		0.11	U	
TERT-BUTYLBENZENE		0.14	U		0.14	U		23	U		0.14	U	
TERTIARY-BUTYL ALCOHOL		1.7	U		1.7	U		280	U		1.7	U	
TETRACHLOROETHENE		0.15	U		0.15	U		25	U		0.15	U	
TOLUENE		0.14	U		0.14	U		23	U		0.14	U	
TOTAL XYLENES		0.15	U		0.15	U		25	U		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		32	U		0.37	J	P
TRANS-1,3-DICHLOROPROPENE		0.67	U		0.67	U		110	U		0.67	U	
TRICHLOROETHENE		38			21			3000			13		
TRICHLOROFLUOROMETHANE		0.45	U		0.45	U		75	U		0.45	U	
VINYL ACETATE		0.19	UJ	C	0.19	UJ	C	32	UJ	C	0.19	UJ	C
VINYL CHLORIDE		0.2	U		0.2	U		33	U		0.2	U	

PROJ_NO: 08784	NSAMPLE	TB-012919		
SDG: 240-107486-1	LAB_ID	240-107486-1		
FRACTION: OV	SAMP_DATE	1/29/2019		
MEDIA: WATER	QC_TYPE	TB		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CARBON DISULFIDE		0.28	UJ	C
CARBON TETRACHLORIDE		0.26	U	
CHLOROBENZENE		0.14	U	
CHLORODIBROMOMETHANE		0.39	U	
CHLOROETHANE		0.83	UJ	C
CHLOROFORM		0.13	U	
CHLOROMETHANE		0.2	U	
CIS-1,2-DICHLOROETHENE		0.16	U	
CIS-1,3-DICHLOROPROPENE		0.61	U	
DIBROMOMETHANE		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	U	
DIISOPROPYL ETHER		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	U	
ETHYLBENZENE		0.11	U	
HEXACHLOROBUTADIENE		0.83	UJ	C
ISOPROPYLBENZENE		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U	
METHYLENE CHLORIDE		2.6	U	
NAPHTHALENE		0.32	UJ	C
N-BUTYLBENZENE		0.14	U	
N-PROPYLBENZENE		0.15	U	
SEC-BUTYLBENZENE		0.13	U	
STYRENE		0.1	U	
TERT-AMYL METHYL ETHER		0.11	U	
TERT-BUTYLBENZENE		0.14	U	
TERTIARY-BUTYL ALCOHOL		1.7	U	
TETRACHLOROETHENE		0.15	U	
TOLUENE		0.14	U	
TOTAL XYLENES		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.67	U	
TRICHLOROETHENE		0.14	J	P
TRICHLOROFLUOROMETHANE		0.45	U	
VINYL ACETATE		0.19	UJ	C
VINYL CHLORIDE		0.2	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW140A-012919			MRC-MW152B-012919		
SDG: 240-107486-1	LAB_ID	240-107486-4			240-107486-2		
FRACTION: PCB	SAMP_DATE	1/29/2019			1/29/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.089	UJ	C	0.068	UJ	C
DICHLOROBIPHENYLS		0.0069	U		0.0052	U	
HEPTACHLOROBIPHENYLS		0.038	U		0.029	U	
HEXACHLOROBIPHENYLS		0.019	U		0.015	U	
MONOCHLOROBIPHENYLS		0.0071	U		0.0054	U	
NONACHLOROBIPHENYLS		0.062	UJ	C	0.048	UJ	C
OCTACHLOROBIPHENYLS		0.048	U		0.037	U	
PENTACHLOROBIPHENYLS		0.018	U		0.014	U	
TETRACHLOROBIPHENYLS		0.017	U		0.013	U	
TRICHLOROBIPHENYLS		0.0083	U		0.0063	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW137A-012919			MRC-MW140A-012919			MRC-MW143A-012919			MRC-MW152B-012919		
SDG: 240-107486-1	LAB_ID	240-107486-3			240-107486-4			240-107486-5			240-107486-2		
FRACTION: M	SAMP_DATE	1/29/2019			1/29/2019			1/29/2019			1/29/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		1000			4100			3000			52		
ANTIMONY		0.82	J	P	0.72	J	P	0.57	U		0.57	U	
ARSENIC		0.75	U		0.75	U		0.75	U		0.75	U	
BARIUM		100			42			130			48		
BERYLLIUM		5.5			8			17			0.51	J	P
CADMIUM		0.9	J	P	1			1.2			0.58	J	P
CALCIUM		42000			73000			37000			9700		
CHROMIUM		2.3			6.1			2.8			0.98	U	
COBALT		79			54			210			44		
COPPER		23			32			31			1.7	U	
IRON		250			2900			1500			11000		
LEAD		0.45	U		2.2			1.6			0.45	U	
MAGNESIUM		20000			40000			32000			3500		
MANGANESE		200			200			270			600		
NICKEL		160			72			340			59		
POTASSIUM		24000			1500			13000			3300		
SELENIUM		3.5	J	P	17			10			0.89	U	
SILVER		0.053	U		0.053	U		0.053	U		0.053	U	
SODIUM		160000			250000			270000			23000		
THALLIUM		0.2	U		0.2	U		0.2	U		0.2	U	
VANADIUM		1.5	J	P	2.1	J	P	0.82	U		0.82	U	
ZINC		200			200			460			64		

PROJ_NO: 08784	NSAMPLE	MRC-MW137A-012919						MRC-MW140A-012919					
SDG: 240-107486-1	LAB_ID	240-107486-3						240-107486-4					
FRACTION: MISC	SAMP_DATE	1/29/2019						1/29/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		37						2.6	U				
BROMIDE		0.55						0.71					
HARDNESS AS CACO3		210						430					
NITRITE/NITRATE-N		0.14						0.049	J	P			
SALINITY					2	U					2	U	
SULFATE		69						390					
TOTAL DISSOLVED SOLIDS		700						1200					

PROJ_NO: 08784	NSAMPLE	MRC-MW143A-012919						MRC-MW152B-012919					
SDG: 240-107486-1	LAB_ID	240-107486-5						240-107486-2					
FRACTION: MISC	SAMP_DATE	1/29/2019						1/29/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		12						44					
BROMIDE		0.46	J	P				0.044	U				
HARDNESS AS CACO3		250						64					
NITRITE/NITRATE-N		0.58						0.32					
SALINITY					2	U					2	U	
SULFATE		93						20					
TOTAL DISSOLVED SOLIDS		990						150					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW137A-012919 | Lab Sample ID: 240-107486-3

Matrix: Water | Lab File ID: UXC8656.D

Analysis Method: 8260C | Date Collected: 01/29/2019 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.27	J	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	J	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.19	J	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	8.5	J	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.31	J	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	1.2		1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.17	J	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW137A-012919 | Lab Sample ID: 240-107486-3

Matrix: Water | Lab File ID: UXC8656.D

Analysis Method: 8260C | Date Collected: 01/29/2019 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.82	J	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	38		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW137A-012919 | Lab Sample ID: 240-107486-3

Matrix: Water | Lab File ID: UXC8656.D

Analysis Method: 8260C | Date Collected: 01/29/2019 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	81		70-121
460-00-4	4-Bromofluorobenzene (Surr)	77		59-120
2037-26-5	Toluene-d8 (Surr)	79		70-123
1868-53-7	Dibromofluoromethane (Surr)	78		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW140A-012919 | Lab Sample ID: 240-107486-4

Matrix: Water | Lab File ID: UXC8657.D

Analysis Method: 8260C | Date Collected: 01/29/2019 13:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW140A-012919 | Lab Sample ID: 240-107486-4

Matrix: Water | Lab File ID: UXC8657.D

Analysis Method: 8260C | Date Collected: 01/29/2019 13:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.40	J	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	21		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW140A-012919 | Lab Sample ID: 240-107486-4

Matrix: Water | Lab File ID: UXC8657.D

Analysis Method: 8260C | Date Collected: 01/29/2019 13:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	87		70-123
1868-53-7	Dibromofluoromethane (Surr)	87		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW143A-012919 | Lab Sample ID: 240-107486-5

Matrix: Water | Lab File ID: UXC8658.D

Analysis Method: 8260C | Date Collected: 01/29/2019 14:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:47

Soil Aliquot Vol: | Dilution Factor: 166.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	23	U	170	23
71-55-6	1,1,1-Trichloroethane	40	U	170	40
79-34-5	1,1,2,2-Tetrachloroethane	22	U	170	22
76-13-1	1,1,2-Trichlorotrifluoroethane	68	U	170	68
75-34-3	1,1-Dichloroethane	28	U	170	28
75-35-4	1,1-Dichloroethene	32	U	170	32
563-58-6	1,1-Dichloropropene	23	U	170	23
87-61-6	1,2,3-Trichlorobenzene	90	U	170	90
96-18-4	1,2,3-Trichloropropane	40	U	170	40
526-73-8	1,2,3-Trimethylbenzene	23	U	830	23
120-82-1	1,2,4-Trichlorobenzene	43	U	170	43
95-63-6	1,2,4-Trimethylbenzene	12	U	170	12
96-12-8	1,2-Dibromo-3-Chloropropane	150	U	330	150
95-50-1	1,2-Dichlorobenzene	25	U	170	25
107-06-2	1,2-Dichloroethane	35	U	170	35
78-87-5	1,2-Dichloropropane	25	U	170	25
541-73-1	1,3-Dichlorobenzene	25	U	170	25
142-28-9	1,3-Dichloropropane	35	U	170	35
106-46-7	1,4-Dichlorobenzene	27	U	170	27
594-20-7	2,2-Dichloropropane	52	U	170	52
110-75-8	2-Chloroethyl vinyl ether	43	U	1700	43
95-49-8	2-Chlorotoluene	25	U	170	25
591-78-6	2-Hexanone	90	U	1700	90
108-86-1	Bromobenzene	20	U	170	20
74-97-5	Bromochloromethane	23	U	170	23
106-43-4	4-Chlorotoluene	15	U	170	15
99-87-6	4-Isopropyltoluene	22	U	170	22
67-64-1	Acetone	900	U	1700	900
71-43-2	Benzene	22	U	170	22
75-25-2	Bromoform	130	U	170	130
74-83-9	Bromomethane	70	U	170	70
75-15-0	Carbon disulfide	47	U	170	47
56-23-5	Carbon tetrachloride	43	U	170	43
108-90-7	Chlorobenzene	23	U	170	23
75-00-3	Chloroethane	140	U	170	140
67-66-3	Chloroform	22	U	170	22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW143A-012919 | Lab Sample ID: 240-107486-5

Matrix: Water | Lab File ID: UXC8658.D

Analysis Method: 8260C | Date Collected: 01/29/2019 14:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:47

Soil Aliquot Vol: | Dilution Factor: 166.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	33	U	170	33
156-59-2	cis-1,2-Dichloroethene	47	J	170	27
10061-01-5	cis-1,3-Dichloropropene	100	U	170	100
87-68-3	Hexachlorobutadiene	140	U	170	140
74-95-3	Dibromomethane	15	U	170	15
75-27-4	Bromodichloromethane	28	U	170	28
75-71-8	Dichlorodifluoromethane	58	U	170	58
100-41-4	Ethylbenzene	18	U	170	18
106-93-4	1,2-Dibromoethane	20	U	170	20
108-20-3	Diisopropyl ether	28	U	1700	28
91-20-3	Naphthalene	53	U	170	53
104-51-8	n-Butylbenzene	23	U	170	23
98-82-8	Isopropylbenzene	15	U	170	15
103-65-1	N-Propylbenzene	25	U	170	25
78-93-3	2-Butanone (MEK)	190	U	1700	190
108-10-1	4-Methyl-2-pentanone (MIBK)	70	U	1700	70
135-98-8	sec-Butylbenzene	22	U	170	22
1634-04-4	Methyl tert-butyl ether	12	U	170	12
994-05-8	Tert-amyl methyl ether	18	U	830	18
75-09-2	Methylene Chloride	440	U	830	440
100-42-5	Styrene	17	U	170	17
637-92-3	Ethyl tert-butyl ether	25	U	830	25
98-06-6	tert-Butylbenzene	23	U	170	23
127-18-4	Tetrachloroethene	25	U	170	25
108-88-3	Toluene	23	U	170	23
156-60-5	trans-1,2-Dichloroethene	32	U	170	32
10061-02-6	trans-1,3-Dichloropropene	110	U	170	110
79-01-6	Trichloroethene	3000		170	17
75-69-4	Trichlorofluoromethane	75	U	170	75
108-05-4	Vinyl acetate	32	U	330	32
75-01-4	Vinyl chloride	33	U	170	33
75-65-0	tert-Butyl alcohol	280	U	8300	280
1330-20-7	Xylenes, Total	25	U	330	25
124-48-1	Chlorodibromomethane	65	U	170	65

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW143A-012919 | Lab Sample ID: 240-107486-5

Matrix: Water | Lab File ID: UXC8658.D

Analysis Method: 8260C | Date Collected: 01/29/2019 14:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:47

Soil Aliquot Vol: | Dilution Factor: 166.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	82		70-121
460-00-4	4-Bromofluorobenzene (Surr)	79		59-120
2037-26-5	Toluene-d8 (Surr)	82		70-123
1868-53-7	Dibromofluoromethane (Surr)	80		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW152B-012919 | Lab Sample ID: 240-107486-2

Matrix: Water | Lab File ID: UXC8655.D

Analysis Method: 8260C | Date Collected: 01/29/2019 10:43

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.20	J	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.33	J	1.0	0.28
56-23-5	Carbon tetrachloride	0.55	J	1.0	0.26
108-90-7	Chlorobenzene	1.5		1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.52	J	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW152B-012919 | Lab Sample ID: 240-107486-2

Matrix: Water | Lab File ID: UXC8655.D

Analysis Method: 8260C | Date Collected: 01/29/2019 10:43

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	18		1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	2.9		1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.37	J	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	13		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW152B-012919 | Lab Sample ID: 240-107486-2

Matrix: Water | Lab File ID: UXC8655.D

Analysis Method: 8260C | Date Collected: 01/29/2019 10:43

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	78		70-121
460-00-4	4-Bromofluorobenzene (Surr)	77		59-120
2037-26-5	Toluene-d8 (Surr)	79		70-123
1868-53-7	Dibromofluoromethane (Surr)	76		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: TB-012919 | Lab Sample ID: 240-107486-1

Matrix: Water | Lab File ID: UXC8654.D

Analysis Method: 8260C | Date Collected: 01/29/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: TB-012919 | Lab Sample ID: 240-107486-1

Matrix: Water | Lab File ID: UXC8654.D

Analysis Method: 8260C | Date Collected: 01/29/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.14	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: TB-012919 | Lab Sample ID: 240-107486-1

Matrix: Water | Lab File ID: UXC8654.D

Analysis Method: 8260C | Date Collected: 01/29/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	78		70-121
460-00-4	4-Bromofluorobenzene (Surr)	78		59-120
2037-26-5	Toluene-d8 (Surr)	80		70-123
1868-53-7	Dibromofluoromethane (Surr)	77		75-128

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW140A-012919 | Lab Sample ID: 240-107486-4

Matrix: Water | Lab File ID: xb2037.D

Analysis Method: 680 | Date Collected: 01/29/2019 13:45

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 784.4(mL) | Date Analyzed: 02/21/2019 10:04

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.038	U	0.38	0.038
26601-64-9	Hexachlorobiphenyl	0.019	U	0.25	0.019
53742-07-7	Nonachlorobiphenyl	0.062	U	0.64	0.062
55722-26-4	Octachlorobiphenyl	0.048	U	0.38	0.048
27323-18-8	Monochlorobiphenyl	0.0071	U	0.13	0.0071
2051-24-3	DCB Decachlorobiphenyl	0.089	U	0.64	0.089
25512-42-9	Dichlorobiphenyl	0.0069	U	0.13	0.0069
25429-29-2	Pentachlorobiphenyl	0.018	U	0.25	0.018
26914-33-0	Tetrachlorobiphenyl	0.017	U	0.25	0.017
25323-68-6	Trichlorobiphenyl	0.0083	U	0.13	0.0083

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	48		25-113

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW152B-012919 | Lab Sample ID: 240-107486-2

Matrix: Water | Lab File ID: xb2036.D

Analysis Method: 680 | Date Collected: 01/29/2019 10:43

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1031.3(mL) | Date Analyzed: 02/21/2019 09:35

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.029	U	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.015	U	0.19	0.015
53742-07-7	Nonachlorobiphenyl	0.048	U	0.48	0.048
55722-26-4	Octachlorobiphenyl	0.037	U	0.29	0.037
27323-18-8	Monochlorobiphenyl	0.0054	U	0.097	0.0054
2051-24-3	DCB Decachlorobiphenyl	0.068	U	0.48	0.068
25512-42-9	Dichlorobiphenyl	0.0052	U	0.097	0.0052
25429-29-2	Pentachlorobiphenyl	0.014	U	0.19	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.19	0.013
25323-68-6	Trichlorobiphenyl	0.0063	U	0.097	0.0063

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	57		25-113

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW137A-012919 Lab Sample ID: 240-107486-3

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:00

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	320	200	26	ug/L			1	6010C
7439-96-5	Manganese	210	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	1000	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	100	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	5.5	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.90	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	79	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.3	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	23	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	250	100	47	ug/L			1	6020A
7439-96-5	Manganese	200	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	160	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.82	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	3.5	5.0	0.89	ug/L	J		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	1.5	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	200	20	15	ug/L			1	6020A
7440-70-2	Calcium	42000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	24000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	20000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	160000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW140A-012919 Lab Sample ID: 240-107486-4

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	3000	200	26	ug/L			1	6010C
7439-96-5	Manganese	200	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	4100	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	42	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	8.0	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	1.0	1.0	0.21	ug/L			1	6020A
7440-48-4	Cobalt	54	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	6.1	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	32	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	2900	100	47	ug/L			1	6020A
7439-96-5	Manganese	200	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	72	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	2.2	1.0	0.45	ug/L			1	6020A
7440-36-0	Antimony	0.72	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	17	5.0	0.89	ug/L			1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	2.1	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	200	20	15	ug/L			1	6020A
7440-70-2	Calcium	73000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	1500	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	40000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	250000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW143A-012919 Lab Sample ID: 240-107486-5

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 14:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	1500	200	26	ug/L			1	6010C
7439-96-5	Manganese	250	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	3000	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	130	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	17	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	1.2	1.0	0.21	ug/L			1	6020A
7440-48-4	Cobalt	210	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.8	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	31	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	1500	100	47	ug/L			1	6020A
7439-96-5	Manganese	270	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	340	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	1.6	1.0	0.45	ug/L			1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	10	5.0	0.89	ug/L			1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	460	20	15	ug/L			1	6020A
7440-70-2	Calcium	37000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	13000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	32000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	270000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW152B-012919 Lab Sample ID: 240-107486-2

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 10:43

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	13000	200	26	ug/L			1	6010C
7439-96-5	Manganese	670	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	52	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	48	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.51	1.0	0.31	ug/L	J		1	6020A
7440-43-9	Cadmium	0.58	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	44	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	0.98	2.0	0.98	ug/L	U		1	6020A
7440-50-8	Copper	1.7	2.0	1.7	ug/L	U		1	6020A
7439-89-6	Iron	11000	100	47	ug/L			1	6020A
7439-96-5	Manganese	600	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	59	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	64	20	15	ug/L			1	6020A
7440-70-2	Calcium	9700	1000	580	ug/L			1	6020A
7440-09-7	Potassium	3300	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	3500	1000	200	ug/L			1	6020A
7440-23-5	Sodium	23000	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW137A-012919 Lab Sample ID: 240-107486-3

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:00

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	210	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	37	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	700	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.55	0.50	0.044	mg/L			1	300.0
14808-79-8	Sulfate	69	5.0	1.7	mg/L			5	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW137A-012919 Lab Sample ID: 240-107486-3

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:00

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.14	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW137A-012919 Lab Sample ID: 240-107486-3

Lab Name: TestAmerica Pittsburgh Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:00

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW140A-012919 Lab Sample ID: 240-107486-4

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	430	25	12	mg/L			1	2340C-2011
	Alkalinity	2.6	5.0	2.6	mg/L	U		1	2320B-2011
	Total Dissolved Solids	1200	20	16	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.71	0.50	0.044	mg/L			1	300.0
14808-79-8	Sulfate	390	10	3.5	mg/L			10	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW140A-012919 Lab Sample ID: 240-107486-4

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.049	0.10	0.040	mg/L	J		1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW140A-012919 Lab Sample ID: 240-107486-4

Lab Name: TestAmerica Pittsburgh Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW143A-012919 Lab Sample ID: 240-107486-5

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 14:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	250	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	12	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	990	20	16	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.46	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	93	10	3.5	mg/L			10	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW143A-012919 Lab Sample ID: 240-107486-5

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 14:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.58	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW143A-012919 Lab Sample ID: 240-107486-5

Lab Name: TestAmerica Pittsburgh Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 14:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW152B-012919 Lab Sample ID: 240-107486-2

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 10:43

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	64	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	44	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	150	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	20	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW152B-012919 Lab Sample ID: 240-107486-2

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 10:43

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.32	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW152B-012919 Lab Sample ID: 240-107486-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 10:43

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

APPENDIX C

SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: LM MRC Block F

Report Number: 240-107486-1
Revised

Revised 3/20/2019. Per client request sample MRC-MW151A-012919 is being changed to MRC-MW152B-012919.

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The 680 Polychlorinated Biphenyls analysis was performed at the TestAmerica Savannah laboratory. The 4500NO3-F Nitrate Nitrite as N analysis was performed at the TestAmerica Nashville laboratory. The 9050A Specific Conductance and the 2520-B Salinity analyses were performed at the TestAmerica Pittsburgh laboratory.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 1/30/2019 10:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-012919 (240-107486-1), MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/01/2019.

Sample MRC-MW143A-012919 (240-107486-5)[166.67X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 366440 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TB-012919 (240-107486-1), MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following samples were received in hydrochloric acid preserved vials: TB-012919 (240-107486-1), MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples MRC-MW152B-012919 (240-107486-2) and MRC-MW140A-012919 (240-107486-4) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The samples were prepared on 02/19/2019 and analyzed on 02/21/2019.

The internal standard response for the following sample(s) was outside of acceptance limits when compared to the area of the CCVIS(continuing calibration verification internal standard). The 680 method allows that the sample also be compared to the average internal standard area of the calibration (ICISAV). Due to limitations in the software, when the areas of the sample are out of control for either the CCVIS or the ICISAV both are flagged. Although a * flag appears on the data, the sample is within the area range for the average internal standard area of the calibration (ICISAV).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 680-558728.

The SOP for the 680 Method allows that for soils the CCVIS has a limit of <30%D for each analyte and for liquids <20%D for each analyte . It also allows that the capping CCV for soils has the limit of <30% average %D with no analyte >60%D and for liquids <20% average D with no analyte >40%D. Due to software limitations for this method, the limits are set at <20%D.

(CCV 680-559059/21)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/01/2019 and analyzed on 02/04/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 01/31/2019 and analyzed on 02/01/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 01/30/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 01/31/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 01/31/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 01/31/2019 and 02/01/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for anions in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 01/31/2019.

Samples MRC-MW137A-012919 (240-107486-3)[5X], MRC-MW140A-012919 (240-107486-4)[10X] and MRC-MW143A-012919 (240-107486-5)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for Salinity in accordance with SM 2520B. The samples were analyzed on 02/07/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 02/16/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: LM MRC Block F

TestAmerica Job ID: 240-107486-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
680	Liquid-Liquid Extraction (Separatory Funnel)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: LM MRC Block F

TestAmerica Job ID: 240-107486-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107486-1	TB-012919	Water	01/29/19 00:00	01/30/19 10:45
240-107486-2	MRC-MW152B-012919	Water	01/29/19 10:43	01/30/19 10:45
240-107486-3	MRC-MW137A-012919	Water	01/29/19 13:00	01/30/19 10:45
240-107486-4	MRC-MW140A-012919	Water	01/29/19 13:45	01/30/19 10:45
240-107486-5	MRC-MW143A-012919	Water	01/29/19 14:45	01/30/19 10:45

North CANTON TESTAMERICA

Chain of Custody Record

2.21C2.2

282259

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Tony Aparicio	Site Contact: Walt Payer	Date: 1/29/19	COC No:
Company Name: Tetra Tech INC	Tel/Fax: 301 528-3021	Lab Contact: Jokel McFadden	Carrier: Fed Ex	1 of 1 COCs
Address: 20251 Century Blvd. Ste 200	Analysis Turnaround Time			Sampler:
City/State/Zip: Germantown, MD 20874	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 301 528-3021	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day — Standard			Lab Sampling:
Project Name: Middle River Center				Job / SDG No.:
Site: MRC Block E/F Groundwater				
PO# 1122C09784				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260C)	TAL metals (6020A)	Alkalinity (2320A)	PCBs (8082)	Salinity (SM2520B)	Sulfate, nitrates, TDS	Local method (353.2)	Local method (2340C)	Sample Specific Notes:
TB-012919	1/29/19	—	G	QC	2			2	-	-	-	-	-	-	-	
MRC-MW151A-012919		1043		GW	11			3	1	1	2	1	1	1	1	
MRC-MW137A-012919		1300			9			3	1	1	-	1	1	-	-	
MRC-MW140A-012919		1345			11			3	1	1	2	1	1	1	1	
MRC-MW143A-012919		1445			9			3	1	1	-	1	1	1	1	

240-107486 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____ — 2 4 1 1 1 1 3 4

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☒ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Payer	TT INC	1/29/19 1900		JTA	1/30/19 1045
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 107486
Canton Facility

Client Tetratech Site Name _____ Cooler unpacked by: [signature]

Cooler Received on 1/30/19 Opened on 1/30/19

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 2.2 °C Corrected Cooler Temp. 2.2 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # N/A Covered Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: Ryan

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____.

WI-NC-099

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW151A-012919	240-107486-F-2	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW151A-012919	240-107486-G-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW151A-012919	240-107486-I-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW151A-012919	240-107486-F-3	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW151A-012919	240-107486-G-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW151A-012919	240-107486-I-3	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW140A-012919	240-107486-F-4	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW140A-012919	240-107486-G-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW140A-012919	240-107486-I-4	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW143A-012919	240-107486-F-5	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW143A-012919	240-107486-G-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW143A-012919	240-107486-I-5	Plastic 500ml - with Nitric Acid	<2	_____	_____

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-012919	240-107486-1	77	78	80	78
MRC-MW152B-012919	240-107486-2	76	78	79	77
MRC-MW137A-012919	240-107486-3	78	81	79	77
MRC-MW140A-012919	240-107486-4	87	87	87	83
MRC-MW143A-012919	240-107486-5	80	82	82	79
	MB 240-366440/6	81	83	85	83
	LCS 240-366440/4	88	84	87	88

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab File ID: UXC8653.D Lab Sample ID: MB 240-366440/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/01/2019 12:42

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-366440/4	UXC8649.D	02/01/2019 11:14
TB-012919	240-107486-1	UXC8654.D	02/01/2019 13:20
MRC-MW152B-012919	240-107486-2	UXC8655.D	02/01/2019 13:42
MRC-MW137A-012919	240-107486-3	UXC8656.D	02/01/2019 14:04
MRC-MW140A-012919	240-107486-4	UXC8657.D	02/01/2019 14:25
MRC-MW143A-012919	240-107486-5	UXC8658.D	02/01/2019 14:47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-366440/6

Matrix: Water | Lab File ID: UXC8653.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-366440/6

Matrix: Water | Lab File ID: UXC8653.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-366440/6

Matrix: Water Lab File ID: UXC8653.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 02/01/2019 12:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 366440 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	83		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	85		70-123
1868-53-7	Dibromofluoromethane (Surr)	81		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8649.D

Lab ID: LCS 240-366440/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.75	88	80-124	
1,1,1-Trichloroethane	10.0	9.38	94	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.99	90	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.72	97	50-156	
1,1-Dichloroethane	10.0	9.82	98	75-133	
1,1-Dichloroethene	10.0	9.11	91	65-139	
1,1-Dichloropropene	10.0	9.42	94	78-126	
1,2,3-Trichlorobenzene	10.0	9.28	93	39-138	
1,2,3-Trichloropropane	10.0	9.31	93	66-139	
1,2,4-Trichlorobenzene	10.0	9.02	90	42-133	
1,2,4-Trimethylbenzene	10.0	9.32	93	74-120	
1,2-Dibromo-3-Chloropropane	10.0	6.95	70	46-132	
1,2-Dichlorobenzene	10.0	9.58	96	78-120	
1,2-Dichloroethane	10.0	9.77	98	71-135	
1,2-Dichloropropane	10.0	10.1	101	78-133	
1,3-Dichlorobenzene	10.0	9.41	94	78-120	
1,3-Dichloropropane	10.0	9.53	95	72-134	
1,4-Dichlorobenzene	10.0	9.46	95	78-120	
2,2-Dichloropropane	10.0	9.01	90	42-150	
2-Chloroethyl vinyl ether	10.0	8.57 J	86	55-137	
2-Chlorotoluene	10.0	9.46	95	78-123	
2-Hexanone	20.0	17.5	88	43-148	
Bromobenzene	10.0	9.63	96	74-129	
Bromochloromethane	10.0	9.87	99	74-130	
4-Chlorotoluene	10.0	9.43	94	77-125	
4-Isopropyltoluene	10.0	9.17	92	69-122	
Acetone	20.0	20.1	100	21-162	
Benzene	10.0	9.86	99	80-123	
Bromoform	10.0	6.45	64	49-141	
Bromomethane	10.0	8.21	82	41-175	
Carbon disulfide	10.0	7.78	78	60-138	
Carbon tetrachloride	10.0	8.86	89	63-140	
Chlorobenzene	10.0	9.64	96	80-121	
Chloroethane	10.0	8.65	87	33-173	
Chloroform	10.0	9.69	97	79-127	
Chloromethane	10.0	9.77	98	54-143	
cis-1,2-Dichloroethene	10.0	9.92	99	76-128	
cis-1,3-Dichloropropene	10.0	9.01	90	64-132	
Hexachlorobutadiene	10.0	8.12	81	38-136	
Dibromomethane	10.0	9.28	93	74-124	
Bromodichloromethane	10.0	8.63	86	77-125	
Dichlorodifluoromethane	10.0	8.94	89	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8649.D

Lab ID: LCS 240-366440/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.38	94	80-120	
1,2-Dibromoethane	10.0	8.86	89	77-123	
Naphthalene	10.0	8.63	86	28-141	
m-Xylene & p-Xylene	10.0	9.25	92	80-120	
n-Butylbenzene	10.0	8.75	88	57-126	
Isopropylbenzene	10.0	9.39	94	74-120	
N-Propylbenzene	10.0	9.41	94	77-123	
2-Butanone (MEK)	20.0	19.4	97	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	17.8	89	49-143	
sec-Butylbenzene	10.0	9.14	91	68-123	
Methyl tert-butyl ether	10.0	8.90	89	51-133	
Methylene Chloride	10.0	8.66	87	70-134	
o-Xylene	10.0	9.46	95	80-120	
Styrene	10.0	9.01	90	79-120	
tert-Butylbenzene	10.0	8.83	88	70-121	
Tetrachloroethene	10.0	9.57	96	74-130	
Toluene	10.0	9.56	96	78-129	
trans-1,2-Dichloroethene	10.0	9.82	98	78-133	
trans-1,3-Dichloropropene	10.0	7.96	80	55-128	
Trichloroethene	10.0	9.64	96	76-125	
Trichlorofluoromethane	10.0	9.50	95	51-164	
Vinyl acetate	10.0	8.74	87	45-151	
Vinyl chloride	10.0	9.02	90	58-143	
tert-Butyl alcohol	100	84.0	84	10-161	
Xylenes, Total	20.0	18.7	94	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	47729 2392918	112693	296202	593761	1222220	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	58046 2319242	119628	276149	585358	1207742	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	57558 2025909	104647	261470	574312	1027051	1.00 40.0	2.00	5.00	10.0	20.0
Butadiene	FB	Ave	71088 2665435	148568	361713	698736	1378009	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	47411 1506749	100403	198900	423055	791041	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	40558 1406432	82718	182320	372694	733356	1.00 40.0	2.00	5.00	10.0	20.0
Dichlorofluoromethane	FB	Ave	103682 3477509	201291	471934	910063	1834172	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	68568 3407867	157640	408598	855986	1703371	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	44605 1653914	87432	212667	419544	869536	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	32229 1148055	55282	144856	290454	603583	5.00 200	10.0	25.0	50.0	100
1,1-Dichloroethene	FB	Ave	57094 2182381	120279	277159	516876	1125076	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichlorotrifluoroethane	FB	Ave	42550 1880984	91700	228498	462285	967763	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Lin1	17181 332724	23252	50751	89168	190030	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	93588 3255913	156089	446819	909454	1760595	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	160687 5174431	283969	742305	1445567	2744114	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	27003 1418141	58477	154763	317161	716236	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	79740 3067156	150240	380996	723073	1550490	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	154915 2032773	198393	338417	580808	1097865	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	36240 1508945	82343	184510	328142	832907	10.0 400	20.0	50.0	100	200
Acrylonitrile	FB	Ave	175156 7643188	352291	868795	1699336	3768272	10.0 400	20.0	50.0	100	200
Methyl tert-butyl ether	FB	Ave	139955 6078083	285516	714788	1439491	3075308	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,2-Dichloroethene	FB	Ave	54736 2072831	103155	251570	500088	1069131	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	10725 455555	22194	51427	104918	230317	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	81126 3448011	166930	409730	832192	1773410	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	88027 4206187	177639	476538	992089	2098831	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	57035 2264494	116480	278759	565374	1189038	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	11684 445323	21907	58586	120845	241048	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone (MEK)	FB	Ave	12505 511818	24387	59681	120010	256717	2.00 80.0	4.00	10.0	20.0	40.0
Bromochloromethane	FB	Ave	28543 1150919	56716	140018	275468	595090	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	31985 1272086	62314	150812	279158	634219	2.00 80.0	4.00	10.0	20.0	40.0
Chloroform	FB	Ave	83929 3460990	169874	422474	847597	1793716	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	63803 2533663	130349	334136	689229	1356966	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	68915 3105972	144320	368473	742256	1592895	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	66437 2816568	140972	343617	688186	1474449	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	56945 2706723	124489	318843	648774	1385341	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	31904 1496664	73133	177736	322275	821992	25.0 1000	50.0	125	250	500
Benzene	FB	Ave	207184 8390558	412777	1016161	2024145	4352726	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	68031 2877185	142414	350758	707702	1492475	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	8801 415529	19095	48491	101813	218160	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	59121 2403531	120531	296310	593061	1274454	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	60130 2723193	127322	326169	654672	1428283	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	43707 1981074	97800	239856	483376	1020861	1.00 40.0	2.00	5.00	10.0	20.0
Dibromomethane	FB	Ave	31111 1256838	65366	157375	317664	664429	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Ave	5185 326819	14227	39232	71764	183906	20.0 800	40.0	100	200	400
Bromodichloromethane	FB	Ave	57382 2704273	121869	306036	637533	1409597	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	61442 2796269	123378	319533	640886	1383920	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Ave	62099 3274371	138202	356486	746312	1652896	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	98299 4186633	187250	495239	970866	2114735	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBNZ d5	Ave	209687 9034071	428381	1080197	2172974	4691174	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	57707 3169409	125256	333930	706531	1578892	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBNZ d5	Ave	61421 2869285	129112	316654	647349	1421429	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBNZ d5	Ave	41853 1840913	87521	218933	437245	940456	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBNZ d5	Ave	44889 1992562	95990	241473	482895	1049416	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBNZ d5	Ave	72217 3294456	153833	378264	779324	1663194	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBNZ d5	Ave	58616 2937075	135481	337296	666112	1487023	2.00 80.0	4.00	10.0	20.0	40.0
Chlorodibromomethane	CBNZ d5	Ave	36977 2200067	82891	222991	469828	1084488	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBNZ d5	Ave	45295 1979685	91132	237763	469490	999728	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBNZ d5	Ave	138107 6035718	286159	714138	1441533	3072375	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	46702 2220799	95060	253355	522591	1113186	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBNZ d5	Ave	73699 3208633	146696	374569	758362	1624425	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBNZ d5	Ave	168049 7830315	351787	872988	1818169	3890600	1.00 40.0	2.00	5.00	10.0	20.0
o-Xylene	CBNZ d5	Ave	88147 3825283	176986	449671	918350	1968397	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBNZ d5	Ave	137740 6714209	289260	754758	1550959	3394736	1.00 40.0	2.00	5.00	10.0	20.0
Bromoform	CBNZ d5	Lin1	19867 1639155	51580	138461	306750	770158	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBNZ d5	Ave	198841 9246149	416807	1070139	2200366	4695119	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	54865 2441270	112833	283791	577712	1238040	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCBd 4	Ave	63640 2849353	131876	330598	678570	1450127	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCBd 4	Ave	18846 848462	40526	99350	201010	423192	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	3277 574750	16039	23872	66363	276245	1.00 40.0	2.00	5.00	10.0	20.0
N-Propylbenzene	DCBd 4	Ave	54874 2529942	117423	290505	601438	1274023	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCBd 4	Ave	53702 2322347	107735	275264	555062	1188057	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	160683 7300680	332591	840604	1766210	3784392	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCBd 4	Ave	170473 7526400	356628	881245	1798133	3844885	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCBd 4	Ave	141080 6973779	300630	749194	1551899	3285832	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	169136 7660047	359918	876431	1848645	3917785	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCBd 4	Ave	173094 7876504	373619	937713	1935865	4155710	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	113176 4738373	229119	572540	1168047	2462678	1.00 40.0	2.00	5.00	10.0	20.0
4-Isopropyltoluene	DCBd 4	Ave	154318 7046098	334169	830781	1751242	3739399	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCBd 4	Ave	119243 4936571	241629	582208	1199185	2527274	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
n-Butylbenzene	DCBd 4	Ave	127428 5435677	263153	659506	1384405	2918965	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCBd 4	Ave	109056 4571601	224899	556492	1159176	2381785	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	10572 585195	24334	65389	138143	306515	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	73453 2553990	145803	356465	739836	1510157	1.00 40.0	2.00	5.00	10.0	20.0
Hexachlorobutadiene	DCBd 4	Ave	41867 1091039	78276	175613	359850	696597	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCBd 4	Ave	172653 6820199	348942	926474	1891386	3879317	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	65430 2286670	131338	324635	663704	1364016	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	41840 1806247	80448	225163	447792	947952	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	55383 2257190	106482	288691	573781	1190875	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBNZ d5	Ave	174193 7359833	333303	912990	1816996	3883966	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	60446 2700470	120695	328418	649263	1374232	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Acetone	5.5						50					
Methylene Chloride	5.1						50					
Bromoform	19.5						50					

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Ave	43776 1719436	78140	216790	375778	846508	10.0 400	20.0	50.0	100	200
Diisopropyl ether	FB	Ave	43843 1750827	82274	218424	423417	889067	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloro-1,3-butadiene	FB	Ave	78005 3085189	151016	379041	729996	1534644	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl tert-butyl ether	FB	Ave	140382 5753247	273366	703226	1363608	2849689	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl acetate	FB	Ave	90776 3822356	173055	465746	871063	1885113	2.00 80.0	4.00	10.0	20.0	40.0
Propionitrile	FB	Ave	60838 2683433	120712	346296	618722	1307620	10.0 400	20.0	50.0	100	200
Methacrylonitrile	FB	Ave	299007 13192364	589937	1557675	3048167	6587251	10.0 400	20.0	50.0	100	200
Tert-amyl methyl ether	FB	Ave	139226 5803487	265089	690261	1376169	2893429	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Ave	27517 1141061	53519	142999	252385	538091	25.0 1000	50.0	125	250	500
Ethyl acrylate	FB	Ave	55889 2595809	111797	311313	570379	1269397	1.00 40.0	2.00	5.00	10.0	20.0
Methyl methacrylate	FB	Ave	82902 3746376	164974	443947	839432	1854426	2.00 80.0	4.00	10.0	20.0	40.0
2-Nitropropane	FB	Ave	24091 1187179	51098	135714	254301	578091	2.00 80.0	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Ave	62560 3081411	130855	371884	688240	1496211	1.00 40.0	2.00	5.00	10.0	20.0
1-Chlorohexane	CBNZ d5	Ave	56623 2299838	112915	287030	522245	1142204	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexanone	DCBd 4	Lin1	18061 496922	26838	72655	115834	240064	10.0 400	20.0	50.0	100	200
Pentachloroethane	CBNZ d5	Ave	49671 2629484	105733	282130	577976	1287207	2.00 80.0	4.00	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCBd 4	Ave	159891 7509792	343441	887789	1750222	3743187	1.00 40.0	2.00	5.00	10.0	20.0
Benzyl chloride	DCBd 4	Ave	18125 1117019	36545	113409	234360	534799	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	70436 2856330	145613	362674	730581	1512196	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCBd 4	Ave	146578 6396329	332448	834898	1722729	3597249	2.00 80.0	4.00	10.0	20.0	40.0
1-Chloro-1-fluoroethane TIC	FB	None	38810 1466901	1184	184959	389588	796152	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
None = No Calib Curve

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Cyclohexanone	4.9						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab File ID: BFB0201.D BFB Injection Date: 02/01/2019

Instrument ID: A3UX15 BFB Injection Time: 10:25

Analysis Batch No.: 366440

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.0	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	101.2	
175	5.0 - 9.0 % of mass 174	7.3	(7.2) 1
176	95.0 - 101.0 % of mass 174	98.4	(97.3) 1
177	5.0 - 9.0 % of mass 176	6.7	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-366440/2	UXC8648.D	02/01/2019	10:52
	LCS 240-366440/4	UXC8649.D	02/01/2019	11:14
	CCV 240-366440/3	UXC8650.D	02/01/2019	11:36
	MB 240-366440/6	UXC8653.D	02/01/2019	12:42
TB-012919	240-107486-1	UXC8654.D	02/01/2019	13:20
MRC-MW152B-012919	240-107486-2	UXC8655.D	02/01/2019	13:42
MRC-MW137A-012919	240-107486-3	UXC8656.D	02/01/2019	14:04
MRC-MW140A-012919	240-107486-4	UXC8657.D	02/01/2019	14:25
MRC-MW143A-012919	240-107486-5	UXC8658.D	02/01/2019	14:47

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: CCVIS 240-366440/2 Calibration Date: 02/01/2019 10:52

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8648.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3149	0.1000	0.0103	0.0100	2.5	20.0
Chloromethane	Ave	0.3135	0.2812	0.1000	0.00897	0.0100	-10.3	20.0
Vinyl chloride	Ave	0.2885	0.2655	0.1000	0.00920	0.0100	-8.0	20.0
Butadiene	Ave	0.3794	0.3330		0.00878	0.0100	-12.2	20.0
Bromomethane	Ave	0.2308	0.1814	0.0500	0.00786	0.0100	-21.4*	20.0
Chloroethane	Ave	0.2041	0.1614	0.0500	0.00791	0.0100	-20.9*	20.0
Dichlorofluoromethane	Ave	0.5102	0.4016		0.00787	0.0100	-21.3*	20.0
Trichlorofluoromethane	Ave	0.4337	0.4194	0.1000	0.00967	0.0100	-3.3	20.0
Ethyl ether	Ave	0.2310	0.2124		0.00919	0.0100	-8.1	20.0
Acrolein	Ave	0.0317	0.0401		0.0632	0.0500	26.5	50.0
1,1-Dichloroethene	Ave	0.3005	0.2585	0.1000	0.00860	0.0100	-14.0	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2186	0.0500	0.00886	0.0100	-11.4	20.0
Acetone	Lin1		0.0234	0.0100	0.0193	0.0200	-3.6	50.0
Iodomethane	Ave	0.4675	0.4361		0.00933	0.0100	-6.7	20.0
Carbon disulfide	Ave	0.7741	0.6113	0.1000	0.00790	0.0100	-21.0*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1497		0.00881	0.0100	-11.9	20.0
Methyl acetate	Ave	0.2050	0.1848	0.1000	0.0180	0.0200	-9.9	20.0
Methylene Chloride	Lin1		0.2754	0.1000	0.00861	0.0100	-13.9	50.0
tert-Butyl alcohol	Ave	0.0203	0.0174		0.0859	0.100	-14.1	50.0
Acrylonitrile	Ave	0.0962	0.0866		0.0900	0.100	-10.0	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6882	0.1000	0.00878	0.0100	-12.2	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2630	0.1000	0.00941	0.0100	-5.9	20.0
Hexane	Ave	0.0586	0.0535		0.00912	0.0100	-8.8	20.0
1,1-Dichloroethane	Ave	0.4517	0.4367	0.2000	0.00967	0.0100	-3.3	20.0
Vinyl acetate	Ave	0.5198	0.3965		0.00763	0.0100	-23.7	50.0
2,2-Dichloropropane	Ave	0.0624	0.0620		0.00994	0.0100	-0.6	20.0
2-Butanone (MEK)	Ave	0.0333	0.0285	0.0100	0.0171	0.0200	-14.3	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.2978	0.1000	0.00967	0.0100	-3.3	20.0
Bromochloromethane	Ave	0.1531	0.1440		0.00940	0.0100	-6.0	20.0
Tetrahydrofuran	Ave	0.0828	0.0704		0.0170	0.0200	-15.0	20.0
Chloroform	Ave	0.4606	0.4386	0.2000	0.00952	0.0100	-4.8	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3380	0.1000	0.00953	0.0100	-4.7	20.0
Cyclohexane	Ave	0.3993	0.3724	0.1000	0.00933	0.0100	-6.7	20.0
1,1-Dichloropropene	Ave	0.3748	0.3482		0.00929	0.0100	-7.1	20.0
Carbon tetrachloride	Ave	0.3441	0.3113	0.1000	0.00905	0.0100	-9.5	20.0
Isobutyl alcohol	Ave	0.0077	0.0069		0.223	0.250	-10.8	20.0
Benzene	Ave	1.116	1.075	0.5000	0.00963	0.0100	-3.7	20.0
1,2-Dichloroethane	Ave	0.3820	0.3545	0.1000	0.00928	0.0100	-7.2	20.0
n-Heptane	Ave	0.0532	0.0476		0.00894	0.0100	-10.6	20.0
Trichloroethene	Ave	0.3240	0.3156	0.1500	0.00974	0.0100	-2.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: CCVIS 240-366440/2 Calibration Date: 02/01/2019 10:52

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8648.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3257	0.1000	0.00924	0.0100	-7.6	20.0
1,2-Dichloropropane	Ave	0.2590	0.2446	0.1000	0.00944	0.0100	-5.6	20.0
1,4-Dioxane	Ave	0.0020	0.0019		0.194	0.200	-3.0	50.0
Dibromomethane	Ave	0.1717	0.1541		0.00897	0.0100	-10.3	20.0
Bromodichloromethane	Ave	0.3410	0.2978	0.1500	0.00873	0.0100	-12.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1448		0.0166	0.0200	-17.0	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3466	0.1500	0.00879	0.0100	-12.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2126	0.0500	0.0159	0.0200	-20.6*	20.0
Toluene	Ave	1.476	1.392	0.4000	0.00943	0.0100	-5.7	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3753	0.1000	0.00808	0.0100	-19.2	20.0
Ethyl methacrylate	Ave	0.4442	0.3559		0.00801	0.0100	-19.9	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2756	0.1000	0.00924	0.0100	-7.6	20.0
Tetrachloroethene	Ave	0.3268	0.3126	0.1500	0.00957	0.0100	-4.3	20.0
1,3-Dichloropropane	Ave	0.5243	0.4772		0.00910	0.0100	-9.0	20.0
2-Hexanone	Ave	0.2283	0.1811	0.0500	0.0159	0.0200	-20.7*	20.0
Chlorodibromomethane	Ave	0.3116	0.2551		0.00819	0.0100	-18.1	20.0
1,2-Dibromoethane	Ave	0.3191	0.2711		0.00850	0.0100	-15.0	20.0
Chlorobenzene	Ave	0.9777	0.9183	0.3000	0.00939	0.0100	-6.1	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3046		0.00883	0.0100	-11.7	20.0
Ethylbenzene	Ave	0.5145	0.4755		0.00924	0.0100	-7.6	20.0
m-Xylene & p-Xylene	Ave	1.221	1.143		0.00936	0.0100	-6.4	20.0
o-Xylene	Ave	0.6189	0.5756		0.00930	0.0100	-7.0	20.0
Styrene	Ave	1.036	0.9635	0.3000	0.00930	0.0100	-7.0	20.0
Bromoform	Lin1		0.1499	0.1000	0.00652	0.0100	-34.8*	20.0
Isopropylbenzene	Ave	1.463	1.336	0.1000	0.00913	0.0100	-8.7	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.6042	0.3000	0.00853	0.0100	-14.7	20.0
Bromobenzene	Ave	0.8274	0.7662		0.00926	0.0100	-7.4	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2082		0.00843	0.0100	-15.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0746		0.00736	0.0100	-26.4*	20.0
N-Propylbenzene	Ave	0.7286	0.6554		0.00900	0.0100	-10.0	20.0
2-Chlorotoluene	Ave	0.6821	0.6326		0.00927	0.0100	-7.3	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.908		0.00900	0.0100	-10.0	20.0
4-Chlorotoluene	Ave	2.205	2.001		0.00907	0.0100	-9.3	20.0
tert-Butylbenzene	Ave	1.897	1.636		0.00862	0.0100	-13.8	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.030		0.00911	0.0100	-8.9	20.0
sec-Butylbenzene	Ave	2.327	2.038		0.00876	0.0100	-12.4	20.0
1,3-Dichlorobenzene	Ave	1.425	1.299	0.6000	0.00912	0.0100	-8.8	20.0
4-Isopropyltoluene	Ave	2.083	1.856		0.00891	0.0100	-10.9	20.0
1,4-Dichlorobenzene	Ave	1.477	1.341	0.5000	0.00908	0.0100	-9.2	20.0
n-Butylbenzene	Ave	1.649	1.394		0.00846	0.0100	-15.4	20.0
1,2-Dichlorobenzene	Ave	1.387	1.252	0.4000	0.00903	0.0100	-9.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: CCVIS 240-366440/2 Calibration Date: 02/01/2019 10:52

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8648.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1008	0.0500	0.00626	0.0100	-37.4	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7037	0.2000	0.00801	0.0100	-19.9	50.0
Hexachlorobutadiene	Ave	0.4386	0.3173		0.00723	0.0100	-27.7*	20.0
Naphthalene	Ave	2.209	1.591		0.00720	0.0100	-28.0	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6281		0.00795	0.0100	-20.5*	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.1955		0.00658	0.00797	-17.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2400		0.00629	0.00797	-21.1*	20.0
Toluene-d8 (Surr)	Ave	1.214	1.030		0.00676	0.00797	-15.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3697		0.00679	0.00797	-14.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: CCV 240-366440/3 Calibration Date: 02/01/2019 11:36

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8650.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0274		0.118	0.100	18.3	20.0
Diisopropyl ether	Ave	0.2405	0.2359		0.00981	0.0100	-1.9	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3886		0.00918	0.0100	-8.2	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6769		0.00868	0.0100	-13.2	20.0
Ethyl acetate	Ave	0.2538	0.2364		0.0186	0.0200	-6.9	50.0
Propionitrile	Ave	0.0357	0.0368		0.103	0.100	3.1	20.0
Methacrylonitrile	Ave	0.1733	0.1652		0.0953	0.100	-4.7	20.0
Tert-amyl methyl ether	Ave	0.7765	0.6264		0.00807	0.0100	-19.3	20.0
n-Butanol	Ave	0.0061	0.0051		0.209	0.250	-16.5	20.0
Ethyl acrylate	Ave	0.3330	0.2965		0.00890	0.0100	-11.0	20.0
Methyl methacrylate	Ave	0.2430	0.2193		0.0180	0.0200	-9.8	20.0
2-Nitropropane	Ave	0.0745	0.0425		0.0114	0.0200	-42.9*	20.0
n-Butyl acetate	Ave	0.3918	0.3330		0.00850	0.0100	-15.0	20.0
1-Chlorohexane	Ave	0.3968	0.3306		0.00833	0.0100	-16.7	20.0
Cyclohexanone	Lin1		0.0134		0.0828	0.100	-17.2	20.0
Pentachloroethane	Ave	0.2034	0.1619		0.0159	0.0200	-20.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.075		0.00903	0.0100	-9.7	20.0
Benzyl chloride	Ave	0.2963	0.1707		0.00576	0.0100	-42.4*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8496		0.00898	0.0100	-10.2	20.0
2-Methylnaphthalene	Ave	1.076	0.7595		0.0141	0.0200	-29.4*	20.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-366440/2		1979475	5.20	1581449	7.88	881893	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Sample No.: CCVIS 240-366440/2 Date Analyzed: 02/01/2019 10:52

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8648.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1979475	5.20	1581449	7.88	881893	10.12
UPPER LIMIT		3958950	5.70	3162898	8.38	1763786	10.62
LOWER LIMIT		989738	4.70	790725	7.38	440947	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-366440/4		1830351	5.20	1496132	7.88	829219	10.12
CCV 240-366440/3		1779588	5.20	1467709	7.88	796864	10.12
MB 240-366440/6		1772288	5.20	1412729	7.88	770701	10.12
240-107486-1	TB-012919	1780216	5.20	1430449	7.88	770829	10.12
240-107486-2	MRC-MW152B-012919	1795132	5.20	1440875	7.88	795226	10.12
240-107486-3	MRC-MW137A-012919	1770669	5.20	1442887	7.88	773855	10.12
240-107486-4	MRC-MW140A-012919	1586491	5.20	1201917	7.88	664877	10.12
240-107486-5	MRC-MW143A-012919	1682601	5.20	1354824	7.88	735487	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

SAMPLE IDENTIFICATION	MRC-MW152B-012919	
COMPOUND	Trichloroethene	
COMPOUND AREA	737109	
INTERNAL STANDARD AMOUNT (ug)	10	
DILUTION FACTOR	1	
INTERNAL STANDARD AREA	1795132	
AVERAGE RRF	0.324	
737109 x 10 / 1795132 x 0.324	12.6733	ug/L
12.6733174929631 x 1	12.67	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW152B-012919 | Lab Sample ID: 240-107486-2

Matrix: Water | Lab File ID: UXC8655.D

Analysis Method: 8260C | Date Collected: 01/29/2019 10:43

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.20	J	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.33	J	1.0	0.28
56-23-5	Carbon tetrachloride	0.55	J	1.0	0.26
108-90-7	Chlorobenzene	1.5		1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.52	J	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW152B-012919 | Lab Sample ID: 240-107486-2

Matrix: Water | Lab File ID: UXC8655.D

Analysis Method: 8260C | Date Collected: 01/29/2019 10:43

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	18		1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	2.9		1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.37	J	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	13		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX15\20190201-84169.b\UXC8655.D
Lims ID: 240-107486-B-2
Client ID: MRC-MW151A-012919
Sample Type: Client
Inject. Date: 01-Feb-2019 13:42:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0084169-009
Misc. Info.: C90201A,8260LLUX15,,43582
Operator ID: Instrument ID: A3UX15

Method: \\chromna\Canton\ChromData\A3UX15\20190201-84169.b\8260_15.m
Limit Group: MSV 8260C ICAL
Last Update: 04-Feb-2019 10:19:56 Calib Date: 21-Jan-2019 19:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX15\20190121-83824.b\UXC8431.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0326

First Level Reviewer: evansle Date: 01-Feb-2019 13:59:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.196	5.196	0.000	99	1795132	10.0	
* 2 Chlorobenzene-d5	117	7.876	7.876	0.000	85	1440875	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.117	10.117	0.000	93	795226	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.639	4.638	0.001	95	258705	6.09	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.923	4.923	0.000	100	338295	6.20	
$ 6 Toluene-d8 (Surr)	98	6.560	6.560	0.000	93	1107497	6.33	
$ 7 4-Bromofluorobenzene (Surr	95	8.991	8.991	0.000	96	381957	6.11	
9 Dichlorodifluoromethane	85		1.532				ND	
10 Chloromethane	50		1.686				ND	
11 Vinyl chloride	62		1.781				ND	
13 Bromomethane	94		2.065				ND	
14 Chloroethane	64		2.148				ND	
16 Trichlorofluoromethane	101		2.362				ND	
19 1,1-Dichloroethene	96		2.777				ND	
20 1,1,2-Trichloro-1,2,2-trif	151		2.800				ND	
22 Acetone	58	2.812	2.812	0.000	98	15046	1.48	
24 Carbon disulfide	76	2.990	2.978	0.012	99	45441	0.3270	
28 Methylene Chloride	84		3.180				ND	
29 2-Methyl-2-propanol	59		3.263				ND	
30 trans-1,2-Dichloroethene	96	3.405	3.405	0.000	93	18677	0.3722	
31 Methyl tert-butyl ether	73	3.405	3.405	0.000	97	413147	2.94	
34 1,1-Dichloroethane	63	3.761	3.761	0.000	94	16234	0.2002	
36 Vinyl acetate	43		3.785				ND	
35 Isopropyl ether	87		3.797				ND	
38 Tert-butyl ethyl ether	59		4.093				ND	
41 2-Butanone (MEK)	72		4.247				ND	
39 cis-1,2-Dichloroethene	96	4.247	4.247	0.000	81	1013126	18.3	
40 2,2-Dichloropropane	97		4.247				ND	U
45 Chlorobromomethane	128		4.449				ND	
47 Chloroform	83	4.496	4.496	0.000	94	43308	0.5238	
48 1,1,1-Trichloroethane	97		4.662				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 1,1-Dichloropropene	75		4.793				ND	
50 Carbon tetrachloride	117	4.805	4.805	0.001	96	33939	0.5495	
53 Benzene	78	4.971	4.971	0.000	91	23201	0.1158	
54 1,2-Dichloroethane	62		4.982				ND	
55 Tert-amyl methyl ether	73		5.042				ND	
58 Trichloroethene	130	5.504	5.504	0.000	96	737109	12.7	
61 1,2-Dichloropropane	63		5.706				ND	
63 Dibromomethane	93		5.812				ND	
65 Dichlorobromomethane	83		5.931				ND	
67 2-Chloroethyl vinyl ether	63		6.180				ND	
68 cis-1,3-Dichloropropene	75		6.322				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.453				ND	
70 Toluene	91		6.619				ND	
71 trans-1,3-Dichloropropene	75		6.809				ND	
74 Tetrachloroethene	164		7.117				ND	
75 1,3-Dichloropropane	76		7.129				ND	
76 2-Hexanone	43		7.188				ND	
79 Chlorodibromomethane	129		7.342				ND	
80 Ethylene Dibromide	107		7.461				ND	
82 Chlorobenzene	112	7.900	7.900	0.000	97	207638	1.47	
83 1,1,1,2-Tetrachloroethane	131		7.983				ND	
84 Ethylbenzene	106		7.994				ND	
85 m-Xylene & p-Xylene	91		8.101				ND	
86 o-Xylene	106		8.481				ND	
87 Styrene	104		8.492				ND	
88 Bromoform	173		8.682				ND	
89 Isopropylbenzene	105		8.825				ND	
93 1,1,2,2-Tetrachloroethane	83		9.121				ND	
92 Bromobenzene	156		9.145				ND	
94 1,2,3-Trichloropropane	110		9.168				ND	
96 N-Propylbenzene	120		9.228				ND	
97 2-Chlorotoluene	126		9.323				ND	
99 4-Chlorotoluene	91		9.429				ND	
101 tert-Butylbenzene	119		9.714				ND	
103 1,2,4-Trimethylbenzene	105		9.761				ND	
105 sec-Butylbenzene	105		9.927				ND	
106 1,3-Dichlorobenzene	146	10.046	10.046	0.000	95	16341	0.1442	
107 4-Isopropyltoluene	119		10.070				ND	
108 1,4-Dichlorobenzene	146	10.141	10.141	0.000	92	17030	0.1450	
109 1,2,3-Trimethylbenzene	105		10.176				ND	
111 n-Butylbenzene	91		10.473				ND	
112 1,2-Dichlorobenzene	146		10.508				ND	
113 1,2-Dibromo-3-Chloropropan	157		11.291				ND	
115 1,2,4-Trichlorobenzene	180	12.109	12.109	0.000	91	10928	0.1564	
116 Hexachlorobutadiene	225		12.275				ND	
117 Naphthalene	128		12.358				ND	
118 1,2,3-Trichlorobenzene	180		12.607				ND	
S 129 Xylenes, Total	106		16.530				ND	

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

Method 680

Polychlorinated Biphenyls (PCBs) (GC/MS) by Method 680

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13CDCB #
MRC-MW152B-012919	240-107486-2	57
MRC-MW140A-012919	240-107486-4	48
	MB 680-558728/12-A	71
	LCS 680-558728/13-A	75
	LCSD 680-558728/14-A	68

	QC LIMITS
13CDCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Lab File ID: xb2031.D Lab Sample ID: MB 680-558728/12-A

Matrix: Water Date Extracted: 02/19/2019 13:42

Instrument ID: CMSX Date Analyzed: 02/21/2019 07:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-558728/13-A	xb2032.D	02/21/2019 07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019 08:10
MRC-MW152B-012919	240-107486-2	xb2036.D	02/21/2019 09:35
MRC-MW140A-012919	240-107486-4	xb2037.D	02/21/2019 10:04

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107486-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-558728/12-A

Matrix: Water | Lab File ID: xb2031.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2032.D

Lab ID: LCS 680-558728/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.67	78	62-130	
Hexachlorobiphenyl	4.00	3.37	84	62-130	
Nonachlorobiphenyl	10.0	14.6	146	70-195	
Octachlorobiphenyl	6.00	5.09	85	64-130	
Monochlorobiphenyl	2.00	1.08	54	42-130	
DCB Decachlorobiphenyl	10.0	7.81	78	59-130	
Dichlorobiphenyl	2.00	1.32	66	49-130	
Pentachlorobiphenyl	4.00	3.47	87	63-130	
Tetrachlorobiphenyl	4.00	2.93	73	54-130	
Trichlorobiphenyl	2.00	1.47	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2033.D

Lab ID: LCSD 680-558728/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.45	74	5	40	62-130	
Hexachlorobiphenyl	4.00	3.21	80	5	40	62-130	
Nonachlorobiphenyl	10.0	13.2	132	10	40	70-195	
Octachlorobiphenyl	6.00	4.75	79	7	40	64-130	
Monochlorobiphenyl	2.00	1.36	68	23	40	42-130	
DCB Decachlorobiphenyl	10.0	7.14	71	9	40	59-130	
Dichlorobiphenyl	2.00	1.47	73	11	40	49-130	
Pentachlorobiphenyl	4.00	3.33	83	4	40	63-130	
Tetrachlorobiphenyl	4.00	3.04	76	4	40	54-130	
Trichlorobiphenyl	2.00	1.52	76	3	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Lab File ID: xa0805.D DFTPP Injection Date: 01/08/2019

Instrument ID: CMSX DFTPP Injection Time: 14:10

Analysis Batch No.: 554469

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.9
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	25.1
365	Greater than 1% of mass 198	3.8
441	Present but less than mass 443	13.7 (87.5) 2
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	15.6 (18.3) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-554469/3	xa0807.D	01/08/2019	15:11
	IC 680-554469/5	xa0809.D	01/08/2019	16:08
	IC 680-554469/6	xa0810.D	01/08/2019	16:37
	IC 680-554469/27	xa0850.D	01/08/2019	17:05
	IC 680-554469/7	xa0811.D	01/08/2019	17:34
	IC 680-554469/8	xa0812.D	01/08/2019	18:02
	ICV 680-554469/9	xa0813.D	01/08/2019	18:31

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107486-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 240-107486-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Monochlorobiphenyl	CRY	Ave	8242 813481	15382	70279	157619	299489	0.0500 5.00	0.100	0.500	1.00	2.00
Dichlorobiphenyl	CRY	Ave	5634 599778	10649	48537	112170	214973	0.0500 5.00	0.100	0.500	1.00	2.00
Trichlorobiphenyl	CRY	Ave	3987 441580	7502	35031	81047	154555	0.0500 5.00	0.100	0.500	1.00	2.00
Tetrachlorobiphenyl	CRY	Ave	5574 615833	10606	50081	113059	216849	0.100 10.0	0.200	1.00	2.00	4.00
Pentachlorobiphenyl	CRY	Ave	4430 525344	8255	40050	94602	179296	0.100 10.0	0.200	1.00	2.00	4.00
Hexachlorobiphenyl	CRY	Ave	4409 515192	8063	39570	95892	180616	0.100 10.0	0.200	1.00	2.00	4.00
Heptachlorobiphenyl	CRY	Ave	8087 711849	13173	54642	129695	247124	0.150 15.0	0.300	1.50	3.00	6.00
Octachlorobiphenyl	CRY	Ave	5679 662783	10462	52287	120191	235791	0.150 15.0	0.300	1.50	3.00	6.00
Nonachlorobiphenyl	CRY	Ave				55196					5.00	
DCB Decachlorobiphenyl	CRY	Ave	1830 243534	3384	17538	42007	81970	0.250 25.0	0.500	2.50	5.00	10.0
Decachlorobiphenyl-13C12	CRY	Ave	2369 234805	4106	24902	55313	103476	0.250 20.0	0.500	2.50	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICV 680-554469/9 Calibration Date: 01/08/2019 18:31

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xa0813.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8517		1.03	1.00	2.6	20.0
Dichlorobiphenyl	Ave	0.5847	0.5801		0.992	1.00	-0.8	20.0
Trichlorobiphenyl	Ave	0.4198	0.4573		1.09	1.00	8.9	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.3118		2.11	2.00	5.6	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2531		2.11	2.00	5.5	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2508		2.10	2.00	5.2	20.0
Heptachlorobiphenyl	Ave	0.2376	0.2274		2.87	3.00	-4.3	20.0
Octachlorobiphenyl	Ave	0.2054	0.2183		3.19	3.00	6.3	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0419		5.00	5.00	-0.0	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0577		5.35	5.00	7.1	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Lab File ID: xb2028.D DFTPP Injection Date: 02/21/2019

Instrument ID: CMSX DFTPP Injection Time: 05:43

Analysis Batch No.: 559059

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	59.5
197	Less than 1 % of mass 198	0.9
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	28.0
365	Greater than 1% of mass 198	3.5
441	Present but less than mass 443	15.1 (86.3) 2
442	Greater than 40% of mass 198	96.2
443	17 - 23% of mass 442	17.5 (18.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559059/2	xb2029.D	02/21/2019	06:14
	CCVIS 680-559059/3	xb2030.D	02/21/2019	06:44
	MB 680-558728/12-A	xb2031.D	02/21/2019	07:13
	LCS 680-558728/13-A	xb2032.D	02/21/2019	07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019	08:10
MRC-MW152B-012919	240-107486-2	xb2036.D	02/21/2019	09:35
MRC-MW140A-012919	240-107486-4	xb2037.D	02/21/2019	10:04
	CCV 680-559059/21	xb2051.D	02/21/2019	16:43

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Lab Sample ID: CCVIS 680-559059/3 Calibration Date: 02/21/2019 06:44

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2030.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.7268		0.875	1.00	-12.5	20.0
Dichlorobiphenyl	Ave	0.5847	0.5079		0.869	1.00	-13.1	20.0
Trichlorobiphenyl	Ave	0.4198	0.3597		0.857	1.00	-14.3	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2563		1.74	2.00	-13.2	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2131		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2136		1.79	2.00	-10.4	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1920		2.42	3.00	-19.2	20.0
Octachlorobiphenyl	Ave	0.2054	0.1725		2.52	3.00	-16.0	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0343		4.08	5.00	-18.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0462		4.29	5.00	-14.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Lab Sample ID: CCV 680-559059/21 Calibration Date: 02/21/2019 16:43

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2051.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8070		0.972	1.00	-2.8	20.0
Dichlorobiphenyl	Ave	0.5847	0.5601		0.958	1.00	-4.2	20.0
Trichlorobiphenyl	Ave	0.4198	0.4000		0.953	1.00	-4.7	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2879		1.95	2.00	-2.4	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2300		1.92	2.00	-4.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2246		1.88	2.00	-5.8	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1938		2.45	3.00	-18.4	20.0
Octachlorobiphenyl	Ave	0.2054	0.1765		2.58	3.00	-14.1	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0315		3.75	5.00	-25.0*	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0422		3.92	5.00	-21.6*	20.0

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Sample No.: CCVIS 680-559059/3 Date Analyzed: 02/21/2019 06:44

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2030.D Heated Purge: (Y/N) N

Calibration ID: 63054

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		170892	12.41	169663	18.67		
UPPER LIMIT		222160	12.91	220562	19.17		
LOWER LIMIT		119624	11.91	118764	18.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-558728/12-A		143915	12.41	132159	18.67		
LCS 680-558728/13-A		164188	12.41	171582	18.67		
LCSD 680-558728/14-A		179669	12.41	188862	18.67		
240-107486-2	MRC-MW152B-012919	187166	12.41	187824	18.67		
240-107486-4	MRC-MW140A-012919	206034	12.41	211293	18.67		
CCV 680-559059/21		159076	12.41	142687	18.67		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

SAMPLE IDENTIFICATION	LCS 680-558728/13-A
COMPOUND	Monochlorobiphenyl
COMPOUND AREA	205079
INTERNAL STANDARD AMOUNT (ng)	0.75
DILUTION FACTOR	1
INTERNAL STANDARD AREA	171582
AVERAGE RRF	0.8305

205079 x 0.75 x 1 / 171582 x 0.8305 = 1.0794 ng/ml

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107486-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 680-558728/13-A

Matrix: Water | Lab File ID: xb2032.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:41

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	4.67		0.30	0.030
26601-64-9	Hexachlorobiphenyl	3.37		0.20	0.015
53742-07-7	Nonachlorobiphenyl	14.6		0.50	0.049
55722-26-4	Octachlorobiphenyl	5.09		0.30	0.038
27323-18-8	Monochlorobiphenyl	1.08		0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	7.81		0.50	0.070
25512-42-9	Dichlorobiphenyl	1.32		0.10	0.0054
25429-29-2	Pentachlorobiphenyl	3.47		0.20	0.014
26914-33-0	Tetrachlorobiphenyl	2.93		0.20	0.013
25323-68-6	Trichlorobiphenyl	1.47		0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	75		25-113

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\xb2032.D
Lims ID: LCS 680-558728/13-A
Client ID:
Sample Type: LCS
Inject. Date: 21-Feb-2019 07:41:30 ALS Bottle#: 26 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: LCS 680-558728/13-A
Misc. Info.: 680-0053932-005
Operator ID: Instrument ID: CMSX

Method: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\680_CMSX.m
Limit Group: 680
Last Update: 22-Feb-2019 09:37:47 Calib Date: 08-Jan-2019 18:02:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Savannah\ChromData\CMSX\20190108-53107.b\xa0812.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: CTX0319

First Level Reviewer: davisn Date: 22-Feb-2019 09:37:47

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/ml	Flags
A 23 Total Monochlorobiphenyls	188	9.762	9.265 - 10.260		0	205079	1.08	
A 24 Total Dichlorobiphenyls	222	11.569	10.603 - 12.535		0	176787	1.32	
* 5 Phenanthrene-d10	188	12.409	12.409	0.0	100	164188	0.7500	
A 25 Total Trichlorobiphenyls	256	13.255	11.910 - 14.600		0	141116	1.47	
A 26 Total Tetrachlorobiphenyls	292	14.773	13.047 - 16.499		0	197767	2.93	
A 27 Total Pentachlorobiphenyls	326	16.192	14.339 - 18.045		0	190369	3.47	
A 28 Total Hexachlorobiphenyls	360	17.480	15.502 - 19.457		0	183545	3.37	
* 15 Chrysene-d12	240	18.669	18.668	0.001	100	171582	0.7500	a
A 29 Total Heptachlorobiphenyls	394	18.749	17.146 - 20.353		0	253613	4.67	
A 30 Total Octachlorobiphenyls	430	19.718	18.642 - 20.795		0	238961	5.09	
A 31 Total Nonachlorobiphenyls	464	20.250	18.500 - 22.000		0	139953	14.6	
19 PCB-208	464	20.286	20.286	0.0	96	140097	0	
$ 22 Decachlorobiphenyl-13C12	510	21.797	21.796	0.001	77	23217	1.88	a
32 DCB Decachlorobiphenyl	498	21.797	21.796	0.001	77	74989	7.81	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

WorkSheet Quantitation Report

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 23 Total Monochlorobiphenyls									
188	9.328	9.265 -	10.260	22	205079	1.08			
190	9.328				66572		2.5- 3.5	3.1	
152	9.328				115591		50.7- 50.7	0.6	
153	9.328				48419		23.2- 23.2	1.4	
A 24 Total Dichlorobiphenyls									
222	11.569	10.603 -	12.535	23	176787	1.32			
224	11.569				113344		1.3- 1.7	1.6	
152	11.554				139546		31.7- 111.7	0.8	
153	11.554				17682		0.0- 49.1	6.4	
186	11.554				16961		0.0- 48.9	6.7	
188	11.569				6120		0.0- 43.3	18.5	
* 5 Phenanthrene-d10									
188	12.409	12.409	0.0	100	164188	0.7500			
189	12.409	12.409	0.0		24329		5.9- 7.5	6.7	
A 25 Total Trichlorobiphenyls									
256	13.087	11.910 -	14.600	95	141116	1.47			
258	13.087				135077		0.8- 1.2	1.0	
186	13.087				95422		26.5- 106.5	1.4	
188	13.087				30921		0.0- 61.5	4.4	
A 26 Total Tetrachlorobiphenyls									
292	13.367	13.047 -	16.499	0	197767	2.93			
290	13.367				154086		1.1- 1.5	1.3	
220	13.353				193028		58.1- 138.1	0.8	
222	13.353				123321		22.9- 102.9	1.2	
A 27 Total Pentachlorobiphenyls									
326	16.249	14.339 -	18.045	91	190369	3.47			
324	16.249				119339		1.4- 1.8	1.6	
254	16.231				142739		41.9- 121.9	0.8	
256	16.249				136737		38.2- 118.2	0.9	
258	16.249				44114		0.0- 65.4	2.7	
A 28 Total Hexachlorobiphenyls									
360	16.439	15.502 -	19.457	59	183545	3.37			
362	16.439				145798		1.0- 1.4	1.3	
288	16.439				111244		61.3- 61.3	1.3	
290	16.439				141842		220.6- 220.6	1.0	
292	16.439				67177		0.0- 0.0	2.2	
* 15 Chrysene-d12									a
240	18.669	18.668	0.001	100	171582	0.7500			a
241	18.669	18.668	0.001		33019		4.3- 5.9	5.2	
A 29 Total Heptachlorobiphenyls									
394	17.217	17.146 -	20.353	97	253613	4.67			
396	17.217				240228		0.8- 1.2	1.1	
322	17.199				110283		48.3- 48.3	2.2	
324	17.199				176673		77.4- 77.4	1.4	

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 30 Total Octachlorobiphenyls									
430	18.859	18.642	-20.795	96	238961	5.09			
428	18.859				217376		0.9- 1.3	1.1	
356	18.842				88632		39.6- 39.6	2.5	
358	18.842				166788		75.2- 75.2	1.3	
360	18.842				132602		59.6- 59.6	1.6	
A 31 Total Nonachlorobiphenyls									
464	20.286	18.500	-22.000	66	139953	14.6			
466	20.286				101255		1.1- 1.5	1.4	
390	20.286				70728		0.0- 0.0	1.4	
392	20.286				152776		0.0- 0.0	0.7	
394	20.286				142469		0.0- 0.0	0.7	
$ 22 Decachlorobiphenyl-13C12									a
510	21.797	21.796	0.001	77	23217	1.88			a
512	21.797	21.796	0.001		17660		0.9- 1.3	1.3	
32 DCB Decachlorobiphenyl									
498	21.797	21.796	0.001	77	74989	7.81			
500	21.797	21.796	0.001		60499		0.9- 1.3	1.2	
424	21.797	21.796	0.001		35328		0.0- 0.0	1.0	
426	21.797	21.796	0.001		86957		0.0- 0.0	1.0	
428	21.797	21.796	0.001		93723		0.0- 0.0	1.0	
430	21.797	21.796	0.001		58374		0.0- 0.0	1.0	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107486-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW152B-012919	240-107486-2
MRC-MW137A-012919	240-107486-3
MRC-MW140A-012919	240-107486-4
MRC-MW143A-012919	240-107486-5

Comments:

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00146

Analyte	ICV 240-366620/4 02/04/2019 08:20				CCV 240-366620/111 02/04/2019 17:10				CCV 240-366620/123 02/04/2019 18:06			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	12800		12500	103	26700		25000	107	27100		25000	108
Manganese	1530		1500	102	2090		2000	105	2120		2000	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00146

Analyte	CCV 240-366620/135 02/04/2019 19:01				CCV 240-366620/147 02/04/2019 19:58							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	27000		25000	108	27600		25000	110				
Manganese	2120		2000	106	2160		2000	108				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-366620/6 02/04/2019 08:29				CCVL 240-366620/166 02/04/2019 21:27							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	205		200	103	224		200	112				
Manganese	15.5		15.0	103	16.3		15.0	109				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICV Source: MTMSICVW_00088 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-366619/7 02/01/2019 13:50				CCV 240-366619/18 02/01/2019 15:00				CCV 240-366619/30 02/01/2019 15:53			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	204		200	102	251		250	100	240		250	96
Antimony	40.0		40.0	100	52.2		50.0	104	49.7		50.0	99
Arsenic	41.5		40.0	104	51.7		50.0	103	50.9		50.0	102
Barium	40.0		40.0	100	52.1		50.0	104	49.2		50.0	98
Beryllium	39.0		40.0	98	48.9		50.0	98	47.8		50.0	96
Cadmium	40.5		40.0	101	52.7		50.0	105	50.3		50.0	101
Calcium	20400		20000	102	25700		25000	103	24900		25000	99
Chromium	40.5		40.0	101	50.2		50.0	100	49.5		50.0	99
Cobalt	40.8		40.0	102	51.2		50.0	102	50.3		50.0	101
Copper	42.2		40.0	106	53.0		50.0	106	51.9		50.0	104
Iron	10100		10000	101	12900		12500	103	12600		12500	101
Lead	40.8		40.0	102	52.2		50.0	104	48.8		50.0	98
Magnesium	20400		20000	102	25600		25000	103	24700		25000	99
Manganese	206		200	103	259		250	103	251		250	100
Nickel	42.1		40.0	105	52.4		50.0	105	51.6		50.0	103
Potassium	20300		20000	101	25200		25000	101	25100		25000	100
Selenium	42.0		40.0	105	52.5		50.0	105	50.3		50.0	101
Silver	39.7		40.0	99	50.1		50.0	100	47.7		50.0	95
Sodium	20200		20000	101	25800		25000	103	25700		25000	103
Thallium	39.8		40.0	99	53.2		50.0	106	49.7		50.0	99
Vanadium	39.6		40.0	99	49.3		50.0	99	49.0		50.0	98
Zinc	43.1		40.0	108	52.6		50.0	105	51.8		50.0	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICV Source: MTMSICVW_00088 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	CCV 240-366619/42 02/01/2019 16:47											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	243		250	97								
Antimony	50.8		50.0	102								
Arsenic	52.1		50.0	104								
Barium	50.4		50.0	101								
Beryllium	47.1		50.0	94								
Cadmium	51.4		50.0	103								
Calcium	25100		25000	101								
Chromium	50.7		50.0	101								
Cobalt	51.7		50.0	103								
Copper	53.1		50.0	106								
Iron	12800		12500	103								
Lead	49.4		50.0	99								
Magnesium	25100		25000	100								
Manganese	256		250	102								
Nickel	52.6		50.0	105								
Potassium	25000		25000	100								
Selenium	51.1		50.0	102								
Silver	49.1		50.0	98								
Sodium	26000		25000	104								
Thallium	50.7		50.0	101								
Vanadium	49.6		50.0	99								
Zinc	53.5		50.0	107								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICV Source: MTMSCRI6020AW_00077 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00078

Analyte	ICVL 240-366619/9 02/01/2019 13:59				CCVL 240-366619/58 02/01/2019 17:58							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	53.5		50.0	107	47.9	J	50.0	96				
Antimony	2.07		2.00	104	2.02		2.00	101				
Arsenic	5.48		5.00	110	5.39		5.00	108				
Barium	5.32		5.00	106	5.11		5.00	102				
Beryllium	0.911	J	1.00	91	0.975	J	1.00	98				
Cadmium	1.19		1.00	119	1.11		1.00	111				
Calcium	1070		1000	107	992	J	1000	99				
Chromium	1.95	J	2.00	97	1.84	J	2.00	92				
Cobalt	1.12		1.00	112	1.09		1.00	109				
Copper	2.22		2.00	111	2.22		2.00	111				
Iron	114		100	114	111		100	111				
Lead	1.10		1.00	110	1.03		1.00	103				
Magnesium	1120		1000	112	1090		1000	109				
Manganese	5.50		5.00	110	5.24		5.00	105				
Nickel	2.37		2.00	118	2.25		2.00	113				
Potassium	1100		1000	110	1040		1000	104				
Selenium	5.73		5.00	115	5.41		5.00	108				
Silver	1.08		1.00	108	1.04		1.00	104				
Sodium	1070		1000	107	1070		1000	107				
Thallium	1.06		1.00	106	0.981	J	1.00	98				
Vanadium	5.11		5.00	102	5.01		5.00	100				
Zinc	23.1		20.0	115	23.2		20.0	116				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-366620/5 02/04/2019 08:24		CCB 240-366620/112 02/04/2019 17:14		CCB 240-366620/124 02/04/2019 18:10		CCB 240-366620/136 02/04/2019 19:05	
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U	26	U
Manganese	15	2.1	U	2.1	U	2.1	U	2.1	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-366620/148 02/04/2019 20:02							
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U						
Manganese	15	2.1	U						

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-366619/8 02/01/2019 13:55		CCB 240-366619/19 02/01/2019 15:04		CCB 240-366619/31 02/01/2019 15:58		CCB 240-366619/43 02/01/2019 16:51	
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-366460/1-A

Instrument Code: I12 Batch No.: 366620

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	26	U		6010C
7439-96-5	Manganese	2.1	U		6010C

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-366250/1-A

Instrument Code: I10 Batch No.: 366619

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	1.7	U		6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	2.1	U		6020A
7440-02-0	Nickel	1.5	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICSA 240-366620/8 Instrument ID: I12

Lab File ID: I12020419A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**183840**	**92**
Manganese		**0.636**	
Aluminum	*500000*	*496670*	*99*
Antimony		*-2.40*	
Arsenic		*-2.51*	
Barium		*0.206*	
Beryllium		*0.188*	
Boron		*2.32*	
Cadmium		*0.916*	
Calcium	*500000*	*462690*	*93*
Chromium		*2.75*	
Cobalt		*-4.68*	
Copper		*0.184*	
Lead		*4.35*	
Lithium		*26.4*	
Magnesium	*500000*	*495310*	*99*
Molybdenum		*0.0460*	
Nickel		*2.65*	
Potassium		*7.30*	
Selenium		*-3.67*	
Silicon		*13.7*	
Silver		*-1.46*	
Sodium		*39.3*	
Strontium		*9.00*	
Thallium		*-3.33*	
Tin		*-0.0598*	
Titanium		*-1.67*	
Vanadium		*0.153*	
Zinc		*-3.82*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICSAB 240-366620/9 Instrument ID: I12

Lab File ID: I12020419A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Iron	**200000**	**183140**	**92**
Manganese	**500**	**481**	**96**
Aluminum	*500000*	*496330*	*99*
Antimony	*1000*	*968*	*97*
Arsenic	*1000*	*958*	*96*
Barium	*500*	*486*	*97*
Beryllium	*500*	*480*	*96*
Boron	*500*	*495*	*99*
Cadmium	*1000*	*988*	*99*
Calcium	*500000*	*464660*	*93*
Chromium	*500*	*480*	*96*
Cobalt	*500*	*482*	*96*
Copper	*500*	*531*	*106*
Lead	*1000*	*842*	*84*
Lithium	*500*	*538*	*108*
Magnesium	*500000*	*492480*	*98*
Molybdenum	*1000*	*922*	*92*
Nickel	*1000*	*954*	*95*
Potassium	*10000*	*10063*	*101*
Selenium	*1000*	*952*	*95*
Silicon	*10000*	*9748*	*97*
Silver	*1000*	*1081*	*108*
Sodium	*10000*	*10025*	*100*
Strontium	*1500*	*1387*	*92*
Thallium	*1000*	*895*	*89*
Tin	*500*	*493*	*99*
Titanium	*500*	*497*	*99*
Vanadium	*500*	*473*	*95*
Zinc	*1000*	*958*	*96*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICSA 240-366619/10 Instrument ID: I10

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**48586**	**97**
Antimony		**0.0140**	
Arsenic		**0.0890**	
Barium		**0.0300**	
Beryllium		**0.0000**	
Cadmium		**0.354**	
Calcium	**50000**	**48548**	**97**
Chromium		**-0.0770**	
Cobalt		**-0.0010**	
Copper		**0.0290**	
Iron	**50000**	**48554**	**97**
Lead		**-0.0050**	
Magnesium	**50000**	**49936**	**100**
Manganese		**0.190**	
Nickel		**0.111**	
Potassium	**50000**	**49777**	**100**
Selenium		**-0.0070**	
Silver		**0.0120**	
Sodium	**50000**	**51245**	**102**
Thallium		**-0.0370**	
Vanadium		**-0.0540**	
Zinc		**0.631**	
Boron		*1.14*	
Lithium		*-0.262*	
Molybdenum	*1000*	*1020*	*102*
Strontium		*0.433*	
Tin		*-0.353*	
Titanium	*1000*	*977*	*98*
Tungsten		*0.145*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICSAB 240-366619/11 Instrument ID: I10

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Aluminum	**50000**	**50219**	**100**
Antimony	**100**	**102**	**102**
Arsenic	**100**	**107**	**107**
Barium	**100**	**101**	**101**
Beryllium	**100**	**104**	**104**
Cadmium	**100**	**101**	**101**
Calcium	**50000**	**50246**	**100**
Chromium	**100**	**105**	**105**
Cobalt	**100**	**106**	**106**
Copper	**100**	**106**	**106**
Iron	**50000**	**51637**	**103**
Lead	**100**	**106**	**106**
Magnesium	**50000**	**52758**	**106**
Manganese	**100**	**104**	**104**
Nickel	**100**	**107**	**107**
Potassium	**50000**	**51892**	**104**
Selenium	**100**	**107**	**107**
Silver	**100**	**97.2**	**97**
Sodium	**50000**	**53880**	**108**
Thallium	**100**	**102**	**102**
Vanadium	**100**	**103**	**103**
Zinc	**100**	**105**	**105**
Boron	*100*	*92.4*	*92*
Lithium	*100*	*89.9*	*90*
Molybdenum	*1100*	*1127*	*102*
Strontium	*100*	*93.3*	*93*
Tin	*100*	*102*	*102*
Titanium	*1100*	*1105*	*100*
Tungsten	*100*	*107*	*107*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW137A-012919 MS
Lab ID: 240-107486-3 MS
Lab Name: TestAmerica Canton
Job No.: 240-107486-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Silver	95.3		0.053	U	100	95	75-125		6020A
Aluminum	10300		1000		10000	92	75-125		6020A
Arsenic	977		0.75	U	1000	98	75-125		6020A
Barium	1080		100		1000	98	75-125		6020A
Beryllium	1110		5.5		1000	110	75-125		6020A
Cadmium	962		0.90	J	1000	96	75-125		6020A
Cobalt	1030		79		1000	95	75-125		6020A
Chromium	935		2.3		1000	93	75-125		6020A
Copper	986		23		1000	96	75-125		6020A
Iron	9890		250		10000	96	75-125		6020A
Manganese	1150		200		1000	95	75-125		6020A
Nickel	1130		160		1000	97	75-125		6020A
Lead	942		0.45	U	1000	94	75-125		6020A
Antimony	96.7		0.82	J	100	96	75-125		6020A
Selenium	926		3.5	J	1000	92	75-125		6020A
Thallium	228		0.20	U	250	91	75-125		6020A
Vanadium	926		1.5	J	1000	92	75-125		6020A
Zinc	1140		200		1000	95	75-125		6020A
Calcium	51200		42000		10000	90	75-125	4	6020A
Potassium	33500		24000		10000	99	75-125		6020A
Magnesium	29800		20000		10000	100	75-125		6020A
Sodium	165000		160000		10000	58	75-125	4	6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW137A-012919 MSD
Lab ID: 240-107486-3 MSD
Lab Name: TestAmerica Canton
Job No.: 240-107486-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Silver	90.3		100	90	75-125	5	20		6020A
Aluminum	10100		10000	91	75-125	2	20		6020A
Arsenic	954		1000	95	75-125	2	20		6020A
Barium	1070		1000	97	75-125	1	20		6020A
Beryllium	1090		1000	109	75-125	1	20		6020A
Cadmium	950		1000	95	75-125	1	20		6020A
Cobalt	1020		1000	94	75-125	2	20		6020A
Chromium	933		1000	93	75-125	0	20		6020A
Copper	963		1000	94	75-125	2	20		6020A
Iron	9660		10000	94	75-125	2	20		6020A
Manganese	1100		1000	91	75-125	4	20		6020A
Nickel	1110		1000	95	75-125	2	20		6020A
Lead	937		1000	94	75-125	1	20		6020A
Antimony	96.2		100	95	75-125	1	20		6020A
Selenium	916		1000	91	75-125	1	20		6020A
Thallium	230		250	92	75-125	1	20		6020A
Vanadium	909		1000	91	75-125	2	20		6020A
Zinc	1130		1000	93	75-125	1	20		6020A
Calcium	51100		10000	89	75-125	0	20	4	6020A
Potassium	33300		10000	97	75-125	1	20		6020A
Magnesium	29400		10000	96	75-125	1	20		6020A
Sodium	165000		10000	59	75-125	0	20	4	6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW143A-012919 MS
Lab ID: 240-107486-5 MS
Lab Name: TestAmerica Canton
Job No.: 240-107486-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Silver	92.3		0.053	U	100	92	75-125		6020A
Aluminum	12100		3000		10000	91	75-125		6020A
Arsenic	950		0.75	U	1000	95	75-125		6020A
Barium	1100		130		1000	97	75-125		6020A
Beryllium	1100		17		1000	108	75-125		6020A
Cadmium	925		1.2		1000	92	75-125		6020A
Cobalt	1150		210		1000	93	75-125		6020A
Chromium	927		2.8		1000	92	75-125		6020A
Copper	947		31		1000	92	75-125		6020A
Iron	10800		1500		10000	93	75-125		6020A
Manganese	1200		270		1000	93	75-125		6020A
Nickel	1260		340		1000	92	75-125		6020A
Lead	895		1.6		1000	89	75-125		6020A
Antimony	95.1		0.57	U	100	95	75-125		6020A
Selenium	912		10		1000	90	75-125		6020A
Thallium	217		0.20	U	250	87	75-125		6020A
Vanadium	905		0.82	U	1000	90	75-125		6020A
Zinc	1380		460		1000	93	75-125		6020A
Calcium	46800		37000		10000	95	75-125		6020A
Potassium	21600		13000		10000	91	75-125		6020A
Magnesium	42700		32000		10000	106	75-125		6020A
Sodium	282000		270000		10000	142	75-125	4	6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW143A-012919 MSD
Lab ID: 240-107486-5 MSD
Lab Name: TestAmerica Canton
Job No.: 240-107486-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Silver	95.8		100	96	75-125	4	20		6020A
Aluminum	12300		10000	93	75-125	2	20		6020A
Arsenic	971		1000	97	75-125	2	20		6020A
Barium	1130		1000	100	75-125	2	20		6020A
Beryllium	1110		1000	109	75-125	1	20		6020A
Cadmium	941		1000	94	75-125	2	20		6020A
Cobalt	1170		1000	95	75-125	2	20		6020A
Chromium	947		1000	94	75-125	2	20		6020A
Copper	974		1000	94	75-125	3	20		6020A
Iron	10800		10000	93	75-125	0	20		6020A
Manganese	1180		1000	90	75-125	2	20		6020A
Nickel	1280		1000	94	75-125	2	20		6020A
Lead	927		1000	93	75-125	4	20		6020A
Antimony	96.7		100	97	75-125	2	20		6020A
Selenium	918		1000	91	75-125	1	20		6020A
Thallium	225		250	90	75-125	3	20		6020A
Vanadium	935		1000	93	75-125	3	20		6020A
Zinc	1400		1000	94	75-125	1	20		6020A
Calcium	46500		10000	92	75-125	1	20		6020A
Potassium	22000		10000	94	75-125	2	20		6020A
Magnesium	41800		10000	97	75-125	2	20		6020A
Sodium	284000		10000	160	75-125	1	20	4	6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-366460/2-A

Lab Name: TestAmerica Canton Job No.: 240-107486-1

Sample Matrix: Water LCS Source: MTICP1_00079

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	1100		110	80	120		6010C
Manganese	500	533		107	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-366250/2-A

Lab Name: TestAmerica Canton Job No.: 240-107486-1

Sample Matrix: Water LCS Source: MTICPMSB_00037

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	96.5		97	80	120		6020A
Aluminum	10000	9530		95	80	120		6020A
Arsenic	1000	1050		105	80	120		6020A
Barium	1000	985		99	80	120		6020A
Beryllium	1000	1040		104	80	120		6020A
Cadmium	1000	1020		102	80	120		6020A
Cobalt	1000	1010		101	80	120		6020A
Chromium	1000	973		97	80	120		6020A
Copper	1000	1060		106	80	120		6020A
Iron	10000	10100		101	80	120		6020A
Manganese	1000	1010		101	80	120		6020A
Nickel	1000	1040		104	80	120		6020A
Lead	1000	1010		101	80	120		6020A
Antimony	100	97.4		97	80	120		6020A
Selenium	1000	1040		104	80	120		6020A
Thallium	250	244		98	80	120		6020A
Vanadium	1000	921		92	80	120		6020A
Zinc	1000	1080		108	80	120		6020A
Calcium	10000	9490		95	80	120		6020A
Potassium	10000	9650		97	80	120		6020A
Magnesium	10000	9990		100	80	120		6020A
Sodium	10000	9880		99	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107486-3

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107486-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Silver	0.053	U	4.53	J	NC		6020A
Aluminum	1000		1480		NC		6020A
Arsenic	0.75	U	53.6		NC		6020A
Barium	100		152		NC		6020A
Beryllium	5.5		49.8		NC		6020A
Cadmium	0.90	J	52.3		NC		6020A
Cobalt	79		136		NC		6020A
Chromium	2.3		48.7		NC		6020A
Copper	23		79.1		NC		6020A
Iron	250		720		NC		6020A
Manganese	200		260		NC		6020A
Nickel	160		230		NC		6020A
Lead	0.45	U	54.0		NC		6020A
Antimony	0.82	J	4.99	J	NC		6020A
Selenium	3.5	J	61.7		NC		6020A
Thallium	0.20	U	14.9		NC		6020A
Vanadium	1.5	J	49.4		NC		6020A
Zinc	200		271		NC		6020A
Calcium	42000		44000		NC		6020A
Potassium	24000		24900		NC		6020A
Magnesium	20000		21100		NC		6020A
Sodium	160000		159000		0.19		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107486-5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107486-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Silver	0.053	U	0.27	U	NC		6020A
Aluminum	3000		2860		NC		6020A
Arsenic	0.75	U	3.8	U	NC		6020A
Barium	130		132		NC		6020A
Beryllium	17		15.8		NC		6020A
Cadmium	1.2		1.26	J	NC		6020A
Cobalt	210		220		4.1		6020A
Chromium	2.8		4.9	U	NC		6020A
Copper	31		32.2		NC		6020A
Iron	1500		1570		NC		6020A
Manganese	270		277		NC		6020A
Nickel	340		359		4.7		6020A
Lead	1.6		2.3	U	NC		6020A
Antimony	0.57	U	2.9	U	NC		6020A
Selenium	10		11.6	J	NC		6020A
Thallium	0.20	U	1.0	U	NC		6020A
Vanadium	0.82	U	4.1	U	NC		6020A
Zinc	460		503		NC		6020A
Calcium	37000		37500		NC		6020A
Potassium	13000		12800		NC		6020A
Magnesium	32000		33300		NC		6020A
Sodium	270000		270000		0.87		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: I10

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: I10

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG No.:

ICP-AES Instrument ID: I12 Date: 12/21/2018

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	V	
Aluminum										0.034040				0.056989	
Antimony		-0.00006			-0.000422			-0.000035						0.002232	
Arsenic		0.000009			-0.000202	0.00931			-0.0003555	0.00123617					
Beryllium														0.000235	
Cadmium			0.012308					0.000004							
Chromium									0.000415						
Cobalt													0.002128		
Copper				0.000018	0.000361			-0.000032					-0.003157		
Lead		-0.000091					0.00057707	0.000048			0.000131	0.000025			
Lithium				0.000011											
Nickel					0.000518			0.000059							
Selenium		-0.000032							0.000338						
Thallium		0.000034			0.003802			-0.000025	-0.0006202 3					0.001371	
Vanadium								0.000064							
Zinc						-0.001092									

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107486-1

SDG No.:

Instrument ID: I12 Date: 01/28/2019 12:19

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		15000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107486-1

SDG No.:

Instrument ID: I10 Date: 10/24/2018 15:39

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		5000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-366460/1-A	02/01/2019 14:00	366460		50	50
LCS 240-366460/2-A	02/01/2019 14:00	366460		50	50
240-107486-2	02/01/2019 14:00	366460		50	50
240-107486-3	02/01/2019 14:00	366460		50	50
240-107486-4	02/01/2019 14:00	366460		50	50
240-107486-5	02/01/2019 14:00	366460		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-366250/1-A	01/31/2019 14:00	366250		50	50
LCS 240-366250/2-A	01/31/2019 14:00	366250		50	50
240-107486-5	01/31/2019 14:00	366250		50	50
240-107486-5 MS	01/31/2019 14:00	366250		50	50
240-107486-5 MSD	01/31/2019 14:00	366250		50	50
240-107486-3	01/31/2019 14:00	366250		50	50
240-107486-3 MS	01/31/2019 14:00	366250		50	50
240-107486-3 MSD	01/31/2019 14:00	366250		50	50
240-107486-2	01/31/2019 14:00	366250		50	50
240-107486-4	01/31/2019 14:00	366250		50	50

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ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/04/2019 08:05 End Date: 02/05/2019 01:06

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ICIS 240-366620/1	1		08:05	X	X																							
CALSTD 240-366620/2 IC			08:10	X	X																							
CALSTD 240-366620/3 IC			08:15	X	X																							
ICV 240-366620/4	1		08:20	X	X																							
ICB 240-366620/5	1		08:24	X	X																							
ICVL 240-366620/6	1		08:29	X	X																							
ZZZZZZ			08:33																									
ICSA 240-366620/8	1		08:38	X	X																							
ICSAB 240-366620/9	1		08:43	X	X																							
CCV 240-366620/10			08:47																									
CCB 240-366620/11			08:52																									
ZZZZZZ			08:56																									
ZZZZZZ			09:01																									
ZZZZZZ			09:06																									
ZZZZZZ			09:10																									
ZZZZZZ			09:15																									
ZZZZZZ			09:20																									
CCV 240-366620/18			09:25																									
CCB 240-366620/19			09:29																									
ZZZZZZ			09:34																									
ZZZZZZ			09:39																									
ZZZZZZ			09:43																									
ZZZZZZ			09:47																									
CCV 240-366620/24			09:52																									
CCB 240-366620/25			09:56																									
ZZZZZZ			10:18																									
CCV 240-366620/27			10:23																									
CCB 240-366620/28			10:27																									
ZZZZZZ			10:48																									
ZZZZZZ			10:53																									
ZZZZZZ			10:57																									
ZZZZZZ			11:02																									
ZZZZZZ			11:06																									
ZZZZZZ			11:11																									
ZZZZZZ			11:15																									
ZZZZZZ			11:20																									
ZZZZZZ			11:24																									
ZZZZZZ			11:29																									
CCV 240-366620/39			11:33																									
CCB 240-366620/40			11:38																									
ZZZZZZ			11:42																									
ZZZZZZ			11:47																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/04/2019 08:05 End Date: 02/05/2019 01:06

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			11:52																									
ZZZZZZ			11:56																									
ZZZZZZ			12:01																									
ZZZZZZ			12:05																									
ZZZZZZ			12:10																									
ZZZZZZ			12:15																									
ZZZZZZ			12:20																									
ZZZZZZ			12:24																									
CCV 240-366620/51			12:29																									
CCB 240-366620/52			12:33																									
ZZZZZZ			12:38																									
ZZZZZZ			12:42																									
ZZZZZZ			12:47																									
ZZZZZZ			12:51																									
ZZZZZZ			12:56																									
ZZZZZZ			13:01																									
ZZZZZZ			13:05																									
ZZZZZZ			13:10																									
ZZZZZZ			13:15																									
ZZZZZZ			13:19																									
CCV 240-366620/63			13:24																									
CCB 240-366620/64			13:28																									
ZZZZZZ			13:33																									
ZZZZZZ			13:38																									
ZZZZZZ			13:43																									
ZZZZZZ			13:47																									
ZZZZZZ			13:52																									
ZZZZZZ			13:57																									
ZZZZZZ			14:01																									
ZZZZZZ			14:06																									
ZZZZZZ			14:11																									
ZZZZZZ			14:15																									
CCV 240-366620/75			14:20																									
CCB 240-366620/76			14:24																									
ZZZZZZ			14:29																									
ZZZZZZ			14:34																									
ZZZZZZ			14:38																									
ZZZZZZ			14:43																									
ZZZZZZ			14:47																									
ZZZZZZ			14:52																									
ZZZZZZ			14:57																									
ZZZZZZ			15:01																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/04/2019 08:05 End Date: 02/05/2019 01:06

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			15:06																										
ZZZZZZ			15:11																										
CCV 240-366620/87			15:16																										
CCB 240-366620/88			15:20																										
ZZZZZZ			15:25																										
ZZZZZZ			15:30																										
ZZZZZZ			15:34																										
ZZZZZZ			15:39																										
ZZZZZZ			15:44																										
ZZZZZZ			15:48																										
ZZZZZZ			15:53																										
ZZZZZZ			15:58																										
ZZZZZZ			16:03																										
ZZZZZZ			16:07																										
CCV 240-366620/99			16:12																										
CCB 240-366620/100			16:16																										
ZZZZZZ			16:21																										
ZZZZZZ			16:26																										
ZZZZZZ			16:31																										
ZZZZZZ			16:36																										
ZZZZZZ			16:41																										
ZZZZZZ			16:46																										
ZZZZZZ			16:50																										
ZZZZZZ			16:55																										
ZZZZZZ			17:00																										
ZZZZZZ			17:05																										
CCV 240-366620/111	1		17:10	X	X																								
CCB 240-366620/112	1		17:14	X	X																								
ZZZZZZ			17:19																										
ZZZZZZ			17:23																										
ZZZZZZ			17:28																										
ZZZZZZ			17:32																										
ZZZZZZ			17:37																										
ZZZZZZ			17:42																										
ZZZZZZ			17:46																										
ZZZZZZ			17:51																										
ZZZZZZ			17:56																										
MB 240-366460/1-A	1	R	18:01	X	X																								
CCV 240-366620/123	1		18:06	X	X																								
CCB 240-366620/124	1		18:10	X	X																								
CCVL 240-366620/125			18:15																										
LCS 240-366460/2-A	1	R	18:19	X	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/04/2019 08:05 End Date: 02/05/2019 01:06

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			18:24																										
ZZZZZZ			18:28																										
ZZZZZZ			18:33																										
ZZZZZZ			18:38																										
ZZZZZZ			18:42																										
ZZZZZZ			18:47																										
ZZZZZZ			18:51																										
ZZZZZZ			18:56																										
CCV 240-366620/135	1		19:01	X	X																								
CCB 240-366620/136	1		19:05	X	X																								
ZZZZZZ			19:10																										
ZZZZZZ			19:15																										
240-107486-2	1	R	19:19	X	X																								
240-107486-3	1	R	19:24	X	X																								
240-107486-4	1	R	19:29	X	X																								
240-107486-5	1	R	19:33	X	X																								
ZZZZZZ			19:38																										
ZZZZZZ			19:43																										
ZZZZZZ			19:48																										
ZZZZZZ			19:53																										
CCV 240-366620/147	1		19:58	X	X																								
CCB 240-366620/148	1		20:02	X	X																								
ZZZZZZ			20:07																										
ZZZZZZ			20:12																										
ZZZZZZ			20:17																										
ZZZZZZ			20:21																										
ZZZZZZ			20:26																										
ZZZZZZ			20:31																										
ZZZZZZ			20:35																										
ZZZZZZ			20:40																										
ZZZZZZ			20:45																										
ZZZZZZ			20:50																										
CCV 240-366620/159			20:54																										
CCB 240-366620/160			20:59																										
ZZZZZZ			21:03																										
ZZZZZZ			21:08																										
ZZZZZZ			21:13																										
ZZZZZZ			21:18																										
ZZZZZZ			21:23																										
CCVL 240-366620/166	1		21:27	X	X																								
ZZZZZZ			21:32																										
ZZZZZZ			21:36																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/04/2019 08:05 End Date: 02/05/2019 01:06

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			21:41																									
ZZZZZZ			21:45																									
CCV 240-366620/171			21:50																									
CCB 240-366620/172			21:54																									
ZZZZZZ			21:59																									
ZZZZZZ			22:03																									
ZZZZZZ			22:08																									
ZZZZZZ			22:13																									
ZZZZZZ			22:17																									
ZZZZZZ			22:22																									
ZZZZZZ			22:26																									
ZZZZZZ			22:31																									
ZZZZZZ			22:36																									
ZZZZZZ			22:41																									
CCV 240-366620/183			22:45																									
CCB 240-366620/184			22:50																									
ZZZZZZ			22:55																									
ZZZZZZ			22:59																									
ZZZZZZ			23:04																									
ZZZZZZ			23:09																									
ZZZZZZ			23:14																									
ZZZZZZ			23:19																									
ZZZZZZ			23:23																									
ZZZZZZ			23:28																									
ZZZZZZ			23:33																									
ZZZZZZ			23:37																									
CCV 240-366620/195			23:42																									
CCB 240-366620/196			23:46																									
ZZZZZZ			23:51																									
ZZZZZZ			23:56																									
ZZZZZZ			00:01																									
ZZZZZZ			00:05																									
ZZZZZZ			00:10																									
ZZZZZZ			00:15																									
ZZZZZZ			00:20																									
ZZZZZZ			00:25																									
ZZZZZZ			00:29																									
ZZZZZZ			00:34																									
CCV 240-366620/207			00:39																									
CCB 240-366620/208			00:43																									
ZZZZZZ			00:48																									
ZZZZZZ			00:52																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/04/2019 08:05 End Date: 02/05/2019 01:06

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			00:57																									
CCV 240-366620/212			01:02																									
CCB 240-366620/213			01:06																									

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 02/01/2019 13:24 End Date: 02/01/2019 23:01

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn						
ZZZZZZ			13:24																												
ICIS 240-366619/2			13:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD1 240-366619/3 IC	1		13:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD2 240-366619/4 IC	1		13:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD3 240-366619/5 IC	1		13:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD4 240-366619/6 IC	1		13:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICV 240-366619/7	1		13:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICB 240-366619/8	1		13:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICVL 240-366619/9	1		13:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSA 240-366619/10	1		14:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSAB 240-366619/11	1		14:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-366619/12			14:13																												
CCB 240-366619/13			14:17																												
ZZZZZZ			14:42																												
ZZZZZZ			14:46																												
ZZZZZZ			14:51																												
ZZZZZZ			14:55																												
CCV 240-366619/18	1		15:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-366619/19	1		15:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
MB 240-366250/1-A	1	R	15:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
LCS 240-366250/2-A	1	R	15:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-5	1	R	15:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-5 SD	5	R	15:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			15:26																												
240-107486-5 MS	1	R	15:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-5 MSD	1	R	15:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-3	1	R	15:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-3 SD	5	R	15:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			15:49																												
CCV 240-366619/30	1		15:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-366619/31	1		15:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-3 MS	1	R	16:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-3 MSD	1	R	16:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-2	1	R	16:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-4	1	R	16:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			16:20																												
ZZZZZZ			16:24																												
ZZZZZZ			16:29																												
ZZZZZZ			16:33																												
ZZZZZZ			16:38																												
ZZZZZZ			16:42																												
CCV 240-366619/42	1		16:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 02/01/2019 13:24 End Date: 02/01/2019 23:01

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn							
CCB 240-366619/43	1		16:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ZZZZZZ			16:56																												
ZZZZZZ			17:00																												
ZZZZZZ			17:04																												
ZZZZZZ			17:09																												
ZZZZZZ			17:13																												
ZZZZZZ			17:18																												
ZZZZZZ			17:22																												
ZZZZZZ			17:27																												
ZZZZZZ			17:31																												
ZZZZZZ			17:36																												
CCV 240-366619/54			17:40																												
CCB 240-366619/55			17:44																												
CCV 240-366619/56			17:49																												
CCB 240-366619/57			17:53																												
CCVL 240-366619/58	1		17:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ZZZZZZ			18:02																												
ZZZZZZ			18:07																												
ZZZZZZ			18:11																												
ZZZZZZ			18:16																												
ZZZZZZ			18:20																												
ZZZZZZ			18:25																												
ZZZZZZ			18:29																												
ZZZZZZ			18:34																												
ZZZZZZ			18:38																												
CCV 240-366619/68			18:43																												
CCB 240-366619/69			18:47																												
ZZZZZZ			18:51																												
ZZZZZZ			18:56																												
ZZZZZZ			19:00																												
ZZZZZZ			19:05																												
ZZZZZZ			19:09																												
CCV 240-366619/75			19:14																												
CCB 240-366619/76			19:18																												
CCVL 240-366619/77			19:23																												
ZZZZZZ			19:27																												
ZZZZZZ			19:32																												
ZZZZZZ			19:36																												
ZZZZZZ			19:41																												
ZZZZZZ			19:45																												
ZZZZZZ			19:49																												
ZZZZZZ			19:54																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 02/01/2019 13:24 End Date: 02/01/2019 23:01

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			19:58																												
ZZZZZZ			20:03																												
CCV 240-366619/87			20:07																												
CCB 240-366619/88			20:12																												
ZZZZZZ			20:16																												
ZZZZZZ			20:21																												
ZZZZZZ			20:25																												
ZZZZZZ			20:30																												
ZZZZZZ			20:34																												
ZZZZZZ			20:38																												
ZZZZZZ			20:43																												
ZZZZZZ			20:47																												
ZZZZZZ			20:52																												
ZZZZZZ			20:56																												
CCV 240-366619/99			21:01																												
CCB 240-366619/100			21:05																												
ZZZZZZ			21:10																												
ZZZZZZ			21:14																												
ZZZZZZ			21:18																												
CCV 240-366619/104			21:23																												
CCB 240-366619/105			21:27																												
CCVL 240-366619/106			21:32																												
ZZZZZZ			21:36																												
ZZZZZZ			21:41																												
ZZZZZZ			21:45																												
ZZZZZZ			21:50																												
ZZZZZZ			21:54																												
ZZZZZZ			21:59																												
ZZZZZZ			22:03																												
ZZZZZZ			22:08																												
ZZZZZZ			22:12																												
CCV 240-366619/116			22:16																												
CCB 240-366619/117			22:21																												
ZZZZZZ			22:25																												
ZZZZZZ			22:30																												
ZZZZZZ			22:34																												
ZZZZZZ			22:39																												
CCV 240-366619/122			22:43																												
CCB 240-366619/123			22:48																												
CCVL 240-366619/124			22:52																												
CCV 240-366619/125			22:57																												
CCB 240-366619/126			23:01																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 02/01/2019 13:24 End Date: 02/01/2019 23:01

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				

Prep Types:
R = Total Recoverable

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICP Instrument ID: I12 Start Date: 02/04/2019 End Date: 02/04/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-366620/1	08:05										
ICV 240-366620/4	08:20	90		97		98		101			
ICB 240-366620/5	08:24	99		99		100		100			
ICVL 240-366620/6	08:29	97		98		99		100			
ICSA 240-366620/8	08:38	73		87		85		97			
ICSAB 240-366620/9	08:43	73		87		85		97			
CCV 240-366620/111	17:10	86		95		95		102			
CCB 240-366620/112	17:14	101		99		100		102			
MB 240-366460/1-A	18:01	100		99		99		101			
CCV 240-366620/123	18:06	85		94		93		98			
CCB 240-366620/124	18:10	99		98		99		100			
LCS 240-366460/2-A	18:19	88		94		94		100			
CCV 240-366620/135	19:01	86		95		94		102			
CCB 240-366620/136	19:05	101		99		100		103			
240-107486-2	19:19	97		99		99		104			
240-107486-3	19:24	88		100		99		108			
240-107486-4	19:29	84		117		117		128			
240-107486-5	19:33	85		114		113		125			
CCV 240-366620/147	19:58	84		94		92		97			
CCB 240-366620/148	20:02	99		98		98		98			
CCVL 240-366620/166	21:27	97		98		97		98			

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICP-MS Instrument ID: I10 Start Date: 02/01/2019 End Date: 02/01/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Rh	Q	Element In	Q
STD1 240-366619/3 IC	13:33	103		94		102		96		96	
STD2 240-366619/4 IC	13:37	93		88		96		88		88	
STD3 240-366619/5 IC	13:42	91		87		96		84		85	
STD4 240-366619/6 IC	13:46	106		92		103		100		96	
ICV 240-366619/7	13:50	95		88		100		90		89	
ICB 240-366619/8	13:55	106		92		103		99		98	
ICVL 240-366619/9	13:59	113		92		103		97		95	
ICSA 240-366619/10	14:04	77		80		80		81		82	
ICSAB 240-366619/11	14:08	67		79		77		83		81	
CCV 240-366619/18	15:00	92		85		92		87		84	
CCB 240-366619/19	15:04	101		93		100		100		95	
MB 240-366250/1-A	15:09	105		88		100		95		95	
LCS 240-366250/2-A	15:13	91		78		86		85		82	
240-107486-5	15:17	80		84		90		79		82	
240-107486-5 SD	15:22	100		92		99		92		94	
240-107486-5 MS	15:31	66		78		78		77		77	
240-107486-5 MSD	15:35	64		79		77		77		78	
240-107486-3	15:40	79		92		87		90		89	
240-107486-3 SD	15:44	90		93		95		100		97	
CCV 240-366619/30	15:53	85		91		89		96		92	
CCB 240-366619/31	15:58	94		98		96		105		100	
240-107486-3 MS	16:02	68		81		80		82		81	
240-107486-3 MSD	16:07	63		82		76		85		82	
240-107486-2	16:11	86		94		91		100		96	
240-107486-4	16:15	70		88		84		85		83	
CCV 240-366619/42	16:47	91		86		93		93		89	
CCB 240-366619/43	16:51	91		92		90		103		98	
CCVL 240-366619/58	17:58	66		92		74		104		98	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICP-MS Instrument ID: I10 Start Date: 02/01/2019 End Date: 02/01/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD1 240-366619/3 IC	13:33	100		101		97					
STD2 240-366619/4 IC	13:37	92		93		87					
STD3 240-366619/5 IC	13:42	89		92		82					
STD4 240-366619/6 IC	13:46	101		102		98					
ICV 240-366619/7	13:50	94		96		90					
ICB 240-366619/8	13:55	101		102		98					
ICVL 240-366619/9	13:59	102		102		99					
ICSA 240-366619/10	14:04	83		84		82					
ICSAB 240-366619/11	14:08	85		87		83					
CCV 240-366619/18	15:00	92		92		87					
CCB 240-366619/19	15:04	102		102		99					
MB 240-366250/1-A	15:09	100		103		101					
LCS 240-366250/2-A	15:13	89		93		89					
240-107486-5	15:17	91		92		78					
240-107486-5 SD	15:22	100		101		92					
240-107486-5 MS	15:31	87		88		75					
240-107486-5 MSD	15:35	88		88		75					
240-107486-3	15:40	97		98		86					
240-107486-3 SD	15:44	104		104		98					
CCV 240-366619/30	15:53	100		100		93					
CCB 240-366619/31	15:58	106		107		105					
240-107486-3 MS	16:02	89		92		80					
240-107486-3 MSD	16:07	91		92		81					
240-107486-2	16:11	105		105		99					
240-107486-4	16:15	97		96		81					
CCV 240-366619/42	16:47	100		101		93					
CCB 240-366619/43	16:51	105		103		103					
CCVL 240-366619/58	17:58	109		110		107					

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366460 Batch Start Date: 02/01/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/01/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00079	MTICP2A 00090	MTTMHCL 00234
MB 240-366460/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-366460/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107486-I-2	MRC-MW152B-012919	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107486-I-3	MRC-MW137A-012919	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107486-I-4	MRC-MW140A-012919	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107486-I-5	MRC-MW143A-012919	3005A, 6010C	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180
MB 240-366460/1		3005A, 6010C		1 mL
LCS 240-366460/2		3005A, 6010C		1 mL
240-107486-I-2	MRC-MW152B-012919	3005A, 6010C	R	1 mL
240-107486-I-3	MRC-MW137A-012919	3005A, 6010C	R	1 mL
240-107486-I-4	MRC-MW140A-012919	3005A, 6010C	R	1 mL
240-107486-I-5	MRC-MW143A-012919	3005A, 6010C	R	1 mL

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb4
Pipette/Syringe/Dispenser ID	mp1
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366460 Batch Start Date: 02/01/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/01/19 22:00

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366250 Batch Start Date: 01/31/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 01/31/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00037	MTICPMSB 00037	MTTMHCL 00234
MB 240-366250/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-366250/2		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107486-I-5	MRC-MW143A-012919	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107486-I-5 MS	MRC-MW143A-012919	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107486-I-5 MSD	MRC-MW143A-012919	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107486-I-3	MRC-MW137A-012919	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107486-I-3 MS	MRC-MW137A-012919	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107486-I-3 MSD	MRC-MW137A-012919	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107486-I-2	MRC-MW152B-012919	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107486-I-4	MRC-MW140A-012919	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-366250/1		3005A, 6020A		1 mL					
LCS 240-366250/2		3005A, 6020A		1 mL					
240-107486-I-5	MRC-MW143A-012919	3005A, 6020A	R	1 mL					
240-107486-I-5 MS	MRC-MW143A-012919	3005A, 6020A	R	1 mL					
240-107486-I-5 MSD	MRC-MW143A-012919	3005A, 6020A	R	1 mL					
240-107486-I-3	MRC-MW137A-012919	3005A, 6020A	R	1 mL					
240-107486-I-3 MS	MRC-MW137A-012919	3005A, 6020A	R	1 mL					
240-107486-I-3 MSD	MRC-MW137A-012919	3005A, 6020A	R	1 mL					
240-107486-I-2	MRC-MW152B-012919	3005A, 6020A	R	1 mL					
240-107486-I-4	MRC-MW140A-012919	3005A, 6020A	R	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366250 Batch Start Date: 01/31/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 01/31/19 22:00

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb3
Pipette/Syringe/Dispenser ID	mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Sample Calculation - 1

Client Sample ID: MRC-MW137A-012919 Lab Sample ID: 240-107486-3

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:00

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	320	200	26	ug/L			1	6010C
7439-96-5	Manganese	210	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	1000	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	100	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	5.5	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.90	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	79	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.3	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	23	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	250	100	47	ug/L			1	6020A
7439-96-5	Manganese	200	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	160	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.82	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	3.5	5.0	0.89	ug/L	J		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	1.5	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	200	20	15	ug/L			1	6020A
7440-70-2	Calcium	42000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	24000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	20000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	160000	1000	330	ug/L			1	6020A

Sample Report

Sample Table

Sample Name	240-107486-i-3-a
Data File Name	027SMPL.d
Data Path Name	D:\Analytical Runs\I10020119A.b
Acq Date Time	2019-02-01T15:40:19-05:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.937	3.937	4.44	365015	0.00	10000	
Be	9	6	2	NoGas	5.493	5.493	3.76	37093	0.01	2000	
B	11	45	2	NoGas	28.928	28.928	1.41	186122	0.02	300	
Na	23	45	1	He	159011.985	159011.985	2.25	438672073	0.04	500000	
Mg	24	45	1	He	19850.239	19850.239	0.94	28519141	0.07	500000	
Al	27	45	1	He	1034.818	1034.818	0.46	708390	0.15	200000	
K	39	45	1	He	23630.937	23630.937	1.22	40665887	0.06	500000	
Ca	44	45	1	He	42273.112	42273.112	0.63	1811419	2.33	500000	
Ti	47	45	1	He	3.064	3.064	14.71	1723	0.18	2500	
V	51	45	1	He	1.473	1.473	1.31	20592	0.01	10000	
Cr	52	45	1	He	2.275	2.275	1.10	46132	0.00	10000	
Mn	55	45	1	He	195.745	195.745	1.93	2258295	0.01	10000	
Fe	56	45	1	He	248.793	248.793	1.38	3476752	0.01	200000	
Co	59	45	1	He	78.761	78.761	0.77	1925322	0.00	5000	
Ni	60	45	1	He	158.911	158.911	0.65	960466	0.02	10000	
Cu	63	45	1	He	22.648	22.648	0.54	348574	0.01	10000	
Zn	66	45	1	He	196.511	196.511	1.10	542560	0.04	10000	
As	75	45	1	He	0.185	0.185	174.93	404	0.05	10000	
Se	78	45	1	He	3.539	3.539	2.39	933	0.38	10000	
Sr	88	103	1	He	132.455	132.455	1.57	1941358	0.01	10000	
Mo	95	103	1	He	4.389	4.389	1.00	33237	0.01	2000	
Ag	107	103	1	He	0.031	0.031	6.41	744	0.00	100	
Cd	111	115	1	He	0.898	0.898	1.52	3537	0.03	4000	
Sn	118	115	1	He	2.924	2.924	7.78	32089	0.01	2000	
Sb	123	115	1	He	0.815	0.815	4.23	6934	0.01	200	
Ba	137	115	1	He	103.222	103.222	1.31	432209	0.02	10000	
W	182	159	1	He	0.417	0.417	0.62	7885	0.01	2500	
Tl	205	165	1	He	0.182	0.182	2.98	9717	0.00	2000	
Pb	208	165	1	He	0.444	0.444	5.70	28872	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	4052484	2.80	5163179	78.49	60	120	
Sc	45	1	He	1690086	0.67	1839605	91.87	60	120	
Sc	45	2	NoGas	9472275	2.14	10933011	86.64	60	120	
Rh	103	1	He	6347426	0.71	7063826	89.86	60	120	
In	115	1	He	3849534	1.13	4323288	89.04	60	120	
Tb	159	1	He	8617710	1.05	8921982	96.59	60	120	
Ho	165	1	He	8613997	1.11	8802922	97.85	60	120	
Bi	209	1	He	5083000	0.55	5887158	86.34	60	120	

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW152B-012919	240-107486-2
MRC-MW137A-012919	240-107486-3
MRC-MW140A-012919	240-107486-4
MRC-MW143A-012919	240-107486-5

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107486-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW152B-012919	240-107486-2
MRC-MW137A-012919	240-107486-3
MRC-MW140A-012919	240-107486-4
MRC-MW143A-012919	240-107486-5

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107486-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW152B-012919	240-107486-2
MRC-MW137A-012919	240-107486-3
MRC-MW140A-012919	240-107486-4
MRC-MW143A-012919	240-107486-5

Comments:

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Analyst: JWW Batch Start Date: 02/01/2019

Reporting Units: mg/L Analytical Batch No.: 366493

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	14:45	Bromide	10.5	10.0	105	90-110		WCICCCV_00858
2	CCB	15:06	Bromide	0.044				U	
13	CCV	18:54	Bromide	10.5	10.0	105	90-110		WCICCCV_00858
14	CCB	19:14	Bromide	0.044				U	
20	CCV	21:18	Bromide	10.5	10.0	105	90-110		WCICCCV_00858
21	CCB	21:39	Bromide	0.044				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Analyst: LKG Batch Start Date: 08/07/2018

Reporting Units: mg/L Analytical Batch No.: 339523

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:20	Sulfate	52.9	50.0	106	90-110		WCICLCS_00669
11	ICB	15:41	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Analyst: JWW Batch Start Date: 01/30/2019

Reporting Units: mg/L Analytical Batch No.: 366140

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	CCV	17:52	Sulfate	52.4	50.0	105	90-110		WCICCCV_00858
14	CCB	18:12	Sulfate	0.35				U	
25	CCV	22:00	Sulfate	52.9	50.0	106	90-110		WCICCCV_00858
26	CCB	22:21	Sulfate	0.35				U	
36	CCV	01:48	Sulfate	52.6	50.0	105	90-110		WCICCCV_00858
37	CCB	02:08	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Analyst: MSP Batch Start Date: 02/16/2019

Reporting Units: mg/L Analytical Batch No.: 575923

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:45	Nitrate Nitrite as N	3.22	3.00	107	90-110		W_ICAl_00027
2	ICB	12:46	Nitrate Nitrite as N	0.040				U	
3	CCV	12:47	Nitrate Nitrite as N	5.48	5.00	110	90-110		W_Nitrate_00020
4	CCV	12:48	Nitrate Nitrite as N	5.10	5.00	102	90-110		IC Primary_00012
5	CCB	12:49	Nitrate Nitrite as N	0.040				U	
20	CCV	13:06	Nitrate Nitrite as N	5.31	5.00	106	90-110		W_Nitrate_00020
21	CCB	13:08	Nitrate Nitrite as N	0.040				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 366338 Date: 01/30/2019 18:16							
2320B-2011	MB 240-366338/4	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 366295 Date: 01/31/2019 11:10							
2340C-2011	MB 240-366295/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 366318 Date: 01/31/2019 13:50							
2540 C-2011	MB 240-366318/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 366493 Date: 02/01/2019 15:26							
300.0	MB 240-366493/3	Bromide	0.044	U	mg/L	0.50	1
Batch ID: 366140 Date: 01/30/2019 18:33							
9056A	MB 240-366140/15	Sulfate	0.35	U	mg/L	1.0	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575923 Date: 02/16/2019 12:50							
SM 4500 NO3 F	MB 490-575923/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107486-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 269673 Date: 02/07/2019 10:25							
SM 2520B	MB 180-269673/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 366493 Date: 02/01/2019 18:33											
300.0	240-107486-3	Bromide	0.55		mg/L						
300.0	240-107486-3 MS	Bromide	11.2		mg/L	10.0	107	80-120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 366493 Date: 02/01/2019 19:35											
300.0	240-107486-3 MSD	Bromide	11.3		mg/L	10.0	108	80-120	1	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575923 Date: 02/16/2019 12:57											
SM 4500 NO3 F	240-107486-5	Nitrate Nitrite as N	0.58		mg/L						
SM 4500 NO3 F	240-107486-5 MS	Nitrate Nitrite as N	3.55		mg/L	3.00	99	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575923 Date: 02/16/2019 12:58											
SM 4500 NO3 F	240-107486-5 MSD	Nitrate Nitrite as N	3.86		mg/L	3.00	109	90-110	8	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 366338 Date: 01/30/2019 18:27								
2320B-2011	MRC-MW137A-012919	240-107486-3	Alkalinity	37	mg/L			
2320B-2011	MRC-MW137A-012919	240-107486-3 DU	Alkalinity	38.3	mg/L	2	20	
Batch ID: 366295 Date: 01/31/2019 13:29								
2340C-2011	MRC-MW143A-012919	240-107486-5	Hardness as calcium carbonate	250	mg/L			
2340C-2011	MRC-MW143A-012919	240-107486-5 DU	Hardness as calcium carbonate	256	mg/L	2	20	
Batch ID: 366318 Date: 01/31/2019 13:50								
2540 C-2011	MRC-MW152B-012919	240-107486-2	Total Dissolved Solids	150	mg/L			
2540 C-2011	MRC-MW152B-012919	240-107486-2 DU	Total Dissolved Solids	156	mg/L	1	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 269673 Date: 02/07/2019 10:25								
SM 2520B	MRC-MW152B-012919	240-107486-2	Salinity	2.0	No Unit			U
SM 2520B	MRC-MW152B-012919	240-107486-2 DU	Salinity	2.0	No Unit	NC	20	U

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 366338	Date: 01/30/2019 18:12										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-366338/3	Alkalinity	260		mg/L	271	96	86-123			
Batch ID: 366295	Date: 01/31/2019 11:17										
						LCS Source: WCHARDNESS_00030					
2340C-2011	LCS 240-366295/2	Hardness as calcium carbonate	268		mg/L	271	99	90-110			
Batch ID: 366318	Date: 01/31/2019 13:50										
						LCS Source: WCPHENOVSOLID_00038					
2540 C-2011	LCS 240-366318/2	Total Dissolved Solids	198		mg/L	204	97	80-120			
Batch ID: 366493	Date: 02/01/2019 15:47										
						LCS Source: WCICLCS_00693					
300.0	LCS 240-366493/4	Bromide	10.1		mg/L	10.0	101	90-110			
Batch ID: 366140	Date: 01/30/2019 18:54										
						LCS Source: WCICLCS_00693					
9056A	LCS 240-366140/16	Sulfate	51.9		mg/L	50.0	104	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575923	Date: 02/16/2019 12:51										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575923/7	Nitrate Nitrite as N	3.22		mg/L	3.00	107	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 01/31/2019 11:10 End Date: 01/31/2019 13:29

Lab Sample Id	D/F	Type	Time	Analytes																								
				HardCC																								
MB 240-366295/1	1	T	11:10	X																								
LCS 240-366295/2	1	T	11:17	X																								
ZZZZZZ			11:25																									
ZZZZZZ			11:33																									
ZZZZZZ			11:40																									
ZZZZZZ			11:48																									
ZZZZZZ			11:56																									
ZZZZZZ			12:04																									
ZZZZZZ			12:11																									
ZZZZZZ			12:19																									
ZZZZZZ			12:27																									
ZZZZZZ			12:35																									
ZZZZZZ			12:42																									
ZZZZZZ			12:50																									
240-107486-2	1	T	12:58	X																								
240-107486-3	1	T	13:06	X																								
240-107486-4	1	T	13:13	X																								
240-107486-5	1	T	13:21	X																								
240-107486-5 DU	1	T	13:29	X																								

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 01/30/2019 17:56 End Date: 01/30/2019 18:37

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			17:56																									
ZZZZZZ			18:07																									
LCS 240-366338/3	1	T	18:12	X																								
MB 240-366338/4	1	T	18:16	X																								
240-107486-2	1	T	18:20	X																								
240-107486-3	1	T	18:24	X																								
240-107486-3 DU	1	T	18:27	X																								
240-107486-4	1	T	18:31	X																								
240-107486-5	1	T	18:35	X																								
ZZZZZZ			18:37																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 01/31/2019 13:50 End Date: 01/31/2019 13:50

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-366318/1	1	T	13:50	X																								
LCS 240-366318/2	1	T	13:50	X																								
ZZZZZZ			13:50																									
ZZZZZZ			13:50																									
ZZZZZZ			13:50																									
240-107486-2 DU	1	T	13:50	X																								
240-107486-2	1	T	13:50	X																								
240-107486-3	1	T	13:50	X																								
240-107486-4	1	T	13:50	X																								
240-107486-5	1	T	13:50	X																								
ZZZZZZ			13:50																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: THOR Analysis Method: 300.0

Start Date: 02/01/2019 14:45 End Date: 02/01/2019 21:39

Lab Sample Id	D/F	Type	Time	Analytes																								
				Br																								
CCV 240-366493/1	1		14:45	X																								
CCB 240-366493/2	1		15:06	X																								
MB 240-366493/3	1	T	15:26	X																								
LCS 240-366493/4	1	T	15:47	X																								
ZZZZZZ			16:08																									
ZZZZZZ			16:29																									
ZZZZZZ			16:49																									
ZZZZZZ			17:10																									
ZZZZZZ			17:31																									
ZZZZZZ			17:51																									
240-107486-3	1	T	18:12	X																								
240-107486-3 MS	1	T	18:33	X																								
CCV 240-366493/13	1		18:54	X																								
CCB 240-366493/14	1		19:14	X																								
240-107486-3 MSD	1	T	19:35	X																								
240-107486-4	1	T	19:56	X																								
240-107486-5	1	T	20:16	X																								
ZZZZZZ			20:37																									
ZZZZZZ			20:58																									
CCV 240-366493/20	1		21:18	X																								
CCB 240-366493/21	1		21:39	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 08/07/2018 12:13 End Date: 08/07/2018 15:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339523/1 IC	1		12:13	X																								
STD2 240-339523/2 IC	1		12:34	X																								
STD3 240-339523/3 IC	1		12:55	X																								
STD4 240-339523/4 IC	1		13:16	X																								
STD5 240-339523/5 ICRT	1		13:36	X																								
STD6 240-339523/6 IC	1		13:57	X																								
STD7 240-339523/7 IC	1		14:18	X																								
STD8 240-339523/8 IC	1		14:39	X																								
STD9 240-339523/9 IC	1		14:59	X																								
ICV 240-339523/10	1		15:20	X																								
ICB 240-339523/11	1		15:41	X																								

Prep Types:
=

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 01/30/2019 13:43 End Date: 01/31/2019 02:08

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
CCV 240-366140/1			13:43																										
CCB 240-366140/2			14:04																										
ZZZZZZ			14:25																										
ZZZZZZ			14:45																										
ZZZZZZ			15:06																										
ZZZZZZ			15:27																										
ZZZZZZ			15:47																										
ZZZZZZ			16:08																										
ZZZZZZ			16:29																										
ZZZZZZ			16:50																										
ZZZZZZ			17:10																										
ZZZZZZ			17:31																										
CCV 240-366140/13	1		17:52		X																								
CCB 240-366140/14	1		18:12		X																								
MB 240-366140/15	1	T	18:33		X																								
LCS 240-366140/16	1	T	18:54		X																								
ZZZZZZ			19:15																										
ZZZZZZ			19:35																										
ZZZZZZ			19:56																										
ZZZZZZ			20:17																										
ZZZZZZ			20:37																										
ZZZZZZ			20:58																										
ZZZZZZ			21:19																										
ZZZZZZ			21:39																										
CCV 240-366140/25	1		22:00		X																								
CCB 240-366140/26	1		22:21		X																								
ZZZZZZ			22:41																										
ZZZZZZ			23:02																										
ZZZZZZ			23:23																										
ZZZZZZ			23:44																										
ZZZZZZ			00:04																										
240-107486-2	1	T	00:25	X	X																								
240-107486-3	5	T	00:46		X																								
240-107486-4	10	T	01:06		X																								
240-107486-5	10	T	01:27		X																								
CCV 240-366140/36	1		01:48		X																								
CCB 240-366140/37	1		02:08		X																								

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/16/2019 12:45 End Date: 02/16/2019 13:21

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575923/1	1		12:45	X																								
ICB 490-575923/2	1		12:46	X																								
CCV 490-575923/3	1		12:47	X																								
CCV 490-575923/4	1		12:48	X																								
CCB 490-575923/5	1		12:49	X																								
MB 490-575923/6	1	T	12:50	X																								
LCS 490-575923/7	1	T	12:51	X																								
240-107486-2	1	T	12:53	X																								
240-107486-3	1	T	12:54	X																								
240-107486-4	1	T	12:55	X																								
240-107486-5	1	T	12:56	X																								
240-107486-5 MS	1	T	12:57	X																								
240-107486-5 MSD	1	T	12:58	X																								
ZZZZZZ			12:59																									
ZZZZZZ			13:01																									
ZZZZZZ			13:02																									
ZZZZZZ			13:03																									
ZZZZZZ			13:04																									
ZZZZZZ			13:05																									
CCV 490-575923/20	1		13:06	X																								
CCB 490-575923/21	1		13:08	X																								
ZZZZZZ			13:09																									
ZZZZZZ			13:10																									
ZZZZZZ			13:11																									
ZZZZZZ			13:12																									
ZZZZZZ			13:13																									
ZZZZZZ			13:14																									
ZZZZZZ			13:16																									
ZZZZZZ			13:17																									
ZZZZZZ			13:18																									
ZZZZZZ			13:19																									
CCV 490-575923/32			13:20																									
CCB 490-575923/33			13:21																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107486-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/07/2019 10:25 End Date: 02/07/2019 10:25

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-269673/1	1	T	10:25	X																								
240-107486-2	1	T	10:25	X																								
240-107486-2 DU	1	T	10:25	X																								
240-107486-3	1	T	10:25	X																								
240-107486-4	1	T	10:25	X																								
240-107486-5	1	T	10:25	X																								
ZZZZZZ			10:25																									
ZZZZZZ			10:25																									

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366295 Batch Start Date: 01/31/19 11:10 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 01/31/19 13:37

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCHARDNESS 00030		
MB 240-366295/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-366295/2		2340C-2011		25 mL	25 mL	6.70 mL	25 mL		
240-107486-G-2	MRC-MW152B-012919	2340C-2011	T	25 mL	25 mL	1.60 mL			
240-107486-G-3	MRC-MW137A-012919	2340C-2011	T	25 mL	25 mL	5.30 mL			
240-107486-G-4	MRC-MW140A-012919	2340C-2011	T	5 mL	25 mL	2.15 mL			
240-107486-G-5	MRC-MW143A-012919	2340C-2011	T	25 mL	25 mL	6.30 mL			
240-107486-G-5 DU	MRC-MW143A-012919	2340C-2011	T	25 mL	25 mL	6.40 mL			

Batch Notes	
Batch Comment	BEAKERS--4010979
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C7
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366338 Batch Start Date: 01/30/19 17:56 Batch Analyst: Carson, Monica

Batch Method: 2320B-2011 Batch End Date: 01/31/19 14:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-366338/3		2320B-2011		InitialAmount is blank	10 mL				
MB 240-366338/4		2320B-2011		InitialAmount is blank					
240-107486-E-2	MRC-MW152B-012919	2320B-2011	T	InitialAmount is blank					
240-107486-E-3	MRC-MW137A-012919	2320B-2011	T	InitialAmount is blank					
240-107486-E-3 DU	MRC-MW137A-012919	2320B-2011	T	InitialAmount is blank					
240-107486-E-4	MRC-MW140A-012919	2320B-2011	T	InitialAmount is blank					
240-107486-E-5	MRC-MW143A-012919	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4- 4005008
pH Buffer 2 ID	7- 4017506
pH Buffer 3 ID	10- 3892955
pH Buffer 4 ID	12- 3891579
Nominal Amount Used	10 mL
pH Meter ID	severus
Probe ID	WCP 137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366318 Batch Start Date: 01/31/19 13:50 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date: 02/01/19 11:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-366318/1		2540 C-2011			3.6747 g	100 mL	3.6747 g	3.6748 g	0 g
LCS 240-366318/2		2540 C-2011			3.6651 g	100 mL	3.6847 g	3.6849 g	0 g
240-107486-H-2 DU	MRC-MW152B-012919	2540 C-2011	T	251 umhos/cm	3.7034 g	100 mL	3.7189 g	3.7190 g	0 g
240-107486-H-2	MRC-MW152B-012919	2540 C-2011	T	251 umhos/cm	3.6945 g	100 mL	3.7104 g	3.7099 g	0 g
240-107486-H-3	MRC-MW137A-012919	2540 C-2011	T	1154 umhos/cm	3.7040 g	100 mL	3.7746 g	3.7742 g	0 g
240-107486-H-4	MRC-MW140A-012919	2540 C-2011	T	1950 umhos/cm	3.6636 g	50 mL	3.7218 g	3.7218 g	0 g
240-107486-H-5	MRC-MW143A-012919	2540 C-2011	T	1860 umhos/cm	3.7107 g	50 mL	3.7605 g	3.7600 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Weight4	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2
MB 240-366318/1		2540 C-2011		0 g	Pass No Unit	N/A No Unit	N/A	0 g	0.0001 g
LCS 240-366318/2		2540 C-2011		0 g	Pass No Unit	N/A No Unit	N/A	0.0196 g	0.0198 g
240-107486-H-2 DU	MRC-MW152B-012919	2540 C-2011	T	0 g	Pass No Unit	N/A No Unit	N/A	0.0155 g	0.0156 g
240-107486-H-2	MRC-MW152B-012919	2540 C-2011	T	0 g	Pass No Unit	N/A No Unit	N/A	0.0159 g	0.0154 g
240-107486-H-3	MRC-MW137A-012919	2540 C-2011	T	0 g	Pass No Unit	N/A No Unit	N/A	0.0706 g	0.0702 g
240-107486-H-4	MRC-MW140A-012919	2540 C-2011	T	0 g	Pass No Unit	N/A No Unit	N/A	0.0582 g	0.0582 g
240-107486-H-5	MRC-MW143A-012919	2540 C-2011	T	0 g	Pass No Unit	N/A No Unit	N/A	0.0498 g	0.0493 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue3	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00038	
MB 240-366318/1		2540 C-2011		N/A g	N/A g	100 mL	OK		
LCS 240-366318/2		2540 C-2011		N/A g	N/A g	100 mL	OK	100 mL	
240-107486-H-2 DU	MRC-MW152B-012919	2540 C-2011	T	N/A g	N/A g	100 mL	OK		
240-107486-H-2	MRC-MW152B-012919	2540 C-2011	T	N/A g	N/A g	100 mL	OK		
240-107486-H-3	MRC-MW137A-012919	2540 C-2011	T	N/A g	N/A g	100 mL	OK		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366318 Batch Start Date: 01/31/19 13:50 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date: 02/01/19 11:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue3	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00038	
240-107486-H-4	MRC-MW140A-012919	2540 C-2011	T	N/A g	N/A g	100 mL	OK		
240-107486-H-5	MRC-MW143A-012919	2540 C-2011	T	N/A g	N/A g	100 mL	OK		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366318 Batch Start Date: 01/31/19 13:50 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date: 02/01/19 11:50

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/01/2019 10:20
Date/Time - Out - CW (WT2)	02/01/2019 11:20
Temperature - Start - CW (WT2) - Correct	183 Celsius
Temperature - End - CW (WT2) - Correct	183 Celsius
Temperature - Start-CW(WT2) -Uncorrected	183 Celsius
Temperature - End-CW(WT2) -Uncorrected	183 Celsius
Temperature - Start - Corrected	105 Celsius
Temperature - End - Corrected	105 Celsius
Date/Time - In	01/31/2019 14:22
Date/Time - Out	02/01/2019 08:33
Filter ID	60020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O06
Thermometer ID - Low Temperature	84922
Thermometer ID	181417084
Temperature - Start - Uncorrected	105 Celsius
Temperature - End - Uncorrected	105 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/01/2019 08:33 No Unit
Weight(WT1) Date/Time Out	02/01/2019 09:57
Weight(WT1) Start Temp	183 Celsius
Weight(WT1) Temp Out	183 Celsius
Uncorrected Weight(WT1) Start Temp	183 Celsius
Uncorrected Weight(WT1) Temp Out	183 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339523/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339523/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339523/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339523/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339523/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339523/6 IC		300.0		5 mL	2 mL				
STD7 240-339523/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339523/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339523/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366140 Batch Start Date: 01/30/19 13:43 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount				
240-107486-E-2	MRC-MW151A-012919	300.0 & 9056A	T	5 mL	1.0 mL				
240-107486-E-3	MRC-MW137A-012919	300.0 & 9056A	T	5 mL	1.0 mL				
240-107486-E-4	MRC-MW140A-012919	300.0 & 9056A	T	5 mL	1.0 mL				
240-107486-E-5	MRC-MW143A-012919	300.0 & 9056A	T	5 mL	1.0 mL				

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366493 Batch Start Date: 02/01/19 14:45 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00858	WCICLCS 00693	WCICSOLNA1 00018	WCICSOLNB1 00018	
CCV 240-366493/1		300.0		5 mL	5 mL				
CCB 240-366493/2		300.0		5 mL					
MB 240-366493/3		300.0		5 mL					
LCS 240-366493/4		300.0		5 mL		5 mL			
240-107486-E-3	MRC-MW137A-012919	300.0	T	5 mL					
240-107486-E-3 MS	MRC-MW137A-012919	300.0	T	5 mL			0.1 mL	0.1 mL	
CCV 240-366493/13		300.0		5 mL	5 mL				
CCB 240-366493/14		300.0		5 mL					
240-107486-E-3 MSD	MRC-MW137A-012919	300.0	T	5 mL			0.1 mL	0.1 mL	
240-107486-E-4	MRC-MW140A-012919	300.0	T	5 mL					
240-107486-E-5	MRC-MW143A-012919	300.0	T	5 mL					
CCV 240-366493/20		300.0		5 mL	5 mL				
CCB 240-366493/21		300.0		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICLCS 00669			
ICV 240-339523/10		9056A		5 mL	1.0 mL	5 mL			
ICB 240-339523/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366140 Batch Start Date: 01/30/19 13:43 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount				
240-107486-E-2	MRC-MW151A-012919	300.0 & 9056A	T	5 mL	1.0 mL				
240-107486-E-3	MRC-MW137A-012919	300.0 & 9056A	T	5 mL	1.0 mL				
240-107486-E-4	MRC-MW140A-012919	300.0 & 9056A	T	5 mL	1.0 mL				
240-107486-E-5	MRC-MW143A-012919	300.0 & 9056A	T	5 mL	1.0 mL				

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366140 Batch Start Date: 01/30/19 13:43 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00858	WCICLCS 00693			
CCV 240-366140/13		9056A		5 mL	5 mL				
CCB 240-366140/14		9056A		5 mL					
MB 240-366140/15		9056A		5 mL					
LCS 240-366140/16		9056A		5 mL		5 mL			
CCV 240-366140/25		9056A		5 mL	5 mL				
CCB 240-366140/26		9056A		5 mL					
CCV 240-366140/36		9056A		5 mL	5 mL				
CCB 240-366140/37		9056A		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Batch Number: 575923 Batch Start Date: 02/16/19 12:45 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/16/19 13:23

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575923/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575923/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575923/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575923/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575923/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575923/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575923/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
240-107486-F-2	MRC-MW152B-012919	SM 4500 NO3 F	T	50 mL	50 mL				7.06
240-107486-F-3	MRC-MW137A-012919	SM 4500 NO3 F	T	50 mL	50 mL				5.84
240-107486-F-4	MRC-MW140A-012919	SM 4500 NO3 F	T	50 mL	50 mL				6.39
240-107486-F-5	MRC-MW143A-012919	SM 4500 NO3 F	T	50 mL	50 mL				8.35
240-107486-F-5 MS	MRC-MW143A-012919	SM 4500 NO3 F	T	50 mL	50 mL		0.25 mL		8.35
240-107486-F-5 MSD	MRC-MW143A-012919	SM 4500 NO3 F	T	50 mL	50 mL		0.25 mL		8.35
CCV 490-575923/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575923/21		SM 4500 NO3 F		50 mL	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Batch Number: 575923 Batch Start Date: 02/16/19 12:45 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/16/19 13:23

Batch Notes	
Acid used for pH adjustment	4547067
Base used for pH adjustment	4273883
Batch Comment	cent tubes 809161; pH probe VVZ10915; pH meter AB92340683
Buffer Reagent ID	4832283
Carrier Identification	DI water
Color Reagent ID	4832299
Filter ID	180611314
Pipette/Syringe/Dispenser ID	26061004, 26121028

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TETRA TECH INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **APRIL 18, 2019**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION – VOC / PCB HOMOLOGS / METALS / MISCELLANEOUS PARAMETERS**
LM MRC BLOCK F – FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) 240-107535-1

SAMPLES: 3 / Water / VOC

MRC-MW139B-013019 MRC-MW153A-013019 TRIP BLANK-013019

2 / Water / Metals / Miscellaneous

MRC-MW139B-013019 MRC-MW153A-013019

1 / Water / PCB

MRC-MW153A-013019

OVERVIEW

The sample set for LM MRC Block F, SDG 240-107535-1, consists of two (2) water environmental samples and one (1) trip blank. Samples were analyzed for volatile organic compounds (VOC), polychlorinated biphenyl homologs (PCBH), metals, and miscellaneous parameters (alkalinity, bromide, hardness as CaCO3, nitrite/nitrate-N, salinity, sulfate, and total dissolved solids (TDS). No field duplicate pairs are included in this SDG.

The samples were collected by Tetra Tech on January 30, 2019 and analyzed by Test America. Analyses were conducted in accordance with EPA SW-846 Methods 8260C (VOC), 6010C/6020A (metals), and 9056A (anions) as well as EPA Method 680 (PCBH), MCAWW Method 300.0 (bromide), and Standard Methods 2320B-2011 (alkalinity), 2340C-2011 (hardness), 4500 NO3 F (nitrite/nitrate-N), 2520B (salinity), and 2540C-2011 (TDS) analytical and reporting protocols. Iron and manganese were analyzed by both Methods 6010C and 6020A - remaining metals were analyzed by Method 6020A only.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, initial/continuing calibrations, laboratory method blank/trip blank results, laboratory control sample/laboratory control sample duplicate results, matrix spike/matrix spike duplicate results, surrogate spike recoveries, interference check sample results, compound identification, analyte quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

MAJOR PROBLEMS

- The laboratory case narrative report states that 2-chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample, all samples were preserved in hydrochloric acid. Non-detected results for 2-chloroethyl vinyl ether were rejected (UR) in water samples.

- The VOC matrix spike (MS)/matrix spike duplicate (MSD) analysis performed on sample MRC-MW139B-013019 had MS and MSD percent recoveries (%Rs) that were less than the laboratory quality control limits and less than 10% for 2-chloroethyl vinyl ether. The non-detected result for this

analyte was rejected (UR) in sample MRC-MW139B-013019.

MINOR PROBLEMS

- The VOC continuing calibration verification (CCV) performed on 02/04/19 at 12:19 on instrument A3UX15 had percent differences (%Ds) that were greater than the 20% quality control limit for dichlorodifluoromethane, vinyl chloride, 2-chloroethyl vinyl ether, 4-methyl-2-pentanone, 2-hexanone, bromoform, and 1,2-dibromo-3-chloropropane. Samples TRIP BLANK-013019, MRC-MW153A-013019, and MRC-MW139B-013019 were affected. Non-detected results for the aforementioned analytes were qualified as estimated (UJ) in the affected samples.

- The VOC MS/MSD analysis performed on sample MRC-MW139B-013019 had an MS %R for tertiary-butyl alcohol that was less than the laboratory quality control limits (but greater than 10%). The MSD %R for this analyte was compliant. The non-detected result for tertiary-butyl alcohol in sample MRC-MW139B-013019 was qualified as estimated (UJ).

- The following VOCs were detected in the trip blanks at the following concentrations:

Analyte	Maximum Concentration	< or > Reporting Limit (RL)
Tertiary-butyl alcohol	180 ug/L(1)	> RL
Trichloroethene	0.16 ug/L(1)	< RL

1 - Detected in trip blank TB-013019 affecting all samples.

Trichloroethene results in samples MRC-MW139B-013019 and MRC-MW153A-013019 were less than the RL and were qualified as non-detected (U). No qualification was necessary for tertiary-butyl alcohol because results for this analyte were non-detected in samples MRC-MW139B-013019 and MRC-MW153A-013019.

- Detected results reported below the RL but above the method detection limit (MDL) were qualified as estimated (J).

- The PCBH CCV performed on 02/21/19 at 16:43 on instrument CMSX had a %D that was greater than the 20% quality control limit for decachlorobiphenyl. Sample MRC-MW153A-013019 was affected. The non-detected results for decachlorobiphenyl and nonachlorobiphenyls were qualified as estimated (UJ) in the affected sample.

NOTES

Non-detected results were reported to the MDL.

VOC sample MRC-MW139B-013019 was analyzed at a dilution factor of 20.

The VOC MS/MSD analysis performed on sample MRC-MW139B-013019 had a relative percent difference (RPD) for 1,1,2-trichlorotrifluoroethane that was greater than the laboratory quality control limit. No qualification was necessary because the result for 1,1,2-trichlorotrifluoroethane was non-detected in sample MRC-MW139B-013019.

Sulfate in sample MRC-MW153A-013019 was analyzed at a dilution factor of 5.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Some VOC and PCBH results were qualified due to calibration noncompliance.

Other Factors Affecting Data Quality: Results for 2-chloroethyl vinyl ether in water samples were rejected due to sample preservation noncompliance, and one of these 2-chloroethyl vinyl ether results was also rejected due to MS/MSD noncompliance. One tertiary-butyl alcohol result was qualified due to MS/MSD noncompliance. Some VOC results were qualified as non-detected due to trip blank contamination. Detected results reported below the RL but above the MDL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017) and the "National Functional Guidelines for Inorganic Superfund Methods Data Review" (January 2017). The text of this report has been formulated to address only those problem areas affecting data quality.

Leigh A. Ciofani

Tetra Tech
Leigh Ciofani
Environmental Scientist/Data Validator

Joseph A. Samchuck

Tetra Tech
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08784	NSAMPLE	MRC-MW139B-013019			MRC-MW153A-013019			TRIP BLANK-013019		
SDG: 240-107535-1	LAB_ID	240-107535-3			240-107535-2			240-107535-1		
FRACTION: OV	SAMP_DATE	1/30/2019			1/30/2019			1/30/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		2.8	U		0.14	U		0.14	U	
1,1,1-TRICHLOROETHANE		4.8	U		0.24	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		2.6	U		0.13	U		0.13	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		8.2	U		0.41	U		0.41	U	
1,1-DICHLOROETHANE		3.4	U		0.17	U		0.17	U	
1,1-DICHLOROETHENE		3.8	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		2.8	U		0.14	U		0.14	U	
1,2,3-TRICHLOROBENZENE		59			0.54	U		0.54	U	
1,2,3-TRICHLOROPROPANE		4.8	U		0.24	U		0.24	U	
1,2,3-TRIMETHYLBENZENE		2.8	U		0.14	U		0.14	U	
1,2,4-TRICHLOROBENZENE		290			0.26	U		0.26	U	
1,2,4-TRIMETHYLBENZENE		1.4	U		0.07	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		18	UJ	C	0.91	UJ	C	0.91	UJ	C
1,2-DIBROMOETHANE		2.4	U		0.12	U		0.12	U	
1,2-DICHLOROBENZENE		11	J	P	0.15	U		0.15	U	
1,2-DICHLOROETHANE		4.2	U		0.21	U		0.21	U	
1,2-DICHLOROPROPANE		3	U		0.15	U		0.15	U	
1,3-DICHLOROBENZENE		65			0.15	U		0.15	U	
1,3-DICHLOROPROPANE		4.2	U		0.21	U		0.21	U	
1,4-DICHLOROBENZENE		42			0.16	U		0.16	U	
2,2-DICHLOROPROPANE		6.2	U		0.31	U		0.31	U	
2-BUTANONE		23	U		1.2	U		1.2	U	
2-CHLOROETHYL VINYL ETHER		5.2	UR	DM	0.26	UR	M	0.26	UR	M
2-CHLOROTOLUENE		3	U		0.15	U		0.15	U	
2-HEXANONE		11	UJ	C	0.54	UJ	C	0.54	UJ	C
4-CHLOROTOLUENE		1.8	U		0.09	U		0.09	U	
4-ISOPROPYLTOLUENE		2.6	U		0.13	U		0.13	U	
4-METHYL-2-PENTANONE		8.4	UJ	C	0.42	UJ	C	0.42	UJ	C
ACETONE		110	U		5.4	U		5.4	U	
BENZENE		2.6	U		0.13	U		0.13	U	
BROMOBENZENE		2.4	U		0.12	U		0.12	U	
BROMOCHLOROMETHANE		2.8	U		0.14	U		0.14	U	
BROMODICHLOROMETHANE		3.4	U		0.17	U		0.17	U	
BROMOFORM		15	UJ	C	0.76	UJ	C	0.76	UJ	C
BROMOMETHANE		8.4	U		0.42	U		0.42	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW139B-013019			MRC-MW153A-013019			TRIP BLANK-013019		
SDG: 240-107535-1	LAB_ID	240-107535-3			240-107535-2			240-107535-1		
FRACTION: OV	SAMP_DATE	1/30/2019			1/30/2019			1/30/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		5.6	U		0.28	U		0.28	U	
CARBON TETRACHLORIDE		5.2	U		0.26	U		0.26	U	
CHLOROBENZENE		68			0.14	U		0.14	U	
CHLORODIBROMOMETHANE		7.8	U		0.39	U		0.39	U	
CHLOROETHANE		17	U		0.83	U		0.83	U	
CHLOROFORM		2.6	U		0.13	U		0.13	U	
CHLOROMETHANE		4	U		0.2	U		0.2	U	
CIS-1,2-DICHLOROETHENE		3.2	U		0.16	U		0.16	U	
CIS-1,3-DICHLOROPROPENE		12	U		0.61	U		0.61	U	
DIBROMOMETHANE		1.8	U		0.09	U		0.09	U	
DICHLORODIFLUOROMETHANE		7	UJ	C	0.35	UJ	C	0.35	UJ	C
DIISOPROPYL ETHER		3.4	U		0.17	U		0.17	U	
ETHYL TERT-BUTYL ETHER		3	U		0.15	U		0.15	U	
ETHYLBENZENE		2.2	U		0.11	U		0.11	U	
HEXACHLOROBUTADIENE		17	U		0.83	U		0.83	U	
ISOPROPYLBENZENE		1.8	U		0.09	U		0.09	U	
METHYL TERT-BUTYL ETHER		1.4	U		0.07	U		0.07	U	
METHYLENE CHLORIDE		52	U		2.6	U		2.6	U	
NAPHTHALENE		6.4	U		0.32	U		0.32	U	
N-BUTYLBENZENE		2.8	U		0.14	U		0.14	U	
N-PROPYLBENZENE		3	U		0.15	U		0.15	U	
SEC-BUTYLBENZENE		2.6	U		0.13	U		0.13	U	
STYRENE		2	U		0.1	U		0.1	U	
TERT-AMYL METHYL ETHER		2.2	U		0.11	U		0.11	U	
TERT-BUTYLBENZENE		2.8	U		0.14	U		0.14	U	
TERTIARY-BUTYL ALCOHOL		34	UJ	D	1.7	U		180		
TETRACHLOROETHENE		3	U		0.15	U		0.15	U	
TOLUENE		2.8	U		0.14	U		0.14	U	
TOTAL XYLENES		3	U		0.15	U		0.15	U	
TRANS-1,2-DICHLOROETHENE		3.8	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		13	U		0.67	U		0.67	U	
TRICHLOROETHENE		10	U	B	0.38	U	B	0.16	J	P
TRICHLOROFLUOROMETHANE		9	U		0.45	U		0.45	U	
VINYL ACETATE		3.8	U		0.19	U		0.19	U	
VINYL CHLORIDE		4	UJ	C	0.2	UJ	C	0.2	UJ	C

PROJ_NO: 08784	NSAMPLE	MRC-MW153A-013019		
SDG: 240-107535-1	LAB_ID	240-107535-2		
FRACTION: PCB	SAMP_DATE	1/30/2019		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.078	UJ	C
DICHLOROBIPHENYLS		0.006	U	
HEPTACHLOROBIPHENYLS		0.033	U	
HEXACHLOROBIPHENYLS		0.017	U	
MONOCHLOROBIPHENYLS		0.0062	U	
NONACHLOROBIPHENYLS		0.054	UJ	C
OCTACHLOROBIPHENYLS		0.042	U	
PENTACHLOROBIPHENYLS		0.016	U	
TETRACHLOROBIPHENYLS		0.014	U	
TRICHLOROBIPHENYLS		0.0072	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW139B-013019			MRC-MW153A-013019		
SDG: 240-107535-1	LAB_ID	240-107535-3			240-107535-2		
FRACTION: M	SAMP_DATE	1/30/2019			1/30/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		280			3600		
ANTIMONY		0.57	J	P	0.57	U	
ARSENIC		0.75	U		0.75	U	
BARIUM		37			28		
BERYLLIUM		1.5			14		
CADMIUM		0.21	U		0.99	J	P
CALCIUM		13000			74000		
CHROMIUM		1.4	J	P	2.6		
COBALT		20			190		
COPPER		20			110		
IRON		1900			680		
LEAD		1.1			0.63	J	P
MAGNESIUM		2600			35000		
MANGANESE		120			600		
NICKEL		37			190		
POTASSIUM		22000			5300		
SELENIUM		0.89	U		0.89	U	
SILVER		0.11	J	P	0.053	U	
SODIUM		34000			10000		
THALLIUM		0.2	U		0.2	U	
VANADIUM		2.6	J	P	0.82	U	
ZINC		82			300		

PROJ_NO: 08784	NSAMPLE	MRC-MW139B-013019						MRC-MW153A-013019					
SDG: 240-107535-1	LAB_ID	240-107535-3						240-107535-2					
FRACTION: MISC	SAMP_DATE	1/30/2019						1/30/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY	43						2.6	U				
BROMIDE	0.044	U					0.044	U				
HARDNESS AS CACO3	58						400					
NITRITE/NITRATE-N	0.17						0.11					
SALINITY				2	U					2	U	
SULFATE	15						370					
TOTAL DISSOLVED SOLIDS	210						570					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW139B-013019 | Lab Sample ID: 240-107535-3

Matrix: Water | Lab File ID: UXC8687.D

Analysis Method: 8260C | Date Collected: 01/30/2019 13:56

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 18:09

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	2.8	U	20	2.8
71-55-6	1,1,1-Trichloroethane	4.8	U	20	4.8
79-34-5	1,1,2,2-Tetrachloroethane	2.6	U	20	2.6
76-13-1	1,1,2-Trichlorotrifluoroethane	8.2	U F2	20	8.2
75-34-3	1,1-Dichloroethane	3.4	U	20	3.4
75-35-4	1,1-Dichloroethene	3.8	U	20	3.8
563-58-6	1,1-Dichloropropene	2.8	U	20	2.8
87-61-6	1,2,3-Trichlorobenzene	59		20	11
96-18-4	1,2,3-Trichloropropane	4.8	U	20	4.8
526-73-8	1,2,3-Trimethylbenzene	2.8	U	100	2.8
120-82-1	1,2,4-Trichlorobenzene	290		20	5.2
95-63-6	1,2,4-Trimethylbenzene	1.4	U	20	1.4
96-12-8	1,2-Dibromo-3-Chloropropane	18	U	40	18
95-50-1	1,2-Dichlorobenzene	11	J	20	3.0
107-06-2	1,2-Dichloroethane	4.2	U	20	4.2
78-87-5	1,2-Dichloropropane	3.0	U	20	3.0
541-73-1	1,3-Dichlorobenzene	65		20	3.0
142-28-9	1,3-Dichloropropane	4.2	U	20	4.2
106-46-7	1,4-Dichlorobenzene	42		20	3.2
594-20-7	2,2-Dichloropropane	6.2	U	20	6.2
110-75-8	2-Chloroethyl vinyl ether	5.2	U F1	200	5.2
95-49-8	2-Chlorotoluene	3.0	U	20	3.0
591-78-6	2-Hexanone	11	U	200	11
108-86-1	Bromobenzene	2.4	U	20	2.4
74-97-5	Bromochloromethane	2.8	U	20	2.8
106-43-4	4-Chlorotoluene	1.8	U	20	1.8
99-87-6	4-Isopropyltoluene	2.6	U	20	2.6
67-64-1	Acetone	110	U	200	110
71-43-2	Benzene	2.6	U	20	2.6
75-25-2	Bromoform	15	U	20	15
74-83-9	Bromomethane	8.4	U	20	8.4
75-15-0	Carbon disulfide	5.6	U	20	5.6
56-23-5	Carbon tetrachloride	5.2	U	20	5.2
108-90-7	Chlorobenzene	68		20	2.8
75-00-3	Chloroethane	17	U	20	17
67-66-3	Chloroform	2.6	U	20	2.6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW139B-013019 | Lab Sample ID: 240-107535-3

Matrix: Water | Lab File ID: UXC8687.D

Analysis Method: 8260C | Date Collected: 01/30/2019 13:56

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 18:09

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	4.0	U	20	4.0
156-59-2	cis-1,2-Dichloroethene	3.2	U	20	3.2
10061-01-5	cis-1,3-Dichloropropene	12	U	20	12
87-68-3	Hexachlorobutadiene	17	U	20	17
74-95-3	Dibromomethane	1.8	U	20	1.8
75-27-4	Bromodichloromethane	3.4	U	20	3.4
75-71-8	Dichlorodifluoromethane	7.0	U	20	7.0
100-41-4	Ethylbenzene	2.2	U	20	2.2
106-93-4	1,2-Dibromoethane	2.4	U	20	2.4
108-20-3	Diisopropyl ether	3.4	U	200	3.4
91-20-3	Naphthalene	6.4	U	20	6.4
104-51-8	n-Butylbenzene	2.8	U	20	2.8
98-82-8	Isopropylbenzene	1.8	U	20	1.8
103-65-1	N-Propylbenzene	3.0	U	20	3.0
78-93-3	2-Butanone (MEK)	23	U	200	23
108-10-1	4-Methyl-2-pentanone (MIBK)	8.4	U	200	8.4
135-98-8	sec-Butylbenzene	2.6	U	20	2.6
1634-04-4	Methyl tert-butyl ether	1.4	U	20	1.4
994-05-8	Tert-amyl methyl ether	2.2	U	100	2.2
75-09-2	Methylene Chloride	52	U	100	52
100-42-5	Styrene	2.0	U	20	2.0
637-92-3	Ethyl tert-butyl ether	3.0	U	100	3.0
98-06-6	tert-Butylbenzene	2.8	U	20	2.8
127-18-4	Tetrachloroethene	3.0	U	20	3.0
108-88-3	Toluene	2.8	U	20	2.8
156-60-5	trans-1,2-Dichloroethene	3.8	U	20	3.8
10061-02-6	trans-1,3-Dichloropropene	13	U	20	13
79-01-6	Trichloroethene	10	J	20	2.0
75-69-4	Trichlorofluoromethane	9.0	U	20	9.0
108-05-4	Vinyl acetate	3.8	U	40	3.8
75-01-4	Vinyl chloride	4.0	U	20	4.0
75-65-0	tert-Butyl alcohol	34	U F1	1000	34
1330-20-7	Xylenes, Total	3.0	U	40	3.0
124-48-1	Chlorodibromomethane	7.8	U	20	7.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW139B-013019 | Lab Sample ID: 240-107535-3

Matrix: Water | Lab File ID: UXC8687.D

Analysis Method: 8260C | Date Collected: 01/30/2019 13:56

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 18:09

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	83		70-121
460-00-4	4-Bromofluorobenzene (Surr)	85		59-120
2037-26-5	Toluene-d8 (Surr)	85		70-123
1868-53-7	Dibromofluoromethane (Surr)	81		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW153A-013019 | Lab Sample ID: 240-107535-2

Matrix: Water | Lab File ID: UXC8686.D

Analysis Method: 8260C | Date Collected: 01/30/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW153A-013019 | Lab Sample ID: 240-107535-2

Matrix: Water | Lab File ID: UXC8686.D

Analysis Method: 8260C | Date Collected: 01/30/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.38	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW153A-013019 | Lab Sample ID: 240-107535-2

Matrix: Water | Lab File ID: UXC8686.D

Analysis Method: 8260C | Date Collected: 01/30/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	84		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	85		70-123
1868-53-7	Dibromofluoromethane (Surr)	81		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: TRIP BLANK-013019 | Lab Sample ID: 240-107535-1

Matrix: Water | Lab File ID: UXC8685.D

Analysis Method: 8260C | Date Collected: 01/30/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: TRIP BLANK-013019 | Lab Sample ID: 240-107535-1

Matrix: Water | Lab File ID: UXC8685.D

Analysis Method: 8260C | Date Collected: 01/30/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.16	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	180		50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: TRIP BLANK-013019 | Lab Sample ID: 240-107535-1

Matrix: Water | Lab File ID: UXC8685.D

Analysis Method: 8260C | Date Collected: 01/30/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	85		70-121
460-00-4	4-Bromofluorobenzene (Surr)	84		59-120
2037-26-5	Toluene-d8 (Surr)	87		70-123
1868-53-7	Dibromofluoromethane (Surr)	82		75-128

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW153A-013019 | Lab Sample ID: 240-107535-2

Matrix: Water | Lab File ID: xb2038.D

Analysis Method: 680 | Date Collected: 01/30/2019 11:00

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 902(mL) | Date Analyzed: 02/21/2019 10:32

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.033	U	0.33	0.033
26601-64-9	Hexachlorobiphenyl	0.017	U	0.22	0.017
53742-07-7	Nonachlorobiphenyl	0.054	U	0.55	0.054
55722-26-4	Octachlorobiphenyl	0.042	U	0.33	0.042
27323-18-8	Monochlorobiphenyl	0.0062	U	0.11	0.0062
2051-24-3	DCB Decachlorobiphenyl	0.078	U	0.55	0.078
25512-42-9	Dichlorobiphenyl	0.0060	U	0.11	0.0060
25429-29-2	Pentachlorobiphenyl	0.016	U	0.22	0.016
26914-33-0	Tetrachlorobiphenyl	0.014	U	0.22	0.014
25323-68-6	Trichlorobiphenyl	0.0072	U	0.11	0.0072

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	25		25-113

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW139B-013019 Lab Sample ID: 240-107535-3

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 13:56

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	1900	200	26	ug/L			1	6010C
7439-96-5	Manganese	130	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.11	1.0	0.053	ug/L	J		1	6020A
7429-90-5	Aluminum	280	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	37	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.5	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	20	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	1.4	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	20	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	1900	100	47	ug/L			1	6020A
7439-96-5	Manganese	120	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	37	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	1.1	1.0	0.45	ug/L			1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	2.6	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	82	20	15	ug/L			1	6020A
7440-70-2	Calcium	13000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	22000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	2600	1000	200	ug/L			1	6020A
7440-23-5	Sodium	34000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW153A-013019 Lab Sample ID: 240-107535-2

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 11:00

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	520	200	26	ug/L			1	6010C
7439-96-5	Manganese	450	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	3600	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	28	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	14	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.99	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	190	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.6	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	110	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	680	100	47	ug/L			1	6020A
7439-96-5	Manganese	600	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	190	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.63	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	300	20	15	ug/L			1	6020A
7440-70-2	Calcium	74000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	5300	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	35000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	10000	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW139B-013019 Lab Sample ID: 240-107535-3

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 13:56

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	58	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	43	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	210	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	15	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW139B-013019 Lab Sample ID: 240-107535-3

Lab Name: TestAmerica Nashville Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 13:56

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.17	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW139B-013019 Lab Sample ID: 240-107535-3

Lab Name: TestAmerica Pittsburgh Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 13:56

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW153A-013019 Lab Sample ID: 240-107535-2

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 11:00

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	400	25	12	mg/L			1	2340C-2011
	Alkalinity	2.6	5.0	2.6	mg/L	U		1	2320B-2011
	Total Dissolved Solids	570	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	370	5.0	1.7	mg/L			5	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW153A-013019 Lab Sample ID: 240-107535-2

Lab Name: TestAmerica Nashville Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 11:00

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.11	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW153A-013019 Lab Sample ID: 240-107535-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 11:00

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

APPENDIX C

SUPPORT DOCUMENTATION

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: LM MRC Block F

Report Number: 240-107535-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The 680 Polychlorinated Biphenyls analysis was performed at the TestAmerica Savannah laboratory. The 4500NO3-F Nitrate Nitrite as N analysis was performed at the TestAmerica Nashville laboratory. The 9050A Specific Conductance and the 2520-B Salinity analyses were performed at the TestAmerica Pittsburgh laboratory.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 1/31/2019 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TRIP BLANK-013019 (240-107535-1), MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/04/2019.

Sample MRC-MW139B-013019 (240-107535-3)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 366634 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TRIP BLANK-013019 (240-107535-1), MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following samples were received in hydrochloric preserved vials: TRIP BLANK-013019 (240-107535-1), MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample MRC-MW153A-013019 (240-107535-2) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The sample was prepared on 02/19/2019 and analyzed on 02/21/2019.

The internal standard response for the following sample(s) was outside of acceptance limits when compared to the area of the CCVIS(continuing calibration verification internal standard). The 680 method allows that the sample also be compared to the average internal standard area of the calibration (ICISAV). Due to limitations in the software, when the areas of the sample are out of control for

either the CCVIS or the ICISAV both are flagged. Although a * flag appears on the data, the sample is within the area range for the average internal standard area of the calibration (ICISAV).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 680-558728.

The SOP for the 680 Method allows that for soils the CCVIS has a limit of <30%D for each analyte and for liquids <20%D for each analyte . It also allows that the capping CCV for soils has the limit of <30% average %D with no analyte >60%D and for liquids <20% average D with no analyte >40%D. Due to software limitations for this method, the limits are set at <20%D. (CCV 680-559059/21)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/04/2019 and analyzed on 02/05/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 02/04/2019 and analyzed on 02/05/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 02/05/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 02/01/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 01/31/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for anions in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 01/31/2019.

Sample MRC-MW153A-013019 (240-107535-2)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for Salinity in accordance with SM 2520B. The samples were analyzed on 02/07/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 02/16/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Method Summary

Client: Tetra Tech, Inc.
Project/Site: LM MRC Block F

TestAmerica Job ID: 240-107535-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
680	Liquid-Liquid Extraction (Separatory Funnel)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: LM MRC Block F

TestAmerica Job ID: 240-107535-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107535-1	TRIP BLANK-013019	Water	01/30/19 00:00	01/31/19 10:15
240-107535-2	MRC-MW153A-013019	Water	01/30/19 11:00	01/31/19 10:15
240-107535-3	MRC-MW139B-013019	Water	01/30/19 13:56	01/31/19 10:15

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

2.4 | C2.4

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Walt Pyron	Lab PM: McFadden, John	Carrier Tracking No(s):	COC No: 240-56232-24222.1
Client Contact: ~~Mr. Stuart Cameron~~ Tony Aparnavage	Phone: 301 991-3914	E-Mail: john.mcfadden@testamericainc.com		Page: Page 1 of 1
Company: Tetra Tech, Inc.				Job #:
Address: 20251 Century Blvd Suite 200	Due Date Requested:			
City: Germantown	TAT Requested (days): standard			
State, Zip: MD, 20874				
Phone: 301-233-8230(Tel)	PO #: ~~4104370~~			
Email: ~~Stuart.Cameron@TetraTech.com~~	WO #: ~~112IC08784~~			
Project Name: ~~MSA Surface Water~~ Middle River Center	Project #: ~~24006132~~ 112IC08784			
Site: MRC Block E/F GW Sampling	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B (MOD) Project VOCs (8260C)	TAL metals (6020A/6010C)	Sulfate, nitrate, TDS (9056A)	Alkalinity (2320B)	Salinity (2520B)	Local method (353.2)	Local method (2340C)	PCBs (680)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A									
TRIP BLANK - 013019	1/30/19	—	G	Water			2	1	1	1	1	1	1	1		
MRC-MW153A-013019	↓	1100	↓	↓			3	1	1	1	1	1	1	2		
MRC-MW139B-013019	↓	1356	↓	↓			3	1	1	1	1	1	1	1		

240-107535 Chain of Custody

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Walt Pyron	1/30/19 1900	ATINC		1-31-19 1015	TAC
2						
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 08/04/2016

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 107535
Canton Facility

Client Tetra Tech Site Name _____ Cooler unpacked by:

Cooler Received on 1-31-19 Opened on 1-31-19

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 17 Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 2.4 °C Corrected Cooler Temp. 2.4 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: MS

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW153A-013019	240-107535-F-2	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW153A-013019	240-107535-G-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW153A-013019	240-107535-I-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW139B-013019	240-107535-F-3	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW139B-013019	240-107535-G-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW139B-013019	240-107535-I-3	Plastic 500ml - with Nitric Acid	<2	_____	_____

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TRIP BLANK-013019	240-107535-1	82	85	87	84
MRC-MW153A-013019	240-107535-2	81	84	85	81
MRC-MW139B-013019	240-107535-3	81	83	85	85
	MB 240-366634/6	86	84	87	86
	LCS 240-366634/4	91	85	90	91
MRC-MW139B-013019 MS	240-107535-3 MS	86	83	86	89
MRC-MW139B-013019 MSD	240-107535-3 MSD	89	85	89	90

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab File ID: UXC8676.D Lab Sample ID: MB 240-366634/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/04/2019 14:09

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-366634/4	UXC8672.D	02/04/2019 12:41
TRIP BLANK-013019	240-107535-1	UXC8685.D	02/04/2019 17:26
MRC-MW153A-013019	240-107535-2	UXC8686.D	02/04/2019 17:48
MRC-MW139B-013019	240-107535-3	UXC8687.D	02/04/2019 18:09
MRC-MW139B-013019 MS	240-107535-3 MS	UXC8688.D	02/04/2019 18:31
MRC-MW139B-013019 MSD	240-107535-3 MSD	UXC8689.D	02/04/2019 18:53

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-366634/6

Matrix: Water | Lab File ID: UXC8676.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 14:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-366634/6

Matrix: Water | Lab File ID: UXC8676.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 14:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-366634/6

Matrix: Water | Lab File ID: UXC8676.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 14:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	84		70-121
460-00-4	4-Bromofluorobenzene (Surr)	86		59-120
2037-26-5	Toluene-d8 (Surr)	87		70-123
1868-53-7	Dibromofluoromethane (Surr)	86		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8672.D

Lab ID: LCS 240-366634/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.73	97	80-124	
1,1,1-Trichloroethane	10.0	11.3	113	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.75	87	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	10.3	103	50-156	
1,1-Dichloroethane	10.0	10.7	107	75-133	
1,1-Dichloroethene	10.0	9.50	95	65-139	
1,1-Dichloropropene	10.0	10.2	102	78-126	
1,2,3-Trichlorobenzene	10.0	9.63	96	39-138	
1,2,3-Trichloropropane	10.0	8.89	89	66-139	
1,2,4-Trichlorobenzene	10.0	9.80	98	42-133	
1,2,4-Trimethylbenzene	10.0	9.80	98	74-120	
1,2-Dibromo-3-Chloropropane	10.0	6.67	67	46-132	
1,2-Dichlorobenzene	10.0	9.94	99	78-120	
1,2-Dichloroethane	10.0	10.0	100	71-135	
1,2-Dichloropropane	10.0	10.3	103	78-133	
1,3-Dichlorobenzene	10.0	9.71	97	78-120	
1,3-Dichloropropane	10.0	9.27	93	72-134	
1,4-Dichlorobenzene	10.0	9.62	96	78-120	
2,2-Dichloropropane	10.0	11.6	116	42-150	
2-Chloroethyl vinyl ether	10.0	7.90 J	79	55-137	
2-Chlorotoluene	10.0	9.83	98	78-123	
2-Hexanone	20.0	15.3	77	43-148	
Bromobenzene	10.0	9.69	97	74-129	
Bromochloromethane	10.0	10.5	105	74-130	
4-Chlorotoluene	10.0	9.60	96	77-125	
4-Isopropyltoluene	10.0	9.99	100	69-122	
Acetone	20.0	17.0	85	21-162	
Benzene	10.0	10.4	104	80-123	
Bromoform	10.0	6.20	62	49-141	
Bromomethane	10.0	9.40	94	41-175	
Carbon disulfide	10.0	9.20	92	60-138	
Carbon tetrachloride	10.0	9.89	99	63-140	
Chlorobenzene	10.0	9.95	99	80-121	
Chloroethane	10.0	9.30	93	33-173	
Chloroform	10.0	10.4	104	79-127	
Chloromethane	10.0	8.60	86	54-143	
cis-1,2-Dichloroethene	10.0	10.5	105	76-128	
cis-1,3-Dichloropropene	10.0	9.22	92	64-132	
Hexachlorobutadiene	10.0	9.27	93	38-136	
Dibromomethane	10.0	9.30	93	74-124	
Bromodichloromethane	10.0	9.10	91	77-125	
Dichlorodifluoromethane	10.0	8.26	83	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8672.D

Lab ID: LCS 240-366634/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.81	98	80-120	
1,2-Dibromoethane	10.0	8.92	89	77-123	
Naphthalene	10.0	8.42	84	28-141	
m-Xylene & p-Xylene	10.0	9.95	100	80-120	
n-Butylbenzene	10.0	9.45	95	57-126	
Isopropylbenzene	10.0	10.2	102	74-120	
N-Propylbenzene	10.0	9.89	99	77-123	
2-Butanone (MEK)	20.0	17.4	87	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.2	81	49-143	
sec-Butylbenzene	10.0	9.83	98	68-123	
Methyl tert-butyl ether	10.0	9.39	94	51-133	
Methylene Chloride	10.0	9.46	95	70-134	
o-Xylene	10.0	10.1	101	80-120	
Styrene	10.0	9.32	93	79-120	
tert-Butylbenzene	10.0	9.63	96	70-121	
Tetrachloroethene	10.0	10.3	103	74-130	
Toluene	10.0	10.2	102	78-129	
trans-1,2-Dichloroethene	10.0	10.8	108	78-133	
trans-1,3-Dichloropropene	10.0	8.00	80	55-128	
Trichloroethene	10.0	10.3	103	76-125	
Trichlorofluoromethane	10.0	10.3	103	51-164	
Vinyl acetate	10.0	9.36	94	45-151	
Vinyl chloride	10.0	10.2	102	58-143	
tert-Butyl alcohol	100	82.4	82	10-161	
Xylenes, Total	20.0	20.1	100	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8688.D

Lab ID: 240-107535-3 MS Client ID: MRC-MW139B-013019 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	200	2.8 U	175	88	67-123	
1,1,1-Trichloroethane	200	4.8 U	186	93	51-138	
1,1,2,2-Tetrachloroethane	200	2.6 U	169	85	60-137	
1,1,2-Trichlorotrifluoroethane	200	8.2 U	114	57	31-156	
1,1-Dichloroethane	200	3.4 U	204	102	63-136	
1,1-Dichloroethene	200	3.8 U	173	86	53-140	
1,1-Dichloropropene	200	2.8 U	183	91	62-127	
1,2,3-Trichlorobenzene	200	59	236	89	34-123	
1,2,3-Trichloropropane	200	4.8 U	173	86	61-143	
1,2,4-Trichlorobenzene	200	290	466	87	30-126	
1,2,4-Trimethylbenzene	200	1.4 U	180	90	62-120	
1,2-Dibromo-3-Chloropropane	200	18 U	106	53	38-124	
1,2-Dichlorobenzene	200	11 J	205	97	64-120	
1,2-Dichloroethane	200	4.2 U	199	100	65-135	
1,2-Dichloropropane	200	3.0 U	203	101	70-132	
1,3-Dichlorobenzene	200	65	254	95	62-120	
1,3-Dichloropropane	200	4.2 U	190	95	68-135	
1,4-Dichlorobenzene	200	42	229	93	63-120	
2,2-Dichloropropane	200	6.2 U	173	86	27-132	
2-Chloroethyl vinyl ether	200	5.2 U	11.0 J	6	10-120	F1
2-Chlorotoluene	200	3.0 U	185	92	64-123	
2-Hexanone	400	11 U	305	76	42-150	
Bromobenzene	200	2.4 U	193	97	66-127	
Bromochloromethane	200	2.8 U	207	103	73-120	
4-Chlorotoluene	200	1.8 U	182	91	63-126	
4-Isopropyltoluene	200	2.6 U	162	81	59-120	
Acetone	400	110 U	362	90	10-168	
Benzene	200	2.6 U	205	103	71-122	
Bromoform	200	15 U	106	53	44-129	
Bromomethane	200	8.4 U	144	72	19-187	
Carbon disulfide	200	5.6 U	133	66	43-144	
Carbon tetrachloride	200	5.2 U	154	77	41-143	
Chlorobenzene	200	68	262	97	70-123	
Chloroethane	200	17 U	162	81	11-189	
Chloroform	200	2.6 U	205	103	68-130	
Chloromethane	200	4.0 U	182	91	31-154	
cis-1,2-Dichloroethene	200	3.2 U	206	103	64-130	
cis-1,3-Dichloropropene	200	12 U	164	82	48-127	
Hexachlorobutadiene	200	17 U	123	61	32-128	
Dibromomethane	200	1.8 U	186	93	71-120	
Bromodichloromethane	200	3.4 U	166	83	64-125	
Dichlorodifluoromethane	200	7.0 U	133	66	28-136	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8688.D

Lab ID: 240-107535-3 MS Client ID: MRC-MW139B-013019 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethylbenzene	200	2.2 U	182	91	66-120	
1,2-Dibromoethane	200	2.4 U	174	87	71-123	
Naphthalene	200	6.4 U	152	76	31-142	
m-Xylene & p-Xylene	200	1.6 U	181	91	63-121	
n-Butylbenzene	200	2.8 U	147	73	51-120	
Isopropylbenzene	200	1.8 U	178	89	59-120	
N-Propylbenzene	200	3.0 U	168	84	61-123	
2-Butanone (MEK)	400	23 U	351	88	37-156	
4-Methyl-2-pentanone (MIBK)	400	8.4 U	309	77	44-143	
sec-Butylbenzene	200	2.6 U	155	78	60-120	
Methyl tert-butyl ether	200	1.4 U	168	84	41-136	
Methylene Chloride	200	52 U	167	84	61-130	
o-Xylene	200	1.8 U	193	97	69-120	
Styrene	200	2.0 U	183	92	68-120	
tert-Butylbenzene	200	2.8 U	163	82	61-120	
Tetrachloroethene	200	3.0 U	176	88	51-136	
Toluene	200	2.8 U	195	98	62-132	
trans-1,2-Dichloroethene	200	3.8 U	206	103	68-133	
trans-1,3-Dichloropropene	200	13 U	139	69	40-125	
Trichloroethene	200	10 J	203	96	55-131	
Trichlorofluoromethane	200	9.0 U	167	84	37-174	
Vinyl acetate	200	3.8 U	173	87	37-148	
Vinyl chloride	200	4.0 U	159	80	43-154	
tert-Butyl alcohol	2000	34 U	1180	59	70-130	F1
Xylenes, Total	400	3.0 U	374	94	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8689.D

Lab ID: 240-107535-3 MSD Client ID: MRC-MW139B-013019 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	200	178	89	2	13	67-123	
1,1,1-Trichloroethane	200	206	103	10	27	51-138	
1,1,2,2-Tetrachloroethane	200	175	87	3	31	60-137	
1,1,2-Trichlorotrifluoroethane	200	207	104	58	35	31-156	F2
1,1-Dichloroethane	200	209	104	2	23	63-136	
1,1-Dichloroethene	200	191	96	10	35	53-140	
1,1-Dichloropropene	200	197	99	8	20	62-127	
1,2,3-Trichlorobenzene	200	248	95	5	35	34-123	
1,2,3-Trichloropropane	200	177	88	2	22	61-143	
1,2,4-Trichlorobenzene	200	479	93	3	35	30-126	
1,2,4-Trimethylbenzene	200	183	91	1	27	62-120	
1,2-Dibromo-3-Chloropropane	200	119	59	11	35	38-124	
1,2-Dichlorobenzene	200	204	96	1	30	64-120	
1,2-Dichloroethane	200	208	104	4	24	65-135	
1,2-Dichloropropane	200	208	104	3	26	70-132	
1,3-Dichlorobenzene	200	249	92	2	31	62-120	
1,3-Dichloropropane	200	191	96	1	15	68-135	
1,4-Dichlorobenzene	200	225	92	1	28	63-120	
2,2-Dichloropropane	200	185	92	7	18	27-132	
2-Chloroethyl vinyl ether	200	9.57 J	5	14	35	10-120	F1
2-Chlorotoluene	200	187	93	1	20	64-123	
2-Hexanone	400	321	80	5	35	42-150	
Bromobenzene	200	190	95	2	19	66-127	
Bromochloromethane	200	210	105	2	15	73-120	
4-Chlorotoluene	200	182	91	0	20	63-126	
4-Isopropyltoluene	200	183	91	12	24	59-120	
Acetone	400	409	102	12	35	10-168	
Benzene	200	208	104	1	22	71-122	
Bromoform	200	103	52	3	28	44-129	
Bromomethane	200	182	91	23	35	19-187	
Carbon disulfide	200	156	78	16	33	43-144	
Carbon tetrachloride	200	184	92	17	30	41-143	
Chlorobenzene	200	262	97	0	23	70-123	
Chloroethane	200	183	91	12	35	11-189	
Chloroform	200	209	105	2	23	68-130	
Chloromethane	200	179	89	2	35	31-154	
cis-1,2-Dichloroethene	200	213	107	4	21	64-130	
cis-1,3-Dichloropropene	200	169	85	3	30	48-127	
Hexachlorobutadiene	200	167	83	31	35	32-128	
Dibromomethane	200	191	95	2	16	71-120	
Bromodichloromethane	200	174	87	4	27	64-125	
Dichlorodifluoromethane	200	166	83	22	35	28-136	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8689.D

Lab ID: 240-107535-3 MSD Client ID: MRC-MW139B-013019 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	200	190	95	5	24	66-120	
1,2-Dibromoethane	200	182	91	4	27	71-123	
Naphthalene	200	166	83	9	35	31-142	
m-Xylene & p-Xylene	200	186	93	3	25	63-121	
n-Butylbenzene	200	173	86	16	27	51-120	
Isopropylbenzene	200	191	96	7	31	59-120	
N-Propylbenzene	200	181	91	7	20	61-123	
2-Butanone (MEK)	400	366	92	4	35	37-156	
4-Methyl-2-pentanone (MIBK)	400	328	82	6	35	44-143	
sec-Butylbenzene	200	180	90	15	24	60-120	
Methyl tert-butyl ether	200	179	90	6	29	41-136	
Methylene Chloride	200	180	90	7	29	61-130	
o-Xylene	200	195	97	1	25	69-120	
Styrene	200	181	91	1	26	68-120	
tert-Butylbenzene	200	175	88	7	20	61-120	
Tetrachloroethene	200	199	99	12	23	51-136	
Toluene	200	197	98	1	23	62-132	
trans-1,2-Dichloroethene	200	212	106	3	24	68-133	
trans-1,3-Dichloropropene	200	140	70	1	27	40-125	
Trichloroethene	200	209	99	3	23	55-131	
Trichlorofluoromethane	200	206	103	21	35	37-174	
Vinyl acetate	200	187	94	8	18	37-148	
Vinyl chloride	200	192	96	19	29	43-154	
tert-Butyl alcohol	2000	1490	74	23	35	70-130	
Xylenes, Total	400	381	95	2	25	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	47729 2392918	112693	296202	593761	1222220	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	58046 2319242	119628	276149	585358	1207742	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	57558 2025909	104647	261470	574312	1027051	1.00 40.0	2.00	5.00	10.0	20.0
Butadiene	FB	Ave	71088 2665435	148568	361713	698736	1378009	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	47411 1506749	100403	198900	423055	791041	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	40558 1406432	82718	182320	372694	733356	1.00 40.0	2.00	5.00	10.0	20.0
Dichlorofluoromethane	FB	Ave	103682 3477509	201291	471934	910063	1834172	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	68568 3407867	157640	408598	855986	1703371	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	44605 1653914	87432	212667	419544	869536	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	32229 1148055	55282	144856	290454	603583	5.00 200	10.0	25.0	50.0	100
1,1-Dichloroethene	FB	Ave	57094 2182381	120279	277159	516876	1125076	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichlorotrifluoroethane	FB	Ave	42550 1880984	91700	228498	462285	967763	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Lin1	17181 332724	23252	50751	89168	190030	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	93588 3255913	156089	446819	909454	1760595	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	160687 5174431	283969	742305	1445567	2744114	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	27003 1418141	58477	154763	317161	716236	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	79740 3067156	150240	380996	723073	1550490	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	154915 2032773	198393	338417	580808	1097865	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	36240 1508945	82343	184510	328142	832907	10.0 400	20.0	50.0	100	200
Acrylonitrile	FB	Ave	175156 7643188	352291	868795	1699336	3768272	10.0 400	20.0	50.0	100	200
Methyl tert-butyl ether	FB	Ave	139955 6078083	285516	714788	1439491	3075308	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,2-Dichloroethene	FB	Ave	54736 2072831	103155	251570	500088	1069131	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	10725 455555	22194	51427	104918	230317	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	81126 3448011	166930	409730	832192	1773410	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	88027 4206187	177639	476538	992089	2098831	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	57035 2264494	116480	278759	565374	1189038	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	11684 445323	21907	58586	120845	241048	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone (MEK)	FB	Ave	12505 511818	24387	59681	120010	256717	2.00 80.0	4.00	10.0	20.0	40.0
Bromochloromethane	FB	Ave	28543 1150919	56716	140018	275468	595090	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	31985 1272086	62314	150812	279158	634219	2.00 80.0	4.00	10.0	20.0	40.0
Chloroform	FB	Ave	83929 3460990	169874	422474	847597	1793716	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	63803 2533663	130349	334136	689229	1356966	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	68915 3105972	144320	368473	742256	1592895	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	66437 2816568	140972	343617	688186	1474449	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	56945 2706723	124489	318843	648774	1385341	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	31904 1496664	73133	177736	322275	821992	25.0 1000	50.0	125	250	500
Benzene	FB	Ave	207184 8390558	412777	1016161	2024145	4352726	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	68031 2877185	142414	350758	707702	1492475	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	8801 415529	19095	48491	101813	218160	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	59121 2403531	120531	296310	593061	1274454	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	60130 2723193	127322	326169	654672	1428283	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	43707 1981074	97800	239856	483376	1020861	1.00 40.0	2.00	5.00	10.0	20.0
Dibromomethane	FB	Ave	31111 1256838	65366	157375	317664	664429	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Ave	5185 326819	14227	39232	71764	183906	20.0 800	40.0	100	200	400
Bromodichloromethane	FB	Ave	57382 2704273	121869	306036	637533	1409597	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	61442 2796269	123378	319533	640886	1383920	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Ave	62099 3274371	138202	356486	746312	1652896	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	98299 4186633	187250	495239	970866	2114735	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBNZ d5	Ave	209687 9034071	428381	1080197	2172974	4691174	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	57707 3169409	125256	333930	706531	1578892	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBNZ d5	Ave	61421 2869285	129112	316654	647349	1421429	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBNZ d5	Ave	41853 1840913	87521	218933	437245	940456	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBNZ d5	Ave	44889 1992562	95990	241473	482895	1049416	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBNZ d5	Ave	72217 3294456	153833	378264	779324	1663194	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBNZ d5	Ave	58616 2937075	135481	337296	666112	1487023	2.00 80.0	4.00	10.0	20.0	40.0
Chlorodibromomethane	CBNZ d5	Ave	36977 2200067	82891	222991	469828	1084488	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBNZ d5	Ave	45295 1979685	91132	237763	469490	999728	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBNZ d5	Ave	138107 6035718	286159	714138	1441533	3072375	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	46702 2220799	95060	253355	522591	1113186	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBNZ d5	Ave	73699 3208633	146696	374569	758362	1624425	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBNZ d5	Ave	168049 7830315	351787	872988	1818169	3890600	1.00 40.0	2.00	5.00	10.0	20.0
o-Xylene	CBNZ d5	Ave	88147 3825283	176986	449671	918350	1968397	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBNZ d5	Ave	137740 6714209	289260	754758	1550959	3394736	1.00 40.0	2.00	5.00	10.0	20.0
Bromoform	CBNZ d5	Lin1	19867 1639155	51580	138461	306750	770158	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBNZ d5	Ave	198841 9246149	416807	1070139	2200366	4695119	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	54865 2441270	112833	283791	577712	1238040	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCBd 4	Ave	63640 2849353	131876	330598	678570	1450127	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCBd 4	Ave	18846 848462	40526	99350	201010	423192	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	3277 574750	16039	23872	66363	276245	1.00 40.0	2.00	5.00	10.0	20.0
N-Propylbenzene	DCBd 4	Ave	54874 2529942	117423	290505	601438	1274023	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCBd 4	Ave	53702 2322347	107735	275264	555062	1188057	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	160683 7300680	332591	840604	1766210	3784392	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCBd 4	Ave	170473 7526400	356628	881245	1798133	3844885	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCBd 4	Ave	141080 6973779	300630	749194	1551899	3285832	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	169136 7660047	359918	876431	1848645	3917785	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCBd 4	Ave	173094 7876504	373619	937713	1935865	4155710	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	113176 4738373	229119	572540	1168047	2462678	1.00 40.0	2.00	5.00	10.0	20.0
4-Isopropyltoluene	DCBd 4	Ave	154318 7046098	334169	830781	1751242	3739399	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCBd 4	Ave	119243 4936571	241629	582208	1199185	2527274	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
n-Butylbenzene	DCBd 4	Ave	127428 5435677	263153	659506	1384405	2918965	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCBd 4	Ave	109056 4571601	224899	556492	1159176	2381785	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	10572 585195	24334	65389	138143	306515	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	73453 2553990	145803	356465	739836	1510157	1.00 40.0	2.00	5.00	10.0	20.0
Hexachlorobutadiene	DCBd 4	Ave	41867 1091039	78276	175613	359850	696597	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCBd 4	Ave	172653 6820199	348942	926474	1891386	3879317	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	65430 2286670	131338	324635	663704	1364016	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	41840 1806247	80448	225163	447792	947952	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	55383 2257190	106482	288691	573781	1190875	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBNZ d5	Ave	174193 7359833	333303	912990	1816996	3883966	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	60446 2700470	120695	328418	649263	1374232	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Acetone	5.5						50					
Methylene Chloride	5.1						50					
Bromoform	19.5						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Ave	43776 1719436	78140	216790	375778	846508	10.0 400	20.0	50.0	100	200
Diisopropyl ether	FB	Ave	43843 1750827	82274	218424	423417	889067	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloro-1,3-butadiene	FB	Ave	78005 3085189	151016	379041	729996	1534644	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl tert-butyl ether	FB	Ave	140382 5753247	273366	703226	1363608	2849689	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl acetate	FB	Ave	90776 3822356	173055	465746	871063	1885113	2.00 80.0	4.00	10.0	20.0	40.0
Propionitrile	FB	Ave	60838 2683433	120712	346296	618722	1307620	10.0 400	20.0	50.0	100	200
Methacrylonitrile	FB	Ave	299007 13192364	589937	1557675	3048167	6587251	10.0 400	20.0	50.0	100	200
Tert-amyl methyl ether	FB	Ave	139226 5803487	265089	690261	1376169	2893429	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Ave	27517 1141061	53519	142999	252385	538091	25.0 1000	50.0	125	250	500
Ethyl acrylate	FB	Ave	55889 2595809	111797	311313	570379	1269397	1.00 40.0	2.00	5.00	10.0	20.0
Methyl methacrylate	FB	Ave	82902 3746376	164974	443947	839432	1854426	2.00 80.0	4.00	10.0	20.0	40.0
2-Nitropropane	FB	Ave	24091 1187179	51098	135714	254301	578091	2.00 80.0	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Ave	62560 3081411	130855	371884	688240	1496211	1.00 40.0	2.00	5.00	10.0	20.0
1-Chlorohexane	CBNZ d5	Ave	56623 2299838	112915	287030	522245	1142204	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexanone	DCBd 4	Lin1	18061 496922	26838	72655	115834	240064	10.0 400	20.0	50.0	100	200
Pentachloroethane	CBNZ d5	Ave	49671 2629484	105733	282130	577976	1287207	2.00 80.0	4.00	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCBd 4	Ave	159891 7509792	343441	887789	1750222	3743187	1.00 40.0	2.00	5.00	10.0	20.0
Benzyl chloride	DCBd 4	Ave	18125 1117019	36545	113409	234360	534799	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	70436 2856330	145613	362674	730581	1512196	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCBd 4	Ave	146578 6396329	332448	834898	1722729	3597249	2.00 80.0	4.00	10.0	20.0	40.0
1-Chloro-1-fluoroethane TIC	FB	None	38810 1466901	1184	184959	389588	796152	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
None = No Calib Curve

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Cyclohexanone	4.9						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab File ID: BFB0204.D BFB Injection Date: 02/04/2019

Instrument ID: A3UX15 BFB Injection Time: 11:27

Analysis Batch No.: 366634

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.3	
75	30.0 - 60.0 % of mass 95	50.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	100.7	
175	5.0 - 9.0 % of mass 174	7.2	(7.2) 1
176	95.0 - 101.0 % of mass 174	100.0	(99.3) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-366634/2	UXC8671.D	02/04/2019	12:19
	LCS 240-366634/4	UXC8672.D	02/04/2019	12:41
	CCV 240-366634/3	UXC8673.D	02/04/2019	13:03
	MB 240-366634/6	UXC8676.D	02/04/2019	14:09
TRIP BLANK-013019	240-107535-1	UXC8685.D	02/04/2019	17:26
MRC-MW153A-013019	240-107535-2	UXC8686.D	02/04/2019	17:48
MRC-MW139B-013019	240-107535-3	UXC8687.D	02/04/2019	18:09
MRC-MW139B-013019 MS	240-107535-3 MS	UXC8688.D	02/04/2019	18:31
MRC-MW139B-013019 MSD	240-107535-3 MSD	UXC8689.D	02/04/2019	18:53

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: CCVIS 240-366634/2 Calibration Date: 02/04/2019 12:19

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8671.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3907	0.1000	0.0127	0.0100	27.2*	20.0
Chloromethane	Ave	0.3135	0.3250	0.1000	0.0104	0.0100	3.6	20.0
Vinyl chloride	Ave	0.2885	0.3565	0.1000	0.0124	0.0100	23.6*	20.0
Butadiene	Ave	0.3794	0.3943		0.0104	0.0100	3.9	20.0
Bromomethane	Ave	0.2308	0.2561	0.0500	0.0111	0.0100	11.0	20.0
Chloroethane	Ave	0.2041	0.2169	0.0500	0.0106	0.0100	6.3	20.0
Dichlorofluoromethane	Ave	0.5102	0.5039		0.00988	0.0100	-1.2	20.0
Trichlorofluoromethane	Ave	0.4337	0.5121	0.1000	0.0118	0.0100	18.1	20.0
Ethyl ether	Ave	0.2310	0.2237		0.00969	0.0100	-3.1	20.0
Acrolein	Ave	0.0317	0.0429		0.0677	0.0500	35.3	50.0
1,1-Dichloroethene	Ave	0.3005	0.2911	0.1000	0.00969	0.0100	-3.1	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2740	0.0500	0.0111	0.0100	11.0	20.0
Acetone	Lin1		0.0245	0.0100	0.0203	0.0200	1.4	50.0
Iodomethane	Ave	0.4675	0.5536		0.0118	0.0100	18.4	20.0
Carbon disulfide	Ave	0.7741	0.7469	0.1000	0.00965	0.0100	-3.5	20.0
3-Chloro-1-propene	Ave	0.1698	0.1842		0.0108	0.0100	8.5	20.0
Methyl acetate	Ave	0.2050	0.1830	0.1000	0.0178	0.0200	-10.8	20.0
Methylene Chloride	Lin1		0.3098	0.1000	0.0100	0.0100	0.0	50.0
tert-Butyl alcohol	Ave	0.0203	0.0201		0.0991	0.100	-0.9	50.0
Acrylonitrile	Ave	0.0962	0.0925		0.0961	0.100	-3.9	20.0
Methyl tert-butyl ether	Ave	0.7834	0.7688	0.1000	0.00981	0.0100	-1.9	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.3040	0.1000	0.0109	0.0100	8.7	20.0
Hexane	Ave	0.0586	0.0566		0.00965	0.0100	-3.5	20.0
1,1-Dichloroethane	Ave	0.4517	0.4973	0.2000	0.0110	0.0100	10.1	20.0
Vinyl acetate	Ave	0.5198	0.4430		0.00852	0.0100	-14.8	50.0
2,2-Dichloropropane	Ave	0.0624	0.0728		0.0117	0.0100	16.8	20.0
2-Butanone (MEK)	Ave	0.0333	0.0268	0.0100	0.0161	0.0200	-19.3	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3329	0.1000	0.0108	0.0100	8.1	20.0
Bromochloromethane	Ave	0.1531	0.1625		0.0106	0.0100	6.1	20.0
Tetrahydrofuran	Ave	0.0828	0.0696		0.0168	0.0200	-15.9	20.0
Chloroform	Ave	0.4606	0.4866	0.2000	0.0106	0.0100	5.6	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.4129	0.1000	0.0116	0.0100	16.4	20.0
Cyclohexane	Ave	0.3993	0.4400	0.1000	0.0110	0.0100	10.2	20.0
1,1-Dichloropropene	Ave	0.3748	0.3867		0.0103	0.0100	3.2	20.0
Carbon tetrachloride	Ave	0.3441	0.3647	0.1000	0.0106	0.0100	6.0	20.0
Isobutyl alcohol	Ave	0.0077	0.0073		0.237	0.250	-5.1	20.0
Benzene	Ave	1.116	1.169	0.5000	0.0105	0.0100	4.7	20.0
1,2-Dichloroethane	Ave	0.3820	0.3816	0.1000	0.00999	0.0100	-0.1	20.0
n-Heptane	Ave	0.0532	0.0478		0.00899	0.0100	-10.1	20.0
Trichloroethene	Ave	0.3240	0.3359	0.1500	0.0104	0.0100	3.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: CCVIS 240-366634/2 Calibration Date: 02/04/2019 12:19

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8671.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3811	0.1000	0.0108	0.0100	8.1	20.0
1,2-Dichloropropane	Ave	0.2590	0.2530	0.1000	0.00977	0.0100	-2.3	20.0
1,4-Dioxane	Ave	0.0020	0.0020		0.197	0.200	-1.4	50.0
Dibromomethane	Ave	0.1717	0.1615		0.00941	0.0100	-5.9	20.0
Bromodichloromethane	Ave	0.3410	0.3193	0.1500	0.00937	0.0100	-6.3	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1255		0.0144	0.0200	-28.1*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3463	0.1500	0.00878	0.0100	-12.2	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2053	0.0500	0.0153	0.0200	-23.3*	20.0
Toluene	Ave	1.476	1.487	0.4000	0.0101	0.0100	0.7	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3731	0.1000	0.00803	0.0100	-19.7	20.0
Ethyl methacrylate	Ave	0.4442	0.3371		0.00759	0.0100	-24.1*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2696	0.1000	0.00904	0.0100	-9.6	20.0
Tetrachloroethene	Ave	0.3268	0.3287	0.1500	0.0101	0.0100	0.6	20.0
1,3-Dichloropropane	Ave	0.5243	0.4694		0.00895	0.0100	-10.5	20.0
2-Hexanone	Ave	0.2283	0.1666	0.0500	0.0146	0.0200	-27.0*	20.0
Chlorodibromomethane	Ave	0.3116	0.2702		0.00867	0.0100	-13.3	20.0
1,2-Dibromoethane	Ave	0.3191	0.2679		0.00840	0.0100	-16.0	20.0
Chlorobenzene	Ave	0.9777	0.9400	0.3000	0.00961	0.0100	-3.9	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3514		0.0102	0.0100	1.8	20.0
Ethylbenzene	Ave	0.5145	0.4983		0.00969	0.0100	-3.1	20.0
m-Xylene & p-Xylene	Ave	1.221	1.161		0.00951	0.0100	-4.9	20.0
o-Xylene	Ave	0.6189	0.6373		0.0103	0.0100	3.0	20.0
Styrene	Ave	1.036	0.9786	0.3000	0.00945	0.0100	-5.5	20.0
Bromoform	Lin1		0.1619	0.1000	0.00700	0.0100	-30.0*	20.0
Isopropylbenzene	Ave	1.463	1.518	0.1000	0.0104	0.0100	3.7	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5850	0.3000	0.00826	0.0100	-17.4	20.0
Bromobenzene	Ave	0.8274	0.7552		0.00913	0.0100	-8.7	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2008		0.00813	0.0100	-18.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0717		0.00708	0.0100	-29.2*	20.0
N-Propylbenzene	Ave	0.7286	0.6763		0.00928	0.0100	-7.2	20.0
2-Chlorotoluene	Ave	0.6821	0.6487		0.00951	0.0100	-4.9	20.0
1,3,5-Trimethylbenzene	Ave	2.119	2.074		0.00979	0.0100	-2.1	20.0
4-Chlorotoluene	Ave	2.205	1.983		0.00899	0.0100	-10.1	20.0
tert-Butylbenzene	Ave	1.897	1.794		0.00946	0.0100	-5.4	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.179		0.00978	0.0100	-2.2	20.0
sec-Butylbenzene	Ave	2.327	2.245		0.00965	0.0100	-3.5	20.0
1,3-Dichlorobenzene	Ave	1.425	1.305	0.6000	0.00916	0.0100	-8.4	20.0
4-Isopropyltoluene	Ave	2.083	2.037		0.00978	0.0100	-2.2	20.0
1,4-Dichlorobenzene	Ave	1.477	1.364	0.5000	0.00923	0.0100	-7.7	20.0
n-Butylbenzene	Ave	1.649	1.539		0.00934	0.0100	-6.6	20.0
1,2-Dichlorobenzene	Ave	1.387	1.365	0.4000	0.00984	0.0100	-1.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: CCVIS 240-366634/2 Calibration Date: 02/04/2019 12:19

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8671.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1171	0.0500	0.00727	0.0100	-27.3	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8854	0.2000	0.0101	0.0100	0.8	50.0
Hexachlorobutadiene	Ave	0.4386	0.4022		0.00917	0.0100	-8.3	20.0
Naphthalene	Ave	2.209	1.984		0.00898	0.0100	-10.2	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7939		0.0100	0.0100	0.5	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2111		0.00711	0.00797	-10.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2501		0.00655	0.00797	-17.8	20.0
Toluene-d8 (Surr)	Ave	1.214	1.028		0.00675	0.00797	-15.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3675		0.00675	0.00797	-15.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: CCV 240-366634/3 Calibration Date: 02/04/2019 13:03

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8673.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0245		0.106	0.100	6.1	20.0
Diisopropyl ether	Ave	0.2405	0.2362		0.00982	0.0100	-1.8	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3955		0.00934	0.0100	-6.6	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6875		0.00882	0.0100	-11.8	20.0
Ethyl acetate	Ave	0.2538	0.2015		0.0159	0.0200	-20.6	50.0
Propionitrile	Ave	0.0357	0.0315		0.0883	0.100	-11.7	20.0
Methacrylonitrile	Ave	0.1733	0.1439		0.0830	0.100	-17.0	20.0
Tert-amyl methyl ether	Ave	0.7765	0.6251		0.00805	0.0100	-19.5	20.0
n-Butanol	Ave	0.0061	0.0042		0.172	0.250	-31.1*	20.0
Ethyl acrylate	Ave	0.3330	0.2402		0.00721	0.0100	-27.9*	20.0
Methyl methacrylate	Ave	0.2430	0.1867		0.0154	0.0200	-23.2*	20.0
2-Nitropropane	Ave	0.0745	0.0359		0.00965	0.0200	-51.8*	20.0
n-Butyl acetate	Ave	0.3918	0.2846		0.00726	0.0100	-27.4*	20.0
1-Chlorohexane	Ave	0.3968	0.3232		0.00815	0.0100	-18.5	20.0
Cyclohexanone	Lin1		0.0117		0.0711	0.100	-28.9*	20.0
Pentachloroethane	Ave	0.2034	0.1698		0.0167	0.0200	-16.5	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.099		0.00914	0.0100	-8.6	20.0
Benzyl chloride	Ave	0.2963	0.1590		0.00537	0.0100	-46.3*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8587		0.00907	0.0100	-9.3	20.0
2-Methylnaphthalene	Ave	1.076	0.7167		0.0133	0.0200	-33.4*	20.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-366634/2		1752505	5.20	1341216	7.88	787926	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Sample No.: CCVIS 240-366634/2 Date Analyzed: 02/04/2019 12:19

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8671.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1752505	5.20	1341216	7.88	787926	10.12
UPPER LIMIT		3505010	5.70	2682432	8.38	1575852	10.62
LOWER LIMIT		876253	4.70	670608	7.38	393963	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-366634/4		1875200	5.20	1491517	7.88	841185	10.12
CCV 240-366634/3		1891949	5.20	1490411	7.88	820426	10.12
MB 240-366634/6		1756677	5.20	1383207	7.88	768470	10.12
240-107535-1	TRIP BLANK-013019	1753486	5.20	1380243	7.88	750816	10.12
240-107535-2	MRC-MW153A-013019	1742838	5.20	1372508	7.88	762545	10.12
240-107535-3	MRC-MW139B-013019	1725869	5.20	1373896	7.88	770315	10.12
240-107535-3 MS	MRC-MW139B-013019 MS	1778117	5.20	1441321	7.88	811607	10.12
240-107535-3 MSD	MRC-MW139B-013019 MSD	1766558	5.20	1442822	7.88	829966	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

SAMPLE IDENTIFICATION	MRC-MW153A-013019	
COMPOUND	Trichloroethene	
COMPOUND AREA	21550	
INTERNAL STANDARD AMOUNT (ug)	10	
DILUTION FACTOR	1	
INTERNAL STANDARD AREA	1742838	
AVERAGE RRF	0.324	
21550 x 10 / 1742838 x 0.324	0.3816	ug/L
0.381632404612548 x 1	0.38	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW153A-013019 | Lab Sample ID: 240-107535-2

Matrix: Water | Lab File ID: UXC8686.D

Analysis Method: 8260C | Date Collected: 01/30/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW153A-013019 | Lab Sample ID: 240-107535-2

Matrix: Water | Lab File ID: UXC8686.D

Analysis Method: 8260C | Date Collected: 01/30/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.38	J ✓	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX15\20190204-84209.b\UXC8686.D
Lims ID: 240-107535-B-2
Client ID: MRC-MW153A-013019
Sample Type: Client
Inject. Date: 04-Feb-2019 17:48:30 ALS Bottle#: 16 Worklist Smp#: 44
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0084209-044
Misc. Info.: C90204A,8260LLUX15,,43582
Operator ID: Instrument ID: A3UX15

Method: \\chromna\Canton\ChromData\A3UX15\20190204-84209.b\8260_15.m
Limit Group: MSV 8260C ICAL
Last Update: 05-Feb-2019 08:08:15 Calib Date: 21-Jan-2019 19:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX15\20190121-83824.b\UXC8431.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: evansle Date: 05-Feb-2019 08:03:48

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.196	5.196	0.000	99	1742838	10.0	
*	2 Chlorobenzene-d5	117	7.876	7.876	0.000	84	1372508	10.0	
*	3 1,4-Dichlorobenzene-d4	152	10.117	10.117	0.000	93	762545	10.0	
$	4 Dibromofluoromethane (Surr	113	4.638	4.639	-0.001	95	265479	6.44	
$	5 1,2-Dichloroethane-d4 (Sur	65	4.923	4.923	0.000	100	353297	6.66	
$	6 Toluene-d8 (Surr)	98	6.560	6.560	0.000	93	1128761	6.78	
$	7 4-Bromofluorobenzene (Surr	95	8.991	8.991	0.000	96	385240	6.47	
	9 Dichlorodifluoromethane	85		1.532				ND	
	10 Chloromethane	50		1.686				ND	
	11 Vinyl chloride	62		1.781				ND	
	13 Bromomethane	94		2.054				ND	
	14 Chloroethane	64		2.137				ND	
	16 Trichlorofluoromethane	101		2.350				ND	
	19 1,1-Dichloroethene	96		2.777				ND	
	20 1,1,2-Trichloro-1,2,2-trif	151		2.789				ND	
	22 Acetone	58	2.824	2.824	0.000	98	13345	1.15	
	24 Carbon disulfide	76	2.966	2.979	-0.012	97	15703	0.1164	
	28 Methylene Chloride	84		3.180				ND	
	29 2-Methyl-2-propanol	59	3.251	3.263	-0.012	90	5140	1.45	
	30 trans-1,2-Dichloroethene	96		3.405				ND	
	31 Methyl tert-butyl ether	73		3.405				ND	
	34 1,1-Dichloroethane	63		3.761				ND	
	36 Vinyl acetate	43		3.785				ND	
	35 Isopropyl ether	87		3.797				ND	
	38 Tert-butyl ethyl ether	59		4.093				ND	
	39 cis-1,2-Dichloroethene	96	4.247	4.247	0.000	63	7449	0.1388	
	41 2-Butanone (MEK)	72		4.247				ND	
	40 2,2-Dichloropropane	97		4.247				ND	
	45 Chlorobromomethane	128		4.449				ND	
	47 Chloroform	83		4.496				ND	
	48 1,1,1-Trichloroethane	97		4.662				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 1,1-Dichloropropene	75		4.793				ND	
50 Carbon tetrachloride	117		4.805				ND	
53 Benzene	78		4.971				ND	
54 1,2-Dichloroethane	62		4.983				ND	
55 Tert-amyl methyl ether	73		5.042				ND	
58 Trichloroethene	130	5.516	5.504	0.012	94	21550	0.3817	√
61 1,2-Dichloropropane	63		5.706				ND	
63 Dibromomethane	93		5.813				ND	
65 Dichlorobromomethane	83		5.931				ND	
67 2-Chloroethyl vinyl ether	63		6.180				ND	
68 cis-1,3-Dichloropropene	75		6.323				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.453				ND	
70 Toluene	91		6.619				ND	
71 trans-1,3-Dichloropropene	75		6.809				ND	
74 Tetrachloroethene	164		7.117				ND	
75 1,3-Dichloropropane	76		7.129				ND	
76 2-Hexanone	43		7.188				ND	
79 Chlorodibromomethane	129		7.342				ND	
80 Ethylene Dibromide	107		7.461				ND	
82 Chlorobenzene	112		7.900				ND	
83 1,1,1,2-Tetrachloroethane	131		7.971				ND	
84 Ethylbenzene	106		7.995				ND	
85 m-Xylene & p-Xylene	91		8.101				ND	
86 o-Xylene	106		8.481				ND	
87 Styrene	104		8.493				ND	
88 Bromoform	173		8.682				ND	
89 Isopropylbenzene	105		8.825				ND	
93 1,1,2,2-Tetrachloroethane	83		9.121				ND	
92 Bromobenzene	156		9.145				ND	
94 1,2,3-Trichloropropane	110		9.169				ND	
96 N-Propylbenzene	120		9.228				ND	
97 2-Chlorotoluene	126		9.323				ND	
99 4-Chlorotoluene	91		9.418				ND	
101 tert-Butylbenzene	119		9.714				ND	
103 1,2,4-Trimethylbenzene	105		9.762				ND	
105 sec-Butylbenzene	105		9.928				ND	
106 1,3-Dichlorobenzene	146		10.046				ND	
107 4-Isopropyltoluene	119		10.070				ND	
108 1,4-Dichlorobenzene	146		10.141				ND	
109 1,2,3-Trimethylbenzene	105		10.177				ND	
111 n-Butylbenzene	91		10.473				ND	
112 1,2-Dichlorobenzene	146		10.509				ND	
113 1,2-Dibromo-3-Chloropropan	157		11.291				ND	
115 1,2,4-Trichlorobenzene	180		12.110				ND	
116 Hexachlorobutadiene	225		12.276				ND	
117 Naphthalene	128		12.359				ND	
118 1,2,3-Trichlorobenzene	180		12.608				ND	
S 129 Xylenes, Total	106		16.530				ND	

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

Method 680

Polychlorinated Biphenyls (PCBs) (GC/MS) by Method 680

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13CDCB #
MRC-MW153A-013019	240-107535-2	25
	MB 680-558728/12-A	71
	LCS 680-558728/13-A	75
	LCSD 680-558728/14-A	68

	QC LIMITS
13CDCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Lab File ID: xb2031.D Lab Sample ID: MB 680-558728/12-A

Matrix: Water Date Extracted: 02/19/2019 13:42

Instrument ID: CMSX Date Analyzed: 02/21/2019 07:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-558728/13-A	xb2032.D	02/21/2019 07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019 08:10
MRC-MW153A-013019	240-107535-2	xb2038.D	02/21/2019 10:32

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107535-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-558728/12-A

Matrix: Water | Lab File ID: xb2031.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2032.D

Lab ID: LCS 680-558728/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.67	78	62-130	
Hexachlorobiphenyl	4.00	3.37	84	62-130	
Nonachlorobiphenyl	10.0	14.6	146	70-195	
Octachlorobiphenyl	6.00	5.09	85	64-130	
Monochlorobiphenyl	2.00	1.08	54	42-130	
DCB Decachlorobiphenyl	10.0	7.81	78	59-130	
Dichlorobiphenyl	2.00	1.32	66	49-130	
Pentachlorobiphenyl	4.00	3.47	87	63-130	
Tetrachlorobiphenyl	4.00	2.93	73	54-130	
Trichlorobiphenyl	2.00	1.47	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2033.D

Lab ID: LCSD 680-558728/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.45	74	5	40	62-130	
Hexachlorobiphenyl	4.00	3.21	80	5	40	62-130	
Nonachlorobiphenyl	10.0	13.2	132	10	40	70-195	
Octachlorobiphenyl	6.00	4.75	79	7	40	64-130	
Monochlorobiphenyl	2.00	1.36	68	23	40	42-130	
DCB Decachlorobiphenyl	10.0	7.14	71	9	40	59-130	
Dichlorobiphenyl	2.00	1.47	73	11	40	49-130	
Pentachlorobiphenyl	4.00	3.33	83	4	40	63-130	
Tetrachlorobiphenyl	4.00	3.04	76	4	40	54-130	
Trichlorobiphenyl	2.00	1.52	76	3	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Lab File ID: xa0805.D DFTPP Injection Date: 01/08/2019

Instrument ID: CMSX DFTPP Injection Time: 14:10

Analysis Batch No.: 554469

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.9
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	25.1
365	Greater than 1% of mass 198	3.8
441	Present but less than mass 443	13.7 (87.5) 2
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	15.6 (18.3) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-554469/3	xa0807.D	01/08/2019	15:11
	IC 680-554469/5	xa0809.D	01/08/2019	16:08
	IC 680-554469/6	xa0810.D	01/08/2019	16:37
	IC 680-554469/27	xa0850.D	01/08/2019	17:05
	IC 680-554469/7	xa0811.D	01/08/2019	17:34
	IC 680-554469/8	xa0812.D	01/08/2019	18:02
	ICV 680-554469/9	xa0813.D	01/08/2019	18:31

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107535-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 240-107535-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Monochlorobiphenyl	CRY	Ave	8242 813481	15382	70279	157619	299489	0.0500 5.00	0.100	0.500	1.00	2.00
Dichlorobiphenyl	CRY	Ave	5634 599778	10649	48537	112170	214973	0.0500 5.00	0.100	0.500	1.00	2.00
Trichlorobiphenyl	CRY	Ave	3987 441580	7502	35031	81047	154555	0.0500 5.00	0.100	0.500	1.00	2.00
Tetrachlorobiphenyl	CRY	Ave	5574 615833	10606	50081	113059	216849	0.100 10.0	0.200	1.00	2.00	4.00
Pentachlorobiphenyl	CRY	Ave	4430 525344	8255	40050	94602	179296	0.100 10.0	0.200	1.00	2.00	4.00
Hexachlorobiphenyl	CRY	Ave	4409 515192	8063	39570	95892	180616	0.100 10.0	0.200	1.00	2.00	4.00
Heptachlorobiphenyl	CRY	Ave	8087 711849	13173	54642	129695	247124	0.150 15.0	0.300	1.50	3.00	6.00
Octachlorobiphenyl	CRY	Ave	5679 662783	10462	52287	120191	235791	0.150 15.0	0.300	1.50	3.00	6.00
Nonachlorobiphenyl	CRY	Ave				55196					5.00	
DCB Decachlorobiphenyl	CRY	Ave	1830 243534	3384	17538	42007	81970	0.250 25.0	0.500	2.50	5.00	10.0
Decachlorobiphenyl-13C12	CRY	Ave	2369 234805	4106	24902	55313	103476	0.250 20.0	0.500	2.50	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICV 680-554469/9 Calibration Date: 01/08/2019 18:31

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xa0813.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8517		1.03	1.00	2.6	20.0
Dichlorobiphenyl	Ave	0.5847	0.5801		0.992	1.00	-0.8	20.0
Trichlorobiphenyl	Ave	0.4198	0.4573		1.09	1.00	8.9	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.3118		2.11	2.00	5.6	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2531		2.11	2.00	5.5	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2508		2.10	2.00	5.2	20.0
Heptachlorobiphenyl	Ave	0.2376	0.2274		2.87	3.00	-4.3	20.0
Octachlorobiphenyl	Ave	0.2054	0.2183		3.19	3.00	6.3	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0419		5.00	5.00	-0.0	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0577		5.35	5.00	7.1	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Lab File ID: xb2028.D DFTPP Injection Date: 02/21/2019

Instrument ID: CMSX DFTPP Injection Time: 05:43

Analysis Batch No.: 559059

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	59.5
197	Less than 1 % of mass 198	0.9
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	28.0
365	Greater than 1% of mass 198	3.5
441	Present but less than mass 443	15.1 (86.3) 2
442	Greater than 40% of mass 198	96.2
443	17 - 23% of mass 442	17.5 (18.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559059/2	xb2029.D	02/21/2019	06:14
	CCVIS 680-559059/3	xb2030.D	02/21/2019	06:44
	MB 680-558728/12-A	xb2031.D	02/21/2019	07:13
	LCS 680-558728/13-A	xb2032.D	02/21/2019	07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019	08:10
MRC-MW153A-013019	240-107535-2	xb2038.D	02/21/2019	10:32
	CCV 680-559059/21	xb2051.D	02/21/2019	16:43

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Lab Sample ID: CCVIS 680-559059/3 Calibration Date: 02/21/2019 06:44

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2030.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.7268		0.875	1.00	-12.5	20.0
Dichlorobiphenyl	Ave	0.5847	0.5079		0.869	1.00	-13.1	20.0
Trichlorobiphenyl	Ave	0.4198	0.3597		0.857	1.00	-14.3	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2563		1.74	2.00	-13.2	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2131		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2136		1.79	2.00	-10.4	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1920		2.42	3.00	-19.2	20.0
Octachlorobiphenyl	Ave	0.2054	0.1725		2.52	3.00	-16.0	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0343		4.08	5.00	-18.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0462		4.29	5.00	-14.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Lab Sample ID: CCV 680-559059/21 Calibration Date: 02/21/2019 16:43

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2051.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8070		0.972	1.00	-2.8	20.0
Dichlorobiphenyl	Ave	0.5847	0.5601		0.958	1.00	-4.2	20.0
Trichlorobiphenyl	Ave	0.4198	0.4000		0.953	1.00	-4.7	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2879		1.95	2.00	-2.4	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2300		1.92	2.00	-4.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2246		1.88	2.00	-5.8	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1938		2.45	3.00	-18.4	20.0
Octachlorobiphenyl	Ave	0.2054	0.1765		2.58	3.00	-14.1	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0315		3.75	5.00	-25.0*	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0422		3.92	5.00	-21.6*	20.0

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Sample No.: CCVIS 680-559059/3 Date Analyzed: 02/21/2019 06:44

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2030.D Heated Purge: (Y/N) N

Calibration ID: 63054

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		170892	12.41	169663	18.67		
UPPER LIMIT		222160	12.91	220562	19.17		
LOWER LIMIT		119624	11.91	118764	18.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-558728/12-A		143915	12.41	132159	18.67		
LCS 680-558728/13-A		164188	12.41	171582	18.67		
LCSD 680-558728/14-A		179669	12.41	188862	18.67		
240-107535-2	MRC-MW153A-013019	163747	12.41	157880	18.67		
CCV 680-559059/21		159076	12.41	142687	18.67		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

SAMPLE IDENTIFICATION	LCS 680-558728/13-A
COMPOUND	Monochlorobiphenyl
COMPOUND AREA	205079
INTERNAL STANDARD AMOUNT (ng)	0.75
DILUTION FACTOR	1
INTERNAL STANDARD AREA	171582
AVERAGE RRF	0.8305

205079 x 0.75 x 1 / 171582 x 0.8305 = 1.0794 ng/ml

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107535-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 680-558728/13-A

Matrix: Water | Lab File ID: xb2032.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:41

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	4.67		0.30	0.030
26601-64-9	Hexachlorobiphenyl	3.37		0.20	0.015
53742-07-7	Nonachlorobiphenyl	14.6		0.50	0.049
55722-26-4	Octachlorobiphenyl	5.09		0.30	0.038
27323-18-8	Monochlorobiphenyl	1.08		0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	7.81		0.50	0.070
25512-42-9	Dichlorobiphenyl	1.32		0.10	0.0054
25429-29-2	Pentachlorobiphenyl	3.47		0.20	0.014
26914-33-0	Tetrachlorobiphenyl	2.93		0.20	0.013
25323-68-6	Trichlorobiphenyl	1.47		0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	75		25-113

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\xb2032.D
Lims ID: LCS 680-558728/13-A
Client ID:
Sample Type: LCS
Inject. Date: 21-Feb-2019 07:41:30 ALS Bottle#: 26 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: LCS 680-558728/13-A
Misc. Info.: 680-0053932-005
Operator ID: Instrument ID: CMSX

Method: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\680_CMSX.m
Limit Group: 680
Last Update: 22-Feb-2019 09:37:47 Calib Date: 08-Jan-2019 18:02:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Savannah\ChromData\CMSX\20190108-53107.b\xa0812.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: CTX0319

First Level Reviewer: davisn Date: 22-Feb-2019 09:37:47

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/ml	Flags
A 23 Total Monochlorobiphenyls	188	9.762	9.265 - 10.260		0	205079	1.08	
A 24 Total Dichlorobiphenyls	222	11.569	10.603 - 12.535		0	176787	1.32	
* 5 Phenanthrene-d10	188	12.409	12.409	0.0	100	164188	0.7500	
A 25 Total Trichlorobiphenyls	256	13.255	11.910 - 14.600		0	141116	1.47	
A 26 Total Tetrachlorobiphenyls	292	14.773	13.047 - 16.499		0	197767	2.93	
A 27 Total Pentachlorobiphenyls	326	16.192	14.339 - 18.045		0	190369	3.47	
A 28 Total Hexachlorobiphenyls	360	17.480	15.502 - 19.457		0	183545	3.37	
* 15 Chrysene-d12	240	18.669	18.668	0.001	100	171582	0.7500	a
A 29 Total Heptachlorobiphenyls	394	18.749	17.146 - 20.353		0	253613	4.67	
A 30 Total Octachlorobiphenyls	430	19.718	18.642 - 20.795		0	238961	5.09	
A 31 Total Nonachlorobiphenyls	464	20.250	18.500 - 22.000		0	139953	14.6	
19 PCB-208	464	20.286	20.286	0.0	96	140097	0	
$ 22 Decachlorobiphenyl-13C12	510	21.797	21.796	0.001	77	23217	1.88	a
32 DCB Decachlorobiphenyl	498	21.797	21.796	0.001	77	74989	7.81	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

WorkSheet Quantitation Report

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 23 Total Monochlorobiphenyls									
188	9.328	9.265 -	10.260	22	205079	1.08			
190	9.328				66572		2.5- 3.5	3.1	
152	9.328				115591		50.7- 50.7	0.6	
153	9.328				48419		23.2- 23.2	1.4	
A 24 Total Dichlorobiphenyls									
222	11.569	10.603 -	12.535	23	176787	1.32			
224	11.569				113344		1.3- 1.7	1.6	
152	11.554				139546		31.7- 111.7	0.8	
153	11.554				17682		0.0- 49.1	6.4	
186	11.554				16961		0.0- 48.9	6.7	
188	11.569				6120		0.0- 43.3	18.5	
* 5 Phenanthrene-d10									
188	12.409	12.409	0.0	100	164188	0.7500			
189	12.409	12.409	0.0		24329		5.9- 7.5	6.7	
A 25 Total Trichlorobiphenyls									
256	13.087	11.910 -	14.600	95	141116	1.47			
258	13.087				135077		0.8- 1.2	1.0	
186	13.087				95422		26.5- 106.5	1.4	
188	13.087				30921		0.0- 61.5	4.4	
A 26 Total Tetrachlorobiphenyls									
292	13.367	13.047 -	16.499	0	197767	2.93			
290	13.367				154086		1.1- 1.5	1.3	
220	13.353				193028		58.1- 138.1	0.8	
222	13.353				123321		22.9- 102.9	1.2	
A 27 Total Pentachlorobiphenyls									
326	16.249	14.339 -	18.045	91	190369	3.47			
324	16.249				119339		1.4- 1.8	1.6	
254	16.231				142739		41.9- 121.9	0.8	
256	16.249				136737		38.2- 118.2	0.9	
258	16.249				44114		0.0- 65.4	2.7	
A 28 Total Hexachlorobiphenyls									
360	16.439	15.502 -	19.457	59	183545	3.37			
362	16.439				145798		1.0- 1.4	1.3	
288	16.439				111244		61.3- 61.3	1.3	
290	16.439				141842		220.6- 220.6	1.0	
292	16.439				67177		0.0- 0.0	2.2	
* 15 Chrysene-d12									a
240	18.669	18.668	0.001	100	171582	0.7500			a
241	18.669	18.668	0.001		33019		4.3- 5.9	5.2	
A 29 Total Heptachlorobiphenyls									
394	17.217	17.146 -	20.353	97	253613	4.67			
396	17.217				240228		0.8- 1.2	1.1	
322	17.199				110283		48.3- 48.3	2.2	
324	17.199				176673		77.4- 77.4	1.4	

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 30 Total Octachlorobiphenyls									
430	18.859	18.642	-20.795	96	238961	5.09			
428	18.859				217376		0.9- 1.3	1.1	
356	18.842				88632		39.6- 39.6	2.5	
358	18.842				166788		75.2- 75.2	1.3	
360	18.842				132602		59.6- 59.6	1.6	
A 31 Total Nonachlorobiphenyls									
464	20.286	18.500	-22.000	66	139953	14.6			
466	20.286				101255		1.1- 1.5	1.4	
390	20.286				70728		0.0- 0.0	1.4	
392	20.286				152776		0.0- 0.0	0.7	
394	20.286				142469		0.0- 0.0	0.7	
$ 22 Decachlorobiphenyl-13C12									a
510	21.797	21.796	0.001	77	23217	1.88			a
512	21.797	21.796	0.001		17660		0.9- 1.3	1.3	
32 DCB Decachlorobiphenyl									
498	21.797	21.796	0.001	77	74989	7.81			
500	21.797	21.796	0.001		60499		0.9- 1.3	1.2	
424	21.797	21.796	0.001		35328		0.0- 0.0	1.0	
426	21.797	21.796	0.001		86957		0.0- 0.0	1.0	
428	21.797	21.796	0.001		93723		0.0- 0.0	1.0	
430	21.797	21.796	0.001		58374		0.0- 0.0	1.0	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107535-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW153A-013019	240-107535-2
MRC-MW139B-013019	240-107535-3

Comments:

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-366872/4 02/05/2019 10:25				CCV 240-366872/42 02/05/2019 13:21				CCV 240-366872/54 02/05/2019 14:17			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	12800		12500	102	24900		25000	100	25200		25000	101
Manganese	1530		1500	102	2000		2000	100	2020		2000	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	CCV 240-366872/60 02/05/2019 14:44											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	24400		25000	98								
Manganese	1960		2000	98								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-366872/6 02/05/2019 10:34				CCVL 240-366872/62 02/05/2019 14:53							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	203		200	101	197	J	200	98				
Manganese	14.9	J	15.0	100	14.7	J	15.0	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICV Source: MTMSICVW_00088 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-366866/7 02/05/2019 10:47				CCV 240-366866/43 02/05/2019 12:13				CCV 240-366866/55 02/05/2019 12:40			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	195		200	98	236		250	94	245		250	98
Antimony	39.6		40.0	99	51.0		50.0	102	50.3		50.0	101
Arsenic	40.7		40.0	102	49.2		50.0	98	49.2		50.0	98
Barium	39.1		40.0	98	50.0		50.0	100	49.5		50.0	99
Beryllium	38.8		40.0	97	54.4		50.0	109	54.3		50.0	109
Cadmium	39.3		40.0	98	50.4		50.0	101	49.9		50.0	100
Calcium	19800		20000	99	25200		25000	101	25400		25000	102
Chromium	40.1		40.0	100	51.9		50.0	104	51.3		50.0	103
Cobalt	40.2		40.0	101	49.2		50.0	98	49.2		50.0	98
Copper	40.6		40.0	102	49.3		50.0	99	49.4		50.0	99
Iron	9980		10000	100	12100		12500	97	12300		12500	98
Lead	40.7		40.0	102	50.1		50.0	100	49.9		50.0	100
Magnesium	19400		20000	97	24100		25000	96	24700		25000	99
Manganese	194		200	97	253		250	101	253		250	101
Nickel	40.9		40.0	102	48.7		50.0	97	49.2		50.0	98
Potassium	19600		20000	98	24600		25000	99	25200		25000	101
Selenium	39.1		40.0	98	53.4		50.0	107	53.2		50.0	106
Silver	40.2		40.0	100	50.0		50.0	100	49.5		50.0	99
Sodium	19600		20000	98	23900		25000	96	24400		25000	97
Thallium	39.8		40.0	99	49.7		50.0	99	49.5		50.0	99
Vanadium	39.5		40.0	99	51.9		50.0	104	51.3		50.0	103
Zinc	37.9		40.0	95	46.1		50.0	92	45.6		50.0	91

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICV Source: MTMSICVW_00088 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	CCV 240-366866/67 02/05/2019 13:08											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	254		250	102								
Antimony	50.4		50.0	101								
Arsenic	50.2		50.0	100								
Barium	49.3		50.0	99								
Beryllium	50.2		50.0	100								
Cadmium	49.3		50.0	99								
Calcium	25700		25000	103								
Chromium	50.7		50.0	101								
Cobalt	49.9		50.0	100								
Copper	49.6		50.0	99								
Iron	12500		12500	100								
Lead	49.4		50.0	99								
Magnesium	25600		25000	103								
Manganese	247		250	99								
Nickel	49.1		50.0	98								
Potassium	25900		25000	104								
Selenium	48.3		50.0	97								
Silver	49.5		50.0	99								
Sodium	25400		25000	101								
Thallium	49.3		50.0	99								
Vanadium	50.6		50.0	101								
Zinc	46.0		50.0	92								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICV Source: MTMSCRI6020AW_00077 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00077

Analyte	ICVL 240-366866/9 02/05/2019 10:52				CCVL 240-366866/71 02/05/2019 13:18							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	48.8	J	50.0	98	51.3		50.0	103				
Antimony	2.00		2.00	100	2.03		2.00	102				
Arsenic	5.06		5.00	101	5.29		5.00	106				
Barium	4.94	J	5.00	99	5.00		5.00	100				
Beryllium	0.975	J	1.00	98	0.985	J	1.00	99				
Cadmium	0.974	J	1.00	97	1.01		1.00	101				
Calcium	929	J	1000	93	938	J	1000	94				
Chromium	1.99	J	2.00	100	1.98	J	2.00	99				
Cobalt	1.02		1.00	102	1.02		1.00	102				
Copper	2.03		2.00	102	2.04		2.00	102				
Iron	103		100	103	105		100	105				
Lead	1.05		1.00	105	1.05		1.00	105				
Magnesium	1030		1000	103	1030		1000	103				
Manganese	4.18	J	5.00	84	4.16	J	5.00	83				
Nickel	1.74	J	2.00	87	1.62	J	2.00	81				
Potassium	1050		1000	105	1070		1000	107				
Selenium	4.93	J	5.00	99	4.99	J	5.00	100				
Silver	1.02		1.00	102	0.999	J	1.00	100				
Sodium	1010		1000	101	1040		1000	104				
Thallium	1.04		1.00	104	1.02		1.00	102				
Vanadium	5.26		5.00	105	5.10		5.00	102				
Zinc	15	U	20.0	74	15	U	20.0	73				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-366872/5 02/05/2019 10:29		CCB 240-366872/43 02/05/2019 13:26		CCB 240-366872/55 02/05/2019 14:22		CCB 240-366872/61 02/05/2019 14:48	
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U	26	U
Manganese	15	2.1	U	2.1	U	2.1	U	2.1	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-366866/8 02/05/2019 10:50		CCB 240-366866/44 02/05/2019 12:15		CCB 240-366866/56 02/05/2019 12:43		CCB 240-366866/68 02/05/2019 13:11	
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-366596/1-A

Instrument Code: I12 Batch No.: 366872

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	26	U		6010C
7439-96-5	Manganese	2.1	U		6010C

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-366596/1-A

Instrument Code: I14 Batch No.: 366866

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	1.7	U		6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	2.1	U		6020A
7440-02-0	Nickel	1.5	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICSA 240-366872/8 Instrument ID: I12

Lab File ID: I12020519A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**180150**	**90**
Manganese		**0.660**	
Aluminum	*500000*	*490820*	*98*
Antimony		*0.794*	
Arsenic		*-4.69*	
Barium		*0.149*	
Beryllium		*0.188*	
Boron		*2.74*	
Cadmium		*1.14*	
Calcium	*500000*	*451760*	*90*
Chromium		*2.58*	
Cobalt		*-4.50*	
Copper		*-0.318*	
Lead		*0.423*	
Lithium		*24.2*	
Magnesium	*500000*	*485320*	*97*
Molybdenum		*-1.08*	
Nickel		*3.01*	
Potassium		*-4.32*	
Selenium		*3.05*	
Silicon		*4.12*	
Silver		*-1.64*	
Sodium		*30.3*	
Strontium		*8.63*	
Thallium		*0.101*	
Tin		*1.25*	
Titanium		*-1.67*	
Vanadium		*3.42*	
Zinc		*-3.14*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICSAB 240-366872/9 Instrument ID: I12

Lab File ID: I12020519A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Iron	**200000**	**182680**	**91**
Manganese	**500**	**478**	**96**
Aluminum	*500000*	*493530*	*99*
Antimony	*1000*	*983*	*98*
Arsenic	*1000*	*973*	*97*
Barium	*500*	*475*	*95*
Beryllium	*500*	*473*	*95*
Boron	*500*	*506*	*101*
Cadmium	*1000*	*996*	*100*
Calcium	*500000*	*456260*	*91*
Chromium	*500*	*476*	*95*
Cobalt	*500*	*488*	*98*
Copper	*500*	*523*	*105*
Lead	*1000*	*846*	*85*
Lithium	*500*	*522*	*104*
Magnesium	*500000*	*490690*	*98*
Molybdenum	*1000*	*933*	*93*
Nickel	*1000*	*965*	*96*
Potassium	*10000*	*9924*	*99*
Selenium	*1000*	*969*	*97*
Silicon	*10000*	*9608*	*96*
Silver	*1000*	*1064*	*106*
Sodium	*10000*	*9918*	*99*
Strontium	*1500*	*1361*	*91*
Thallium	*1000*	*920*	*92*
Tin	*500*	*499*	*100*
Titanium	*500*	*493*	*99*
Vanadium	*500*	*467*	*93*
Zinc	*1000*	*977*	*98*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICSA 240-366866/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**47321**	**95**
Antimony		**0.0250**	
Arsenic		**0.0260**	
Barium		**0.0030**	
Beryllium		**-0.0260**	
Cadmium		**0.237**	
Calcium	**50000**	**48732**	**97**
Chromium		**0.0560**	
Cobalt		**0.0000**	
Copper		**0.116**	
Iron	**50000**	**48977**	**98**
Lead		**0.0120**	
Magnesium	**50000**	**47590**	**95**
Manganese		**-0.823**	
Nickel		**-0.195**	
Potassium	**50000**	**47643**	**95**
Selenium		**0.0420**	
Silver		**0.0070**	
Sodium	**50000**	**47401**	**95**
Thallium		**0.0010**	
Vanadium		**0.108**	
Zinc		**-7.22**	
Boron		*1.13*	
Lithium		*0.0020*	
Molybdenum	*1000*	*1062*	*106*
Strontium		*0.424*	
Tin		*-1.07*	
Titanium	*1000*	*984*	*98*
Tungsten		*0.104*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICSAB 240-366866/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Aluminum	**50000**	**46598**	**93**
Antimony	**100**	**101**	**101**
Arsenic	**100**	**98.4**	**98**
Barium	**100**	**97.7**	**98**
Beryllium	**100**	**103**	**103**
Cadmium	**100**	**97.9**	**98**
Calcium	**50000**	**48360**	**97**
Chromium	**100**	**96.7**	**97**
Cobalt	**100**	**95.5**	**95**
Copper	**100**	**95.9**	**96**
Iron	**50000**	**46963**	**94**
Lead	**100**	**99.8**	**100**
Magnesium	**50000**	**46918**	**94**
Manganese	**100**	**96.0**	**96**
Nickel	**100**	**96.9**	**97**
Potassium	**50000**	**47281**	**95**
Selenium	**100**	**101**	**101**
Silver	**100**	**97.2**	**97**
Sodium	**50000**	**46380**	**93**
Thallium	**100**	**97.4**	**97**
Vanadium	**100**	**96.8**	**97**
Zinc	**100**	**98.5**	**99**
Boron	*100*	*106*	*106*
Lithium	*100*	*101*	*101*
Molybdenum	*1100*	*1139*	*104*
Strontium	*100*	*97.3*	*97*
Tin	*100*	*102*	*102*
Titanium	*1100*	*1083*	*98*
Tungsten	*100*	*98.6*	*99*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW139B-013019 MS
Lab ID: 240-107535-3 MS
Lab Name: TestAmerica Canton
Job No.: 240-107535-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Iron	2970		1900		1000	104	75-125		6010C
Manganese	623		130		500	99	75-125		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW139B-013019 MSD
Lab ID: 240-107535-3 MSD
Lab Name: TestAmerica Canton
Job No.: 240-107535-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Iron	2970		1000	103	75-125	0	20		6010C
Manganese	630		500	100	75-125	1	20		6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-366596/2-A

Lab Name: TestAmerica Canton Job No.: 240-107535-1

Sample Matrix: Water LCS Source: MTICP1_00079

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	1030		103	80	120		6010C
Manganese	500	504		101	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-366596/3-A

Lab Name: TestAmerica Canton Job No.: 240-107535-1

Sample Matrix: Water LCS Source: MTICPMSB_00037

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	98.6		99	80	120		6020A
Aluminum	10000	9440		94	80	120		6020A
Arsenic	1000	959		96	80	120		6020A
Barium	1000	1010		101	80	120		6020A
Beryllium	1000	1080		108	80	120		6020A
Cadmium	1000	992		99	80	120		6020A
Cobalt	1000	953		95	80	120		6020A
Chromium	1000	998		100	80	120		6020A
Copper	1000	962		96	80	120		6020A
Iron	10000	9250		92	80	120		6020A
Manganese	1000	987		99	80	120		6020A
Nickel	1000	980		98	80	120		6020A
Lead	1000	1030		103	80	120		6020A
Antimony	100	100		100	80	120		6020A
Selenium	1000	1030		103	80	120		6020A
Thallium	250	256		102	80	120		6020A
Vanadium	1000	996		100	80	120		6020A
Zinc	1000	1040		104	80	120		6020A
Calcium	10000	9110		91	80	120		6020A
Potassium	10000	9540		95	80	120		6020A
Magnesium	10000	9670		97	80	120		6020A
Sodium	10000	9440		94	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107535-3

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107535-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Iron	1900		1960		1.4		6010C
Manganese	130		131		1.4		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG No.:

ICP-AES Instrument ID: I12 Date: 12/21/2018

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	V	
Aluminum										0.034040				0.056989	
Antimony		-0.00006			-0.000422			-0.000035						0.002232	
Arsenic		0.000009			-0.000202	0.00931			-0.0003555	0.00123617					
Beryllium														0.000235	
Cadmium			0.012308					0.000004							
Chromium									0.000415						
Cobalt													0.002128		
Copper				0.000018	0.000361			-0.000032					-0.003157		
Lead		-0.000091					0.00057707	0.000048			0.000131	0.000025			
Lithium				0.000011											
Nickel					0.000518			0.000059							
Selenium		-0.000032							0.000338						
Thallium		0.000034			0.003802			-0.000025	-0.0006202 3					0.001371	
Vanadium								0.000064							
Zinc						-0.001092									

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107535-1

SDG No.:

Instrument ID: I12 Date: 01/28/2019 12:19

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		15000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107535-1

SDG No.:

Instrument ID: I14 Date: 10/02/2018 11:17

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-366596/1-A	02/04/2019 14:00	366596		50	50
LCS 240-366596/2-A	02/04/2019 14:00	366596		50	50
240-107535-2	02/04/2019 14:00	366596		50	50
240-107535-3	02/04/2019 14:00	366596		50	50
240-107535-3 MS	02/04/2019 14:00	366596		50	50
240-107535-3 MSD	02/04/2019 14:00	366596		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-366596/1-A	02/04/2019 14:00	366596		50	50
LCS 240-366596/3-A	02/04/2019 14:00	366596		50	50
240-107535-2	02/04/2019 14:00	366596		50	50
240-107535-3	02/04/2019 14:00	366596		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/05/2019 10:11 End Date: 02/05/2019 20:29

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ICIS 240-366872/1	1		10:11	X	X																								
CALSTD 240-366872/2 IC			10:15	X	X																								
CALSTD 240-366872/3 IC			10:20	X	X																								
ICV 240-366872/4	1		10:25	X	X																								
ICB 240-366872/5	1		10:29	X	X																								
ICVL 240-366872/6	1		10:34	X	X																								
ZZZZZZ			10:38																										
ICSA 240-366872/8	1		10:43	X	X																								
ICSAB 240-366872/9	1		10:48	X	X																								
CCV 240-366872/10			10:52																										
CCB 240-366872/11			10:57																										
ZZZZZZ			11:01																										
ZZZZZZ			11:06																										
ZZZZZZ			11:11																										
ZZZZZZ			11:16																										
ZZZZZZ			11:20																										
ZZZZZZ			11:25																										
CCV 240-366872/18			11:30																										
CCB 240-366872/19			11:34																										
ZZZZZZ			11:39																										
ZZZZZZ			11:44																										
ZZZZZZ			11:49																										
ZZZZZZ			11:53																										
ZZZZZZ			11:58																										
ZZZZZZ			12:03																										
ZZZZZZ			12:08																										
ZZZZZZ			12:12																										
ZZZZZZ			12:17																										
ZZZZZZ			12:21																										
CCV 240-366872/30			12:26																										
CCB 240-366872/31			12:30																										
ZZZZZZ			12:35																										
ZZZZZZ			12:39																										
ZZZZZZ			12:44																										
ZZZZZZ			12:48																										
ZZZZZZ			12:53																										
ZZZZZZ			12:57																										
ZZZZZZ			13:02																										
ZZZZZZ			13:07																										
ZZZZZZ			13:12																										
ZZZZZZ			13:16																										
CCV 240-366872/42	1		13:21	X	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/05/2019 10:11 End Date: 02/05/2019 20:29

Lab Sample Id	D/F	Type	Time	Analytes																										
				Fe	Mn																									
CCB 240-366872/43	1		13:26	X	X																									
ZZZZZZ			13:30																											
ZZZZZZ			13:35																											
ZZZZZZ			13:40																											
ZZZZZZ			13:45																											
MB 240-366596/1-A	1	R	13:49	X	X																									
LCS 240-366596/2-A	1	R	13:54	X	X																									
ZZZZZZ			13:59																											
ZZZZZZ			14:03																											
240-107535-2	1	R	14:08	X	X																									
240-107535-3	1	R	14:13	X	X																									
CCV 240-366872/54	1		14:17	X	X																									
CCB 240-366872/55	1		14:22	X	X																									
240-107535-3 SD	5	R	14:26	X	X																									
ZZZZZZ			14:31																											
240-107535-3 MS	1	R	14:35	X	X																									
240-107535-3 MSD	1	R	14:40	X	X																									
CCV 240-366872/60	1		14:44	X	X																									
CCB 240-366872/61	1		14:48	X	X																									
CCVL 240-366872/62	1		14:53	X	X																									
ZZZZZZ			14:58																											
ZZZZZZ			15:02																											
ZZZZZZ			15:07																											
CCV 240-366872/66			15:11																											
CCB 240-366872/67			15:16																											
ZZZZZZ			15:20																											
ZZZZZZ			15:25																											
ZZZZZZ			15:30																											
ZZZZZZ			15:34																											
ZZZZZZ			15:39																											
ZZZZZZ			15:43																											
ZZZZZZ			15:48																											
ZZZZZZ			15:52																											
ZZZZZZ			15:57																											
ZZZZZZ			16:01																											
CCV 240-366872/78			16:06																											
CCB 240-366872/79			16:10																											
ZZZZZZ			16:15																											
ZZZZZZ			16:19																											
ZZZZZZ			16:23																											
ZZZZZZ			16:28																											
ZZZZZZ			16:33																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/05/2019 10:11 End Date: 02/05/2019 20:29

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			16:38																									
ZZZZZZ			16:42																									
ZZZZZZ			16:47																									
ZZZZZZ			16:52																									
ZZZZZZ			16:56																									
CCV 240-366872/90			17:01																									
CCB 240-366872/91			17:05																									
ZZZZZZ			17:10																									
ZZZZZZ			17:15																									
ZZZZZZ			17:19																									
ZZZZZZ			17:24																									
ZZZZZZ			17:29																									
ZZZZZZ			17:34																									
ZZZZZZ			17:38																									
ZZZZZZ			17:43																									
ZZZZZZ			17:48																									
ZZZZZZ			17:52																									
CCV 240-366872/102			17:56																									
CCB 240-366872/103			18:01																									
ZZZZZZ			18:06																									
ZZZZZZ			18:10																									
ZZZZZZ			18:15																									
ZZZZZZ			18:19																									
ZZZZZZ			18:24																									
ZZZZZZ			18:28																									
ZZZZZZ			18:32																									
ZZZZZZ			18:37																									
ZZZZZZ			18:42																									
ZZZZZZ			18:46																									
CCV 240-366872/114			18:51																									
CCB 240-366872/115			18:55																									
ZZZZZZ			19:00																									
ZZZZZZ			19:05																									
ZZZZZZ			19:09																									
ZZZZZZ			19:14																									
ZZZZZZ			19:19																									
ZZZZZZ			19:23																									
ZZZZZZ			19:28																									
ZZZZZZ			19:33																									
ZZZZZZ			19:37																									
ZZZZZZ			19:42																									
CCV 240-366872/126			19:47																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/05/2019 10:11 End Date: 02/05/2019 20:29

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
CCB 240-366872/127			19:51																									
ZZZZZZ			19:56																									
ZZZZZZ			20:01																									
ZZZZZZ			20:06																									
ZZZZZZ			20:11																									
ZZZZZZ			20:16																									
ZZZZZZ			20:20																									
CCV 240-366872/134			20:25																									
CCB 240-366872/135			20:29																									

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/05/2019 10:33 End Date: 02/05/2019 13:47

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn						
RINSE 240-366866/1			10:33																												
ICIS 240-366866/2			10:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD1 240-366866/3 IC	1		10:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD2 240-366866/4 IC	1		10:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD3 240-366866/5 IC	1		10:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD4 240-366866/6 IC	1		10:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICV 240-366866/7	1		10:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICB 240-366866/8	1		10:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICVL 240-366866/9	1		10:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSA 240-366866/10	1		10:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSAB 240-366866/11	1		10:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-366866/12			10:59																												
CCB 240-366866/13			11:01																												
CCV 240-366866/14			11:04																												
CCB 240-366866/15			11:07																												
ZZZZZZ			11:09																												
ZZZZZZ			11:11																												
ZZZZZZ			11:15																												
ZZZZZZ			11:17																												
CCV 240-366866/20			11:20																												
CCB 240-366866/21			11:22																												
CCVL 240-366866/22			11:25																												
ZZZZZZ			11:27																												
ZZZZZZ			11:29																												
ZZZZZZ			11:31																												
CCV 240-366866/26			11:33																												
CCB 240-366866/27			11:36																												
CCVL 240-366866/28			11:38																												
ZZZZZZ			11:40																												
ZZZZZZ			11:43																												
ZZZZZZ			11:45																												
ZZZZZZ			11:47																												
ZZZZZZ			11:49																												
ZZZZZZ			11:52																												
ZZZZZZ			11:54																												
ZZZZZZ			11:56																												
ZZZZZZ			11:59																												
CCV 240-366866/38			12:01																												
CCB 240-366866/39			12:03																												
ZZZZZZ			12:06																												
ZZZZZZ			12:08																												
ZZZZZZ			12:10																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/05/2019 10:33 End Date: 02/05/2019 13:47

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn							
CCV 240-366866/43	1		12:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCB 240-366866/44	1		12:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCVL 240-366866/45			12:18																													
MB 240-366596/1-A	1	R	12:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
LCS 240-366596/3-A	1	R	12:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ZZZZZZ			12:24																													
ZZZZZZ			12:27																													
ZZZZZZ			12:29																													
ZZZZZZ			12:31																													
ZZZZZZ			12:34																													
ZZZZZZ			12:36																													
ZZZZZZ			12:38																													
CCV 240-366866/55	1		12:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCB 240-366866/56	1		12:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ZZZZZZ			12:45																													
ZZZZZZ			12:47																													
ZZZZZZ			12:50																													
ZZZZZZ			12:52																													
240-107535-2	1	R	12:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
240-107535-3	1	R	12:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ZZZZZZ			12:59																													
ZZZZZZ			13:01																													
ZZZZZZ			13:04																													
ZZZZZZ			13:06																													
CCV 240-366866/67	1		13:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCB 240-366866/68	1		13:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCV 240-366866/69			13:13																													
CCB 240-366866/70			13:15																													
CCVL 240-366866/71	1		13:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCVL 240-366866/72			13:20																													
ZZZZZZ			13:28																													
ZZZZZZ			13:31																													
ZZZZZZ			13:33																													
ZZZZZZ			13:35																													
ZZZZZZ			13:42																													
CCV 240-366866/78			13:44																													
CCB 240-366866/79			13:47																													

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICP Instrument ID: I12 Start Date: 02/05/2019 End Date: 02/05/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-366872/1	10:11										
ICV 240-366872/4	10:25	91		99		98		100			
ICB 240-366872/5	10:29	101		101		101		101			
ICVL 240-366872/6	10:34	99		101		101		102			
ICSA 240-366872/8	10:43	75		89		86		99			
ICSAB 240-366872/9	10:48	74		89		86		98			
CCV 240-366872/42	13:21	87		97		95		100			
CCB 240-366872/43	13:26	101		101		101		101			
MB 240-366596/1-A	13:49	102		102		101		102			
LCS 240-366596/2-A	13:54	89		97		96		100			
240-107535-2	14:08	93		130		129		134			
240-107535-3	14:13	95		100		98		102			
CCV 240-366872/54	14:17	86		97		95		100			
CCB 240-366872/55	14:22	101		101		100		101			
240-107535-3 SD	14:26	99		101		100		101			
240-107535-3 MS	14:35	87		97		95		101			
240-107535-3 MSD	14:40	86		96		95		101			
CCV 240-366872/60	14:44	86		97		95		100			
CCB 240-366872/61	14:48	102		102		101		101			
CCVL 240-366872/62	14:53	97		100		99		101			

FORM XV - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/05/2019 End Date: 02/05/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-366866/3 IC	10:38	98		99		98		98		97	
STD2 240-366866/4 IC	10:40	93		95		96		94		92	
STD3 240-366866/5 IC	10:43	89		93		95		94		90	
STD4 240-366866/6 IC	10:45	91		93		96		96		96	
ICV 240-366866/7	10:47	93		96		98		97		94	
ICB 240-366866/8	10:50	94		99		102		98		100	
ICVL 240-366866/9	10:52	97		101		102		100		99	
ICSA 240-366866/10	10:55	88		94		95		93		88	
ICSAB 240-366866/11	10:57	77		90		94		90		87	
CCV 240-366866/43	12:13	70		97		103		97		99	
CCB 240-366866/44	12:15	77		98		105		98		101	
MB 240-366596/1-A	12:20	79		100		107		98		103	
LCS 240-366596/3-A	12:22	75		96		102		96		99	
CCV 240-366866/55	12:40	73		95		100		94		94	
CCB 240-366866/56	12:43	84		103		102		96		99	
240-107535-2	12:54	94		110		105		97		100	
240-107535-3	12:57	92		108		105		97		100	
CCV 240-366866/67	13:08	91		106		102		95		98	
CCB 240-366866/68	13:11	95		107		102		96		102	
CCVL 240-366866/71	13:18	98		111		105		100		103	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/05/2019 End Date: 02/05/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-366866/3 IC	10:38	96		98		97		99		98	
STD2 240-366866/4 IC	10:40	93		96		94		97		97	
STD3 240-366866/5 IC	10:43	92		95		92		97		96	
STD4 240-366866/6 IC	10:45	97		97		98		98		97	
ICV 240-366866/7	10:47	94		98		96		98		97	
ICB 240-366866/8	10:50	99		101		99		100		101	
ICVL 240-366866/9	10:52	100		101		101		101		100	
ICSA 240-366866/10	10:55	91		96		95		99		99	
ICSAB 240-366866/11	10:57	91		94		92		97		96	
CCV 240-366866/43	12:13	103		108		103		107		107	
CCB 240-366866/44	12:15	106		108		107		108		108	
MB 240-366596/1-A	12:20	106		110		106		107		107	
LCS 240-366596/3-A	12:22	102		109		100		105		104	
CCV 240-366866/55	12:40	99		102		99		101		101	
CCB 240-366866/56	12:43	102		104		102		101		102	
240-107535-2	12:54	97		102		101		108		106	
240-107535-3	12:57	97		104		100		98		97	
CCV 240-366866/67	13:08	95		99		96		96		97	
CCB 240-366866/68	13:11	100		101		98		98		97	
CCVL 240-366866/71	13:18	100		105		102		100		99	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/05/2019 End Date: 02/05/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-366866/3 IC	10:38	100									
STD2 240-366866/4 IC	10:40	96									
STD3 240-366866/5 IC	10:43	93									
STD4 240-366866/6 IC	10:45	98									
ICV 240-366866/7	10:47	95									
ICB 240-366866/8	10:50	100									
ICVL 240-366866/9	10:52	102									
ICSA 240-366866/10	10:55	96									
ICSAB 240-366866/11	10:57	96									
CCV 240-366866/43	12:13	104									
CCB 240-366866/44	12:15	105									
MB 240-366596/1-A	12:20	108									
LCS 240-366596/3-A	12:22	104									
CCV 240-366866/55	12:40	97									
CCB 240-366866/56	12:43	102									
240-107535-2	12:54	99									
240-107535-3	12:57	98									
CCV 240-366866/67	13:08	93									
CCB 240-366866/68	13:11	96									
CCVL 240-366866/71	13:18	98									

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366596 Batch Start Date: 02/04/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/04/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00079	MTICP2A 00090	MTTMHCL 00234
MB 240-366596/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-366596/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107535-I-2	MRC-MW153A-013019	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107535-I-3	MRC-MW139B-013019	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107535-I-3 MS	MRC-MW139B-013019	3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107535-I-3 MSD	MRC-MW139B-013019	3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-366596/1		3005A, 6010C		1 mL					
LCS 240-366596/2		3005A, 6010C		1 mL					
240-107535-I-2	MRC-MW153A-013019	3005A, 6010C	R	1 mL					
240-107535-I-3	MRC-MW139B-013019	3005A, 6010C	R	1 mL					
240-107535-I-3 MS	MRC-MW139B-013019	3005A, 6010C	R	1 mL					
240-107535-I-3 MSD	MRC-MW139B-013019	3005A, 6010C	R	1 mL					

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb3
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366596 Batch Start Date: 02/04/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/04/19 22:00

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366596 Batch Start Date: 02/04/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/04/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00037	MTICPMSB 00037	MTTMHCL 00234
MB 240-366596/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-366596/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107535-I-2	MRC-MW153A-013019	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107535-I-3	MRC-MW139B-013019	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-366596/1		3005A, 6020A		1 mL					
LCS 240-366596/3		3005A, 6020A		1 mL					
240-107535-I-2	MRC-MW153A-013019	3005A, 6020A	R	1 mL					
240-107535-I-3	MRC-MW139B-013019	3005A, 6020A	R	1 mL					

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb3
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW153A-013019 Lab Sample ID: 240-107535-2

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 11:00

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	520	200	26	ug/L			1	6010C
7439-96-5	Manganese	450	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	3600	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	28	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	14	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.99	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	190	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.6	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	110	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	680	100	47	ug/L			1	6020A
7439-96-5	Manganese	600	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	190	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.63	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	300	20	15	ug/L			1	6020A
7440-70-2	Calcium	74000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	5300	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	35000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	10000	1000	330	ug/L			1	6020A

Sample Report

Sample Name	240-107535-I-2-A
File Name	061SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\I14020519B.b
Acq Time	2019-02-05 12:54:53
Sample Type	Sample
Total Dilution	1.0000
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	5.788	ug/l	1.8	63495.83	10000	
Be	9	6	No Gas	13.944	ug/l	4.1	15834.23	2000	
B	11	6	No Gas	54.755	ug/l	3.4	37781.00	300	
Na	23	45	He	10499.806	ug/l	1.3	5576420.89	500000	
Mg	24	45	He	34805.717	ug/l	2.4	10077123.21	500000	
Al	27	45	He	3556.319	ug/l	2.1	501061.66	200000	
K	39	45	He	5323.454	ug/l	2.2	1885871.59	500000	
Ca	44	45	He	74080.103	ug/l	2.6	627144.39	500000	
Ti	47	45	He	2.019	ug/l	12.3	210.00	2500	
V	51	45	He	0.058	ug/l	274.5	-388.47	10000	
Cr	52	45	He	2.554	ug/l	1.7	9089.67	10000	
Mn	55	45	He	599.534	ug/l	2.2	1404217.62	10000	
Fe	56	103	He	679.867	ug/l	0.2	1973989.85	200000	
Co	59	103	He	185.719	ug/l	0.4	863239.31	5000	
Ni	60	103	He	191.626	ug/l	0.6	225675.36	10000	
Cu	63	103	He	106.648	ug/l	0.6	332854.46	10000	
Zn	66	103	He	304.575	ug/l	0.5	203209.70	10000	
As	75	103	He	-1.204	ug/l	N/A	-635.58	10000	
Se	78	103	H2	0.638	ug/l	5.2	117.67	10000	
Sr	88	103	He	220.717	ug/l	0.6	801888.01	10000	
Mo	95	103	He	0.111	ug/l	25.0	211.11	2000	
Ag	107	103	He	0.010	ug/l	26.2	73.33	100	
Cd	111	115	He	0.987	ug/l	4.1	1038.93	4000	
Sn	118	115	He	-0.459	ug/l	N/A	2847.00	2000	
Sb	123	115	He	0.214	ug/l	7.0	640.02	200	
Ba	137	115	He	28.356	ug/l	0.9	35634.99	10000	
W	182	159	He	0.046	ug/l	6.9	467.79	2500	
Tl	205	165	He	0.132	ug/l	5.6	1323.42	2000	
Pb	208	165	He	0.633	ug/l	0.2	9065.81	4000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li6	6	No Gas	762145.31	1.5	812134.5	93.84	59.5	120.4	
Sc	45	No Gas	2884450.30	1.2	2628455.73	109.74	59.5	120.4	
Sc	45	H2	2221524.67	3.5	2107242.92	105.42	59.5	120.4	
Sc	45	He	580912.96	0.5	596612.84	97.37	59.5	120.4	
Rh	103	H2	356240.02	3.9	357430.74	99.67	59.5	120.4	

Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Rh	103	He	1888637.91	0.6	1939891.8	97.36	59.5	120.4	
In	115	H2	2214858.92	2.8	2163228.25	102.39	59.5	120.4	
In	115	He	1343330.55	1.6	1328713.38	101.1	59.5	120.4	
Tb	159	He	2821893.57	1.7	2617555.24	107.81	59.5	120.4	
Ho	165	He	2674392.95	1.5	2524114.76	105.95	59.5	120.4	
Bi	209	He	1618240.84	0.4	1631617.4	99.18	59.5	120.4	

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW153A-013019	240-107535-2
MRC-MW139B-013019	240-107535-3

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107535-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW153A-013019	240-107535-2
MRC-MW139B-013019	240-107535-3

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107535-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW153A-013019	240-107535-2
MRC-MW139B-013019	240-107535-3

Comments:

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Analyst: LKG Batch Start Date: 08/07/2018

Reporting Units: mg/L Analytical Batch No.: 339523

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:20	Sulfate	52.9	50.0	106	90-110		WCICLCS_00669
11	ICB	15:41	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Analyst: JWW Batch Start Date: 01/31/2019

Reporting Units: mg/L Analytical Batch No.: 366306

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	CCV	17:20	Sulfate	52.2	50.0	104	90-110		WCICCCV_00858
14	CCB	17:40	Sulfate	0.35				U	
24	CCV	21:08	Sulfate	52.2	50.0	104	90-110		WCICCCV_00858
25	CCB	21:28	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107535-1

SDG No.:

Analyst: MSP Batch Start Date: 02/16/2019

Reporting Units: mg/L Analytical Batch No.: 575923

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:45	Nitrate Nitrite as N	3.22	3.00	107	90-110		W_ICAl_00027
2	ICB	12:46	Nitrate Nitrite as N	0.040				U	
3	CCV	12:47	Nitrate Nitrite as N	5.48	5.00	110	90-110		W_Nitrate_00020
4	CCV	12:48	Nitrate Nitrite as N	5.10	5.00	102	90-110		IC Primary_00012
5	CCB	12:49	Nitrate Nitrite as N	0.040				U	
20	CCV	13:06	Nitrate Nitrite as N	5.31	5.00	106	90-110		W_Nitrate_00020
21	CCB	13:08	Nitrate Nitrite as N	0.040				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 366819 Date: 02/05/2019 09:54							
2320B-2011	MB 240-366819/4	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 367926 Date: 02/13/2019 13:29							
2340C-2011	MB 240-367926/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 366480 Date: 02/01/2019 12:55							
2540 C-2011	MB 240-366480/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 366306 Date: 01/31/2019 18:01							
9056A	MB 240-366306/15	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-366306/15	Sulfate	0.35	U	mg/L	1.0	1

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107535-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575923 Date: 02/16/2019 12:50							
SM 4500 NO3 F	MB 490-575923/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107535-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 269673 Date: 02/07/2019 10:25							
SM 2520B	MB 180-269673/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 366306 Date: 01/31/2019 20:26											
300.0	240-107535-3	Bromide	0.044	U	mg/L						
300.0	240-107535-3 MS	Bromide	11.3		mg/L	10.0	113	80-120			
Batch ID: 366306 Date: 01/31/2019 20:26											
9056A	240-107535-3	Sulfate	15		mg/L						
9056A	240-107535-3 MS	Sulfate	69.2		mg/L	50.0	109	80-120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 366306 Date: 01/31/2019 20:47											
300.0	240-107535-3 MSD	Bromide	11.5		mg/L	10.0	115	80-120	1	15	
Batch ID: 366306 Date: 01/31/2019 20:47											
9056A	240-107535-3 MSD	Sulfate	69.9		mg/L	50.0	110	80-120	1	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 367926 Date: 02/13/2019 13:44								
2340C-2011	MRC-MW153A-013019	240-107535-2	Hardness as calcium carbonate	400	mg/L			
2340C-2011	MRC-MW153A-013019	240-107535-2 DU	Hardness as calcium carbonate	380	mg/L	5	20	
Batch ID: 366480 Date: 02/01/2019 12:55								
2540 C-2011	MRC-MW139B-013019	240-107535-3	Total Dissolved Solids	210	mg/L			
2540 C-2011	MRC-MW139B-013019	240-107535-3 DU	Total Dissolved Solids	202	mg/L	3	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 366819	Date: 02/05/2019 09:51										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-366819/3	Alkalinity	257		mg/L	271	95	86-123			
Batch ID: 367926	Date: 02/13/2019 13:34										
						LCS Source: WCHARDNESS_00031					
2340C-2011	LCS 240-367926/2	Hardness as calcium carbonate	264		mg/L	246	107	90-110			
Batch ID: 366480	Date: 02/01/2019 12:55										
						LCS Source: WCPHENOVSOLID_00038					
2540 C-2011	LCS 240-366480/2	Total Dissolved Solids	202		mg/L	204	99	80-120			
Batch ID: 366306	Date: 01/31/2019 18:22										
						LCS Source: WCICLCS_00693					
9056A	LCS 240-366306/16	Sulfate	52.2		mg/L	50.0	104	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107535-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575923	Date: 02/16/2019 12:51										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575923/7	Nitrate Nitrite as N	3.22		mg/L	3.00	107	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 02/13/2019 13:29 End Date: 02/13/2019 16:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				HardCC																								
MB 240-367926/1	1	T	13:29	X																								
LCS 240-367926/2	1	T	13:34	X																								
240-107535-2	1	T	13:39	X																								
240-107535-2 DU	1	T	13:44	X																								
240-107535-3	1	T	13:49	X																								
ZZZZZZ			13:55																									
ZZZZZZ			14:00																									
ZZZZZZ			14:05																									
ZZZZZZ			14:10																									
ZZZZZZ			14:16																									
ZZZZZZ			14:21																									
ZZZZZZ			14:26																									
ZZZZZZ			14:31																									
ZZZZZZ			14:37																									
ZZZZZZ			14:42																									
ZZZZZZ			14:47																									
ZZZZZZ			14:52																									
ZZZZZZ			14:57																									
ZZZZZZ			15:03																									
ZZZZZZ			15:08																									
ZZZZZZ			15:13																									
ZZZZZZ			15:18																									
ZZZZZZ			15:24																									
ZZZZZZ			15:29																									
ZZZZZZ			15:34																									
ZZZZZZ			15:39																									
ZZZZZZ			15:45																									
ZZZZZZ			15:50																									
ZZZZZZ			15:55																									
ZZZZZZ			16:00																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/05/2019 09:35 End Date: 02/05/2019 10:54

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			09:35																									
ZZZZZZ			09:46																									
LCS 240-366819/3	1	T	09:51	X																								
MB 240-366819/4	1	T	09:54	X																								
ZZZZZZ			10:00																									
ZZZZZZ			10:06																									
ZZZZZZ			10:11																									
ZZZZZZ			10:16																									
ZZZZZZ			10:20																									
ZZZZZZ			10:25																									
ZZZZZZ			10:30																									
240-107535-2	1	T	10:34	X																								
ZZZZZZ			10:35																									
240-107535-3	1	T	10:39	X																								
ZZZZZZ			10:44																									
ZZZZZZ			10:52																									
ZZZZZZ			10:54																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 02/01/2019 12:55 End Date: 02/01/2019 12:55

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-366480/1	1	T	12:55	X																								
LCS 240-366480/2	1	T	12:55	X																								
240-107535-2	1	T	12:55	X																								
240-107535-3 DU	1	T	12:55	X																								
240-107535-3	1	T	12:55	X																								
ZZZZZZ			12:55																									
ZZZZZZ			12:55																									
ZZZZZZ			12:55																									
ZZZZZZ			12:55																									
ZZZZZZ			12:55																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 08/07/2018 12:13 End Date: 08/07/2018 15:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339523/1 IC	1		12:13	X																								
STD2 240-339523/2 IC	1		12:34	X																								
STD3 240-339523/3 IC	1		12:55	X																								
STD4 240-339523/4 IC	1		13:16	X																								
STD5 240-339523/5 ICRT	1		13:36	X																								
STD6 240-339523/6 IC	1		13:57	X																								
STD7 240-339523/7 IC	1		14:18	X																								
STD8 240-339523/8 IC	1		14:39	X																								
STD9 240-339523/9 IC	1		14:59	X																								
ICV 240-339523/10	1		15:20	X																								
ICB 240-339523/11	1		15:41	X																								

Prep Types:
=

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 01/31/2019 13:11 End Date: 01/31/2019 21:28

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
CCV 240-366306/1			13:11																										
CCB 240-366306/2			13:32																										
ZZZZZZ			13:53																										
ZZZZZZ			14:13																										
ZZZZZZ			14:34																										
ZZZZZZ			14:55																										
ZZZZZZ			15:15																										
ZZZZZZ			15:36																										
ZZZZZZ			15:57																										
ZZZZZZ			16:17																										
CCV 240-366306/13	1		17:20		X																								
CCB 240-366306/14	1		17:40		X																								
MB 240-366306/15	1	T	18:01		X																								
LCS 240-366306/16	1	T	18:22		X																								
240-107535-2	1	T	19:24	X																									
240-107535-2	5	T	19:45		X																								
240-107535-3	1	T	20:05	X	X																								
240-107535-3 MS	1	T	20:26	X	X																								
240-107535-3 MSD	1	T	20:47	X	X																								
CCV 240-366306/24	1		21:08		X																								
CCB 240-366306/25	1		21:28		X																								

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107535-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/16/2019 12:45 End Date: 02/16/2019 13:21

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575923/1	1		12:45	X																								
ICB 490-575923/2	1		12:46	X																								
CCV 490-575923/3	1		12:47	X																								
CCV 490-575923/4	1		12:48	X																								
CCB 490-575923/5	1		12:49	X																								
MB 490-575923/6	1	T	12:50	X																								
LCS 490-575923/7	1	T	12:51	X																								
ZZZZZZ			12:53																									
ZZZZZZ			12:54																									
ZZZZZZ			12:55																									
ZZZZZZ			12:56																									
ZZZZZZ			12:57																									
ZZZZZZ			12:58																									
240-107535-2	1	T	12:59	X																								
240-107535-3	1	T	13:01	X																								
ZZZZZZ			13:02																									
ZZZZZZ			13:03																									
ZZZZZZ			13:04																									
ZZZZZZ			13:05																									
CCV 490-575923/20	1		13:06	X																								
CCB 490-575923/21	1		13:08	X																								
ZZZZZZ			13:09																									
ZZZZZZ			13:10																									
ZZZZZZ			13:11																									
ZZZZZZ			13:12																									
ZZZZZZ			13:13																									
ZZZZZZ			13:14																									
ZZZZZZ			13:16																									
ZZZZZZ			13:17																									
ZZZZZZ			13:18																									
ZZZZZZ			13:19																									
CCV 490-575923/32			13:20																									
CCB 490-575923/33			13:21																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107535-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/07/2019 10:25 End Date: 02/07/2019 10:25

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-269673/1	1	T	10:25	X																								
ZZZZZZ			10:25																									
ZZZZZZ			10:25																									
ZZZZZZ			10:25																									
ZZZZZZ			10:25																									
ZZZZZZ			10:25																									
240-107535-2	1	T	10:25	X																								
240-107535-3	1	T	10:25	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 367926 Batch Start Date: 02/13/19 13:29 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 02/13/19 16:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCHARDNESS 00031		
MB 240-367926/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-367926/2		2340C-2011		25 mL	25 mL	6.60 mL	25 mL		
240-107535-G-2	MRC-MW153A-013019	2340C-2011	T	5 mL	25 mL	2.00 mL			
240-107535-G-2 DU	MRC-MW153A-013019	2340C-2011	T	5 mL	25 mL	1.90 mL			
240-107535-G-3	MRC-MW139B-013019	2340C-2011	T	25 mL	25 mL	1.45 mL			

Batch Notes	
Batch Comment	BEAKERS--4010980
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C9, E3
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366819 Batch Start Date: 02/05/19 09:35 Batch Analyst: Carson, Monica

Batch Method: 2320B-2011 Batch End Date: 02/05/19 11:35

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-366819/3		2320B-2011		InitialAmount is blank	10 mL				
MB 240-366819/4		2320B-2011		InitialAmount is blank					
240-107535-H-2	MRC-MW153A-013019	2320B-2011	T	InitialAmount is blank					
240-107535-H-3	MRC-MW139B-013019	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4- 4005008
pH Buffer 2 ID	7- 4017506
pH Buffer 3 ID	10- 3892955
pH Buffer 4 ID	12- 3891579
Nominal Amount Used	10 mL
pH Meter ID	SEVERUS
Probe ID	WCP 137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366480 Batch Start Date: 02/01/19 12:55 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date: 02/04/19 17:07

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-366480/1		2540 C-2011			3.7076 g	100 mL	3.7078 g	3.7078 g	0 g
LCS 240-366480/2		2540 C-2011			3.7648 g	100 mL	3.7847 g	3.7850 g	0 g
240-107535-H-2	MRC-MW153A-013019	2540 C-2011	T	723 umhos/cm	3.2737 g	100 mL	3.3307 g	3.3308 g	0 g
240-107535-H-3 DU	MRC-MW139B-013019	2540 C-2011	T	340 umhos/cm	3.6437 g	100 mL	3.6640 g	3.6639 g	0 g
240-107535-H-3	MRC-MW139B-013019	2540 C-2011	T	340 umhos/cm	3.7466 g	100 mL	3.7672 g	3.7674 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 240-366480/1		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0002 g	0.0002 g	N/A g
LCS 240-366480/2		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0199 g	0.0202 g	N/A g
240-107535-H-2	MRC-MW153A-013019	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.057 g	0.0571 g	N/A g
240-107535-H-3 DU	MRC-MW139B-013019	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0203 g	0.0202 g	N/A g
240-107535-H-3	MRC-MW139B-013019	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0206 g	0.0208 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00038		
MB 240-366480/1		2540 C-2011		N/A g	100 mL	OK			
LCS 240-366480/2		2540 C-2011		N/A g	100 mL	OK	100 mL		
240-107535-H-2	MRC-MW153A-013019	2540 C-2011	T	N/A g	100 mL	OK			
240-107535-H-3 DU	MRC-MW139B-013019	2540 C-2011	T	N/A g	100 mL	OK			
240-107535-H-3	MRC-MW139B-013019	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366480 Batch Start Date: 02/01/19 12:55 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date: 02/04/19 17:07

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/04/2019 13:33
Date/Time - Out - CW (WT2)	02/04/2019 14:53
Temperature - Start - CW (WT2) - Correct	180 Celsius
Temperature - End - CW (WT2) - Correct	181 Celsius
Temperature - Start-CW(WT2) -Uncorrected	180 Celsius
Temperature - End-CW(WT2) -Uncorrected	181 Celsius
Temperature - Start - Corrected	105 Celsius
Temperature - End - Corrected	105 Celsius
Date/Time - In	02/01/2019 13:21
Date/Time - Out	02/04/2019 09:43
Filter ID	60020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O06
Thermometer ID - Low Temperature	84922
Thermometer ID	181417084
Temperature - Start - Uncorrected	105 Celsius
Temperature - End - Uncorrected	105 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/04/2019 09:44 No Unit
Weight(WT1) Date/Time Out	02/04/2019 11:37
Weight(WT1) Start Temp	182 Celsius
Weight(WT1) Temp Out	181 Celsius
Uncorrected Weight(WT1) Start Temp	182 Celsius
Uncorrected Weight(WT1) Temp Out	181 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339523/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339523/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339523/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339523/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339523/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339523/6 IC		300.0		5 mL	2 mL				
STD7 240-339523/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339523/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339523/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366306 Batch Start Date: 01/31/19 13:11 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICSOLNA1 00018	WCICSOLNB1 00018			
240-107535-E-2	MRC-MW153A-013019	300.0 & 9056A	T	5 mL					
240-107535-E-2	MRC-MW153A-013019	300.0 & 9056A	T	5 mL					
240-107535-E-3	MRC-MW139B-013019	300.0 & 9056A	T	5 mL					
240-107535-E-3 MS	MRC-MW139B-013019	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-107535-E-3 MSD	MRC-MW139B-013019	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICLCS 00669			
ICV 240-339523/10		9056A		5 mL	1.0 mL	5 mL			
ICB 240-339523/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366306 Batch Start Date: 01/31/19 13:11 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICSOLNA1 00018	WCICSOLNB1 00018			
240-107535-E-2	MRC-MW153A-013019	300.0 & 9056A	T	5 mL					
240-107535-E-2	MRC-MW153A-013019	300.0 & 9056A	T	5 mL					
240-107535-E-3	MRC-MW139B-013019	300.0 & 9056A	T	5 mL					
240-107535-E-3 MS	MRC-MW139B-013019	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-107535-E-3 MSD	MRC-MW139B-013019	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366306 Batch Start Date: 01/31/19 13:11 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00858	WCICLCS 00693			
CCV 240-366306/13		9056A		5 mL	5 mL				
CCB 240-366306/14		9056A		5 mL					
MB 240-366306/15		9056A		5 mL					
LCS 240-366306/16		9056A		5 mL		5 mL			
CCV 240-366306/24		9056A		5 mL	5 mL				
CCB 240-366306/25		9056A		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107535-1

SDG No.:

Batch Number: 575923 Batch Start Date: 02/16/19 12:45 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/16/19 13:23

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575923/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575923/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575923/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575923/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575923/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575923/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575923/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
240-107535-F-2	MRC-MW153A-013019	SM 4500 NO3 F	T	50 mL	50 mL				7.44
240-107535-F-3	MRC-MW139B-013019	SM 4500 NO3 F	T	50 mL	50 mL				8.6
CCV 490-575923/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575923/21		SM 4500 NO3 F		50 mL	50 mL				

Batch Notes	
Acid used for pH adjustment	4547067
Base used for pH adjustment	4273883
Batch Comment	cent tubes 809161; pH probe VVZ10915; pH meter AB92340683
Buffer Reagent ID	4832283
Carrier Identification	DI water
Color Reagent ID	4832299
Filter ID	180611314
Pipette/Syringe/Dispenser ID	26061004, 26121028

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TETRA TECH **INTERNAL CORRESPONDENCE**

TO: **M. MARTIN** **DATE:** **MAY 2, 2019**

FROM: **MICHELLE L. WOEBER** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC & INORGANIC DATA VALIDATION – VOC/PCB HOMOLOGS/METALS/ MISCELLANEOUS**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
BLOCK E/F WASTE
SDGs 240-107638-1 & 240-107796-1

SAMPLES: SDG 240-107638-1

2/Aqueous/VOC

MRC-MW151A-020419 TB-020419

1/Aqueous/PCB Homologs/Metals/Miscellaneous

MRC-MW151A-020419

SDG 240-107796-1

6/Aqueous/VOC

MRC-DUP01-020619	MRC-MW138B-020619	MRC-MW141B-020619
MRC-MW142B-020619	MRC-MW158A-020619	TB-020619

1/Aqueous/PCB Homologs

MRC-MW158A-020619

5/Aqueous/Metals/Miscellaneous

MRC-DUP01-020619	MRC-MW138B-020619	MRC-MW141B-020619
MRC-MW142B-020619	MRC-MW158A-020619	

Overview

The sample set for LMC-MRC, Block E/F Waste, SDGs 240-107638-1 & 240-107796-1 consisted of six (6) aqueous environmental samples and two (2) trip blanks. The six (6) aqueous samples were analyzed for Volatile Organic Compounds (VOC), metals, and miscellaneous parameters (alkalinity, bromide, hardness, nitrate/nitrite, salinity, sulfate, and Total Dissolved Solids (TDS). The trip blanks were analyzed for VOC only. One field duplicate sample pair was included in this SDG: MRC-DUP01-020619/MRC-MW142B-020619.

The samples were collected by Tetra Tech, Inc. on February 2 & 4, 2019 and analyzed by TestAmerica, Inc. All analyses were conducted in accordance with SW-846 Methods 8260C, 6020A, and 9056A, EPA Methods 680 and 300.0, and Standard Methods 2320B-2011, 2340C-2011, SM 2520B, 2540C-2011 and SM 4500 NO3 F analytical and reporting protocols.

The data contained in this SDG were validated with regard to for the following parameters: data completeness, holding times and sample preservation, GC/MS tuning, initial/continuing calibrations, ICP interference check sample results, laboratory preparation/method/trip blank results, surrogate spike recoveries, laboratory control sample/laboratory control sample duplicate results, internal standard areas

and recoveries, laboratory duplicate precision, and detection limits. Areas of concern are listed below.

Major

- As stated in the laboratory case narrative, 2-chloroethyl vinyl ether cannot be reliably recovered in an acid preserved samples. All samples in these SDGs were acid preserved. The non-detected results reported for 2-chloroethyl vinyl ether were qualified as rejected, (UR).

Minor

- The VOC continuing calibration performed on instrument A3UX15 on 02/07/2019 @ 09:17 had a Percent Difference (%D) for hexachlorobutadiene and a Percent Drift (%Drift) for bromoform which exceeded the 20% quality control limit. The non-detected results reported for these compounds in the affected sample, TB-020419, were qualified as estimated, (UJ).

- The VOC continuing calibrations performed on instrument A3UX15 on 02/08/2019 @ 12:55 and 13:39 had %Ds for vinyl acetate, 2-chloroethyl vinyl ether, 4-methyl-2-pentanone, trans-1,3-dichloropropene, 2-hexanone, 1,1,2,2-tetrachloroethane, 1,2-dibromo-3-chloropropane, naphthalene, and tert-amyl methyl ether, and a %Drift for bromoform which exceeded the 20% quality control limit. The non-detected results reported for these compounds in the affected sample, MRC-MW151A-020419, were qualified as estimated, (UJ).

- The VOC continuing calibrations performed on instrument A3UX15 on 02/11/2019 @ 10:51 and 11:35 had %Ds for carbon disulfide, tert-butyl alcohol, vinyl acetate, 2-chloroethyl vinyl ether, cis-1,3-dichloropropene, 4-methyl-2-pentanone, trans-1,3-dichloropropene, 2-hexanone, chlorodibromomethane, 1,1,2,2-tetrachloroethane, 1,2-dibromo-3-chloropropane, and tert-amyl methyl ether, and a %Drift for bromoform which exceeded the 20% quality control limit. The non-detected results reported for these compounds in the affected sample, TB-020619, were qualified as estimated, (UJ).

- The VOC continuing calibrations performed on instrument A3UX15 on 02/12/2019 @ 10:48 and 11:32 had %Ds for carbon disulfide, vinyl acetate, 2-chloroethyl vinyl ether, trans-1,3-dichloropropene, 2-hexanone, chlorodibromomethane, 1,1,2,2-tetrachloroethane, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, ethyl tert-butyl ether, and tert-amyl methyl ether, and a %Drift for bromoform which exceeded the 20% quality control limit. The non-detected results reported for these compounds in the affected samples, MRC-MW138B-020619, MRC-MW141B-020619, and MRC-MW142B-020619, were qualified as estimated, (UJ).

- The VOC continuing calibrations performed on instrument A3UX15 on 02/13/2019 @ 11:48 and 12:32 had %Ds for carbon disulfide, methylene chloride, 2-chloroethyl vinyl ether, trans-1,3-dichloropropene, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, 1,2,3-trichlorobenzene, ethyl tert-butyl ether, and tert-amyl methyl ether, and a %Drift for bromoform which exceeded the 20% quality control limit. The non-detected results reported for these compounds in the affected samples, MRC-DUP01-020619 and MRC-MW158A-020619 were qualified as estimated, (UJ).

- The PCB homolog closing continuing calibration performed on instrument CMSX on 02/21/2019 @ 16:43 had a %D for decachlorobiphenyl above the 20% quality control criterion. The non-detected results reported for decachlorobiphenyl and nonachlorobiphenyls in the affected samples, MRC-MW151A-020419 and MRC-MW158A-020619, were qualified as estimated, (UJ).

- Trichloroethene was detected in the trip blank, TB-020419, below the Reporting Limit (RL). The detected result reported for trichloroethene below the RL in the associated sample, MRC-MW151A-020419, was qualified as non-detected, (U).

- Nitrate/nitrite was detected in the closing Continuing Calibration Blank (CCB) below the RL. All samples were affected. The detected result reported for this parameter below the RL in sample MRC-MW158A-020619 was qualified as non-detected, (U).

- The Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses performed on sample MRC-MW141B-020619 had Percent Recoveries (%Rs) for tert-butyl alcohol, chlorodibromomethane, and bromoform below the lower quality control limits. In addition, several Relative Percent Differences (RPDs) were outside the quality control criteria. No action was taken for the noncompliant RPDs because the MS/MSD %Rs were acceptable. The non-detected results reported for tert-butyl alcohol, chlorodibromomethane, and bromoform were qualified as estimated, (UJ), in the parent sample.

- Detected results reported below the RL but above the Method Detection Limit (MDL) were qualified as estimated, (J).

Notes

The laboratory reported results for iron and manganese via SW-846 6010C. These results were not used in the data validation because these analytes were reported via SW-846 6020A and were removed from the database.

The following samples were analyzed at dilutions:

Sample	Fraction/Parameter	Dilution
MRC-DUP01-020619	VOC	5X
MRC-MW138B-020619	VOC	25X
MRC-MW141B-020619	VOC	1000X
MRC-MW142B-020619	VOC	4X
MRC-MW158A-020619	Sulfate	5X

The RLs of the non-detected results were elevated in the VOC fraction.

Non-detected results were reported to the MDL.

Executive Summary

Laboratory Performance: VOC continuing calibration %Ds and %Drifts exceeded 20%. A PCB homolog continuing calibration %D exceeded 20%. Nitrate/nitrite was detected in a CCB.

Other Factors Affecting Data Quality: 2-Chloroethylvinyl ether results were rejected due to sample preservation. Trichloroethene was detected in a trip blank. MS/MSD %Rs were low for three compounds. Some samples were analyzed at dilutions. Results below the RL were estimated.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Review" (January 2017) and the "National Functional Guidelines for Inorganic Review" (August 2017). The text of this report has been formulated to address only those areas affecting data quality.

Michelle L. Woeber

Tetra Tech, Inc.
Michelle L. Woeber
Chemist/Data Validator

Joseph A. Samchuck

Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08784	NSAMPLE	MRC-MW151A-020419			TB-020419		
SDG: 240-107638-1	LAB_ID	240-107638-2			240-107638-1		
FRACTION: OV	SAMP_DATE	2/4/2019			2/4/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U		0.14	U	
1,1,1-TRICHLOROETHANE		0.24	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	UJ	C	0.13	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U		0.41	U	
1,1-DICHLOROETHANE		0.17	U		0.17	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.14	U		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	U		0.54	U	
1,2,3-TRICHLOROPROPANE		0.24	U		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	U		0.14	U	
1,2,4-TRICHLOROBENZENE		0.26	U		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	UJ	C	0.91	U	
1,2-DIBROMOETHANE		0.12	U		0.12	U	
1,2-DICHLOROBENZENE		0.15	U		0.15	U	
1,2-DICHLOROETHANE		0.21	U		0.21	U	
1,2-DICHLOROPROPANE		0.15	U		0.15	U	
1,3-DICHLOROBENZENE		0.15	U		0.15	U	
1,3-DICHLOROPROPANE		0.21	U		0.21	U	
1,4-DICHLOROBENZENE		0.16	U		0.16	U	
2,2-DICHLOROPROPANE		0.31	U		0.31	U	
2-BUTANONE		1.2	U		1.2	U	
2-CHLOROETHYL VINYL ETHER		0.26	UR	M	0.26	UR	M
2-CHLOROTOLUENE		0.15	U		0.15	U	
2-HEXANONE		0.54	UJ	C	0.54	U	
4-CHLOROTOLUENE		0.09	U		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U		0.13	U	
4-METHYL-2-PENTANONE		0.42	UJ	C	0.42	U	
ACETONE		5.4	U		5.4	U	
BENZENE		0.13	U		0.13	U	
BROMOBENZENE		0.12	U		0.12	U	
BROMOCHLOROMETHANE		0.14	U		0.14	U	
BROMODICHLOROMETHANE		0.17	U		0.17	U	
BROMOFORM		0.76	UJ	C	0.76	UJ	C
BROMOMETHANE		0.42	U		0.42	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW151A-020419			TB-020419		
SDG: 240-107638-1	LAB_ID	240-107638-2			240-107638-1		
FRACTION: OV	SAMP_DATE	2/4/2019			2/4/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.28	U		0.28	U	
CARBON TETRACHLORIDE		0.26	U		0.26	U	
CHLOROBENZENE		0.14	U		0.14	U	
CHLORODIBROMOMETHANE		0.39	U		0.39	U	
CHLOROETHANE		0.83	U		0.83	U	
CHLOROFORM		0.13	U		0.13	U	
CHLOROMETHANE		0.2	U		0.2	U	
CIS-1,2-DICHLOROETHENE		0.16	U		0.16	U	
CIS-1,3-DICHLOROPROPENE		0.61	U		0.61	U	
DIBROMOMETHANE		0.09	U		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	U		0.35	U	
DIISOPROPYL ETHER		0.17	U		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	U		0.15	U	
ETHYLBENZENE		0.11	U		0.11	U	
HEXACHLOROBUTADIENE		0.83	U		0.83	UJ	C
ISOPROPYLBENZENE		0.09	U		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U		0.07	U	
METHYLENE CHLORIDE		2.6	U		2.6	U	
NAPHTHALENE		0.32	U		0.32	U	
N-BUTYLBENZENE		0.14	U		0.14	U	
N-PROPYLBENZENE		0.15	U		0.15	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U	
STYRENE		0.1	U		0.1	U	
TERT-AMYL METHYL ETHER		0.11	UJ	C	0.11	U	
TERT-BUTYLBENZENE		0.14	U		0.14	U	
TERTIARY-BUTYL ALCOHOL		1.7	U		1.7	U	
TETRACHLOROETHENE		0.15	U		0.15	U	
TOLUENE		0.14	U		0.14	U	
TOTAL XYLENES		0.15	U		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.67	UJ	C	0.67	U	
TRICHLOROETHENE		0.28	U	B	0.1	J	P
TRICHLOROFLUOROMETHANE		0.45	U		0.45	U	
VINYL ACETATE		0.19	UJ	C	0.19	U	
VINYL CHLORIDE		0.2	U		0.2	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW151A-020419		
SDG: 240-107638-1	LAB_ID	240-107638-2		
FRACTION: PCB	SAMP_DATE	2/4/2019		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.069	UJ	C
DICHLOROBIPHENYLS		0.0054	U	
HEPTACHLOROBIPHENYLS		0.03	U	
HEXACHLOROBIPHENYLS		0.015	U	
MONOCHLOROBIPHENYLS		0.0055	U	
NONACHLOROBIPHENYLS		0.049	UJ	C
OCTACHLOROBIPHENYLS		0.038	U	
PENTACHLOROBIPHENYLS		0.014	U	
TETRACHLOROBIPHENYLS		0.013	U	
TRICHLOROBIPHENYLS		0.0064	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW151A-020419		
SDG: 240-107638-1	LAB_ID	240-107638-2		
FRACTION: M	SAMP_DATE	2/4/2019		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ALUMINUM		57		
ANTIMONY		0.66	J	P
ARSENIC		0.75	U	
BARIUM		57		
BERYLLIUM		1.7		
CADMIUM		0.22	J	P
CALCIUM		13000		
CHROMIUM		0.98	U	
COBALT		24		
COPPER		170		
IRON		47	U	
LEAD		0.45	U	
MAGNESIUM		3500		
MANGANESE		75		
NICKEL		34		
POTASSIUM		3900		
SELENIUM		0.89	U	
SILVER		0.053	U	
SODIUM		38000		
THALLIUM		0.2	U	
VANADIUM		0.82	U	
ZINC		98		

PROJ_NO: 08784	NSAMPLE	MRC-MW151A-020419					
SDG: 240-107638-1	LAB_ID	240-107638-2					
FRACTION: MISC	SAMP_DATE	2/4/2019					
MEDIA: WATER	QC_TYPE	NM					
	UNITS	MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		22					
BROMIDE		0.044	U				
HARDNESS AS CACO3		52					
NITRITE/NITRATE-N		0.32					
SALINITY					2	U	
SULFATE		57					
TOTAL DISSOLVED SOLIDS		200					

PROJ_NO: 08784	NSAMPLE	MRC-DUP01-020619			MRC-MW138B-020619			MRC-MW141B-020619			MRC-MW142B-020619		
SDG: 240-107796-1	LAB_ID	240-107796-6			240-107796-2			240-107796-3			240-107796-4		
FRACTION: OV	SAMP_DATE	2/6/2019			2/6/2019			2/6/2019			2/6/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	MRC-MW142B-020619											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.7	U		3.5	U		140	U		0.56	U	
1,1,1-TRICHLOROETHANE		1.2	U		6	U		240	U		0.96	U	
1,1,2,2-TETRACHLOROETHANE		0.65	U		3.3	UJ	C	130	UJ	C	0.52	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		2.1	U		10	U		410	U		1.6	U	
1,1-DICHLOROETHANE		0.85	U		4.3	U		170	U		0.68	U	
1,1-DICHLOROETHENE		0.95	U		4.8	U		190	U		0.76	U	
1,1-DICHLOROPROPENE		0.7	U		3.5	U		140	U		0.56	U	
1,2,3-TRICHLOROBENZENE		2.7	UJ	C	14	U		540	U		2.2	U	
1,2,3-TRICHLOROPROPANE		1.2	U		6	U		240	U		0.96	U	
1,2,3-TRIMETHYLBENZENE		0.7	U		3.5	U		140	U		0.56	U	
1,2,4-TRICHLOROBENZENE		1.3	U		6.5	UJ	C	260	UJ	C	1	UJ	C
1,2,4-TRIMETHYLBENZENE		0.35	U		1.8	U		70	U		0.28	U	
1,2-DIBROMO-3-CHLOROPROPANE		4.6	U		23	UJ	C	910	UJ	C	3.6	UJ	C
1,2-DIBROMOETHANE		0.6	U		3	U		120	U		0.48	U	
1,2-DICHLOROBENZENE		0.75	U		3.8	U		150	U		0.6	U	
1,2-DICHLOROETHANE		1.1	U		5.3	U		210	U		0.84	U	
1,2-DICHLOROPROPANE		0.75	U		3.8	U		150	U		0.6	U	
1,3-DICHLOROBENZENE		0.75	U		3.8	U		150	U		0.6	U	
1,3-DICHLOROPROPANE		1.1	U		5.3	U		210	U		0.84	U	
1,4-DICHLOROBENZENE		0.8	U		4	U		160	U		0.64	U	
2,2-DICHLOROPROPANE		1.6	U		7.8	U		310	U		1.2	U	
2-BUTANONE		5.8	U		29	U		1200	U		4.6	U	
2-CHLOROETHYL VINYL ETHER		1.3	UR	M	6.5	UR	M	260	UR	M	1	UR	M
2-CHLOROTOLUENE		0.75	U		3.8	U		150	U		0.6	U	
2-HEXANONE		2.7	U		14	UJ	C	540	UJ	C	2.2	UJ	C
4-CHLOROTOLUENE		0.45	U		2.3	U		90	U		0.36	U	
4-ISOPROPYLTOLUENE		0.65	U		3.3	U		130	U		0.52	U	
4-METHYL-2-PENTANONE		2.1	U		11	U		420	U		1.7	U	
ACETONE		27	U		140	U		5400	U		22	U	
BENZENE		0.65	U		3.3	U		130	U		0.52	U	
BROMOBENZENE		0.6	U		3	U		120	U		0.48	U	
BROMOCHLOROMETHANE		0.7	U		3.5	U		140	U		0.56	U	
BROMODICHLOROMETHANE		0.85	U		4.3	U		170	U		0.68	U	
BROMOFORM		3.8	UJ	C	19	UJ	C	760	UJ	CD	3	UJ	C
BROMOMETHANE		2.1	U		11	U		420	U		1.7	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW158A-020619			TB-020619		
SDG: 240-107796-1	LAB_ID	240-107796-5			240-107796-1		
FRACTION: OV	SAMP_DATE	2/6/2019			2/6/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U		0.14	U	
1,1,1-TRICHLOROETHANE		0.24	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	U		0.13	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U		0.41	U	
1,1-DICHLOROETHANE		0.17	U		0.17	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.14	U		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	UJ	C	0.54	U	
1,2,3-TRICHLOROPROPANE		0.24	U		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	U		0.14	U	
1,2,4-TRICHLOROBENZENE		0.26	U		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	U		0.91	UJ	C
1,2-DIBROMOETHANE		0.12	U		0.12	U	
1,2-DICHLOROBENZENE		0.15	U		0.15	U	
1,2-DICHLOROETHANE		0.21	U		0.21	U	
1,2-DICHLOROPROPANE		0.15	U		0.15	U	
1,3-DICHLOROBENZENE		0.15	U		0.15	U	
1,3-DICHLOROPROPANE		0.21	U		0.21	U	
1,4-DICHLOROBENZENE		0.16	U		0.16	U	
2,2-DICHLOROPROPANE		0.31	U		0.31	U	
2-BUTANONE		1.2	U		1.2	U	
2-CHLOROETHYL VINYL ETHER		0.26	UR	M	0.26	UR	M
2-CHLOROTOLUENE		0.15	U		0.15	U	
2-HEXANONE		0.54	U		0.54	UJ	C
4-CHLOROTOLUENE		0.09	U		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U		0.13	U	
4-METHYL-2-PENTANONE		0.42	U		0.42	UJ	C
ACETONE		5.4	U		5.4	U	
BENZENE		0.13	U		0.13	U	
BROMOBENZENE		0.12	U		0.12	U	
BROMOCHLOROMETHANE		0.14	U		0.14	U	
BROMODICHLOROMETHANE		0.17	U		0.17	U	
BROMOFORM		0.76	UJ	C	0.76	UJ	C
BROMOMETHANE		0.42	U		0.42	U	

PROJ_NO: 08784	NSAMPLE	MRC-DUP01-020619			MRC-MW138B-020619			MRC-MW141B-020619			MRC-MW142B-020619		
SDG: 240-107796-1	LAB_ID	240-107796-6			240-107796-2			240-107796-3			240-107796-4		
FRACTION: OV	SAMP_DATE	2/6/2019			2/6/2019			2/6/2019			2/6/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	MRC-MW142B-020619											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		1.4	UJ	C	7	UJ	C	280	UJ	C	1.1	UJ	C
CARBON TETRACHLORIDE		1.3	U		6.5	U		260	U		1	U	
CHLOROBENZENE		0.7	U		3.5	U		140	U		0.56	U	
CHLORODIBROMOMETHANE		2	U		9.8	UJ	C	390	UJ	CD	1.6	UJ	C
CHLOROETHANE		4.2	U		21	U		830	U		3.3	U	
CHLOROFORM		0.71	J	P	3.3	U		130	U		0.68	J	P
CHLOROMETHANE		1	U		5	U		200	U		0.8	U	
CIS-1,2-DICHLOROETHENE		7.3			4	U		180	J	P	7.7		
CIS-1,3-DICHLOROPROPENE		3.1	U		15	U		610	U		2.4	U	
DIBROMOMETHANE		0.45	U		2.3	U		90	U		0.36	U	
DICHLORODIFLUOROMETHANE		1.8	U		8.8	U		350	U		1.4	U	
DIISOPROPYL ETHER		0.85	U		4.3	U		170	U		0.68	U	
ETHYL TERT-BUTYL ETHER		0.75	UJ	C	3.8	UJ	C	150	UJ	C	0.6	UJ	C
ETHYLBENZENE		0.55	U		2.8	U		110	U		0.44	U	
HEXACHLOROBUTADIENE		4.2	UJ	C	21	UJ	C	830	UJ	C	3.3	UJ	C
ISOPROPYLBENZENE		0.45	U		2.3	U		90	U		0.36	U	
METHYL TERT-BUTYL ETHER		3.5	J	P	1.8	U		70	U		3.7	J	P
METHYLENE CHLORIDE		13	UJ	C	66	U		2600	U		10	U	
NAPHTHALENE		1.6	UJ	C	8	UJ	C	320	UJ	C	1.3	UJ	C
N-BUTYLBENZENE		0.7	U		3.5	U		140	U		0.56	U	
N-PROPYLBENZENE		0.75	U		3.8	U		150	U		0.6	U	
SEC-BUTYLBENZENE		0.65	U		3.3	U		130	U		0.52	U	
STYRENE		0.5	U		2.5	U		100	U		0.4	U	
TERT-AMYL METHYL ETHER		0.55	UJ	C	2.8	UJ	C	110	UJ	C	0.44	UJ	C
TERT-BUTYLBENZENE		0.7	U		3.5	U		140	U		0.56	U	
TERTIARY-BUTYL ALCOHOL		8.5	U		42	U		1700	UJ	D	6.8	U	
TETRACHLOROETHENE		0.75	U		3.8	U		150	U		0.6	U	
TOLUENE		0.7	U		3.5	U		140	U		0.56	U	
TOTAL XYLENES		0.75	U		3.8	U		150	U		0.6	U	
TRANS-1,2-DICHLOROETHENE		0.95	U		4.8	U		190	U		0.76	U	
TRANS-1,3-DICHLOROPROPENE		3.4	UJ	C	17	UJ	C	670	UJ	C	2.7	UJ	C
TRICHLOROETHENE		90			540			21000			86		
TRICHLOROFLUOROMETHANE		2.3	U		11	U		450	U		1.8	U	
VINYL ACETATE		0.95	U		4.8	UJ	C	190	UJ	C	0.76	UJ	C
VINYL CHLORIDE		1	U		5	U		200	U		0.8	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW158A-020619			TB-020619		
SDG: 240-107796-1	LAB_ID	240-107796-5			240-107796-1		
FRACTION: OV	SAMP_DATE	2/6/2019			2/6/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE	0.28	UJ	C	0.28	U	
CARBON TETRACHLORIDE	0.26	U		0.26	UJ	C
CHLOROBENZENE	0.14	U		0.14	U	
CHLORODIBROMOMETHANE	0.39	U		0.39	UJ	C
CHLOROETHANE	0.83	U		0.83	U	
CHLOROFORM	0.13	U		0.13	U	
CHLOROMETHANE	0.2	U		0.2	U	
CIS-1,2-DICHLOROETHENE	0.31	J	P	0.16	U	
CIS-1,3-DICHLOROPROPENE	0.61	U		0.61	UJ	C
DIBROMOMETHANE	0.09	U		0.09	U	
DICHLORODIFLUOROMETHANE	0.35	U		0.35	U	
DIISOPROPYL ETHER	0.17	U		0.17	U	
ETHYL TERT-BUTYL ETHER	0.15	UJ	C	0.15	U	
ETHYLBENZENE	0.11	U		0.11	U	
HEXACHLOROBUTADIENE	0.83	UJ	C	0.83	U	
ISOPROPYLBENZENE	0.09	U		0.09	U	
METHYL TERT-BUTYL ETHER	0.07	U		0.07	U	
METHYLENE CHLORIDE	2.6	UJ	C	2.6	U	
NAPHTHALENE	0.32	UJ	C	0.32	U	
N-BUTYLBENZENE	0.14	U		0.14	U	
N-PROPYLBENZENE	0.15	U		0.15	U	
SEC-BUTYLBENZENE	0.13	U		0.13	U	
STYRENE	0.1	U		0.1	U	
TERT-AMYL METHYL ETHER	0.11	UJ	C	0.11	UJ	C
TERT-BUTYLBENZENE	0.14	U		0.14	U	
TERTIARY-BUTYL ALCOHOL	1.7	U		1.7	UJ	C
TETRACHLOROETHENE	0.15	U		0.15	U	
TOLUENE	0.14	U		0.14	U	
TOTAL XYLENES	0.15	U		0.15	U	
TRANS-1,2-DICHLOROETHENE	0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE	0.67	UJ	C	0.67	UJ	C
TRICHLOROETHENE	1.3			0.1	U	
TRICHLOROFLUOROMETHANE	0.45	U		0.45	U	
VINYL ACETATE	0.19	U		0.19	UJ	C
VINYL CHLORIDE	0.2	U		0.2	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW158A-020619		
SDG: 240-107796-1	LAB_ID	240-107796-5		
FRACTION: PCB	SAMP_DATE	2/6/2019		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.07	UJ	C
DICHLOROBIPHENYLS		0.0054	U	
HEPTACHLOROBIPHENYLS		0.03	U	
HEXACHLOROBIPHENYLS		0.015	U	
MONOCHLOROBIPHENYLS		0.0056	U	
NONACHLOROBIPHENYLS		0.049	UJ	C
OCTACHLOROBIPHENYLS		0.038	U	
PENTACHLOROBIPHENYLS		0.014	U	
TETRACHLOROBIPHENYLS		0.013	U	
TRICHLOROBIPHENYLS		0.0065	U	

PROJ_NO: 08784	NSAMPLE	MRC-DUP01-020619			MRC-DUP01-020619-RE			MRC-MW138B-020619			MRC-MW138B-020619-RE		
SDG: 240-107796-1	LAB_ID	240-107796-6			240-107796-6			240-107796-2			240-107796-2		
FRACTION: M	SAMP_DATE	2/6/2019			2/6/2019			2/6/2019			2/6/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	MRC-MW142B-020619											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		140						420					
ANTIMONY		0.57	U					0.84	J	P			
ARSENIC		0.75	U					0.75	U				
BARIUM		70						86					
BERYLLIUM		1.6						1.5					
CADMIUM		0.21	U					0.21	J	P			
CALCIUM		19000						31000					
CHROMIUM		1.3	J	P				2.5					
COBALT		30						32					
COPPER		19						7.8					
IRON					2700						1700		
LEAD		0.66	J	P				1.1					
MAGNESIUM		2700						8900					
MANGANESE					160						120		
NICKEL		45						57					
POTASSIUM		22000						21000					
SELENIUM		0.89	U					0.89	U				
SILVER		0.073	J	P				0.053	U				
SODIUM		27000						94000					
THALLIUM		0.2	U					0.2	U				
VANADIUM		2.8	J	P				3.3	J	P			
ZINC		75						85					

PROJ_NO: 08784	NSAMPLE	MRC-MW141B-020619			MRC-MW141B-020619-RE			MRC-MW142B-020619			MRC-MW142B-020619-RE		
SDG: 240-107796-1	LAB_ID	240-107796-3			240-107796-3			240-107796-4			240-107796-4		
FRACTION: M	SAMP_DATE	2/6/2019			2/6/2019			2/6/2019			2/6/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		140						130					
ANTIMONY		0.57	U					0.57	U				
ARSENIC		0.75	U					0.75	U				
BARIUM		68						52					
BERYLLIUM		3.1						1.6					
CADMIUM		0.21	U					0.21	U				
CALCIUM		11000						19000					
CHROMIUM		0.98	U					1.4	J	P			
COBALT		48						30					
COPPER		15						20					
IRON					260						2700		
LEAD		0.45	U					0.63	J	P			
MAGNESIUM		4900						2700					
MANGANESE					94						160		
NICKEL		82						43					
POTASSIUM		17000						21000					
SELENIUM		0.89	U					0.89	U				
SILVER		0.053	U					0.056	J	P			
SODIUM		35000						26000					
THALLIUM		0.2	U					0.2	U				
VANADIUM		0.86	J	P				3	J	P			
ZINC		120						76					

PROJ_NO: 08784	NSAMPLE	MRC-MW158A-020619			MRC-MW158A-020619-RE		
SDG: 240-107796-1	LAB_ID	240-107796-5			240-107796-5		
FRACTION: M	SAMP_DATE	2/6/2019			2/6/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		380					
ANTIMONY		0.66	J	P			
ARSENIC		0.75	U				
BARIUM		77					
BERYLLIUM		0.31	U				
CADMIUM		0.21	U				
CALCIUM		180000					
CHROMIUM		2					
COBALT		1.6					
COPPER		13					
IRON					550		
LEAD		0.45	U				
MAGNESIUM		41000					
MANGANESE					120		
NICKEL		5.1					
POTASSIUM		18000					
SELENIUM		0.89	U				
SILVER		0.053	U				
SODIUM		52000					
THALLIUM		0.2	U				
VANADIUM		1.4	J	P			
ZINC		15	U				

PROJ_NO: 08784	NSAMPLE	MRC-DUP01-020619						MRC-MW138B-020619					
SDG: 240-107796-1	LAB_ID	240-107796-6						240-107796-2					
FRACTION: MISC	SAMP_DATE	2/6/2019						2/6/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	MRC-MW142B-020619			MRC-MW142B-020619								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		61						69					
BROMIDE		0.044	U					0.24	J	P			
HARDNESS AS CACO3		76						120					
NITRITE/NITRATE-N		0.31						0.22					
SALINITY					2	U					2	U	
SULFATE		11						22					
TOTAL DISSOLVED SOLIDS		200						400					

PROJ_NO: 08784	NSAMPLE	MRC-MW141B-020619						MRC-MW142B-020619					
SDG: 240-107796-1	LAB_ID	240-107796-3						240-107796-4					
FRACTION: MISC	SAMP_DATE	2/6/2019						2/6/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY	29						60					
BROMIDE	0.37	J	P				0.044	U				
HARDNESS AS CACO3	56						76					
NITRITE/NITRATE-N	0.86						0.3					
SALINITY				2	U					2	U	
SULFATE	17						12					
TOTAL DISSOLVED SOLIDS	190						190					

PROJ_NO: 08784	NSAMPLE	MRC-MW158A-020619					
SDG: 240-107796-1	LAB_ID	240-107796-5					
FRACTION: MISC	SAMP_DATE	2/6/2019					
MEDIA: WATER	QC_TYPE	NM					
	UNITS	MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		290					
BROMIDE		0.044	U				
HARDNESS AS CACO3		720					
NITRITE/NITRATE-N		0.093	U	A			
SALINITY					2	U	
SULFATE		380					
TOTAL DISSOLVED SOLIDS		980					

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: TB-020419 | Lab Sample ID: 240-107638-1

Matrix: Water | Lab File ID: UXC8729.D

Analysis Method: 8260C | Date Collected: 02/04/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/07/2019 19:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367131 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: TB-020419 | Lab Sample ID: 240-107638-1

Matrix: Water | Lab File ID: UXC8729.D

Analysis Method: 8260C | Date Collected: 02/04/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/07/2019 19:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367131 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: TB-020419 | Lab Sample ID: 240-107638-1

Matrix: Water | Lab File ID: UXC8729.D

Analysis Method: 8260C | Date Collected: 02/04/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/07/2019 19:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367131 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	86		70-123
1868-53-7	Dibromofluoromethane (Surr)	85		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: MRC-MW151A-020419 | Lab Sample ID: 240-107638-2

Matrix: Water | Lab File ID: UXC8742.D

Analysis Method: 8260C | Date Collected: 02/04/2019 14:20

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 15:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: MRC-MW151A-020419 | Lab Sample ID: 240-107638-2

Matrix: Water | Lab File ID: UXC8742.D

Analysis Method: 8260C | Date Collected: 02/04/2019 14:20

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 15:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.28	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: MRC-MW151A-020419 | Lab Sample ID: 240-107638-2

Matrix: Water | Lab File ID: UXC8742.D

Analysis Method: 8260C | Date Collected: 02/04/2019 14:20

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 15:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		70-121
460-00-4	4-Bromofluorobenzene (Surr)	84		59-120
2037-26-5	Toluene-d8 (Surr)	90		70-123
1868-53-7	Dibromofluoromethane (Surr)	89		75-128

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107638-1

SDG No.:

Client Sample ID: MRC-MW151A-020419 | Lab Sample ID: 240-107638-2

Matrix: Water | Lab File ID: xb2039.D

Analysis Method: 680 | Date Collected: 02/04/2019 14:20

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1009.1(mL) | Date Analyzed: 02/21/2019 11:01

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0055	U	0.099	0.0055
2051-24-3	DCB Decachlorobiphenyl	0.069	U	0.50	0.069
25512-42-9	Dichlorobiphenyl	0.0054	U	0.099	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0064	U	0.099	0.0064

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	56		25-113

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW151A-020419 Lab Sample ID: 240-107638-2

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG ID.:

Matrix: Water Date Sampled: 02/04/2019 14:20

Reporting Basis: WET Date Received: 02/05/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	26	200	26	ug/L	U		1	6010C
7439-96-5	Manganese	73	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	57	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	57	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.7	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.22	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	24	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	0.98	2.0	0.98	ug/L	U		1	6020A
7440-50-8	Copper	170	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	47	100	47	ug/L	U		1	6020A
7439-96-5	Manganese	75	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	34	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.66	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	98	20	15	ug/L			1	6020A
7440-70-2	Calcium	13000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	3900	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	3500	1000	200	ug/L			1	6020A
7440-23-5	Sodium	38000	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW151A-020419 Lab Sample ID: 240-107638-2

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG ID.:

Matrix: Water Date Sampled: 02/04/2019 14:20

Reporting Basis: WET Date Received: 02/05/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	52	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	22	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	200	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	57	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW151A-020419 Lab Sample ID: 240-107638-2

Lab Name: TestAmerica Nashville Job No.: 240-107638-1

SDG ID.:

Matrix: Water Date Sampled: 02/04/2019 14:20

Reporting Basis: WET Date Received: 02/05/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.32	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW151A-020419 Lab Sample ID: 240-107638-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-107638-1

SDG ID.:

Matrix: Water Date Sampled: 02/04/2019 14:20

Reporting Basis: WET Date Received: 02/05/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: TB-020619 | Lab Sample ID: 240-107796-1

Matrix: Water | Lab File ID: UXC8786.D

Analysis Method: 8260C | Date Collected: 02/06/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 19:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: TB-020619 | Lab Sample ID: 240-107796-1

Matrix: Water | Lab File ID: UXC8786.D

Analysis Method: 8260C | Date Collected: 02/06/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 19:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: TB-020619 | Lab Sample ID: 240-107796-1

Matrix: Water | Lab File ID: UXC8786.D

Analysis Method: 8260C | Date Collected: 02/06/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 19:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-121
460-00-4	4-Bromofluorobenzene (Surr)	82		59-120
2037-26-5	Toluene-d8 (Surr)	88		70-123
1868-53-7	Dibromofluoromethane (Surr)	92		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW138B-020619 | Lab Sample ID: 240-107796-2

Matrix: Water | Lab File ID: UXC8796.D

Analysis Method: 8260C | Date Collected: 02/06/2019 10:19

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 13:43

Soil Aliquot Vol: | Dilution Factor: 25

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.5	U	25	3.5
71-55-6	1,1,1-Trichloroethane	6.0	U	25	6.0
79-34-5	1,1,2,2-Tetrachloroethane	3.3	U	25	3.3
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U	25	10
75-34-3	1,1-Dichloroethane	4.3	U	25	4.3
75-35-4	1,1-Dichloroethene	4.8	U	25	4.8
563-58-6	1,1-Dichloropropene	3.5	U	25	3.5
87-61-6	1,2,3-Trichlorobenzene	14	U	25	14
96-18-4	1,2,3-Trichloropropane	6.0	U	25	6.0
526-73-8	1,2,3-Trimethylbenzene	3.5	U	130	3.5
120-82-1	1,2,4-Trichlorobenzene	6.5	U	25	6.5
95-63-6	1,2,4-Trimethylbenzene	1.8	U	25	1.8
96-12-8	1,2-Dibromo-3-Chloropropane	23	U	50	23
95-50-1	1,2-Dichlorobenzene	3.8	U	25	3.8
107-06-2	1,2-Dichloroethane	5.3	U	25	5.3
78-87-5	1,2-Dichloropropane	3.8	U	25	3.8
541-73-1	1,3-Dichlorobenzene	3.8	U	25	3.8
142-28-9	1,3-Dichloropropane	5.3	U	25	5.3
106-46-7	1,4-Dichlorobenzene	4.0	U	25	4.0
594-20-7	2,2-Dichloropropane	7.8	U	25	7.8
110-75-8	2-Chloroethyl vinyl ether	6.5	U	250	6.5
95-49-8	2-Chlorotoluene	3.8	U	25	3.8
591-78-6	2-Hexanone	14	U	250	14
108-86-1	Bromobenzene	3.0	U	25	3.0
74-97-5	Bromochloromethane	3.5	U	25	3.5
106-43-4	4-Chlorotoluene	2.3	U	25	2.3
99-87-6	4-Isopropyltoluene	3.3	U	25	3.3
67-64-1	Acetone	140	U	250	140
71-43-2	Benzene	3.3	U	25	3.3
75-25-2	Bromoform	19	U	25	19
74-83-9	Bromomethane	11	U	25	11
75-15-0	Carbon disulfide	7.0	U	25	7.0
56-23-5	Carbon tetrachloride	6.5	U	25	6.5
108-90-7	Chlorobenzene	3.5	U	25	3.5
75-00-3	Chloroethane	21	U	25	21
67-66-3	Chloroform	3.3	U	25	3.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW138B-020619 | Lab Sample ID: 240-107796-2

Matrix: Water | Lab File ID: UXC8796.D

Analysis Method: 8260C | Date Collected: 02/06/2019 10:19

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 13:43

Soil Aliquot Vol: | Dilution Factor: 25

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	5.0	U	25	5.0
156-59-2	cis-1,2-Dichloroethene	4.0	U	25	4.0
10061-01-5	cis-1,3-Dichloropropene	15	U	25	15
87-68-3	Hexachlorobutadiene	21	U	25	21
74-95-3	Dibromomethane	2.3	U	25	2.3
75-27-4	Bromodichloromethane	4.3	U	25	4.3
75-71-8	Dichlorodifluoromethane	8.8	U	25	8.8
100-41-4	Ethylbenzene	2.8	U	25	2.8
106-93-4	1,2-Dibromoethane	3.0	U	25	3.0
108-20-3	Diisopropyl ether	4.3	U	250	4.3
91-20-3	Naphthalene	8.0	U	25	8.0
104-51-8	n-Butylbenzene	3.5	U	25	3.5
98-82-8	Isopropylbenzene	2.3	U	25	2.3
103-65-1	N-Propylbenzene	3.8	U	25	3.8
78-93-3	2-Butanone (MEK)	29	U	250	29
108-10-1	4-Methyl-2-pentanone (MIBK)	11	U	250	11
135-98-8	sec-Butylbenzene	3.3	U	25	3.3
1634-04-4	Methyl tert-butyl ether	1.8	U	25	1.8
994-05-8	Tert-amyl methyl ether	2.8	U	130	2.8
75-09-2	Methylene Chloride	66	U	130	66
100-42-5	Styrene	2.5	U	25	2.5
637-92-3	Ethyl tert-butyl ether	3.8	U	130	3.8
98-06-6	tert-Butylbenzene	3.5	U	25	3.5
127-18-4	Tetrachloroethene	3.8	U	25	3.8
108-88-3	Toluene	3.5	U	25	3.5
156-60-5	trans-1,2-Dichloroethene	4.8	U	25	4.8
10061-02-6	trans-1,3-Dichloropropene	17	U	25	17
79-01-6	Trichloroethene	540		25	2.5
75-69-4	Trichlorofluoromethane	11	U	25	11
108-05-4	Vinyl acetate	4.8	U	50	4.8
75-01-4	Vinyl chloride	5.0	U	25	5.0
75-65-0	tert-Butyl alcohol	42	U	1300	42
1330-20-7	Xylenes, Total	3.8	U	50	3.8
124-48-1	Chlorodibromomethane	9.8	U	25	9.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW138B-020619 | Lab Sample ID: 240-107796-2

Matrix: Water | Lab File ID: UXC8796.D

Analysis Method: 8260C | Date Collected: 02/06/2019 10:19

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 13:43

Soil Aliquot Vol: | Dilution Factor: 25

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	79		59-120
2037-26-5	Toluene-d8 (Surr)	84		70-123
1868-53-7	Dibromofluoromethane (Surr)	87		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW141B-020619 | Lab Sample ID: 240-107796-3

Matrix: Water | Lab File ID: UXC8797.D

Analysis Method: 8260C | Date Collected: 02/06/2019 11:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 14:05

Soil Aliquot Vol: | Dilution Factor: 1000

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	140	U F2	1000	140
71-55-6	1,1,1-Trichloroethane	240	U	1000	240
79-34-5	1,1,2,2-Tetrachloroethane	130	U	1000	130
76-13-1	1,1,2-Trichlorotrifluoroethane	410	U F2	1000	410
75-34-3	1,1-Dichloroethane	170	U	1000	170
75-35-4	1,1-Dichloroethene	190	U	1000	190
563-58-6	1,1-Dichloropropene	140	U	1000	140
87-61-6	1,2,3-Trichlorobenzene	540	U	1000	540
96-18-4	1,2,3-Trichloropropane	240	U	1000	240
526-73-8	1,2,3-Trimethylbenzene	140	U	5000	140
120-82-1	1,2,4-Trichlorobenzene	260	U	1000	260
95-63-6	1,2,4-Trimethylbenzene	70	U	1000	70
96-12-8	1,2-Dibromo-3-Chloropropane	910	U	2000	910
95-50-1	1,2-Dichlorobenzene	150	U	1000	150
107-06-2	1,2-Dichloroethane	210	U	1000	210
78-87-5	1,2-Dichloropropane	150	U	1000	150
541-73-1	1,3-Dichlorobenzene	150	U	1000	150
142-28-9	1,3-Dichloropropane	210	U F2	1000	210
106-46-7	1,4-Dichlorobenzene	160	U	1000	160
594-20-7	2,2-Dichloropropane	310	U	1000	310
110-75-8	2-Chloroethyl vinyl ether	260	U	10000	260
95-49-8	2-Chlorotoluene	150	U F2	1000	150
591-78-6	2-Hexanone	540	U	10000	540
108-86-1	Bromobenzene	120	U	1000	120
74-97-5	Bromochloromethane	140	U F2	1000	140
106-43-4	4-Chlorotoluene	90	U	1000	90
99-87-6	4-Isopropyltoluene	130	U	1000	130
67-64-1	Acetone	5400	U	10000	5400
71-43-2	Benzene	130	U	1000	130
75-25-2	Bromoform	760	U F1	1000	760
74-83-9	Bromomethane	420	U	1000	420
75-15-0	Carbon disulfide	280	U	1000	280
56-23-5	Carbon tetrachloride	260	U	1000	260
108-90-7	Chlorobenzene	140	U	1000	140
75-00-3	Chloroethane	830	U	1000	830
67-66-3	Chloroform	130	U	1000	130

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW141B-020619 | Lab Sample ID: 240-107796-3

Matrix: Water | Lab File ID: UXC8797.D

Analysis Method: 8260C | Date Collected: 02/06/2019 11:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 14:05

Soil Aliquot Vol: | Dilution Factor: 1000

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	200	U	1000	200
156-59-2	cis-1,2-Dichloroethene	180	J	1000	160
10061-01-5	cis-1,3-Dichloropropene	610	U	1000	610
87-68-3	Hexachlorobutadiene	830	U	1000	830
74-95-3	Dibromomethane	90	U F2	1000	90
75-27-4	Bromodichloromethane	170	U	1000	170
75-71-8	Dichlorodifluoromethane	350	U F2	1000	350
100-41-4	Ethylbenzene	110	U	1000	110
106-93-4	1,2-Dibromoethane	120	U	1000	120
108-20-3	Diisopropyl ether	170	U	10000	170
91-20-3	Naphthalene	320	U	1000	320
104-51-8	n-Butylbenzene	140	U	1000	140
98-82-8	Isopropylbenzene	90	U	1000	90
103-65-1	N-Propylbenzene	150	U F2	1000	150
78-93-3	2-Butanone (MEK)	1200	U	10000	1200
108-10-1	4-Methyl-2-pentanone (MIBK)	420	U	10000	420
135-98-8	sec-Butylbenzene	130	U	1000	130
1634-04-4	Methyl tert-butyl ether	70	U	1000	70
994-05-8	Tert-amyl methyl ether	110	U	5000	110
75-09-2	Methylene Chloride	2600	U	5000	2600
100-42-5	Styrene	100	U	1000	100
637-92-3	Ethyl tert-butyl ether	150	U	5000	150
98-06-6	tert-Butylbenzene	140	U	1000	140
127-18-4	Tetrachloroethene	150	U	1000	150
108-88-3	Toluene	140	U	1000	140
156-60-5	trans-1,2-Dichloroethene	190	U	1000	190
10061-02-6	trans-1,3-Dichloropropene	670	U	1000	670
79-01-6	Trichloroethene	21000		1000	100
75-69-4	Trichlorofluoromethane	450	U F2	1000	450
108-05-4	Vinyl acetate	190	U	2000	190
75-01-4	Vinyl chloride	200	U	1000	200
75-65-0	tert-Butyl alcohol	1700	U F1	50000	1700
1330-20-7	Xylenes, Total	150	U	2000	150
124-48-1	Chlorodibromomethane	390	U F1	1000	390

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW141B-020619 | Lab Sample ID: 240-107796-3

Matrix: Water | Lab File ID: UXC8797.D

Analysis Method: 8260C | Date Collected: 02/06/2019 11:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 14:05

Soil Aliquot Vol: | Dilution Factor: 1000

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		70-121
460-00-4	4-Bromofluorobenzene (Surr)	77		59-120
2037-26-5	Toluene-d8 (Surr)	82		70-123
1868-53-7	Dibromofluoromethane (Surr)	84		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW142B-020619 | Lab Sample ID: 240-107796-4

Matrix: Water | Lab File ID: UXC8804.D

Analysis Method: 8260C | Date Collected: 02/06/2019 13:18

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 16:38

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.56	U	4.0	0.56
71-55-6	1,1,1-Trichloroethane	0.96	U	4.0	0.96
79-34-5	1,1,2,2-Tetrachloroethane	0.52	U	4.0	0.52
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	4.0	1.6
75-34-3	1,1-Dichloroethane	0.68	U	4.0	0.68
75-35-4	1,1-Dichloroethene	0.76	U	4.0	0.76
563-58-6	1,1-Dichloropropene	0.56	U	4.0	0.56
87-61-6	1,2,3-Trichlorobenzene	2.2	U	4.0	2.2
96-18-4	1,2,3-Trichloropropane	0.96	U	4.0	0.96
526-73-8	1,2,3-Trimethylbenzene	0.56	U	20	0.56
120-82-1	1,2,4-Trichlorobenzene	1.0	U	4.0	1.0
95-63-6	1,2,4-Trimethylbenzene	0.28	U	4.0	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	3.6	U	8.0	3.6
95-50-1	1,2-Dichlorobenzene	0.60	U	4.0	0.60
107-06-2	1,2-Dichloroethane	0.84	U	4.0	0.84
78-87-5	1,2-Dichloropropane	0.60	U	4.0	0.60
541-73-1	1,3-Dichlorobenzene	0.60	U	4.0	0.60
142-28-9	1,3-Dichloropropane	0.84	U	4.0	0.84
106-46-7	1,4-Dichlorobenzene	0.64	U	4.0	0.64
594-20-7	2,2-Dichloropropane	1.2	U	4.0	1.2
110-75-8	2-Chloroethyl vinyl ether	1.0	U	40	1.0
95-49-8	2-Chlorotoluene	0.60	U	4.0	0.60
591-78-6	2-Hexanone	2.2	U	40	2.2
108-86-1	Bromobenzene	0.48	U	4.0	0.48
74-97-5	Bromochloromethane	0.56	U	4.0	0.56
106-43-4	4-Chlorotoluene	0.36	U	4.0	0.36
99-87-6	4-Isopropyltoluene	0.52	U	4.0	0.52
67-64-1	Acetone	22	U	40	22
71-43-2	Benzene	0.52	U	4.0	0.52
75-25-2	Bromoform	3.0	U	4.0	3.0
74-83-9	Bromomethane	1.7	U	4.0	1.7
75-15-0	Carbon disulfide	1.1	U	4.0	1.1
56-23-5	Carbon tetrachloride	1.0	U	4.0	1.0
108-90-7	Chlorobenzene	0.56	U	4.0	0.56
75-00-3	Chloroethane	3.3	U	4.0	3.3
67-66-3	Chloroform	0.68	J	4.0	0.52

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW142B-020619 | Lab Sample ID: 240-107796-4

Matrix: Water | Lab File ID: UXC8804.D

Analysis Method: 8260C | Date Collected: 02/06/2019 13:18

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 16:38

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.80	U	4.0	0.80
156-59-2	cis-1,2-Dichloroethene	7.7		4.0	0.64
10061-01-5	cis-1,3-Dichloropropene	2.4	U	4.0	2.4
87-68-3	Hexachlorobutadiene	3.3	U	4.0	3.3
74-95-3	Dibromomethane	0.36	U	4.0	0.36
75-27-4	Bromodichloromethane	0.68	U	4.0	0.68
75-71-8	Dichlorodifluoromethane	1.4	U	4.0	1.4
100-41-4	Ethylbenzene	0.44	U	4.0	0.44
106-93-4	1,2-Dibromoethane	0.48	U	4.0	0.48
108-20-3	Diisopropyl ether	0.68	U	40	0.68
91-20-3	Naphthalene	1.3	U	4.0	1.3
104-51-8	n-Butylbenzene	0.56	U	4.0	0.56
98-82-8	Isopropylbenzene	0.36	U	4.0	0.36
103-65-1	N-Propylbenzene	0.60	U	4.0	0.60
78-93-3	2-Butanone (MEK)	4.6	U	40	4.6
108-10-1	4-Methyl-2-pentanone (MIBK)	1.7	U	40	1.7
135-98-8	sec-Butylbenzene	0.52	U	4.0	0.52
1634-04-4	Methyl tert-butyl ether	3.7	J	4.0	0.28
994-05-8	Tert-amyl methyl ether	0.44	U	20	0.44
75-09-2	Methylene Chloride	10	U	20	10
100-42-5	Styrene	0.40	U	4.0	0.40
637-92-3	Ethyl tert-butyl ether	0.60	U	20	0.60
98-06-6	tert-Butylbenzene	0.56	U	4.0	0.56
127-18-4	Tetrachloroethene	0.60	U	4.0	0.60
108-88-3	Toluene	0.56	U	4.0	0.56
156-60-5	trans-1,2-Dichloroethene	0.76	U	4.0	0.76
10061-02-6	trans-1,3-Dichloropropene	2.7	U	4.0	2.7
79-01-6	Trichloroethene	86		4.0	0.40
75-69-4	Trichlorofluoromethane	1.8	U	4.0	1.8
108-05-4	Vinyl acetate	0.76	U	8.0	0.76
75-01-4	Vinyl chloride	0.80	U	4.0	0.80
75-65-0	tert-Butyl alcohol	6.8	U	200	6.8
1330-20-7	Xylenes, Total	0.60	U	8.0	0.60
124-48-1	Chlorodibromomethane	1.6	U	4.0	1.6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW142B-020619 | Lab Sample ID: 240-107796-4

Matrix: Water | Lab File ID: UXC8804.D

Analysis Method: 8260C | Date Collected: 02/06/2019 13:18

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 16:38

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	89		70-123
1868-53-7	Dibromofluoromethane (Surr)	92		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW158A-020619 | Lab Sample ID: 240-107796-5

Matrix: Water | Lab File ID: UXC8814.D

Analysis Method: 8260C | Date Collected: 02/06/2019 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 14:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW158A-020619 | Lab Sample ID: 240-107796-5

Matrix: Water | Lab File ID: UXC8814.D

Analysis Method: 8260C | Date Collected: 02/06/2019 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 14:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.31	J	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	1.3		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW158A-020619 | Lab Sample ID: 240-107796-5

Matrix: Water | Lab File ID: UXC8814.D

Analysis Method: 8260C | Date Collected: 02/06/2019 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 14:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	85		70-123
1868-53-7	Dibromofluoromethane (Surr)	88		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-DUP01-020619 | Lab Sample ID: 240-107796-6

Matrix: Water | Lab File ID: UXC8815.D

Analysis Method: 8260C | Date Collected: 02/06/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:05

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.70	U	5.0	0.70
71-55-6	1,1,1-Trichloroethane	1.2	U	5.0	1.2
79-34-5	1,1,2,2-Tetrachloroethane	0.65	U	5.0	0.65
76-13-1	1,1,2-Trichlorotrifluoroethane	2.1	U	5.0	2.1
75-34-3	1,1-Dichloroethane	0.85	U	5.0	0.85
75-35-4	1,1-Dichloroethene	0.95	U	5.0	0.95
563-58-6	1,1-Dichloropropene	0.70	U	5.0	0.70
87-61-6	1,2,3-Trichlorobenzene	2.7	U	5.0	2.7
96-18-4	1,2,3-Trichloropropane	1.2	U	5.0	1.2
526-73-8	1,2,3-Trimethylbenzene	0.70	U	25	0.70
120-82-1	1,2,4-Trichlorobenzene	1.3	U	5.0	1.3
95-63-6	1,2,4-Trimethylbenzene	0.35	U	5.0	0.35
96-12-8	1,2-Dibromo-3-Chloropropane	4.6	U	10	4.6
95-50-1	1,2-Dichlorobenzene	0.75	U	5.0	0.75
107-06-2	1,2-Dichloroethane	1.1	U	5.0	1.1
78-87-5	1,2-Dichloropropane	0.75	U	5.0	0.75
541-73-1	1,3-Dichlorobenzene	0.75	U	5.0	0.75
142-28-9	1,3-Dichloropropane	1.1	U	5.0	1.1
106-46-7	1,4-Dichlorobenzene	0.80	U	5.0	0.80
594-20-7	2,2-Dichloropropane	1.6	U	5.0	1.6
110-75-8	2-Chloroethyl vinyl ether	1.3	U	50	1.3
95-49-8	2-Chlorotoluene	0.75	U	5.0	0.75
591-78-6	2-Hexanone	2.7	U	50	2.7
108-86-1	Bromobenzene	0.60	U	5.0	0.60
74-97-5	Bromochloromethane	0.70	U	5.0	0.70
106-43-4	4-Chlorotoluene	0.45	U	5.0	0.45
99-87-6	4-Isopropyltoluene	0.65	U	5.0	0.65
67-64-1	Acetone	27	U	50	27
71-43-2	Benzene	0.65	U	5.0	0.65
75-25-2	Bromoform	3.8	U	5.0	3.8
74-83-9	Bromomethane	2.1	U	5.0	2.1
75-15-0	Carbon disulfide	1.4	U	5.0	1.4
56-23-5	Carbon tetrachloride	1.3	U	5.0	1.3
108-90-7	Chlorobenzene	0.70	U	5.0	0.70
75-00-3	Chloroethane	4.2	U	5.0	4.2
67-66-3	Chloroform	0.71	J	5.0	0.65

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-DUP01-020619 | Lab Sample ID: 240-107796-6

Matrix: Water | Lab File ID: UXC8815.D

Analysis Method: 8260C | Date Collected: 02/06/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:05

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	5.0	1.0
156-59-2	cis-1,2-Dichloroethene	7.3		5.0	0.80
10061-01-5	cis-1,3-Dichloropropene	3.1	U	5.0	3.1
87-68-3	Hexachlorobutadiene	4.2	U	5.0	4.2
74-95-3	Dibromomethane	0.45	U	5.0	0.45
75-27-4	Bromodichloromethane	0.85	U	5.0	0.85
75-71-8	Dichlorodifluoromethane	1.8	U	5.0	1.8
100-41-4	Ethylbenzene	0.55	U	5.0	0.55
106-93-4	1,2-Dibromoethane	0.60	U	5.0	0.60
108-20-3	Diisopropyl ether	0.85	U	50	0.85
91-20-3	Naphthalene	1.6	U	5.0	1.6
104-51-8	n-Butylbenzene	0.70	U	5.0	0.70
98-82-8	Isopropylbenzene	0.45	U	5.0	0.45
103-65-1	N-Propylbenzene	0.75	U	5.0	0.75
78-93-3	2-Butanone (MEK)	5.8	U	50	5.8
108-10-1	4-Methyl-2-pentanone (MIBK)	2.1	U	50	2.1
135-98-8	sec-Butylbenzene	0.65	U	5.0	0.65
1634-04-4	Methyl tert-butyl ether	3.5	J	5.0	0.35
994-05-8	Tert-amyl methyl ether	0.55	U	25	0.55
75-09-2	Methylene Chloride	13	U	25	13
100-42-5	Styrene	0.50	U	5.0	0.50
637-92-3	Ethyl tert-butyl ether	0.75	U	25	0.75
98-06-6	tert-Butylbenzene	0.70	U	5.0	0.70
127-18-4	Tetrachloroethene	0.75	U	5.0	0.75
108-88-3	Toluene	0.70	U	5.0	0.70
156-60-5	trans-1,2-Dichloroethene	0.95	U	5.0	0.95
10061-02-6	trans-1,3-Dichloropropene	3.4	U	5.0	3.4
79-01-6	Trichloroethene	90		5.0	0.50
75-69-4	Trichlorofluoromethane	2.3	U	5.0	2.3
108-05-4	Vinyl acetate	0.95	U	10	0.95
75-01-4	Vinyl chloride	1.0	U	5.0	1.0
75-65-0	tert-Butyl alcohol	8.5	U	250	8.5
1330-20-7	Xylenes, Total	0.75	U	10	0.75
124-48-1	Chlorodibromomethane	2.0	U	5.0	2.0

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-DUP01-020619 | Lab Sample ID: 240-107796-6

Matrix: Water | Lab File ID: UXC8815.D

Analysis Method: 8260C | Date Collected: 02/06/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:05

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		70-121
460-00-4	4-Bromofluorobenzene (Surr)	75		59-120
2037-26-5	Toluene-d8 (Surr)	79		70-123
1868-53-7	Dibromofluoromethane (Surr)	83		75-128

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW158A-020619 | Lab Sample ID: 240-107796-5

Matrix: Water | Lab File ID: xb2043.D

Analysis Method: 680 | Date Collected: 02/06/2019 14:30

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 993.1(mL) | Date Analyzed: 02/21/2019 12:55

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	49		25-113

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW138B-020619 Lab Sample ID: 240-107796-2

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 10:19

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	1800	200	26	ug/L		B	1	6010C
7439-96-5	Manganese	120	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	420	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	86	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.5	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	32	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.5	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	7.8	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	1700	100	47	ug/L			1	6020A
7439-96-5	Manganese	120	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	57	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	1.1	1.0	0.45	ug/L			1	6020A
7440-36-0	Antimony	0.84	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	3.3	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	85	20	15	ug/L			1	6020A
7440-70-2	Calcium	31000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	21000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	8900	1000	200	ug/L			1	6020A
7440-23-5	Sodium	94000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW141B-020619 Lab Sample ID: 240-107796-3

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 11:45

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	260	200	26	ug/L		B	1	6010C
7439-96-5	Manganese	94	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	140	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	68	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	3.1	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	48	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	0.98	2.0	0.98	ug/L	U		1	6020A
7440-50-8	Copper	15	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	260	100	47	ug/L			1	6020A
7439-96-5	Manganese	94	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	82	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.86	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	120	20	15	ug/L			1	6020A
7440-70-2	Calcium	11000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	17000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	4900	1000	200	ug/L			1	6020A
7440-23-5	Sodium	35000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW142B-020619 Lab Sample ID: 240-107796-4

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 13:18

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	2900	200	26	ug/L		B	1	6010C
7439-96-5	Manganese	160	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.056	1.0	0.053	ug/L	J		1	6020A
7429-90-5	Aluminum	130	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	52	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.6	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	30	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	1.4	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	20	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	2700	100	47	ug/L			1	6020A
7439-96-5	Manganese	160	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	43	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.63	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	3.0	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	76	20	15	ug/L			1	6020A
7440-70-2	Calcium	19000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	21000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	2700	1000	200	ug/L			1	6020A
7440-23-5	Sodium	26000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW158A-020619 Lab Sample ID: 240-107796-5

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 14:30

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	580	200	26	ug/L		B	1	6010C
7439-96-5	Manganese	130	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	380	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	77	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.31	1.0	0.31	ug/L	U		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	1.6	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.0	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	13	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	550	100	47	ug/L			1	6020A
7439-96-5	Manganese	120	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	5.1	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.66	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	1.4	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	15	20	15	ug/L	U		1	6020A
7440-70-2	Calcium	180000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	18000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	41000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	52000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-DUP01-020619 Lab Sample ID: 240-107796-6

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 00:00

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	3000	200	26	ug/L		B	1	6010C
7439-96-5	Manganese	160	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.073	1.0	0.053	ug/L	J		1	6020A
7429-90-5	Aluminum	140	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	70	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.6	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	30	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	1.3	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	19	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	2700	100	47	ug/L			1	6020A
7439-96-5	Manganese	160	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	45	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.66	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	2.8	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	75	20	15	ug/L			1	6020A
7440-70-2	Calcium	19000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	22000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	2700	1000	200	ug/L			1	6020A
7440-23-5	Sodium	27000	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW138B-020619 Lab Sample ID: 240-107796-2

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 10:19

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	120	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	69	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	400	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.24	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	22	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW141B-020619 Lab Sample ID: 240-107796-3

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 11:45

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	56	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	29	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	190	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.37	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	17	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW142B-020619 Lab Sample ID: 240-107796-4

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 13:18

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	76	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	60	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	190	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	12	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW158A-020619 Lab Sample ID: 240-107796-5

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 14:30

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	720	25	12	mg/L			1	2340C-2011
	Alkalinity	290	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	980	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	380	5.0	1.7	mg/L			5	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-DUP01-020619 Lab Sample ID: 240-107796-6

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 00:00

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	76	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	61	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	200	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	11	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW138B-020619 Lab Sample ID: 240-107796-2

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 10:19

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.22	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW141B-020619 Lab Sample ID: 240-107796-3

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 11:45

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.86	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW142B-020619 Lab Sample ID: 240-107796-4

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 13:18

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.30	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW158A-020619 Lab Sample ID: 240-107796-5

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 14:30

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.093	0.10	0.040	mg/L	J		1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-DUP01-020619 Lab Sample ID: 240-107796-6

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 00:00

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.31	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW138B-020619 Lab Sample ID: 240-107796-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 10:19

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW141B-020619 Lab Sample ID: 240-107796-3

Lab Name: TestAmerica Pittsburgh Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 11:45

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW142B-020619 Lab Sample ID: 240-107796-4

Lab Name: TestAmerica Pittsburgh Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 13:18

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW158A-020619 Lab Sample ID: 240-107796-5

Lab Name: TestAmerica Pittsburgh Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 14:30

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-DUP01-020619 Lab Sample ID: 240-107796-6

Lab Name: TestAmerica Pittsburgh Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 00:00

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

Appendix C

Support Documentation

MRC -BLOCK E/F WASTE
SDG 240-107796-1

SAMPLE IDENTIFICATION	MRC-MW141B-020619
COMPOUND	TRICHLOROETHENE
COMPOUND AREA	1174590
INTERNAL STANDARD AMOUNT (ng)	50
VOLUME WATER PURGED (ml)	5
DILUTION FACTOR	1000
INTERNAL STANDARD AREA	1693055
AVERAGE RRF	0.324
ml to µl	1000
ng to µg	1000

= 21412.64 µg/L

1174590 x 50 ng x 1000 x 1000ml x 1µg /(1693055 x 0.324 x 5ml x 1L x 1000ng)

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX15\20190212-84405.b\UXC8797.D
Lims ID: 240-107796-B-3
Client ID: MRC-MW141B-020619
Sample Type: Client
Inject. Date: 12-Feb-2019 14:05:30 ALS Bottle#: 10 Worklist Smp#: 37
Purge Vol: 5.000 mL Dil. Factor: 1000.0000
Sample Info: 240-0084405-037
Misc. Info.: C90212A,8260LLUX15,,43582
Operator ID: Instrument ID: A3UX15

Method: \\chromna\Canton\ChromData\A3UX15\20190212-84405.b\8260_15.m
Limit Group: MSV 8260C ICAL
Last Update: 13-Feb-2019 10:30:48 Calib Date: 21-Jan-2019 19:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX15\20190121-83824.b\UXC8431.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: evansle Date: 12-Feb-2019 14:49:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.196	5.196	0.000	99	1693055	10.0	
* 2 Chlorobenzene-d5	117	7.876	7.876	0.000	84	1418830	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.117	10.117	0.000	93	792712	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.639	4.639	0.000	95	269170	6.72	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.923	4.923	0.000	100	369079	7.17	
$ 6 Toluene-d8 (Surr)	98	6.560	6.560	0.000	93	1126574	6.54	
$ 7 4-Bromofluorobenzene (Surr	95	8.991	8.991	0.000	96	377248	6.13	
9 Dichlorodifluoromethane	85		1.532				ND	
10 Chloromethane	50		1.686				ND	
11 Vinyl chloride	62		1.781				ND	
13 Bromomethane	94		2.065				ND	
14 Chloroethane	64		2.136				ND	
16 Trichlorofluoromethane	101		2.362				ND	
19 1,1-Dichloroethene	96		2.777				ND	
20 1,1,2-Trichloro-1,2,2-trif	151		2.789				ND	
22 Acetone	58		2.812				ND	
24 Carbon disulfide	76		2.978				ND	
28 Methylene Chloride	84		3.180				ND	
29 2-Methyl-2-propanol	59		3.263				ND	
31 Methyl tert-butyl ether	73		3.405				ND	
30 trans-1,2-Dichloroethene	96		3.405				ND	
34 1,1-Dichloroethane	63		3.761				ND	
36 Vinyl acetate	43		3.785				ND	
35 Isopropyl ether	87		3.797				ND	
38 Tert-butyl ethyl ether	59		4.093				ND	
41 2-Butanone (MEK)	72		4.247				ND	
40 2,2-Dichloropropane	97		4.247				ND	
39 cis-1,2-Dichloroethene	96	4.235	4.247	-0.012	83	9421	0.1808	
45 Chlorobromomethane	128		4.449				ND	
47 Chloroform	83		4.496				ND	
48 1,1,1-Trichloroethane	97		4.662				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 1,1-Dichloropropene	75		4.793				ND	
50 Carbon tetrachloride	117		4.805				ND	
53 Benzene	78		4.971				ND	
54 1,2-Dichloroethane	62		4.982				ND	
55 Tert-amyl methyl ether	73		5.042				ND	
58 Trichloroethene	130	5.504	5.504	0.000	95	1174590	21.4	
61 1,2-Dichloropropane	63		5.706				ND	
63 Dibromomethane	93		5.813				ND	
65 Dichlorobromomethane	83		5.931				ND	
67 2-Chloroethyl vinyl ether	63		6.180				ND	
68 cis-1,3-Dichloropropene	75		6.322				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.453				ND	
70 Toluene	91		6.619				ND	
71 trans-1,3-Dichloropropene	75		6.809				ND	
74 Tetrachloroethene	164		7.117				ND	
75 1,3-Dichloropropane	76		7.129				ND	
76 2-Hexanone	43		7.188				ND	
79 Chlorodibromomethane	129		7.342				ND	
80 Ethylene Dibromide	107		7.461				ND	
82 Chlorobenzene	112		7.900				ND	
83 1,1,1,2-Tetrachloroethane	131		7.971				ND	
84 Ethylbenzene	106		7.995				ND	
85 m-Xylene & p-Xylene	91		8.101				ND	
86 o-Xylene	106		8.481				ND	
87 Styrene	104		8.493				ND	
88 Bromoform	173		8.682				ND	
89 Isopropylbenzene	105		8.825				ND	
93 1,1,2,2-Tetrachloroethane	83		9.121				ND	
92 Bromobenzene	156		9.145				ND	
94 1,2,3-Trichloropropane	110		9.169				ND	
96 N-Propylbenzene	120		9.228				ND	
97 2-Chlorotoluene	126		9.323				ND	
99 4-Chlorotoluene	91		9.418				ND	
101 tert-Butylbenzene	119		9.714				ND	
103 1,2,4-Trimethylbenzene	105		9.761				ND	
105 sec-Butylbenzene	105		9.927				ND	
106 1,3-Dichlorobenzene	146		10.046				ND	
107 4-Isopropyltoluene	119		10.070				ND	
108 1,4-Dichlorobenzene	146		10.141				ND	
109 1,2,3-Trimethylbenzene	105		10.176				ND	
111 n-Butylbenzene	91		10.473				ND	
112 1,2-Dichlorobenzene	146		10.509				ND	
113 1,2-Dibromo-3-Chloropropan	157		11.291				ND	
115 1,2,4-Trichlorobenzene	180		12.109				ND	
116 Hexachlorobutadiene	225		12.275				ND	
117 Naphthalene	128		12.358				ND	
118 1,2,3-Trichlorobenzene	180		12.607				ND	
S 129 Xylenes, Total	106		16.530				ND	

Reagents:

vm40ml_vials_00009	Amount Added:	0.00	Units:	Run Reagent
vm50ss_stk_00079	Amount Added:	0.80	Units: uL	Run Reagent
VM50IS_00072	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00138	Amount Added:	0.00	Units:	Run Reagent

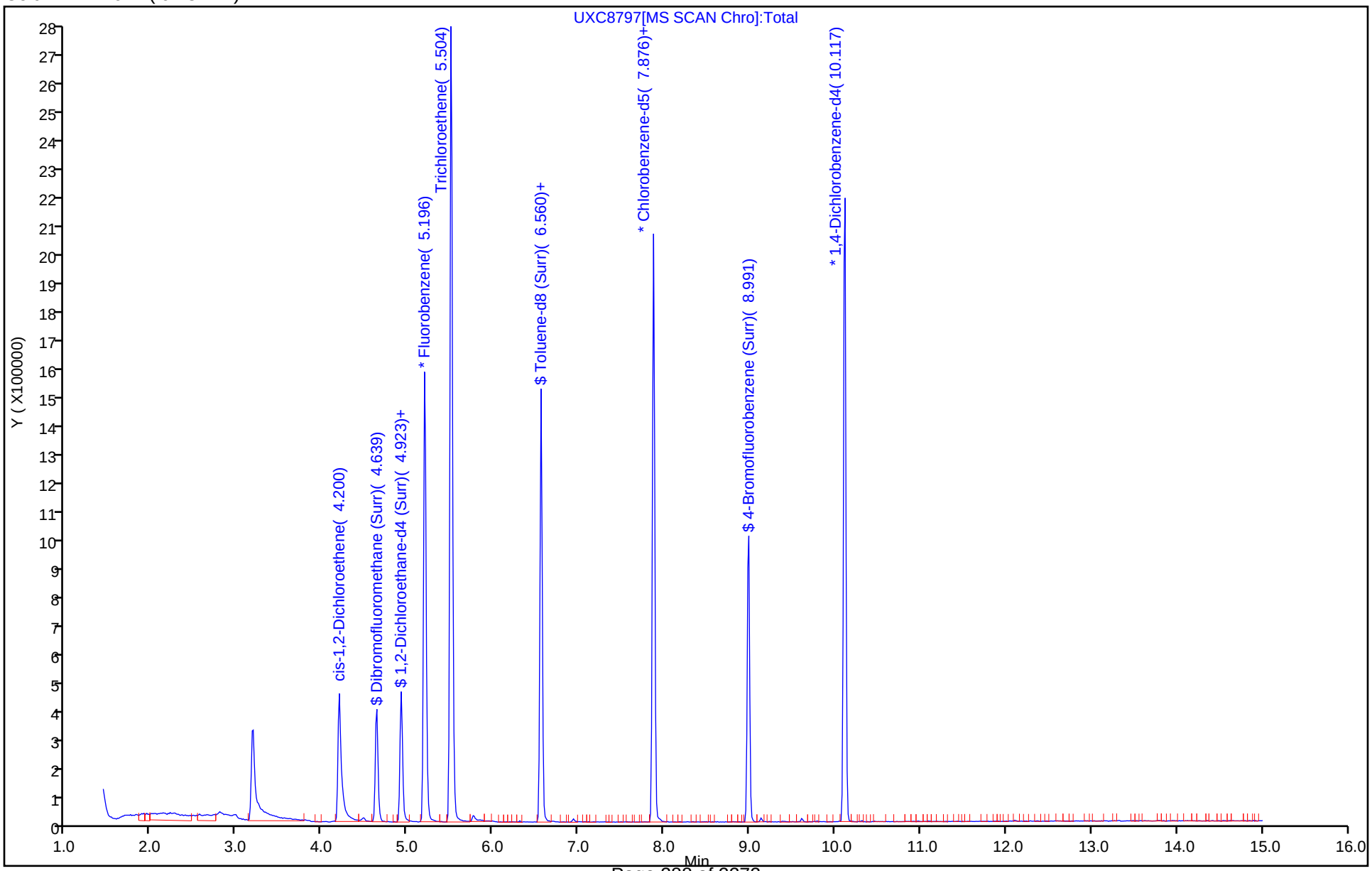
Report Date: 13-Feb-2019 10:31:20 Chrom Revision: 2.3 11-Feb-2019 16:31:10

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX15\20190212-84405.b\UXC8797.D

Injection Date:	12-Feb-2019 14:05:30	Instrument ID:	A3UX15	Operator ID:	
Lims ID:	240-107796-B-3	Lab Sample ID:	240-107796-3	Worklist Smp#:	37
Client ID:	MRC-MW141B-020619				
Purge Vol:	5.000 mL	Dil. Factor:	1000.0000	ALS Bottle#:	10
Method:	8260_15	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



Sample Report

Sample Name	240-107796-G-5-A MRC-MW158A-020619
File Name	209SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\I14021119A.b
Acq Time	2019-02-11 20:12:31
Sample Type	Sample
Total Dilution	1.0000
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	1.053	ug/l	17.1	35761.39	10000	
Be	9	6	No Gas	0.121	ug/l	51.4	217.78	2000	
B	11	45	No Gas	38.486	ug/l	1.2	28222.86	300	
Na	23	45	He	51848.867	ug/l	1.9	23688232.39	500000	
Mg	24	45	He	41425.594	ug/l	1.9	10382063.76	500000	
Al	27	45	He	375.849	ug/l	2.5	45543.90	200000	
K	39	45	He	17921.050	ug/l	1.8	5074700.49	500000	
Ca	44	45	He	183322.711	ug/l	2.2	1324729.99	500000	
Ti	47	45	He	11.352	ug/l	11.2	953.39	2500	
V	51	45	He	1.435	ug/l	9.7	3321.72	10000	
Cr	52	45	He	2.007	ug/l	4.0	6485.98	10000	
Mn	55	45	He	121.652	ug/l	1.5	244765.49	10000	
Fe	56	103	He	553.229	ug/l	2.3	1432096.36	200000	
Co	59	103	He	1.583	ug/l	1.4	6866.18	5000	
Ni	60	103	He	3.955	ug/l	3.8	5903.52	10000	
Cu	63	103	He	13.386	ug/l	3.8	39016.14	10000	
Zn	66	103	He	8.501	ug/l	7.0	6029.14	10000	
As	75	103	He	0.331	ug/l	92.6	275.91	10000	
Se	78	103	H2	0.638	ug/l	5.7	112.33	10000	
Sr	88	103	He	516.440	ug/l	3.0	1698678.58	10000	
Mo	95	103	He	9.268	ug/l	4.1	14862.54	2000	
Ag	107	103	He	0.002	ug/l	157.3	40.00	100	
Cd	111	115	He	0.043	ug/l	27.6	48.96	4000	
Sn	118	115	He	-0.766	ug/l	N/A	1584.55	2000	
Sb	123	115	He	0.660	ug/l	5.8	1723.46	200	
Ba	137	115	He	76.637	ug/l	1.1	90072.97	10000	
W	182	159	He	0.000	ug/l	N/A	248.89	2500	
Tl	205	165	He	0.045	ug/l	7.8	453.35	2000	
Pb	208	165	He	0.358	ug/l	1.4	5164.92	4000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li6	6	No Gas	614023.21	0.6	827295.22	74.22	59.5	120.4	
Sc	45	No Gas	1742429.62	1.4	1770739.44	98.4	59.5	120.4	
Sc	45	H2	1364010.17	1.5	1335565.71	102.13	59.5	120.4	
Sc	45	He	337899.74	1.8	354647.9	95.28	59.5	120.4	
Rh	103	H2	307303.28	2.7	330907.05	92.87	59.5	120.4	

Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Rh	103	He	1834233.47	2.2	1852568.12	99.01	59.5	120.4	
In	115	H2	2225044.25	1.8	2138122.33	104.07	59.5	120.4	
In	115	He	1253179.85	1.3	1244849.96	100.67	59.5	120.4	
Tb	159	He	2653250.80	1.6	2589887.47	102.45	59.5	120.4	
Ho	165	He	2646605.10	1.1	2521978.58	104.94	59.5	120.4	
Bi	209	He	1586041.60	0.9	1617595.04	98.05	59.5	120.4	

ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 30%	ORIGINAL SAMPLE CONC >2XRL	DUPLICATE SAMPLE CONC >2XRL	DIFFERENCE >2RL
METALS								
ALUMINUM	130	140	50	7.41	FALSE	TRUE	TRUE	FALSE
BARIUM	52	70	5	29.51	FALSE	TRUE	TRUE	TRUE
BERYLLIUM	1.6	1.6	1	0.00	FALSE	FALSE	FALSE	FALSE
CALCIUM	19000	19000	1000	0.00	FALSE	TRUE	TRUE	FALSE
CHROMIUM	1.4	1.3	2	7.41	FALSE	FALSE	FALSE	FALSE
COBALT	30	30	1	0.00	FALSE	TRUE	TRUE	FALSE
COPPER	20	19	2	5.13	FALSE	TRUE	TRUE	FALSE
LEAD	0.63	0.66	1	4.65	FALSE	FALSE	FALSE	FALSE
MAGNESIUM	2700	2700	1000	0.00	FALSE	TRUE	TRUE	FALSE
NICKEL	43	45	2	4.55	FALSE	TRUE	TRUE	FALSE
POTASSIUM	21000	22000	1000	4.65	FALSE	TRUE	TRUE	FALSE
SILVER	0.056	0.073	1	26.36	FALSE	FALSE	FALSE	FALSE
SODIUM	26000	27000	1000	3.77	FALSE	TRUE	TRUE	FALSE
VANADIUM	3	2.8	5	6.90	FALSE	FALSE	FALSE	FALSE
ZINC	76	75	20	1.32	FALSE	TRUE	TRUE	FALSE
			5					
MISCELLANEOUS			5					
ALKALINITY	60	61	5	1.65	FALSE	TRUE	TRUE	FALSE
HARDNESS AS CACO3	76	76	5	0.00	FALSE	TRUE	TRUE	FALSE
NITRITE/NITRATE-N	0.3	0.31	0.1	3.28	FALSE	TRUE	TRUE	FALSE
SULFATE	12	11	1	8.70	FALSE	TRUE	TRUE	FALSE
TOTAL DISSOLVED SOLIDS	190	200	10	5.13	FALSE	TRUE	TRUE	FALSE
VOCs								
CHLOROFORM	0.68	0.71	4	4.32	FALSE	FALSE	FALSE	FALSE
CIS-1,2-DICHLOROETHENE	7.7	7.3	4	5.33	FALSE	FALSE	FALSE	FALSE
METHYL TERT-BUTYL ETHER	3.7	3.5	4	5.56	FALSE	FALSE	FALSE	FALSE
TRICHLOROETHENE	86	90	4	4.55	FALSE	TRUE	TRUE	FALSE

SDG 240-107796-1

MRC-DUP01-020619/MRC-MW142B-020619

3.6|3.6

North Canton
4101 Shuffel Street, N. W.

North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

Baltimore #201

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Mike Martin	Site Contact: Walt Pryor	Date: 2/4/19	COC No:
20251 Century Blvd, Suite 200	**Analysis Turnaround Time**			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) _____			
(301) 528-3021 Phone	TAT if different from Below **STANDARD TAT**			SDG No.
(301) 528-3000 FAX	☐ 2 weeks			
Project Name: MRC BLOCK E/F MASS DISCHARGE	☐ 1 week			
Site: MRC BLOCK E	☐ 2 days	standard		
PO # 112IC08784	☐ 1 day			Sampler: Walt Pryor

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (SW0846 8260C)	Total Metals/Hardness (6020A, 2340C)	Sulfate, Nitrates, TDS (9056A, 4500-NO3E, 2540C	Bromide (300)	Iron and Manganese (6010C	Alkalinity (SM 2320B)	Salinity (2520B)	PCBs (680)	Sample Specific Notes:
TB- 020419	2/4/19	—	GRAB	WATER	2		x	–	–	–	–	–	–	–	
MRC-MW151A-020419	↓	1420	↓	↓	11		3	1	1	1	1	1	1	2	
							2	4	6	1	4	1	1	1	

240-107638 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☒ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☒ *Disposal By Lab* ☐ *Archive For _____ Months*

Special Instructions/QC Requirements & Comments: Block E/F Mass discharge well sampling

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pryor	TA INC	2/4/19 1530	[signature]	2/4/19 1530	
[signature]	TA 2/4/19	1700	[signature]	2-5-19 940	AC

Form No. CA-C-WI-002, Rev. 2, dated 03/06/2012

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client Tetra Tech Site Name _____ Cooler unpacked by:

Cooler Received on 2-5-19 Opened on 2-5-19

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam (Plastic Bag) None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 3.6 °C Corrected Cooler Temp. 3.6 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered (Yes) No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW151A-020419	240-107638-F-2	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW151A-020419	240-107638-G-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW151A-020419	240-107638-I-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW151A-020419	240-107638-K-2	Amber Glass 1 liter - Sulfuric Acid	____	_____	_____

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass Discharge

Report Number: 240-107638-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The 680 Polychlorinated Biphenyls analysis was performed at the TestAmerica Savannah laboratory. The 4500NO3-F Nitrate Nitrite as N analysis was performed at the TestAmerica Nashville laboratory. The 9050A Specific Conductance and the 2520-B Salinity analyses were performed at the TestAmerica Pittsburgh laboratory.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 2/5/2019 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.6º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-020419 (240-107638-1) and MRC-MW151A-020419 (240-107638-2) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/07/2019 and 02/08/2019.

The continuing calibration verification (CCV) for analytical batch 367131 exceeded control criteria for Bromoform and/ or Hexachlorobutadiene. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TB-020419 (240-107638-1)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following samples were received in hydrochloric preserved vials: TB-020419 (240-107638-1) and MRC-MW151A-020419 (240-107638-2)

The continuing calibration verification (CCV) for analytical batch 367370 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. MRC-MW151A-020419 (240-107638-2)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample MRC-MW151A-020419 (240-107638-2) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The sample was prepared on 02/19/2019 and analyzed on 02/21/2019.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 680-558728.

The SOP for the 680 Method allows that for soils the CCVIS has a limit of <30%D for each analyte and for liquids <20%D for each analyte

. It also allows that the capping CCV for soils has the limit of <30% average %D with no analyte >60%D and for liquids <20% average D with no analyte >40%D. Due to software limitations for this method, the limits are set at <20%D. (CCV 680-559059/21)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The sample was prepared on 02/06/2019 and analyzed on 02/08/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The sample was prepared on 02/06/2019 and analyzed on 02/07/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for alkalinity in accordance with SM 2320B. The sample was analyzed on 02/18/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for hardness in accordance with SM 2340C. The sample was analyzed on 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for total dissolved solids in accordance with SM 2540C. The sample was analyzed on 02/06/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for anions in accordance with EPA Method 300.0. The sample was analyzed on 02/07/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for anions in accordance with EPA SW-846 Method 9056A. The sample was analyzed on 02/07/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for Salinity in accordance with SM 2520B. The sample was analyzed on 02/19/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The sample was analyzed on 02/16/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107638-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107638-1	TB-020419	Water	02/04/19 00:00	02/05/19 09:40
240-107638-2	MRC-MW151A-020419	Water	02/04/19 14:20	02/05/19 09:40

Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-107638-1
Project/Site: MRC Block E/F Mass Discharge

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
680	Liquid-Liquid Extraction (Separatory Funnel)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-020419	240-107638-1	85	90	86	81
MRC-MW151A-020419	240-107638-2	89	95	90	84
	MB 240-367131/6	93	96	93	88
	MB 240-367370/6	85	89	85	82
	LCS 240-367131/4	97	92	95	100
	LCS 240-367370/4	94	88	89	88

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-367131/2		1902855	5.20	1565296	7.88	915539	10.12
CCVIS 240-367370/2		1771075	5.20	1445689	7.88	859854	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Sample No.: CCVIS 240-367131/2 Date Analyzed: 02/07/2019 09:17

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8703.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1902855	5.20	1565296	7.88	915539	10.12
UPPER LIMIT		3805710	5.70	3130592	8.38	1831078	10.62
LOWER LIMIT		951428	4.70	782648	7.38	457770	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367131/4		1816219	5.20	1489107	7.88	858312	10.12
CCV 240-367131/3		1824445	5.20	1506450	7.88	823766	10.12
MB 240-367131/6		1678964	5.20	1385753	7.88	770212	10.12
240-107638-1	TB-020419	1758075	5.20	1434380	7.88	794961	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Sample No.: CCVIS 240-367370/2 Date Analyzed: 02/08/2019 12:55

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8735.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1771075	5.20	1445689	7.88	859854	10.12
UPPER LIMIT		3542150	5.70	2891378	8.38	1719708	10.62
LOWER LIMIT		885538	4.70	722845	7.38	429927	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367370/4		1859981	5.20	1523524	7.88	880859	10.12
CCV 240-367370/3		1723888	5.20	1390828	7.88	755414	10.12
MB 240-367370/6		1756530	5.20	1437868	7.88	809655	10.12
240-107638-2	MRC-MW151A-020419	1753455	5.20	1431866	7.88	784219	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab File ID: UXC8708.D Lab Sample ID: MB 240-367131/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/07/2019 11:06

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367131/4	UXC8704.D	02/07/2019 09:39
TB-020419	240-107638-1	UXC8729.D	02/07/2019 19:04

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367131/6

Matrix: Water | Lab File ID: UXC8708.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/07/2019 11:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367131 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367131/6

Matrix: Water | Lab File ID: UXC8708.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/07/2019 11:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367131 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367131/6

Matrix: Water | Lab File ID: UXC8708.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/07/2019 11:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367131 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		70-121
460-00-4	4-Bromofluorobenzene (Surr)	88		59-120
2037-26-5	Toluene-d8 (Surr)	93		70-123
1868-53-7	Dibromofluoromethane (Surr)	93		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8704.D

Lab ID: LCS 240-367131/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.63	96	80-124	
1,1,1-Trichloroethane	10.0	11.1	111	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.62	86	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	10.7	107	50-156	
1,1-Dichloroethane	10.0	10.5	105	75-133	
1,1-Dichloroethene	10.0	9.49	95	65-139	
1,1-Dichloropropene	10.0	10.4	104	78-126	
1,2,3-Trichlorobenzene	10.0	9.72	97	39-138	
1,2,3-Trichloropropane	10.0	8.79	88	66-139	
1,2,4-Trichlorobenzene	10.0	9.73	97	42-133	
1,2,4-Trimethylbenzene	10.0	9.61	96	74-120	
1,2-Dibromo-3-Chloropropane	10.0	6.73	67	46-132	
1,2-Dichlorobenzene	10.0	9.96	100	78-120	
1,2-Dichloroethane	10.0	10.2	102	71-135	
1,2-Dichloropropane	10.0	10.5	105	78-133	
1,3-Dichlorobenzene	10.0	9.67	97	78-120	
1,3-Dichloropropane	10.0	9.55	96	72-134	
1,4-Dichlorobenzene	10.0	9.79	98	78-120	
2,2-Dichloropropane	10.0	11.0	110	42-150	
2-Chloroethyl vinyl ether	10.0	7.66 J	77	55-137	
2-Chlorotoluene	10.0	9.81	98	78-123	
2-Hexanone	20.0	17.1	85	43-148	
Bromobenzene	10.0	9.87	99	74-129	
Bromochloromethane	10.0	10.5	105	74-130	
4-Chlorotoluene	10.0	9.59	96	77-125	
4-Isopropyltoluene	10.0	9.79	98	69-122	
Acetone	20.0	19.9	99	21-162	
Benzene	10.0	10.6	106	80-123	
Bromoform	10.0	6.53	65	49-141	
Bromomethane	10.0	9.13	91	41-175	
Carbon disulfide	10.0	8.75	87	60-138	
Carbon tetrachloride	10.0	9.97	100	63-140	
Chlorobenzene	10.0	10.1	101	80-121	
Chloroethane	10.0	9.40	94	33-173	
Chloroform	10.0	10.6	106	79-127	
Chloromethane	10.0	9.40	94	54-143	
cis-1,2-Dichloroethene	10.0	10.6	106	76-128	
cis-1,3-Dichloropropene	10.0	9.65	96	64-132	
Hexachlorobutadiene	10.0	9.23	92	38-136	
Dibromomethane	10.0	9.71	97	74-124	
Bromodichloromethane	10.0	9.27	93	77-125	
Dichlorodifluoromethane	10.0	8.74	87	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8704.D

Lab ID: LCS 240-367131/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.92	99	80-120	
1,2-Dibromoethane	10.0	9.08	91	77-123	
Naphthalene	10.0	8.48	85	28-141	
m-Xylene & p-Xylene	10.0	10.0	100	80-120	
n-Butylbenzene	10.0	9.36	94	57-126	
Isopropylbenzene	10.0	10.2	102	74-120	
N-Propylbenzene	10.0	9.73	97	77-123	
2-Butanone (MEK)	20.0	18.7	94	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	17.1	86	49-143	
sec-Butylbenzene	10.0	9.67	97	68-123	
Methyl tert-butyl ether	10.0	9.33	93	51-133	
Methylene Chloride	10.0	10.8	108	70-134	
o-Xylene	10.0	10.1	101	80-120	
Styrene	10.0	9.59	96	79-120	
tert-Butylbenzene	10.0	9.41	94	70-121	
Tetrachloroethene	10.0	10.3	103	74-130	
Toluene	10.0	10.3	103	78-129	
trans-1,2-Dichloroethene	10.0	10.8	108	78-133	
trans-1,3-Dichloropropene	10.0	8.15	82	55-128	
Trichloroethene	10.0	10.4	104	76-125	
Trichlorofluoromethane	10.0	10.6	106	51-164	
Vinyl acetate	10.0	8.95	89	45-151	
Vinyl chloride	10.0	10.2	102	58-143	
tert-Butyl alcohol	100	94.4	94	10-161	
Xylenes, Total	20.0	20.1	101	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab File ID: UXC8740.D Lab Sample ID: MB 240-367370/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/08/2019 14:45

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367370/4	UXC8736.D	02/08/2019 13:17
MRC-MW151A-020419	240-107638-2	UXC8742.D	02/08/2019 15:28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367370/6

Matrix: Water | Lab File ID: UXC8740.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367370/6

Matrix: Water | Lab File ID: UXC8740.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367370/6

Matrix: Water | Lab File ID: UXC8740.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		70-121
460-00-4	4-Bromofluorobenzene (Surr)	82		59-120
2037-26-5	Toluene-d8 (Surr)	85		70-123
1868-53-7	Dibromofluoromethane (Surr)	85		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8736.D

Lab ID: LCS 240-367370/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.17	92	80-124	
1,1,1-Trichloroethane	10.0	10.8	108	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.21	82	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	10.2	102	50-156	
1,1-Dichloroethane	10.0	10.5	105	75-133	
1,1-Dichloroethene	10.0	9.19	92	65-139	
1,1-Dichloropropene	10.0	10.1	101	78-126	
1,2,3-Trichlorobenzene	10.0	8.78	88	39-138	
1,2,3-Trichloropropane	10.0	8.35	84	66-139	
1,2,4-Trichlorobenzene	10.0	8.64	86	42-133	
1,2,4-Trimethylbenzene	10.0	9.51	95	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.73	57	46-132	
1,2-Dichlorobenzene	10.0	9.69	97	78-120	
1,2-Dichloroethane	10.0	10.1	101	71-135	
1,2-Dichloropropane	10.0	10.1	101	78-133	
1,3-Dichlorobenzene	10.0	9.51	95	78-120	
1,3-Dichloropropane	10.0	9.13	91	72-134	
1,4-Dichlorobenzene	10.0	9.55	95	78-120	
2,2-Dichloropropane	10.0	10.4	104	42-150	
2-Chloroethyl vinyl ether	10.0	7.38 J	74	55-137	
2-Chlorotoluene	10.0	9.72	97	78-123	
2-Hexanone	20.0	14.3	72	43-148	
Bromobenzene	10.0	9.58	96	74-129	
Bromochloromethane	10.0	10.6	106	74-130	
4-Chlorotoluene	10.0	9.42	94	77-125	
4-Isopropyltoluene	10.0	9.69	97	69-122	
Acetone	20.0	19.0	95	21-162	
Benzene	10.0	10.5	105	80-123	
Bromoform	10.0	6.23	62	49-141	
Bromomethane	10.0	8.36	84	41-175	
Carbon disulfide	10.0	8.25	83	60-138	
Carbon tetrachloride	10.0	9.80	98	63-140	
Chlorobenzene	10.0	9.81	98	80-121	
Chloroethane	10.0	8.53	85	33-173	
Chloroform	10.0	10.4	104	79-127	
Chloromethane	10.0	8.12	81	54-143	
cis-1,2-Dichloroethene	10.0	10.5	105	76-128	
cis-1,3-Dichloropropene	10.0	8.99	90	64-132	
Hexachlorobutadiene	10.0	8.65	86	38-136	
Dibromomethane	10.0	9.44	94	74-124	
Bromodichloromethane	10.0	9.01	90	77-125	
Dichlorodifluoromethane	10.0	7.28	73	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8736.D

Lab ID: LCS 240-367370/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.91	99	80-120	
1,2-Dibromoethane	10.0	8.62	86	77-123	
Naphthalene	10.0	7.16	72	28-141	
m-Xylene & p-Xylene	10.0	9.78	98	80-120	
n-Butylbenzene	10.0	9.13	91	57-126	
Isopropylbenzene	10.0	10.1	101	74-120	
N-Propylbenzene	10.0	9.47	95	77-123	
2-Butanone (MEK)	20.0	17.1	85	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	15.2	76	49-143	
sec-Butylbenzene	10.0	9.51	95	68-123	
Methyl tert-butyl ether	10.0	8.59	86	51-133	
Methylene Chloride	10.0	9.56	96	70-134	
o-Xylene	10.0	10.1	101	80-120	
Styrene	10.0	9.27	93	79-120	
tert-Butylbenzene	10.0	9.14	91	70-121	
Tetrachloroethene	10.0	10.2	102	74-130	
Toluene	10.0	9.99	100	78-129	
trans-1,2-Dichloroethene	10.0	10.8	108	78-133	
trans-1,3-Dichloropropene	10.0	7.58	76	55-128	
Trichloroethene	10.0	10.3	103	76-125	
Trichlorofluoromethane	10.0	9.81	98	51-164	
Vinyl acetate	10.0	8.23	82	45-151	
Vinyl chloride	10.0	9.17	92	58-143	
tert-Butyl alcohol	100	72.4	72	10-161	
Xylenes, Total	20.0	19.9	99	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107638-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107638-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107638-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107638-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107638-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107638-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107638-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab File ID: BFB0207.D BFB Injection Date: 02/07/2019

Instrument ID: A3UX15 BFB Injection Time: 08:46

Analysis Batch No.: 367131

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.4	
75	30.0 - 60.0 % of mass 95	52.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	103.2	
175	5.0 - 9.0 % of mass 174	7.0	(6.8) 1
176	95.0 - 101.0 % of mass 174	101.1	(98.0) 1
177	5.0 - 9.0 % of mass 176	6.6	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367131/2	UXC8703.D	02/07/2019	09:17
	LCS 240-367131/4	UXC8704.D	02/07/2019	09:39
	CCV 240-367131/3	UXC8705.D	02/07/2019	10:01
	MB 240-367131/6	UXC8708.D	02/07/2019	11:06
TB-020419	240-107638-1	UXC8729.D	02/07/2019	19:04

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCVIS 240-367131/2 Calibration Date: 02/07/2019 09:17

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8703.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3417	0.1000	0.0111	0.0100	11.2	20.0
Chloromethane	Ave	0.3135	0.3151	0.1000	0.0100	0.0100	0.5	20.0
Butadiene	Ave	0.3794	0.3432		0.00905	0.0100	-9.5	20.0
Vinyl chloride	Ave	0.2885	0.2593	0.1000	0.00899	0.0100	-10.1	20.0
Bromomethane	Ave	0.2308	0.1947	0.0500	0.00843	0.0100	-15.7	20.0
Chloroethane	Ave	0.2041	0.1827	0.0500	0.00895	0.0100	-10.5	20.0
Dichlorofluoromethane	Ave	0.5102	0.4514		0.00885	0.0100	-11.5	20.0
Trichlorofluoromethane	Ave	0.4337	0.4403	0.1000	0.0102	0.0100	1.5	20.0
Ethyl ether	Ave	0.2310	0.2302		0.00997	0.0100	-0.3	20.0
Acrolein	Ave	0.0317	0.0422		0.0666	0.0500	33.2	50.0
1,1-Dichloroethene	Ave	0.3005	0.2745	0.1000	0.00914	0.0100	-8.6	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2519	0.0500	0.0102	0.0100	2.1	20.0
Acetone	Lin1		0.0254	0.0100	0.0211	0.0200	5.6	50.0
Iodomethane	Ave	0.4675	0.4542		0.00972	0.0100	-2.8	20.0
Carbon disulfide	Ave	0.7741	0.6357	0.1000	0.00821	0.0100	-17.9	20.0
3-Chloro-1-propene	Ave	0.1698	0.1715		0.0101	0.0100	1.0	20.0
Methyl acetate	Ave	0.2050	0.1990	0.1000	0.0194	0.0200	-2.9	20.0
Methylene Chloride	Lin1		0.3273	0.1000	0.0107	0.0100	7.0	50.0
tert-Butyl alcohol	Ave	0.0203	0.0213		0.105	0.100	5.2	50.0
Acrylonitrile	Ave	0.0962	0.0982		0.102	0.100	2.1	20.0
Methyl tert-butyl ether	Ave	0.7834	0.7432	0.1000	0.00949	0.0100	-5.1	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2846	0.1000	0.0102	0.0100	1.8	20.0
Hexane	Ave	0.0586	0.0578		0.00985	0.0100	-1.5	20.0
1,1-Dichloroethane	Ave	0.4517	0.4736	0.2000	0.0105	0.0100	4.8	20.0
Vinyl acetate	Ave	0.5198	0.4496		0.00865	0.0100	-13.5	50.0
2,2-Dichloropropane	Ave	0.0624	0.0630		0.0101	0.0100	0.9	20.0
2-Butanone (MEK)	Ave	0.0333	0.0326	0.0100	0.0196	0.0200	-2.0	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3222	0.1000	0.0105	0.0100	4.7	20.0
Bromochloromethane	Ave	0.1531	0.1593		0.0104	0.0100	4.0	20.0
Tetrahydrofuran	Ave	0.0828	0.0795		0.0192	0.0200	-3.9	20.0
Chloroform	Ave	0.4606	0.4808	0.2000	0.0104	0.0100	4.4	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3710	0.1000	0.0105	0.0100	4.6	20.0
Cyclohexane	Ave	0.3993	0.4145	0.1000	0.0104	0.0100	3.8	20.0
1,1-Dichloropropene	Ave	0.3748	0.3810		0.0102	0.0100	1.7	20.0
Carbon tetrachloride	Ave	0.3441	0.3445	0.1000	0.0100	0.0100	0.1	20.0
Isobutyl alcohol	Ave	0.0077	0.0082		0.265	0.250	6.1	20.0
Benzene	Ave	1.116	1.185	0.5000	0.0106	0.0100	6.2	20.0
1,2-Dichloroethane	Ave	0.3820	0.3919	0.1000	0.0103	0.0100	2.6	20.0
n-Heptane	Ave	0.0532	0.0512		0.00962	0.0100	-3.8	20.0
Trichloroethene	Ave	0.3240	0.3421	0.1500	0.0106	0.0100	5.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCVIS 240-367131/2 Calibration Date: 02/07/2019 09:17

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8703.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3598	0.1000	0.0102	0.0100	2.1	20.0
1,2-Dichloropropane	Ave	0.2590	0.2664	0.1000	0.0103	0.0100	2.9	20.0
1,4-Dioxane	Ave	0.0020	0.0024		0.242	0.200	20.8	50.0
Dibromomethane	Ave	0.1717	0.1688		0.00983	0.0100	-1.7	20.0
Bromodichloromethane	Ave	0.3410	0.3246	0.1500	0.00952	0.0100	-4.8	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1481		0.0170	0.0200	-15.1	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3777	0.1500	0.00958	0.0100	-4.2	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2358	0.0500	0.0176	0.0200	-12.0	20.0
Toluene	Ave	1.476	1.499	0.4000	0.0102	0.0100	1.5	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4030	0.1000	0.00867	0.0100	-13.3	20.0
Ethyl methacrylate	Ave	0.4442	0.3849		0.00866	0.0100	-13.4	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2904	0.1000	0.00974	0.0100	-2.6	20.0
Tetrachloroethene	Ave	0.3268	0.3351	0.1500	0.0103	0.0100	2.6	20.0
1,3-Dichloropropane	Ave	0.5243	0.5082		0.00969	0.0100	-3.1	20.0
2-Hexanone	Ave	0.2283	0.2039	0.0500	0.0179	0.0200	-10.7	20.0
Chlorodibromomethane	Ave	0.3116	0.2722		0.00874	0.0100	-12.6	20.0
1,2-Dibromoethane	Ave	0.3191	0.2972		0.00931	0.0100	-6.9	20.0
Chlorobenzene	Ave	0.9777	0.9792	0.3000	0.0100	0.0100	0.1	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3254		0.00943	0.0100	-5.7	20.0
Ethylbenzene	Ave	0.5145	0.5112		0.00994	0.0100	-0.6	20.0
m-Xylene & p-Xylene	Ave	1.221	1.193		0.00977	0.0100	-2.3	20.0
o-Xylene	Ave	0.6189	0.6194		0.0100	0.0100	0.0	20.0
Styrene	Ave	1.036	1.035	0.3000	0.00999	0.0100	-0.1	20.0
Bromoform	Lin1		0.1684	0.1000	0.00725	0.0100	-27.5*	20.0
Isopropylbenzene	Ave	1.463	1.457	0.1000	0.00996	0.0100	-0.4	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.6212	0.3000	0.00877	0.0100	-12.3	20.0
Bromobenzene	Ave	0.8274	0.7853		0.00949	0.0100	-5.1	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2216		0.00898	0.0100	-10.2	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.1224		0.0121	0.0100	20.8*	20.0
N-Propylbenzene	Ave	0.7286	0.6834		0.00938	0.0100	-6.2	20.0
2-Chlorotoluene	Ave	0.6821	0.6395		0.00938	0.0100	-6.2	20.0
1,3,5-Trimethylbenzene	Ave	2.119	2.004		0.00946	0.0100	-5.4	20.0
4-Chlorotoluene	Ave	2.205	2.068		0.00938	0.0100	-6.2	20.0
tert-Butylbenzene	Ave	1.897	1.719		0.00906	0.0100	-9.4	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.120		0.00952	0.0100	-4.8	20.0
sec-Butylbenzene	Ave	2.327	2.162		0.00929	0.0100	-7.1	20.0
1,3-Dichlorobenzene	Ave	1.425	1.354	0.6000	0.00950	0.0100	-5.0	20.0
4-Isopropyltoluene	Ave	2.083	1.958		0.00940	0.0100	-6.0	20.0
1,4-Dichlorobenzene	Ave	1.477	1.410	0.5000	0.00955	0.0100	-4.5	20.0
n-Butylbenzene	Ave	1.649	1.482		0.00899	0.0100	-10.1	20.0
1,2-Dichlorobenzene	Ave	1.387	1.332	0.4000	0.00960	0.0100	-4.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCVIS 240-367131/2 Calibration Date: 02/07/2019 09:17

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8703.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1150	0.0500	0.00714	0.0100	-28.6	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7656	0.2000	0.00872	0.0100	-12.8	50.0
Hexachlorobutadiene	Ave	0.4386	0.3490		0.00796	0.0100	-20.4*	20.0
Naphthalene	Ave	2.209	1.757		0.00795	0.0100	-20.5	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6941		0.00878	0.0100	-12.2	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2276		0.00767	0.00797	-3.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2813		0.00737	0.00797	-7.5	20.0
Toluene-d8 (Surr)	Ave	1.214	1.144		0.00751	0.00797	-5.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4230		0.00777	0.00797	-2.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCV 240-367131/3 Calibration Date: 02/07/2019 10:01

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8705.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0253		0.110	0.100	9.6	20.0
Diisopropyl ether	Ave	0.2405	0.2470		0.0103	0.0100	2.7	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4163		0.00983	0.0100	-1.7	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6986		0.00896	0.0100	-10.4	20.0
Ethyl acetate	Ave	0.2538	0.2122		0.0167	0.0200	-16.4	50.0
Propionitrile	Ave	0.0357	0.0337		0.0945	0.100	-5.5	20.0
Methacrylonitrile	Ave	0.1733	0.1558		0.0899	0.100	-10.1	20.0
Tert-amyl methyl ether	Ave	0.7765	0.6215		0.00800	0.0100	-20.0	20.0
n-Butanol	Ave	0.0061	0.0047		0.195	0.250	-22.1*	20.0
Ethyl acrylate	Ave	0.3330	0.2716		0.00816	0.0100	-18.4	20.0
Methyl methacrylate	Ave	0.2430	0.2065		0.0170	0.0200	-15.0	20.0
2-Nitropropane	Ave	0.0745	0.0359		0.00963	0.0200	-51.8*	20.0
n-Butyl acetate	Ave	0.3918	0.3138		0.00801	0.0100	-19.9	20.0
1-Chlorohexane	Ave	0.3968	0.3387		0.00854	0.0100	-14.6	20.0
Cyclohexanone	Lin1		0.0122		0.0745	0.100	-25.5*	20.0
Pentachloroethane	Ave	0.2034	0.1829		0.0180	0.0200	-10.1	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.232		0.00972	0.0100	-2.8	20.0
Benzyl chloride	Ave	0.2963	0.1606		0.00542	0.0100	-45.8*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9036		0.00955	0.0100	-4.5	20.0
2-Methylnaphthalene	Ave	1.076	0.6950		0.0129	0.0200	-35.4*	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab File ID: BFB0208.D BFB Injection Date: 02/08/2019

Instrument ID: A3UX15 BFB Injection Time: 12:12

Analysis Batch No.: 367370

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.8	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	100.8	
175	5.0 - 9.0 % of mass 174	6.6	(6.5) 1
176	95.0 - 101.0 % of mass 174	99.3	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.1	(6.1) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367370/2	UXC8735.D	02/08/2019	12:55
	LCS 240-367370/4	UXC8736.D	02/08/2019	13:17
	CCV 240-367370/3	UXC8737.D	02/08/2019	13:39
	MB 240-367370/6	UXC8740.D	02/08/2019	14:45
MRC-MW151A-020419	240-107638-2	UXC8742.D	02/08/2019	15:28

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCVIS 240-367370/2 Calibration Date: 02/08/2019 12:55

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8735.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3194	0.1000	0.0104	0.0100	4.0	20.0
Chloromethane	Ave	0.3135	0.2905	0.1000	0.00927	0.0100	-7.3	20.0
Vinyl chloride	Ave	0.2885	0.3042	0.1000	0.0105	0.0100	5.5	20.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	20.0
Bromomethane	Ave	0.2308	0.2169	0.0500	0.00940	0.0100	-6.0	20.0
Chloroethane	Ave	0.2041	0.1953	0.0500	0.00957	0.0100	-4.3	20.0
Dichlorofluoromethane	Ave	0.5102	0.4818		0.00944	0.0100	-5.6	20.0
Trichlorofluoromethane	Ave	0.4337	0.4764	0.1000	0.0110	0.0100	9.9	20.0
Ethyl ether	Ave	0.2310	0.2244		0.00971	0.0100	-2.9	20.0
Acrolein	Ave	0.0317	0.0364		0.0575	0.0500	14.9	50.0
1,1-Dichloroethene	Ave	0.3005	0.2918	0.1000	0.00971	0.0100	-2.9	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2537	0.0500	0.0103	0.0100	2.8	20.0
Acetone	Lin1		0.0226	0.0100	0.0186	0.0200	-7.1	50.0
Iodomethane	Ave	0.4675	0.4990		0.0107	0.0100	6.7	20.0
Carbon disulfide	Ave	0.7741	0.6903	0.1000	0.00892	0.0100	-10.8	20.0
3-Chloro-1-propene	Ave	0.1698	0.1713		0.0101	0.0100	0.9	20.0
Methyl acetate	Ave	0.2050	0.1764	0.1000	0.0172	0.0200	-14.0	20.0
Methylene Chloride	Lin1		0.3159	0.1000	0.0102	0.0100	2.5	50.0
tert-Butyl alcohol	Ave	0.0203	0.0166		0.0819	0.100	-18.1	50.0
Acrylonitrile	Ave	0.0962	0.0873		0.0907	0.100	-9.3	20.0
Methyl tert-butyl ether	Ave	0.7834	0.7001	0.1000	0.00894	0.0100	-10.6	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.3041	0.1000	0.0109	0.0100	8.8	20.0
Hexane	Ave	0.0586	0.0589		0.0100	0.0100	0.4	20.0
1,1-Dichloroethane	Ave	0.4517	0.4927	0.2000	0.0109	0.0100	9.1	20.0
Vinyl acetate	Ave	0.5198	0.3775		0.00726	0.0100	-27.4	50.0
2,2-Dichloropropane	Ave	0.0624	0.0684		0.0110	0.0100	9.7	20.0
2-Butanone (MEK)	Ave	0.0333	0.0273	0.0100	0.0164	0.0200	-18.0	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3454	0.1000	0.0112	0.0100	12.2	20.0
Bromochloromethane	Ave	0.1531	0.1636		0.0107	0.0100	6.9	20.0
Tetrahydrofuran	Ave	0.0828	0.0671		0.0162	0.0200	-18.9	20.0
Chloroform	Ave	0.4606	0.5082	0.2000	0.0110	0.0100	10.3	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3911	0.1000	0.0110	0.0100	10.3	20.0
Cyclohexane	Ave	0.3993	0.4126	0.1000	0.0103	0.0100	3.3	20.0
1,1-Dichloropropene	Ave	0.3748	0.3983		0.0106	0.0100	6.3	20.0
Carbon tetrachloride	Ave	0.3441	0.3477	0.1000	0.0101	0.0100	1.1	20.0
Isobutyl alcohol	Ave	0.0077	0.0064		0.208	0.250	-16.9	20.0
Benzene	Ave	1.116	1.233	0.5000	0.0110	0.0100	10.5	20.0
1,2-Dichloroethane	Ave	0.3820	0.3936	0.1000	0.0103	0.0100	3.0	20.0
n-Heptane	Ave	0.0532	0.0494		0.00928	0.0100	-7.2	20.0
Trichloroethene	Ave	0.3240	0.3645	0.1500	0.0112	0.0100	12.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCVIS 240-367370/2 Calibration Date: 02/08/2019 12:55

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8735.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3636	0.1000	0.0103	0.0100	3.2	20.0
1,2-Dichloropropane	Ave	0.2590	0.2663	0.1000	0.0103	0.0100	2.8	20.0
1,4-Dioxane	Ave	0.0020	0.0024		0.244	0.200	22.2	50.0
Dibromomethane	Ave	0.1717	0.1647		0.00959	0.0100	-4.1	20.0
Bromodichloromethane	Ave	0.3410	0.3312	0.1500	0.00971	0.0100	-2.9	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1324		0.0152	0.0200	-24.1*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3663	0.1500	0.00929	0.0100	-7.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2024	0.0500	0.0151	0.0200	-24.4*	20.0
Toluene	Ave	1.476	1.516	0.4000	0.0103	0.0100	2.7	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3705	0.1000	0.00798	0.0100	-20.2*	20.0
Ethyl methacrylate	Ave	0.4442	0.3497		0.00787	0.0100	-21.3*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2764	0.1000	0.00927	0.0100	-7.3	20.0
Tetrachloroethene	Ave	0.3268	0.3439	0.1500	0.0105	0.0100	5.2	20.0
1,3-Dichloropropane	Ave	0.5243	0.4843		0.00924	0.0100	-7.6	20.0
2-Hexanone	Ave	0.2283	0.1700	0.0500	0.0149	0.0200	-25.5*	20.0
Chlorodibromomethane	Ave	0.3116	0.2744		0.00881	0.0100	-11.9	20.0
1,2-Dibromoethane	Ave	0.3191	0.2759		0.00865	0.0100	-13.5	20.0
Chlorobenzene	Ave	0.9777	1.001	0.3000	0.0102	0.0100	2.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3362		0.00974	0.0100	-2.6	20.0
Ethylbenzene	Ave	0.5145	0.5207		0.0101	0.0100	1.2	20.0
m-Xylene & p-Xylene	Ave	1.221	1.236		0.0101	0.0100	1.2	20.0
o-Xylene	Ave	0.6189	0.6449		0.0104	0.0100	4.2	20.0
Styrene	Ave	1.036	1.065	0.3000	0.0103	0.0100	2.8	20.0
Bromoform	Lin1		0.1666	0.1000	0.00718	0.0100	-28.2*	20.0
Isopropylbenzene	Ave	1.463	1.541	0.1000	0.0105	0.0100	5.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5642	0.3000	0.00796	0.0100	-20.4*	20.0
Bromobenzene	Ave	0.8274	0.8129		0.00982	0.0100	-1.8	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2011		0.00815	0.0100	-18.5	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.1211		0.0119	0.0100	19.5	20.0
N-Propylbenzene	Ave	0.7286	0.7102		0.00975	0.0100	-2.5	20.0
2-Chlorotoluene	Ave	0.6821	0.6719		0.00985	0.0100	-1.5	20.0
1,3,5-Trimethylbenzene	Ave	2.119	2.073		0.00978	0.0100	-2.2	20.0
4-Chlorotoluene	Ave	2.205	2.114		0.00959	0.0100	-4.1	20.0
tert-Butylbenzene	Ave	1.897	1.770		0.00933	0.0100	-6.7	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.225		0.00999	0.0100	-0.1	20.0
sec-Butylbenzene	Ave	2.327	2.217		0.00953	0.0100	-4.7	20.0
1,3-Dichlorobenzene	Ave	1.425	1.407	0.6000	0.00988	0.0100	-1.2	20.0
4-Isopropyltoluene	Ave	2.083	2.024		0.00972	0.0100	-2.8	20.0
1,4-Dichlorobenzene	Ave	1.477	1.455	0.5000	0.00985	0.0100	-1.5	20.0
n-Butylbenzene	Ave	1.649	1.548		0.00939	0.0100	-6.1	20.0
1,2-Dichlorobenzene	Ave	1.387	1.375	0.4000	0.00992	0.0100	-0.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCVIS 240-367370/2 Calibration Date: 02/08/2019 12:55

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8735.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0938	0.0500	0.00582	0.0100	-41.8	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7725	0.2000	0.00879	0.0100	-12.1	50.0
Hexachlorobutadiene	Ave	0.4386	0.3567		0.00813	0.0100	-18.7	20.0
Naphthalene	Ave	2.209	1.532		0.00694	0.0100	-30.6	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6880		0.00871	0.0100	-12.9	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2260		0.00761	0.00797	-4.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2747		0.00720	0.00797	-9.7	20.0
Toluene-d8 (Surr)	Ave	1.214	1.098		0.00721	0.00797	-9.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3929		0.00721	0.00797	-9.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCV 240-367370/3 Calibration Date: 02/08/2019 13:39

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8737.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0288		0.125	0.100	24.8*	20.0
Diisopropyl ether	Ave	0.2405	0.2487		0.0103	0.0100	3.4	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4165		0.00983	0.0100	-1.7	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6880		0.00882	0.0100	-11.8	20.0
Ethyl acetate	Ave	0.2538	0.2069		0.0163	0.0200	-18.5	50.0
Propionitrile	Ave	0.0357	0.0342		0.0958	0.100	-4.2	20.0
Methacrylonitrile	Ave	0.1733	0.1557		0.0898	0.100	-10.2	20.0
Tert-amyl methyl ether	Ave	0.7765	0.6043		0.00778	0.0100	-22.2*	20.0
n-Butanol	Ave	0.0061	0.0038		0.156	0.250	-37.7*	20.0
Ethyl acrylate	Ave	0.3330	0.2516		0.00755	0.0100	-24.5*	20.0
Methyl methacrylate	Ave	0.2430	0.1957		0.0161	0.0200	-19.5	20.0
2-Nitropropane	Ave	0.0745	0.0303		0.00814	0.0200	-59.3*	20.0
n-Butyl acetate	Ave	0.3918	0.2938		0.00750	0.0100	-25.0*	20.0
1-Chlorohexane	Ave	0.3968	0.3306		0.00833	0.0100	-16.7	20.0
Cyclohexanone	Lin1		0.0113		0.0690	0.100	-31.0*	20.0
Pentachloroethane	Ave	0.2034	0.1799		0.0177	0.0200	-11.6	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.229		0.00970	0.0100	-3.0	20.0
Benzyl chloride	Ave	0.2963	0.1422		0.00480	0.0100	-52.0*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9064		0.00958	0.0100	-4.2	20.0
2-Methylnaphthalene	Ave	1.076	0.7065		0.0131	0.0200	-34.3*	20.0

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00281	vmbfb 00021
BFB 240-364786/1		8260C		5 mL	5 mL				1 uL
STD8260 240-364786/2 IC		8260C		5 mL	5 mL	1 uL	32 uL	32 uL	
STD8260 240-364786/3 IC		8260C		5 mL	5 mL	1 uL	16 uL	16 uL	
STD8260 240-364786/4 ICIS		8260C		5 mL	5 mL	1 uL	8 uL	8 uL	
STD8260 240-364786/5 IC		8260C		5 mL	5 mL	1 uL	4 uL	4 uL	
STD8260 240-364786/6 IC		8260C		5 mL	5 mL	1 uL	1.6 uL	1.6 uL	
STD8260 240-364786/7 IC		8260C		5 mL	5 mL	1 uL	0.8 uL	0.8 uL	
STD 240-364786/8 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/9 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/10 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/11 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/12 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/13 IC		8260C		5 mL	5 mL	1 uL			
ICV 240-364786/14		8260C		5 mL	5 mL	1 uL	0.797 uL		
ICV 240-364786/15		8260C		5 mL	5 mL	1 uL	0.797 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C							32 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
STD8260 240-364786/3 IC		8260C							16 uL
STD8260 240-364786/4 ICIS		8260C							8 uL
STD8260 240-364786/5 IC		8260C							4 uL
STD8260 240-364786/6 IC		8260C							1.6 uL
STD8260 240-364786/7 IC		8260C							0.8 uL
STD 240-364786/8 IC		8260C						32 uL	
STD 240-364786/9 IC		8260C						16 uL	
STD 240-364786/10 IC		8260C						8 uL	
STD 240-364786/11 IC		8260C						4 uL	
STD 240-364786/12 IC		8260C						1.6 uL	
STD 240-364786/13 IC		8260C						0.8 uL	
ICV 240-364786/14		8260C			8 uL	8 uL	8 uL		
ICV 240-364786/15		8260C		8 uL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C		32 uL					
STD8260 240-364786/3 IC		8260C		16 uL					
STD8260 240-364786/4 ICIS		8260C		8 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
STD8260 240-364786/5 IC		8260C		4 uL					
STD8260 240-364786/6 IC		8260C		1.6 uL					
STD8260 240-364786/7 IC		8260C		0.8 uL					
STD 240-364786/8 IC		8260C							
STD 240-364786/9 IC		8260C							
STD 240-364786/10 IC		8260C							
STD 240-364786/11 IC		8260C							
STD 240-364786/12 IC		8260C							
STD 240-364786/13 IC		8260C							
ICV 240-364786/14		8260C							
ICV 240-364786/15		8260C							

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367131 Batch Start Date: 02/07/19 08:46 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00283
BFB 240-367131/1		8260C		5 mL	5 mL				
CCVIS 240-367131/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-367131/3		8260C		5 mL	5 mL		1 uL		
LCS 240-367131/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-367131/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-107638-A-1	TB-020419	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00266	VMFASGW 00295	VMFASPW 00287	VMRA9W 00284	VMRGAS 00281
BFB 240-367131/1		8260C		1 uL					
CCVIS 240-367131/2		8260C							8 uL
CCV 240-367131/3		8260C						8 uL	
LCS 240-367131/4		8260C			8 uL	8 uL	8 uL		
MB 240-367131/6		8260C							
240-107638-A-1	TB-020419	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00320					
BFB 240-367131/1		8260C							
CCVIS 240-367131/2		8260C		8 uL					
CCV 240-367131/3		8260C							
LCS 240-367131/4		8260C							
MB 240-367131/6		8260C							
240-107638-A-1	TB-020419	8260C	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367131 Batch Start Date: 02/07/19 08:46 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Batch Notes	
pH Indicator ID	hc861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367370 Batch Start Date: 02/08/19 12:12 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00283
BFB 240-367370/1		8260C		5 mL	5 mL				
CCVIS 240-367370/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-367370/3		8260C		5 mL	5 mL		1 uL		
LCS 240-367370/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-367370/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-107638-A-2	MRC-MW151A-020419	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00266	VMFASGW 00295	VMFASPW 00287	VMRA9W 00284	VMRGAS 00281
BFB 240-367370/1		8260C		1 uL					
CCVIS 240-367370/2		8260C							8 uL
CCV 240-367370/3		8260C						8 uL	
LCS 240-367370/4		8260C			8 uL	8 uL	8 uL		
MB 240-367370/6		8260C							
240-107638-A-2	MRC-MW151A-020419	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00320					
BFB 240-367370/1		8260C							
CCVIS 240-367370/2		8260C		8 uL					
CCV 240-367370/3		8260C							
LCS 240-367370/4		8260C							
MB 240-367370/6		8260C							
240-107638-A-2	MRC-MW151A-020419	8260C	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367370 Batch Start Date: 02/08/19 12:12 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13CDCB #
MRC-MW151A-020419	240-107638-2	56
	MB 680-558728/12-A	71
	LCS 680-558728/13-A	75
	LCSD 680-558728/14-A	68

	QC LIMITS
13CDCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Sample No.: CCVIS 680-559059/3 Date Analyzed: 02/21/2019 06:44

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2030.D Heated Purge: (Y/N) N

Calibration ID: 63054

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		170892	12.41	169663	18.67		
UPPER LIMIT		222160	12.91	220562	19.17		
LOWER LIMIT		119624	11.91	118764	18.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-558728/12-A		143915	12.41	132159	18.67		
LCS 680-558728/13-A		164188	12.41	171582	18.67		
LCSD 680-558728/14-A		179669	12.41	188862	18.67		
240-107638-2	MRC-MW151A-020419	164587	12.41	164580	18.67		
CCV 680-559059/21		159076	12.41	142687	18.67		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Lab File ID: xb2031.D Lab Sample ID: MB 680-558728/12-A

Matrix: Water Date Extracted: 02/19/2019 13:42

Instrument ID: CMSX Date Analyzed: 02/21/2019 07:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-558728/13-A	xb2032.D	02/21/2019 07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019 08:10
MRC-MW151A-020419	240-107638-2	xb2039.D	02/21/2019 11:01

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107638-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-558728/12-A

Matrix: Water | Lab File ID: xb2031.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2032.D

Lab ID: LCS 680-558728/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.67	78	62-130	
Hexachlorobiphenyl	4.00	3.37	84	62-130	
Nonachlorobiphenyl	10.0	14.6	146	70-195	
Octachlorobiphenyl	6.00	5.09	85	64-130	
Monochlorobiphenyl	2.00	1.08	54	42-130	
DCB Decachlorobiphenyl	10.0	7.81	78	59-130	
Dichlorobiphenyl	2.00	1.32	66	49-130	
Pentachlorobiphenyl	4.00	3.47	87	63-130	
Tetrachlorobiphenyl	4.00	2.93	73	54-130	
Trichlorobiphenyl	2.00	1.47	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2033.D

Lab ID: LCSD 680-558728/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.45	74	5	40	62-130	
Hexachlorobiphenyl	4.00	3.21	80	5	40	62-130	
Nonachlorobiphenyl	10.0	13.2	132	10	40	70-195	
Octachlorobiphenyl	6.00	4.75	79	7	40	64-130	
Monochlorobiphenyl	2.00	1.36	68	23	40	42-130	
DCB Decachlorobiphenyl	10.0	7.14	71	9	40	59-130	
Dichlorobiphenyl	2.00	1.47	73	11	40	49-130	
Pentachlorobiphenyl	4.00	3.33	83	4	40	63-130	
Tetrachlorobiphenyl	4.00	3.04	76	4	40	54-130	
Trichlorobiphenyl	2.00	1.52	76	3	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Lab File ID: xa0805.D DFTPP Injection Date: 01/08/2019

Instrument ID: CMSX DFTPP Injection Time: 14:10

Analysis Batch No.: 554469

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.9
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	25.1
365	Greater than 1% of mass 198	3.8
441	Present but less than mass 443	13.7 (87.5) 2
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	15.6 (18.3) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-554469/3	xa0807.D	01/08/2019	15:11
	IC 680-554469/5	xa0809.D	01/08/2019	16:08
	IC 680-554469/6	xa0810.D	01/08/2019	16:37
	IC 680-554469/27	xa0850.D	01/08/2019	17:05
	IC 680-554469/7	xa0811.D	01/08/2019	17:34
	IC 680-554469/8	xa0812.D	01/08/2019	18:02
	ICV 680-554469/9	xa0813.D	01/08/2019	18:31

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107638-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICV 680-554469/9 Calibration Date: 01/08/2019 18:31

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xa0813.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8517		1.03	1.00	2.6	20.0
Dichlorobiphenyl	Ave	0.5847	0.5801		0.992	1.00	-0.8	20.0
Trichlorobiphenyl	Ave	0.4198	0.4573		1.09	1.00	8.9	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.3118		2.11	2.00	5.6	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2531		2.11	2.00	5.5	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2508		2.10	2.00	5.2	20.0
Heptachlorobiphenyl	Ave	0.2376	0.2274		2.87	3.00	-4.3	20.0
Octachlorobiphenyl	Ave	0.2054	0.2183		3.19	3.00	6.3	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0419		5.00	5.00	-0.0	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0577		5.35	5.00	7.1	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Lab File ID: xb2028.D DFTPP Injection Date: 02/21/2019

Instrument ID: CMSX DFTPP Injection Time: 05:43

Analysis Batch No.: 559059

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	59.5
197	Less than 1 % of mass 198	0.9
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	28.0
365	Greater than 1% of mass 198	3.5
441	Present but less than mass 443	15.1 (86.3) 2
442	Greater than 40% of mass 198	96.2
443	17 - 23% of mass 442	17.5 (18.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559059/2	xb2029.D	02/21/2019	06:14
	CCVIS 680-559059/3	xb2030.D	02/21/2019	06:44
	MB 680-558728/12-A	xb2031.D	02/21/2019	07:13
	LCS 680-558728/13-A	xb2032.D	02/21/2019	07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019	08:10
MRC-MW151A-020419	240-107638-2	xb2039.D	02/21/2019	11:01
	CCV 680-559059/21	xb2051.D	02/21/2019	16:43

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCVIS 680-559059/3 Calibration Date: 02/21/2019 06:44

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2030.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.7268		0.875	1.00	-12.5	20.0
Dichlorobiphenyl	Ave	0.5847	0.5079		0.869	1.00	-13.1	20.0
Trichlorobiphenyl	Ave	0.4198	0.3597		0.857	1.00	-14.3	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2563		1.74	2.00	-13.2	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2131		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2136		1.79	2.00	-10.4	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1920		2.42	3.00	-19.2	20.0
Octachlorobiphenyl	Ave	0.2054	0.1725		2.52	3.00	-16.0	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0343		4.08	5.00	-18.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0462		4.29	5.00	-14.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCV 680-559059/21 Calibration Date: 02/21/2019 16:43

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2051.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8070		0.972	1.00	-2.8	20.0
Dichlorobiphenyl	Ave	0.5847	0.5601		0.958	1.00	-4.2	20.0
Trichlorobiphenyl	Ave	0.4198	0.4000		0.953	1.00	-4.7	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2879		1.95	2.00	-2.4	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2300		1.92	2.00	-4.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2246		1.88	2.00	-5.8	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1938		2.45	3.00	-18.4	20.0
Octachlorobiphenyl	Ave	0.2054	0.1765		2.58	3.00	-14.1	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0315		3.75	5.00	-25.0*	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0422		3.92	5.00	-21.6*	20.0

NONACHLOROBIPHENYLS AFFECTED BY DCB

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Instrument ID: CMSX Start Date: 01/08/2019 14:10

Analysis Batch Number: 554469 End Date: 01/08/2019 18:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 680-554469/25		01/08/2019 14:10	1	xa0805.D	HP-5MS 0.25(mm)
WDM 680-554469/26		01/08/2019 14:41	1		HP-5MS 0.25(mm)
ICISAV 680-554469/3		01/08/2019 15:11	1	xa0807.D	HP-5MS 0.25(mm)
IC 680-554469/5		01/08/2019 16:08	1	xa0809.D	HP-5MS 0.25(mm)
IC 680-554469/6		01/08/2019 16:37	1	xa0810.D	HP-5MS 0.25(mm)
IC 680-554469/27		01/08/2019 17:05	1	xa0850.D	HP-5MS 0.25(mm)
IC 680-554469/7		01/08/2019 17:34	1	xa0811.D	HP-5MS 0.25(mm)
IC 680-554469/8		01/08/2019 18:02	1	xa0812.D	HP-5MS 0.25(mm)
ICV 680-554469/9		01/08/2019 18:31	1	xa0813.D	HP-5MS 0.25(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Instrument ID: CMSX Start Date: 02/21/2019 05:43

Analysis Batch Number: 559059 End Date: 02/21/2019 16:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 680-559059/1		02/21/2019 05:43	1	xb2028.D	HP-5MS 0.25(mm)
WDM 680-559059/2		02/21/2019 06:14	1	xb2029.D	HP-5MS 0.25(mm)
CCVIS 680-559059/3		02/21/2019 06:44	1	xb2030.D	HP-5MS 0.25(mm)
MB 680-558728/12-A		02/21/2019 07:13	1	xb2031.D	HP-5MS 0.25(mm)
LCS 680-558728/13-A		02/21/2019 07:41	1	xb2032.D	HP-5MS 0.25(mm)
LCSD 680-558728/14-A		02/21/2019 08:10	1	xb2033.D	HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 08:38	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 09:07	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 09:35	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 10:04	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 10:32	1		HP-5MS 0.25(mm)
240-107638-2		02/21/2019 11:01	1	xb2039.D	HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 11:58	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 12:26	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 12:55	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 13:52	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 14:21	1		HP-5MS 0.25(mm)
CCV 680-559059/21		02/21/2019 16:43	1	xb2051.D	HP-5MS 0.25(mm)

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Batch Number: 558728 Batch Start Date: 02/19/19 13:42 Batch Analyst: Wilson, Charles E

Batch Method: 680 Batch End Date: 02/20/19 07:53

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ResidualChloCheck	ReceivedpH
240-107638-K-2	MRC-MW151A-020419	680, 680	T	1513.2 g	504.1 g	1009.1 mL	1 mL	N	7 SU
MB 680-558728/12		680, 680				1000 mL	1 mL	N	7 SU
LCS 680-558728/13		680, 680				1000 mL	1 mL	N	7 SU
LCSD 680-558728/14		680, 680				1000 mL	1 mL	N	7 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	680wkSPIKE 00120	680wkSURR-NEW 00035				
240-107638-K-2	MRC-MW151A-020419	680, 680	T		1 mL				
MB 680-558728/12		680, 680			1 mL				
LCS 680-558728/13		680, 680		1 mL	1 mL				
LCSD 680-558728/14		680, 680		1 mL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Batch Number: 558728 Batch Start Date: 02/19/19 13:42 Batch Analyst: Wilson, Charles E

Batch Method: 680 Batch End Date: 02/20/19 07:53

Batch Notes	
Balance ID	23
Batch Comment	680 box 125
Boiling Chips ID	901800
Concentration 1 Thermometer ID	50
Analyst ID - Concentration	jc
Exchange Solvent ID	5859923
Analyst ID - Extraction	CEW/CMJ
Extraction 1 End Time	02/20/2019 07:53
Extraction 1 Start Time	02/19/2019 13:42
Method/Fraction	680
pH Indicator ID	5904645
Pipette/Syringe/Dispenser ID	AA06G
Prep Solvent ID	5904693
Residual Chlorine Indicator ID	5775443
Analyst ID - Spike Analyst	CEW
Analyst ID - Spike Witness Analyst	CMJ
Sufficient Volume for Batch QC	NO

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW151A-020419	240-107638-2

Comments:

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG No.:

ICP-AES Instrument ID: I12 Date: 12/21/2018

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	V	
Aluminum										0.034040				0.056989	
Antimony		-0.00006			-0.000422			-0.000035						0.002232	
Arsenic		0.000009			-0.000202	0.00931			-0.0003555	0.00123617					
Beryllium														0.000235	
Cadmium			0.012308					0.000004							
Chromium									0.000415						
Cobalt													0.002128		
Copper				0.000018	0.000361			-0.000032					-0.003157		
Lead		-0.000091					0.00057707	0.000048			0.000131	0.000025			
Lithium				0.000011											
Nickel					0.000518			0.000059							
Selenium		-0.000032							0.000338						
Thallium		0.000034			0.003802			-0.000025	-0.0006202 3					0.001371	
Vanadium								0.000064							
Zinc						-0.001092									

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107638-1

SDG No.:

Instrument ID: I12 Date: 01/28/2019 12:19

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		15000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107638-1

SDG No.:

Instrument ID: I14 Date: 10/02/2018 11:17

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/08/2019 09:28 End Date: 02/08/2019 18:33

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ICIS 240-367445/1	1		09:28	X	X																								
CALSTD 240-367445/2 IC			09:33	X	X																								
CALSTD 240-367445/3 IC			09:38	X	X																								
ICV 240-367445/4	1		09:42	X	X																								
ICB 240-367445/5	1		09:47	X	X																								
ICVL 240-367445/6	1		09:52	X	X																								
ZZZZZZ			09:56																										
ICSA 240-367445/8	1		10:01	X	X																								
ICSAB 240-367445/9	1		10:06	X	X																								
CCV 240-367445/10			10:10																										
CCB 240-367445/11			10:15																										
ZZZZZZ			10:19																										
ZZZZZZ			10:24																										
ZZZZZZ			10:29																										
ZZZZZZ			10:33																										
ZZZZZZ			10:38																										
ZZZZZZ			10:43																										
CCV 240-367445/18	1		10:48	X	X																								
CCB 240-367445/19	1		10:52	X	X																								
ZZZZZZ			10:57																										
ZZZZZZ			11:02																										
HIGHSTD 240-367445/22 IC			11:06	X	X																								
ZZZZZZ			11:11																										
MB 240-366966/1-A	1	R	11:16	X	X																								
LCS 240-366966/2-A	1	R	11:20	X	X																								
240-107638-2	1	R	11:25	X	X																								
240-107638-2 SD	5	R	11:29	X	X																								
240-107638-2 MS	1	R	11:34	X	X																								
240-107638-2 MSD	1	R	11:38	X	X																								
CCV 240-367445/30	1		11:43	X	X																								
CCB 240-367445/31	1		11:47	X	X																								
ZZZZZZ			11:52																										
ZZZZZZ			11:56																										
ZZZZZZ			12:01																										
ZZZZZZ			12:06																										
ZZZZZZ			12:10																										
ZZZZZZ			12:15																										
ZZZZZZ			12:20																										
ZZZZZZ			12:25																										
ZZZZZZ			12:29																										
ZZZZZZ			12:34																										
CCV 240-367445/42			12:38																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/08/2019 09:28 End Date: 02/08/2019 18:33

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
CCB 240-367445/43			12:43																									
ZZZZZZ			12:47																									
ZZZZZZ			12:52																									
ZZZZZZ			12:56																									
ZZZZZZ			13:00																									
ZZZZZZ			13:05																									
ZZZZZZ			13:10																									
ZZZZZZ			13:14																									
ZZZZZZ			13:19																									
ZZZZZZ			13:24																									
ZZZZZZ			13:28																									
CCV 240-367445/54			13:33																									
CCB 240-367445/55			13:37																									
CCVL 240-367445/56	1		13:42	X	X																							
ZZZZZZ			13:47																									
ZZZZZZ			13:51																									
ZZZZZZ			13:56																									
ZZZZZZ			14:01																									
ZZZZZZ			14:05																									
ZZZZZZ			14:10																									
ZZZZZZ			14:15																									
ZZZZZZ			14:19																									
ZZZZZZ			14:24																									
CCV 240-367445/66			14:29																									
CCB 240-367445/67			14:33																									
ZZZZZZ			14:38																									
ZZZZZZ			14:42																									
ZZZZZZ			14:47																									
ZZZZZZ			14:51																									
ZZZZZZ			14:56																									
ZZZZZZ			15:00																									
ZZZZZZ			15:05																									
ZZZZZZ			15:10																									
ZZZZZZ			15:14																									
ZZZZZZ			15:18																									
CCV 240-367445/78			15:23																									
CCB 240-367445/79			15:27																									
ZZZZZZ			15:32																									
ZZZZZZ			15:37																									
ZZZZZZ			15:41																									
ZZZZZZ			15:46																									
ZZZZZZ			15:50																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/08/2019 09:28 End Date: 02/08/2019 18:33

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			15:55																										
ZZZZZZ			15:59																										
ZZZZZZ			16:04																										
ZZZZZZ			16:08																										
ZZZZZZ			16:13																										
CCV 240-367445/90			16:18																										
CCB 240-367445/91			16:22																										
ZZZZZZ			16:27																										
ZZZZZZ			16:32																										
ZZZZZZ			16:36																										
ZZZZZZ			16:41																										
ZZZZZZ			16:46																										
ZZZZZZ			16:51																										
ZZZZZZ			16:55																										
ZZZZZZ			17:00																										
ZZZZZZ			17:04																										
ZZZZZZ			17:09																										
CCV 240-367445/102			17:14																										
CCB 240-367445/103			17:18																										
ZZZZZZ			17:23																										
ZZZZZZ			17:27																										
ZZZZZZ			17:32																										
ZZZZZZ			17:37																										
ZZZZZZ			17:42																										
ZZZZZZ			17:46																										
ZZZZZZ			17:51																										
ZZZZZZ			17:55																										
ZZZZZZ			18:00																										
ZZZZZZ			18:05																										
CCV 240-367445/114			18:10																										
CCB 240-367445/115			18:14																										
ZZZZZZ			18:19																										
ZZZZZZ			18:24																										
CCV 240-367445/118			18:28																										
CCB 240-367445/119			18:33																										

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICP Instrument ID: I12 Start Date: 02/08/2019 End Date: 02/08/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-367445/1	09:28										
ICV 240-367445/4	09:42	90		97		97		101			
ICB 240-367445/5	09:47	99		99		100		101			
ICVL 240-367445/6	09:52	96		98		99		101			
ICSA 240-367445/8	10:01	73		86		85		98			
ICSAB 240-367445/9	10:06	72		86		84		98			
CCV 240-367445/18	10:48	84		94		94		99			
CCB 240-367445/19	10:52	98		98		99		100			
MB 240-366966/1-A	11:16	99		99		100		102			
LCS 240-366966/2-A	11:20	86		93		94		100			
240-107638-2	11:25	93		97		97		102			
240-107638-2 SD	11:29	97		98		99		101			
240-107638-2 MS	11:34	84		93		94		101			
240-107638-2 MSD	11:38	83		92		93		100			
CCV 240-367445/30	11:43	83		93		94		99			
CCB 240-367445/31	11:47	98		97		99		99			
CCVL 240-367445/56	13:42	96		98		99		101			

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-367445/4 02/08/2019 09:42				CCV 240-367445/18 02/08/2019 10:48				CCV 240-367445/30 02/08/2019 11:43			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	13100		12500	105	24100		25000	96	23900		25000	95
Manganese	1530		1500	102	1900		2000	95	1900		2000	95

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-367445/6 02/08/2019 09:52				CCVL 240-367445/56 02/08/2019 13:42							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	204		200	102	192	J	200	96				
Manganese	12.7	J	15.0	85	12.4	J	15.0	83				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367445/5 02/08/2019 09:47		CCB 240-367445/19 02/08/2019 10:52		CCB 240-367445/31 02/08/2019 11:47			
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U		
Manganese	15	2.1	U	2.1	U	2.1	U		

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICSA 240-367445/8 Instrument ID: I12

Lab File ID: I12020819A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**181740**	**91**
Manganese		**-1.48**	
Aluminum	*500000*	*490620*	*98*
Antimony		*-0.233*	
Arsenic		*-7.18*	
Barium		*0.0948*	
Beryllium		*0.383*	
Boron		*0.286*	
Cadmium		*0.922*	
Calcium	*500000*	*458860*	*92*
Chromium		*3.15*	
Cobalt		*-4.75*	
Copper		*-0.459*	
Lead		*2.49*	
Lithium		*22.6*	
Magnesium	*500000*	*495590*	*99*
Molybdenum		*-1.28*	
Nickel		*3.61*	
Potassium		*-6.25*	
Selenium		*0.650*	
Silicon		*6.55*	
Silver		*-1.26*	
Sodium		*69.4*	
Strontium		*8.16*	
Thallium		*-3.39*	
Tin		*0.678*	
Titanium		*-1.72*	
Vanadium		*0.444*	
Zinc		*-2.40*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICSAB 240-367445/9 Instrument ID: I12

Lab File ID: I12020819A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Iron	**200000**	**181690**	**91**
Manganese	**500**	**469**	**94**
Aluminum	*500000*	*486790*	*97*
Antimony	*1000*	*982*	*98*
Arsenic	*1000*	*986*	*99*
Barium	*500*	*480*	*96*
Beryllium	*500*	*462*	*92*
Boron	*500*	*501*	*100*
Cadmium	*1000*	*994*	*99*
Calcium	*500000*	*465920*	*93*
Chromium	*500*	*464*	*93*
Cobalt	*500*	*495*	*99*
Copper	*500*	*525*	*105*
Lead	*1000*	*864*	*86*
Lithium	*500*	*529*	*106*
Magnesium	*500000*	*498270*	*100*
Molybdenum	*1000*	*950*	*95*
Nickel	*1000*	*984*	*98*
Potassium	*10000*	*10003*	*100*
Selenium	*1000*	*979*	*98*
Silicon	*10000*	*9631*	*96*
Silver	*1000*	*1078*	*108*
Sodium	*10000*	*10023*	*100*
Strontium	*1500*	*1354*	*90*
Thallium	*1000*	*933*	*93*
Tin	*500*	*500*	*100*
Titanium	*500*	*495*	*99*
Vanadium	*500*	*465*	*93*
Zinc	*1000*	*987*	*99*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/07/2019 10:13 End Date: 02/07/2019 16:46

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn							
RINSE 240-367244/1			10:13																												
ICIS 240-367244/2			10:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD1 240-367244/3 IC	1		10:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD2 240-367244/4 IC	1		10:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD3 240-367244/5 IC	1		10:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD4 240-367244/6 IC	1		10:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICV 240-367244/7	1		10:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICB 240-367244/8	1		10:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICVL 240-367244/9	1		10:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICSA 240-367244/10	1		10:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICSAB 240-367244/11	1		10:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCV 240-367244/12			10:39																												
CCB 240-367244/13			10:41																												
ZZZZZZ			10:47																												
CCV 240-367244/15			10:50																												
CCB 240-367244/16			10:52																												
CCVL 240-367244/17			10:55																												
ZZZZZZ			10:57																												
ZZZZZZ			10:59																												
CCV 240-367244/20			11:01																												
CCB 240-367244/21			11:03																												
CCVL 240-367244/22			11:06																												
ZZZZZZ			11:08																												
ZZZZZZ			11:10																												
ZZZZZZ			11:13																												
ZZZZZZ			11:15																												
ZZZZZZ			11:17																												
ZZZZZZ			11:20																												
ZZZZZZ			11:22																												
CCV 240-367244/30			11:24																												
CCB 240-367244/31			11:27																												
CCVL 240-367244/32			11:29																												
ZZZZZZ			11:31																												
ZZZZZZ			11:34																												
ZZZZZZ			11:36																												
ZZZZZZ			11:38																												
ZZZZZZ			11:40																												
ZZZZZZ			11:42																												
ZZZZZZ			11:45																												
ZZZZZZ			11:47																												
ZZZZZZ			11:49																												
CCV 240-367244/42			11:52																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/07/2019 10:13 End Date: 02/07/2019 16:46

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
CCB 240-367244/43			11:54																												
ZZZZZZ			11:56																												
ZZZZZZ			11:59																												
ZZZZZZ			12:01																												
ZZZZZZ			12:03																												
ZZZZZZ			12:05																												
ZZZZZZ			12:07																												
ZZZZZZ			12:09																												
ZZZZZZ			12:12																												
ZZZZZZ			12:14																												
ZZZZZZ			12:17																												
CCV 240-367244/54			12:19																												
CCB 240-367244/55			12:21																												
ZZZZZZ			12:24																												
ZZZZZZ			12:26																												
ZZZZZZ			12:28																												
ZZZZZZ			12:31																												
CCV 240-367244/60	1		12:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-367244/61	1		12:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCVL 240-367244/62			12:38																												
MB 240-366966/1-A	1	R	12:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
LCS 240-366966/3-A	1	R	12:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107638-2	1	R	12:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107638-2 SD	5	R	12:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			12:49																												
240-107638-2 MS	1	R	12:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107638-2 MSD	1	R	12:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			12:56																												
ZZZZZZ			12:58																												
CCV 240-367244/72	1		13:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-367244/73	1		13:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			13:05																												
ZZZZZZ			13:07																												
ZZZZZZ			13:10																												
CCV 240-367244/77			13:12																												
CCB 240-367244/78			13:14																												
CCVL 240-367244/79	1		13:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			13:19																												
ZZZZZZ			13:22																												
ZZZZZZ			13:24																												
ZZZZZZ			13:26																												
ZZZZZZ			13:28																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/07/2019 10:13 End Date: 02/07/2019 16:46

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			13:30																												
ZZZZZZ			13:32																												
ZZZZZZ			13:35																												
ZZZZZZ			13:37																												
CCV 240-367244/89			13:39																												
CCB 240-367244/90			13:41																												
ZZZZZZ			13:44																												
ZZZZZZ			13:46																												
ZZZZZZ			13:49																												
ZZZZZZ			13:51																												
ZZZZZZ			13:53																												
ZZZZZZ			13:56																												
ZZZZZZ			13:58																												
ZZZZZZ			14:00																												
ZZZZZZ			14:03																												
ZZZZZZ			14:05																												
CCV 240-367244/101			14:07																												
CCB 240-367244/102			14:10																												
ZZZZZZ			14:12																												
ZZZZZZ			14:14																												
ZZZZZZ			14:17																												
ZZZZZZ			14:19																												
ZZZZZZ			14:21																												
ZZZZZZ			14:24																												
ZZZZZZ			14:26																												
CCV 240-367244/110			14:28																												
CCB 240-367244/111			14:31																												
CCVL 240-367244/112			14:33																												
ZZZZZZ			14:35																												
ZZZZZZ			14:38																												
ZZZZZZ			14:40																												
ZZZZZZ			14:42																												
ZZZZZZ			14:45																												
ZZZZZZ			14:47																												
ZZZZZZ			14:49																												
ZZZZZZ			14:51																												
ZZZZZZ			14:53																												
CCV 240-367244/122			14:55																												
CCB 240-367244/123			14:58																												
ZZZZZZ			15:00																												
ZZZZZZ			15:03																												
ZZZZZZ			15:05																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/07/2019 10:13 End Date: 02/07/2019 16:46

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			15:07																												
ZZZZZZ			15:10																												
ZZZZZZ			15:12																												
ZZZZZZ			15:14																												
ZZZZZZ			15:16																												
ZZZZZZ			15:19																												
ZZZZZZ			15:21																												
CCV 240-367244/134			15:23																												
CCB 240-367244/135			15:26																												
ZZZZZZ			15:28																												
ZZZZZZ			15:31																												
ZZZZZZ			15:33																												
ZZZZZZ			15:35																												
ZZZZZZ			15:38																												
ZZZZZZ			15:40																												
ZZZZZZ			15:42																												
ZZZZZZ			16:09																												
ZZZZZZ			16:11																												
ZZZZZZ			16:13																												
CCV 240-367244/146			16:15																												
CCB 240-367244/147			16:18																												
ZZZZZZ			16:20																												
ZZZZZZ			16:23																												
ZZZZZZ			16:25																												
ZZZZZZ			16:27																												
ZZZZZZ			16:30																												
ZZZZZZ			16:32																												
ZZZZZZ			16:34																												
CCV 240-367244/155			16:37																												
CCB 240-367244/156			16:39																												
CCVL 240-367244/157			16:41																												
CCV 240-367244/158			16:44																												
CCB 240-367244/159			16:46																												

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/07/2019 End Date: 02/07/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-367244/3 IC	10:18	101		100		101		98		97	
STD2 240-367244/4 IC	10:20	96		96		97		95		94	
STD3 240-367244/5 IC	10:22	90		94		97		95		90	
STD4 240-367244/6 IC	10:25	92		94		98		96		97	
ICV 240-367244/7	10:27	89		96		99		97		95	
ICB 240-367244/8	10:29	91		96		100		98		98	
ICVL 240-367244/9	10:32	92		96		101		97		97	
ICSA 240-367244/10	10:34	83		90		94		92		86	
ICSAB 240-367244/11	10:36	81		91		97		93		89	
CCV 240-367244/60	12:33	91		100		102		98		97	
CCB 240-367244/61	12:35	90		100		103		100		100	
MB 240-366966/1-A	12:40	91		103		107		102		105	
LCS 240-366966/3-A	12:43	88		101		102		96		96	
240-107638-2	12:45	85		97		100		98		95	
240-107638-2 SD	12:47	87		100		105		101		102	
240-107638-2 MS	12:51	81		97		102		95		95	
240-107638-2 MSD	12:54	82		98		102		96		94	
CCV 240-367244/72	13:00	80		97		105		97		99	
CCB 240-367244/73	13:03	85		100		105		99		102	
CCVL 240-367244/79	13:17	85		99		104		97		101	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/07/2019 End Date: 02/07/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-367244/3 IC	10:18	98		100		99		100		101	
STD2 240-367244/4 IC	10:20	93		97		95		98		100	
STD3 240-367244/5 IC	10:22	94		96		93		99		99	
STD4 240-367244/6 IC	10:25	99		99		98		99		100	
ICV 240-367244/7	10:27	97		99		97		99		100	
ICB 240-367244/8	10:29	100		100		98		100		100	
ICVL 240-367244/9	10:32	100		100		100		100		100	
ICSA 240-367244/10	10:34	91		96		92		97		99	
ICSAB 240-367244/11	10:36	93		97		92		100		100	
CCV 240-367244/60	12:33	98		101		99		100		101	
CCB 240-367244/61	12:35	103		102		102		102		103	
MB 240-366966/1-A	12:40	105		106		105		105		105	
LCS 240-366966/3-A	12:43	99		103		97		101		103	
240-107638-2	12:45	100		102		102		104		105	
240-107638-2 SD	12:47	103		107		105		102		103	
240-107638-2 MS	12:51	98		103		97		102		103	
240-107638-2 MSD	12:54	97		103		96		102		103	
CCV 240-367244/72	13:00	99		104		100		103		103	
CCB 240-367244/73	13:03	104		106		104		104		105	
CCVL 240-367244/79	13:17	102		105		101		102		103	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/07/2019 End Date: 02/07/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-367244/3 IC	10:18	100									
STD2 240-367244/4 IC	10:20	97									
STD3 240-367244/5 IC	10:22	95									
STD4 240-367244/6 IC	10:25	100									
ICV 240-367244/7	10:27	99									
ICB 240-367244/8	10:29	99									
ICVL 240-367244/9	10:32	100									
ICSA 240-367244/10	10:34	96									
ICSAB 240-367244/11	10:36	96									
CCV 240-367244/60	12:33	96									
CCB 240-367244/61	12:35	99									
MB 240-366966/1-A	12:40	103									
LCS 240-366966/3-A	12:43	100									
240-107638-2	12:45	100									
240-107638-2 SD	12:47	103									
240-107638-2 MS	12:51	98									
240-107638-2 MSD	12:54	99									
CCV 240-367244/72	13:00	98									
CCB 240-367244/73	13:03	104									
CCVL 240-367244/79	13:17	101									

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-367244/7 02/07/2019 10:27				CCV 240-367244/60 02/07/2019 12:33				CCV 240-367244/72 02/07/2019 13:00			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	198		200	99	256		250	102	251		250	100
Antimony	40.5		40.0	101	51.3		50.0	103	51.3		50.0	103
Arsenic	40.3		40.0	101	51.1		50.0	102	50.6		50.0	101
Barium	38.6		40.0	96	49.6		50.0	99	49.5		50.0	99
Beryllium	41.0		40.0	102	51.6		50.0	103	53.9		50.0	108
Cadmium	39.9		40.0	100	49.2		50.0	98	50.0		50.0	100
Calcium	19600		20000	98	25400		25000	102	25300		25000	101
Chromium	40.0		40.0	100	50.5		50.0	101	51.4		50.0	103
Cobalt	39.8		40.0	99	51.2		50.0	102	50.6		50.0	101
Copper	40.1		40.0	100	51.4		50.0	103	51.2		50.0	102
Iron	9970		10000	100	13000		12500	104	12700		12500	102
Lead	40.7		40.0	102	50.2		50.0	100	51.2		50.0	102
Magnesium	19800		20000	99	25500		25000	102	25300		25000	101
Manganese	197		200	99	253		250	101	254		250	102
Nickel	40.1		40.0	100	51.9		50.0	104	49.8		50.0	100
Potassium	20100		20000	100	26300		25000	105	26100		25000	104
Selenium	38.9		40.0	97	50.4		50.0	101	50.6		50.0	101
Silver	41.2		40.0	103	51.7		50.0	103	51.8		50.0	104
Sodium	19900		20000	100	25500		25000	102	25100		25000	100
Thallium	39.6		40.0	99	50.3		50.0	101	51.0		50.0	102
Vanadium	40.0		40.0	100	50.9		50.0	102	51.7		50.0	103
Zinc	39.2		40.0	98	50.4		50.0	101	49.9		50.0	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICV Source: MTMSCRI6020AW_00079 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00079

Analyte	ICVL 240-367244/9 02/07/2019 10:32				CCVL 240-367244/79 02/07/2019 13:17							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	50.9		50.0	102	48.8	J	50.0	98				
Antimony	2.04		2.00	102	2.04		2.00	102				
Arsenic	4.81	J	5.00	96	4.76	J	5.00	95				
Barium	5.18		5.00	104	5.11		5.00	102				
Beryllium	0.975	J	1.00	98	1.03		1.00	103				
Cadmium	0.945	J	1.00	95	1.02		1.00	102				
Calcium	1000		1000	100	974	J	1000	97				
Chromium	2.01		2.00	100	1.89	J	2.00	94				
Cobalt	1.01		1.00	101	0.992	J	1.00	99				
Copper	2.12		2.00	106	2.06		2.00	103				
Iron	104		100	104	101		100	101				
Lead	1.06		1.00	106	1.04		1.00	104				
Magnesium	1050		1000	105	1020		1000	102				
Manganese	4.65	J	5.00	93	4.68	J	5.00	94				
Nickel	1.77	J	2.00	89	1.52	J	2.00	76				
Potassium	1100		1000	110	1090		1000	109				
Selenium	5.00		5.00	100	5.04		5.00	101				
Silver	1.04		1.00	104	1.04		1.00	104				
Sodium	1030		1000	103	1020		1000	102				
Thallium	1.07		1.00	107	1.07		1.00	107				
Vanadium	5.13		5.00	103	5.05		5.00	101				
Zinc	18.0	J	20.0	90	18.1	J	20.0	90				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367244/8 02/07/2019 10:29		CCB 240-367244/61 02/07/2019 12:35		CCB 240-367244/73 02/07/2019 13:03			
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U		
Antimony	2.0	0.57	U	0.57	U	0.57	U		
Arsenic	5.0	0.75	U	0.75	U	0.75	U		
Barium	5.0	2.2	U	2.2	U	2.2	U		
Beryllium	1.0	0.31	U	0.31	U	0.31	U		
Cadmium	1.0	0.21	U	0.21	U	0.21	U		
Calcium	1000	580	U	580	U	580	U		
Chromium	2.0	0.98	U	0.98	U	0.98	U		
Cobalt	1.0	0.19	U	0.19	U	0.19	U		
Copper	2.0	1.7	U	1.7	U	1.7	U		
Iron	100	47	U	47	U	47	U		
Lead	1.0	0.45	U	0.45	U	0.45	U		
Magnesium	1000	200	U	200	U	200	U		
Manganese	5.0	2.1	U	2.1	U	2.1	U		
Nickel	2.0	1.5	U	1.5	U	1.5	U		
Potassium	1000	220	U	220	U	220	U		
Selenium	5.0	0.89	U	0.89	U	0.89	U		
Silver	1.0	0.053	U	0.053	U	0.053	U		
Sodium	1000	330	U	330	U	330	U		
Thallium	1.0	0.20	U	0.20	U	0.20	U		
Vanadium	5.0	0.82	U	0.82	U	0.82	U		
Zinc	20	15	U	15	U	15	U		

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICSA 240-367244/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**48923**	**98**
Antimony		**0.0350**	
Arsenic		**-0.226**	
Barium		**0.0060**	
Beryllium		**-0.0170**	
Cadmium		**0.196**	
Calcium	**50000**	**49704**	**99**
Chromium		**0.138**	
Cobalt		**-0.0090**	
Copper		**0.117**	
Iron	**50000**	**49613**	**99**
Lead		**0.0050**	
Magnesium	**50000**	**49342**	**99**
Manganese		**-0.264**	
Nickel		**-0.177**	
Potassium	**50000**	**49990**	**100**
Selenium		**0.0650**	
Silver		**0.0100**	
Sodium	**50000**	**49589**	**99**
Thallium		**0.0010**	
Vanadium		**0.0660**	
Zinc		**-2.89**	
Boron		*1.62*	
Lithium		*0.229*	
Molybdenum	*1000*	*1073*	*107*
Strontium		*0.416*	
Tin		*-1.07*	
Titanium	*1000*	*1003*	*100*
Tungsten		*0.112*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICSAB 240-367244/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Aluminum	**50000**	**48155**	**96**
Antimony	**100**	**105**	**105**
Arsenic	**100**	**100**	**100**
Barium	**100**	**100**	**100**
Beryllium	**100**	**101**	**101**
Cadmium	**100**	**99.7**	**100**
Calcium	**50000**	**48762**	**98**
Chromium	**100**	**97.6**	**98**
Cobalt	**100**	**98.6**	**99**
Copper	**100**	**98.2**	**98**
Iron	**50000**	**49417**	**99**
Lead	**100**	**101**	**101**
Magnesium	**50000**	**47958**	**96**
Manganese	**100**	**98.3**	**98**
Nickel	**100**	**97.9**	**98**
Potassium	**50000**	**48784**	**98**
Selenium	**100**	**99.3**	**99**
Silver	**100**	**102**	**102**
Sodium	**50000**	**47749**	**95**
Thallium	**100**	**98.4**	**98**
Vanadium	**100**	**98.2**	**98**
Zinc	**100**	**100**	**100**
Boron	*100*	*94.5*	*95*
Lithium	*100*	*103*	*103*
Molybdenum	*1100*	*1179*	*107*
Strontium	*100*	*99.5*	*99*
Tin	*100*	*105*	*105*
Titanium	*1100*	*1084*	*99*
Tungsten	*100*	*99.9*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-366966/1-A	02/06/2019 14:00	366966		50	50
LCS 240-366966/2-A	02/06/2019 14:00	366966		50	50
240-107638-2	02/06/2019 14:00	366966		50	50
240-107638-2 MS	02/06/2019 14:00	366966		50	50
240-107638-2 MSD	02/06/2019 14:00	366966		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-366966/1-A

Instrument Code: I12 Batch No.: 367445

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	26	U		6010C
7439-96-5	Manganese	2.1	U		6010C

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-366966/2-A

Lab Name: TestAmerica Canton Job No.: 240-107638-1

Sample Matrix: Water LCS Source: MTICP1_00079

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	1000		100	80	120		6010C
Manganese	500	490		98	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-366966/1-A	02/06/2019 14:00	366966		50	50
LCS 240-366966/3-A	02/06/2019 14:00	366966		50	50
240-107638-2	02/06/2019 14:00	366966		50	50
240-107638-2 MS	02/06/2019 14:00	366966		50	50
240-107638-2 MSD	02/06/2019 14:00	366966		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-366966/1-A

Instrument Code: I14 Batch No.: 367244

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	1.7	U		6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	2.1	U		6020A
7440-02-0	Nickel	1.5	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-366966/3-A

Lab Name: TestAmerica Canton Job No.: 240-107638-1

Sample Matrix: Water LCS Source: MTICPMSB_00037

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	101		101	80	120		6020A
Aluminum	10000	10200		102	80	120		6020A
Arsenic	1000	970		97	80	120		6020A
Barium	1000	1020		102	80	120		6020A
Beryllium	1000	1030		103	80	120		6020A
Cadmium	1000	989		99	80	120		6020A
Cobalt	1000	1000		100	80	120		6020A
Chromium	1000	1010		101	80	120		6020A
Copper	1000	993		99	80	120		6020A
Iron	10000	9800		98	80	120		6020A
Manganese	1000	1020		102	80	120		6020A
Nickel	1000	1010		101	80	120		6020A
Lead	1000	1030		103	80	120		6020A
Antimony	100	99.2		99	80	120		6020A
Selenium	1000	980		98	80	120		6020A
Thallium	250	253		101	80	120		6020A
Vanadium	1000	1010		101	80	120		6020A
Zinc	1000	1020		102	80	120		6020A
Calcium	10000	9060		91	80	120		6020A
Potassium	10000	10300		103	80	120		6020A
Magnesium	10000	9980		100	80	120		6020A
Sodium	10000	9900		99	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW151A-020419 MS | Lab ID: 240-107638-2 MS

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Iron	1000		26	U	1000	100	75-125		6010C
Manganese	563		73		500	98	75-125		6010C
Silver	101		0.053	U	100	101	75-125		6020A
Aluminum	10100		57		10000	101	75-125		6020A
Arsenic	984		0.75	U	1000	98	75-125		6020A
Barium	1080		57		1000	102	75-125		6020A
Beryllium	1070		1.7		1000	107	75-125		6020A
Cadmium	982		0.22	J	1000	98	75-125		6020A
Cobalt	1030		24		1000	101	75-125		6020A
Chromium	1010		0.98	U	1000	101	75-125		6020A
Copper	1150		170		1000	98	75-125		6020A
Iron	9790		47	U	10000	98	75-125		6020A
Manganese	1100		75		1000	103	75-125		6020A
Nickel	1030		34		1000	100	75-125		6020A
Lead	1030		0.45	U	1000	103	75-125		6020A
Antimony	101		0.66	J	100	100	75-125		6020A
Selenium	997		0.89	U	1000	100	75-125		6020A
Thallium	254		0.20	U	250	102	75-125		6020A
Vanadium	1020		0.82	U	1000	102	75-125		6020A
Zinc	1120		98		1000	102	75-125		6020A
Calcium	21000		13000		10000	84	75-125		6020A
Potassium	13700		3900		10000	98	75-125		6020A
Magnesium	13100		3500		10000	96	75-125		6020A
Sodium	46000		38000		10000	80	75-125		6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW151A-020419 MSD
Lab ID: 240-107638-2 MSD
Lab Name: TestAmerica Canton
Job No.: 240-107638-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Iron	1010		1000	101	75-125	1	20		6010C
Manganese	562		500	98	75-125	0	20		6010C
Silver	101		100	101	75-125	0	20		6020A
Aluminum	10100		10000	100	75-125	1	20		6020A
Arsenic	984		1000	98	75-125	0	20		6020A
Barium	1080		1000	103	75-125	1	20		6020A
Beryllium	1050		1000	104	75-125	3	20		6020A
Cadmium	993		1000	99	75-125	1	20		6020A
Cobalt	1020		1000	99	75-125	1	20		6020A
Chromium	1010		1000	101	75-125	0	20		6020A
Copper	1170		1000	99	75-125	1	20		6020A
Iron	9700		10000	97	75-125	1	20		6020A
Manganese	1080		1000	100	75-125	2	20		6020A
Nickel	1030		1000	99	75-125	1	20		6020A
Lead	1020		1000	102	75-125	1	20		6020A
Antimony	102		100	101	75-125	1	20		6020A
Selenium	1010		1000	101	75-125	1	20		6020A
Thallium	256		250	103	75-125	1	20		6020A
Vanadium	1020		1000	102	75-125	0	20		6020A
Zinc	1110		1000	102	75-125	0	20		6020A
Calcium	21000		10000	84	75-125	0	20		6020A
Potassium	13500		10000	96	75-125	1	20		6020A
Magnesium	12900		10000	94	75-125	1	20		6020A
Sodium	45600		10000	76	75-125	1	20		6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107638-2

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107638-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Silver	0.053	U	0.27	U	NC		6020A
Aluminum	57		170	U	NC		6020A
Arsenic	0.75	U	3.8	U	NC		6020A
Barium	57		56.8		NC		6020A
Beryllium	1.7		1.84	J	NC		6020A
Cadmium	0.22	J	1.1	U	NC		6020A
Cobalt	24		23.8		NC		6020A
Chromium	0.98	U	4.9	U	NC		6020A
Copper	170		178		NC		6020A
Iron	47	U	240	U	NC		6020A
Manganese	75		74.6		NC		6020A
Nickel	34		32.7		NC		6020A
Lead	0.45	U	2.3	U	NC		6020A
Antimony	0.66	J	2.9	U	NC		6020A
Selenium	0.89	U	4.5	U	NC		6020A
Thallium	0.20	U	1.0	U	NC		6020A
Vanadium	0.82	U	4.1	U	NC		6020A
Zinc	98		86.3	J	NC		6020A
Calcium	13000		12300		NC		6020A
Potassium	3900		3950	J	NC		6020A
Magnesium	3500		3440	J	NC		6020A
Sodium	38000		38500		NC		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 366966 Batch Start Date: 02/06/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/06/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00079	MTICP2A 00090	MTTMHCL 00235
MB 240-366966/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-366966/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107638-I-2	MRC-MW151A-020419	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107638-I-2 MS	MRC-MW151A-020419	3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107638-I-2 MSD	MRC-MW151A-020419	3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-366966/1		3005A, 6010C		1 mL					
LCS 240-366966/2		3005A, 6010C		1 mL					
240-107638-I-2	MRC-MW151A-020419	3005A, 6010C	R	1 mL					
240-107638-I-2 MS	MRC-MW151A-020419	3005A, 6010C	R	1 mL					
240-107638-I-2 MSD	MRC-MW151A-020419	3005A, 6010C	R	1 mL					

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb2
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 366966 Batch Start Date: 02/06/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/06/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00037	MTICPMSB 00037	MTTMHCL 00235
MB 240-366966/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-366966/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107638-I-2	MRC-MW151A-020419	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107638-I-2 MS	MRC-MW151A-020419	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107638-I-2 MSD	MRC-MW151A-020419	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180
MB 240-366966/1		3005A, 6020A		1 mL
LCS 240-366966/3		3005A, 6020A		1 mL
240-107638-I-2	MRC-MW151A-020419	3005A, 6020A	R	1 mL
240-107638-I-2 MS	MRC-MW151A-020419	3005A, 6020A	R	1 mL
240-107638-I-2 MSD	MRC-MW151A-020419	3005A, 6020A	R	1 mL

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb2
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW151A-020419	240-107638-2

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107638-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW151A-020419	240-107638-2

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107638-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW151A-020419	240-107638-2

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 02/13/2019 13:29 End Date: 02/13/2019 16:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				HardCC																								
MB 240-367926/1	1	T	13:29	X																								
LCS 240-367926/2	1	T	13:34	X																								
ZZZZZZ			13:39																									
ZZZZZZ			13:44																									
ZZZZZZ			13:49																									
240-107638-2	1	T	13:55	X																								
ZZZZZZ			14:00																									
ZZZZZZ			14:05																									
ZZZZZZ			14:10																									
ZZZZZZ			14:16																									
ZZZZZZ			14:21																									
ZZZZZZ			14:26																									
ZZZZZZ			14:31																									
ZZZZZZ			14:37																									
ZZZZZZ			14:42																									
ZZZZZZ			14:47																									
ZZZZZZ			14:52																									
ZZZZZZ			14:57																									
ZZZZZZ			15:03																									
ZZZZZZ			15:08																									
ZZZZZZ			15:13																									
ZZZZZZ			15:18																									
ZZZZZZ			15:24																									
ZZZZZZ			15:29																									
ZZZZZZ			15:34																									
ZZZZZZ			15:39																									
ZZZZZZ			15:45																									
ZZZZZZ			15:50																									
ZZZZZZ			15:55																									
ZZZZZZ			16:00																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/18/2019 16:09 End Date: 02/18/2019 18:20

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			16:09																									
ZZZZZZ			16:21																									
LCS 240-368563/3	1	T	16:26	X																								
MB 240-368563/4	1	T	16:30	X																								
ZZZZZZ			16:34																									
ZZZZZZ			16:39																									
ZZZZZZ			16:44																									
ZZZZZZ			16:49																									
ZZZZZZ			16:54																									
ZZZZZZ			16:59																									
ZZZZZZ			17:04																									
ZZZZZZ			17:09																									
ZZZZZZ			17:10																									
ZZZZZZ			17:15																									
ZZZZZZ			17:19																									
ZZZZZZ			17:24																									
ZZZZZZ			17:29																									
ZZZZZZ			17:34																									
ZZZZZZ			17:38																									
ZZZZZZ			17:43																									
ZZZZZZ			17:47																									
ZZZZZZ			17:52																									
ZZZZZZ			17:57																									
ZZZZZZ			17:59																									
ZZZZZZ			18:03																									
ZZZZZZ			18:08																									
240-107638-2	1	T	18:12	X																								
ZZZZZZ			18:17																									
ZZZZZZ			18:20																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 02/06/2019 13:22 End Date: 02/06/2019 13:22

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-367014/1	1	T	13:22	X																								
LCS 240-367014/2	1	T	13:22	X																								
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
240-107638-2	1	T	13:22	X																								
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 08/07/2018 12:13 End Date: 08/07/2018 15:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339523/1 IC	1		12:13	X																								
STD2 240-339523/2 IC	1		12:34	X																								
STD3 240-339523/3 IC	1		12:55	X																								
STD4 240-339523/4 IC	1		13:16	X																								
STD5 240-339523/5 ICRT	1		13:36	X																								
STD6 240-339523/6 IC	1		13:57	X																								
STD7 240-339523/7 IC	1		14:18	X																								
STD8 240-339523/8 IC	1		14:39	X																								
STD9 240-339523/9 IC	1		14:59	X																								
ICV 240-339523/10	1		15:20	X																								
ICB 240-339523/11	1		15:41	X																								

Prep Types:
=

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Analyst: LKG Batch Start Date: 08/07/2018

Reporting Units: mg/L Analytical Batch No.: 339523

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:20	Sulfate	52.9	50.0	106	90-110		WCICLCS_00669
11	ICB	15:41	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 02/06/2019 13:46 End Date: 02/07/2019 08:04

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
CCV 240-367005/1	1		13:46		X																								
CCB 240-367005/2	1		14:07		X																								
MB 240-367005/3	1	T	14:28		X																								
LCS 240-367005/4	1	T	14:49		X																								
ZZZZZZ			15:09																										
ZZZZZZ			15:30																										
ZZZZZZ			15:51																										
ZZZZZZ			16:12																										
ZZZZZZ			16:32																										
ZZZZZZ			16:53																										
ZZZZZZ			17:14																										
ZZZZZZ			17:35																										
CCV 240-367005/13	1		17:55		X																								
CCB 240-367005/14	1		18:16		X																								
ZZZZZZ			18:37																										
ZZZZZZ			18:57																										
ZZZZZZ			19:18																										
ZZZZZZ			19:39																										
ZZZZZZ			19:59																										
ZZZZZZ			20:20																										
ZZZZZZ			20:41																										
ZZZZZZ			21:02																										
ZZZZZZ			21:22																										
ZZZZZZ			21:43																										
CCV 240-367005/25	1		22:04		X																								
CCB 240-367005/26	1		22:24		X																								
ZZZZZZ			22:45																										
ZZZZZZ			23:06																										
ZZZZZZ			23:26																										
ZZZZZZ			23:47																										
ZZZZZZ			00:08																										
ZZZZZZ			00:28																										
ZZZZZZ			00:49																										
ZZZZZZ			01:10																										
ZZZZZZ			01:31																										
ZZZZZZ			01:51																										
CCV 240-367005/37	1		02:12		X																								
CCB 240-367005/38	1		02:33		X																								
MB 240-367005/39	1	T	02:53		X																								
LCS 240-367005/40	1	T	03:14		X																								
ZZZZZZ			03:35																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 02/06/2019 13:46 End Date: 02/07/2019 08:04

Lab Sample Id	D/F	Type	Time	Analytes																								
				Br	SO4																							
ZZZZZZ			03:55																									
ZZZZZZ			04:16																									
ZZZZZZ			04:37																									
ZZZZZZ			04:58																									
ZZZZZZ			05:18																									
240-107638-2	1	T	05:39	X	X																							
ZZZZZZ			06:00																									
CCV 240-367005/49	1		06:20		X																							
CCB 240-367005/50	1		06:41		X																							
ZZZZZZ			07:02																									
ZZZZZZ			07:23																									
CCV 240-367005/53			07:43																									
CCB 240-367005/54			08:04																									

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Analyst: JESW Batch Start Date: 02/06/2019

Reporting Units: mg/L Analytical Batch No.: 367005

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	13:46	Sulfate	51.3	50.0	103	90-110		WCICCCV_00860
2	CCB	14:07	Sulfate	0.35				U	
13	CCV	17:55	Sulfate	51.2	50.0	102	90-110		WCICCCV_00860
14	CCB	18:16	Sulfate	0.35				U	
25	CCV	22:04	Sulfate	51.4	50.0	103	90-110		WCICCCV_00860
26	CCB	22:24	Sulfate	0.35				U	
37	CCV	02:12	Sulfate	52.0	50.0	104	90-110		WCICCCV_00860
38	CCB	02:33	Sulfate	0.35				U	
49	CCV	06:20	Sulfate	51.9	50.0	104	90-110		WCICCCV_00860
50	CCB	06:41	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107638-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/16/2019 12:45 End Date: 02/16/2019 13:21

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575923/1	1		12:45	X																								
ICB 490-575923/2	1		12:46	X																								
CCV 490-575923/3	1		12:47	X																								
CCV 490-575923/4	1		12:48	X																								
CCB 490-575923/5	1		12:49	X																								
MB 490-575923/6	1	T	12:50	X																								
LCS 490-575923/7	1	T	12:51	X																								
ZZZZZZ			12:53																									
ZZZZZZ			12:54																									
ZZZZZZ			12:55																									
ZZZZZZ			12:56																									
ZZZZZZ			12:57																									
ZZZZZZ			12:58																									
ZZZZZZ			12:59																									
ZZZZZZ			13:01																									
240-107638-2	1	T	13:02	X																								
ZZZZZZ			13:03																									
ZZZZZZ			13:04																									
ZZZZZZ			13:05																									
CCV 490-575923/20	1		13:06	X																								
CCB 490-575923/21	1		13:08	X																								
ZZZZZZ			13:09																									
ZZZZZZ			13:10																									
ZZZZZZ			13:11																									
ZZZZZZ			13:12																									
ZZZZZZ			13:13																									
ZZZZZZ			13:14																									
ZZZZZZ			13:16																									
ZZZZZZ			13:17																									
ZZZZZZ			13:18																									
ZZZZZZ			13:19																									
CCV 490-575923/32			13:20																									
CCB 490-575923/33			13:21																									

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107638-1

SDG No.:

Analyst: MSP Batch Start Date: 02/16/2019

Reporting Units: mg/L Analytical Batch No.: 575923

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:45	Nitrate Nitrite as N	3.22	3.00	107	90-110		W_ICAl_00027
2	ICB	12:46	Nitrate Nitrite as N	0.040				U	
3	CCV	12:47	Nitrate Nitrite as N	5.48	5.00	110	90-110		W_Nitrate_00020
4	CCV	12:48	Nitrate Nitrite as N	5.10	5.00	102	90-110		IC Primary_00012
5	CCB	12:49	Nitrate Nitrite as N	0.040				U	
20	CCV	13:06	Nitrate Nitrite as N	5.31	5.00	106	90-110		W_Nitrate_00020
21	CCB	13:08	Nitrate Nitrite as N	0.040				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107638-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/19/2019 06:40 End Date: 02/19/2019 06:40

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-270629/1	1	T	06:40	X																								
240-107638-2	1	T	06:40	X																								
240-107638-2 DU	1	T	06:40	X																								
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									

Prep Types:
T = Total/NA

FORM XIII-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 368563 Date: 02/18/2019 16:30							
2320B-2011	MB 240-368563/4	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 367926 Date: 02/13/2019 13:29							
2340C-2011	MB 240-367926/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 367014 Date: 02/06/2019 13:22							
2540 C-2011	MB 240-367014/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 367005 Date: 02/06/2019 14:28							
9056A	MB 240-367005/3	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-367005/3	Sulfate	0.35	U	mg/L	1.0	1
Batch ID: 367005 Date: 02/07/2019 02:53							
9056A	MB 240-367005/39	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-367005/39	Sulfate	0.35	U	mg/L	1.0	1

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107638-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575923 Date: 02/16/2019 12:50							
SM 4500 NO3 F	MB 490-575923/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107638-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 270629 Date: 02/19/2019 06:40							
SM 2520B	MB 180-270629/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 368563	Date: 02/18/2019 16:26										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-368563/3	Alkalinity	260		mg/L	271	96	86-123			
Batch ID: 367926	Date: 02/13/2019 13:34										
						LCS Source: WCHARDNESS_00031					
2340C-2011	LCS 240-367926/2	Hardness as calcium carbonate	264		mg/L	246	107	90-110			
Batch ID: 367014	Date: 02/06/2019 13:22										
						LCS Source: WCPHENOVSOLID_00038					
2540 C-2011	LCS 240-367014/2	Total Dissolved Solids	213		mg/L	204	104	80-120			
Batch ID: 367005	Date: 02/06/2019 14:49										
						LCS Source: WCICLCS_00695					
9056A	LCS 240-367005/4	Sulfate	51.5		mg/L	50.0	103	90-110			
Batch ID: 367005	Date: 02/07/2019 03:14										
						LCS Source: WCICLCS_00695					
9056A	LCS 240-367005/40	Sulfate	51.7		mg/L	50.0	103	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107638-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575923	Date: 02/16/2019 12:51										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575923/7	Nitrate Nitrite as N	3.22		mg/L	3.00	107	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107638-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 270629 Date: 02/19/2019 06:40								
SM 2520B	MRC-MW151A-020419	240-107638-2	Salinity	2.0	No Unit			U
SM 2520B	MRC-MW151A-020419	240-107638-2 DU	Salinity	2.0	No Unit	NC	20	U

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367926 Batch Start Date: 02/13/19 13:29 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 02/13/19 16:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCHARDNESS 00031		
MB 240-367926/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-367926/2		2340C-2011		25 mL	25 mL	6.60 mL	25 mL		
240-107638-G-2	MRC-MW151A-020419	2340C-2011	T	25 mL	25 mL	1.30 mL			

Batch Notes	
Batch Comment	BEAKERS--4010980
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C9, E3
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 368563 Batch Start Date: 02/18/19 16:09 Batch Analyst: Weisend, Joseph

Batch Method: 2320B-2011 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-368563/3		2320B-2011		InitialAmount is blank	10 mL				
MB 240-368563/4		2320B-2011		InitialAmount is blank					
240-107638-D-2	MRC-MW151A-020419	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4-4005008
pH Buffer 2 ID	7-4017506
pH Buffer 3 ID	10-3892955
pH Buffer 4 ID	12-3891579
Nominal Amount Used	10 mL
Probe ID	WCP-137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367014 Batch Start Date: 02/06/19 13:22 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date: 02/07/19 17:18

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-367014/1		2540 C-2011			3.3581 g	100 mL	3.3585 g	3.3584 g	0 g
LCS 240-367014/2		2540 C-2011			3.2202 g	100 mL	3.2415 g	3.2415 g	0 g
240-107638-H-2	MRC-MW151A-020419	2540 C-2011	T	323 umhos/cm	3.4312 g	100 mL	3.4515 g	3.4512 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 240-367014/1		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0004 g	0.0003 g	N/A g
LCS 240-367014/2		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0213 g	0.0213 g	N/A g
240-107638-H-2	MRC-MW151A-020419	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0203 g	0.02 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00038		
MB 240-367014/1		2540 C-2011		N/A g	100 mL	OK			
LCS 240-367014/2		2540 C-2011		N/A g	100 mL	OK	100 mL		
240-107638-H-2	MRC-MW151A-020419	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367014 Batch Start Date: 02/06/19 13:22 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date: 02/07/19 17:18

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/07/2019 15:55
Date/Time - Out - CW (WT2)	02/07/2019 16:56
Temperature - Start - CW (WT2) - Correct	181 Celsius
Temperature - End - CW (WT2) - Correct	182 Celsius
Temperature - Start-CW(WT2) -Uncorrected	181 Celsius
Temperature - End-CW(WT2) -Uncorrected	182 Celsius
Temperature - Start - Corrected	105 Celsius
Temperature - End - Corrected	105 Celsius
Date/Time - In	02/06/2019 14:03
Date/Time - Out	02/07/2019 13:35
Filter ID	60020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O06
Thermometer ID - Low Temperature	84922
Thermometer ID	181417084
Temperature - Start - Uncorrected	105 Celsius
Temperature - End - Uncorrected	105 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/07/2019 13:35 No Unit
Weight(WT1) Date/Time Out	02/07/2019 14:37
Weight(WT1) Start Temp	182 Celsius
Weight(WT1) Temp Out	182 Celsius
Uncorrected Weight(WT1) Start Temp	182 Celsius
Uncorrected Weight(WT1) Temp Out	182 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339523/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339523/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339523/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339523/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339523/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339523/6 IC		300.0		5 mL	2 mL				
STD7 240-339523/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339523/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339523/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367005 Batch Start Date: 02/06/19 13:46 Batch Analyst: Weisend, Joseph

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107638-D-2	MRC-MW151A-020419	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICLCS 00669			
ICV 240-339523/10		9056A		5 mL	1.0 mL	5 mL			
ICB 240-339523/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367005 Batch Start Date: 02/06/19 13:46 Batch Analyst: Weisend, Joseph

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107638-D-2	MRC-MW151A-020419	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367005 Batch Start Date: 02/06/19 13:46 Batch Analyst: Weisend, Joseph

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00860	WCICLCS 00695			
CCV 240-367005/1		9056A		5 mL	5 mL				
CCB 240-367005/2		9056A		5 mL					
MB 240-367005/3		9056A		5 mL					
LCS 240-367005/4		9056A		5 mL		5 mL			
CCV 240-367005/13		9056A		5 mL	5 mL				
CCB 240-367005/14		9056A		5 mL					
CCV 240-367005/25		9056A		5 mL	5 mL				
CCB 240-367005/26		9056A		5 mL					
CCV 240-367005/37		9056A		5 mL	5 mL				
CCB 240-367005/38		9056A		5 mL					
MB 240-367005/39		9056A		5 mL					
LCS 240-367005/40		9056A		5 mL		5 mL			
CCV 240-367005/49		9056A		5 mL	5 mL				
CCB 240-367005/50		9056A		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107638-1

SDG No.:

Batch Number: 575923 Batch Start Date: 02/16/19 12:45 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/16/19 13:23

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575923/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575923/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575923/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575923/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575923/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575923/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575923/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
240-107638-F-2	MRC-MW151A-020419	SM 4500 NO3 F	T	50 mL	50 mL				7.08
CCV 490-575923/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575923/21		SM 4500 NO3 F		50 mL	50 mL				

Batch Notes	
Acid used for pH adjustment	4547067
Base used for pH adjustment	4273883
Batch Comment	cent tubes 809161; pH probe VVZ10915; pH meter AB92340683
Buffer Reagent ID	4832283
Carrier Identification	DI water
Color Reagent ID	4832299
Filter ID	180611314
Pipette/Syringe/Dispenser ID	26061004, 26121028

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

0-8/0-8

North Canton
4101 Shuffel Street, N. W.

North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Mike Martin	Site Contact: Walt Pryor	Date: 2/6/19	COC No:
20251 Century Blvd, Suite 200	Analysis Turnaround Time			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) _____			
(301) 528-3021 Phone	TAT if different from Below STANDARD TAT			SDG No.
(301) 528-3000 FAX	☐ 2 weeks			
Project Name: MRC BLOCK E/F MASS DISCHARGE	☐ 1 week			
Site: MRC BLOCK E	☐ 2 days Standard			Sampler: Walt Pryor
PO # 112IC08784	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (SW0846 8260C)	Total Metals/Hardness (6020A, 2340C)	Sulfate, Nitrates, TDS (9056A, 4500-NO3E, 2540C	Bromide (300)	Iron and Manganese (6010C	Alkalinity (SM 2320B)	Salinity (2520B)	PCBs (680)	Sample Specific Notes:
TB- 020619	2/6/19	—	GRAB	WATER	2		X	1	—	—	—	—	—	—	
MRC-MW138B-020619		1019			9		3	1	1	1	1	1	1	—	
MRC-MW141B-020619		1145			9		3	1	1	1	1	1	1	—	Sample Hot Pid 31500
MRC-MW142B-020619		1318			9		3	1	1	1	1	1	1	—	
MRC-MW158A-020619		1430			11		3	1	1	1	1	1	1	2	
MRC-Dup01-020619		0000			9		3	1	1	1	1	1	1	—	
							2	4	6	1	4	1	1	1	

240-107796 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: Block E/F Mass discharge well sampling

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pr	TT PAR	2/6/19 1730		TAC	2-7-19 930
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 107796**
Canton Facility

Client MRC Block E/F Mass Discharge Site Name _____ Cooler unpacked by:

Cooler Received on 2-7-19 Opened on 2-7-19

FedEx: 1st Grd ~~Exp~~ UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 1A Foam Box Client Cooler Box Other _____

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other _____

COOLANT: ~~Wet Ice~~ Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 0-8 °C Corrected Cooler Temp. 0-8 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW138B-020619	240-107796-F-2	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW138B-020619	240-107796-G-2	Plastic 250ml - with Nitric Acid	<2		
MRC-MW138B-020619	240-107796-I-2	Plastic 500ml - with Nitric Acid	<2		
MRC-MW141B-020619	240-107796-F-3	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW141B-020619	240-107796-G-3	Plastic 250ml - with Nitric Acid	<2		
MRC-MW141B-020619	240-107796-I-3	Plastic 500ml - with Nitric Acid	<2		
MRC-MW142B-020619	240-107796-F-4	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW142B-020619	240-107796-G-4	Plastic 250ml - with Nitric Acid	<2		
MRC-MW142B-020619	240-107796-I-4	Plastic 500ml - with Nitric Acid	<2		
MRC-MW158A-020619	240-107796-F-5	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW158A-020619	240-107796-G-5	Plastic 250ml - with Nitric Acid	<2		
MRC-MW158A-020619	240-107796-I-5	Plastic 500ml - with Nitric Acid	<2		
MRC-DUP01-020619	240-107796-F-6	Plastic 250ml - with Sulfuric Acid	<2		
MRC-DUP01-020619	240-107796-G-6	Plastic 250ml - with Nitric Acid	<2		
MRC-DUP01-020619	240-107796-I-6	Plastic 500ml - with Nitric Acid	<2		

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass Discharge

Report Number: 240-107796-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The PCB by 680 and NO2/NO3 by SM4500_NO3_F analysis were performed at TestAmerica Savannah Laboratory. The Specific Conductance and Salinity analysis were performed at TestAmerica Pittsburgh Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 2/7/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-020619 (240-107796-1), MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/11/2019, 02/12/2019 and 02/13/2019.

Methylene Chloride was detected in method blank MB 240-367892/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Samples MRC-MW138B-020619 (240-107796-2)[25X], MRC-MW141B-020619 (240-107796-3)[1000X], MRC-MW142B-020619 (240-107796-4)[4X] and MRC-DUP01-020619 (240-107796-6)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 307509 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TB-020619 (240-107796-1)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following samples were received in hydrochloric preserved vials: TB-020619 (240-107796-1), MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6)

The continuing calibration verification (CCV) for analytical batch 367672 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3) and MRC-MW142B-020619 (240-107796-4)

The continuing calibration verification (CCV) for analytical batch 367892 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)
Sample MRC-MW158A-020619 (240-107796-5) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The samples were prepared on 02/19/2019 and analyzed on 02/21/2019.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 680-558728.

The SOP for the 680 Method allows that for soils the CCVIS has a limit of <30%D for each analyte and for liquids <20%D for each analyte . It also allows that the capping CCV for soils has the limit of <30% average %D with no analyte >60%D and for liquids <20% average D with no analyte >40%D. Due to software limitations for this method, the limits are set at <20%D. (CCV 680-559059/21)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/08/2019 and analyzed on 02/11/2019.

Iron was detected in method blank MB 240-367336/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 02/08/2019 and analyzed on 02/11/2019 and 02/12/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 02/11/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 02/12/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 02/12/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4),

MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for anions in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 02/12/2019.

Sample MRC-MW158A-020619 (240-107796-5)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY

Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for Salinity in accordance with SM 2520B. The samples were analyzed on 02/19/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE

Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 02/17/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107796-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107796-1	TB-020619	Water	02/06/19 00:00	02/07/19 09:30
240-107796-2	MRC-MW138B-020619	Water	02/06/19 10:19	02/07/19 09:30
240-107796-3	MRC-MW141B-020619	Water	02/06/19 11:45	02/07/19 09:30
240-107796-4	MRC-MW142B-020619	Water	02/06/19 13:18	02/07/19 09:30
240-107796-5	MRC-MW158A-020619	Water	02/06/19 14:30	02/07/19 09:30
240-107796-6	MRC-DUP01-020619	Water	02/06/19 00:00	02/07/19 09:30

Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-107796-1
Project/Site: MRC Block E/F Mass Discharge

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
680	Liquid-Liquid Extraction (Separatory Funnel)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-020619	240-107796-1	92	99	88	82
MRC-MW138B-020619	240-107796-2	87	92	84	79
MRC-MW141B-020619	240-107796-3	84	90	82	77
MRC-MW142B-020619	240-107796-4	92	97	89	81
MRC-MW158A-020619	240-107796-5	88	92	85	81
MRC-DUP01-020619	240-107796-6	83	87	79	75
	MB 240-367509/6	86	92	86	81
	MB 240-367672/6	81	87	81	77
	MB 240-367892/6	91	97	89	85
	LCS 240-367509/4	97	94	94	92
	LCS 240-367672/4	88	86	82	83
	LCS 240-367892/4	90	88	84	84
MRC-MW141B-020619 MS	240-107796-3 MS	89	87	86	83
MRC-MW141B-020619 MSD	240-107796-3 MSD	92	91	88	85

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-367509/2		1607043	5.20	1260395	7.88	745296	10.12
CCVIS 240-367672/2		1813807	5.20	1522602	7.88	926461	10.12
CCVIS 240-367892/2		1803643	5.20	1542696	7.88	927814	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Sample No.: CCVIS 240-367509/2 Date Analyzed: 02/11/2019 10:51

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8765.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1607043	5.20	1260395	7.88	745296	10.12
UPPER LIMIT		3214086	5.70	2520790	8.38	1490592	10.62
LOWER LIMIT		803522	4.70	630198	7.38	372648	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367509/4		1796449	5.20	1507511	7.88	863122	10.12
CCV 240-367509/3		1829504	5.20	1503859	7.88	817203	10.12
MB 240-367509/6		1730580	5.20	1472271	7.88	810355	10.12
240-107796-1	TB-020619	1505298	5.20	1262185	7.88	720503	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Sample No.: CCVIS 240-367672/2 Date Analyzed: 02/12/2019 10:48

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8788.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1813807	5.20	1522602	7.88	926461	10.12
UPPER LIMIT		3627614	5.70	3045204	8.38	1852922	10.62
LOWER LIMIT		906904	4.70	761301	7.38	463231	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367672/4		1787433	5.20	1540504	7.88	895344	10.12
CCV 240-367672/3		1803926	5.20	1522212	7.88	833765	10.12
MB 240-367672/6		1759637	5.21	1514348	7.88	844128	10.12
240-107796-2	MRC-MW138B-020619	1719138	5.20	1476340	7.88	817581	10.12
240-107796-3	MRC-MW141B-020619	1693055	5.20	1418830	7.88	792712	10.12
240-107796-3 MS	MRC-MW141B-020619 MS	1843356	5.21	1579862	7.88	936719	10.12
240-107796-3 MSD	MRC-MW141B-020619 MSD	1769941	5.20	1504965	7.88	872726	10.12
240-107796-4	MRC-MW142B-020619	1640262	5.20	1372048	7.88	765739	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Sample No.: CCVIS 240-367892/2 Date Analyzed: 02/13/2019 11:48

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8806.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1803643	5.20	1542696	7.88	927814	10.12
UPPER LIMIT		3607286	5.70	3085392	8.38	1855628	10.62
LOWER LIMIT		901822	4.70	771348	7.38	463907	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367892/4		1866937	5.20	1555716	7.88	933071	10.12
CCV 240-367892/3		1758419	5.20	1529185	7.88	842177	10.12
MB 240-367892/6		1565514	5.20	1326978	7.88	735680	10.12
240-107796-5	MRC-MW158A-020619	1623378	5.20	1401608	7.88	789394	10.12
240-107796-6	MRC-DUP01-020619	1795194	5.20	1537264	7.88	854668	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: UXC8770.D Lab Sample ID: MB 240-367509/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/11/2019 12:40

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367509/4	UXC8766.D	02/11/2019 11:13
TB-020619	240-107796-1	UXC8786.D	02/11/2019 19:47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	86		70-123
1868-53-7	Dibromofluoromethane (Surr)	86		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.03	90	80-124	
1,1,1-Trichloroethane	10.0	10.5	105	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.69	87	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.62	96	50-156	
1,1-Dichloroethane	10.0	10.5	105	75-133	
1,1-Dichloroethene	10.0	9.12	91	65-139	
1,1-Dichloropropene	10.0	9.95	99	78-126	
1,2,3-Trichlorobenzene	10.0	8.95	90	39-138	
1,2,3-Trichloropropane	10.0	8.85	88	66-139	
1,2,4-Trichlorobenzene	10.0	8.66	87	42-133	
1,2,4-Trimethylbenzene	10.0	9.49	95	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.72	57	46-132	
1,2-Dichlorobenzene	10.0	9.87	99	78-120	
1,2-Dichloroethane	10.0	10.3	103	71-135	
1,2-Dichloropropane	10.0	10.6	106	78-133	
1,3-Dichlorobenzene	10.0	9.58	96	78-120	
1,3-Dichloropropane	10.0	9.50	95	72-134	
1,4-Dichlorobenzene	10.0	9.63	96	78-120	
2,2-Dichloropropane	10.0	10.5	105	42-150	
2-Chloroethyl vinyl ether	10.0	8.08 J	81	55-137	
2-Chlorotoluene	10.0	9.67	97	78-123	
2-Hexanone	20.0	15.5	77	43-148	
Bromobenzene	10.0	9.69	97	74-129	
Bromochloromethane	10.0	10.7	107	74-130	
4-Chlorotoluene	10.0	9.49	95	77-125	
4-Isopropyltoluene	10.0	9.40	94	69-122	
Acetone	20.0	17.4	87	21-162	
Benzene	10.0	10.6	106	80-123	
Bromoform	10.0	5.03	50	49-141	
Bromomethane	10.0	8.44	84	41-175	
Carbon disulfide	10.0	7.88	79	60-138	
Carbon tetrachloride	10.0	9.20	92	63-140	
Chlorobenzene	10.0	10.0	100	80-121	
Chloroethane	10.0	8.43	84	33-173	
Chloroform	10.0	10.5	105	79-127	
Chloromethane	10.0	8.83	88	54-143	
cis-1,2-Dichloroethene	10.0	10.6	106	76-128	
cis-1,3-Dichloropropene	10.0	8.94	89	64-132	
Hexachlorobutadiene	10.0	8.16	82	38-136	
Dibromomethane	10.0	9.67	97	74-124	
Bromodichloromethane	10.0	8.78	88	77-125	
Dichlorodifluoromethane	10.0	7.36	74	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.78	98	80-120	
1,2-Dibromoethane	10.0	8.95	89	77-123	
Naphthalene	10.0	7.76	78	28-141	
m-Xylene & p-Xylene	10.0	9.69	97	80-120	
n-Butylbenzene	10.0	8.82	88	57-126	
Isopropylbenzene	10.0	9.80	98	74-120	
N-Propylbenzene	10.0	9.40	94	77-123	
2-Butanone (MEK)	20.0	17.5	87	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.8	84	49-143	
sec-Butylbenzene	10.0	9.10	91	68-123	
Methyl tert-butyl ether	10.0	8.88	89	51-133	
Methylene Chloride	10.0	9.41	94	70-134	
o-Xylene	10.0	9.98	100	80-120	
Styrene	10.0	9.34	93	79-120	
tert-Butylbenzene	10.0	9.02	90	70-121	
Tetrachloroethene	10.0	9.77	98	74-130	
Toluene	10.0	10.0	100	78-129	
trans-1,2-Dichloroethene	10.0	10.7	107	78-133	
trans-1,3-Dichloropropene	10.0	7.22	72	55-128	
Trichloroethene	10.0	10.3	103	76-125	
Trichlorofluoromethane	10.0	9.69	97	51-164	
Vinyl acetate	10.0	8.28	83	45-151	
Vinyl chloride	10.0	8.69	87	58-143	
tert-Butyl alcohol	100	59.8	60	10-161	
Xylenes, Total	20.0	19.7	98	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: UXC8793.D Lab Sample ID: MB 240-367672/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/12/2019 12:38

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367672/4	UXC8789.D	02/12/2019 11:10
MRC-MW138B-020619	240-107796-2	UXC8796.D	02/12/2019 13:43
MRC-MW141B-020619	240-107796-3	UXC8797.D	02/12/2019 14:05
MRC-MW141B-020619 MS	240-107796-3 MS	UXC8801.D	02/12/2019 15:32
MRC-MW141B-020619 MSD	240-107796-3 MSD	UXC8802.D	02/12/2019 15:54
MRC-MW142B-020619	240-107796-4	UXC8804.D	02/12/2019 16:38

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367672/6

Matrix: Water | Lab File ID: UXC8793.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 12:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367672/6

Matrix: Water | Lab File ID: UXC8793.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 12:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-367672/6

Matrix: Water Lab File ID: UXC8793.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 02/12/2019 12:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367672 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		70-121
460-00-4	4-Bromofluorobenzene (Surr)	77		59-120
2037-26-5	Toluene-d8 (Surr)	81		70-123
1868-53-7	Dibromofluoromethane (Surr)	81		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8789.D

Lab ID: LCS 240-367672/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.46	85	80-124	
1,1,1-Trichloroethane	10.0	9.89	99	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.17	82	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	10.2	102	50-156	
1,1-Dichloroethane	10.0	9.96	100	75-133	
1,1-Dichloroethene	10.0	9.00	90	65-139	
1,1-Dichloropropene	10.0	9.72	97	78-126	
1,2,3-Trichlorobenzene	10.0	8.77	88	39-138	
1,2,3-Trichloropropane	10.0	8.55	86	66-139	
1,2,4-Trichlorobenzene	10.0	8.63	86	42-133	
1,2,4-Trimethylbenzene	10.0	9.17	92	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.64	56	46-132	
1,2-Dichlorobenzene	10.0	9.54	95	78-120	
1,2-Dichloroethane	10.0	10.0	100	71-135	
1,2-Dichloropropane	10.0	10.2	102	78-133	
1,3-Dichlorobenzene	10.0	9.32	93	78-120	
1,3-Dichloropropane	10.0	9.20	92	72-134	
1,4-Dichlorobenzene	10.0	9.38	94	78-120	
2,2-Dichloropropane	10.0	8.80	88	42-150	
2-Chloroethyl vinyl ether	10.0	7.52 J	75	55-137	
2-Chlorotoluene	10.0	9.06	91	78-123	
2-Hexanone	20.0	15.4	77	43-148	
Bromobenzene	10.0	9.50	95	74-129	
Bromochloromethane	10.0	10.3	103	74-130	
4-Chlorotoluene	10.0	9.14	91	77-125	
4-Isopropyltoluene	10.0	9.15	92	69-122	
Acetone	20.0	18.6	93	21-162	
Benzene	10.0	10.2	102	80-123	
Bromoform	10.0	5.52	55	49-141	
Bromomethane	10.0	7.95	79	41-175	
Carbon disulfide	10.0	7.28	73	60-138	
Carbon tetrachloride	10.0	8.91	89	63-140	
Chlorobenzene	10.0	9.57	96	80-121	
Chloroethane	10.0	8.34	83	33-173	
Chloroform	10.0	10.2	102	79-127	
Chloromethane	10.0	8.61	86	54-143	
cis-1,2-Dichloroethene	10.0	10.1	101	76-128	
cis-1,3-Dichloropropene	10.0	8.71	87	64-132	
Hexachlorobutadiene	10.0	8.02	80	38-136	
Dibromomethane	10.0	9.42	94	74-124	
Bromodichloromethane	10.0	8.61	86	77-125	
Dichlorodifluoromethane	10.0	6.73	67	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8789.D

Lab ID: LCS 240-367672/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.28	93	80-120	
1,2-Dibromoethane	10.0	8.58	86	77-123	
Naphthalene	10.0	7.42	74	28-141	
m-Xylene & p-Xylene	10.0	9.37	94	80-120	
n-Butylbenzene	10.0	8.49	85	57-126	
Isopropylbenzene	10.0	9.45	95	74-120	
N-Propylbenzene	10.0	9.02	90	77-123	
2-Butanone (MEK)	20.0	17.8	89	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.0	80	49-143	
sec-Butylbenzene	10.0	8.94	89	68-123	
Methyl tert-butyl ether	10.0	8.28	83	51-133	
Methylene Chloride	10.0	8.95	89	70-134	
o-Xylene	10.0	9.57	96	80-120	
Styrene	10.0	9.11	91	79-120	
tert-Butylbenzene	10.0	8.70	87	70-121	
Tetrachloroethene	10.0	9.60	96	74-130	
Toluene	10.0	9.58	96	78-129	
trans-1,2-Dichloroethene	10.0	10.3	103	78-133	
trans-1,3-Dichloropropene	10.0	7.05	70	55-128	
Trichloroethene	10.0	9.98	100	76-125	
Trichlorofluoromethane	10.0	9.24	92	51-164	
Vinyl acetate	10.0	8.31	83	45-151	
Vinyl chloride	10.0	8.33	83	58-143	
tert-Butyl alcohol	100	75.3	75	10-161	
Xylenes, Total	20.0	18.9	95	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8801.D

Lab ID: 240-107796-3 MS Client ID: MRC-MW141B-020619 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10000	140 U	8060	81	67-123	
1,1,1-Trichloroethane	10000	240 U	8990	90	51-138	
1,1,2,2-Tetrachloroethane	10000	130 U	8020	80	60-137	
1,1,2-Trichlorotrifluoroethane	10000	410 U	5590	56	31-156	
1,1-Dichloroethane	10000	170 U	9730	97	63-136	
1,1-Dichloroethene	10000	190 U	8130	81	53-140	
1,1-Dichloropropene	10000	140 U	8970	90	62-127	
1,2,3-Trichlorobenzene	10000	540 U	7880	79	34-123	
1,2,3-Trichloropropane	10000	240 U	8380	84	61-143	
1,2,4-Trichlorobenzene	10000	260 U	7690	77	30-126	
1,2,4-Trimethylbenzene	10000	70 U	8640	86	62-120	
1,2-Dibromo-3-Chloropropane	10000	910 U	5050	50	38-124	
1,2-Dichlorobenzene	10000	150 U	9260	93	64-120	
1,2-Dichloroethane	10000	210 U	9910	99	65-135	
1,2-Dichloropropane	10000	150 U	9830	98	70-132	
1,3-Dichlorobenzene	10000	150 U	9020	90	62-120	
1,3-Dichloropropane	10000	210 U	9150	91	68-135	
1,4-Dichlorobenzene	10000	160 U	9060	91	63-120	
2,2-Dichloropropane	10000	310 U	7930	79	27-132	
2-Chloroethyl vinyl ether	10000	260 U	6980 J	70	10-120	
2-Chlorotoluene	10000	150 U	8910	89	64-123	
2-Hexanone	20000	540 U	15400	77	42-150	
Bromobenzene	10000	120 U	8960	90	66-127	
Bromochloromethane	10000	140 U	10200	102	73-120	
4-Chlorotoluene	10000	90 U	8760	88	63-126	
4-Isopropyltoluene	10000	130 U	8350	83	59-120	
Acetone	20000	5400 U	19300	97	10-168	
Benzene	10000	130 U	10100	101	71-122	
Bromoform	10000	760 U	4680	47	44-129	
Bromomethane	10000	420 U	7060	71	19-187	
Carbon disulfide	10000	280 U	5820	58	43-144	
Carbon tetrachloride	10000	260 U	7410	74	41-143	
Chlorobenzene	10000	140 U	9540	95	70-123	
Chloroethane	10000	830 U	7740	77	11-189	
Chloroform	10000	130 U	10200	102	68-130	
Chloromethane	10000	200 U	8610	86	31-154	
cis-1,2-Dichloroethene	10000	180 J	10200	100	64-130	
cis-1,3-Dichloropropene	10000	610 U	7940	79	48-127	
Hexachlorobutadiene	10000	830 U	6390	64	32-128	
Dibromomethane	10000	90 U	9230	92	71-120	
Bromodichloromethane	10000	170 U	7920	79	64-125	
Dichlorodifluoromethane	10000	350 U	3770	38	28-136	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8801.D

Lab ID: 240-107796-3 MS Client ID: MRC-MW141B-020619 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethylbenzene	10000	110 U	9210	92	66-120	
1,2-Dibromoethane	10000	120 U	8510	85	71-123	
Naphthalene	10000	320 U	6850	68	31-142	
m-Xylene & p-Xylene	10000	80 U	9190	92	63-121	
n-Butylbenzene	10000	140 U	7400	74	51-120	
Isopropylbenzene	10000	90 U	9020	90	59-120	
N-Propylbenzene	10000	150 U	8440	84	61-123	
2-Butanone (MEK)	20000	1200 U	18700	94	37-156	
4-Methyl-2-pentanone (MIBK)	20000	420 U	16300	81	44-143	
sec-Butylbenzene	10000	130 U	7990	80	60-120	
Methyl tert-butyl ether	10000	70 U	7630	76	41-136	
Methylene Chloride	10000	2600 U	9420	94	61-130	
o-Xylene	10000	90 U	9530	95	69-120	
Styrene	10000	100 U	8890	89	68-120	
tert-Butylbenzene	10000	140 U	8020	80	61-120	
Tetrachloroethene	10000	150 U	9050	90	51-136	
Toluene	10000	140 U	9410	94	62-132	
trans-1,2-Dichloroethene	10000	190 U	10100	101	68-133	
trans-1,3-Dichloropropene	10000	670 U	6230	62	40-125	
Trichloroethene	10000	21000	31300	98	55-131	
Trichlorofluoromethane	10000	450 U	6100	61	37-174	
Vinyl acetate	10000	190 U	7750	77	37-148	
Vinyl chloride	10000	200 U	6990	70	43-154	
tert-Butyl alcohol	100000	1700 U	64600	65	70-130	F1
Xylenes, Total	20000	150 U	18700	94	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8802.D

Lab ID: 240-107796-3 MSD Client ID: MRC-MW141B-020619 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10000	6660	67	19	13	67-123	F2
1,1,1-Trichloroethane	10000	7590	76	17	27	51-138	
1,1,2,2-Tetrachloroethane	10000	6770	68	17	31	60-137	
1,1,2-Trichlorotrifluoroethane	10000	8070	81	36	35	31-156	F2
1,1-Dichloroethane	10000	7830	78	22	23	63-136	
1,1-Dichloroethene	10000	6890	69	17	35	53-140	
1,1-Dichloropropene	10000	7440	74	19	20	62-127	
1,2,3-Trichlorobenzene	10000	7090	71	10	35	34-123	
1,2,3-Trichloropropane	10000	7100	71	16	22	61-143	
1,2,4-Trichlorobenzene	10000	6960	70	10	35	30-126	
1,2,4-Trimethylbenzene	10000	6970	70	21	27	62-120	
1,2-Dibromo-3-Chloropropane	10000	3890	39	26	35	38-124	
1,2-Dichlorobenzene	10000	7710	77	18	30	64-120	
1,2-Dichloroethane	10000	8510	85	15	24	65-135	
1,2-Dichloropropane	10000	8100	81	19	26	70-132	
1,3-Dichlorobenzene	10000	7500	75	18	31	62-120	
1,3-Dichloropropane	10000	7610	76	18	15	68-135	F2
1,4-Dichlorobenzene	10000	7570	76	18	28	63-120	
2,2-Dichloropropane	10000	6890	69	14	18	27-132	
2-Chloroethyl vinyl ether	10000	5940 J	59	16	35	10-120	
2-Chlorotoluene	10000	7230	72	21	20	64-123	F2
2-Hexanone	20000	12200	61	23	35	42-150	
Bromobenzene	10000	7710	77	15	19	66-127	
Bromochloromethane	10000	8460	85	18	15	73-120	F2
4-Chlorotoluene	10000	7190	72	20	20	63-126	
4-Isopropyltoluene	10000	6910	69	19	24	59-120	
Acetone	20000	15900	79	19	35	10-168	
Benzene	10000	8080	81	22	22	71-122	
Bromoform	10000	3540	35	28	28	44-129	F1
Bromomethane	10000	7020	70	1	35	19-187	
Carbon disulfide	10000	5350	53	8	33	43-144	
Carbon tetrachloride	10000	6440	64	14	30	41-143	
Chlorobenzene	10000	7660	77	22	23	70-123	
Chloroethane	10000	7150	71	8	35	11-189	
Chloroform	10000	8200	82	21	23	68-130	
Chloromethane	10000	6590	66	27	35	31-154	
cis-1,2-Dichloroethene	10000	8430	82	19	21	64-130	
cis-1,3-Dichloropropene	10000	6400	64	21	30	48-127	
Hexachlorobutadiene	10000	6290	63	2	35	32-128	
Dibromomethane	10000	7750	78	17	16	71-120	F2
Bromodichloromethane	10000	6470	65	20	27	64-125	
Dichlorodifluoromethane	10000	6060	61	47	35	28-136	F2

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8802.D

Lab ID: 240-107796-3 MSD Client ID: MRC-MW141B-020619 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	10000	7300	73	23	24	66-120	
1,2-Dibromoethane	10000	7100	71	18	27	71-123	
Naphthalene	10000	6000	60	13	35	31-142	
m-Xylene & p-Xylene	10000	7100	71	26	25	63-121	F2
n-Butylbenzene	10000	6320	63	16	27	51-120	
Isopropylbenzene	10000	7170	72	23	31	59-120	
N-Propylbenzene	10000	6850	68	21	20	61-123	F2
2-Butanone (MEK)	20000	14400	72	26	35	37-156	
4-Methyl-2-pentanone (MIBK)	20000	12900	64	24	35	44-143	
sec-Butylbenzene	10000	6710	67	18	24	60-120	
Methyl tert-butyl ether	10000	6490	65	16	29	41-136	
Methylene Chloride	10000	7860	79	18	29	61-130	
o-Xylene	10000	7470	75	24	25	69-120	
Styrene	10000	7180	72	21	26	68-120	
tert-Butylbenzene	10000	6600	66	19	20	61-120	
Tetrachloroethene	10000	7520	75	18	23	51-136	
Toluene	10000	7550	75	22	23	62-132	
trans-1,2-Dichloroethene	10000	8130	81	21	24	68-133	
trans-1,3-Dichloropropene	10000	5040	50	21	27	40-125	
Trichloroethene	10000	30700	93	2	23	55-131	
Trichlorofluoromethane	10000	8760	88	36	35	37-174	F2
Vinyl acetate	10000	6650	66	15	18	37-148	
Vinyl chloride	10000	7500	75	7	29	43-154	
tert-Butyl alcohol	100000	47100 J	47	31	35	70-130	F1
Xylenes, Total	20000	14600	73	25	25	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: UXC8811.D Lab Sample ID: MB 240-367892/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/13/2019 13:38

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367892/4	UXC8807.D	02/13/2019 12:10
MRC-MW158A-020619	240-107796-5	UXC8814.D	02/13/2019 14:43
MRC-DUP01-020619	240-107796-6	UXC8815.D	02/13/2019 16:05

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367892/6

Matrix: Water | Lab File ID: UXC8811.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367892/6

Matrix: Water | Lab File ID: UXC8811.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.78	J	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-367892/6

Matrix: Water Lab File ID: UXC8811.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367892 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-121
460-00-4	4-Bromofluorobenzene (Surr)	85		59-120
2037-26-5	Toluene-d8 (Surr)	89		70-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.60	86	80-124	
1,1,1-Trichloroethane	10.0	10.1	101	69-134	
1,1,2,2-Tetrachloroethane	10.0	7.96	80	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.94	99	50-156	
1,1-Dichloroethane	10.0	10.0	100	75-133	
1,1-Dichloroethene	10.0	8.97	90	65-139	
1,1-Dichloropropene	10.0	9.59	96	78-126	
1,2,3-Trichlorobenzene	10.0	8.32	83	39-138	
1,2,3-Trichloropropane	10.0	8.35	84	66-139	
1,2,4-Trichlorobenzene	10.0	8.22	82	42-133	
1,2,4-Trimethylbenzene	10.0	8.77	88	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.66	57	46-132	
1,2-Dichlorobenzene	10.0	9.22	92	78-120	
1,2-Dichloroethane	10.0	9.95	99	71-135	
1,2-Dichloropropane	10.0	9.85	99	78-133	
1,3-Dichlorobenzene	10.0	8.91	89	78-120	
1,3-Dichloropropane	10.0	8.96	90	72-134	
1,4-Dichlorobenzene	10.0	8.98	90	78-120	
2,2-Dichloropropane	10.0	9.68	97	42-150	
2-Chloroethyl vinyl ether	10.0	7.11 J	71	55-137	
2-Chlorotoluene	10.0	8.99	90	78-123	
2-Hexanone	20.0	15.3	77	43-148	
Bromobenzene	10.0	9.08	91	74-129	
Bromochloromethane	10.0	10.2	102	74-130	
4-Chlorotoluene	10.0	8.70	87	77-125	
4-Isopropyltoluene	10.0	8.79	88	69-122	
Acetone	20.0	16.3	81	21-162	
Benzene	10.0	10.1	101	80-123	
Bromoform	10.0	5.22	52	49-141	
Bromomethane	10.0	7.90	79	41-175	
Carbon disulfide	10.0	7.70	77	60-138	
Carbon tetrachloride	10.0	8.94	89	63-140	
Chlorobenzene	10.0	9.44	94	80-121	
Chloroethane	10.0	7.96	80	33-173	
Chloroform	10.0	10.1	101	79-127	
Chloromethane	10.0	7.52	75	54-143	
cis-1,2-Dichloroethene	10.0	10.1	101	76-128	
cis-1,3-Dichloropropene	10.0	8.48	85	64-132	
Hexachlorobutadiene	10.0	7.72	77	38-136	
Dibromomethane	10.0	9.26	93	74-124	
Bromodichloromethane	10.0	8.40	84	77-125	
Dichlorodifluoromethane	10.0	5.94	59	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.29	93	80-120	
1,2-Dibromoethane	10.0	8.51	85	77-123	
Naphthalene	10.0	7.20	72	28-141	
m-Xylene & p-Xylene	10.0	9.41	94	80-120	
n-Butylbenzene	10.0	8.24	82	57-126	
Isopropylbenzene	10.0	9.54	95	74-120	
N-Propylbenzene	10.0	8.77	88	77-123	
2-Butanone (MEK)	20.0	17.0	85	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	15.5	78	49-143	
sec-Butylbenzene	10.0	8.62	86	68-123	
Methyl tert-butyl ether	10.0	8.10	81	51-133	
Methylene Chloride	10.0	13.1	131	70-134	
o-Xylene	10.0	9.59	96	80-120	
Styrene	10.0	9.02	90	79-120	
tert-Butylbenzene	10.0	8.40	84	70-121	
Tetrachloroethene	10.0	9.78	98	74-130	
Toluene	10.0	9.59	96	78-129	
trans-1,2-Dichloroethene	10.0	10.2	102	78-133	
trans-1,3-Dichloropropene	10.0	6.92	69	55-128	
Trichloroethene	10.0	9.91	99	76-125	
Trichlorofluoromethane	10.0	8.99	90	51-164	
Vinyl acetate	10.0	7.96	80	45-151	
Vinyl chloride	10.0	7.98	80	58-143	
tert-Butyl alcohol	100	60.7	61	10-161	
Xylenes, Total	20.0	19.0	95	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-020619	240-107796-1	92	99	88	82
MRC-MW138B-020619	240-107796-2	87	92	84	79
MRC-MW141B-020619	240-107796-3	84	90	82	77
MRC-MW142B-020619	240-107796-4	92	97	89	81
MRC-MW158A-020619	240-107796-5	88	92	85	81
MRC-DUP01-020619	240-107796-6	83	87	79	75
	MB 240-367509/6	86	92	86	81
	MB 240-367672/6	81	87	81	77
	MB 240-367892/6	91	97	89	85
	LCS 240-367509/4	97	94	94	92
	LCS 240-367672/4	88	86	82	83
	LCS 240-367892/4	90	88	84	84
MRC-MW141B-020619 MS	240-107796-3 MS	89	87	86	83
MRC-MW141B-020619 MSD	240-107796-3 MSD	92	91	88	85

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.03	90	80-124	
1,1,1-Trichloroethane	10.0	10.5	105	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.69	87	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.62	96	50-156	
1,1-Dichloroethane	10.0	10.5	105	75-133	
1,1-Dichloroethene	10.0	9.12	91	65-139	
1,1-Dichloropropene	10.0	9.95	99	78-126	
1,2,3-Trichlorobenzene	10.0	8.95	90	39-138	
1,2,3-Trichloropropane	10.0	8.85	88	66-139	
1,2,4-Trichlorobenzene	10.0	8.66	87	42-133	
1,2,4-Trimethylbenzene	10.0	9.49	95	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.72	57	46-132	
1,2-Dichlorobenzene	10.0	9.87	99	78-120	
1,2-Dichloroethane	10.0	10.3	103	71-135	
1,2-Dichloropropane	10.0	10.6	106	78-133	
1,3-Dichlorobenzene	10.0	9.58	96	78-120	
1,3-Dichloropropane	10.0	9.50	95	72-134	
1,4-Dichlorobenzene	10.0	9.63	96	78-120	
2,2-Dichloropropane	10.0	10.5	105	42-150	
2-Chloroethyl vinyl ether	10.0	8.08 J	81	55-137	
2-Chlorotoluene	10.0	9.67	97	78-123	
2-Hexanone	20.0	15.5	77	43-148	
Bromobenzene	10.0	9.69	97	74-129	
Bromochloromethane	10.0	10.7	107	74-130	
4-Chlorotoluene	10.0	9.49	95	77-125	
4-Isopropyltoluene	10.0	9.40	94	69-122	
Acetone	20.0	17.4	87	21-162	
Benzene	10.0	10.6	106	80-123	
Bromoform	10.0	5.03	50	49-141	
Bromomethane	10.0	8.44	84	41-175	
Carbon disulfide	10.0	7.88	79	60-138	
Carbon tetrachloride	10.0	9.20	92	63-140	
Chlorobenzene	10.0	10.0	100	80-121	
Chloroethane	10.0	8.43	84	33-173	
Chloroform	10.0	10.5	105	79-127	
Chloromethane	10.0	8.83	88	54-143	
cis-1,2-Dichloroethene	10.0	10.6	106	76-128	
cis-1,3-Dichloropropene	10.0	8.94	89	64-132	
Hexachlorobutadiene	10.0	8.16	82	38-136	
Dibromomethane	10.0	9.67	97	74-124	
Bromodichloromethane	10.0	8.78	88	77-125	
Dichlorodifluoromethane	10.0	7.36	74	29-148	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.78	98	80-120	
1,2-Dibromoethane	10.0	8.95	89	77-123	
Naphthalene	10.0	7.76	78	28-141	
m-Xylene & p-Xylene	10.0	9.69	97	80-120	
n-Butylbenzene	10.0	8.82	88	57-126	
Isopropylbenzene	10.0	9.80	98	74-120	
N-Propylbenzene	10.0	9.40	94	77-123	
2-Butanone (MEK)	20.0	17.5	87	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.8	84	49-143	
sec-Butylbenzene	10.0	9.10	91	68-123	
Methyl tert-butyl ether	10.0	8.88	89	51-133	
Methylene Chloride	10.0	9.41	94	70-134	
o-Xylene	10.0	9.98	100	80-120	
Styrene	10.0	9.34	93	79-120	
tert-Butylbenzene	10.0	9.02	90	70-121	
Tetrachloroethene	10.0	9.77	98	74-130	
Toluene	10.0	10.0	100	78-129	
trans-1,2-Dichloroethene	10.0	10.7	107	78-133	
trans-1,3-Dichloropropene	10.0	7.22	72	55-128	
Trichloroethene	10.0	10.3	103	76-125	
Trichlorofluoromethane	10.0	9.69	97	51-164	
Vinyl acetate	10.0	8.28	83	45-151	
Vinyl chloride	10.0	8.69	87	58-143	
tert-Butyl alcohol	100	59.8	60	10-161	
Xylenes, Total	20.0	19.7	98	80-120	
Chlorodibromomethane	10.0	7.44	74	70-132	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8789.D

Lab ID: LCS 240-367672/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.46	85	80-124	
1,1,1-Trichloroethane	10.0	9.89	99	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.17	82	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	10.2	102	50-156	
1,1-Dichloroethane	10.0	9.96	100	75-133	
1,1-Dichloroethene	10.0	9.00	90	65-139	
1,1-Dichloropropene	10.0	9.72	97	78-126	
1,2,3-Trichlorobenzene	10.0	8.77	88	39-138	
1,2,3-Trichloropropane	10.0	8.55	86	66-139	
1,2,4-Trichlorobenzene	10.0	8.63	86	42-133	
1,2,4-Trimethylbenzene	10.0	9.17	92	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.64	56	46-132	
1,2-Dichlorobenzene	10.0	9.54	95	78-120	
1,2-Dichloroethane	10.0	10.0	100	71-135	
1,2-Dichloropropane	10.0	10.2	102	78-133	
1,3-Dichlorobenzene	10.0	9.32	93	78-120	
1,3-Dichloropropane	10.0	9.20	92	72-134	
1,4-Dichlorobenzene	10.0	9.38	94	78-120	
2,2-Dichloropropane	10.0	8.80	88	42-150	
2-Chloroethyl vinyl ether	10.0	7.52 J	75	55-137	
2-Chlorotoluene	10.0	9.06	91	78-123	
2-Hexanone	20.0	15.4	77	43-148	
Bromobenzene	10.0	9.50	95	74-129	
Bromochloromethane	10.0	10.3	103	74-130	
4-Chlorotoluene	10.0	9.14	91	77-125	
4-Isopropyltoluene	10.0	9.15	92	69-122	
Acetone	20.0	18.6	93	21-162	
Benzene	10.0	10.2	102	80-123	
Bromoform	10.0	5.52	55	49-141	
Bromomethane	10.0	7.95	79	41-175	
Carbon disulfide	10.0	7.28	73	60-138	
Carbon tetrachloride	10.0	8.91	89	63-140	
Chlorobenzene	10.0	9.57	96	80-121	
Chloroethane	10.0	8.34	83	33-173	
Chloroform	10.0	10.2	102	79-127	
Chloromethane	10.0	8.61	86	54-143	
cis-1,2-Dichloroethene	10.0	10.1	101	76-128	
cis-1,3-Dichloropropene	10.0	8.71	87	64-132	
Hexachlorobutadiene	10.0	8.02	80	38-136	
Dibromomethane	10.0	9.42	94	74-124	
Bromodichloromethane	10.0	8.61	86	77-125	
Dichlorodifluoromethane	10.0	6.73	67	29-148	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8789.D

Lab ID: LCS 240-367672/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.28	93	80-120	
1,2-Dibromoethane	10.0	8.58	86	77-123	
Naphthalene	10.0	7.42	74	28-141	
m-Xylene & p-Xylene	10.0	9.37	94	80-120	
n-Butylbenzene	10.0	8.49	85	57-126	
Isopropylbenzene	10.0	9.45	95	74-120	
N-Propylbenzene	10.0	9.02	90	77-123	
2-Butanone (MEK)	20.0	17.8	89	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.0	80	49-143	
sec-Butylbenzene	10.0	8.94	89	68-123	
Methyl tert-butyl ether	10.0	8.28	83	51-133	
Methylene Chloride	10.0	8.95	89	70-134	
o-Xylene	10.0	9.57	96	80-120	
Styrene	10.0	9.11	91	79-120	
tert-Butylbenzene	10.0	8.70	87	70-121	
Tetrachloroethene	10.0	9.60	96	74-130	
Toluene	10.0	9.58	96	78-129	
trans-1,2-Dichloroethene	10.0	10.3	103	78-133	
trans-1,3-Dichloropropene	10.0	7.05	70	55-128	
Trichloroethene	10.0	9.98	100	76-125	
Trichlorofluoromethane	10.0	9.24	92	51-164	
Vinyl acetate	10.0	8.31	83	45-151	
Vinyl chloride	10.0	8.33	83	58-143	
tert-Butyl alcohol	100	75.3	75	10-161	
Xylenes, Total	20.0	18.9	95	80-120	
Chlorodibromomethane	10.0	7.41	74	70-132	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.60	86	80-124	
1,1,1-Trichloroethane	10.0	10.1	101	69-134	
1,1,2,2-Tetrachloroethane	10.0	7.96	80	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.94	99	50-156	
1,1-Dichloroethane	10.0	10.0	100	75-133	
1,1-Dichloroethene	10.0	8.97	90	65-139	
1,1-Dichloropropene	10.0	9.59	96	78-126	
1,2,3-Trichlorobenzene	10.0	8.32	83	39-138	
1,2,3-Trichloropropane	10.0	8.35	84	66-139	
1,2,4-Trichlorobenzene	10.0	8.22	82	42-133	
1,2,4-Trimethylbenzene	10.0	8.77	88	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.66	57	46-132	
1,2-Dichlorobenzene	10.0	9.22	92	78-120	
1,2-Dichloroethane	10.0	9.95	99	71-135	
1,2-Dichloropropane	10.0	9.85	99	78-133	
1,3-Dichlorobenzene	10.0	8.91	89	78-120	
1,3-Dichloropropane	10.0	8.96	90	72-134	
1,4-Dichlorobenzene	10.0	8.98	90	78-120	
2,2-Dichloropropane	10.0	9.68	97	42-150	
2-Chloroethyl vinyl ether	10.0	7.11 J	71	55-137	
2-Chlorotoluene	10.0	8.99	90	78-123	
2-Hexanone	20.0	15.3	77	43-148	
Bromobenzene	10.0	9.08	91	74-129	
Bromochloromethane	10.0	10.2	102	74-130	
4-Chlorotoluene	10.0	8.70	87	77-125	
4-Isopropyltoluene	10.0	8.79	88	69-122	
Acetone	20.0	16.3	81	21-162	
Benzene	10.0	10.1	101	80-123	
Bromoform	10.0	5.22	52	49-141	
Bromomethane	10.0	7.90	79	41-175	
Carbon disulfide	10.0	7.70	77	60-138	
Carbon tetrachloride	10.0	8.94	89	63-140	
Chlorobenzene	10.0	9.44	94	80-121	
Chloroethane	10.0	7.96	80	33-173	
Chloroform	10.0	10.1	101	79-127	
Chloromethane	10.0	7.52	75	54-143	
cis-1,2-Dichloroethene	10.0	10.1	101	76-128	
cis-1,3-Dichloropropene	10.0	8.48	85	64-132	
Hexachlorobutadiene	10.0	7.72	77	38-136	
Dibromomethane	10.0	9.26	93	74-124	
Bromodichloromethane	10.0	8.40	84	77-125	
Dichlorodifluoromethane	10.0	5.94	59	29-148	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.29	93	80-120	
1,2-Dibromoethane	10.0	8.51	85	77-123	
Naphthalene	10.0	7.20	72	28-141	
m-Xylene & p-Xylene	10.0	9.41	94	80-120	
n-Butylbenzene	10.0	8.24	82	57-126	
Isopropylbenzene	10.0	9.54	95	74-120	
N-Propylbenzene	10.0	8.77	88	77-123	
2-Butanone (MEK)	20.0	17.0	85	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	15.5	78	49-143	
sec-Butylbenzene	10.0	8.62	86	68-123	
Methyl tert-butyl ether	10.0	8.10	81	51-133	
Methylene Chloride	10.0	13.1	131	70-134	
o-Xylene	10.0	9.59	96	80-120	
Styrene	10.0	9.02	90	79-120	
tert-Butylbenzene	10.0	8.40	84	70-121	
Tetrachloroethene	10.0	9.78	98	74-130	
Toluene	10.0	9.59	96	78-129	
trans-1,2-Dichloroethene	10.0	10.2	102	78-133	
trans-1,3-Dichloropropene	10.0	6.92	69	55-128	
Trichloroethene	10.0	9.91	99	76-125	
Trichlorofluoromethane	10.0	8.99	90	51-164	
Vinyl acetate	10.0	7.96	80	45-151	
Vinyl chloride	10.0	7.98	80	58-143	
tert-Butyl alcohol	100	60.7	61	10-161	
Xylenes, Total	20.0	19.0	95	80-120	
Chlorodibromomethane	10.0	7.39	74	70-132	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8801.D

Lab ID: 240-107796-3 MS Client ID: MRC-MW141B-020619 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10000	140 U	8060	81	67-123	
1,1,1-Trichloroethane	10000	240 U	8990	90	51-138	
1,1,2,2-Tetrachloroethane	10000	130 U	8020	80	60-137	
1,1,2-Trichlorotrifluoroethane	10000	410 U	5590	56	31-156	
1,1-Dichloroethane	10000	170 U	9730	97	63-136	
1,1-Dichloroethene	10000	190 U	8130	81	53-140	
1,1-Dichloropropene	10000	140 U	8970	90	62-127	
1,2,3-Trichlorobenzene	10000	540 U	7880	79	34-123	
1,2,3-Trichloropropane	10000	240 U	8380	84	61-143	
1,2,4-Trichlorobenzene	10000	260 U	7690	77	30-126	
1,2,4-Trimethylbenzene	10000	70 U	8640	86	62-120	
1,2-Dibromo-3-Chloropropane	10000	910 U	5050	50	38-124	
1,2-Dichlorobenzene	10000	150 U	9260	93	64-120	
1,2-Dichloroethane	10000	210 U	9910	99	65-135	
1,2-Dichloropropane	10000	150 U	9830	98	70-132	
1,3-Dichlorobenzene	10000	150 U	9020	90	62-120	
1,3-Dichloropropane	10000	210 U	9150	91	68-135	
1,4-Dichlorobenzene	10000	160 U	9060	91	63-120	
2,2-Dichloropropane	10000	310 U	7930	79	27-132	
2-Chloroethyl vinyl ether	10000	260 U	6980 J	70	10-120	
2-Chlorotoluene	10000	150 U	8910	89	64-123	
2-Hexanone	20000	540 U	15400	77	42-150	
Bromobenzene	10000	120 U	8960	90	66-127	
Bromochloromethane	10000	140 U	10200	102	73-120	
4-Chlorotoluene	10000	90 U	8760	88	63-126	
4-Isopropyltoluene	10000	130 U	8350	83	59-120	
Acetone	20000	5400 U	19300	97	10-168	
Benzene	10000	130 U	10100	101	71-122	
Bromoform	10000	760 U	4680	47	44-129	
Bromomethane	10000	420 U	7060	71	19-187	
Carbon disulfide	10000	280 U	5820	58	43-144	
Carbon tetrachloride	10000	260 U	7410	74	41-143	
Chlorobenzene	10000	140 U	9540	95	70-123	
Chloroethane	10000	830 U	7740	77	11-189	
Chloroform	10000	130 U	10200	102	68-130	
Chloromethane	10000	200 U	8610	86	31-154	
cis-1,2-Dichloroethene	10000	180 J	10200	100	64-130	
cis-1,3-Dichloropropene	10000	610 U	7940	79	48-127	
Hexachlorobutadiene	10000	830 U	6390	64	32-128	
Dibromomethane	10000	90 U	9230	92	71-120	
Bromodichloromethane	10000	170 U	7920	79	64-125	
Dichlorodifluoromethane	10000	350 U	3770	38	28-136	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8801.D

Lab ID: 240-107796-3 MS Client ID: MRC-MW141B-020619 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethylbenzene	10000	110 U	9210	92	66-120	
1,2-Dibromoethane	10000	120 U	8510	85	71-123	
Naphthalene	10000	320 U	6850	68	31-142	
m-Xylene & p-Xylene	10000	80 U	9190	92	63-121	
n-Butylbenzene	10000	140 U	7400	74	51-120	
Isopropylbenzene	10000	90 U	9020	90	59-120	
N-Propylbenzene	10000	150 U	8440	84	61-123	
2-Butanone (MEK)	20000	1200 U	18700	94	37-156	
4-Methyl-2-pentanone (MIBK)	20000	420 U	16300	81	44-143	
sec-Butylbenzene	10000	130 U	7990	80	60-120	
Methyl tert-butyl ether	10000	70 U	7630	76	41-136	
Methylene Chloride	10000	2600 U	9420	94	61-130	
o-Xylene	10000	90 U	9530	95	69-120	
Styrene	10000	100 U	8890	89	68-120	
tert-Butylbenzene	10000	140 U	8020	80	61-120	
Tetrachloroethene	10000	150 U	9050	90	51-136	
Toluene	10000	140 U	9410	94	62-132	
trans-1,2-Dichloroethene	10000	190 U	10100	101	68-133	
trans-1,3-Dichloropropene	10000	670 U	6230	62	40-125	
Trichloroethene	10000	21000	31300	98	55-131	
Trichlorofluoromethane	10000	450 U	6100	61	37-174	
Vinyl acetate	10000	190 U	7750	77	37-148	
Vinyl chloride	10000	200 U	6990	70	43-154	
tert-Butyl alcohol	100000	1700 U	64600	65	70-130	F1
Xylenes, Total	20000	150 U	18700	94	67-120	
Chlorodibromomethane	10000	390 U	6540	65	60-129	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8802.D

Lab ID: 240-107796-3 MSD Client ID: MRC-MW141B-020619 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10000	6660	67	19	13	67-123	F2
1,1,1-Trichloroethane	10000	7590	76	17	27	51-138	
1,1,2,2-Tetrachloroethane	10000	6770	68	17	31	60-137	
1,1,2-Trichlorotrifluoroethane	10000	8070	81	36	35	31-156	F2
1,1-Dichloroethane	10000	7830	78	22	23	63-136	
1,1-Dichloroethene	10000	6890	69	17	35	53-140	
1,1-Dichloropropene	10000	7440	74	19	20	62-127	
1,2,3-Trichlorobenzene	10000	7090	71	10	35	34-123	
1,2,3-Trichloropropane	10000	7100	71	16	22	61-143	
1,2,4-Trichlorobenzene	10000	6960	70	10	35	30-126	
1,2,4-Trimethylbenzene	10000	6970	70	21	27	62-120	
1,2-Dibromo-3-Chloropropane	10000	3890	39	26	35	38-124	
1,2-Dichlorobenzene	10000	7710	77	18	30	64-120	
1,2-Dichloroethane	10000	8510	85	15	24	65-135	
1,2-Dichloropropane	10000	8100	81	19	26	70-132	
1,3-Dichlorobenzene	10000	7500	75	18	31	62-120	
1,3-Dichloropropane	10000	7610	76	18	15	68-135	F2
1,4-Dichlorobenzene	10000	7570	76	18	28	63-120	
2,2-Dichloropropane	10000	6890	69	14	18	27-132	
2-Chloroethyl vinyl ether	10000	5940 J	59	16	35	10-120	
2-Chlorotoluene	10000	7230	72	21	20	64-123	F2
2-Hexanone	20000	12200	61	23	35	42-150	
Bromobenzene	10000	7710	77	15	19	66-127	
Bromochloromethane	10000	8460	85	18	15	73-120	F2
4-Chlorotoluene	10000	7190	72	20	20	63-126	
4-Isopropyltoluene	10000	6910	69	19	24	59-120	
Acetone	20000	15900	79	19	35	10-168	
Benzene	10000	8080	81	22	22	71-122	
Bromoform	10000	3540	35	28	28	44-129	F1
Bromomethane	10000	7020	70	1	35	19-187	
Carbon disulfide	10000	5350	53	8	33	43-144	
Carbon tetrachloride	10000	6440	64	14	30	41-143	
Chlorobenzene	10000	7660	77	22	23	70-123	
Chloroethane	10000	7150	71	8	35	11-189	
Chloroform	10000	8200	82	21	23	68-130	
Chloromethane	10000	6590	66	27	35	31-154	
cis-1,2-Dichloroethene	10000	8430	82	19	21	64-130	
cis-1,3-Dichloropropene	10000	6400	64	21	30	48-127	
Hexachlorobutadiene	10000	6290	63	2	35	32-128	
Dibromomethane	10000	7750	78	17	16	71-120	F2
Bromodichloromethane	10000	6470	65	20	27	64-125	
Dichlorodifluoromethane	10000	6060	61	47	35	28-136	F2

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8802.D

Lab ID: 240-107796-3 MSD Client ID: MRC-MW141B-020619 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	10000	7300	73	23	24	66-120	
1,2-Dibromoethane	10000	7100	71	18	27	71-123	
Naphthalene	10000	6000	60	13	35	31-142	
m-Xylene & p-Xylene	10000	7100	71	26	25	63-121	F2
n-Butylbenzene	10000	6320	63	16	27	51-120	
Isopropylbenzene	10000	7170	72	23	31	59-120	
N-Propylbenzene	10000	6850	68	21	20	61-123	F2
2-Butanone (MEK)	20000	14400	72	26	35	37-156	
4-Methyl-2-pentanone (MIBK)	20000	12900	64	24	35	44-143	
sec-Butylbenzene	10000	6710	67	18	24	60-120	
Methyl tert-butyl ether	10000	6490	65	16	29	41-136	
Methylene Chloride	10000	7860	79	18	29	61-130	
o-Xylene	10000	7470	75	24	25	69-120	
Styrene	10000	7180	72	21	26	68-120	
tert-Butylbenzene	10000	6600	66	19	20	61-120	
Tetrachloroethene	10000	7520	75	18	23	51-136	
Toluene	10000	7550	75	22	23	62-132	
trans-1,2-Dichloroethene	10000	8130	81	21	24	68-133	
trans-1,3-Dichloropropene	10000	5040	50	21	27	40-125	
Trichloroethene	10000	30700	93	2	23	55-131	
Trichlorofluoromethane	10000	8760	88	36	35	37-174	F2
Vinyl acetate	10000	6650	66	15	18	37-148	
Vinyl chloride	10000	7500	75	7	29	43-154	
tert-Butyl alcohol	100000	47100 J	47	31	35	70-130	F1
Xylenes, Total	20000	14600	73	25	25	67-120	
Chlorodibromomethane	10000	5280	53	21	26	60-129	F1

Column to be used to flag recovery and RPD values

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: UXC8770.D Lab Sample ID: MB 240-367509/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/11/2019 12:40

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367509/4	UXC8766.D	02/11/2019 11:13
TB-020619	240-107796-1	UXC8786.D	02/11/2019 19:47

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: UXC8793.D Lab Sample ID: MB 240-367672/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/12/2019 12:38

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367672/4	UXC8789.D	02/12/2019 11:10
MRC-MW138B-020619	240-107796-2	UXC8796.D	02/12/2019 13:43
MRC-MW141B-020619	240-107796-3	UXC8797.D	02/12/2019 14:05
MRC-MW141B-020619 MS	240-107796-3 MS	UXC8801.D	02/12/2019 15:32
MRC-MW141B-020619 MSD	240-107796-3 MSD	UXC8802.D	02/12/2019 15:54
MRC-MW142B-020619	240-107796-4	UXC8804.D	02/12/2019 16:38

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: UXC8811.D Lab Sample ID: MB 240-367892/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/13/2019 13:38

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367892/4	UXC8807.D	02/13/2019 12:10
MRC-MW158A-020619	240-107796-5	UXC8814.D	02/13/2019 14:43
MRC-DUP01-020619	240-107796-6	UXC8815.D	02/13/2019 16:05

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0211.D BFB Injection Date: 02/11/2019

Instrument ID: A3UX15 BFB Injection Time: 10:27

Analysis Batch No.: 367509

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.1	
75	30.0 - 60.0 % of mass 95	50.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.7	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	101.9	
175	5.0 - 9.0 % of mass 174	6.3	(6.2) 1
176	95.0 - 101.0 % of mass 174	100.4	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367509/2	UXC8765.D	02/11/2019	10:51
	LCS 240-367509/4	UXC8766.D	02/11/2019	11:13
	CCV 240-367509/3	UXC8767.D	02/11/2019	11:35
	MB 240-367509/6	UXC8770.D	02/11/2019	12:40
TB-020619	240-107796-1	UXC8786.D	02/11/2019	19:47

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0212.D BFB Injection Date: 02/12/2019

Instrument ID: A3UX15 BFB Injection Time: 10:19

Analysis Batch No.: 367672

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.1	
75	30.0 - 60.0 % of mass 95	51.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	103.9	
175	5.0 - 9.0 % of mass 174	7.2	(6.9) 1
176	95.0 - 101.0 % of mass 174	99.4	(95.7) 1
177	5.0 - 9.0 % of mass 176	6.6	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367672/2	UXC8788.D	02/12/2019	10:48
	LCS 240-367672/4	UXC8789.D	02/12/2019	11:10
	CCV 240-367672/3	UXC8790.D	02/12/2019	11:32
	MB 240-367672/6	UXC8793.D	02/12/2019	12:38
MRC-MW138B-020619	240-107796-2	UXC8796.D	02/12/2019	13:43
MRC-MW141B-020619	240-107796-3	UXC8797.D	02/12/2019	14:05
MRC-MW141B-020619 MS	240-107796-3 MS	UXC8801.D	02/12/2019	15:32
MRC-MW141B-020619 MSD	240-107796-3 MSD	UXC8802.D	02/12/2019	15:54
MRC-MW142B-020619	240-107796-4	UXC8804.D	02/12/2019	16:38

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0213.D BFB Injection Date: 02/13/2019

Instrument ID: A3UX15 BFB Injection Time: 11:22

Analysis Batch No.: 367892

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.8	
75	30.0 - 60.0 % of mass 95	50.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.6	(0.5) 1
174	50.0 - 120.00 % of mass 95	105.7	
175	5.0 - 9.0 % of mass 174	7.0	(6.6) 1
176	95.0 - 101.0 % of mass 174	101.4	(96.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367892/2	UXC8806.D	02/13/2019	11:48
	LCS 240-367892/4	UXC8807.D	02/13/2019	12:10
	CCV 240-367892/3	UXC8808.D	02/13/2019	12:32
	MB 240-367892/6	UXC8811.D	02/13/2019	13:38
MRC-MW158A-020619	240-107796-5	UXC8814.D	02/13/2019	14:43
MRC-DUP01-020619	240-107796-6	UXC8815.D	02/13/2019	16:05

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-367509/2		1607043	5.20	1260395	7.88	745296	10.12
CCVIS 240-367672/2		1813807	5.20	1522602	7.88	926461	10.12
CCVIS 240-367892/2		1803643	5.20	1542696	7.88	927814	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Sample No.: CCVIS 240-367509/2 Date Analyzed: 02/11/2019 10:51

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8765.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1607043	5.20	1260395	7.88	745296	10.12
UPPER LIMIT		3214086	5.70	2520790	8.38	1490592	10.62
LOWER LIMIT		803522	4.70	630198	7.38	372648	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367509/4		1796449	5.20	1507511	7.88	863122	10.12
CCV 240-367509/3		1829504	5.20	1503859	7.88	817203	10.12
MB 240-367509/6		1730580	5.20	1472271	7.88	810355	10.12
240-107796-1	TB-020619	1505298	5.20	1262185	7.88	720503	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Sample No.: CCVIS 240-367672/2 Date Analyzed: 02/12/2019 10:48

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8788.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1813807	5.20	1522602	7.88	926461	10.12
UPPER LIMIT		3627614	5.70	3045204	8.38	1852922	10.62
LOWER LIMIT		906904	4.70	761301	7.38	463231	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367672/4		1787433	5.20	1540504	7.88	895344	10.12
CCV 240-367672/3		1803926	5.20	1522212	7.88	833765	10.12
MB 240-367672/6		1759637	5.21	1514348	7.88	844128	10.12
240-107796-2	MRC-MW138B-020619	1719138	5.20	1476340	7.88	817581	10.12
240-107796-3	MRC-MW141B-020619	1693055	5.20	1418830	7.88	792712	10.12
240-107796-3 MS	MRC-MW141B-020619 MS	1843356	5.21	1579862	7.88	936719	10.12
240-107796-3 MSD	MRC-MW141B-020619 MSD	1769941	5.20	1504965	7.88	872726	10.12
240-107796-4	MRC-MW142B-020619	1640262	5.20	1372048	7.88	765739	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Sample No.: CCVIS 240-367892/2 Date Analyzed: 02/13/2019 11:48

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8806.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1803643	5.20	1542696	7.88	927814	10.12
UPPER LIMIT		3607286	5.70	3085392	8.38	1855628	10.62
LOWER LIMIT		901822	4.70	771348	7.38	463907	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367892/4		1866937	5.20	1555716	7.88	933071	10.12
CCV 240-367892/3		1758419	5.20	1529185	7.88	842177	10.12
MB 240-367892/6		1565514	5.20	1326978	7.88	735680	10.12
240-107796-5	MRC-MW158A-020619	1623378	5.20	1401608	7.88	789394	10.12
240-107796-6	MRC-DUP01-020619	1795194	5.20	1537264	7.88	854668	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107796-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107796-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107796-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107796-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107796-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107796-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107796-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0211.D BFB Injection Date: 02/11/2019

Instrument ID: A3UX15 BFB Injection Time: 10:27

Analysis Batch No.: 367509

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.1	
75	30.0 - 60.0 % of mass 95	50.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.7	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	101.9	
175	5.0 - 9.0 % of mass 174	6.3	(6.2) 1
176	95.0 - 101.0 % of mass 174	100.4	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367509/2	UXC8765.D	02/11/2019	10:51
	LCS 240-367509/4	UXC8766.D	02/11/2019	11:13
	CCV 240-367509/3	UXC8767.D	02/11/2019	11:35
	MB 240-367509/6	UXC8770.D	02/11/2019	12:40
TB-020619	240-107796-1	UXC8786.D	02/11/2019	19:47

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3306	0.1000	0.0108	0.0100	7.6	20.0
Chloromethane	Ave	0.3135	0.3315	0.1000	0.0106	0.0100	5.7	20.0
Butadiene	Ave	0.3794	0.3395		0.00895	0.0100	-10.5	20.0
Vinyl chloride	Ave	0.2885	0.2932	0.1000	0.0102	0.0100	1.6	20.0
Bromomethane	Ave	0.2308	0.2097	0.0500	0.00908	0.0100	-9.2	20.0
Chloroethane	Ave	0.2041	0.1903	0.0500	0.00932	0.0100	-6.8	20.0
Dichlorofluoromethane	Ave	0.5102	0.4772		0.00935	0.0100	-6.5	20.0
Trichlorofluoromethane	Ave	0.4337	0.4369	0.1000	0.0101	0.0100	0.7	20.0
Ethyl ether	Ave	0.2310	0.2152		0.00932	0.0100	-6.8	20.0
Acrolein	Ave	0.0317	0.0415		0.0654	0.0500	30.8	50.0
1,1-Dichloroethene	Ave	0.3005	0.2630	0.1000	0.00875	0.0100	-12.5	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2317	0.0500	0.00939	0.0100	-6.1	20.0
Acetone	Lin1		0.0215	0.0100	0.0175	0.0200	-12.3	50.0
Iodomethane	Ave	0.4675	0.4437		0.00949	0.0100	-5.1	20.0
Carbon disulfide	Ave	0.7741	0.6041	0.1000	0.00780	0.0100	-22.0*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1568		0.00923	0.0100	-7.7	20.0
Methyl acetate	Ave	0.2050	0.1752	0.1000	0.0171	0.0200	-14.6	20.0
Methylene Chloride	Lin1		0.2911	0.1000	0.00925	0.0100	-7.5	50.0
tert-Butyl alcohol	Ave	0.0203	0.0152		0.0751	0.100	-24.9	50.0
Acrylonitrile	Ave	0.0962	0.0865		0.0899	0.100	-10.1	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6912	0.1000	0.00882	0.0100	-11.8	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2769	0.1000	0.00990	0.0100	-1.0	20.0
Hexane	Ave	0.0586	0.0490		0.00835	0.0100	-16.5	20.0
1,1-Dichloroethane	Ave	0.4517	0.4471	0.2000	0.00990	0.0100	-1.0	20.0
Vinyl acetate	Ave	0.5198	0.3452		0.00664	0.0100	-33.6	50.0
2,2-Dichloropropane	Ave	0.0624	0.0620		0.00994	0.0100	-0.6	20.0
2-Butanone (MEK)	Ave	0.0333	0.0269	0.0100	0.0162	0.0200	-19.0	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3120	0.1000	0.0101	0.0100	1.4	20.0
Bromochloromethane	Ave	0.1531	0.1522		0.00994	0.0100	-0.6	20.0
Tetrahydrofuran	Ave	0.0828	0.0641		0.0155	0.0200	-22.5*	20.0
Chloroform	Ave	0.4606	0.4672	0.2000	0.0101	0.0100	1.4	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3486	0.1000	0.00983	0.0100	-1.7	20.0
Cyclohexane	Ave	0.3993	0.3736	0.1000	0.00936	0.0100	-6.4	20.0
1,1-Dichloropropene	Ave	0.3748	0.3470		0.00926	0.0100	-7.4	20.0
Carbon tetrachloride	Ave	0.3441	0.3064	0.1000	0.00891	0.0100	-10.9	20.0
Isobutyl alcohol	Ave	0.0077	0.0067		0.216	0.250	-13.5	20.0
Benzene	Ave	1.116	1.108	0.5000	0.00992	0.0100	-0.8	20.0
1,2-Dichloroethane	Ave	0.3820	0.3654	0.1000	0.00957	0.0100	-4.3	20.0
n-Heptane	Ave	0.0532	0.0432		0.00811	0.0100	-18.9	20.0
Trichloroethene	Ave	0.3240	0.3113	0.1500	0.00961	0.0100	-3.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3263	0.1000	0.00926	0.0100	-7.4	20.0
1,2-Dichloropropane	Ave	0.2590	0.2427	0.1000	0.00937	0.0100	-6.3	20.0
1,4-Dioxane	Ave	0.0020	0.0017		0.174	0.200	-13.1	50.0
Dibromomethane	Ave	0.1717	0.1548		0.00901	0.0100	-9.9	20.0
Bromodichloromethane	Ave	0.3410	0.2813	0.1500	0.00825	0.0100	-17.5	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1175		0.0135	0.0200	-32.7*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3121	0.1500	0.00791	0.0100	-20.9*	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2001	0.0500	0.0149	0.0200	-25.3*	20.0
Toluene	Ave	1.476	1.394	0.4000	0.00944	0.0100	-5.6	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3270	0.1000	0.00704	0.0100	-29.6*	20.0
Ethyl methacrylate	Ave	0.4442	0.3282		0.00739	0.0100	-26.1*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2666	0.1000	0.00894	0.0100	-10.6	20.0
Tetrachloroethene	Ave	0.3268	0.3095	0.1500	0.00947	0.0100	-5.3	20.0
1,3-Dichloropropane	Ave	0.5243	0.4627		0.00882	0.0100	-11.8	20.0
2-Hexanone	Ave	0.2283	0.1734	0.0500	0.0152	0.0200	-24.1*	20.0
Chlorodibromomethane	Ave	0.3116	0.2276		0.00730	0.0100	-27.0*	20.0
1,2-Dibromoethane	Ave	0.3191	0.2642		0.00828	0.0100	-17.2	20.0
Chlorobenzene	Ave	0.9777	0.9075	0.3000	0.00928	0.0100	-7.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3172		0.00919	0.0100	-8.1	20.0
Ethylbenzene	Ave	0.5145	0.4715		0.00916	0.0100	-8.4	20.0
m-Xylene & p-Xylene	Ave	1.221	1.096		0.00898	0.0100	-10.2	20.0
o-Xylene	Ave	0.6189	0.5994		0.00969	0.0100	-3.1	20.0
Styrene	Ave	1.036	0.9417	0.3000	0.00909	0.0100	-9.1	20.0
Bromoform	Lin1		0.1219	0.1000	0.00542	0.0100	-45.8*	20.0
Isopropylbenzene	Ave	1.463	1.403	0.1000	0.00959	0.0100	-4.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5572	0.3000	0.00786	0.0100	-21.4*	20.0
Bromobenzene	Ave	0.8274	0.7248		0.00876	0.0100	-12.4	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.1984		0.00804	0.0100	-19.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0703		0.00693	0.0100	-30.7*	20.0
N-Propylbenzene	Ave	0.7286	0.6321		0.00867	0.0100	-13.3	20.0
2-Chlorotoluene	Ave	0.6821	0.6150		0.00902	0.0100	-9.8	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.928		0.00910	0.0100	-9.0	20.0
4-Chlorotoluene	Ave	2.205	1.890		0.00857	0.0100	-14.3	20.0
tert-Butylbenzene	Ave	1.897	1.667		0.00878	0.0100	-12.2	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.035		0.00914	0.0100	-8.6	20.0
sec-Butylbenzene	Ave	2.327	2.095		0.00901	0.0100	-9.9	20.0
1,3-Dichlorobenzene	Ave	1.425	1.263	0.6000	0.00887	0.0100	-11.3	20.0
4-Isopropyltoluene	Ave	2.083	1.884		0.00904	0.0100	-9.6	20.0
1,4-Dichlorobenzene	Ave	1.477	1.296	0.5000	0.00877	0.0100	-12.3	20.0
n-Butylbenzene	Ave	1.649	1.400		0.00849	0.0100	-15.1	20.0
1,2-Dichlorobenzene	Ave	1.387	1.288	0.4000	0.00928	0.0100	-7.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0961	0.0500	0.00596	0.0100	-40.4	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7988	0.2000	0.00909	0.0100	-9.1	50.0
Hexachlorobutadiene	Ave	0.4386	0.3511		0.00801	0.0100	-19.9	20.0
Naphthalene	Ave	2.209	1.776		0.00804	0.0100	-19.6	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7384		0.00934	0.0100	-6.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2646		0.00693	0.00797	-13.0	20.0
Toluene-d8 (Surr)	Ave	1.214	1.077		0.00707	0.00797	-11.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3688		0.00677	0.00797	-15.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCV 240-367509/3 Calibration Date: 02/11/2019 11:35

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8767.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0259		0.112	0.100	12.2	20.0
Diisopropyl ether	Ave	0.2405	0.2296		0.00955	0.0100	-4.5	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3804		0.00898	0.0100	-10.2	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6235		0.00800	0.0100	-20.0	20.0
Ethyl acetate	Ave	0.2538	0.1979		0.0156	0.0200	-22.0	50.0
Propionitrile	Ave	0.0357	0.0334		0.0937	0.100	-6.3	20.0
Methacrylonitrile	Ave	0.1733	0.1482		0.0855	0.100	-14.5	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5715		0.00736	0.0100	-26.4*	20.0
n-Butanol	Ave	0.0061	0.0037		0.154	0.250	-38.5*	20.0
Ethyl acrylate	Ave	0.3330	0.2421		0.00727	0.0100	-27.3*	20.0
Methyl methacrylate	Ave	0.2430	0.1897		0.0156	0.0200	-21.9*	20.0
2-Nitropropane	Ave	0.0745	0.0280		0.00753	0.0200	-62.4*	20.0
n-Butyl acetate	Ave	0.3918	0.2807		0.00716	0.0100	-28.4*	20.0
1-Chlorohexane	Ave	0.3968	0.2920		0.00736	0.0100	-26.4*	20.0
Cyclohexanone	Lin1		0.0104		0.0631	0.100	-36.9*	20.0
Pentachloroethane	Ave	0.2034	0.1517		0.0149	0.0200	-25.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.013		0.00876	0.0100	-12.4	20.0
Benzyl chloride	Ave	0.2963	0.1293		0.00436	0.0100	-56.4*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8316		0.00879	0.0100	-12.1	20.0
2-Methylnaphthalene	Ave	1.076	0.6690		0.0124	0.0200	-37.8*	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0212.D BFB Injection Date: 02/12/2019

Instrument ID: A3UX15 BFB Injection Time: 10:19

Analysis Batch No.: 367672

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.1	
75	30.0 - 60.0 % of mass 95	51.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	103.9	
175	5.0 - 9.0 % of mass 174	7.2	(6.9) 1
176	95.0 - 101.0 % of mass 174	99.4	(95.7) 1
177	5.0 - 9.0 % of mass 176	6.6	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367672/2	UXC8788.D	02/12/2019	10:48
	LCS 240-367672/4	UXC8789.D	02/12/2019	11:10
	CCV 240-367672/3	UXC8790.D	02/12/2019	11:32
	MB 240-367672/6	UXC8793.D	02/12/2019	12:38
MRC-MW138B-020619	240-107796-2	UXC8796.D	02/12/2019	13:43
MRC-MW141B-020619	240-107796-3	UXC8797.D	02/12/2019	14:05
MRC-MW141B-020619 MS	240-107796-3 MS	UXC8801.D	02/12/2019	15:32
MRC-MW141B-020619 MSD	240-107796-3 MSD	UXC8802.D	02/12/2019	15:54
MRC-MW142B-020619	240-107796-4	UXC8804.D	02/12/2019	16:38

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367672/2 Calibration Date: 02/12/2019 10:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8788.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3009	0.1000	0.00980	0.0100	-2.0	20.0
Chloromethane	Ave	0.3135	0.2731	0.1000	0.00871	0.0100	-12.9	20.0
Vinyl chloride	Ave	0.2885	0.2581	0.1000	0.00895	0.0100	-10.5	20.0
Butadiene	Ave	0.3794	0.3191		0.00841	0.0100	-15.9	20.0
Bromomethane	Ave	0.2308	0.1940	0.0500	0.00841	0.0100	-15.9	20.0
Chloroethane	Ave	0.2041	0.1763	0.0500	0.00864	0.0100	-13.6	20.0
Dichlorofluoromethane	Ave	0.5102	0.4393		0.00861	0.0100	-13.9	20.0
Trichlorofluoromethane	Ave	0.4337	0.4273	0.1000	0.00985	0.0100	-1.5	20.0
Ethyl ether	Ave	0.2310	0.2133		0.00924	0.0100	-7.6	20.0
Acrolein	Ave	0.0317	0.0406		0.0641	0.0500	28.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2535	0.1000	0.00843	0.0100	-15.7	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2314	0.0500	0.00938	0.0100	-6.2	20.0
Acetone	Lin1		0.0226	0.0100	0.0185	0.0200	-7.3	50.0
Iodomethane	Ave	0.4675	0.4510		0.00965	0.0100	-3.5	20.0
Carbon disulfide	Ave	0.7741	0.5640	0.1000	0.00729	0.0100	-27.1*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1500		0.00883	0.0100	-11.7	20.0
Methyl acetate	Ave	0.2050	0.1773	0.1000	0.0173	0.0200	-13.5	20.0
Methylene Chloride	Lin1		0.2816	0.1000	0.00886	0.0100	-11.4	50.0
tert-Butyl alcohol	Ave	0.0203	0.0176		0.0868	0.100	-13.2	50.0
Acrylonitrile	Ave	0.0962	0.0907		0.0943	0.100	-5.7	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6673	0.1000	0.00852	0.0100	-14.8	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2743	0.1000	0.00981	0.0100	-1.9	20.0
Hexane	Ave	0.0586	0.0525		0.00895	0.0100	-10.5	20.0
1,1-Dichloroethane	Ave	0.4517	0.4534	0.2000	0.0100	0.0100	0.4	20.0
Vinyl acetate	Ave	0.5198	0.4042		0.00778	0.0100	-22.2	50.0
2,2-Dichloropropane	Ave	0.0624	0.0600		0.00962	0.0100	-3.8	20.0
2-Butanone (MEK)	Ave	0.0333	0.0282	0.0100	0.0170	0.0200	-15.2	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3157	0.1000	0.0103	0.0100	2.6	20.0
Bromochloromethane	Ave	0.1531	0.1590		0.0104	0.0100	3.9	20.0
Tetrahydrofuran	Ave	0.0828	0.0713		0.0172	0.0200	-13.9	20.0
Chloroform	Ave	0.4606	0.4722	0.2000	0.0103	0.0100	2.5	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3582	0.1000	0.0101	0.0100	1.0	20.0
Cyclohexane	Ave	0.3993	0.3706	0.1000	0.00928	0.0100	-7.2	20.0
1,1-Dichloropropene	Ave	0.3748	0.3689		0.00984	0.0100	-1.6	20.0
Carbon tetrachloride	Ave	0.3441	0.3086	0.1000	0.00897	0.0100	-10.3	20.0
Isobutyl alcohol	Ave	0.0077	0.0069		0.224	0.250	-10.2	20.0
Benzene	Ave	1.116	1.149	0.5000	0.0103	0.0100	2.9	20.0
1,2-Dichloroethane	Ave	0.3820	0.3901	0.1000	0.0102	0.0100	2.1	20.0
n-Heptane	Ave	0.0532	0.0467		0.00877	0.0100	-12.3	20.0
Trichloroethene	Ave	0.3240	0.3352	0.1500	0.0103	0.0100	3.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367672/2 Calibration Date: 02/12/2019 10:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8788.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3266	0.1000	0.00927	0.0100	-7.3	20.0
1,2-Dichloropropane	Ave	0.2590	0.2577	0.1000	0.00995	0.0100	-0.5	20.0
1,4-Dioxane	Ave	0.0020	0.0025		0.253	0.200	26.7	50.0
Dibromomethane	Ave	0.1717	0.1640		0.00955	0.0100	-4.5	20.0
Bromodichloromethane	Ave	0.3410	0.3079	0.1500	0.00903	0.0100	-9.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1335		0.0153	0.0200	-23.5*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3423	0.1500	0.00868	0.0100	-13.2	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2206	0.0500	0.0165	0.0200	-17.6	20.0
Toluene	Ave	1.476	1.447	0.4000	0.00980	0.0100	-2.0	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3462	0.1000	0.00745	0.0100	-25.5*	20.0
Ethyl methacrylate	Ave	0.4442	0.3466		0.00780	0.0100	-22.0*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2801	0.1000	0.00939	0.0100	-6.1	20.0
Tetrachloroethene	Ave	0.3268	0.3304	0.1500	0.0101	0.0100	1.1	20.0
1,3-Dichloropropane	Ave	0.5243	0.4892		0.00933	0.0100	-6.7	20.0
2-Hexanone	Ave	0.2283	0.1819	0.0500	0.0159	0.0200	-20.3*	20.0
Chlorodibromomethane	Ave	0.3116	0.2439		0.00783	0.0100	-21.7*	20.0
1,2-Dibromoethane	Ave	0.3191	0.2748		0.00861	0.0100	-13.9	20.0
Chlorobenzene	Ave	0.9777	0.9596	0.3000	0.00982	0.0100	-1.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3019		0.00875	0.0100	-12.5	20.0
Ethylbenzene	Ave	0.5145	0.4878		0.00948	0.0100	-5.2	20.0
m-Xylene & p-Xylene	Ave	1.221	1.173		0.00961	0.0100	-3.9	20.0
o-Xylene	Ave	0.6189	0.6029		0.00974	0.0100	-2.6	20.0
Styrene	Ave	1.036	1.020	0.3000	0.00985	0.0100	-1.5	20.0
Bromoform	Lin1		0.1395	0.1000	0.00611	0.0100	-38.9*	20.0
Isopropylbenzene	Ave	1.463	1.410	0.1000	0.00963	0.0100	-3.7	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5650	0.3000	0.00797	0.0100	-20.3*	20.0
Bromobenzene	Ave	0.8274	0.7646		0.00924	0.0100	-7.6	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2064		0.00836	0.0100	-16.4	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0946		0.00933	0.0100	-6.7	20.0
N-Propylbenzene	Ave	0.7286	0.6486		0.00890	0.0100	-11.0	20.0
2-Chlorotoluene	Ave	0.6821	0.6130		0.00899	0.0100	-10.1	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.882		0.00888	0.0100	-11.2	20.0
4-Chlorotoluene	Ave	2.205	1.972		0.00894	0.0100	-10.6	20.0
tert-Butylbenzene	Ave	1.897	1.615		0.00851	0.0100	-14.9	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.015		0.00905	0.0100	-9.5	20.0
sec-Butylbenzene	Ave	2.327	2.019		0.00868	0.0100	-13.2	20.0
1,3-Dichlorobenzene	Ave	1.425	1.306	0.6000	0.00917	0.0100	-8.3	20.0
4-Isopropyltoluene	Ave	2.083	1.828		0.00877	0.0100	-12.3	20.0
1,4-Dichlorobenzene	Ave	1.477	1.357	0.5000	0.00918	0.0100	-8.2	20.0
n-Butylbenzene	Ave	1.649	1.339		0.00812	0.0100	-18.8	20.0
1,2-Dichlorobenzene	Ave	1.387	1.287	0.4000	0.00928	0.0100	-7.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367672/2 Calibration Date: 02/12/2019 10:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8788.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0940	0.0500	0.00583	0.0100	-41.7	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.6986	0.2000	0.00795	0.0100	-20.5	50.0
Hexachlorobutadiene	Ave	0.4386	0.3106		0.00708	0.0100	-29.2*	20.0
Naphthalene	Ave	2.209	1.503		0.00680	0.0100	-32.0	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6350		0.00804	0.0100	-19.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2152		0.00725	0.00797	-9.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2673		0.00700	0.00797	-12.1	20.0
Toluene-d8 (Surr)	Ave	1.214	1.054		0.00692	0.00797	-13.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3773		0.00693	0.00797	-13.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCV 240-367672/3 Calibration Date: 02/12/2019 11:32

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8790.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0268		0.116	0.100	16.0	20.0
Diisopropyl ether	Ave	0.2405	0.2304		0.00958	0.0100	-4.2	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3765		0.00889	0.0100	-11.1	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.5969		0.00765	0.0100	-23.5*	20.0
Ethyl acetate	Ave	0.2538	0.2069		0.0163	0.0200	-18.5	50.0
Propionitrile	Ave	0.0357	0.0330		0.0925	0.100	-7.5	20.0
Methacrylonitrile	Ave	0.1733	0.1495		0.0863	0.100	-13.7	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5238		0.00675	0.0100	-32.5*	20.0
n-Butanol	Ave	0.0061	0.0034		0.140	0.250	-44.2*	20.0
Ethyl acrylate	Ave	0.3330	0.2550		0.00766	0.0100	-23.4*	20.0
Methyl methacrylate	Ave	0.2430	0.1977		0.0163	0.0200	-18.6	20.0
2-Nitropropane	Ave	0.0745	0.0254		0.00682	0.0200	-65.9*	20.0
n-Butyl acetate	Ave	0.3918	0.2791		0.00712	0.0100	-28.8*	20.0
1-Chlorohexane	Ave	0.3968	0.3138		0.00791	0.0100	-20.9*	20.0
Cyclohexanone	Lin1		0.0106		0.0642	0.100	-35.8*	20.0
Pentachloroethane	Ave	0.2034	0.1486		0.0146	0.0200	-27.0*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.063		0.00898	0.0100	-10.2	20.0
Benzyl chloride	Ave	0.2963	0.1175		0.00397	0.0100	-60.3*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8269		0.00873	0.0100	-12.7	20.0
2-Methylnaphthalene	Ave	1.076	0.5934		0.0110	0.0200	-44.8*	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0213.D BFB Injection Date: 02/13/2019

Instrument ID: A3UX15 BFB Injection Time: 11:22

Analysis Batch No.: 367892

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.8	
75	30.0 - 60.0 % of mass 95	50.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.6	(0.5) 1
174	50.0 - 120.00 % of mass 95	105.7	
175	5.0 - 9.0 % of mass 174	7.0	(6.6) 1
176	95.0 - 101.0 % of mass 174	101.4	(96.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367892/2	UXC8806.D	02/13/2019	11:48
	LCS 240-367892/4	UXC8807.D	02/13/2019	12:10
	CCV 240-367892/3	UXC8808.D	02/13/2019	12:32
	MB 240-367892/6	UXC8811.D	02/13/2019	13:38
MRC-MW158A-020619	240-107796-5	UXC8814.D	02/13/2019	14:43
MRC-DUP01-020619	240-107796-6	UXC8815.D	02/13/2019	16:05

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.2644	0.1000	0.00861	0.0100	-13.9	20.0
Chloromethane	Ave	0.3135	0.2740	0.1000	0.00874	0.0100	-12.6	20.0
Butadiene	Ave	0.3794	0.2948		0.00777	0.0100	-22.3*	20.0
Vinyl chloride	Ave	0.2885	0.2406	0.1000	0.00834	0.0100	-16.6	20.0
Bromomethane	Ave	0.2308	0.1961	0.0500	0.00850	0.0100	-15.0	20.0
Chloroethane	Ave	0.2041	0.1732	0.0500	0.00848	0.0100	-15.2	20.0
Dichlorofluoromethane	Ave	0.5102	0.4461		0.00874	0.0100	-12.6	20.0
Trichlorofluoromethane	Ave	0.4337	0.4175	0.1000	0.00963	0.0100	-3.7	20.0
Ethyl ether	Ave	0.2310	0.2280		0.00987	0.0100	-1.3	20.0
Acrolein	Ave	0.0317	0.0400		0.0631	0.0500	26.2	50.0
1,1-Dichloroethene	Ave	0.3005	0.2646	0.1000	0.00881	0.0100	-11.9	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2394	0.0500	0.00970	0.0100	-3.0	20.0
Acetone	Lin1		0.0240	0.0100	0.0198	0.0200	-0.9	50.0
Iodomethane	Ave	0.4675	0.4375		0.00936	0.0100	-6.4	20.0
Carbon disulfide	Ave	0.7741	0.5971	0.1000	0.00771	0.0100	-22.9*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1633		0.00962	0.0100	-3.8	20.0
Methyl acetate	Ave	0.2050	0.1768	0.1000	0.0172	0.0200	-13.8	20.0
Methylene Chloride	Lin1		0.4011	0.1000	0.0137	0.0100	36.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0163		0.0803	0.100	-19.7	50.0
Acrylonitrile	Ave	0.0962	0.0916		0.0952	0.100	-4.8	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6712	0.1000	0.00857	0.0100	-14.3	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2866	0.1000	0.0103	0.0100	2.5	20.0
Hexane	Ave	0.0586	0.0527		0.00899	0.0100	-10.1	20.0
1,1-Dichloroethane	Ave	0.4517	0.4693	0.2000	0.0104	0.0100	3.9	20.0
Vinyl acetate	Ave	0.5198	0.4189		0.00806	0.0100	-19.4	50.0
2,2-Dichloropropane	Ave	0.0624	0.0587		0.00942	0.0100	-5.8	20.0
2-Butanone (MEK)	Ave	0.0333	0.0305	0.0100	0.0184	0.0200	-8.2	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3242	0.1000	0.0105	0.0100	5.3	20.0
Bromochloromethane	Ave	0.1531	0.1616		0.0106	0.0100	5.5	20.0
Tetrahydrofuran	Ave	0.0828	0.0686		0.0166	0.0200	-17.1	20.0
Chloroform	Ave	0.4606	0.4880	0.2000	0.0106	0.0100	6.0	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3575	0.1000	0.0101	0.0100	0.8	20.0
Cyclohexane	Ave	0.3993	0.3773	0.1000	0.00945	0.0100	-5.5	20.0
1,1-Dichloropropene	Ave	0.3748	0.3719		0.00992	0.0100	-0.8	20.0
Carbon tetrachloride	Ave	0.3441	0.3171	0.1000	0.00922	0.0100	-7.8	20.0
Isobutyl alcohol	Ave	0.0077	0.0070		0.227	0.250	-9.4	20.0
Benzene	Ave	1.116	1.180	0.5000	0.0106	0.0100	5.7	20.0
1,2-Dichloroethane	Ave	0.3820	0.3993	0.1000	0.0105	0.0100	4.5	20.0
n-Heptane	Ave	0.0532	0.0463		0.00870	0.0100	-13.0	20.0
Trichloroethene	Ave	0.3240	0.3428	0.1500	0.0106	0.0100	5.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3350	0.1000	0.00950	0.0100	-5.0	20.0
1,2-Dichloropropane	Ave	0.2590	0.2611	0.1000	0.0101	0.0100	0.8	20.0
1,4-Dioxane	Ave	0.0020	0.0026		0.260	0.200	30.1	50.0
Dibromomethane	Ave	0.1717	0.1669		0.00972	0.0100	-2.8	20.0
Bromodichloromethane	Ave	0.3410	0.3135	0.1500	0.00919	0.0100	-8.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1388		0.0159	0.0200	-20.5*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3525	0.1500	0.00894	0.0100	-10.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2257	0.0500	0.0169	0.0200	-15.7	20.0
Toluene	Ave	1.476	1.435	0.4000	0.00972	0.0100	-2.8	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3495	0.1000	0.00752	0.0100	-24.8*	20.0
Ethyl methacrylate	Ave	0.4442	0.3465		0.00780	0.0100	-22.0*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2780	0.1000	0.00932	0.0100	-6.8	20.0
Tetrachloroethene	Ave	0.3268	0.3212	0.1500	0.00983	0.0100	-1.7	20.0
1,3-Dichloropropane	Ave	0.5243	0.4898		0.00934	0.0100	-6.6	20.0
2-Hexanone	Ave	0.2283	0.1843	0.0500	0.0161	0.0200	-19.3	20.0
Chlorodibromomethane	Ave	0.3116	0.2594		0.00833	0.0100	-16.7	20.0
1,2-Dibromoethane	Ave	0.3191	0.2750		0.00862	0.0100	-13.8	20.0
Chlorobenzene	Ave	0.9777	0.9502	0.3000	0.00972	0.0100	-2.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.2977		0.00863	0.0100	-13.7	20.0
Ethylbenzene	Ave	0.5145	0.4912		0.00955	0.0100	-4.5	20.0
m-Xylene & p-Xylene	Ave	1.221	1.165		0.00955	0.0100	-4.5	20.0
o-Xylene	Ave	0.6189	0.5935		0.00959	0.0100	-4.1	20.0
Styrene	Ave	1.036	1.012	0.3000	0.00977	0.0100	-2.3	20.0
Bromoform	Lin1		0.1557	0.1000	0.00675	0.0100	-32.5*	20.0
Isopropylbenzene	Ave	1.463	1.374	0.1000	0.00939	0.0100	-6.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5684	0.3000	0.00802	0.0100	-19.8	20.0
Bromobenzene	Ave	0.8274	0.7586		0.00917	0.0100	-8.3	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2002		0.00811	0.0100	-18.9	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.1131		0.0112	0.0100	11.5	20.0
N-Propylbenzene	Ave	0.7286	0.6484		0.00890	0.0100	-11.0	20.0
2-Chlorotoluene	Ave	0.6821	0.6162		0.00903	0.0100	-9.7	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.868		0.00882	0.0100	-11.8	20.0
4-Chlorotoluene	Ave	2.205	1.951		0.00885	0.0100	-11.5	20.0
tert-Butylbenzene	Ave	1.897	1.591		0.00839	0.0100	-16.1	20.0
1,2,4-Trimethylbenzene	Ave	2.227	1.990		0.00894	0.0100	-10.6	20.0
sec-Butylbenzene	Ave	2.327	1.997		0.00858	0.0100	-14.2	20.0
1,3-Dichlorobenzene	Ave	1.425	1.317	0.6000	0.00924	0.0100	-7.6	20.0
4-Isopropyltoluene	Ave	2.083	1.821		0.00874	0.0100	-12.6	20.0
1,4-Dichlorobenzene	Ave	1.477	1.350	0.5000	0.00914	0.0100	-8.6	20.0
n-Butylbenzene	Ave	1.649	1.338		0.00812	0.0100	-18.8	20.0
1,2-Dichlorobenzene	Ave	1.387	1.278	0.4000	0.00921	0.0100	-7.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0952	0.0500	0.00591	0.0100	-40.9	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.6817	0.2000	0.00776	0.0100	-22.4	50.0
Hexachlorobutadiene	Ave	0.4386	0.3104		0.00708	0.0100	-29.2*	20.0
Naphthalene	Ave	2.209	1.476		0.00668	0.0100	-33.2	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6052		0.00766	0.0100	-23.4*	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2175		0.00732	0.00797	-8.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2720		0.00713	0.00797	-10.6	20.0
Toluene-d8 (Surr)	Ave	1.214	1.047		0.00687	0.00797	-13.8	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3760		0.00690	0.00797	-13.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCV 240-367892/3 Calibration Date: 02/13/2019 12:32

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8808.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0282		0.122	0.100	22.1*	20.0
Diisopropyl ether	Ave	0.2405	0.2294		0.00954	0.0100	-4.6	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3741		0.00883	0.0100	-11.7	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.5945		0.00762	0.0100	-23.8*	20.0
Ethyl acetate	Ave	0.2538	0.2228		0.0176	0.0200	-12.2	50.0
Propionitrile	Ave	0.0357	0.0361		0.101	0.100	1.1	20.0
Methacrylonitrile	Ave	0.1733	0.1604		0.0925	0.100	-7.5	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5323		0.00686	0.0100	-31.4*	20.0
n-Butanol	Ave	0.0061	0.0040		0.163	0.250	-34.7*	20.0
Ethyl acrylate	Ave	0.3330	0.2775		0.00833	0.0100	-16.7	20.0
Methyl methacrylate	Ave	0.2430	0.2131		0.0175	0.0200	-12.3	20.0
2-Nitropropane	Ave	0.0745	0.0279		0.00750	0.0200	-62.5*	20.0
n-Butyl acetate	Ave	0.3918	0.3008		0.00768	0.0100	-23.2*	20.0
1-Chlorohexane	Ave	0.3968	0.3067		0.00773	0.0100	-22.7*	20.0
Cyclohexanone	Lin1		0.0109		0.0663	0.100	-33.7*	20.0
Pentachloroethane	Ave	0.2034	0.1499		0.0147	0.0200	-26.3*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.035		0.00886	0.0100	-11.4	20.0
Benzyl chloride	Ave	0.2963	0.1196		0.00404	0.0100	-59.6*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8253		0.00872	0.0100	-12.8	20.0
2-Methylnaphthalene	Ave	1.076	0.6682		0.0124	0.0200	-37.9*	20.0

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00281	vmbfb 00021
BFB 240-364786/1		8260C		5 mL	5 mL				1 uL
STD8260 240-364786/2 IC		8260C		5 mL	5 mL	1 uL	32 uL	32 uL	
STD8260 240-364786/3 IC		8260C		5 mL	5 mL	1 uL	16 uL	16 uL	
STD8260 240-364786/4 ICIS		8260C		5 mL	5 mL	1 uL	8 uL	8 uL	
STD8260 240-364786/5 IC		8260C		5 mL	5 mL	1 uL	4 uL	4 uL	
STD8260 240-364786/6 IC		8260C		5 mL	5 mL	1 uL	1.6 uL	1.6 uL	
STD8260 240-364786/7 IC		8260C		5 mL	5 mL	1 uL	0.8 uL	0.8 uL	
STD 240-364786/8 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/9 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/10 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/11 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/12 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/13 IC		8260C		5 mL	5 mL	1 uL			
ICV 240-364786/14		8260C		5 mL	5 mL	1 uL	0.797 uL		
ICV 240-364786/15		8260C		5 mL	5 mL	1 uL	0.797 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C							32 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
STD8260 240-364786/3 IC		8260C							16 uL
STD8260 240-364786/4 ICIS		8260C							8 uL
STD8260 240-364786/5 IC		8260C							4 uL
STD8260 240-364786/6 IC		8260C							1.6 uL
STD8260 240-364786/7 IC		8260C							0.8 uL
STD 240-364786/8 IC		8260C						32 uL	
STD 240-364786/9 IC		8260C						16 uL	
STD 240-364786/10 IC		8260C						8 uL	
STD 240-364786/11 IC		8260C						4 uL	
STD 240-364786/12 IC		8260C						1.6 uL	
STD 240-364786/13 IC		8260C						0.8 uL	
ICV 240-364786/14		8260C			8 uL	8 uL	8 uL		
ICV 240-364786/15		8260C		8 uL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C		32 uL					
STD8260 240-364786/3 IC		8260C		16 uL					
STD8260 240-364786/4 ICIS		8260C		8 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
STD8260 240-364786/5 IC		8260C		4 uL					
STD8260 240-364786/6 IC		8260C		1.6 uL					
STD8260 240-364786/7 IC		8260C		0.8 uL					
STD 240-364786/8 IC		8260C							
STD 240-364786/9 IC		8260C							
STD 240-364786/10 IC		8260C							
STD 240-364786/11 IC		8260C							
STD 240-364786/12 IC		8260C							
STD 240-364786/13 IC		8260C							
ICV 240-364786/14		8260C							
ICV 240-364786/15		8260C							

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367509 Batch Start Date: 02/11/19 10:27 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00284
BFB 240-367509/1		8260C		5 mL	5 mL				
CCVIS 240-367509/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-367509/3		8260C		5 mL	5 mL		1 uL		
LCS 240-367509/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-367509/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-107796-A-1	TB-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00267	VMFASGW 00295	VMFASPW 00287	VMRA9W 00284	VMRGAS 00281
BFB 240-367509/1		8260C		1 uL					
CCVIS 240-367509/2		8260C							8 uL
CCV 240-367509/3		8260C						8 uL	
LCS 240-367509/4		8260C			8 uL	8 uL	8 uL		
MB 240-367509/6		8260C							
240-107796-A-1	TB-020619	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00320					
BFB 240-367509/1		8260C							
CCVIS 240-367509/2		8260C		8 uL					
CCV 240-367509/3		8260C							
LCS 240-367509/4		8260C							
MB 240-367509/6		8260C							
240-107796-A-1	TB-020619	8260C	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367509 Batch Start Date: 02/11/19 10:27 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367672 Batch Start Date: 02/12/19 10:19 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00284
BFB 240-367672/1		8260C		5 mL	5 mL				
CCVIS 240-367672/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-367672/3		8260C		5 mL	5 mL		1 uL		
LCS 240-367672/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-367672/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-107796-B-2	MRC-MW138B-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107796-B-3	MRC-MW141B-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107796-B-3 MS	MRC-MW141B-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107796-B-3 MSD	MRC-MW141B-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107796-B-4	MRC-MW142B-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00267	VMFASGW 00296	VMFASPW 00288	VMRA9W 00284	VMRGAS 00281
BFB 240-367672/1		8260C		1 uL					
CCVIS 240-367672/2		8260C							8 uL
CCV 240-367672/3		8260C						8 uL	
LCS 240-367672/4		8260C			8 uL	8 uL	8 uL		
MB 240-367672/6		8260C							
240-107796-B-2	MRC-MW138B-020619	8260C	T						
240-107796-B-3	MRC-MW141B-020619	8260C	T						
240-107796-B-3 MS	MRC-MW141B-020619	8260C	T		8 uL	8 uL	8 uL		
240-107796-B-3 MSD	MRC-MW141B-020619	8260C	T		8 uL	8 uL	8 uL		
240-107796-B-4	MRC-MW142B-020619	8260C	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367672 Batch Start Date: 02/12/19 10:19 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00321					
BFB 240-367672/1		8260C							
CCVIS 240-367672/2		8260C		8 uL					
CCV 240-367672/3		8260C							
LCS 240-367672/4		8260C							
MB 240-367672/6		8260C							
240-107796-B-2	MRC-MW138B-020619	8260C	T						
240-107796-B-3	MRC-MW141B-020619	8260C	T						
240-107796-B-3 MS	MRC-MW141B-020619	8260C	T						
240-107796-B-3 MSD	MRC-MW141B-020619	8260C	T						
240-107796-B-4	MRC-MW142B-020619	8260C	T						

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367892 Batch Start Date: 02/13/19 11:22 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00284
BFB 240-367892/1		8260C		5 mL	5 mL				
CCVIS 240-367892/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-367892/3		8260C		5 mL	5 mL		1 uL		
LCS 240-367892/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-367892/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-107796-B-5	MRC-MW158A-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107796-C-6	MRC-DUP01-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00267	VMFASGW 00296	VMFASPW 00288	VMRA9W 00285	VMRGAS 00281
BFB 240-367892/1		8260C		1 uL					
CCVIS 240-367892/2		8260C							8 uL
CCV 240-367892/3		8260C						8 uL	
LCS 240-367892/4		8260C			8 uL	8 uL	8 uL		
MB 240-367892/6		8260C							
240-107796-B-5	MRC-MW158A-020619	8260C	T						
240-107796-C-6	MRC-DUP01-020619	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00321					
BFB 240-367892/1		8260C							
CCVIS 240-367892/2		8260C		8 uL					
CCV 240-367892/3		8260C							
LCS 240-367892/4		8260C							
MB 240-367892/6		8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367892 Batch Start Date: 02/13/19 11:22 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00321					
240-107796-B-5	MRC-MW158A-020619	8260C	T						
240-107796-C-6	MRC-DUP01-020619	8260C	T						

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13CDCB #
MRC-MW158A-020619	240-107796-5	49
	MB 680-558728/12-A	71
	LCS 680-558728/13-A	75
	LCSD 680-558728/14-A	68

	QC LIMITS
13CDCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Sample No.: CCVIS 680-559059/3 Date Analyzed: 02/21/2019 06:44

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2030.D Heated Purge: (Y/N) N

Calibration ID: 63054

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		170892	12.41	169663	18.67		
UPPER LIMIT		222160	12.91	220562	19.17		
LOWER LIMIT		119624	11.91	118764	18.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-558728/12-A		143915	12.41	132159	18.67		
LCS 680-558728/13-A		164188	12.41	171582	18.67		
LCSD 680-558728/14-A		179669	12.41	188862	18.67		
240-107796-5	MRC-MW158A-020619	179584	12.41	179028	18.67		
CCV 680-559059/21		159076	12.41	142687	18.67		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Lab File ID: xb2031.D Lab Sample ID: MB 680-558728/12-A

Matrix: Water Date Extracted: 02/19/2019 13:42

Instrument ID: CMSX Date Analyzed: 02/21/2019 07:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-558728/13-A	xb2032.D	02/21/2019 07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019 08:10
MRC-MW158A-020619	240-107796-5	xb2043.D	02/21/2019 12:55

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-558728/12-A

Matrix: Water | Lab File ID: xb2031.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2032.D

Lab ID: LCS 680-558728/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.67	78	62-130	
Hexachlorobiphenyl	4.00	3.37	84	62-130	
Nonachlorobiphenyl	10.0	14.6	146	70-195	
Octachlorobiphenyl	6.00	5.09	85	64-130	
Monochlorobiphenyl	2.00	1.08	54	42-130	
DCB Decachlorobiphenyl	10.0	7.81	78	59-130	
Dichlorobiphenyl	2.00	1.32	66	49-130	
Pentachlorobiphenyl	4.00	3.47	87	63-130	
Tetrachlorobiphenyl	4.00	2.93	73	54-130	
Trichlorobiphenyl	2.00	1.47	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2033.D

Lab ID: LCSD 680-558728/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.45	74	5	40	62-130	
Hexachlorobiphenyl	4.00	3.21	80	5	40	62-130	
Nonachlorobiphenyl	10.0	13.2	132	10	40	70-195	
Octachlorobiphenyl	6.00	4.75	79	7	40	64-130	
Monochlorobiphenyl	2.00	1.36	68	23	40	42-130	
DCB Decachlorobiphenyl	10.0	7.14	71	9	40	59-130	
Dichlorobiphenyl	2.00	1.47	73	11	40	49-130	
Pentachlorobiphenyl	4.00	3.33	83	4	40	63-130	
Tetrachlorobiphenyl	4.00	3.04	76	4	40	54-130	
Trichlorobiphenyl	2.00	1.52	76	3	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Lab File ID: xa0805.D DFTPP Injection Date: 01/08/2019

Instrument ID: CMSX DFTPP Injection Time: 14:10

Analysis Batch No.: 554469

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.9
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	25.1
365	Greater than 1% of mass 198	3.8
441	Present but less than mass 443	13.7 (87.5) 2
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	15.6 (18.3) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-554469/3	xa0807.D	01/08/2019	15:11
	IC 680-554469/5	xa0809.D	01/08/2019	16:08
	IC 680-554469/6	xa0810.D	01/08/2019	16:37
	IC 680-554469/27	xa0850.D	01/08/2019	17:05
	IC 680-554469/7	xa0811.D	01/08/2019	17:34
	IC 680-554469/8	xa0812.D	01/08/2019	18:02
	ICV 680-554469/9	xa0813.D	01/08/2019	18:31

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107796-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICV 680-554469/9 Calibration Date: 01/08/2019 18:31

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xa0813.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8517		1.03	1.00	2.6	20.0
Dichlorobiphenyl	Ave	0.5847	0.5801		0.992	1.00	-0.8	20.0
Trichlorobiphenyl	Ave	0.4198	0.4573		1.09	1.00	8.9	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.3118		2.11	2.00	5.6	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2531		2.11	2.00	5.5	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2508		2.10	2.00	5.2	20.0
Heptachlorobiphenyl	Ave	0.2376	0.2274		2.87	3.00	-4.3	20.0
Octachlorobiphenyl	Ave	0.2054	0.2183		3.19	3.00	6.3	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0419		5.00	5.00	-0.0	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0577		5.35	5.00	7.1	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Lab File ID: xb2028.D DFTPP Injection Date: 02/21/2019

Instrument ID: CMSX DFTPP Injection Time: 05:43

Analysis Batch No.: 559059

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	59.5
197	Less than 1 % of mass 198	0.9
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	28.0
365	Greater than 1% of mass 198	3.5
441	Present but less than mass 443	15.1 (86.3) 2
442	Greater than 40% of mass 198	96.2
443	17 - 23% of mass 442	17.5 (18.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559059/2	xb2029.D	02/21/2019	06:14
	CCVIS 680-559059/3	xb2030.D	02/21/2019	06:44
	MB 680-558728/12-A	xb2031.D	02/21/2019	07:13
	LCS 680-558728/13-A	xb2032.D	02/21/2019	07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019	08:10
MRC-MW158A-020619	240-107796-5	xb2043.D	02/21/2019	12:55
	CCV 680-559059/21	xb2051.D	02/21/2019	16:43

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 680-559059/3 Calibration Date: 02/21/2019 06:44

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2030.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.7268		0.875	1.00	-12.5	20.0
Dichlorobiphenyl	Ave	0.5847	0.5079		0.869	1.00	-13.1	20.0
Trichlorobiphenyl	Ave	0.4198	0.3597		0.857	1.00	-14.3	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2563		1.74	2.00	-13.2	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2131		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2136		1.79	2.00	-10.4	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1920		2.42	3.00	-19.2	20.0
Octachlorobiphenyl	Ave	0.2054	0.1725		2.52	3.00	-16.0	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0343		4.08	5.00	-18.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0462		4.29	5.00	-14.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCV 680-559059/21 Calibration Date: 02/21/2019 16:43

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2051.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8070		0.972	1.00	-2.8	20.0
Dichlorobiphenyl	Ave	0.5847	0.5601		0.958	1.00	-4.2	20.0
Trichlorobiphenyl	Ave	0.4198	0.4000		0.953	1.00	-4.7	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2879		1.95	2.00	-2.4	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2300		1.92	2.00	-4.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2246		1.88	2.00	-5.8	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1938		2.45	3.00	-18.4	20.0
Octachlorobiphenyl	Ave	0.2054	0.1765		2.58	3.00	-14.1	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0315		3.75	5.00	-25.0*	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0422		3.92	5.00	-21.6*	20.0

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Batch Number: 558728 Batch Start Date: 02/19/19 13:42 Batch Analyst: Wilson, Charles E

Batch Method: 680 Batch End Date: 02/20/19 07:53

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ResidualChloCheck	ReceivedpH
240-107796-K-5	MRC-MW158A-020619	680, 680	T	1494.3 g	501.2 g	993.1 mL	1 mL	N	7 SU
MB 680-558728/12		680, 680				1000 mL	1 mL	N	7 SU
LCS 680-558728/13		680, 680				1000 mL	1 mL	N	7 SU
LCSD 680-558728/14		680, 680				1000 mL	1 mL	N	7 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	680wkSPIKE 00120	680wkSURR-NEW 00035				
240-107796-K-5	MRC-MW158A-020619	680, 680	T		1 mL				
MB 680-558728/12		680, 680			1 mL				
LCS 680-558728/13		680, 680		1 mL	1 mL				
LCSD 680-558728/14		680, 680		1 mL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Batch Number: 558728 Batch Start Date: 02/19/19 13:42 Batch Analyst: Wilson, Charles E

Batch Method: 680 Batch End Date: 02/20/19 07:53

Batch Notes	
Balance ID	23
Batch Comment	680 box 125
Boiling Chips ID	901800
Concentration 1 Thermometer ID	50
Analyst ID - Concentration	jc
Exchange Solvent ID	5859923
Analyst ID - Extraction	CEW/CMJ
Extraction 1 End Time	02/20/2019 07:53
Extraction 1 Start Time	02/19/2019 13:42
Method/Fraction	680
pH Indicator ID	5904645
Pipette/Syringe/Dispenser ID	AA06G
Prep Solvent ID	5904693
Residual Chlorine Indicator ID	5775443
Analyst ID - Spike Analyst	CEW
Analyst ID - Spike Witness Analyst	CMJ
Sufficient Volume for Batch QC	NO

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW138B-020619	240-107796-2
MRC-MW141B-020619	240-107796-3
MRC-MW142B-020619	240-107796-4
MRC-MW158A-020619	240-107796-5
MRC-DUP01-020619	240-107796-6

Comments:

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG No.:

ICP-AES Instrument ID: I9 Date: 01/25/2019

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	Tl	V
Aluminum										0.01401160					0.026101
Antimony		-0.000056			-0.000451			-0.000015							0.002940
Arsenic		0.000005			-0.000198	0.00022072			-0.000355	0.00045569					
Barium															
Beryllium															0.000086
Boron															
Cadmium			0.008775					-0.00001							
Calcium															
Chromium															
Cobalt													0.001923		
Copper				0.000018	0.000453			-0.000018					-0.000463		
Iron															
Lead		-0.000129					0.00001699	0.000043			0.000260	0.000066831			
Lithium															
Magnesium															
Manganese															
Molybdenum															
Nickel					0.000799			0.000054							
Potassium															
Selenium		-0.000049							0.000231						
Silver															
Sodium															
Strontium															
Thallium		-0.000010			0.003994			0.000007	0.00168520				-0.000498		-0.000210
Tin															
Titanium															
Vanadium								0.000027							
Zinc						-0.000286									

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107796-1

SDG No.:

Instrument ID: I9 Date: 01/28/2019 12:15

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		10000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107796-1

SDG No.:

Instrument ID: I14 Date: 10/02/2018 11:17

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/11/2019 09:36 End Date: 02/12/2019 01:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ICIS 240-367531/1	1		09:36	X	X																							
CALSTD 240-367531/2 IC			09:40	X	X																							
CALSTD 240-367531/3 IC			09:44	X	X																							
ICV 240-367531/4	1		09:49	X	X																							
ICB 240-367531/5	1		09:53	X	X																							
ICVL 240-367531/6	1		09:57	X	X																							
ZZZZZZ			10:02																									
ICSA 240-367531/8	1		10:06	X	X																							
ICSAB 240-367531/9	1		10:10	X	X																							
CCV 240-367531/10			10:15																									
CCB 240-367531/11			10:19																									
ZZZZZZ			10:23																									
ZZZZZZ			10:27																									
ZZZZZZ			10:32																									
ZZZZZZ			10:36																									
ZZZZZZ			10:41																									
ZZZZZZ			10:45																									
CCV 240-367531/18			10:50																									
CCB 240-367531/19			10:54																									
ZZZZZZ			11:05																									
ZZZZZZ			11:09																									
ZZZZZZ			11:14																									
ZZZZZZ			11:18																									
ZZZZZZ			11:23																									
ZZZZZZ			11:27																									
ZZZZZZ			11:32																									
CCV 240-367531/27			11:36																									
CCB 240-367531/28			11:40																									
ZZZZZZ			11:56																									
ZZZZZZ			12:01																									
ZZZZZZ			12:05																									
ZZZZZZ			12:09																									
ZZZZZZ			12:14																									
ZZZZZZ			12:18																									
ZZZZZZ			12:22																									
ZZZZZZ			12:26																									
ZZZZZZ			12:30																									
ZZZZZZ			12:35																									
CCV 240-367531/39			12:39																									
CCB 240-367531/40			12:43																									
ZZZZZZ			12:48																									
ZZZZZZ			12:52																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/11/2019 09:36 End Date: 02/12/2019 01:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			12:56																									
CCV 240-367531/44			13:01																									
CCB 240-367531/45			13:05																									
ZZZZZZ			13:09																									
ZZZZZZ			13:14																									
ZZZZZZ			13:18																									
ZZZZZZ			13:22																									
ZZZZZZ			13:27																									
CCV 240-367531/51			13:32																									
CCB 240-367531/52			13:36																									
ZZZZZZ			13:40																									
ZZZZZZ			13:44																									
ZZZZZZ			13:49																									
ZZZZZZ			13:53																									
ZZZZZZ			13:58																									
ZZZZZZ			14:03																									
ZZZZZZ			14:07																									
ZZZZZZ			14:12																									
ZZZZZZ			14:16																									
ZZZZZZ			14:21																									
CCV 240-367531/63			14:25																									
CCB 240-367531/64			14:29																									
ZZZZZZ			14:34																									
ZZZZZZ			14:38																									
ZZZZZZ			14:43																									
ZZZZZZ			14:47																									
ZZZZZZ			14:51																									
ZZZZZZ			14:56																									
ZZZZZZ			15:01																									
ZZZZZZ			15:05																									
ZZZZZZ			15:10																									
ZZZZZZ			15:14																									
CCV 240-367531/75			15:18																									
CCB 240-367531/76			15:22																									
CCVL 240-367531/77			15:27																									
ZZZZZZ			15:31																									
ZZZZZZ			15:35																									
ZZZZZZ			15:39																									
ZZZZZZ			15:43																									
ZZZZZZ			15:48																									
ZZZZZZ			15:52																									
ZZZZZZ			15:56																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/11/2019 09:36 End Date: 02/12/2019 01:26

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			16:00																										
ZZZZZZ			16:05																										
CCV 240-367531/87	1		16:09	X	X																								
CCB 240-367531/88	1		16:13	X	X																								
ZZZZZZ			16:17																										
ZZZZZZ			16:22																										
ZZZZZZ			16:26																										
ZZZZZZ			16:30																										
ZZZZZZ			16:35																										
ZZZZZZ			16:39																										
ZZZZZZ			16:44																										
ZZZZZZ			16:48																										
ZZZZZZ			16:52																										
MB 240-367336/1-A	1	R	16:57	X	X																								
CCV 240-367531/99	1		17:02	X	X																								
CCB 240-367531/100	1		17:06	X	X																								
LCS 240-367336/2-A	1	R	17:10	X	X																								
ZZZZZZ			17:14																										
ZZZZZZ			17:19																										
ZZZZZZ			17:23																										
ZZZZZZ			17:27																										
ZZZZZZ			17:31																										
ZZZZZZ			17:36																										
ZZZZZZ			17:40																										
ZZZZZZ			17:45																										
ZZZZZZ			17:49																										
CCV 240-367531/111	1		17:53	X	X																								
CCB 240-367531/112	1		17:58	X	X																								
240-107796-2	1	R	18:02	X	X																								
240-107796-3	1	R	18:06	X	X																								
240-107796-4	1	R	18:11	X	X																								
240-107796-5	1	R	18:15	X	X																								
240-107796-6	1	R	18:19	X	X																								
ZZZZZZ			18:24																										
ZZZZZZ			18:28																										
ZZZZZZ			18:32																										
ZZZZZZ			18:37																										
ZZZZZZ			18:41																										
CCV 240-367531/123	1		18:46	X	X																								
CCB 240-367531/124	1		18:50	X	X																								
CCVL 240-367531/125	1		18:54	X	X																								
ZZZZZZ			18:58																										

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/11/2019 09:36 End Date: 02/12/2019 01:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			19:03																									
ZZZZZZ			19:07																									
ZZZZZZ			19:12																									
ZZZZZZ			19:16																									
ZZZZZZ			19:21																									
ZZZZZZ			19:25																									
ZZZZZZ			19:29																									
ZZZZZZ			19:34																									
CCV 240-367531/135			19:38																									
CCB 240-367531/136			19:42																									
ZZZZZZ			19:47																									
ZZZZZZ			19:51																									
ZZZZZZ			19:56																									
ZZZZZZ			20:00																									
ZZZZZZ			20:05																									
ZZZZZZ			20:09																									
ZZZZZZ			20:13																									
ZZZZZZ			20:18																									
ZZZZZZ			20:22																									
ZZZZZZ			20:26																									
CCV 240-367531/147			20:31																									
CCB 240-367531/148			20:35																									
ZZZZZZ			20:39																									
ZZZZZZ			20:43																									
ZZZZZZ			20:48																									
ZZZZZZ			20:52																									
ZZZZZZ			20:56																									
ZZZZZZ			21:01																									
ZZZZZZ			21:05																									
ZZZZZZ			21:10																									
ZZZZZZ			21:14																									
ZZZZZZ			21:18																									
CCV 240-367531/159			21:23																									
CCB 240-367531/160			21:27																									
ZZZZZZ			21:31																									
ZZZZZZ			21:36																									
ZZZZZZ			21:40																									
ZZZZZZ			21:45																									
ZZZZZZ			21:49																									
ZZZZZZ			21:53																									
ZZZZZZ			21:58																									
ZZZZZZ			22:02																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/11/2019 09:36 End Date: 02/12/2019 01:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			22:07																									
ZZZZZZ			22:11																									
CCV 240-367531/171			22:16																									
CCB 240-367531/172			22:20																									
ZZZZZZ			22:24																									
ZZZZZZ			22:28																									
ZZZZZZ			22:33																									
ZZZZZZ			22:37																									
ZZZZZZ			22:41																									
ZZZZZZ			22:45																									
ZZZZZZ			22:50																									
ZZZZZZ			22:54																									
ZZZZZZ			22:58																									
ZZZZZZ			23:02																									
CCV 240-367531/183			23:06																									
CCB 240-367531/184			23:10																									
ZZZZZZ			23:15																									
ZZZZZZ			23:19																									
ZZZZZZ			23:24																									
ZZZZZZ			23:28																									
ZZZZZZ			23:33																									
ZZZZZZ			23:37																									
ZZZZZZ			23:42																									
ZZZZZZ			23:46																									
ZZZZZZ			23:50																									
ZZZZZZ			23:55																									
CCV 240-367531/195			23:59																									
CCB 240-367531/196			00:03																									
ZZZZZZ			00:08																									
ZZZZZZ			00:12																									
ZZZZZZ			00:16																									
ZZZZZZ			00:21																									
ZZZZZZ			00:25																									
ZZZZZZ			00:30																									
ZZZZZZ			00:34																									
ZZZZZZ			00:38																									
ZZZZZZ			00:43																									
ZZZZZZ			00:47																									
CCV 240-367531/207			00:51																									
CCB 240-367531/208			00:55																									
ZZZZZZ			01:00																									
ZZZZZZ			01:04																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/11/2019 09:36 End Date: 02/12/2019 01:26

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			01:09																										
ZZZZZZ			01:13																										
ZZZZZZ			01:17																										
CCV 240-367531/214			01:22																										
CCB 240-367531/215			01:26																										

Prep Types:
R = Total Recoverable

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15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICP Instrument ID: I9 Start Date: 02/11/2019 End Date: 02/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-367531/1	09:36										
ICV 240-367531/4	09:49	100		98		99		98			
ICB 240-367531/5	09:53	99		99		100		99			
ICVL 240-367531/6	09:57	100		98		100		99			
ICSA 240-367531/8	10:06	92		90		94		94			
ICSAB 240-367531/9	10:10	92		91		93		94			
CCV 240-367531/87	16:09	109		106		111		113			
CCB 240-367531/88	16:13	111		109		111		114			
MB 240-367336/1-A	16:57	111		110		113		115			
CCV 240-367531/99	17:02	108		106		111		113			
CCB 240-367531/100	17:06	109		108		111		114			
LCS 240-367336/2-A	17:10	112		110		114		115			
CCV 240-367531/111	17:53	116		114		119		125			
CCB 240-367531/112	17:58	118		116		119		126			
240-107796-2	18:02	123		118		122		127			
240-107796-3	18:06	122		117		122		127			
240-107796-4	18:11	122		117		123		129			
240-107796-5	18:15	117		113		120		123			
240-107796-6	18:19	121		116		120		126			
CCV 240-367531/123	18:46	119		114		123		125			
CCB 240-367531/124	18:50	120		117		123		127			
CCVL 240-367531/125	18:54	122		118		124		127			

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-367531/4 02/11/2019 09:49				CCV 240-367531/87 02/11/2019 16:09				CCV 240-367531/99 02/11/2019 17:02			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	12900		12500	103	26100		25000	104	25900		25000	103
Manganese	1530		1500	102	2050		2000	103	2060		2000	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	CCV 240-367531/111 02/11/2019 17:53				CCV 240-367531/123 02/11/2019 18:46							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	25400		25000	102	25000		25000	100				
Manganese	2010		2000	100	1980		2000	99				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-367531/6 02/11/2019 09:57				CCVL 240-367531/125 02/11/2019 18:54							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	201		200	100	200		200	100				
Manganese	15.1		15.0	101	14.4	J	15.0	96				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367531/5 02/11/2019 09:53		CCB 240-367531/88 02/11/2019 16:13		CCB 240-367531/100 02/11/2019 17:06		CCB 240-367531/112 02/11/2019 17:58	
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U	26	U
Manganese	15	2.1	U	3.33	J	3.16	J	3.31	J

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-367531/124 02/11/2019 18:50							
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U						
Manganese	15	3.37	J						

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICSA 240-367531/8 Instrument ID: I9

Lab File ID: I9021119A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**192380**	**96**
Manganese		**1.13**	
Aluminum	*500000*	*513950*	*103*
Antimony		*4.64*	
Arsenic		*-6.04*	
Barium		*0.922*	
Beryllium		*-0.0438*	
Boron		*-5.57*	
Cadmium		*1.12*	
Calcium	*500000*	*487520*	*98*
Chromium		*4.32*	
Cobalt		*-0.429*	
Copper		*0.578*	
Lead		*4.52*	
Lithium		*18.3*	
Magnesium	*500000*	*500350*	*100*
Molybdenum		*-0.150*	
Nickel		*4.08*	
Potassium		*95.5*	
Selenium		*0.909*	
Silicon		*10.9*	
Silver		*0.612*	
Sodium		*96.7*	
Strontium		*14.5*	
Thallium		*-7.54*	
Tin		*2.55*	
Titanium		*0.205*	
Vanadium		*-6.15*	
Zinc		*0.0864*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICSAB 240-367531/9 Instrument ID: I9

Lab File ID: I9021119A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Iron	**200000**	**191830**	**96**
Manganese	**500**	**498**	**100**
Aluminum	*500000*	*507090*	*101*
Antimony	*1000*	*1032*	*103*
Arsenic	*1000*	*995*	*99*
Barium	*500*	*502*	*100*
Beryllium	*500*	*503*	*101*
Boron	*500*	*520*	*104*
Cadmium	*1000*	*1045*	*105*
Calcium	*500000*	*483770*	*97*
Chromium	*500*	*500*	*100*
Cobalt	*500*	*492*	*98*
Copper	*500*	*566*	*113*
Lead	*1000*	*995*	*100*
Lithium	*500*	*557*	*111*
Magnesium	*500000*	*496160*	*99*
Molybdenum	*1000*	*1037*	*104*
Nickel	*1000*	*973*	*97*
Potassium	*10000*	*10522*	*105*
Selenium	*1000*	*978*	*98*
Silicon	*10000*	*10079*	*101*
Silver	*1000*	*1092*	*109*
Sodium	*10000*	*10533*	*105*
Strontium	*1500*	*1464*	*98*
Thallium	*1000*	*1008*	*101*
Tin	*500*	*507*	*101*
Titanium	*500*	*523*	*105*
Vanadium	*500*	*493*	*99*
Zinc	*1000*	*934*	*93*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/11/2019 12:05 End Date: 02/11/2019 21:18

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Pb	Sb	Se	Tl	V	Zn						
RINSE 240-367649/1			12:05																											
ICIS 240-367649/2			12:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD1 240-367649/3 IC	1		12:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD2 240-367649/4 IC	1		12:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD3 240-367649/5 IC	1		12:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD4 240-367649/6 IC	1		12:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICV 240-367649/7	1		12:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICB 240-367649/8	1		12:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICVL 240-367649/9	1		12:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSA 240-367649/10	1		12:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSAB 240-367649/11	1		12:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-367649/12			12:31																											
CCB 240-367649/13			12:34																											
ZZZZZZ			12:37																											
ZZZZZZ			12:40																											
ZZZZZZ			12:42																											
ZZZZZZ			12:45																											
ZZZZZZ			12:47																											
ZZZZZZ			12:49																											
ZZZZZZ			12:52																											
ZZZZZZ			12:54																											
ZZZZZZ			12:56																											
ZZZZZZ			12:58																											
CCV 240-367649/24			13:01																											
CCB 240-367649/25			13:03																											
ZZZZZZ			13:05																											
ZZZZZZ			13:08																											
ZZZZZZ			13:10																											
ZZZZZZ			13:12																											
ZZZZZZ			13:15																											
ZZZZZZ			13:17																											
ZZZZZZ			13:19																											
ZZZZZZ			13:21																											
ZZZZZZ			13:23																											
ZZZZZZ			13:26																											
CCV 240-367649/36			13:28																											
CCB 240-367649/37			13:30																											
ZZZZZZ			13:33																											
ZZZZZZ			13:35																											
ZZZZZZ			13:37																											
ZZZZZZ			13:40																											
ZZZZZZ			13:42																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/11/2019 12:05 End Date: 02/11/2019 21:18

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Pb	Sb	Se	Tl	V	Zn						
ZZZZZZ			13:45																											
ZZZZZZ			13:47																											
ZZZZZZ			13:49																											
ZZZZZZ			13:52																											
ZZZZZZ			13:54																											
CCV 240-367649/48			13:57																											
CCB 240-367649/49			13:59																											
ZZZZZZ			14:01																											
ZZZZZZ			14:04																											
ZZZZZZ			14:06																											
ZZZZZZ			14:08																											
ZZZZZZ			14:11																											
ZZZZZZ			14:13																											
ZZZZZZ			14:16																											
CCV 240-367649/57			14:18																											
CCB 240-367649/58			14:20																											
CCVL 240-367649/59			14:23																											
ZZZZZZ			14:25																											
ZZZZZZ			14:28																											
ZZZZZZ			14:30																											
ZZZZZZ			14:32																											
ZZZZZZ			14:34																											
ZZZZZZ			14:36																											
ZZZZZZ			14:39																											
ZZZZZZ			14:41																											
ZZZZZZ			14:43																											
CCV 240-367649/69			14:45																											
CCB 240-367649/70			14:48																											
ZZZZZZ			14:50																											
ZZZZZZ			14:53																											
ZZZZZZ			14:55																											
ZZZZZZ			14:57																											
ZZZZZZ			14:59																											
ZZZZZZ			15:02																											
ZZZZZZ			15:04																											
CCV 240-367649/78			15:07																											
CCB 240-367649/79			15:09																											
CCVL 240-367649/80			15:11																											
ZZZZZZ			15:14																											
ZZZZZZ			15:16																											
ZZZZZZ			15:18																											
ZZZZZZ			15:21																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/11/2019 12:05 End Date: 02/11/2019 21:18

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Pb	Sb	Se	Tl	V	Zn						
ZZZZZZ			15:23																											
ZZZZZZ			15:25																											
ZZZZZZ			15:27																											
ZZZZZZ			15:29																											
ZZZZZZ			15:32																											
CCV 240-367649/90			15:34																											
CCB 240-367649/91			15:36																											
ZZZZZZ			15:39																											
ZZZZZZ			15:41																											
ZZZZZZ			15:43																											
ZZZZZZ			15:46																											
ZZZZZZ			15:48																											
ZZZZZZ			15:50																											
ZZZZZZ			15:53																											
ZZZZZZ			15:55																											
ZZZZZZ			15:58																											
ZZZZZZ			16:00																											
CCV 240-367649/102			16:02																											
CCB 240-367649/103			16:05																											
ZZZZZZ			16:07																											
ZZZZZZ			16:10																											
ZZZZZZ			16:12																											
ZZZZZZ			16:14																											
ZZZZZZ			16:17																											
ZZZZZZ			16:19																											
ZZZZZZ			16:21																											
ZZZZZZ			16:24																											
ZZZZZZ			16:26																											
ZZZZZZ			16:28																											
CCV 240-367649/114			16:30																											
CCB 240-367649/115			16:33																											
ZZZZZZ			16:35																											
ZZZZZZ			16:37																											
ZZZZZZ			16:39																											
ZZZZZZ			16:42																											
ZZZZZZ			16:44																											
ZZZZZZ			16:46																											
ZZZZZZ			16:49																											
ZZZZZZ			16:51																											
ZZZZZZ			16:53																											
ZZZZZZ			16:56																											
CCV 240-367649/126			16:58																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/11/2019 12:05 End Date: 02/11/2019 21:18

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Pb	Sb	Se	Tl	V	Zn						
CCB 240-367649/127			17:00																											
ZZZZZZ			17:03																											
ZZZZZZ			17:05																											
ZZZZZZ			17:07																											
ZZZZZZ			17:09																											
ZZZZZZ			17:12																											
ZZZZZZ			17:14																											
ZZZZZZ			17:16																											
ZZZZZZ			17:19																											
ZZZZZZ			17:21																											
CCV 240-367649/137			17:23																											
CCB 240-367649/138			17:26																											
CCVL 240-367649/139			17:28																											
ZZZZZZ			17:30																											
ZZZZZZ			17:33																											
ZZZZZZ			17:35																											
ZZZZZZ			17:37																											
ZZZZZZ			17:40																											
ZZZZZZ			17:42																											
ZZZZZZ			17:44																											
ZZZZZZ			17:46																											
ZZZZZZ			17:48																											
CCV 240-367649/149			17:51																											
CCB 240-367649/150			17:53																											
ZZZZZZ			17:56																											
ZZZZZZ			17:58																											
ZZZZZZ			18:00																											
ZZZZZZ			18:03																											
ZZZZZZ			18:05																											
ZZZZZZ			18:07																											
ZZZZZZ			18:10																											
ZZZZZZ			18:12																											
ZZZZZZ			18:15																											
ZZZZZZ			18:17																											
CCV 240-367649/161			18:19																											
CCB 240-367649/162			18:22																											
ZZZZZZ			18:24																											
ZZZZZZ			18:26																											
ZZZZZZ			18:29																											
ZZZZZZ			18:31																											
ZZZZZZ			18:34																											
ZZZZZZ			18:36																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/11/2019 12:05 End Date: 02/11/2019 21:18

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Pb	Sb	Se	Tl	V	Zn					
ZZZZZZ			18:38																									
CCV 240-367649/170			18:41																									
CCB 240-367649/171			18:43																									
CCVL 240-367649/172			18:45																									
ZZZZZZ			18:48																									
ZZZZZZ			18:50																									
ZZZZZZ			18:52																									
ZZZZZZ			18:55																									
ZZZZZZ			18:57																									
ZZZZZZ			18:59																									
ZZZZZZ			19:02																									
ZZZZZZ			19:04																									
ZZZZZZ			19:06																									
CCV 240-367649/182	1		19:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCB 240-367649/183	1		19:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ZZZZZZ			19:13																									
ZZZZZZ			19:16																									
ZZZZZZ			19:18																									
ZZZZZZ			19:21																									
ZZZZZZ			19:23																									
ZZZZZZ			19:25																									
ZZZZZZ			19:28																									
MB 240-367336/1-A	1	R	19:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
LCS 240-367336/3-A	1	R	19:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ZZZZZZ			19:35																									
CCV 240-367649/194	1		19:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCB 240-367649/195	1		19:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ZZZZZZ			19:42																									
ZZZZZZ			19:44																									
ZZZZZZ			19:46																									
ZZZZZZ			19:49																									
ZZZZZZ			19:51																									
ZZZZZZ			19:53																									
ZZZZZZ			19:55																									
ZZZZZZ			19:58																									
240-107796-2	1	R	20:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-107796-3	1	R	20:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCV 240-367649/206	1		20:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCB 240-367649/207	1		20:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-107796-4	1	R	20:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-107796-5	1	R	20:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-107796-6	1	R	20:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/11/2019 12:05 End Date: 02/11/2019 21:18

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Pb	Sb	Se	Tl	V	Zn						
CCV 240-367649/211	1		20:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-367649/212	1		20:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCVL 240-367649/213	1		20:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			20:24																											
ZZZZZZ			20:26																											
ZZZZZZ			20:29																											
ZZZZZZ			20:31																											
ZZZZZZ			20:33																											
ZZZZZZ			20:35																											
ZZZZZZ			20:38																											
ZZZZZZ			20:40																											
ZZZZZZ			20:42																											
CCV 240-367649/223			20:44																											
CCB 240-367649/224			20:47																											
ZZZZZZ			20:49																											
ZZZZZZ			20:52																											
ZZZZZZ			20:54																											
ZZZZZZ			20:56																											
ZZZZZZ			20:59																											
ZZZZZZ			21:01																											
ZZZZZZ			21:04																											
ZZZZZZ			21:06																											
CCV 240-367649/233			21:08																											
CCB 240-367649/234			21:11																											
CCVL 240-367649/235			21:13																											
CCV 240-367649/236			21:16																											
CCB 240-367649/237			21:18																											

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/11/2019 End Date: 02/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-367649/3 IC	12:10	96		98		98		99		97	
STD2 240-367649/4 IC	12:13	93		98		95		97		93	
STD3 240-367649/5 IC	12:15	90		96		96		97		90	
STD4 240-367649/6 IC	12:17	93		98		98		99		97	
ICV 240-367649/7	12:20	92		99		100		101		95	
ICB 240-367649/8	12:22	95		102		103		102		99	
ICVL 240-367649/9	12:24	95		102		102		103		99	
ICSA 240-367649/10	12:27	86		94		95		94		86	
ICSAB 240-367649/11	12:29	78		92		95		94		89	
CCV 240-367649/182	19:09	70		94		97		91		91	
CCB 240-367649/183	19:11	70		96		98		90		94	
MB 240-367336/1-A	19:30	80		102		107		96		103	
LCS 240-367336/3-A	19:33	75		96		98		91		93	
CCV 240-367649/194	19:37	59		85		93		87		88	
CCB 240-367649/195	19:40	63		88		95		87		92	
240-107796-2	20:00	73		98		99		93		92	
240-107796-3	20:03	74		98		102		96		97	
CCV 240-367649/206	20:05	74		100		102		95		98	
CCB 240-367649/207	20:07	76		99		102		96		99	
240-107796-4	20:10	77		102		103		96		94	
240-107796-5	20:12	74		98		102		95		93	
240-107796-6	20:14	77		99		102		96		96	
CCV 240-367649/211	20:17	75		100		101		94		96	
CCB 240-367649/212	20:19	80		100		104		95		99	
CCVL 240-367649/213	20:21	80		100		102		95		98	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/11/2019 End Date: 02/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-367649/3 IC	12:10	99		100		98		99		99	
STD2 240-367649/4 IC	12:13	97		98		97		100		101	
STD3 240-367649/5 IC	12:15	97		98		95		99		101	
STD4 240-367649/6 IC	12:17	103		102		102		104		104	
ICV 240-367649/7	12:20	101		101		101		104		104	
ICB 240-367649/8	12:22	106		105		103		104		105	
ICVL 240-367649/9	12:24	104		106		105		105		106	
ICSA 240-367649/10	12:27	96		98		94		103		103	
ICSAB 240-367649/11	12:29	95		99		96		104		104	
CCV 240-367649/182	19:09	96		101		95		99		100	
CCB 240-367649/183	19:11	101		104		98		100		101	
MB 240-367336/1-A	19:30	103		107		103		100		102	
LCS 240-367336/3-A	19:33	95		102		94		96		97	
CCV 240-367649/194	19:37	93		99		91		96		96	
CCB 240-367649/195	19:40	98		102		96		96		99	
240-107796-2	20:00	95		102		98		100		100	
240-107796-3	20:03	102		106		103		103		104	
CCV 240-367649/206	20:05	99		105		100		102		104	
CCB 240-367649/207	20:07	104		108		103		104		104	
240-107796-4	20:10	102		107		103		103		104	
240-107796-5	20:12	99		104		101		102		105	
240-107796-6	20:14	102		106		104		103		104	
CCV 240-367649/211	20:17	98		103		100		101		102	
CCB 240-367649/212	20:19	104		107		104		102		104	
CCVL 240-367649/213	20:21	104		108		103		101		102	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/11/2019 End Date: 02/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-367649/3 IC	12:10	100									
STD2 240-367649/4 IC	12:13	99									
STD3 240-367649/5 IC	12:15	96									
STD4 240-367649/6 IC	12:17	101									
ICV 240-367649/7	12:20	100									
ICB 240-367649/8	12:22	104									
ICVL 240-367649/9	12:24	104									
ICSA 240-367649/10	12:27	99									
ICSAB 240-367649/11	12:29	100									
CCV 240-367649/182	19:09	95									
CCB 240-367649/183	19:11	98									
MB 240-367336/1-A	19:30	101									
LCS 240-367336/3-A	19:33	93									
CCV 240-367649/194	19:37	93									
CCB 240-367649/195	19:40	96									
240-107796-2	20:00	95									
240-107796-3	20:03	100									
CCV 240-367649/206	20:05	99									
CCB 240-367649/207	20:07	102									
240-107796-4	20:10	102									
240-107796-5	20:12	98									
240-107796-6	20:14	102									
CCV 240-367649/211	20:17	98									
CCB 240-367649/212	20:19	102									
CCVL 240-367649/213	20:21	101									

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-367649/7 02/11/2019 12:20				CCV 240-367649/182 02/11/2019 19:09				CCV 240-367649/194 02/11/2019 19:37			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	196		200	98	246		250	98	237		250	95
Antimony	40.9		40.0	102	51.8		50.0	104	52.9		50.0	106
Arsenic	40.5		40.0	101	49.9		50.0	100	49.3		50.0	99
Barium	39.4		40.0	99	50.5		50.0	101	51.2		50.0	102
Beryllium	40.4		40.0	101	52.6		50.0	105	54.3		50.0	109
Cadmium	40.0		40.0	100	50.5		50.0	101	51.0		50.0	102
Calcium	19700		20000	98	25000		25000	100	25000		25000	100
Chromium	40.3		40.0	101	51.3		50.0	103	51.2		50.0	102
Cobalt	40.2		40.0	100	48.4		50.0	97	48.9		50.0	98
Copper	40.6		40.0	101	50.1		50.0	100	50.0		50.0	100
Iron	9950		10000	100	12200		12500	98	12200		12500	98
Lead	40.8		40.0	102	49.2		50.0	98	49.6		50.0	99
Magnesium	19500		20000	97	24300		25000	97	23700		25000	95
Manganese	199		200	99	253		250	101	257		250	103
Potassium	19800		20000	99	25300		25000	101	25300		25000	101
Selenium	40.6		40.0	101	51.0		50.0	102	51.9		50.0	104
Silver	41.6		40.0	104	49.6		50.0	99	49.8		50.0	100
Sodium	20000		20000	100	24300		25000	97	23800		25000	95
Thallium	40.2		40.0	101	49.3		50.0	99	49.7		50.0	99
Vanadium	39.5		40.0	99	51.3		50.0	103	50.8		50.0	102
Zinc	39.8		40.0	100	49.3		50.0	99	49.7		50.0	99
Nickel	40.6		40.0	101	47.4		50.0	95	48.1		50.0	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	CCV 240-367649/206 02/11/2019 20:05											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	243		250	97								
Antimony	51.7		50.0	103								
Arsenic	50.0		50.0	100								
Barium	50.2		50.0	100								
Beryllium	53.9		50.0	108								
Cadmium	49.5		50.0	99								
Calcium	25500		25000	102								
Chromium	51.7		50.0	103								
Cobalt	49.8		50.0	100								
Copper	51.1		50.0	102								
Iron	12600		12500	101								
Lead	49.6		50.0	99								
Magnesium	25100		25000	100								
Manganese	258		250	103								
Potassium	26200		25000	105								
Selenium	50.6		50.0	101								
Silver	50.1		50.0	100								
Sodium	25100		25000	100								
Thallium	49.7		50.0	99								
Vanadium	51.5		50.0	103								
Zinc	49.7		50.0	99								
Nickel	48.4		50.0	97								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00230

Analyte	ICV 240-367649/7 02/11/2019 12:20				CCV 240-367649/211 02/11/2019 20:17							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	196		200	98	244		250	98				
Antimony	40.9		40.0	102	51.6		50.0	103				
Arsenic	40.5		40.0	101	50.6		50.0	101				
Barium	39.4		40.0	99	50.1		50.0	100				
Beryllium	40.4		40.0	101	53.7		50.0	107				
Cadmium	40.0		40.0	100	49.4		50.0	99				
Calcium	19700		20000	98	25400		25000	102				
Chromium	40.3		40.0	101	51.7		50.0	103				
Cobalt	40.2		40.0	100	50.2		50.0	100				
Copper	40.6		40.0	101	51.2		50.0	102				
Iron	9950		10000	100	12600		12500	101				
Lead	40.8		40.0	102	49.5		50.0	99				
Magnesium	19500		20000	97	24900		25000	100				
Manganese	199		200	99	258		250	103				
Potassium	19800		20000	99	26200		25000	105				
Selenium	40.6		40.0	101	51.7		50.0	103				
Silver	41.6		40.0	104	49.7		50.0	99				
Sodium	20000		20000	100	25100		25000	100				
Thallium	40.2		40.0	101	49.6		50.0	99				
Vanadium	39.5		40.0	99	51.8		50.0	104				
Zinc	39.8		40.0	100	50.8		50.0	102				
Nickel	40.6		40.0	101	48.9		50.0	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTMSCRI6020AW_00079 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00079

Analyte	ICVL 240-367649/9 02/11/2019 12:24				CCVL 240-367649/213 02/11/2019 20:21							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	47.1	J	50.0	94	45.6	J	50.0	91				
Antimony	2.08		2.00	104	2.12		2.00	106				
Arsenic	5.02		5.00	100	4.61	J	5.00	92				
Barium	5.37		5.00	107	5.24		5.00	105				
Beryllium	0.994	J	1.00	99	1.12		1.00	112				
Cadmium	1.02		1.00	102	1.01		1.00	101				
Calcium	1020		1000	102	1040		1000	104				
Chromium	1.99	J	2.00	99	2.02		2.00	101				
Cobalt	1.04		1.00	104	1.01		1.00	101				
Copper	2.07		2.00	104	2.04		2.00	102				
Iron	107		100	107	102		100	102				
Lead	1.09		1.00	109	1.12		1.00	112				
Magnesium	1030		1000	103	1000		1000	100				
Manganese	5.15		5.00	103	5.47		5.00	109				
Potassium	1080		1000	108	1100		1000	110				
Selenium	5.13		5.00	103	5.26		5.00	105				
Silver	1.07		1.00	107	1.03		1.00	103				
Sodium	1040		1000	104	1020		1000	102				
Thallium	1.07		1.00	107	1.08		1.00	108				
Vanadium	4.96	J	5.00	99	5.10		5.00	102				
Zinc	19.9	J	20.0	99	19.3	J	20.0	96				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367649/8 02/11/2019 12:22		CCB 240-367649/183 02/11/2019 19:11		CCB 240-367649/195 02/11/2019 19:40		CCB 240-367649/207 02/11/2019 20:07	
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-367649/212 02/11/2019 20:19							
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U						
Antimony	2.0	0.57	U						
Arsenic	5.0	0.75	U						
Barium	5.0	2.2	U						
Beryllium	1.0	0.31	U						
Cadmium	1.0	0.21	U						
Calcium	1000	580	U						
Chromium	2.0	0.98	U						
Cobalt	1.0	0.19	U						
Copper	2.0	1.7	U						
Iron	100	47	U						
Lead	1.0	0.45	U						
Magnesium	1000	200	U						
Manganese	5.0	2.1	U						
Potassium	1000	220	U						
Selenium	5.0	0.89	U						
Silver	1.0	0.053	U						
Sodium	1000	330	U						
Thallium	1.0	0.20	U						
Vanadium	5.0	0.82	U						
Zinc	20	15	U						
Nickel	2.0	1.5	U						

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICSA 240-367649/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**49811**	**100**
Antimony		**0.0260**	
Arsenic		**0.0010**	
Barium		**0.0340**	
Beryllium		**-0.0370**	
Cadmium		**0.234**	
Calcium	**50000**	**50957**	**102**
Chromium		**0.131**	
Cobalt		**0.0030**	
Copper		**0.0880**	
Iron	**50000**	**50248**	**100**
Lead		**0.0330**	
Magnesium	**50000**	**50531**	**101**
Manganese		**0.180**	
Potassium	**50000**	**50715**	**101**
Selenium		**0.0760**	
Silver		**0.0120**	
Sodium	**50000**	**50487**	**101**
Thallium		**0.0060**	
Vanadium		**-0.151**	
Zinc		**0.114**	
Boron		*1.06*	
Lithium		*0.137*	
Molybdenum	*1000*	*1101*	*110*
Nickel		*-0.287*	
Strontium		*0.422*	
Tin		*-0.644*	
Titanium	*1000*	*1050*	*105*
Tungsten		*0.135*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICSAB 240-367649/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Aluminum	**50000**	**47683**	**95**
Antimony	**100**	**105**	**105**
Arsenic	**100**	**102**	**102**
Barium	**100**	**101**	**101**
Beryllium	**100**	**105**	**105**
Cadmium	**100**	**100**	**100**
Calcium	**50000**	**49151**	**98**
Chromium	**100**	**100**	**100**
Cobalt	**100**	**99.5**	**99**
Copper	**100**	**101**	**101**
Iron	**50000**	**49243**	**98**
Lead	**100**	**101**	**101**
Magnesium	**50000**	**48663**	**97**
Manganese	**100**	**101**	**101**
Potassium	**50000**	**49590**	**99**
Selenium	**100**	**105**	**105**
Silver	**100**	**105**	**105**
Sodium	**50000**	**48695**	**97**
Thallium	**100**	**98.6**	**99**
Vanadium	**100**	**100.0**	**100**
Zinc	**100**	**101**	**101**
Boron	*100*	*94.7*	*95*
Lithium	*100*	*104*	*104*
Molybdenum	*1100*	*1196*	*109*
Nickel	*100*	*99.4*	*99*
Strontium	*100*	*100*	*100*
Tin	*100*	*105*	*105*
Titanium	*1100*	*1125*	*102*
Tungsten	*100*	*102*	*102*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/12/2019 15:08 End Date: 02/12/2019 20:56

Lab Sample Id	D/F	Type	Time	Analytes
				Ni
RINSE 240-367822/1			15:08	
ICIS 240-367822/2			15:11	X
STD1 240-367822/3 IC	1		15:13	X
STD2 240-367822/4 IC	1		15:15	X
STD3 240-367822/5 IC	1		15:18	X
STD4 240-367822/6 IC	1		15:20	X
ICV 240-367822/7	1		15:22	X
ICB 240-367822/8	1		15:25	X
ICVL 240-367822/9	1		15:27	X
ICSA 240-367822/10	1		15:29	X
ICSAB 240-367822/11	1		15:32	X
CCV 240-367822/12			15:34	
CCB 240-367822/13			15:36	
ZZZZZZ			15:40	
ZZZZZZ			15:43	
ZZZZZZ			15:45	
ZZZZZZ			15:47	
ZZZZZZ			15:49	
ZZZZZZ			15:51	
ZZZZZZ			15:54	
ZZZZZZ			15:56	
ZZZZZZ			15:58	
ZZZZZZ			16:01	
CCV 240-367822/24			16:03	
CCB 240-367822/25			16:05	
ZZZZZZ			16:08	
ZZZZZZ			16:10	
ZZZZZZ			16:12	
ZZZZZZ			16:15	
ZZZZZZ			16:17	
ZZZZZZ			16:19	
ZZZZZZ			16:22	
ZZZZZZ			16:24	
ZZZZZZ			16:26	
ZZZZZZ			16:29	
CCV 240-367822/36			16:31	
CCB 240-367822/37			16:33	
ZZZZZZ			16:36	
ZZZZZZ			16:38	
ZZZZZZ			16:40	
ZZZZZZ			16:43	
ZZZZZZ			16:45	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/12/2019 15:08 End Date: 02/12/2019 20:56

Lab Sample Id	D/F	Type	Time	Analytes
				Ni
ZZZZZZ			16:48	
ZZZZZZ			16:50	
ZZZZZZ			16:52	
ZZZZZZ			16:55	
ZZZZZZ			16:57	
CCV 240-367822/48			16:59	
CCB 240-367822/49			17:01	
ZZZZZZ			17:04	
ZZZZZZ			17:06	
ZZZZZZ			17:08	
ZZZZZZ			17:11	
ZZZZZZ			17:13	
ZZZZZZ			17:15	
CCV 240-367822/56			17:18	
CCB 240-367822/57			17:20	
ZZZZZZ			17:22	
ZZZZZZ			17:25	
ZZZZZZ			17:27	
ZZZZZZ			17:29	
ZZZZZZ			17:31	
ZZZZZZ			17:34	
ZZZZZZ			17:36	
ZZZZZZ			17:38	
ZZZZZZ			17:41	
ZZZZZZ			17:43	
CCV 240-367822/68			17:45	
CCB 240-367822/69			17:48	
ZZZZZZ			17:50	
ZZZZZZ			17:52	
ZZZZZZ			17:55	
ZZZZZZ			17:57	
ZZZZZZ			17:59	
ZZZZZZ			18:02	
ZZZZZZ			18:04	
ZZZZZZ			18:06	
ZZZZZZ			18:08	
ZZZZZZ			18:11	
CCV 240-367822/80			18:13	
CCB 240-367822/81			18:15	
ZZZZZZ			18:18	
ZZZZZZ			18:20	
ZZZZZZ			18:22	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/12/2019 15:08 End Date: 02/12/2019 20:56

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ni																								
ZZZZZZ			18:24																									
ZZZZZZ			18:26																									
ZZZZZZ			18:28																									
ZZZZZZ			18:31																									
ZZZZZZ			18:33																									
ZZZZZZ			18:35																									
ZZZZZZ			18:37																									
CCV 240-367822/92			18:40																									
CCB 240-367822/93			18:42																									
ZZZZZZ			18:45																									
ZZZZZZ			18:47																									
CCV 240-367822/96	1		18:49	X																								
CCB 240-367822/97	1		18:51	X																								
CCVL 240-367822/98			18:54																									
ZZZZZZ			18:56																									
ZZZZZZ			18:58																									
ZZZZZZ			19:01																									
ZZZZZZ			19:03																									
ZZZZZZ			19:05																									
ZZZZZZ			19:08																									
MB 240-367336/1-A	1	R	19:10	X																								
LCS 240-367336/3-A	1	R	19:13	X																								
240-107796-2	1	R	19:15	X																								
CCV 240-367822/108	1		19:17	X																								
CCB 240-367822/109	1		19:19	X																								
240-107796-3	1	R	19:22	X																								
240-107796-4	1	R	19:24	X																								
240-107796-5	1	R	19:26	X																								
240-107796-6	1	R	19:29	X																								
CCV 240-367822/114	1		19:31	X																								
CCB 240-367822/115	1		19:33	X																								
CCVL 240-367822/116	1		19:36	X																								
ZZZZZZ			19:38																									
ZZZZZZ			19:40																									
ZZZZZZ			19:42																									
ZZZZZZ			19:45																									
ZZZZZZ			19:47																									
ZZZZZZ			19:49																									
ZZZZZZ			19:51																									
ZZZZZZ			19:54																									
ZZZZZZ			19:56																									
CCV 240-367822/126			19:58																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/12/2019 15:08 End Date: 02/12/2019 20:56

Lab Sample Id	D/F	Type	Time	Analytes
				Ni
CCB 240-367822/127			20:00	
ZZZZZZ			20:03	
ZZZZZZ			20:05	
ZZZZZZ			20:07	
ZZZZZZ			20:10	
ZZZZZZ			20:12	
ZZZZZZ			20:14	
ZZZZZZ			20:17	
ZZZZZZ			20:19	
ZZZZZZ			20:21	
ZZZZZZ			20:24	
CCV 240-367822/138			20:26	
CCB 240-367822/139			20:28	
ZZZZZZ			20:31	
ZZZZZZ			20:33	
ZZZZZZ			20:35	
ZZZZZZ			20:38	
ZZZZZZ			20:40	
ZZZZZZ			20:42	
ZZZZZZ			20:45	
CCV 240-367822/147			20:47	
CCB 240-367822/148			20:49	
CCVL 240-367822/149			20:52	
CCV 240-367822/150			20:54	
CCB 240-367822/151			20:56	

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/12/2019 End Date: 02/12/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-367822/3 IC	15:13	99		100		100		98		97	
STD2 240-367822/4 IC	15:15	97		98		98		97		95	
STD3 240-367822/5 IC	15:18	94		97		98		96		92	
STD4 240-367822/6 IC	15:20	100		99		100		99		101	
ICV 240-367822/7	15:22	97		100		101		99		97	
ICB 240-367822/8	15:25	97		101		104		100		101	
ICVL 240-367822/9	15:27	98		100		103		99		101	
ICSA 240-367822/10	15:29	94		98		99		95		91	
ICSAB 240-367822/11	15:32	90		98		99		95		92	
CCV 240-367822/96	18:49	85		99		106		98		98	
CCB 240-367822/97	18:51	88		102		109		101		104	
MB 240-367336/1-A	19:10	88		102		107		100		101	
LCS 240-367336/3-A	19:13	82		97		105		96		96	
240-107796-2	19:15	81		98		104		96		95	
CCV 240-367822/108	19:17	81		98		103		95		96	
CCB 240-367822/109	19:19	86		100		105		97		103	
240-107796-3	19:22	83		100		105		97		98	
240-107796-4	19:24	85		101		106		96		97	
240-107796-5	19:26	82		99		102		95		93	
240-107796-6	19:29	87		98		105		95		97	
CCV 240-367822/114	19:31	83		96		101		94		95	
CCB 240-367822/115	19:33	87		99		105		96		102	
CCVL 240-367822/116	19:36	84		97		103		96		100	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/12/2019 End Date: 02/12/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-367822/3 IC	15:13	99		98		100		99		101	
STD2 240-367822/4 IC	15:15	95		95		96		99		97	
STD3 240-367822/5 IC	15:18	92		93		93		97		97	
STD4 240-367822/6 IC	15:20	100		100		99		99		99	
ICV 240-367822/7	15:22	98		99		98		100		100	
ICB 240-367822/8	15:25	101		101		100		100		100	
ICVL 240-367822/9	15:27	100		102		101		102		101	
ICSA 240-367822/10	15:29	93		95		92		97		97	
ICSAB 240-367822/11	15:32	94		96		94		98		98	
CCV 240-367822/96	18:49	101		105		101		103		103	
CCB 240-367822/97	18:51	105		111		103		104		105	
MB 240-367336/1-A	19:10	107		110		105		107		108	
LCS 240-367336/3-A	19:13	99		108		97		102		102	
240-107796-2	19:15	96		104		98		101		102	
CCV 240-367822/108	19:17	98		103		98		100		100	
CCB 240-367822/109	19:19	103		106		101		103		103	
240-107796-3	19:22	99		106		101		102		103	
240-107796-4	19:24	101		106		101		102		103	
240-107796-5	19:26	95		100		96		100		101	
240-107796-6	19:29	98		105		100		101		102	
CCV 240-367822/114	19:31	97		102		97		100		101	
CCB 240-367822/115	19:33	102		108		101		102		102	
CCVL 240-367822/116	19:36	101		105		101		102		102	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/12/2019 End Date: 02/12/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-367822/3 IC	15:13	101									
STD2 240-367822/4 IC	15:15	96									
STD3 240-367822/5 IC	15:18	95									
STD4 240-367822/6 IC	15:20	101									
ICV 240-367822/7	15:22	99									
ICB 240-367822/8	15:25	101									
ICVL 240-367822/9	15:27	101									
ICSA 240-367822/10	15:29	95									
ICSAB 240-367822/11	15:32	95									
CCV 240-367822/96	18:49	101									
CCB 240-367822/97	18:51	105									
MB 240-367336/1-A	19:10	108									
LCS 240-367336/3-A	19:13	100									
240-107796-2	19:15	98									
CCV 240-367822/108	19:17	97									
CCB 240-367822/109	19:19	101									
240-107796-3	19:22	100									
240-107796-4	19:24	101									
240-107796-5	19:26	96									
240-107796-6	19:29	101									
CCV 240-367822/114	19:31	98									
CCB 240-367822/115	19:33	101									
CCVL 240-367822/116	19:36	102									

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-367822/7 02/12/2019 15:22				CCV 240-367822/96 02/12/2019 18:49				CCV 240-367822/108 02/12/2019 19:17			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Nickel	38.2		40.0	95	49.4		50.0	99	49.1		50.0	98
Aluminum	188		200	94	237		250	95	240		250	96
Antimony	39.1		40.0	98	51.8		50.0	104	52.6		50.0	105
Arsenic	38.1		40.0	95	49.1		50.0	98	48.6		50.0	97
Barium	37.5		40.0	94	49.3		50.0	99	49.4		50.0	99
Beryllium	38.3		40.0	96	52.0		50.0	104	53.1		50.0	106
Cadmium	37.7		40.0	94	49.6		50.0	99	50.0		50.0	100
Calcium	19400		20000	97	25500		25000	102	25600		25000	102
Chromium	38.4		40.0	96	50.9		50.0	102	51.5		50.0	103
Cobalt	38.5		40.0	96	51.8		50.0	104	51.9		50.0	104
Copper	37.6		40.0	94	49.0		50.0	98	49.7		50.0	99
Iron	9290		10000	93	12100		12500	97	12000		12500	96
Lead	38.8		40.0	97	50.1		50.0	100	49.7		50.0	99
Magnesium	18700		20000	94	24300		25000	97	24300		25000	97
Manganese	188		200	94	246		250	99	248		250	99
Potassium	18700		20000	93	24300		25000	97	24500		25000	98
Selenium	37.2		40.0	93	49.5		50.0	99	49.1		50.0	98
Silver	39.1		40.0	98	49.4		50.0	99	49.4		50.0	99
Sodium	18900		20000	94	24600		25000	98	24500		25000	98
Thallium	37.7		40.0	94	49.4		50.0	99	49.7		50.0	99
Vanadium	37.7		40.0	94	51.1		50.0	102	51.1		50.0	102
Zinc	37.6		40.0	94	49.1		50.0	98	48.6		50.0	97

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00230

Analyte	ICV 240-367822/7 02/12/2019 15:22				CCV 240-367822/114 02/12/2019 19:31							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Nickel	38.2		40.0	95	48.9		50.0	98				
Aluminum	188		200	94	240		250	96				
Antimony	39.1		40.0	98	53.0		50.0	106				
Arsenic	38.1		40.0	95	49.1		50.0	98				
Barium	37.5		40.0	94	49.7		50.0	99				
Beryllium	38.3		40.0	96	51.8		50.0	104				
Cadmium	37.7		40.0	94	50.1		50.0	100				
Calcium	19400		20000	97	25600		25000	102				
Chromium	38.4		40.0	96	50.9		50.0	102				
Cobalt	38.5		40.0	96	51.9		50.0	104				
Copper	37.6		40.0	94	49.0		50.0	98				
Iron	9290		10000	93	12100		12500	97				
Lead	38.8		40.0	97	49.4		50.0	99				
Magnesium	18700		20000	94	24200		25000	97				
Manganese	188		200	94	249		250	99				
Potassium	18700		20000	93	24300		25000	97				
Selenium	37.2		40.0	93	49.6		50.0	99				
Silver	39.1		40.0	98	49.4		50.0	99				
Sodium	18900		20000	94	24100		25000	96				
Thallium	37.7		40.0	94	49.3		50.0	99				
Vanadium	37.7		40.0	94	50.8		50.0	102				
Zinc	37.6		40.0	94	48.6		50.0	97				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTMSCRI6020AW_00079 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00079

Analyte	ICVL 240-367822/9 02/12/2019 15:27				CCVL 240-367822/116 02/12/2019 19:36							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Nickel	2.03		2.00	102	2.01		2.00	100				
Aluminum	50.1		50.0	100	50.4		50.0	101				
Antimony	2.07		2.00	104	2.11		2.00	106				
Arsenic	4.70	J	5.00	94	5.00		5.00	100				
Barium	5.26		5.00	105	5.22		5.00	104				
Beryllium	0.989	J	1.00	99	1.07		1.00	107				
Cadmium	1.00		1.00	100	0.981	J	1.00	98				
Calcium	1060		1000	106	1030		1000	103				
Chromium	1.96	J	2.00	98	2.04		2.00	102				
Cobalt	1.07		1.00	107	1.12		1.00	112				
Copper	2.12		2.00	106	2.10		2.00	105				
Iron	106		100	106	103		100	103				
Lead	1.07		1.00	107	1.14		1.00	114				
Magnesium	1040		1000	104	1030		1000	103				
Manganese	4.76	J	5.00	95	4.92	J	5.00	98				
Potassium	1080		1000	108	1070		1000	107				
Selenium	5.04		5.00	101	5.11		5.00	102				
Silver	1.07		1.00	107	1.05		1.00	105				
Sodium	1050		1000	105	1040		1000	104				
Thallium	1.05		1.00	105	1.08		1.00	108				
Vanadium	5.02		5.00	100	5.03		5.00	101				
Zinc	20.1		20.0	101	20.0		20.0	100				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367822/8 02/12/2019 15:25		CCB 240-367822/97 02/12/2019 18:51		CCB 240-367822/109 02/12/2019 19:19		CCB 240-367822/115 02/12/2019 19:33	
		Found	C	Found	C	Found	C	Found	C
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICSA 240-367822/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Nickel		**0.155**	
Aluminum	*50000*	*47551*	*95*
Antimony		*0.0300*	
Arsenic		*0.0200*	
Barium		*0.0370*	
Beryllium		*0.0000*	
Boron		*1.72*	
Cadmium		*0.219*	
Calcium	*50000*	*48423*	*97*
Chromium		*0.0910*	
Cobalt		*0.0030*	
Copper		*0.151*	
Iron	*50000*	*48553*	*97*
Lead		*0.0370*	
Lithium		*0.246*	
Magnesium	*50000*	*48553*	*97*
Manganese		*-0.0690*	
Molybdenum	*1000*	*1074*	*107*
Potassium	*50000*	*48657*	*97*
Selenium		*0.0330*	
Silver		*0.0120*	
Sodium	*50000*	*49212*	*98*
Strontium		*0.444*	
Thallium		*0.0000*	
Tin		*-0.0150*	
Titanium	*1000*	*1009*	*101*
Tungsten		*0.121*	
Vanadium		*0.0230*	
Zinc		*0.113*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICSAB 240-367822/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Nickel	**100**	**94.6**	**95**
Aluminum	*50000*	*45036*	*90*
Antimony	*100*	*101*	*101*
Arsenic	*100*	*95.6*	*96*
Barium	*100*	*94.5*	*95*
Beryllium	*100*	*98.1*	*98*
Boron	*100*	*96.0*	*96*
Cadmium	*100*	*93.8*	*94*
Calcium	*50000*	*46769*	*94*
Chromium	*100*	*93.6*	*94*
Cobalt	*100*	*96.3*	*96*
Copper	*100*	*93.7*	*94*
Iron	*50000*	*46744*	*93*
Lead	*100*	*96.7*	*97*
Lithium	*100*	*103*	*103*
Magnesium	*50000*	*46140*	*92*
Manganese	*100*	*93.5*	*93*
Molybdenum	*1100*	*1112*	*101*
Potassium	*50000*	*46287*	*93*
Selenium	*100*	*94.4*	*94*
Silver	*100*	*97.5*	*97*
Sodium	*50000*	*46057*	*92*
Strontium	*100*	*93.9*	*94*
Thallium	*100*	*95.5*	*95*
Tin	*100*	*101*	*101*
Titanium	*1100*	*1058*	*96*
Tungsten	*100*	*98.3*	*98*
Vanadium	*100*	*94.6*	*95*
Zinc	*100*	*95.2*	*95*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367336/1-A	02/08/2019 14:00	367336		50	50
LCS 240-367336/2-A	02/08/2019 14:00	367336		50	50
240-107796-2	02/08/2019 14:00	367336		50	50
240-107796-3	02/08/2019 14:00	367336		50	50
240-107796-4	02/08/2019 14:00	367336		50	50
240-107796-5	02/08/2019 14:00	367336		50	50
240-107796-6	02/08/2019 14:00	367336		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367336/1-A

Instrument Code: I9 Batch No.: 367531

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	28.7	J		6010C
7439-96-5	Manganese	2.1	U		6010C

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367336/2-A

Lab Name: TestAmerica Canton Job No.: 240-107796-1

Sample Matrix: Water LCS Source: MTICP1_00082

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	1030		103	80	120		6010C
Manganese	500	504		101	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367336/1-A	02/08/2019 14:00	367336		50	50
LCS 240-367336/3-A	02/08/2019 14:00	367336		50	50
240-107796-2	02/08/2019 14:00	367336		50	50
240-107796-3	02/08/2019 14:00	367336		50	50
240-107796-4	02/08/2019 14:00	367336		50	50
240-107796-5	02/08/2019 14:00	367336		50	50
240-107796-6	02/08/2019 14:00	367336		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367336/1-A

Instrument Code: I14 Batch No.: 367649

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	1.7	U		6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	2.1	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367336/3-A

Lab Name: TestAmerica Canton Job No.: 240-107796-1

Sample Matrix: Water LCS Source: MTICPMSB_00039

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	99.9		100	80	120		6020A
Aluminum	10000	9750		98	80	120		6020A
Arsenic	1000	961		96	80	120		6020A
Barium	1000	975		98	80	120		6020A
Beryllium	1000	1030		103	80	120		6020A
Cadmium	1000	956		96	80	120		6020A
Cobalt	1000	979		98	80	120		6020A
Chromium	1000	1010		101	80	120		6020A
Copper	1000	979		98	80	120		6020A
Iron	10000	9490		95	80	120		6020A
Manganese	1000	1010		101	80	120		6020A
Lead	1000	990		99	80	120		6020A
Antimony	100	98.9		99	80	120		6020A
Selenium	1000	956		96	80	120		6020A
Thallium	250	242		97	80	120		6020A
Vanadium	1000	1010		101	80	120		6020A
Zinc	1000	972		97	80	120		6020A
Calcium	10000	9060		91	80	120		6020A
Potassium	10000	10100		101	80	120		6020A
Magnesium	10000	9650		96	80	120		6020A
Sodium	10000	9680		97	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367336/1-A

Instrument Code: I14 Batch No.: 367822

CAS No.	Analyte	Concentration	C	Q	Method
7440-02-0	Nickel	1.5	U		6020A

FORM III-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367336/3-A

Lab Name: TestAmerica Canton Job No.: 240-107796-1

Sample Matrix: Water LCS Source: MTICPMSA_00038

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Nickel	1000	936		94	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367336 Batch Start Date: 02/08/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/08/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00082	MTICP2A 00090	MTTMHCL 00235
MB 240-367336/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-367336/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107796-G-2	MRC-MW138B-020619	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107796-G-3	MRC-MW141B-020619	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107796-G-4	MRC-MW142B-020619	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107796-G-5	MRC-MW158A-020619	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107796-G-6	MRC-DUP01-020619	3005A, 6010C	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180
MB 240-367336/1		3005A, 6010C		1 mL
LCS 240-367336/2		3005A, 6010C		1 mL
240-107796-G-2	MRC-MW138B-020619	3005A, 6010C	R	1 mL
240-107796-G-3	MRC-MW141B-020619	3005A, 6010C	R	1 mL
240-107796-G-4	MRC-MW142B-020619	3005A, 6010C	R	1 mL
240-107796-G-5	MRC-MW158A-020619	3005A, 6010C	R	1 mL
240-107796-G-6	MRC-DUP01-020619	3005A, 6010C	R	1 mL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367336 Batch Start Date: 02/08/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/08/19 22:00

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb2
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367336 Batch Start Date: 02/08/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/08/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00038	MTICPMSB 00039	MTTMHCL 00235
MB 240-367336/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-367336/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107796-G-2	MRC-MW138B-020619	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107796-G-3	MRC-MW141B-020619	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107796-G-4	MRC-MW142B-020619	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107796-G-5	MRC-MW158A-020619	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107796-G-6	MRC-DUP01-020619	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-367336/1		3005A, 6020A		1 mL					
LCS 240-367336/3		3005A, 6020A		1 mL					
240-107796-G-2	MRC-MW138B-020619	3005A, 6020A	R	1 mL					
240-107796-G-3	MRC-MW141B-020619	3005A, 6020A	R	1 mL					
240-107796-G-4	MRC-MW142B-020619	3005A, 6020A	R	1 mL					
240-107796-G-5	MRC-MW158A-020619	3005A, 6020A	R	1 mL					
240-107796-G-6	MRC-DUP01-020619	3005A, 6020A	R	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367336 Batch Start Date: 02/08/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/08/19 22:00

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb2
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW138B-020619	240-107796-2
MRC-MW141B-020619	240-107796-3
MRC-MW142B-020619	240-107796-4
MRC-MW158A-020619	240-107796-5
MRC-DUP01-020619	240-107796-6

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107796-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW138B-020619	240-107796-2
MRC-MW141B-020619	240-107796-3
MRC-MW142B-020619	240-107796-4
MRC-MW158A-020619	240-107796-5
MRC-DUP01-020619	240-107796-6

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107796-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW138B-020619	240-107796-2
MRC-MW141B-020619	240-107796-3
MRC-MW142B-020619	240-107796-4
MRC-MW158A-020619	240-107796-5
MRC-DUP01-020619	240-107796-6

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 02/13/2019 13:29 End Date: 02/13/2019 16:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				HardCC																								
MB 240-367926/1	1	T	13:29	X																								
LCS 240-367926/2	1	T	13:34	X																								
ZZZZZZ			13:39																									
ZZZZZZ			13:44																									
ZZZZZZ			13:49																									
ZZZZZZ			13:55																									
ZZZZZZ			14:00																									
ZZZZZZ			14:05																									
ZZZZZZ			14:10																									
ZZZZZZ			14:16																									
ZZZZZZ			14:21																									
ZZZZZZ			14:26																									
ZZZZZZ			14:31																									
ZZZZZZ			14:37																									
ZZZZZZ			14:42																									
ZZZZZZ			14:47																									
ZZZZZZ			14:52																									
240-107796-2	1	T	14:57	X																								
240-107796-3	1	T	15:03	X																								
240-107796-4	1	T	15:08	X																								
240-107796-4 DU	1	T	15:13	X																								
240-107796-5	1	T	15:18	X																								
240-107796-6	1	T	15:24	X																								
ZZZZZZ			15:29																									
ZZZZZZ			15:34																									
ZZZZZZ			15:39																									
ZZZZZZ			15:45																									
ZZZZZZ			15:50																									
ZZZZZZ			15:55																									
ZZZZZZ			16:00																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/11/2019 16:47 End Date: 02/11/2019 20:34

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			16:47																									
LCS 240-367751/2	1	T	16:52	X																								
MB 240-367751/3	1	T	16:56	X																								
ZZZZZZ			17:01																									
ZZZZZZ			17:05																									
ZZZZZZ			17:10																									
ZZZZZZ			17:15																									
ZZZZZZ			17:19																									
ZZZZZZ			17:24																									
ZZZZZZ			17:28																									
ZZZZZZ			17:34																									
ZZZZZZ			17:35																									
ZZZZZZ			17:39																									
ZZZZZZ			17:43																									
ZZZZZZ			17:47																									
ZZZZZZ			17:51																									
ZZZZZZ			17:55																									
ZZZZZZ			17:58																									
ZZZZZZ			18:02																									
ZZZZZZ			18:07																									
ZZZZZZ			18:10																									
ZZZZZZ			18:14																									
ZZZZZZ			18:15																									
ZZZZZZ			18:18																									
ZZZZZZ			18:22																									
ZZZZZZ			18:26																									
ZZZZZZ			18:29																									
ZZZZZZ			18:32																									
ZZZZZZ			18:35																									
ZZZZZZ			18:40																									
ZZZZZZ			18:46																									
ZZZZZZ			18:51																									
ZZZZZZ			18:57																									
ZZZZZZ			18:59																									
ZZZZZZ			19:05																									
ZZZZZZ			19:10																									
ZZZZZZ			19:17																									
ZZZZZZ			19:23																									
ZZZZZZ			19:27																									
ZZZZZZ			19:31																									
ZZZZZZ			19:36																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/11/2019 16:47 End Date: 02/11/2019 20:34

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			19:41																									
240-107796-2	1	T	19:45	X																								
240-107796-3	1	T	19:49	X																								
ZZZZZZ			19:51																									
LCS 240-367751/46	1	T	19:56	X																								
MB 240-367751/47	1	T	20:00	X																								
240-107796-4	1	T	20:04	X																								
240-107796-5	1	T	20:09	X																								
240-107796-6	1	T	20:13	X																								
ZZZZZZ			20:18																									
ZZZZZZ			20:22																									
ZZZZZZ			20:27																									
ZZZZZZ			20:32																									
ZZZZZZ			20:34																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 02/12/2019 10:15 End Date: 02/12/2019 10:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-367674/1	1	T	10:15	X																								
LCS 240-367674/2	1	T	10:15	X																								
ZZZZZZ			10:15																									
ZZZZZZ			10:15																									
ZZZZZZ			10:15																									
ZZZZZZ			10:15																									
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ZZZZZZ			10:15																									
ZZZZZZ			10:15																									
240-107796-2	1	T	10:15	X																								
240-107796-3	1	T	10:15	X																								
240-107796-4	1	T	10:15	X																								
240-107796-5	1	T	10:15	X																								
240-107796-6	1	T	10:15	X																								
ZZZZZZ			10:15																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 08/07/2018 12:13 End Date: 08/07/2018 15:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339523/1 IC	1		12:13	X																								
STD2 240-339523/2 IC	1		12:34	X																								
STD3 240-339523/3 IC	1		12:55	X																								
STD4 240-339523/4 IC	1		13:16	X																								
STD5 240-339523/5 ICRT	1		13:36	X																								
STD6 240-339523/6 IC	1		13:57	X																								
STD7 240-339523/7 IC	1		14:18	X																								
STD8 240-339523/8 IC	1		14:39	X																								
STD9 240-339523/9 IC	1		14:59	X																								
ICV 240-339523/10	1		15:20	X																								
ICB 240-339523/11	1		15:41	X																								

Prep Types:
=

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Analyst: LKG Batch Start Date: 08/07/2018

Reporting Units: mg/L Analytical Batch No.: 339523

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:20	Sulfate	52.9	50.0	106	90-110		WCICLCS_00669
11	ICB	15:41	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: THOR Analysis Method: 300.0

Start Date: 02/12/2019 13:08 End Date: 02/13/2019 01:54

Lab Sample Id	D/F	Type	Time	Analytes																								
				Br	SO4																							
CCV 240-367774/1	1		13:08	X																								
CCB 240-367774/2	1		13:29	X																								
MB 240-367774/3	1	T	13:49	X																								
LCS 240-367774/4	1	T	14:10	X																								
ZZZZZZ			14:31																									
ZZZZZZ			14:52																									
ZZZZZZ			15:13																									
ZZZZZZ			15:33																									
ZZZZZZ			15:54																									
ZZZZZZ			16:15																									
ZZZZZZ			16:35																									
ZZZZZZ			16:56																									
CCV 240-367774/13	1		17:17	X																								
CCB 240-367774/14	1		17:38	X																								
ZZZZZZ			17:58																									
ZZZZZZ			18:19																									
ZZZZZZ			18:40																									
ZZZZZZ			19:00																									
ZZZZZZ			19:21																									
ZZZZZZ			19:42																									
ZZZZZZ			20:03																									
ZZZZZZ			20:23																									
240-107796-5	1	T	20:44	X																								
240-107796-2	1	T	21:05	X	X																							
CCV 240-367774/25	1		21:25	X																								
CCB 240-367774/26	1		21:46	X																								
ZZZZZZ			22:07																									
ZZZZZZ			22:27																									
ZZZZZZ			22:48																									
ZZZZZZ			23:09																									
ZZZZZZ			23:30																									
ZZZZZZ			23:50																									
ZZZZZZ			00:11																									
ZZZZZZ			00:32																									
ZZZZZZ			00:52																									
ZZZZZZ			01:13																									
CCV 240-367774/37			01:34																									
CCB 240-367774/38			01:54																									

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Analyst: JWW Batch Start Date: 02/12/2019

Reporting Units: mg/L Analytical Batch No.: 367774

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	13:08	Bromide	10.4	10.0	104	90-110		WCICCCV_00861
2	CCB	13:29	Bromide	0.044				U	
13	CCV	17:17	Bromide	9.39	10.0	94	90-110		WCICCCV_00861
14	CCB	17:38	Bromide	0.044				U	
25	CCV	21:25	Bromide	10.5	10.0	105	90-110		WCICCCV_00861
26	CCB	21:46	Bromide	0.044				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 02/11/2019 17:49 End Date: 02/12/2019 12:47

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
CCV 240-367585/1			17:49																										
CCB 240-367585/2			18:10																										
ZZZZZZ			18:30																										
ZZZZZZ			18:51																										
ZZZZZZ			19:12																										
ZZZZZZ			19:33																										
ZZZZZZ			19:53																										
ZZZZZZ			20:14																										
ZZZZZZ			20:35																										
ZZZZZZ			20:55																										
ZZZZZZ			21:16																										
ZZZZZZ			21:37																										
CCV 240-367585/13			21:57																										
CCB 240-367585/14			22:18																										
ZZZZZZ			22:39																										
ZZZZZZ			22:59																										
ZZZZZZ			23:20																										
ZZZZZZ			23:41																										
ZZZZZZ			00:01																										
ZZZZZZ			00:22																										
ZZZZZZ			00:43																										
ZZZZZZ			01:04																										
ZZZZZZ			01:24																										
ZZZZZZ			01:45																										
CCV 240-367585/25			02:06																										
CCB 240-367585/26			02:26																										
ZZZZZZ			02:47																										
ZZZZZZ			03:08																										
ZZZZZZ			03:28																										
ZZZZZZ			03:49																										
ZZZZZZ			04:10																										
ZZZZZZ			04:30																										
ZZZZZZ			04:51																										
ZZZZZZ			05:12																										
ZZZZZZ			05:32																										
ZZZZZZ			05:53																										
CCV 240-367585/37	1		06:14		X																								
CCB 240-367585/38	1		06:35		X																								
MB 240-367585/39	1	T	06:55		X																								
LCS 240-367585/40	1	T	07:16		X																								
ZZZZZZ			07:37																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 02/11/2019 17:49 End Date: 02/12/2019 12:47

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
ZZZZZZ			07:57																										
ZZZZZZ			08:18																										
ZZZZZZ			08:39																										
ZZZZZZ			09:00																										
ZZZZZZ			09:20																										
240-107796-3	1	T	09:41	X	X																								
240-107796-3 MS	1	T	10:02	X	X																								
CCV 240-367585/49	1		10:22		X																								
CCB 240-367585/50	1		10:43		X																								
240-107796-3 MSD	1	T	11:04	X	X																								
240-107796-4	1	T	11:24	X	X																								
240-107796-5	5	T	11:45		X																								
240-107796-6	1	T	12:06	X	X																								
CCV 240-367585/55	1		12:26		X																								
CCB 240-367585/56	1		12:47		X																								

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Analyst: JWW Batch Start Date: 02/12/2019

Reporting Units: mg/L Analytical Batch No.: 367585

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
37	CCV	06:14	Sulfate	53.1	50.0	106	90-110		WCICCCV_00861
38	CCB	06:35	Sulfate	0.35				U	
49	CCV	10:22	Sulfate	52.9	50.0	106	90-110		WCICCCV_00861
50	CCB	10:43	Sulfate	0.35				U	
55	CCV	12:26	Sulfate	52.8	50.0	106	90-110		WCICCCV_00861
56	CCB	12:47	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/17/2019 12:50 End Date: 02/17/2019 13:27

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575925/1	1		12:50	X																								
ICB 490-575925/2	1		12:51	X																								
CCV 490-575925/3	1		12:52	X																								
CCV 490-575925/4	1		12:53	X																								
CCB 490-575925/5	1		12:54	X																								
MB 490-575925/6	1	T	12:55	X																								
LCS 490-575925/7	1	T	12:57	X																								
ZZZZZZ			12:58																									
ZZZZZZ			12:59																									
ZZZZZZ			13:00																									
240-107796-2	1	T	13:01	X																								
240-107796-3	1	T	13:02	X																								
240-107796-3 MS	1	T	13:04	X																								
240-107796-3 MSD	1	T	13:05	X																								
240-107796-4	1	T	13:06	X																								
240-107796-5	1	T	13:07	X																								
240-107796-6	1	T	13:08	X																								
ZZZZZZ			13:10																									
ZZZZZZ			13:11																									
CCV 490-575925/20	1		13:12	X																								
CCB 490-575925/21	1		13:13	X																								
ZZZZZZ			13:14																									
ZZZZZZ			13:15																									
ZZZZZZ			13:17																									
ZZZZZZ			13:18																									
ZZZZZZ			13:19																									
ZZZZZZ			13:20																									
ZZZZZZ			13:21																									
ZZZZZZ			13:23																									
ZZZZZZ			13:24																									
ZZZZZZ			13:25																									
CCV 490-575925/32			13:26																									
CCB 490-575925/33			13:27																									

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Analyst: MSP Batch Start Date: 02/17/2019

Reporting Units: mg/L Analytical Batch No.: 575925

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:50	Nitrate Nitrite as N	3.26	3.00	109	90-110		W_ICAl_00027
2	ICB	12:51	Nitrate Nitrite as N	0.040				U	
3	CCV	12:52	Nitrate Nitrite as N	4.88	5.00	98	90-110		W_Nitrate_00020
4	CCV	12:53	Nitrate Nitrite as N	4.93	5.00	99	90-110		IC Primary_00012
5	CCB	12:54	Nitrate Nitrite as N	0.040				U	
20	CCV	13:12	Nitrate Nitrite as N	4.76	5.00	95	90-110		W_Nitrate_00020
21	CCB	13:13	Nitrate Nitrite as N	0.0463				J	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107796-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/19/2019 06:40 End Date: 02/19/2019 06:40

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-270629/1	1	T	06:40	X																								
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
240-107796-2	1	T	06:40	X																								
240-107796-3	1	T	06:40	X																								
240-107796-4	1	T	06:40	X																								
240-107796-5	1	T	06:40	X																								
240-107796-6	1	T	06:40	X																								

Prep Types:
T = Total/NA

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 367751 Date: 02/11/2019 16:56							
2320B-2011	MB 240-367751/3	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 367751 Date: 02/11/2019 20:00							
2320B-2011	MB 240-367751/47	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 367926 Date: 02/13/2019 13:29							
2340C-2011	MB 240-367926/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 367674 Date: 02/12/2019 10:15							
2540 C-2011	MB 240-367674/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 367774 Date: 02/12/2019 13:49							
300.0	MB 240-367774/3	Sulfate	0.35	U	mg/L	1.0	1
300.0	MB 240-367774/3	Bromide	0.044	U	mg/L	0.50	1
Batch ID: 367585 Date: 02/12/2019 06:55							
9056A	MB 240-367585/39	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-367585/39	Sulfate	0.35	U	mg/L	1.0	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575925 Date: 02/17/2019 12:55							
SM 4500 NO3 F	MB 490-575925/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107796-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 270629 Date: 02/19/2019 06:40							
SM 2520B	MB 180-270629/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367751	Date: 02/11/2019 16:52										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-367751/2	Alkalinity	261		mg/L	271	96	86-123			
Batch ID: 367751	Date: 02/11/2019 19:56										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-367751/46	Alkalinity	263		mg/L	271	97	86-123			
Batch ID: 367926	Date: 02/13/2019 13:34										
						LCS Source: WCHARDNESS_00031					
2340C-2011	LCS 240-367926/2	Hardness as calcium carbonate	264		mg/L	246	107	90-110			
Batch ID: 367674	Date: 02/12/2019 10:15										
						LCS Source: WCPHENOVSOLID_00039					
2540 C-2011	LCS 240-367674/2	Total Dissolved Solids	202		mg/L	202	100	80-120			
Batch ID: 367774	Date: 02/12/2019 14:10										
						LCS Source: WCICLCS_00696					
300.0	LCS 240-367774/4	Bromide	9.95		mg/L	10.0	100	90-110			
Batch ID: 367585	Date: 02/12/2019 07:16										
						LCS Source: WCICLCS_00696					
9056A	LCS 240-367585/40	Sulfate	52.4		mg/L	50.0	105	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925	Date: 02/17/2019 12:57										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575925/7	Nitrate Nitrite as N	3.23		mg/L	3.00	108	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367585 Date: 02/12/2019 10:02											
300.0	240-107796-3	Bromide	0.37	J	mg/L						
300.0	240-107796-3 MS	Bromide	11.2		mg/L	10.0	109	80-120			
Batch ID: 367585 Date: 02/12/2019 10:02											
9056A	240-107796-3	Sulfate	17		mg/L						
9056A	240-107796-3 MS	Sulfate	70.4		mg/L	50.0	106	80-120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367585 Date: 02/12/2019 11:04											
300.0	240-107796-3 MSD	Bromide	11.4		mg/L	10.0	110	80-120	2	15	
Batch ID: 367585 Date: 02/12/2019 11:04											
9056A	240-107796-3 MSD	Sulfate	71.3		mg/L	50.0	108	80-120	1	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925 Date: 02/17/2019 13:04											
SM 4500 NO3 F	240-107796-3	Nitrate Nitrite as N	0.86		mg/L						
SM 4500 NO3 F	240-107796-3 MS	Nitrate Nitrite as N	3.96		mg/L	3.00	103	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925 Date: 02/17/2019 13:05											
SM 4500 NO3 F	240-107796-3 MSD	Nitrate Nitrite as N	4.15		mg/L	3.00	110	90-110	5	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 367926 Date: 02/13/2019 15:13								
2340C-2011	MRC-MW142B-020619	240-107796-4	Hardness as calcium carbonate	76	mg/L			
2340C-2011	MRC-MW142B-020619	240-107796-4 DU	Hardness as calcium carbonate	76.0	mg/L	0	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367926 Batch Start Date: 02/13/19 13:29 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 02/13/19 16:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCHARDNESS 00031		
MB 240-367926/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-367926/2		2340C-2011		25 mL	25 mL	6.60 mL	25 mL		
240-107796-I-2	MRC-MW138B-020619	2340C-2011	T	25 mL	25 mL	3.00 mL			
240-107796-G-3	MRC-MW141B-020619	2340C-2011	T	25 mL	25 mL	1.40 mL			
240-107796-I-4	MRC-MW142B-020619	2340C-2011	T	25 mL	25 mL	1.90 mL			
240-107796-I-4 DU	MRC-MW142B-020619	2340C-2011	T	25 mL	25 mL	1.90 mL			
240-107796-G-5	MRC-MW158A-020619	2340C-2011	T	5 mL	25 mL	3.60 mL			
240-107796-G-6	MRC-DUP01-020619	2340C-2011	T	25 mL	25 mL	1.90 mL			

Batch Notes	
Batch Comment	BEAKERS--4010980
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C9, E3
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367751 Batch Start Date: 02/11/19 16:47 Batch Analyst: Carson, Monica

Batch Method: 2320B-2011 Batch End Date: 02/12/19 14:03

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-367751/2		2320B-2011		InitialAmount is blank	10 mL				
MB 240-367751/3		2320B-2011		InitialAmount is blank					
240-107796-D-2	MRC-MW138B-020619	2320B-2011	T	InitialAmount is blank					
240-107796-D-3	MRC-MW141B-020619	2320B-2011	T	InitialAmount is blank					
LCS 240-367751/46		2320B-2011		InitialAmount is blank	10 mL				
MB 240-367751/47		2320B-2011		InitialAmount is blank					
240-107796-D-4	MRC-MW142B-020619	2320B-2011	T	InitialAmount is blank					
240-107796-D-5	MRC-MW158A-020619	2320B-2011	T	InitialAmount is blank					
240-107796-D-6	MRC-DUP01-020619	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4- 4005008
pH Buffer 2 ID	7- 4017506
pH Buffer 3 ID	10- 3892955
pH Buffer 4 ID	12- 3891579
Nominal Amount Used	10 mL
pH Meter ID	severus
Probe ID	WCP 137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367674 Batch Start Date: 02/12/19 10:15 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date: 02/14/19 14:36

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-367674/1		2540 C-2011			3.2783 g	100 mL	3.2781 g	3.2781 g	0 g
LCS 240-367674/2		2540 C-2011			3.2586 g	100 mL	3.2789 g	3.2788 g	0 g
240-107796-H-2	MRC-MW138B-020619	2540 C-2011	T	807 umhos/cm	3.7000 g	100 mL	3.7401 g	3.7400 g	0 g
240-107796-H-3	MRC-MW141B-020619	2540 C-2011	T	349 umhos/cm	3.7397 g	100 mL	3.7590 g	3.7585 g	0 g
240-107796-H-4	MRC-MW142B-020619	2540 C-2011	T	373 umhos/cm	3.6365 g	100 mL	3.6561 g	3.6557 g	0 g
240-107796-H-5	MRC-MW158A-020619	2540 C-2011	T	1407 umhos/cm	3.6692 g	100 mL	3.7675 g	3.7671 g	0 g
240-107796-H-6	MRC-DUP01-020619	2540 C-2011	T	354 umhos/cm	3.7363 g	100 mL	3.7564 g	3.7560 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 240-367674/1		2540 C-2011		Pass No Unit	N/A No Unit	N/A	-0.0002 g	-0.0002 g	N/A g
LCS 240-367674/2		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0203 g	0.0202 g	N/A g
240-107796-H-2	MRC-MW138B-020619	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0401 g	0.04 g	N/A g
240-107796-H-3	MRC-MW141B-020619	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0193 g	0.0188 g	N/A g
240-107796-H-4	MRC-MW142B-020619	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0196 g	0.0192 g	N/A g
240-107796-H-5	MRC-MW158A-020619	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0983 g	0.0979 g	N/A g
240-107796-H-6	MRC-DUP01-020619	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0201 g	0.0197 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00039		
MB 240-367674/1		2540 C-2011		N/A g	100 mL	OK			
LCS 240-367674/2		2540 C-2011		N/A g	100 mL	OK	100 mL		
240-107796-H-2	MRC-MW138B-020619	2540 C-2011	T	N/A g	100 mL	OK			
240-107796-H-3	MRC-MW141B-020619	2540 C-2011	T	N/A g	100 mL	OK			
240-107796-H-4	MRC-MW142B-020619	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367674 Batch Start Date: 02/12/19 10:15 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date: 02/14/19 14:36

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00039		
240-107796-H-5	MRC-MW158A-020619	2540 C-2011	T	N/A g	100 mL	OK			
240-107796-H-6	MRC-DUP01-020619	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367674 Batch Start Date: 02/12/19 10:15 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date: 02/14/19 14:36

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/13/2019 14:57
Date/Time - Out - CW (WT2)	02/13/2019 16:38
Temperature - Start - CW (WT2) - Correct	180 Celsius
Temperature - End - CW (WT2) - Correct	181 Celsius
Temperature - Start-CW(WT2) -Uncorrected	180 Celsius
Temperature - End-CW(WT2) -Uncorrected	181 Celsius
Temperature - Start - Corrected	105 Celsius
Temperature - End - Corrected	105 Celsius
Date/Time - In	02/12/2019 11:42
Date/Time - Out	02/13/2019 11:01
Filter ID	60020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O06
Thermometer ID - Low Temperature	84922
Thermometer ID	181417084
Temperature - Start - Uncorrected	105 Celsius
Temperature - End - Uncorrected	105 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/13/2019 11:01 No Unit
Weight(WT1) Date/Time Out	02/13/2019 12:57
Weight(WT1) Start Temp	181 Celsius
Weight(WT1) Temp Out	179 Celsius
Uncorrected Weight(WT1) Start Temp	181 Celsius
Uncorrected Weight(WT1) Temp Out	179 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339523/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339523/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339523/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339523/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339523/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339523/6 IC		300.0		5 mL	2 mL				
STD7 240-339523/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339523/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339523/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367585 Batch Start Date: 02/11/19 17:49 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICSOLNA1 00018	WCICSOLNB1 00018			
240-107796-H-2	MRC-MW138B-020619	300.0 & 9056A	T	5 mL					
240-107796-H-3	MRC-MW141B-020619	300.0 & 9056A	T	5 mL					
240-107796-H-3 MS	MRC-MW141B-020619	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-107796-H-3 MSD	MRC-MW141B-020619	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-107796-H-4	MRC-MW142B-020619	300.0 & 9056A	T	5 mL					
240-107796-H-5	MRC-MW158A-020619	300.0 & 9056A	T	5 mL					
240-107796-H-6	MRC-DUP01-020619	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367774 Batch Start Date: 02/12/19 13:08 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00861	WCICLCS 00696			
CCV 240-367774/1		300.0		5 mL	5 mL				
CCB 240-367774/2		300.0		5 mL					
MB 240-367774/3		300.0		5 mL					
LCS 240-367774/4		300.0		5 mL		5 mL			
CCV 240-367774/13		300.0		5 mL	5 mL				
CCB 240-367774/14		300.0		5 mL					
240-107796-H-5	MRC-MW158A-020619	300.0	T	5 mL					
CCV 240-367774/25		300.0		5 mL	5 mL				
CCB 240-367774/26		300.0		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367774 Batch Start Date: 02/12/19 13:08 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107796-H-2	MRC-MW138B-020619	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICLCS 00669			
ICV 240-339523/10		9056A		5 mL	1.0 mL	5 mL			
ICB 240-339523/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367585 Batch Start Date: 02/11/19 17:49 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICSOLNA1 00018	WCICSOLNB1 00018			
240-107796-H-2	MRC-MW138B-020619	300.0 & 9056A	T	5 mL					
240-107796-H-3	MRC-MW141B-020619	300.0 & 9056A	T	5 mL					
240-107796-H-3 MS	MRC-MW141B-020619	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-107796-H-3 MSD	MRC-MW141B-020619	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-107796-H-4	MRC-MW142B-020619	300.0 & 9056A	T	5 mL					
240-107796-H-5	MRC-MW158A-020619	300.0 & 9056A	T	5 mL					
240-107796-H-6	MRC-DUP01-020619	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367585 Batch Start Date: 02/11/19 17:49 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00861	WCICLCS 00696			
CCV 240-367585/37		9056A		5 mL	5 mL				
CCB 240-367585/38		9056A		5 mL					
MB 240-367585/39		9056A		5 mL					
LCS 240-367585/40		9056A		5 mL		5 mL			
CCV 240-367585/49		9056A		5 mL	5 mL				
CCB 240-367585/50		9056A		5 mL					
CCV 240-367585/55		9056A		5 mL	5 mL				
CCB 240-367585/56		9056A		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367774 Batch Start Date: 02/12/19 13:08 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107796-H-2	MRC-MW138B-020619	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575925/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575925/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575925/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575925/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575925/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575925/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575925/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
240-107796-F-2	MRC-MW138B-020619	SM 4500 NO3 F	T	50 mL	50 mL				8.8
240-107796-F-3	MRC-MW141B-020619	SM 4500 NO3 F	T	50 mL	50 mL				8.65
240-107796-F-3 MS	MRC-MW141B-020619	SM 4500 NO3 F	T	50 mL	50 mL		0.25 mL		8.65
240-107796-F-3 MSD	MRC-MW141B-020619	SM 4500 NO3 F	T	50 mL	50 mL		0.25 mL		8.65
240-107796-F-4	MRC-MW142B-020619	SM 4500 NO3 F	T	50 mL	50 mL				6.11
240-107796-F-5	MRC-MW158A-020619	SM 4500 NO3 F	T	50 mL	50 mL				5.87
240-107796-F-6	MRC-DUP01-020619	SM 4500 NO3 F	T	50 mL	50 mL				8.55
CCV 490-575925/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/21		SM 4500 NO3 F		50 mL	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Batch Notes	
Acid used for pH adjustment	4547067
Base used for pH adjustment	4273883
Batch Comment	cent tubes 809161; pH probe VVZ10915; pH meter AB92340683
Buffer Reagent ID	4832283
Carrier Identification	DI water
Color Reagent ID	4832299
Filter ID	180611314
Pipette/Syringe/Dispenser ID	26061004, 26121028

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

APPENDIX H—VALIDATED DATA REPORTS

TETRA TECH **INTERNAL CORRESPONDENCE**

TO: **S. BRENNER** **DATE:** **FEBRUARY 26, 2019**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION –VOCs**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
FIRE LINE LEAK
SDG 240-106686-1

SAMPLES: 9/Soils/

SB-MW154-10-12	SB-MW154-12-13
SB-MW154-9-10	SB-MW155-11-12
SB-MW155-8-9	SB-MW155-9-11
SB-MW158-10-11	SB-MW158-11-12
SB-MW158-9-10	

1/Trip Blank/
TB-010819

Overview

The sample set for LMC-MRC Fire Line Leak, SDG 240-106686-1, consisted of nine (9) soil environmental samples and one (1) trip blank. All samples were analyzed for volatile organic compounds (VOCs). No field duplicate samples were included in this sample delivery group (SDG).

The samples were collected by Tetra Tech, Inc. on January 8, 2019 and analyzed by Test America – Canton. All analyses were conducted in accordance with SW-846 methods 8260B and 8260C analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method/trip blank results, surrogate spike recoveries, laboratory control sample results, matrix spike / matrix spike duplicate results, internal standard areas, chromatographic resolution, analyte identification, analyte quantitation, and detection limits. Areas of concern are listed below.

Major

- The laboratory case narrative indicates that sample TB-010819 was preserved with hydrochloric acid. The VOC analyte 2-chloroethyl vinyl ether is an acid-labile compound that degrades in an acidic medium. The non-detected result for 2-chloroethyl vinyl ether was rejected (UR) in sample TB-010819.

Minor

- The VOC initial calibration verification performed on 11/30/18 @ 10:37 on instrument A3UX8 had percent differences (%Ds) that were greater than the 20% quality control limit for 1,2,4-trichlorobenzene and hexachlorobutadiene. All soil samples were affected. The non-detected results reported for the aforementioned compounds in the affected samples were qualified as estimated (UJ).

- The VOC continuing calibration verifications performed on 01/10/19 @ 3:21 and 3:44 on instrument A3UX8 had %Ds that were greater than the 20% quality control limit for ethyl tert-butyl ether, tert-butyl alcohol, 2-butanone, 1,1,2,2-tetrachloroethane and 1,2,3-trichloropropane. All soil samples were affected. The non-detected results reported for the aforementioned compounds in the

affected samples were qualified as estimated (UJ).

- The VOC initial calibration verification performed on 10/02/18 @ 18:21 on instrument A3UX10 had a %D that was greater than the 20% quality control limit for tert-butyl alcohol. Sample TB-010819 was affected. The non-detected result reported for tert-butyl alcohol in the affected sample was qualified as estimated (UJ).

- The VOC initial calibration verification performed on 8/07/18 @ 12:33 on instrument A3UX11 had %Ds that were greater than the 20% quality control limit for acetone and 2-butanone. Sample TB-010819 was affected. The non-detected results reported for the aforementioned compounds in the affected sample were qualified as estimated (UJ).

- The VOC continuing calibration verifications performed on 01/21/19 @ 10:02 and 10:47 on instrument A3UX11 had %Ds that were greater than the 20% quality control limit for dichlorodifluoromethane, chloroethane, methylene chloride, vinyl acetate, 2-butanone, 1,1,1-trichloroethane, carbon tetrachloride, 2-chloroethyl vinyl ether, 4-methyl-2-pentanone, tetrachloroethene, 2-hexanone, 1,1,2,2-tetrachloroethane, sec-butyl benzene, 4-isopropyl toluene, n-butyl benzene, naphthalene, ethyl tert-butyl ether, tert-amyl methyl ether and 1,2,3-trimethyl benzene. Sample TB-010819 was affected. The non-detected results reported for the aforementioned compounds, with the exception of 2-chloroethyl vinyl ether, in the affected sample were qualified as estimated (UJ). The nondetected result reported for 2-chloroethyl vinyl ether was rejected due to acid preservation.

Notes

Non-detected results were reported to the MDL.

Methylene chloride (2.86 ug/L) was detected in method blank 240-364762 affecting sample TB-010819. No validation actions were required as the sample result was nondetected.

Executive Summary

Laboratory Performance: Several initial calibration verification and continuing calibration %Ds were noncompliant for the VOC fraction.

Other Factors Affecting Data Quality: The non-detected result for 2-chloroethyl vinyl ether was rejected due to preservation noncompliance for sample TB-010819.

The data for these analyses were reviewed with reference to the USEPA “National Functional Guidelines for Organic Superfund Methods Data Review” (January 2017). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech, Inc.
Terri L. Solomon
Chemist/Data Validator

Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

PROJ_NO: 08474	NSAMPLE	SB-MW154-10-12			SB-MW154-12-13			SB-MW154-9-10			SB-MW155-11-12		
SDG: 240-106686-1	LAB_ID	240-106686-3			240-106686-4			240-106686-2			240-106686-7		
FRACTION: OV	SAMP_DATE	1/8/2019			1/8/2019			1/8/2019			1/8/2019		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	86.3			84.0			85.4			83.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		3.2	U		3.4	U		3.2	U		3.6	U	
1,1,1-TRICHLOROETHANE		0.88	U		0.93	U		0.9	U		0.98	U	
1,1,2,2-TETRACHLOROETHANE		1.5	UJ	C	1.6	UJ	C	1.6	UJ	C	1.7	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		1.4	U		1.5	U		1.4	U		1.5	U	
1,1-DICHLOROETHANE		0.74	U		0.79	U		0.76	U		0.83	U	
1,1-DICHLOROETHENE		0.97	U		1	U		0.99	U		1.1	U	
1,1-DICHLOROPROPENE		1.1	U		1.1	U		1.1	U		1.2	U	
1,2,3-TRICHLOROBENZENE		0.61	U		0.65	U		0.63	U		0.69	U	
1,2,3-TRICHLOROPROPANE		1.7	UJ	C	1.8	UJ	C	1.7	UJ	C	1.9	UJ	C
1,2,3-TRIMETHYLBENZENE		2	U		2.1	U		2	U		2.2	U	
1,2,4-TRICHLOROBENZENE		0.61	UJ	C	0.65	UJ	C	0.62	UJ	C	0.68	UJ	C
1,2,4-TRIMETHYLBENZENE		1.1	U		1.2	U		1.1	U		1.2	U	
1,2-DIBROMO-3-CHLOROPROPANE		3.9	U		4.1	U		3.9	U		4.3	U	
1,2-DIBROMOETHANE		0.82	U		0.88	U		0.84	U		0.92	U	
1,2-DICHLOROBENZENE		1.2	U		1.3	U		1.2	U		1.3	U	
1,2-DICHLOROETHANE		0.83	U		0.88	U		0.84	U		0.92	U	
1,2-DICHLOROPROPANE		0.91	U		0.97	U		0.93	U		1	U	
1,3-DICHLOROBENZENE		0.87	U		0.93	U		0.89	U		0.98	U	
1,3-DICHLOROPROPANE		1.1	U		1.1	U		1.1	U		1.2	U	
1,4-DICHLOROBENZENE		0.94	U		1	U		0.96	U		1.1	U	
2,2-DICHLOROPROPANE		1.3	U		1.4	U		1.3	U		1.4	U	
2-BUTANONE		3.8	UJ	C	4	UJ	C	3.9	UJ	C	4.3	UJ	C
2-CHLOROETHYL VINYL ETHER		9.5	U		10	U		9.7	U		11	U	
2-CHLOROTOLUENE		1	U		1.1	U		1	U		1.1	U	
2-HEXANONE		4.4	U		4.7	U		4.5	U		4.9	U	
4-CHLOROTOLUENE		0.92	U		0.98	U		0.94	U		1	U	
4-ISOPROPYLTOLUENE		3.2	U		3.4	U		3.2	U		3.5	U	
4-METHYL-2-PENTANONE		4	U		4.2	U		4.1	U		4.4	U	
ACETONE		22	U		24	U		23	U		25	U	
BENZENE		0.75	U		0.79	U		0.76	U		0.83	U	
BROMOBENZENE		1.3	U		1.3	U		1.3	U		1.4	U	
BROMOCHLOROMETHANE		0.64	U		0.68	U		0.65	U		0.71	U	
BROMODICHLOROMETHANE		0.73	U		0.77	U		0.74	U		0.81	U	
BROMOFORM		2.6	U		2.7	U		2.6	U		2.9	U	
BROMOMETHANE		1.1	U		1.1	U		1.1	U		1.2	U	

PROJ_NO: 08474	NSAMPLE	SB-MW155-8-9			SB-MW155-9-11			SB-MW158-10-11			SB-MW158-11-12		
SDG: 240-106686-1	LAB_ID	240-106686-5			240-106686-6			240-106686-9			240-106686-10		
FRACTION: OV	SAMP_DATE	1/8/2019			1/8/2019			1/8/2019			1/8/2019		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	86.6			86.5			84.9			84.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		3.3	U		3.3	U		3.4	U		3.3	U	
1,1,1-TRICHLOROETHANE		0.9	U		0.91	U		0.95	U		0.9	U	
1,1,2,2-TETRACHLOROETHANE		1.6	UJ	C	1.6	UJ	C	1.6	UJ	C	1.6	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		1.4	U		1.4	U		1.5	U		1.4	U	
1,1-DICHLOROETHANE		0.76	U		0.77	U		0.8	U		0.76	U	
1,1-DICHLOROETHENE		0.99	U		1	U		1	U		0.99	U	
1,1-DICHLOROPROPENE		1.1	U		1.1	U		1.1	U		1.1	U	
1,2,3-TRICHLOROBENZENE		0.63	U		0.64	U		0.66	U		0.63	U	
1,2,3-TRICHLOROPROPANE		1.7	UJ	C	1.7	UJ	C	1.8	UJ	C	1.7	UJ	C
1,2,3-TRIMETHYLBENZENE		2	U		2	U		2.1	U		2	U	
1,2,4-TRICHLOROBENZENE		0.63	UJ	C	0.64	UJ	C	0.66	UJ	C	0.63	UJ	C
1,2,4-TRIMETHYLBENZENE		1.1	U		1.1	U		1.2	U		1.1	U	
1,2-DIBROMO-3-CHLOROPROPANE		4	U		4	U		4.2	U		3.9	U	
1,2-DIBROMOETHANE		0.85	U		0.86	U		0.89	U		0.84	U	
1,2-DICHLOROBENZENE		1.2	U		1.2	U		1.3	U		1.2	U	
1,2-DICHLOROETHANE		0.85	U		0.86	U		0.89	U		0.84	U	
1,2-DICHLOROPROPANE		0.93	U		0.95	U		0.98	U		0.93	U	
1,3-DICHLOROBENZENE		0.9	U		0.91	U		0.94	U		0.89	U	
1,3-DICHLOROPROPANE		1.1	U		1.1	U		1.1	U		1.1	U	
1,4-DICHLOROBENZENE		0.97	U		0.98	U		1	U		0.96	U	
2,2-DICHLOROPROPANE		1.3	U		1.3	U		1.4	U		1.3	U	
2-BUTANONE		3.9	UJ	C	4	UJ	C	4.1	UJ	C	3.9	UJ	C
2-CHLOROETHYL VINYL ETHER		9.8	U		9.9	U		10	U		9.7	U	
2-CHLOROTOLUENE		1	U		1.1	U		1.1	U		1	U	
2-HEXANONE		4.5	U		4.5	U		4.7	U		4.5	U	
4-CHLOROTOLUENE		0.95	U		0.96	U		0.99	U		0.94	U	
4-ISOPROPYLTOLUENE		3.2	U		3.3	U		3.4	U		3.2	U	
4-METHYL-2-PENTANONE		4.1	U		4.1	U		4.3	U		4.1	U	
ACETONE		23	U		23	U		24	U		23	U	
BENZENE		0.77	U		0.78	U		0.8	U		0.76	U	
BROMOBENZENE		1.3	U		1.3	U		1.3	U		1.3	U	
BROMOCHLOROMETHANE		0.65	U		0.66	U		0.68	U		0.65	U	
BROMODICHLOROMETHANE		0.75	U		0.76	U		0.78	U		0.74	U	
BROMOFORM		2.6	U		2.7	U		2.8	U		2.6	U	
BROMOMETHANE		1.1	U		1.1	U		1.1	U		1.1	U	

PROJ_NO: 08474	NSAMPLE	SB-MW158-9-10		
SDG: 240-106686-1	LAB_ID	240-106686-8		
FRACTION: OV	SAMP_DATE	1/8/2019		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	83.5		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		3.5	U	
1,1,1-TRICHLOROETHANE		0.98	U	
1,1,2,2-TETRACHLOROETHANE		1.7	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		1.5	U	
1,1-DICHLOROETHANE		0.83	U	
1,1-DICHLOROETHENE		1.1	U	
1,1-DICHLOROPROPENE		1.2	U	
1,2,3-TRICHLOROBENZENE		0.68	U	
1,2,3-TRICHLOROPROPANE		1.9	UJ	C
1,2,3-TRIMETHYLBENZENE		2.2	U	
1,2,4-TRICHLOROBENZENE		0.68	UJ	C
1,2,4-TRIMETHYLBENZENE		1.2	U	
1,2-DIBROMO-3-CHLOROPROPANE		4.3	U	
1,2-DIBROMOETHANE		0.92	U	
1,2-DICHLOROBENZENE		1.3	U	
1,2-DICHLOROETHANE		0.92	U	
1,2-DICHLOROPROPANE		1	U	
1,3-DICHLOROBENZENE		0.97	U	
1,3-DICHLOROPROPANE		1.2	U	
1,4-DICHLOROBENZENE		1.1	U	
2,2-DICHLOROPROPANE		1.4	U	
2-BUTANONE		4.2	UJ	C
2-CHLOROETHYL VINYL ETHER		11	U	
2-CHLOROTOLUENE		1.1	U	
2-HEXANONE		4.9	U	
4-CHLOROTOLUENE		1	U	
4-ISOPROPYLTOLUENE		3.5	U	
4-METHYL-2-PENTANONE		4.4	U	
ACETONE		25	U	
BENZENE		0.83	U	
BROMOBENZENE		1.4	U	
BROMOCHLOROMETHANE		0.71	U	
BROMODICHLOROMETHANE		0.81	U	
BROMOFORM		2.9	U	
BROMOMETHANE		1.2	U	

PROJ_NO: 08474	NSAMPLE	SB-MW154-10-12			SB-MW154-12-13			SB-MW154-9-10			SB-MW155-11-12		
SDG: 240-106686-1	LAB_ID	240-106686-3			240-106686-4			240-106686-2			240-106686-7		
FRACTION: OV	SAMP_DATE	1/8/2019			1/8/2019			1/8/2019			1/8/2019		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	86.3			84.0			85.4			83.3		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		1.2	U		1.3	U		1.3	U		1.4	U	
CARBON TETRACHLORIDE		3.5	U		3.7	U		3.6	U		3.9	U	
CHLOROBENZENE		0.98	U		1	U		1	U		1.1	U	
CHLORODIBROMOMETHANE		3	U		3.2	U		3	U		3.3	U	
CHLOROETHANE		1.3	U		1.4	U		1.3	U		1.5	U	
CHLOROFORM		0.84	U		0.9	U		0.86	U		0.94	U	
CHLOROMETHANE		1.1	U		1.2	U		1.1	U		1.2	U	
CIS-1,2-DICHLOROETHENE		0.7	U		0.74	U		0.71	U		0.78	U	
CIS-1,3-DICHLOROPROPENE		1.5	U		1.6	U		1.6	U		1.7	U	
DIBROMOMETHANE		0.72	U		0.76	U		0.73	U		0.8	U	
DICHLORODIFLUOROMETHANE		1	U		1.1	U		1	U		1.1	U	
DIISOPROPYL ETHER		0.81	U		0.86	U		0.83	U		0.91	U	
ETHYL TERT-BUTYL ETHER		2.4	UJ	C	2.6	UJ	C	2.5	UJ	C	2.7	UJ	C
ETHYLBENZENE		1.1	U		1.2	U		1.1	U		1.3	U	
HEXACHLOROBUTADIENE		4	UJ	C	4.3	UJ	C	4.1	UJ	C	4.5	UJ	C
ISOPROPYLBENZENE		0.89	U		0.95	U		0.91	U		0.99	U	
METHYL TERT-BUTYL ETHER		0.88	U		0.93	U		0.9	U		0.98	U	
METHYLENE CHLORIDE		13	U		14	U		13	U		14	U	
NAPHTHALENE		2.9	U		3.1	U		2.9	U		3.2	U	
N-BUTYLBENZENE		3.7	U		4	U		3.8	U		4.1	U	
N-PROPYLBENZENE		0.78	U		0.83	U		0.8	U		0.88	U	
SEC-BUTYLBENZENE		0.92	U		0.98	U		0.94	U		1	U	
STYRENE		1.2	U		1.3	U		1.3	U		1.4	U	
TERT-AMYL METHYL ETHER		2.4	U		2.6	U		2.5	U		2.7	U	
TERT-BUTYLBENZENE		0.97	U		1	U		0.99	U		1.1	U	
TERTIARY-BUTYL ALCOHOL		18	UJ	C	19	UJ	C	18	UJ	C	20	UJ	C
TETRACHLOROETHENE		0.78	U		0.83	U		0.8	U		0.87	U	
TOLUENE		0.83	U		0.88	U		0.84	U		0.92	U	
TOTAL XYLENES		1.7	U		1.8	U		1.7	U		1.9	U	
TRANS-1,2-DICHLOROETHENE		0.5	U		0.53	U		0.51	U		0.56	U	
TRANS-1,3-DICHLOROPROPENE		1.1	U		1.2	U		1.1	U		1.2	U	
TRICHLOROETHENE		0.68	U		0.72	U		0.69	U		0.76	U	
TRICHLOROFLUOROMETHANE		1.2	U		1.2	U		1.2	U		1.3	U	
VINYL ACETATE		2.3	U		2.4	U		2.3	U		2.5	U	
VINYL CHLORIDE		0.9	U		0.95	U		0.91	U		1	U	

PROJ_NO: 08474	NSAMPLE	SB-MW155-8-9			SB-MW155-9-11			SB-MW158-10-11			SB-MW158-11-12		
SDG: 240-106686-1	LAB_ID	240-106686-5			240-106686-6			240-106686-9			240-106686-10		
FRACTION: OV	SAMP_DATE	1/8/2019			1/8/2019			1/8/2019			1/8/2019		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/KG			UG/KG			UG/KG			UG/KG		
	PCT_SOLIDS	86.6			86.5			84.9			84.8		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		1.3	U		1.3	U		1.3	U		1.3	U	
CARBON TETRACHLORIDE		3.6	U		3.6	U		3.7	U		3.6	U	
CHLOROBENZENE		1	U		1	U		1.1	U		1	U	
CHLORODIBROMOMETHANE		3.1	U		3.1	U		3.2	U		3	U	
CHLOROETHANE		1.3	U		1.4	U		1.4	U		1.3	U	
CHLOROFORM		0.86	U		0.88	U		0.91	U		0.86	U	
CHLOROMETHANE		1.1	U		1.2	U		1.2	U		1.1	U	
CIS-1,2-DICHLOROETHENE		0.71	U		0.72	U		0.75	U		0.71	U	
CIS-1,3-DICHLOROPROPENE		1.6	U		1.6	U		1.7	U		1.6	U	
DIBROMOMETHANE		0.73	U		0.74	U		0.77	U		0.73	U	
DICHLORODIFLUOROMETHANE		1	U		1	U		1.1	U		1	U	
DIISOPROPYL ETHER		0.83	U		0.84	U		0.87	U		0.83	U	
ETHYL TERT-BUTYL ETHER		2.5	UJ	C	2.5	UJ	C	2.6	UJ	C	2.5	UJ	C
ETHYLBENZENE		1.1	U		1.2	U		1.2	U		1.1	U	
HEXACHLOROBUTADIENE		4.1	UJ	C	4.2	UJ	C	4.3	UJ	C	4.1	UJ	C
ISOPROPYLBENZENE		0.91	U		0.93	U		0.96	U		0.91	U	
METHYL TERT-BUTYL ETHER		0.9	U		0.91	U		0.95	U		0.9	U	
METHYLENE CHLORIDE		13	U		13	U		14	U		13	U	
NAPHTHALENE		3	U		3	U		3.1	U		3	U	
N-BUTYLBENZENE		3.8	U		3.9	U		4	U		3.8	U	
N-PROPYLBENZENE		0.8	U		0.81	U		0.84	U		0.8	U	
SEC-BUTYLBENZENE		0.95	U		0.96	U		1	U		0.94	U	
STYRENE		1.3	U		1.3	U		1.3	U		1.3	U	
TERT-AMYL METHYL ETHER		2.5	U		2.5	U		2.6	U		2.5	U	
TERT-BUTYLBENZENE		1	U		1	U		1	U		0.99	U	
TERTIARY-BUTYL ALCOHOL		18	UJ	C	18	UJ	C	19	UJ	C	18	UJ	C
TETRACHLOROETHENE		0.8	U		0.81	U		0.84	U		0.8	U	
TOLUENE		0.85	U		0.86	U		0.89	U		0.85	U	
TOTAL XYLENES		1.7	U		1.8	U		1.8	U		1.7	U	
TRANS-1,2-DICHLOROETHENE		0.51	U		0.52	U		0.54	U		0.51	U	
TRANS-1,3-DICHLOROPROPENE		1.1	U		1.1	U		1.2	U		1.1	U	
TRICHLOROETHENE		0.69	U		0.7	U		0.73	U		0.69	U	
TRICHLOROFLUOROMETHANE		1.2	U		1.2	U		1.2	U		1.2	U	
VINYL ACETATE		2.3	U		2.4	U		2.5	U		2.3	U	
VINYL CHLORIDE		0.92	U		0.93	U		0.96	U		0.92	U	

PROJ_NO: 08474	NSAMPLE	SB-MW158-9-10		
SDG: 240-106686-1	LAB_ID	240-106686-8		
FRACTION: OV	SAMP_DATE	1/8/2019		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	UG/KG		
	PCT_SOLIDS	83.5		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CARBON DISULFIDE		1.4	U	
CARBON TETRACHLORIDE		3.9	U	
CHLOROBENZENE		1.1	U	
CHLORODIBROMOMETHANE		3.3	U	
CHLOROETHANE		1.5	U	
CHLOROFORM		0.94	U	
CHLOROMETHANE		1.2	U	
CIS-1,2-DICHLOROETHENE		0.78	U	
CIS-1,3-DICHLOROPROPENE		1.7	U	
DIBROMOMETHANE		0.8	U	
DICHLORODIFLUOROMETHANE		1.1	U	
DIISOPROPYL ETHER		0.9	U	
ETHYL TERT-BUTYL ETHER		2.7	UJ	C
ETHYLBENZENE		1.2	U	
HEXACHLOROBUTADIENE		4.5	UJ	C
ISOPROPYLBENZENE		0.99	U	
METHYL TERT-BUTYL ETHER		0.98	U	
METHYLENE CHLORIDE		14	U	
NAPHTHALENE		3.2	U	
N-BUTYLBENZENE		4.1	U	
N-PROPYLBENZENE		0.87	U	
SEC-BUTYLBENZENE		1	U	
STYRENE		1.4	U	
TERT-AMYL METHYL ETHER		2.7	U	
TERT-BUTYLBENZENE		1.1	U	
TERTIARY-BUTYL ALCOHOL		20	UJ	C
TETRACHLOROETHENE		0.87	U	
TOLUENE		0.92	U	
TOTAL XYLENES		1.9	U	
TRANS-1,2-DICHLOROETHENE		0.55	U	
TRANS-1,3-DICHLOROPROPENE		1.2	U	
TRICHLOROETHENE		0.75	U	
TRICHLOROFLUOROMETHANE		1.3	U	
VINYL ACETATE		2.5	U	
VINYL CHLORIDE		1	U	

PROJ_NO: 08474	NSAMPLE	TB-010819		
SDG: 240-106686-1	LAB_ID	240-106686-1		
FRACTION: OV	SAMP_DATE	1/8/2019		
MEDIA: WATER	QC_TYPE	TB		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U	
1,1,1-TRICHLOROETHANE		0.24	UJ	C
1,1,2,2-TETRACHLOROETHANE		0.13	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U	
1,1-DICHLOROETHANE		0.17	U	
1,1-DICHLOROETHENE		0.19	U	
1,1-DICHLOROPROPENE		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	U	
1,2,3-TRICHLOROPROPANE		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	UJ	C
1,2,4-TRICHLOROBENZENE		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	U	
1,2-DIBROMOETHANE		0.12	U	
1,2-DICHLOROBENZENE		0.15	U	
1,2-DICHLOROETHANE		0.21	U	
1,2-DICHLOROPROPANE		0.15	U	
1,3-DICHLOROBENZENE		0.15	U	
1,3-DICHLOROPROPANE		0.21	U	
1,4-DICHLOROBENZENE		0.16	U	
2,2-DICHLOROPROPANE		0.31	U	
2-BUTANONE		1.2	UJ	C
2-CHLOROETHYL VINYL ETHER		0.26	UR	M
2-CHLOROTOLUENE		0.15	U	
2-HEXANONE		0.54	UJ	C
4-CHLOROTOLUENE		0.09	U	
4-ISOPROPYLTOLUENE		0.13	UJ	C
4-METHYL-2-PENTANONE		0.42	UJ	C
ACETONE		5.4	UJ	C
BENZENE		0.13	U	
BROMOBENZENE		0.12	U	
BROMOCHLOROMETHANE		0.14	U	
BROMODICHLOROMETHANE		0.17	U	
BROMOFORM		0.76	U	
BROMOMETHANE		0.42	U	

PROJ_NO: 08474	NSAMPLE	TB-010819		
SDG: 240-106686-1	LAB_ID	240-106686-1		
FRACTION: OV	SAMP_DATE	1/8/2019		
MEDIA: WATER	QC_TYPE	TB		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CARBON DISULFIDE		0.28	U	
CARBON TETRACHLORIDE		0.26	UJ	C
CHLOROBENZENE		0.14	U	
CHLORODIBROMOMETHANE		0.39	U	
CHLOROETHANE		0.83	UJ	C
CHLOROFORM		0.13	U	
CHLOROMETHANE		0.2	U	
CIS-1,2-DICHLOROETHENE		0.16	U	
CIS-1,3-DICHLOROPROPENE		0.61	U	
DIBROMOMETHANE		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	UJ	C
DIISOPROPYL ETHER		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	UJ	C
ETHYLBENZENE		0.11	U	
HEXACHLOROBUTADIENE		0.83	U	
ISOPROPYLBENZENE		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U	
METHYLENE CHLORIDE		2.6	UJ	C
NAPHTHALENE		0.32	UJ	C
N-BUTYLBENZENE		0.14	UJ	C
N-PROPYLBENZENE		0.15	U	
SEC-BUTYLBENZENE		0.13	UJ	C
STYRENE		0.1	U	
TERT-AMYL METHYL ETHER		0.11	UJ	C
TERT-BUTYLBENZENE		0.14	U	
TERTIARY-BUTYL ALCOHOL		1.7	UJ	C
TETRACHLOROETHENE		0.15	UJ	C
TOLUENE		0.14	U	
TOTAL XYLENES		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.67	U	
TRICHLOROETHENE		0.1	U	
TRICHLOROFLUOROMETHANE		0.45	U	
VINYL ACETATE		0.19	UJ	C
VINYL CHLORIDE		0.2	U	

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-9-10 | Lab Sample ID: 240-106686-2

Matrix: Solid | Lab File ID: UX82201.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:30

Sample wt/vol: 5.36(g) | Date Analyzed: 01/10/2019 10:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.6 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.2	U	5.5	3.2
71-55-6	1,1,1-Trichloroethane	0.90	U	5.5	0.90
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U	5.5	1.6
76-13-1	1,1,2-Trichlorotrifluoroethane	1.4	U	5.5	1.4
75-34-3	1,1-Dichloroethane	0.76	U	5.5	0.76
75-35-4	1,1-Dichloroethene	0.99	U	5.5	0.99
563-58-6	1,1-Dichloropropene	1.1	U	5.5	1.1
87-61-6	1,2,3-Trichlorobenzene	0.63	U	5.5	0.63
96-18-4	1,2,3-Trichloropropane	1.7	U	5.5	1.7
526-73-8	1,2,3-Trimethylbenzene	2.0	U	5.5	2.0
120-82-1	1,2,4-Trichlorobenzene	0.62	U	5.5	0.62
95-63-6	1,2,4-Trimethylbenzene	1.1	U	5.5	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	3.9	U	11	3.9
95-50-1	1,2-Dichlorobenzene	1.2	U	5.5	1.2
107-06-2	1,2-Dichloroethane	0.84	U	5.5	0.84
78-87-5	1,2-Dichloropropane	0.93	U	5.5	0.93
541-73-1	1,3-Dichlorobenzene	0.89	U	5.5	0.89
142-28-9	1,3-Dichloropropane	1.1	U	5.5	1.1
106-46-7	1,4-Dichlorobenzene	0.96	U	5.5	0.96
594-20-7	2,2-Dichloropropane	1.3	U	5.5	1.3
110-75-8	2-Chloroethyl vinyl ether	9.7	U	55	9.7
95-49-8	2-Chlorotoluene	1.0	U	5.5	1.0
591-78-6	2-Hexanone	4.5	U	22	4.5
108-86-1	Bromobenzene	1.3	U	5.5	1.3
74-97-5	Bromochloromethane	0.65	U	5.5	0.65
106-43-4	4-Chlorotoluene	0.94	U	5.5	0.94
99-87-6	4-Isopropyltoluene	3.2	U	5.5	3.2
67-64-1	Acetone	23	U	27	23
71-43-2	Benzene	0.76	U	5.5	0.76
75-25-2	Bromoform	2.6	U	5.5	2.6
74-83-9	Bromomethane	1.1	U	5.5	1.1
75-15-0	Carbon disulfide	1.3	U	5.5	1.3
56-23-5	Carbon tetrachloride	3.6	U	5.5	3.6
108-90-7	Chlorobenzene	1.0	U	5.5	1.0
75-00-3	Chloroethane	1.3	U	5.5	1.3
67-66-3	Chloroform	0.86	U	5.5	0.86

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-9-10 | Lab Sample ID: 240-106686-2

Matrix: Solid | Lab File ID: UX82201.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:30

Sample wt/vol: 5.36(g) | Date Analyzed: 01/10/2019 10:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.6 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.1	U	5.5	1.1
156-59-2	cis-1,2-Dichloroethene	0.71	U	5.5	0.71
10061-01-5	cis-1,3-Dichloropropene	1.6	U	5.5	1.6
87-68-3	Hexachlorobutadiene	4.1	U	5.5	4.1
74-95-3	Dibromomethane	0.73	U	5.5	0.73
75-27-4	Bromodichloromethane	0.74	U	5.5	0.74
75-71-8	Dichlorodifluoromethane	1.0	U	5.5	1.0
100-41-4	Ethylbenzene	1.1	U	5.5	1.1
106-93-4	1,2-Dibromoethane	0.84	U	5.5	0.84
108-20-3	Diisopropyl ether	0.83	U	11	0.83
91-20-3	Naphthalene	2.9	U	5.5	2.9
104-51-8	n-Butylbenzene	3.8	U	5.5	3.8
98-82-8	Isopropylbenzene	0.91	U	5.5	0.91
103-65-1	N-Propylbenzene	0.80	U	5.5	0.80
78-93-3	2-Butanone (MEK)	3.9	U	22	3.9
108-10-1	4-Methyl-2-pentanone (MIBK)	4.1	U	22	4.1
135-98-8	sec-Butylbenzene	0.94	U	5.5	0.94
1634-04-4	Methyl tert-butyl ether	0.90	U	5.5	0.90
994-05-8	Tert-amyl methyl ether	2.5	U	5.5	2.5
75-09-2	Methylene Chloride	13	U	27	13
100-42-5	Styrene	1.3	U	5.5	1.3
637-92-3	Ethyl tert-butyl ether	2.5	U	5.5	2.5
98-06-6	tert-Butylbenzene	0.99	U	5.5	0.99
127-18-4	Tetrachloroethene	0.80	U	5.5	0.80
108-88-3	Toluene	0.84	U	5.5	0.84
156-60-5	trans-1,2-Dichloroethene	0.51	U	5.5	0.51
10061-02-6	trans-1,3-Dichloropropene	1.1	U	5.5	1.1
79-01-6	Trichloroethene	0.69	U	5.5	0.69
75-69-4	Trichlorofluoromethane	1.2	U	5.5	1.2
108-05-4	Vinyl acetate	2.3	U	11	2.3
75-01-4	Vinyl chloride	0.91	U	5.5	0.91
75-65-0	tert-Butyl alcohol	18	U	220	18
1330-20-7	Xylenes, Total	1.7	U	11	1.7
124-48-1	Chlorodibromomethane	3.0	U	5.5	3.0

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-9-10 | Lab Sample ID: 240-106686-2

Matrix: Solid | Lab File ID: UX82201.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:30

Sample wt/vol: 5.36(g) | Date Analyzed: 01/10/2019 10:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 14.6 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		48-123
460-00-4	4-Bromofluorobenzene (Surr)	74		49-141
2037-26-5	Toluene-d8 (Surr)	80		62-135
1868-53-7	Dibromofluoromethane (Surr)	91		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-10-12 | Lab Sample ID: 240-106686-3

Matrix: Solid | Lab File ID: UX82202.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:32

Sample wt/vol: 5.42(g) | Date Analyzed: 01/10/2019 10:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.7 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.2	U	5.3	3.2
71-55-6	1,1,1-Trichloroethane	0.88	U	5.3	0.88
79-34-5	1,1,2,2-Tetrachloroethane	1.5	U	5.3	1.5
76-13-1	1,1,2-Trichlorotrifluoroethane	1.4	U	5.3	1.4
75-34-3	1,1-Dichloroethane	0.74	U	5.3	0.74
75-35-4	1,1-Dichloroethene	0.97	U	5.3	0.97
563-58-6	1,1-Dichloropropene	1.1	U	5.3	1.1
87-61-6	1,2,3-Trichlorobenzene	0.61	U	5.3	0.61
96-18-4	1,2,3-Trichloropropane	1.7	U	5.3	1.7
526-73-8	1,2,3-Trimethylbenzene	2.0	U	5.3	2.0
120-82-1	1,2,4-Trichlorobenzene	0.61	U	5.3	0.61
95-63-6	1,2,4-Trimethylbenzene	1.1	U	5.3	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	3.9	U	11	3.9
95-50-1	1,2-Dichlorobenzene	1.2	U	5.3	1.2
107-06-2	1,2-Dichloroethane	0.83	U	5.3	0.83
78-87-5	1,2-Dichloropropane	0.91	U	5.3	0.91
541-73-1	1,3-Dichlorobenzene	0.87	U	5.3	0.87
142-28-9	1,3-Dichloropropane	1.1	U	5.3	1.1
106-46-7	1,4-Dichlorobenzene	0.94	U	5.3	0.94
594-20-7	2,2-Dichloropropane	1.3	U	5.3	1.3
110-75-8	2-Chloroethyl vinyl ether	9.5	U	53	9.5
95-49-8	2-Chlorotoluene	1.0	U	5.3	1.0
591-78-6	2-Hexanone	4.4	U	21	4.4
108-86-1	Bromobenzene	1.3	U	5.3	1.3
74-97-5	Bromochloromethane	0.64	U	5.3	0.64
106-43-4	4-Chlorotoluene	0.92	U	5.3	0.92
99-87-6	4-Isopropyltoluene	3.2	U	5.3	3.2
67-64-1	Acetone	22	U	27	22
71-43-2	Benzene	0.75	U	5.3	0.75
75-25-2	Bromoform	2.6	U	5.3	2.6
74-83-9	Bromomethane	1.1	U	5.3	1.1
75-15-0	Carbon disulfide	1.2	U	5.3	1.2
56-23-5	Carbon tetrachloride	3.5	U	5.3	3.5
108-90-7	Chlorobenzene	0.98	U	5.3	0.98
75-00-3	Chloroethane	1.3	U	5.3	1.3
67-66-3	Chloroform	0.84	U	5.3	0.84

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-10-12 | Lab Sample ID: 240-106686-3

Matrix: Solid | Lab File ID: UX82202.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:32

Sample wt/vol: 5.42(g) | Date Analyzed: 01/10/2019 10:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.7 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.1	U	5.3	1.1
156-59-2	cis-1,2-Dichloroethene	0.70	U	5.3	0.70
10061-01-5	cis-1,3-Dichloropropene	1.5	U	5.3	1.5
87-68-3	Hexachlorobutadiene	4.0	U	5.3	4.0
74-95-3	Dibromomethane	0.72	U	5.3	0.72
75-27-4	Bromodichloromethane	0.73	U	5.3	0.73
75-71-8	Dichlorodifluoromethane	1.0	U	5.3	1.0
100-41-4	Ethylbenzene	1.1	U	5.3	1.1
106-93-4	1,2-Dibromoethane	0.82	U	5.3	0.82
108-20-3	Diisopropyl ether	0.81	U	11	0.81
91-20-3	Naphthalene	2.9	U	5.3	2.9
104-51-8	n-Butylbenzene	3.7	U	5.3	3.7
98-82-8	Isopropylbenzene	0.89	U	5.3	0.89
103-65-1	N-Propylbenzene	0.78	U	5.3	0.78
78-93-3	2-Butanone (MEK)	3.8	U	21	3.8
108-10-1	4-Methyl-2-pentanone (MIBK)	4.0	U	21	4.0
135-98-8	sec-Butylbenzene	0.92	U	5.3	0.92
1634-04-4	Methyl tert-butyl ether	0.88	U	5.3	0.88
994-05-8	Tert-amyl methyl ether	2.4	U	5.3	2.4
75-09-2	Methylene Chloride	13	U	27	13
100-42-5	Styrene	1.2	U	5.3	1.2
637-92-3	Ethyl tert-butyl ether	2.4	U	5.3	2.4
98-06-6	tert-Butylbenzene	0.97	U	5.3	0.97
127-18-4	Tetrachloroethene	0.78	U	5.3	0.78
108-88-3	Toluene	0.83	U	5.3	0.83
156-60-5	trans-1,2-Dichloroethene	0.50	U	5.3	0.50
10061-02-6	trans-1,3-Dichloropropene	1.1	U	5.3	1.1
79-01-6	Trichloroethene	0.68	U	5.3	0.68
75-69-4	Trichlorofluoromethane	1.2	U	5.3	1.2
108-05-4	Vinyl acetate	2.3	U	11	2.3
75-01-4	Vinyl chloride	0.90	U	5.3	0.90
75-65-0	tert-Butyl alcohol	18	U	210	18
1330-20-7	Xylenes, Total	1.7	U	11	1.7
124-48-1	Chlorodibromomethane	3.0	U	5.3	3.0

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-10-12 | Lab Sample ID: 240-106686-3

Matrix: Solid | Lab File ID: UX82202.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:32

Sample wt/vol: 5.42(g) | Date Analyzed: 01/10/2019 10:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.7 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		48-123
460-00-4	4-Bromofluorobenzene (Surr)	75		49-141
2037-26-5	Toluene-d8 (Surr)	82		62-135
1868-53-7	Dibromofluoromethane (Surr)	94		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-12-13 | Lab Sample ID: 240-106686-4

Matrix: Solid | Lab File ID: UX82203.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:34

Sample wt/vol: 5.23(g) | Date Analyzed: 01/10/2019 10:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.0 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.4	U	5.7	3.4
71-55-6	1,1,1-Trichloroethane	0.93	U	5.7	0.93
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U	5.7	1.6
76-13-1	1,1,2-Trichlorotrifluoroethane	1.5	U	5.7	1.5
75-34-3	1,1-Dichloroethane	0.79	U	5.7	0.79
75-35-4	1,1-Dichloroethene	1.0	U	5.7	1.0
563-58-6	1,1-Dichloropropene	1.1	U	5.7	1.1
87-61-6	1,2,3-Trichlorobenzene	0.65	U	5.7	0.65
96-18-4	1,2,3-Trichloropropane	1.8	U	5.7	1.8
526-73-8	1,2,3-Trimethylbenzene	2.1	U	5.7	2.1
120-82-1	1,2,4-Trichlorobenzene	0.65	U	5.7	0.65
95-63-6	1,2,4-Trimethylbenzene	1.2	U	5.7	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	4.1	U	11	4.1
95-50-1	1,2-Dichlorobenzene	1.3	U	5.7	1.3
107-06-2	1,2-Dichloroethane	0.88	U	5.7	0.88
78-87-5	1,2-Dichloropropane	0.97	U	5.7	0.97
541-73-1	1,3-Dichlorobenzene	0.93	U	5.7	0.93
142-28-9	1,3-Dichloropropane	1.1	U	5.7	1.1
106-46-7	1,4-Dichlorobenzene	1.0	U	5.7	1.0
594-20-7	2,2-Dichloropropane	1.4	U	5.7	1.4
110-75-8	2-Chloroethyl vinyl ether	10	U	57	10
95-49-8	2-Chlorotoluene	1.1	U	5.7	1.1
591-78-6	2-Hexanone	4.7	U	23	4.7
108-86-1	Bromobenzene	1.3	U	5.7	1.3
74-97-5	Bromochloromethane	0.68	U	5.7	0.68
106-43-4	4-Chlorotoluene	0.98	U	5.7	0.98
99-87-6	4-Isopropyltoluene	3.4	U	5.7	3.4
67-64-1	Acetone	24	U	28	24
71-43-2	Benzene	0.79	U	5.7	0.79
75-25-2	Bromoform	2.7	U	5.7	2.7
74-83-9	Bromomethane	1.1	U	5.7	1.1
75-15-0	Carbon disulfide	1.3	U	5.7	1.3
56-23-5	Carbon tetrachloride	3.7	U	5.7	3.7
108-90-7	Chlorobenzene	1.0	U	5.7	1.0
75-00-3	Chloroethane	1.4	U	5.7	1.4
67-66-3	Chloroform	0.90	U	5.7	0.90

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-12-13 | Lab Sample ID: 240-106686-4

Matrix: Solid | Lab File ID: UX82203.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:34

Sample wt/vol: 5.23(g) | Date Analyzed: 01/10/2019 10:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.0 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.2	U	5.7	1.2
156-59-2	cis-1,2-Dichloroethene	0.74	U	5.7	0.74
10061-01-5	cis-1,3-Dichloropropene	1.6	U	5.7	1.6
87-68-3	Hexachlorobutadiene	4.3	U	5.7	4.3
74-95-3	Dibromomethane	0.76	U	5.7	0.76
75-27-4	Bromodichloromethane	0.77	U	5.7	0.77
75-71-8	Dichlorodifluoromethane	1.1	U	5.7	1.1
100-41-4	Ethylbenzene	1.2	U	5.7	1.2
106-93-4	1,2-Dibromoethane	0.88	U	5.7	0.88
108-20-3	Diisopropyl ether	0.86	U	11	0.86
91-20-3	Naphthalene	3.1	U	5.7	3.1
104-51-8	n-Butylbenzene	4.0	U	5.7	4.0
98-82-8	Isopropylbenzene	0.95	U	5.7	0.95
103-65-1	N-Propylbenzene	0.83	U	5.7	0.83
78-93-3	2-Butanone (MEK)	4.0	U	23	4.0
108-10-1	4-Methyl-2-pentanone (MIBK)	4.2	U	23	4.2
135-98-8	sec-Butylbenzene	0.98	U	5.7	0.98
1634-04-4	Methyl tert-butyl ether	0.93	U	5.7	0.93
994-05-8	Tert-amyl methyl ether	2.6	U	5.7	2.6
75-09-2	Methylene Chloride	14	U	28	14
100-42-5	Styrene	1.3	U	5.7	1.3
637-92-3	Ethyl tert-butyl ether	2.6	U	5.7	2.6
98-06-6	tert-Butylbenzene	1.0	U	5.7	1.0
127-18-4	Tetrachloroethene	0.83	U	5.7	0.83
108-88-3	Toluene	0.88	U	5.7	0.88
156-60-5	trans-1,2-Dichloroethene	0.53	U	5.7	0.53
10061-02-6	trans-1,3-Dichloropropene	1.2	U	5.7	1.2
79-01-6	Trichloroethene	0.72	U	5.7	0.72
75-69-4	Trichlorofluoromethane	1.2	U	5.7	1.2
108-05-4	Vinyl acetate	2.4	U	11	2.4
75-01-4	Vinyl chloride	0.95	U	5.7	0.95
75-65-0	tert-Butyl alcohol	19	U	230	19
1330-20-7	Xylenes, Total	1.8	U	11	1.8
124-48-1	Chlorodibromomethane	3.2	U	5.7	3.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW154-12-13 | Lab Sample ID: 240-106686-4

Matrix: Solid | Lab File ID: UX82203.D

Analysis Method: 8260B | Date Collected: 01/08/2019 12:34

Sample wt/vol: 5.23(g) | Date Analyzed: 01/10/2019 10:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.0 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		48-123
460-00-4	4-Bromofluorobenzene (Surr)	73		49-141
2037-26-5	Toluene-d8 (Surr)	83		62-135
1868-53-7	Dibromofluoromethane (Surr)	89		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-8-9 | Lab Sample ID: 240-106686-5

Matrix: Solid | Lab File ID: UX82204.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:50

Sample wt/vol: 5.26(g) | Date Analyzed: 01/10/2019 11:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.4 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.3	U	5.5	3.3
71-55-6	1,1,1-Trichloroethane	0.90	U	5.5	0.90
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U	5.5	1.6
76-13-1	1,1,2-Trichlorotrifluoroethane	1.4	U	5.5	1.4
75-34-3	1,1-Dichloroethane	0.76	U	5.5	0.76
75-35-4	1,1-Dichloroethene	0.99	U	5.5	0.99
563-58-6	1,1-Dichloropropene	1.1	U	5.5	1.1
87-61-6	1,2,3-Trichlorobenzene	0.63	U	5.5	0.63
96-18-4	1,2,3-Trichloropropane	1.7	U	5.5	1.7
526-73-8	1,2,3-Trimethylbenzene	2.0	U	5.5	2.0
120-82-1	1,2,4-Trichlorobenzene	0.63	U	5.5	0.63
95-63-6	1,2,4-Trimethylbenzene	1.1	U	5.5	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	4.0	U	11	4.0
95-50-1	1,2-Dichlorobenzene	1.2	U	5.5	1.2
107-06-2	1,2-Dichloroethane	0.85	U	5.5	0.85
78-87-5	1,2-Dichloropropane	0.93	U	5.5	0.93
541-73-1	1,3-Dichlorobenzene	0.90	U	5.5	0.90
142-28-9	1,3-Dichloropropane	1.1	U	5.5	1.1
106-46-7	1,4-Dichlorobenzene	0.97	U	5.5	0.97
594-20-7	2,2-Dichloropropane	1.3	U	5.5	1.3
110-75-8	2-Chloroethyl vinyl ether	9.8	U	55	9.8
95-49-8	2-Chlorotoluene	1.0	U	5.5	1.0
591-78-6	2-Hexanone	4.5	U	22	4.5
108-86-1	Bromobenzene	1.3	U	5.5	1.3
74-97-5	Bromochloromethane	0.65	U	5.5	0.65
106-43-4	4-Chlorotoluene	0.95	U	5.5	0.95
99-87-6	4-Isopropyltoluene	3.2	U	5.5	3.2
67-64-1	Acetone	23	U	27	23
71-43-2	Benzene	0.77	U	5.5	0.77
75-25-2	Bromoform	2.6	U	5.5	2.6
74-83-9	Bromomethane	1.1	U	5.5	1.1
75-15-0	Carbon disulfide	1.3	U	5.5	1.3
56-23-5	Carbon tetrachloride	3.6	U	5.5	3.6
108-90-7	Chlorobenzene	1.0	U	5.5	1.0
75-00-3	Chloroethane	1.3	U	5.5	1.3
67-66-3	Chloroform	0.86	U	5.5	0.86

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-8-9 | Lab Sample ID: 240-106686-5

Matrix: Solid | Lab File ID: UX82204.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:50

Sample wt/vol: 5.26(g) | Date Analyzed: 01/10/2019 11:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.4 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.1	U	5.5	1.1
156-59-2	cis-1,2-Dichloroethene	0.71	U	5.5	0.71
10061-01-5	cis-1,3-Dichloropropene	1.6	U	5.5	1.6
87-68-3	Hexachlorobutadiene	4.1	U	5.5	4.1
74-95-3	Dibromomethane	0.73	U	5.5	0.73
75-27-4	Bromodichloromethane	0.75	U	5.5	0.75
75-71-8	Dichlorodifluoromethane	1.0	U	5.5	1.0
100-41-4	Ethylbenzene	1.1	U	5.5	1.1
106-93-4	1,2-Dibromoethane	0.85	U	5.5	0.85
108-20-3	Diisopropyl ether	0.83	U	11	0.83
91-20-3	Naphthalene	3.0	U	5.5	3.0
104-51-8	n-Butylbenzene	3.8	U	5.5	3.8
98-82-8	Isopropylbenzene	0.91	U	5.5	0.91
103-65-1	N-Propylbenzene	0.80	U	5.5	0.80
78-93-3	2-Butanone (MEK)	3.9	U	22	3.9
108-10-1	4-Methyl-2-pentanone (MIBK)	4.1	U	22	4.1
135-98-8	sec-Butylbenzene	0.95	U	5.5	0.95
1634-04-4	Methyl tert-butyl ether	0.90	U	5.5	0.90
994-05-8	Tert-amyl methyl ether	2.5	U	5.5	2.5
75-09-2	Methylene Chloride	13	U	27	13
100-42-5	Styrene	1.3	U	5.5	1.3
637-92-3	Ethyl tert-butyl ether	2.5	U	5.5	2.5
98-06-6	tert-Butylbenzene	1.0	U	5.5	1.0
127-18-4	Tetrachloroethene	0.80	U	5.5	0.80
108-88-3	Toluene	0.85	U	5.5	0.85
156-60-5	trans-1,2-Dichloroethene	0.51	U	5.5	0.51
10061-02-6	trans-1,3-Dichloropropene	1.1	U	5.5	1.1
79-01-6	Trichloroethene	0.69	U	5.5	0.69
75-69-4	Trichlorofluoromethane	1.2	U	5.5	1.2
108-05-4	Vinyl acetate	2.3	U	11	2.3
75-01-4	Vinyl chloride	0.92	U	5.5	0.92
75-65-0	tert-Butyl alcohol	18	U	220	18
1330-20-7	Xylenes, Total	1.7	U	11	1.7
124-48-1	Chlorodibromomethane	3.1	U	5.5	3.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-8-9 | Lab Sample ID: 240-106686-5

Matrix: Solid | Lab File ID: UX82204.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:50

Sample wt/vol: 5.26(g) | Date Analyzed: 01/10/2019 11:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.4 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		48-123
460-00-4	4-Bromofluorobenzene (Surr)	70		49-141
2037-26-5	Toluene-d8 (Surr)	82		62-135
1868-53-7	Dibromofluoromethane (Surr)	90		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-9-11 | Lab Sample ID: 240-106686-6

Matrix: Solid | Lab File ID: UX82205.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:52

Sample wt/vol: 5.20(g) | Date Analyzed: 01/10/2019 11:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.5 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.3	U	5.6	3.3
71-55-6	1,1,1-Trichloroethane	0.91	U	5.6	0.91
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U	5.6	1.6
76-13-1	1,1,2-Trichlorotrifluoroethane	1.4	U	5.6	1.4
75-34-3	1,1-Dichloroethane	0.77	U	5.6	0.77
75-35-4	1,1-Dichloroethene	1.0	U	5.6	1.0
563-58-6	1,1-Dichloropropene	1.1	U	5.6	1.1
87-61-6	1,2,3-Trichlorobenzene	0.64	U	5.6	0.64
96-18-4	1,2,3-Trichloropropane	1.7	U	5.6	1.7
526-73-8	1,2,3-Trimethylbenzene	2.0	U	5.6	2.0
120-82-1	1,2,4-Trichlorobenzene	0.64	U	5.6	0.64
95-63-6	1,2,4-Trimethylbenzene	1.1	U	5.6	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	4.0	U	11	4.0
95-50-1	1,2-Dichlorobenzene	1.2	U	5.6	1.2
107-06-2	1,2-Dichloroethane	0.86	U	5.6	0.86
78-87-5	1,2-Dichloropropane	0.95	U	5.6	0.95
541-73-1	1,3-Dichlorobenzene	0.91	U	5.6	0.91
142-28-9	1,3-Dichloropropane	1.1	U	5.6	1.1
106-46-7	1,4-Dichlorobenzene	0.98	U	5.6	0.98
594-20-7	2,2-Dichloropropane	1.3	U	5.6	1.3
110-75-8	2-Chloroethyl vinyl ether	9.9	U	56	9.9
95-49-8	2-Chlorotoluene	1.1	U	5.6	1.1
591-78-6	2-Hexanone	4.5	U	22	4.5
108-86-1	Bromobenzene	1.3	U	5.6	1.3
74-97-5	Bromochloromethane	0.66	U	5.6	0.66
106-43-4	4-Chlorotoluene	0.96	U	5.6	0.96
99-87-6	4-Isopropyltoluene	3.3	U	5.6	3.3
67-64-1	Acetone	23	U	28	23
71-43-2	Benzene	0.78	U	5.6	0.78
75-25-2	Bromoform	2.7	U	5.6	2.7
74-83-9	Bromomethane	1.1	U	5.6	1.1
75-15-0	Carbon disulfide	1.3	U	5.6	1.3
56-23-5	Carbon tetrachloride	3.6	U	5.6	3.6
108-90-7	Chlorobenzene	1.0	U	5.6	1.0
75-00-3	Chloroethane	1.4	U	5.6	1.4
67-66-3	Chloroform	0.88	U	5.6	0.88

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-9-11 | Lab Sample ID: 240-106686-6

Matrix: Solid | Lab File ID: UX82205.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:52

Sample wt/vol: 5.20(g) | Date Analyzed: 01/10/2019 11:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.5 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.2	U	5.6	1.2
156-59-2	cis-1,2-Dichloroethene	0.72	U	5.6	0.72
10061-01-5	cis-1,3-Dichloropropene	1.6	U	5.6	1.6
87-68-3	Hexachlorobutadiene	4.2	U	5.6	4.2
74-95-3	Dibromomethane	0.74	U	5.6	0.74
75-27-4	Bromodichloromethane	0.76	U	5.6	0.76
75-71-8	Dichlorodifluoromethane	1.0	U	5.6	1.0
100-41-4	Ethylbenzene	1.2	U	5.6	1.2
106-93-4	1,2-Dibromoethane	0.86	U	5.6	0.86
108-20-3	Diisopropyl ether	0.84	U	11	0.84
91-20-3	Naphthalene	3.0	U	5.6	3.0
104-51-8	n-Butylbenzene	3.9	U	5.6	3.9
98-82-8	Isopropylbenzene	0.93	U	5.6	0.93
103-65-1	N-Propylbenzene	0.81	U	5.6	0.81
78-93-3	2-Butanone (MEK)	4.0	U	22	4.0
108-10-1	4-Methyl-2-pentanone (MIBK)	4.1	U	22	4.1
135-98-8	sec-Butylbenzene	0.96	U	5.6	0.96
1634-04-4	Methyl tert-butyl ether	0.91	U	5.6	0.91
994-05-8	Tert-amyl methyl ether	2.5	U	5.6	2.5
75-09-2	Methylene Chloride	13	U	28	13
100-42-5	Styrene	1.3	U	5.6	1.3
637-92-3	Ethyl tert-butyl ether	2.5	U	5.6	2.5
98-06-6	tert-Butylbenzene	1.0	U	5.6	1.0
127-18-4	Tetrachloroethene	0.81	U	5.6	0.81
108-88-3	Toluene	0.86	U	5.6	0.86
156-60-5	trans-1,2-Dichloroethene	0.52	U	5.6	0.52
10061-02-6	trans-1,3-Dichloropropene	1.1	U	5.6	1.1
79-01-6	Trichloroethene	0.70	U	5.6	0.70
75-69-4	Trichlorofluoromethane	1.2	U	5.6	1.2
108-05-4	Vinyl acetate	2.4	U	11	2.4
75-01-4	Vinyl chloride	0.93	U	5.6	0.93
75-65-0	tert-Butyl alcohol	18	U	220	18
1330-20-7	Xylenes, Total	1.8	U	11	1.8
124-48-1	Chlorodibromomethane	3.1	U	5.6	3.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-9-11 | Lab Sample ID: 240-106686-6

Matrix: Solid | Lab File ID: UX82205.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:52

Sample wt/vol: 5.20(g) | Date Analyzed: 01/10/2019 11:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 13.5 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		48-123
460-00-4	4-Bromofluorobenzene (Surr)	73		49-141
2037-26-5	Toluene-d8 (Surr)	86		62-135
1868-53-7	Dibromofluoromethane (Surr)	90		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-11-12 | Lab Sample ID: 240-106686-7

Matrix: Solid | Lab File ID: UX82206.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:54

Sample wt/vol: 5.02(g) | Date Analyzed: 01/10/2019 11:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.7 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.6	U	6.0	3.6
71-55-6	1,1,1-Trichloroethane	0.98	U	6.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.7	U	6.0	1.7
76-13-1	1,1,2-Trichlorotrifluoroethane	1.5	U	6.0	1.5
75-34-3	1,1-Dichloroethane	0.83	U	6.0	0.83
75-35-4	1,1-Dichloroethene	1.1	U	6.0	1.1
563-58-6	1,1-Dichloropropene	1.2	U	6.0	1.2
87-61-6	1,2,3-Trichlorobenzene	0.69	U	6.0	0.69
96-18-4	1,2,3-Trichloropropane	1.9	U	6.0	1.9
526-73-8	1,2,3-Trimethylbenzene	2.2	U	6.0	2.2
120-82-1	1,2,4-Trichlorobenzene	0.68	U	6.0	0.68
95-63-6	1,2,4-Trimethylbenzene	1.2	U	6.0	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	4.3	U	12	4.3
95-50-1	1,2-Dichlorobenzene	1.3	U	6.0	1.3
107-06-2	1,2-Dichloroethane	0.92	U	6.0	0.92
78-87-5	1,2-Dichloropropane	1.0	U	6.0	1.0
541-73-1	1,3-Dichlorobenzene	0.98	U	6.0	0.98
142-28-9	1,3-Dichloropropane	1.2	U	6.0	1.2
106-46-7	1,4-Dichlorobenzene	1.1	U	6.0	1.1
594-20-7	2,2-Dichloropropane	1.4	U	6.0	1.4
110-75-8	2-Chloroethyl vinyl ether	11	U	60	11
95-49-8	2-Chlorotoluene	1.1	U	6.0	1.1
591-78-6	2-Hexanone	4.9	U	24	4.9
108-86-1	Bromobenzene	1.4	U	6.0	1.4
74-97-5	Bromochloromethane	0.71	U	6.0	0.71
106-43-4	4-Chlorotoluene	1.0	U	6.0	1.0
99-87-6	4-Isopropyltoluene	3.5	U	6.0	3.5
67-64-1	Acetone	25	U	30	25
71-43-2	Benzene	0.83	U	6.0	0.83
75-25-2	Bromoform	2.9	U	6.0	2.9
74-83-9	Bromomethane	1.2	U	6.0	1.2
75-15-0	Carbon disulfide	1.4	U	6.0	1.4
56-23-5	Carbon tetrachloride	3.9	U	6.0	3.9
108-90-7	Chlorobenzene	1.1	U	6.0	1.1
75-00-3	Chloroethane	1.5	U	6.0	1.5
67-66-3	Chloroform	0.94	U	6.0	0.94

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-11-12 | Lab Sample ID: 240-106686-7

Matrix: Solid | Lab File ID: UX82206.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:54

Sample wt/vol: 5.02(g) | Date Analyzed: 01/10/2019 11:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.7 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.2	U	6.0	1.2
156-59-2	cis-1,2-Dichloroethene	0.78	U	6.0	0.78
10061-01-5	cis-1,3-Dichloropropene	1.7	U	6.0	1.7
87-68-3	Hexachlorobutadiene	4.5	U	6.0	4.5
74-95-3	Dibromomethane	0.80	U	6.0	0.80
75-27-4	Bromodichloromethane	0.81	U	6.0	0.81
75-71-8	Dichlorodifluoromethane	1.1	U	6.0	1.1
100-41-4	Ethylbenzene	1.3	U	6.0	1.3
106-93-4	1,2-Dibromoethane	0.92	U	6.0	0.92
108-20-3	Diisopropyl ether	0.91	U	12	0.91
91-20-3	Naphthalene	3.2	U	6.0	3.2
104-51-8	n-Butylbenzene	4.1	U	6.0	4.1
98-82-8	Isopropylbenzene	0.99	U	6.0	0.99
103-65-1	N-Propylbenzene	0.88	U	6.0	0.88
78-93-3	2-Butanone (MEK)	4.3	U	24	4.3
108-10-1	4-Methyl-2-pentanone (MIBK)	4.4	U	24	4.4
135-98-8	sec-Butylbenzene	1.0	U	6.0	1.0
1634-04-4	Methyl tert-butyl ether	0.98	U	6.0	0.98
994-05-8	Tert-amyl methyl ether	2.7	U	6.0	2.7
75-09-2	Methylene Chloride	14	U	30	14
100-42-5	Styrene	1.4	U	6.0	1.4
637-92-3	Ethyl tert-butyl ether	2.7	U	6.0	2.7
98-06-6	tert-Butylbenzene	1.1	U	6.0	1.1
127-18-4	Tetrachloroethene	0.87	U	6.0	0.87
108-88-3	Toluene	0.92	U	6.0	0.92
156-60-5	trans-1,2-Dichloroethene	0.56	U	6.0	0.56
10061-02-6	trans-1,3-Dichloropropene	1.2	U	6.0	1.2
79-01-6	Trichloroethene	0.76	U	6.0	0.76
75-69-4	Trichlorofluoromethane	1.3	U	6.0	1.3
108-05-4	Vinyl acetate	2.5	U	12	2.5
75-01-4	Vinyl chloride	1.0	U	6.0	1.0
75-65-0	tert-Butyl alcohol	20	U	240	20
1330-20-7	Xylenes, Total	1.9	U	12	1.9
124-48-1	Chlorodibromomethane	3.3	U	6.0	3.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW155-11-12 | Lab Sample ID: 240-106686-7

Matrix: Solid | Lab File ID: UX82206.D

Analysis Method: 8260B | Date Collected: 01/08/2019 13:54

Sample wt/vol: 5.02(g) | Date Analyzed: 01/10/2019 11:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.7 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		48-123
460-00-4	4-Bromofluorobenzene (Surr)	75		49-141
2037-26-5	Toluene-d8 (Surr)	85		62-135
1868-53-7	Dibromofluoromethane (Surr)	92		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-9-10 | Lab Sample ID: 240-106686-8

Matrix: Solid | Lab File ID: UX82207.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:42

Sample wt/vol: 5.03(g) | Date Analyzed: 01/10/2019 12:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.5 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.5	U	6.0	3.5
71-55-6	1,1,1-Trichloroethane	0.98	U	6.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	1.7	U	6.0	1.7
76-13-1	1,1,2-Trichlorotrifluoroethane	1.5	U	6.0	1.5
75-34-3	1,1-Dichloroethane	0.83	U	6.0	0.83
75-35-4	1,1-Dichloroethene	1.1	U	6.0	1.1
563-58-6	1,1-Dichloropropene	1.2	U	6.0	1.2
87-61-6	1,2,3-Trichlorobenzene	0.68	U	6.0	0.68
96-18-4	1,2,3-Trichloropropane	1.9	U	6.0	1.9
526-73-8	1,2,3-Trimethylbenzene	2.2	U	6.0	2.2
120-82-1	1,2,4-Trichlorobenzene	0.68	U	6.0	0.68
95-63-6	1,2,4-Trimethylbenzene	1.2	U	6.0	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	4.3	U	12	4.3
95-50-1	1,2-Dichlorobenzene	1.3	U	6.0	1.3
107-06-2	1,2-Dichloroethane	0.92	U	6.0	0.92
78-87-5	1,2-Dichloropropane	1.0	U	6.0	1.0
541-73-1	1,3-Dichlorobenzene	0.97	U	6.0	0.97
142-28-9	1,3-Dichloropropane	1.2	U	6.0	1.2
106-46-7	1,4-Dichlorobenzene	1.1	U	6.0	1.1
594-20-7	2,2-Dichloropropane	1.4	U	6.0	1.4
110-75-8	2-Chloroethyl vinyl ether	11	U	60	11
95-49-8	2-Chlorotoluene	1.1	U	6.0	1.1
591-78-6	2-Hexanone	4.9	U	24	4.9
108-86-1	Bromobenzene	1.4	U	6.0	1.4
74-97-5	Bromochloromethane	0.71	U	6.0	0.71
106-43-4	4-Chlorotoluene	1.0	U	6.0	1.0
99-87-6	4-Isopropyltoluene	3.5	U	6.0	3.5
67-64-1	Acetone	25	U	30	25
71-43-2	Benzene	0.83	U	6.0	0.83
75-25-2	Bromoform	2.9	U	6.0	2.9
74-83-9	Bromomethane	1.2	U	6.0	1.2
75-15-0	Carbon disulfide	1.4	U	6.0	1.4
56-23-5	Carbon tetrachloride	3.9	U	6.0	3.9
108-90-7	Chlorobenzene	1.1	U	6.0	1.1
75-00-3	Chloroethane	1.5	U	6.0	1.5
67-66-3	Chloroform	0.94	U	6.0	0.94

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-9-10 | Lab Sample ID: 240-106686-8

Matrix: Solid | Lab File ID: UX82207.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:42

Sample wt/vol: 5.03(g) | Date Analyzed: 01/10/2019 12:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.5 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.2	U	6.0	1.2
156-59-2	cis-1,2-Dichloroethene	0.78	U	6.0	0.78
10061-01-5	cis-1,3-Dichloropropene	1.7	U	6.0	1.7
87-68-3	Hexachlorobutadiene	4.5	U	6.0	4.5
74-95-3	Dibromomethane	0.80	U	6.0	0.80
75-27-4	Bromodichloromethane	0.81	U	6.0	0.81
75-71-8	Dichlorodifluoromethane	1.1	U	6.0	1.1
100-41-4	Ethylbenzene	1.2	U	6.0	1.2
106-93-4	1,2-Dibromoethane	0.92	U	6.0	0.92
108-20-3	Diisopropyl ether	0.90	U	12	0.90
91-20-3	Naphthalene	3.2	U	6.0	3.2
104-51-8	n-Butylbenzene	4.1	U	6.0	4.1
98-82-8	Isopropylbenzene	0.99	U	6.0	0.99
103-65-1	N-Propylbenzene	0.87	U	6.0	0.87
78-93-3	2-Butanone (MEK)	4.2	U	24	4.2
108-10-1	4-Methyl-2-pentanone (MIBK)	4.4	U	24	4.4
135-98-8	sec-Butylbenzene	1.0	U	6.0	1.0
1634-04-4	Methyl tert-butyl ether	0.98	U	6.0	0.98
994-05-8	Tert-amyl methyl ether	2.7	U	6.0	2.7
75-09-2	Methylene Chloride	14	U	30	14
100-42-5	Styrene	1.4	U	6.0	1.4
637-92-3	Ethyl tert-butyl ether	2.7	U	6.0	2.7
98-06-6	tert-Butylbenzene	1.1	U	6.0	1.1
127-18-4	Tetrachloroethene	0.87	U	6.0	0.87
108-88-3	Toluene	0.92	U	6.0	0.92
156-60-5	trans-1,2-Dichloroethene	0.55	U	6.0	0.55
10061-02-6	trans-1,3-Dichloropropene	1.2	U	6.0	1.2
79-01-6	Trichloroethene	0.75	U	6.0	0.75
75-69-4	Trichlorofluoromethane	1.3	U	6.0	1.3
108-05-4	Vinyl acetate	2.5	U	12	2.5
75-01-4	Vinyl chloride	1.0	U	6.0	1.0
75-65-0	tert-Butyl alcohol	20	U	240	20
1330-20-7	Xylenes, Total	1.9	U	12	1.9
124-48-1	Chlorodibromomethane	3.3	U	6.0	3.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-9-10 | Lab Sample ID: 240-106686-8

Matrix: Solid | Lab File ID: UX82207.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:42

Sample wt/vol: 5.03(g) | Date Analyzed: 01/10/2019 12:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 16.5 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		48-123
460-00-4	4-Bromofluorobenzene (Surr)	72		49-141
2037-26-5	Toluene-d8 (Surr)	84		62-135
1868-53-7	Dibromofluoromethane (Surr)	90		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-10-11 | Lab Sample ID: 240-106686-9

Matrix: Solid | Lab File ID: UX82208.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:44

Sample wt/vol: 5.11(g) | Date Analyzed: 01/10/2019 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 15.1 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.4	U	5.8	3.4
71-55-6	1,1,1-Trichloroethane	0.95	U	5.8	0.95
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U	5.8	1.6
76-13-1	1,1,2-Trichlorotrifluoroethane	1.5	U	5.8	1.5
75-34-3	1,1-Dichloroethane	0.80	U	5.8	0.80
75-35-4	1,1-Dichloroethene	1.0	U	5.8	1.0
563-58-6	1,1-Dichloropropene	1.1	U	5.8	1.1
87-61-6	1,2,3-Trichlorobenzene	0.66	U	5.8	0.66
96-18-4	1,2,3-Trichloropropane	1.8	U	5.8	1.8
526-73-8	1,2,3-Trimethylbenzene	2.1	U	5.8	2.1
120-82-1	1,2,4-Trichlorobenzene	0.66	U	5.8	0.66
95-63-6	1,2,4-Trimethylbenzene	1.2	U	5.8	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	4.2	U	12	4.2
95-50-1	1,2-Dichlorobenzene	1.3	U	5.8	1.3
107-06-2	1,2-Dichloroethane	0.89	U	5.8	0.89
78-87-5	1,2-Dichloropropane	0.98	U	5.8	0.98
541-73-1	1,3-Dichlorobenzene	0.94	U	5.8	0.94
142-28-9	1,3-Dichloropropane	1.1	U	5.8	1.1
106-46-7	1,4-Dichlorobenzene	1.0	U	5.8	1.0
594-20-7	2,2-Dichloropropane	1.4	U	5.8	1.4
110-75-8	2-Chloroethyl vinyl ether	10	U	58	10
95-49-8	2-Chlorotoluene	1.1	U	5.8	1.1
591-78-6	2-Hexanone	4.7	U	23	4.7
108-86-1	Bromobenzene	1.3	U	5.8	1.3
74-97-5	Bromochloromethane	0.68	U	5.8	0.68
106-43-4	4-Chlorotoluene	0.99	U	5.8	0.99
99-87-6	4-Isopropyltoluene	3.4	U	5.8	3.4
67-64-1	Acetone	24	U	29	24
71-43-2	Benzene	0.80	U	5.8	0.80
75-25-2	Bromoform	2.8	U	5.8	2.8
74-83-9	Bromomethane	1.1	U	5.8	1.1
75-15-0	Carbon disulfide	1.3	U	5.8	1.3
56-23-5	Carbon tetrachloride	3.7	U	5.8	3.7
108-90-7	Chlorobenzene	1.1	U	5.8	1.1
75-00-3	Chloroethane	1.4	U	5.8	1.4
67-66-3	Chloroform	0.91	U	5.8	0.91

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-10-11 | Lab Sample ID: 240-106686-9

Matrix: Solid | Lab File ID: UX82208.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:44

Sample wt/vol: 5.11(g) | Date Analyzed: 01/10/2019 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 15.1 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.2	U	5.8	1.2
156-59-2	cis-1,2-Dichloroethene	0.75	U	5.8	0.75
10061-01-5	cis-1,3-Dichloropropene	1.7	U	5.8	1.7
87-68-3	Hexachlorobutadiene	4.3	U	5.8	4.3
74-95-3	Dibromomethane	0.77	U	5.8	0.77
75-27-4	Bromodichloromethane	0.78	U	5.8	0.78
75-71-8	Dichlorodifluoromethane	1.1	U	5.8	1.1
100-41-4	Ethylbenzene	1.2	U	5.8	1.2
106-93-4	1,2-Dibromoethane	0.89	U	5.8	0.89
108-20-3	Diisopropyl ether	0.87	U	12	0.87
91-20-3	Naphthalene	3.1	U	5.8	3.1
104-51-8	n-Butylbenzene	4.0	U	5.8	4.0
98-82-8	Isopropylbenzene	0.96	U	5.8	0.96
103-65-1	N-Propylbenzene	0.84	U	5.8	0.84
78-93-3	2-Butanone (MEK)	4.1	U	23	4.1
108-10-1	4-Methyl-2-pentanone (MIBK)	4.3	U	23	4.3
135-98-8	sec-Butylbenzene	1.0	U	5.8	1.0
1634-04-4	Methyl tert-butyl ether	0.95	U	5.8	0.95
994-05-8	Tert-amyl methyl ether	2.6	U	5.8	2.6
75-09-2	Methylene Chloride	14	U	29	14
100-42-5	Styrene	1.3	U	5.8	1.3
637-92-3	Ethyl tert-butyl ether	2.6	U	5.8	2.6
98-06-6	tert-Butylbenzene	1.0	U	5.8	1.0
127-18-4	Tetrachloroethene	0.84	U	5.8	0.84
108-88-3	Toluene	0.89	U	5.8	0.89
156-60-5	trans-1,2-Dichloroethene	0.54	U	5.8	0.54
10061-02-6	trans-1,3-Dichloropropene	1.2	U	5.8	1.2
79-01-6	Trichloroethene	0.73	U	5.8	0.73
75-69-4	Trichlorofluoromethane	1.2	U	5.8	1.2
108-05-4	Vinyl acetate	2.5	U	12	2.5
75-01-4	Vinyl chloride	0.96	U	5.8	0.96
75-65-0	tert-Butyl alcohol	19	U	230	19
1330-20-7	Xylenes, Total	1.8	U	12	1.8
124-48-1	Chlorodibromomethane	3.2	U	5.8	3.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-10-11 | Lab Sample ID: 240-106686-9

Matrix: Solid | Lab File ID: UX82208.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:44

Sample wt/vol: 5.11(g) | Date Analyzed: 01/10/2019 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 15.1 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		48-123
460-00-4	4-Bromofluorobenzene (Surr)	76		49-141
2037-26-5	Toluene-d8 (Surr)	85		62-135
1868-53-7	Dibromofluoromethane (Surr)	95		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-11-12 | Lab Sample ID: 240-106686-10

Matrix: Solid | Lab File ID: UX82209.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:46

Sample wt/vol: 5.39(g) | Date Analyzed: 01/10/2019 13:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 15.2 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.3	U	5.5	3.3
71-55-6	1,1,1-Trichloroethane	0.90	U	5.5	0.90
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U	5.5	1.6
76-13-1	1,1,2-Trichlorotrifluoroethane	1.4	U	5.5	1.4
75-34-3	1,1-Dichloroethane	0.76	U	5.5	0.76
75-35-4	1,1-Dichloroethene	0.99	U	5.5	0.99
563-58-6	1,1-Dichloropropene	1.1	U	5.5	1.1
87-61-6	1,2,3-Trichlorobenzene	0.63	U	5.5	0.63
96-18-4	1,2,3-Trichloropropane	1.7	U	5.5	1.7
526-73-8	1,2,3-Trimethylbenzene	2.0	U	5.5	2.0
120-82-1	1,2,4-Trichlorobenzene	0.63	U	5.5	0.63
95-63-6	1,2,4-Trimethylbenzene	1.1	U	5.5	1.1
96-12-8	1,2-Dibromo-3-Chloropropane	3.9	U	11	3.9
95-50-1	1,2-Dichlorobenzene	1.2	U	5.5	1.2
107-06-2	1,2-Dichloroethane	0.84	U	5.5	0.84
78-87-5	1,2-Dichloropropane	0.93	U	5.5	0.93
541-73-1	1,3-Dichlorobenzene	0.89	U	5.5	0.89
142-28-9	1,3-Dichloropropane	1.1	U	5.5	1.1
106-46-7	1,4-Dichlorobenzene	0.96	U	5.5	0.96
594-20-7	2,2-Dichloropropane	1.3	U	5.5	1.3
110-75-8	2-Chloroethyl vinyl ether	9.7	U	55	9.7
95-49-8	2-Chlorotoluene	1.0	U	5.5	1.0
591-78-6	2-Hexanone	4.5	U	22	4.5
108-86-1	Bromobenzene	1.3	U	5.5	1.3
74-97-5	Bromochloromethane	0.65	U	5.5	0.65
106-43-4	4-Chlorotoluene	0.94	U	5.5	0.94
99-87-6	4-Isopropyltoluene	3.2	U	5.5	3.2
67-64-1	Acetone	23	U	27	23
71-43-2	Benzene	0.76	U	5.5	0.76
75-25-2	Bromoform	2.6	U	5.5	2.6
74-83-9	Bromomethane	1.1	U	5.5	1.1
75-15-0	Carbon disulfide	1.3	U	5.5	1.3
56-23-5	Carbon tetrachloride	3.6	U	5.5	3.6
108-90-7	Chlorobenzene	1.0	U	5.5	1.0
75-00-3	Chloroethane	1.3	U	5.5	1.3
67-66-3	Chloroform	0.86	U	5.5	0.86

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-11-12 | Lab Sample ID: 240-106686-10

Matrix: Solid | Lab File ID: UX82209.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:46

Sample wt/vol: 5.39(g) | Date Analyzed: 01/10/2019 13:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 15.2 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.1	U	5.5	1.1
156-59-2	cis-1,2-Dichloroethene	0.71	U	5.5	0.71
10061-01-5	cis-1,3-Dichloropropene	1.6	U	5.5	1.6
87-68-3	Hexachlorobutadiene	4.1	U	5.5	4.1
74-95-3	Dibromomethane	0.73	U	5.5	0.73
75-27-4	Bromodichloromethane	0.74	U	5.5	0.74
75-71-8	Dichlorodifluoromethane	1.0	U	5.5	1.0
100-41-4	Ethylbenzene	1.1	U	5.5	1.1
106-93-4	1,2-Dibromoethane	0.84	U	5.5	0.84
108-20-3	Diisopropyl ether	0.83	U	11	0.83
91-20-3	Naphthalene	3.0	U	5.5	3.0
104-51-8	n-Butylbenzene	3.8	U	5.5	3.8
98-82-8	Isopropylbenzene	0.91	U	5.5	0.91
103-65-1	N-Propylbenzene	0.80	U	5.5	0.80
78-93-3	2-Butanone (MEK)	3.9	U	22	3.9
108-10-1	4-Methyl-2-pentanone (MIBK)	4.1	U	22	4.1
135-98-8	sec-Butylbenzene	0.94	U	5.5	0.94
1634-04-4	Methyl tert-butyl ether	0.90	U	5.5	0.90
994-05-8	Tert-amyl methyl ether	2.5	U	5.5	2.5
75-09-2	Methylene Chloride	13	U	27	13
100-42-5	Styrene	1.3	U	5.5	1.3
637-92-3	Ethyl tert-butyl ether	2.5	U	5.5	2.5
98-06-6	tert-Butylbenzene	0.99	U	5.5	0.99
127-18-4	Tetrachloroethene	0.80	U	5.5	0.80
108-88-3	Toluene	0.85	U	5.5	0.85
156-60-5	trans-1,2-Dichloroethene	0.51	U	5.5	0.51
10061-02-6	trans-1,3-Dichloropropene	1.1	U	5.5	1.1
79-01-6	Trichloroethene	0.69	U	5.5	0.69
75-69-4	Trichlorofluoromethane	1.2	U	5.5	1.2
108-05-4	Vinyl acetate	2.3	U	11	2.3
75-01-4	Vinyl chloride	0.92	U	5.5	0.92
75-65-0	tert-Butyl alcohol	18	U	220	18
1330-20-7	Xylenes, Total	1.7	U	11	1.7
124-48-1	Chlorodibromomethane	3.0	U	5.5	3.0

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: SB-MW158-11-12 | Lab Sample ID: 240-106686-10

Matrix: Solid | Lab File ID: UX82209.D

Analysis Method: 8260B | Date Collected: 01/08/2019 14:46

Sample wt/vol: 5.39(g) | Date Analyzed: 01/10/2019 13:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: 15.2 | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		48-123
460-00-4	4-Bromofluorobenzene (Surr)	69		49-141
2037-26-5	Toluene-d8 (Surr)	81		62-135
1868-53-7	Dibromofluoromethane (Surr)	91		49-132

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: TB-010819 | Lab Sample ID: 240-106686-1

Matrix: Water | Lab File ID: UXJ7833.D

Analysis Method: 8260C | Date Collected: 01/08/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 01/21/2019 14:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 364762 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: TB-010819 | Lab Sample ID: 240-106686-1

Matrix: Water | Lab File ID: UXJ7833.D

Analysis Method: 8260C | Date Collected: 01/08/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 01/21/2019 14:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 364762 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: TB-010819 | Lab Sample ID: 240-106686-1

Matrix: Water | Lab File ID: UXJ7833.D

Analysis Method: 8260C | Date Collected: 01/08/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 01/21/2019 14:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 364762 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		70-121
460-00-4	4-Bromofluorobenzene (Surr)	78		59-120
2037-26-5	Toluene-d8 (Surr)	79		70-123
1868-53-7	Dibromofluoromethane (Surr)	112		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: TB-010819 | Lab Sample ID: 240-106686-1

Matrix: Water | Lab File ID: UXX9154.D

Analysis Method: 8260C | Date Collected: 01/08/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 01/18/2019 15:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 364651 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		70-121
460-00-4	4-Bromofluorobenzene (Surr)	95		59-120
2037-26-5	Toluene-d8 (Surr)	100		70-123
1868-53-7	Dibromofluoromethane (Surr)	94		75-128

Appendix C

Support Documentation

0.5/0.5

North Canton
4101 Shuffel Street, N. W.

North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

Chain of Custody Record

Baltimore #201

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Mike Martin	Site Contact: Mullis/Larson	Date: 1/8/2019	COC No:
Tetra Tech	Tel: (301) 528-3021	Lab Contact: John McFadden	Carrier: Fedex	1 of 1 COCs
20251 Century Blvd, Suite 200	**Analysis Turnaround Time**			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) _____			
(301) 528-3021 Phone	TAT if different from Below: **STANDARD TAT**			SDG No.
(301) 528-3000 FAX	☐ 2 weeks			
Project Name: MRC BLOCK E/F MASS DISCHARGE	☐ 1 week			Sampler: Mullis/Larson
Site: MRC BLOCK E	☐ 2 days			
PO # 112IC08784	☐ 1 day			Sample Specific Notes:

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (8260)
TB-010819	1/8/2019	0000	GRAB	WATER	2		x
SB-MW154-9-10	1/8/2019	1230	GRAB	SOIL	1		x
SB-MW154-10-12	1/8/2019	1232	GRAB	SOIL	1		x
SB-MW154-12-13	1/8/2019	1234	GRAB	SOIL	1		x
SB-MW155-8-9	1/8/2019	1350	GRAB	SOIL	1		x
SB-MW155-9-11	1/8/2019	1352	GRAB	SOIL	1		x
SB-MW155-11-12	1/8/2019	1354	GRAB	SOIL	1		x
SB-MW158-9-10	1/8/2019	1442	GRAB	SOIL	1		x
SB-MW158-10-11	1/8/2019	1444	GRAB	SOIL	1		x
SB-MW158-11-12	1/8/2019	1446	GRAB	SOIL	1		x
						2	

240-106686 Chain of Custody

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Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: Block E/F Mass discharge well installation project, clay layer A/B boundary soil samples for VOC analysis.

Relinquished by:	Company: Tetra Tech Inc	Date/Time: 1/8/19 1600	Received by:	Company: TestAmerica	Date/Time: 1-9-2019 1600
Relinquished by:	Company: TA 1/8/19	Date/Time: 1700	Received by:	Company: TA	Date/Time: 1-9-19 0940
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass Discharge

Report Number: 240-106686-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 1/9/2019 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.5º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples SB-MW154-9-10 (240-106686-2), SB-MW154-10-12 (240-106686-3), SB-MW154-12-13 (240-106686-4), SB-MW155-8-9 (240-106686-5), SB-MW155-9-11 (240-106686-6), SB-MW155-11-12 (240-106686-7), SB-MW158-9-10 (240-106686-8), SB-MW158-10-11 (240-106686-9) and SB-MW158-11-12 (240-106686-10) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were prepared and analyzed on 01/10/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Sample TB-010819 (240-106686-1) was analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The sample was analyzed on 01/18/2019 and 01/21/2019.

Methylene Chloride was detected in method blank MB 240-364762/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-364651.

The continuing calibration verification (CCV) for analytical batch 364762 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TB-010819 (240-106686-1)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following sample was received preserved with hydrochloric acid:TB-010819 (240-106686-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples SB-MW154-9-10 (240-106686-2), SB-MW154-10-12 (240-106686-3), SB-MW154-12-13 (240-106686-4), SB-MW155-8-9 (240-106686-5), SB-MW155-9-11 (240-106686-6), SB-MW155-11-12 (240-106686-7), SB-MW158-9-10 (240-106686-8), SB-MW158-10-11 (240-106686-9) and SB-MW158-11-12 (240-106686-10) were analyzed for percent solids in accordance with ASTM Method D2216-80. The samples were analyzed on 01/10/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-106686-1
Project/Site: MRC Block E/F Mass Discharge

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN
5030A	Purge and Trap	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-106686-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-106686-1	TB-010819	Water	01/08/19 00:00	01/09/19 09:40
240-106686-2	SB-MW154-9-10	Solid	01/08/19 12:30	01/09/19 09:40
240-106686-3	SB-MW154-10-12	Solid	01/08/19 12:32	01/09/19 09:40
240-106686-4	SB-MW154-12-13	Solid	01/08/19 12:34	01/09/19 09:40
240-106686-5	SB-MW155-8-9	Solid	01/08/19 13:50	01/09/19 09:40
240-106686-6	SB-MW155-9-11	Solid	01/08/19 13:52	01/09/19 09:40
240-106686-7	SB-MW155-11-12	Solid	01/08/19 13:54	01/09/19 09:40
240-106686-8	SB-MW158-9-10	Solid	01/08/19 14:42	01/09/19 09:40
240-106686-9	SB-MW158-10-11	Solid	01/08/19 14:44	01/09/19 09:40
240-106686-10	SB-MW158-11-12	Solid	01/08/19 14:46	01/09/19 09:40

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
SB-MW154-9-10	240-106686-2	91	95	80	74
SB-MW154-10-12	240-106686-3	94	95	82	75
SB-MW154-12-13	240-106686-4	89	92	83	73
SB-MW155-8-9	240-106686-5	90	95	82	70
SB-MW155-9-11	240-106686-6	90	93	86	73
SB-MW155-11-12	240-106686-7	92	95	85	75
SB-MW158-9-10	240-106686-8	90	93	84	72
SB-MW158-10-11	240-106686-9	95	100	85	76
SB-MW158-11-12	240-106686-10	91	93	81	69
	MB 240-363459/8	87	93	83	77
	LCS 240-363459/9	88	89	85	85
SB-MW158-11-12 MS	240-106686-10 MS	93	92	90	87
SB-MW158-11-12 MSD	240-106686-10 MSD	89	88	89	87

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	49-132
DCA = 1,2-Dichloroethane-d4 (Surr)	48-123
TOL = Toluene-d8 (Surr)	62-135
BFB = 4-Bromofluorobenzene (Surr)	49-141

Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82188.D

Lab ID: LCS 240-363459/9 Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	25.0	22.3	89	73-124	
1,1,1-Trichloroethane	25.0	21.4	85	64-135	
1,1,2,2-Tetrachloroethane	25.0	25.9	104	68-128	
1,1,2-Trichlorotrifluoroethane	25.0	21.8	87	56-138	
1,1-Dichloroethane	25.0	21.0	84	72-122	
1,1-Dichloroethene	25.0	21.8	87	57-139	
1,1-Dichloropropene	25.0	22.9	92	72-127	
1,2,3-Trichlorobenzene	25.0	20.0	80	59-120	
1,2,3-Trichloropropane	25.0	24.8	99	68-128	
1,2,4-Trichlorobenzene	25.0	19.5	78	54-120	
1,2,4-Trimethylbenzene	25.0	20.6	82	75-121	
1,2-Dibromo-3-Chloropropane	25.0	21.9	88	38-135	
1,2-Dichlorobenzene	25.0	21.6	87	73-120	
1,2-Dichloroethane	25.0	22.7	91	64-126	
1,2-Dichloropropane	25.0	22.4	90	78-122	
1,3-Dichlorobenzene	25.0	20.9	84	70-120	
1,3-Dichloropropane	25.0	23.3	93	76-120	
1,4-Dichlorobenzene	25.0	20.2	81	71-120	
2,2-Dichloropropane	25.0	16.4	66	42-143	
2-Chloroethyl vinyl ether	25.0	23.5 J	94	58-154	
2-Chlorotoluene	25.0	21.0	84	75-120	
2-Hexanone	50.0	48.9	98	52-145	
Bromobenzene	25.0	21.0	84	75-120	
Bromochloromethane	25.0	24.1	96	72-124	
4-Chlorotoluene	25.0	20.6	82	74-121	
4-Isopropyltoluene	25.0	20.7	83	74-124	
Acetone	50.0	50.5	101	43-159	
Benzene	25.0	22.3	89	74-123	
Bromoform	25.0	21.1	85	46-137	
Bromomethane	25.0	19.1	76	10-152	
Carbon disulfide	25.0	20.7	83	29-153	
Carbon tetrachloride	25.0	21.5	86	56-139	
Chlorobenzene	25.0	20.9	84	80-120	
Chloroethane	25.0	18.6	74	15-155	
Chloroform	25.0	22.2	89	72-124	
Chloromethane	25.0	17.8	71	45-128	
cis-1,2-Dichloroethene	25.0	22.4	90	74-123	
cis-1,3-Dichloropropene	25.0	22.0	88	63-137	
Hexachlorobutadiene	25.0	17.2	69	58-122	
Dibromomethane	25.0	25.0	100	71-122	
Bromodichloromethane	25.0	22.3	89	63-132	
Dichlorodifluoromethane	25.0	19.9	79	26-138	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82188.D

Lab ID: LCS 240-363459/9 Client ID:

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	25.0	21.6	86	76-120	
1,2-Dibromoethane	25.0	25.3	101	76-120	
Naphthalene	25.0	21.4	86	51-120	
m-Xylene & p-Xylene	25.0	22.1	88	77-120	
n-Butylbenzene	25.0	20.2	81	64-133	
Isopropylbenzene	25.0	20.8	83	77-124	
N-Propylbenzene	25.0	20.4	81	73-129	
2-Butanone (MEK)	50.0	54.0	108	45-148	
4-Methyl-2-pentanone (MIBK)	50.0	53.1	106	53-139	
sec-Butylbenzene	25.0	19.7	79	73-126	
Methyl tert-butyl ether	25.0	22.7	91	66-127	
Methylene Chloride	25.0	20.7 J	83	62-137	
o-Xylene	25.0	21.9	88	79-120	
Styrene	25.0	20.2	81	76-121	
tert-Butylbenzene	25.0	19.4	78	73-122	
Tetrachloroethene	25.0	21.6	86	76-120	
Toluene	25.0	21.9	88	76-120	
trans-1,2-Dichloroethene	25.0	22.4	90	71-133	
trans-1,3-Dichloropropene	25.0	19.7	79	55-121	
Trichloroethene	25.0	23.5	94	73-126	
Trichlorofluoromethane	25.0	21.3	85	47-146	
Vinyl acetate	25.0	26.5	106	43-144	
Vinyl chloride	25.0	19.2	77	52-130	
tert-Butyl alcohol	250	265	106	41-139	
Xylenes, Total	50.0	44.0	88	79-120	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82210.D

Lab ID: 240-106686-10 MS Client ID: SB-MW158-11-12 MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	29.1	3.3 U	26.9	93	16-137	
1,1,1-Trichloroethane	29.1	0.90 U	26.7	92	38-143	
1,1,2,2-Tetrachloroethane	29.1	1.6 U	27.6	95	16-178	
1,1,2-Trichlorotrifluoroethane	29.1	1.4 U	26.2	90	37-147	
1,1-Dichloroethane	29.1	0.76 U	26.5	91	50-133	
1,1-Dichloroethene	29.1	0.99 U	27.3	94	36-150	
1,1-Dichloropropene	29.1	1.1 U	26.0	90	30-138	
1,2,3-Trichlorobenzene	29.1	0.63 U	17.6	61	10-120	
1,2,3-Trichloropropane	29.1	1.7 U	27.0	93	10-178	
1,2,4-Trichlorobenzene	29.1	0.63 U	15.4	53	10-120	
1,2,4-Trimethylbenzene	29.1	1.1 U	21.9	75	10-149	
1,2-Dibromo-3-Chloropropane	29.1	3.9 U	21.1	72	10-141	
1,2-Dichlorobenzene	29.1	1.2 U	22.7	78	10-130	
1,2-Dichloroethane	29.1	0.84 U	27.1	93	42-127	
1,2-Dichloropropane	29.1	0.93 U	27.3	94	51-128	
1,3-Dichlorobenzene	29.1	0.89 U	22.0	76	10-131	
1,3-Dichloropropane	29.1	1.1 U	27.0	93	34-121	
1,4-Dichlorobenzene	29.1	0.96 U	21.1	73	10-130	
2,2-Dichloropropane	29.1	1.3 U	18.6	64	20-141	
2-Chloroethyl vinyl ether	29.1	9.7 U	25.8 J	89	10-134	
2-Chlorotoluene	29.1	1.0 U	22.9	79	10-179	
2-Hexanone	58.1	4.5 U	49.1	84	15-147	
Bromobenzene	29.1	1.3 U	24.4	84	10-164	
Bromochloromethane	29.1	0.65 U	30.0	103	36-147	
4-Chlorotoluene	29.1	0.94 U	22.3	77	10-158	
4-Isopropyltoluene	29.1	3.2 U	21.3	73	10-142	
Acetone	58.1	23 U	66.0	113	10-160	
Benzene	29.1	0.76 U	27.8	95	39-133	
Bromoform	29.1	2.6 U	24.2	83	18-120	
Bromomethane	29.1	1.1 U	24.8	85	10-159	
Carbon disulfide	29.1	1.3 U	26.0	89	16-145	
Carbon tetrachloride	29.1	3.6 U	26.6	91	22-142	
Chlorobenzene	29.1	1.0 U	24.9	86	21-131	
Chloroethane	29.1	1.3 U	25.0	86	17-162	
Chloroform	29.1	0.86 U	27.7	95	51-130	
Chloromethane	29.1	1.1 U	23.8	82	26-149	
cis-1,2-Dichloroethene	29.1	0.71 U	27.7	95	50-128	
cis-1,3-Dichloropropene	29.1	1.6 U	23.8	82	15-132	
Hexachlorobutadiene	29.1	4.1 U	17.3	60	10-120	
Dibromomethane	29.1	0.73 U	30.5	105	37-138	
Bromodichloromethane	29.1	0.74 U	27.1	93	32-129	
Dichlorodifluoromethane	29.1	1.0 U	24.8	85	15-150	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82210.D

Lab ID: 240-106686-10 MS Client ID: SB-MW158-11-12 MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
Ethylbenzene	29.1	1.1 U	25.8	89	20-135	
1,2-Dibromoethane	29.1	0.84 U	28.2	97	36-125	
Naphthalene	29.1	3.0 U	18.2	63	10-120	
m-Xylene & p-Xylene	29.1	0.86 U	25.1	86	16-137	
n-Butylbenzene	29.1	3.8 U	19.0	65	10-149	
Isopropylbenzene	29.1	0.91 U	23.9	82	20-138	
N-Propylbenzene	29.1	0.80 U	22.5	78	10-162	
2-Butanone (MEK)	58.1	3.9 U	61.6	106	20-148	
4-Methyl-2-pentanone (MIBK)	58.1	4.1 U	54.6	94	29-143	
sec-Butylbenzene	29.1	0.94 U	21.4	74	10-156	
Methyl tert-butyl ether	29.1	0.90 U	26.7	92	48-134	
Methylene Chloride	29.1	13 U	28.3 J	97	39-145	
o-Xylene	29.1	0.94 U	25.6	88	21-138	
Styrene	29.1	1.3 U	23.1	80	10-134	
tert-Butylbenzene	29.1	0.99 U	22.0	76	10-148	
Tetrachloroethene	29.1	0.80 U	23.5	81	20-151	
Toluene	29.1	0.85 U	26.5	91	29-141	
trans-1,2-Dichloroethene	29.1	0.51 U	28.4	98	44-141	
trans-1,3-Dichloropropene	29.1	1.1 U	20.8	71	15-120	
Trichloroethene	29.1	0.69 U	27.7	95	25-148	
Trichlorofluoromethane	29.1	1.2 U	27.2	94	38-149	
Vinyl acetate	29.1	2.3 U	22.7	78	10-120	
Vinyl chloride	29.1	0.92 U	25.7	88	31-148	
tert-Butyl alcohol	291	18 U	272	93	59-128	
Xylenes, Total	58.1	1.7 U	50.7	87	19-137	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82211.D

Lab ID: 240-106686-10 MSD Client ID: SB-MW158-11-12 MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	29.0	28.2	97	5	40	16-137	
1,1,1-Trichloroethane	29.0	26.4	91	1	40	38-143	
1,1,2,2-Tetrachloroethane	29.0	30.8	107	11	40	16-178	
1,1,2-Trichlorotrifluoroethane	29.0	25.2	87	4	37	37-147	
1,1-Dichloroethane	29.0	26.6	92	0	40	50-133	
1,1-Dichloroethene	29.0	27.1	94	1	40	36-150	
1,1-Dichloropropene	29.0	26.8	93	3	36	30-138	
1,2,3-Trichlorobenzene	29.0	19.1	66	8	40	10-120	
1,2,3-Trichloropropane	29.0	30.1	104	11	40	10-178	
1,2,4-Trichlorobenzene	29.0	16.6	57	8	40	10-120	
1,2,4-Trimethylbenzene	29.0	22.7	78	3	40	10-149	
1,2-Dibromo-3-Chloropropane	29.0	24.4	84	14	40	10-141	
1,2-Dichlorobenzene	29.0	24.1	83	6	40	10-130	
1,2-Dichloroethane	29.0	26.9	93	0	34	42-127	
1,2-Dichloropropane	29.0	27.5	95	1	36	51-128	
1,3-Dichlorobenzene	29.0	22.5	78	2	40	10-131	
1,3-Dichloropropane	29.0	28.0	97	4	40	34-121	
1,4-Dichlorobenzene	29.0	22.1	76	5	40	10-130	
2,2-Dichloropropane	29.0	18.2	63	3	40	20-141	
2-Chloroethyl vinyl ether	29.0	25.6 J	88	1	40	10-134	
2-Chlorotoluene	29.0	23.3	81	2	40	10-179	
2-Hexanone	57.9	52.7	91	7	40	15-147	
Bromobenzene	29.0	24.1	83	1	40	10-164	
Bromochloromethane	29.0	29.7	103	1	40	36-147	
4-Chlorotoluene	29.0	23.2	80	4	40	10-158	
4-Isopropyltoluene	29.0	22.1	76	4	40	10-142	
Acetone	57.9	62.7	108	5	39	10-160	
Benzene	29.0	27.2	94	2	40	39-133	
Bromoform	29.0	25.2	87	4	40	18-120	
Bromomethane	29.0	25.3	87	2	40	10-159	
Carbon disulfide	29.0	25.6	88	2	40	16-145	
Carbon tetrachloride	29.0	25.3	87	5	40	22-142	
Chlorobenzene	29.0	25.0	86	1	40	21-131	
Chloroethane	29.0	24.9	86	0	40	17-162	
Chloroform	29.0	27.2	94	2	32	51-130	
Chloromethane	29.0	23.8	82	0	37	26-149	
cis-1,2-Dichloroethene	29.0	26.9	93	3	40	50-128	
cis-1,3-Dichloropropene	29.0	24.8	86	4	40	15-132	
Hexachlorobutadiene	29.0	17.8	61	3	40	10-120	
Dibromomethane	29.0	30.1	104	1	30	37-138	
Bromodichloromethane	29.0	26.4	91	2	39	32-129	
Dichlorodifluoromethane	29.0	24.0	83	3	31	15-150	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: UX82211.D

Lab ID: 240-106686-10 MSD Client ID: SB-MW158-11-12 MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	29.0	25.3	87	2	40	20-135	
1,2-Dibromoethane	29.0	29.1	101	3	40	36-125	
Naphthalene	29.0	21.3	74	16	40	10-120	
m-Xylene & p-Xylene	29.0	25.0	86	0	40	16-137	
n-Butylbenzene	29.0	20.2	70	6	40	10-149	
Isopropylbenzene	29.0	24.2	84	1	40	20-138	
N-Propylbenzene	29.0	22.7	78	1	40	10-162	
2-Butanone (MEK)	57.9	59.2	102	4	36	20-148	
4-Methyl-2-pentanone (MIBK)	57.9	57.9	100	6	40	29-143	
sec-Butylbenzene	29.0	22.2	77	3	40	10-156	
Methyl tert-butyl ether	29.0	26.7	92	0	34	48-134	
Methylene Chloride	29.0	26.0 J	90	8	40	39-145	
o-Xylene	29.0	26.1	90	2	40	21-138	
Styrene	29.0	23.8	82	3	40	10-134	
tert-Butylbenzene	29.0	22.7	79	3	40	10-148	
Tetrachloroethene	29.0	24.6	85	4	40	20-151	
Toluene	29.0	26.0	90	2	40	29-141	
trans-1,2-Dichloroethene	29.0	27.6	95	3	40	44-141	
trans-1,3-Dichloropropene	29.0	20.9	72	1	40	15-120	
Trichloroethene	29.0	27.3	94	2	40	25-148	
Trichlorofluoromethane	29.0	26.4	91	3	39	38-149	
Vinyl acetate	29.0	22.7	78	0	40	10-120	
Vinyl chloride	29.0	25.7	89	0	37	31-148	
tert-Butyl alcohol	290	289	100	6	39	59-128	
Xylenes, Total	57.9	51.1	88	1	40	19-137	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: UX82187.D Lab Sample ID: MB 240-363459/8

Matrix: Solid Heated Purge:(Y/N) Y

Instrument ID: A3UX8 Date Analyzed: 01/10/2019 04:30

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-363459/9	UX82188.D	01/10/2019 04:54
SB-MW154-9-10	240-106686-2	UX82201.D	01/10/2019 10:00
SB-MW154-10-12	240-106686-3	UX82202.D	01/10/2019 10:23
SB-MW154-12-13	240-106686-4	UX82203.D	01/10/2019 10:47
SB-MW155-8-9	240-106686-5	UX82204.D	01/10/2019 11:10
SB-MW155-9-11	240-106686-6	UX82205.D	01/10/2019 11:33
SB-MW155-11-12	240-106686-7	UX82206.D	01/10/2019 11:55
SB-MW158-9-10	240-106686-8	UX82207.D	01/10/2019 12:18
SB-MW158-10-11	240-106686-9	UX82208.D	01/10/2019 12:42
SB-MW158-11-12	240-106686-10	UX82209.D	01/10/2019 13:05
SB-MW158-11-12 MS	240-106686-10 MS	UX82210.D	01/10/2019 13:28
SB-MW158-11-12 MSD	240-106686-10 MSD	UX82211.D	01/10/2019 13:51

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-363459/8

Matrix: Solid | Lab File ID: UX82187.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 01/10/2019 04:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.0	U	5.0	3.0
71-55-6	1,1,1-Trichloroethane	0.82	U	5.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	1.4	U	5.0	1.4
76-13-1	1,1,2-Trichlorotrifluoroethane	1.3	U	5.0	1.3
75-34-3	1,1-Dichloroethane	0.69	U	5.0	0.69
75-35-4	1,1-Dichloroethene	0.90	U	5.0	0.90
563-58-6	1,1-Dichloropropene	0.99	U	5.0	0.99
87-61-6	1,2,3-Trichlorobenzene	0.57	U	5.0	0.57
96-18-4	1,2,3-Trichloropropane	1.6	U	5.0	1.6
526-73-8	1,2,3-Trimethylbenzene	1.8	U	5.0	1.8
120-82-1	1,2,4-Trichlorobenzene	0.57	U	5.0	0.57
95-63-6	1,2,4-Trimethylbenzene	1.0	U	5.0	1.0
96-12-8	1,2-Dibromo-3-Chloropropane	3.6	U	10	3.6
95-50-1	1,2-Dichlorobenzene	1.1	U	5.0	1.1
107-06-2	1,2-Dichloroethane	0.77	U	5.0	0.77
78-87-5	1,2-Dichloropropane	0.85	U	5.0	0.85
541-73-1	1,3-Dichlorobenzene	0.82	U	5.0	0.82
142-28-9	1,3-Dichloropropane	0.99	U	5.0	0.99
106-46-7	1,4-Dichlorobenzene	0.88	U	5.0	0.88
594-20-7	2,2-Dichloropropane	1.2	U	5.0	1.2
110-75-8	2-Chloroethyl vinyl ether	8.9	U	50	8.9
95-49-8	2-Chlorotoluene	0.95	U	5.0	0.95
591-78-6	2-Hexanone	4.1	U	20	4.1
108-86-1	Bromobenzene	1.2	U	5.0	1.2
74-97-5	Bromochloromethane	0.59	U	5.0	0.59
106-43-4	4-Chlorotoluene	0.86	U	5.0	0.86
99-87-6	4-Isopropyltoluene	2.9	U	5.0	2.9
67-64-1	Acetone	21	U	25	21
71-43-2	Benzene	0.70	U	5.0	0.70
75-25-2	Bromoform	2.4	U	5.0	2.4
74-83-9	Bromomethane	0.99	U	5.0	0.99
75-15-0	Carbon disulfide	1.2	U	5.0	1.2
56-23-5	Carbon tetrachloride	3.3	U	5.0	3.3
108-90-7	Chlorobenzene	0.92	U	5.0	0.92
75-00-3	Chloroethane	1.2	U	5.0	1.2
67-66-3	Chloroform	0.79	U	5.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-363459/8

Matrix: Solid | Lab File ID: UX82187.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 01/10/2019 04:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	5.0	1.0
156-59-2	cis-1,2-Dichloroethene	0.65	U	5.0	0.65
10061-01-5	cis-1,3-Dichloropropene	1.4	U	5.0	1.4
87-68-3	Hexachlorobutadiene	3.7	U	5.0	3.7
74-95-3	Dibromomethane	0.67	U	5.0	0.67
75-27-4	Bromodichloromethane	0.68	U	5.0	0.68
75-71-8	Dichlorodifluoromethane	0.94	U	5.0	0.94
100-41-4	Ethylbenzene	1.0	U	5.0	1.0
106-93-4	1,2-Dibromoethane	0.77	U	5.0	0.77
108-20-3	Diisopropyl ether	0.76	U	10	0.76
91-20-3	Naphthalene	2.7	U	5.0	2.7
104-51-8	n-Butylbenzene	3.5	U	5.0	3.5
98-82-8	Isopropylbenzene	0.83	U	5.0	0.83
103-65-1	N-Propylbenzene	0.73	U	5.0	0.73
78-93-3	2-Butanone (MEK)	3.6	U	20	3.6
108-10-1	4-Methyl-2-pentanone (MIBK)	3.7	U	20	3.7
135-98-8	sec-Butylbenzene	0.86	U	5.0	0.86
1634-04-4	Methyl tert-butyl ether	0.82	U	5.0	0.82
994-05-8	Tert-amyl methyl ether	2.2	U	5.0	2.2
75-09-2	Methylene Chloride	12	U	25	12
100-42-5	Styrene	1.2	U	5.0	1.2
637-92-3	Ethyl tert-butyl ether	2.3	U	5.0	2.3
98-06-6	tert-Butylbenzene	0.91	U	5.0	0.91
127-18-4	Tetrachloroethene	0.73	U	5.0	0.73
108-88-3	Toluene	0.77	U	5.0	0.77
156-60-5	trans-1,2-Dichloroethene	0.47	U	5.0	0.47
10061-02-6	trans-1,3-Dichloropropene	1.0	U	5.0	1.0
79-01-6	Trichloroethene	0.63	U	5.0	0.63
75-69-4	Trichlorofluoromethane	1.1	U	5.0	1.1
108-05-4	Vinyl acetate	2.1	U	10	2.1
75-01-4	Vinyl chloride	0.84	U	5.0	0.84
75-65-0	tert-Butyl alcohol	17	U	200	17
1330-20-7	Xylenes, Total	1.6	U	10	1.6
124-48-1	Chlorodibromomethane	2.8	U	5.0	2.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-363459/8

Matrix: Solid | Lab File ID: UX82187.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(g) | Date Analyzed: 01/10/2019 04:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 363459 | Units: ug/Kg

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		48-123
460-00-4	4-Bromofluorobenzene (Surr)	77		49-141
2037-26-5	Toluene-d8 (Surr)	83		62-135
1868-53-7	Dibromofluoromethane (Surr)	87		49-132

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: BFB8814.D BFB Injection Date: 11/30/2018

Instrument ID: A3UX8 BFB Injection Time: 03:22

Analysis Batch No.: 357692

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	31.2	
75	30.0 - 60.0 % of mass 95	55.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.3	(0.4) 1
174	50.0 - 120.00 % of mass 95	78.1	
175	5.0 - 9.0 % of mass 174	5.9	(7.6) 1
176	95.0 - 101.0 % of mass 174	76.4	(97.9) 1
177	5.0 - 9.0 % of mass 176	4.9	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-357692/3	UX81313.D	11/30/2018	03:55
	STD8260 240-357692/4	UX81314.D	11/30/2018	04:18
	STD8260 240-357692/5	UX81315.D	11/30/2018	04:40
	STD8260 240-357692/6	UX81316.D	11/30/2018	05:01
	ICIS 240-357692/7	UX81317.D	11/30/2018	05:24
	STD8260 240-357692/8	UX81318.D	11/30/2018	05:47
	STD8260 240-357692/9	UX81319.D	11/30/2018	06:09
	STD8260 240-357692/10	UX81320.D	11/30/2018	06:31
	STD8260 240-357692/11	UX81321.D	11/30/2018	06:53
	STDA9 240-357692/12	UX81322.D	11/30/2018	07:16
	STDA9 240-357692/13	UX81323.D	11/30/2018	07:38
	STDA9 240-357692/14	UX81324.D	11/30/2018	08:00
	STDA9 240-357692/15	UX81325.D	11/30/2018	08:23
	STDA9 240-357692/16	UX81326.D	11/30/2018	08:45
	STDA9 240-357692/17	UX81327.D	11/30/2018	09:08
	STDA9 240-357692/18	UX81328.D	11/30/2018	09:30
	STDA9 240-357692/19	UX81329.D	11/30/2018	09:52
	STDA9 240-357692/20	UX81330.D	11/30/2018	10:15
	ICV 240-357692/21	UX81331.D	11/30/2018	10:37
	ICV 240-357692/22	UX81332.D	11/30/2018	11:00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-357692/11	UX81321.D
Level 2	STD8260 240-357692/10	UX81320.D
Level 3	STD8260 240-357692/9	UX81319.D
Level 4	STD8260 240-357692/8	UX81318.D
Level 5	ICIS 240-357692/7	UX81317.D
Level 6	STD8260 240-357692/6	UX81316.D
Level 7	STD8260 240-357692/5	UX81315.D
Level 8	STD8260 240-357692/4	UX81314.D
Level 9	STD8260 240-357692/3	UX81313.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3171 0.3632	0.3618 0.3530	0.3888 0.3159	0.3248 0.3379	0.3477	Ave		0.3456				7.0		15.0			
Chloromethane	0.5402 0.4908	0.4890 0.4859	0.5494 0.4240	0.4344 0.4312	0.4675	Ave		0.4792			0.1000	9.5		15.0			
Vinyl chloride	0.3512 0.3316	0.3401 0.3284	0.3670 0.2876	0.2953 0.3092	0.3132	Ave		0.3248				8.0		15.0			
Butadiene	0.4215 0.4391	0.4065 0.4371	0.4867 0.3860	0.3922 0.4094	0.4125	Ave		0.4212				7.2		15.0			
Bromomethane	0.2210 0.1716	0.1865 0.1610	0.2087 +++++	0.1628 +++++	0.1624	Ave		0.1820				13.4		15.0			
Chloroethane	0.2574 0.2120	0.2041 0.2094	0.2368 0.1739	0.1906 0.1784	0.1937	Ave		0.2062				13.1		15.0			
Dichlorofluoromethane	0.5144 0.4763	0.4966 0.4649	0.5146 0.4039	0.4255 0.4285	0.4421	Ave		0.4630				8.8		15.0			
Trichlorofluoromethane	0.4443 0.4379	0.4349 0.4315	0.4773 0.3809	0.3927 0.4132	0.4165	Ave		0.4255				6.8		15.0			
Ethyl ether	0.2330 0.2088	0.2238 0.2019	0.2671 0.2166	0.2553 0.1960	0.2454	Ave		0.2276				10.8		15.0			
Acrolein	0.0394 0.0387	0.0376 0.0386	0.0415 0.0335	0.0357 0.0348	0.0380	Ave		0.0375				6.6		15.0			
1,1-Dichloroethene	+++++ 0.2743	0.2356 0.2676	0.3420 0.2396	0.2651 0.2551	0.2651	Ave		0.2680				12.3		15.0			
1,1,2-Trichlorotrifluoroethane	+++++ 0.2225	+++++ 0.2120	0.3091 0.1903	0.2216 0.2040	0.2282	Lin1	0.5057	0.1987							0.9970		0.9900
Acetone	0.2804 0.0955	0.1787 0.0913	0.1431 0.0798	0.1040 0.0813	0.1044	Lin1	0.4395	0.0826							0.9960		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Iodomethane	0.3932 0.4536	0.4506 0.4430	0.5529 0.3913	0.4262 0.4086	0.4311	Ave		0.4389				11.1		15.0			
Carbon disulfide	0.6255 0.8480	0.6103 0.8665	0.8942 0.7865	0.7381 0.8592	0.7724	Ave		0.7778				13.3		15.0			
3-Chloro-1-propene	0.1288 0.1692	0.1226 0.1651	0.1735 0.1551	0.1465 0.1622	0.1512	Ave		0.1527				11.5		15.0			
Methyl acetate	0.2138 0.1977	0.2019 0.1904	0.2458 0.1776	0.2031 0.1799	0.2047	Ave		0.2016				10.1		15.0			
Methylene Chloride	+++++ 0.3068	+++++ 0.2867	0.5022 0.2560	0.3355 0.2638	0.3196	Lin1	1.1511	0.2604							0.9970		0.9900
tert-Butyl alcohol	+++++ 0.0164	+++++ 0.0155	0.0213 0.0141	0.0164 0.0135	0.0175	Lin1	0.4295	0.0140							0.9960		0.9900
Acrylonitrile	0.0848 0.0877	0.0885 0.0840	0.1079 0.0772	0.0868 0.0791	0.0894	Ave		0.0873				10.1		15.0			
Methyl tert-butyl ether	0.5113 0.6220	0.5659 0.5853	0.7570 0.5419	0.5777 0.5428	0.6118	Ave		0.5906				12.1		15.0			
trans-1,2-Dichloroethene	0.2722 0.3154	0.3251 0.3015	0.3658 0.2720	0.3110 0.2860	0.3127	Ave		0.3069				9.5		15.0			
Hexane	+++++ 0.0774	0.1027 0.0734	0.0955 0.0776	0.0937 0.0802	0.0827	Ave		0.0854				12.3		15.0			
1,1-Dichloroethane	0.5224 0.5973	0.5762 0.5832	0.7558 0.5485	0.5961 0.5640	0.6036	Ave		0.5941			0.1000	11.1		15.0			
Vinyl acetate	0.3795 0.4822	0.3839 0.4919	0.4935 0.5172	0.4769 0.5103	0.5088	Ave		0.4716				11.2		15.0			
2-Butanone (MEK)	+++++ 0.1187	+++++ 0.1105	+++++ 0.1077	0.1323 0.1071	0.1337	Ave		0.1183				10.2		15.0			
cis-1,2-Dichloroethene	0.3154 0.3169	0.3232 0.3078	0.3837 0.2851	0.3349 0.2907	0.3310	Ave		0.3210				9.0		15.0			
2,2-Dichloropropane	+++++ 0.3631	0.3905 0.3612	0.4439 0.3208	0.3462 0.3345	0.3383	Ave		0.3623				10.8		15.0			
Bromochloromethane	0.0989 0.1253	0.1196 0.1194	0.1536 0.1114	0.1325 0.1119	0.1269	Ave		0.1222				12.6		15.0			
Tetrahydrofuran	0.0743 0.0710	0.0724 0.0687	0.0897 0.0666	0.0736 0.0675	0.0733	Ave		0.0730				9.4		15.0			
Chloroform	0.4877 0.5211	0.5195 0.5068	0.6672 0.4784	0.5317 0.4936	0.5310	Ave		0.5263				10.7		15.0			
1,1,1-Trichloroethane	0.3424 0.4795	0.3858 0.4814	0.5340 0.4420	0.4519 0.4624	0.4666	Ave		0.4496				12.5		15.0			
Cyclohexane	0.5159 0.7296	0.5184 0.7182	0.8300 0.6602	0.6949 0.6992	0.6965	Ave		0.6736				14.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.3506 0.4003	0.3611 0.3964	0.4756 0.3939	0.4170 0.4123	0.4261	Ave		0.4037				9.1		15.0			
Carbon tetrachloride	0.2971 0.4152	0.3160 0.4161	0.4551 0.3917	0.3810 0.4159	0.3926	Ave		0.3867				13.0		15.0			
Isobutyl alcohol	+++++ 0.0094	+++++ 0.0090	0.0116 0.0079	0.0095 0.0080	0.0098	Ave		0.0093				13.4		15.0			
1,2-Dichloroethane	0.4886 0.4121	0.3939 0.3968	0.5146 0.3825	0.4421 0.3903	0.4373	Ave		0.4287				10.9		15.0			
Benzene	1.1423 1.1254	1.1229 1.0882	1.4286 1.0624	1.1912 1.0958	1.1701	Ave		1.1586				9.4		15.0			
n-Heptane	+++++ 0.0779	+++++ 0.0736	0.0951 0.0781	0.0863 0.0833	0.0793	Ave		0.0819				8.7		15.0			
Trichloroethene	0.2678 0.2698	0.2679 0.2662	0.3301 0.2623	0.2890 0.2764	0.2854	Ave		0.2794				7.5		15.0			
Methylcyclohexane	0.4413 0.5681	0.3994 0.5527	0.6459 0.5085	0.5476 0.5421	0.5559	Ave		0.5291				13.7		15.0			
1,2-Dichloropropane	0.2775 0.2693	0.2671 0.2617	0.3454 0.2587	0.2854 0.2600	0.2724	Ave		0.2775				9.7		15.0			
1,4-Dioxane	+++++ 0.0017	+++++ 0.0016	0.0018 0.0014	0.0017 0.0015	0.0018	Ave		0.0016				8.7		15.0			
Dibromomethane	0.0878 0.1274	0.1134 0.1232	0.1505 0.1189	0.1356 0.1212	0.1291	Ave		0.1230				13.9		15.0			
Bromodichloromethane	+++++ 0.3022	0.2572 0.3114	0.3264 0.3182	0.2925 0.3304	0.2983	Ave		0.3046				7.7		15.0			
2-Chloroethyl vinyl ether	+++++ 0.0765	0.0648 0.0741	0.0822 0.0809	0.0748 0.0820	0.0801	Ave		0.0769				7.6		15.0			
cis-1,3-Dichloropropene	+++++ 0.3071	+++++ 0.3036	0.2970 0.3289	0.2713 0.3322	0.2792	Ave		0.3028				7.6		15.0			
4-Methyl-2-pentanone (MIBK)	0.1572 0.2336	0.1775 0.2201	0.2587 0.2118	0.2249 0.2135	0.2318	Ave		0.2143				14.2		15.0			
Toluene	1.6081 1.6954	1.4143 1.6550	1.9821 1.6725	1.7826 1.7554	1.7449	Ave		1.7011				8.9		15.0			
trans-1,3-Dichloropropene	+++++ 0.3722	+++++ 0.3830	0.3505 0.4222	0.3114 0.4346	0.3442	Ave		0.3740				11.7		15.0			
Ethyl methacrylate	+++++ 0.3046	0.2146 0.2930	0.2582 0.3027	0.2829 0.3105	0.2882	Ave		0.2818				11.2		15.0			
1,1,2-Trichloroethane	0.2413 0.2445	0.2245 0.2319	0.3128 0.2312	0.2716 0.2358	0.2580	Ave		0.2502				11.0		15.0			
1,3-Dichloropropane	0.3694 0.4586	0.4724 0.4284	0.5498 0.4347	0.4925 0.4427	0.4783	Ave		0.4585				10.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Tetrachloroethene	0.3377 0.3473	0.3231 0.3407	0.4150 0.3363	0.3824 0.3541	0.3460	Ave		0.3536				8.0		15.0			
2-Hexanone	+++++ 0.2425	+++++ 0.2204	0.2490 0.2143	0.2240 0.2195	0.2459	Ave		0.2308				6.2		15.0			
Chlorodibromomethane	+++++ 0.2512	0.1748 0.2613	0.2334 0.2788	0.2200 0.2899	0.2399	Ave		0.2437				14.9		15.0			
1,2-Dibromoethane	0.1870 0.2355	0.1892 0.2244	0.2461 0.2222	0.2314 0.2303	0.2359	Ave		0.2225				9.3		15.0			
Chlorobenzene	1.1316 1.0368	1.1454 1.0060	1.3456 0.9914	1.1528 1.0302	1.0868	Ave		1.1030			0.3000	9.9		15.0			
1,1,1,2-Tetrachloroethane	0.2479 0.3734	0.2681 0.3745	0.3490 0.3650	0.3427 0.3694	0.3498	Ave		0.3377				13.9		15.0			
Ethylbenzene	0.4584 0.5971	0.5081 0.5757	0.6897 0.5752	0.5976 0.6007	0.6019	Ave		0.5783				11.2		15.0			
m-Xylene & p-Xylene	0.5408 0.7328	0.5891 0.7056	0.8378 0.7051	0.7575 0.7418	0.7241	Ave		0.7038				12.6		15.0			
o-Xylene	0.5324 0.7413	0.5515 0.7152	0.7892 0.6841	0.7403 0.7028	0.7253	Ave		0.6869				12.7		15.0			
Styrene	+++++ 1.1220	+++++ 1.0974	1.1463 1.1029	1.0569 1.1377	1.0771	Ave		1.1058				2.9		15.0			
Bromoform	+++++ 0.1236	+++++ 0.1316	0.1150 0.1469	0.1027 0.1535	0.1162	Ave		0.1271			0.1000	14.3		15.0			
Isopropylbenzene	+++++ 2.0550	1.4442 2.0601	2.1645 1.9730	2.0123 2.0590	2.0469	Ave		1.9769				11.2		15.0			
1,1,2,2-Tetrachloroethane	0.4616 0.5244	0.4419 0.5383	0.6737 0.5044	0.5671 0.5360	0.5608	Ave		0.5343			0.3000	12.6		15.0			
Bromobenzene	0.8221 0.7852	0.7460 0.7797	0.9932 0.7631	0.8506 0.7909	0.8685	Ave		0.8222				9.2		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.2052	+++++ 0.2106	0.1878 0.2144	0.1919 0.2317	0.1983	Ave		0.2057				7.3		15.0			
1,2,3-Trichloropropane	0.1684 0.1855	0.1895 0.1765	0.2401 0.1662	0.2109 0.1722	0.1997	Ave		0.1899				12.6		15.0			
N-Propylbenzene	+++++ 1.0015	0.7297 1.0057	1.2077 0.9671	1.0604 1.0301	1.0422	Ave		1.0055				13.2		15.0			
2-Chlorotoluene	0.6929 0.8243	0.7599 0.8534	0.9988 0.8117	0.9411 0.8545	0.8714	Ave		0.8453				10.7		15.0			
1,3,5-Trimethylbenzene	+++++ 3.2929	2.3946 3.3915	3.7591 3.2056	3.4135 3.3286	3.4072	Ave		3.2741				11.9		15.0			
4-Chlorotoluene	+++++ 0.8259	0.7336 0.8534	1.0558 0.8109	0.9513 0.8508	0.8860	Ave		0.8710				11.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
tert-Butylbenzene	+++++ 2.8758	2.1025 3.0161	3.5261 2.8829	2.9062 2.9807	2.9610	Ave		2.9064				13.3		15.0			
1,2,4-Trimethylbenzene	+++++ 3.3149	2.4165 3.3592	3.8068 3.2131	3.4931 3.3855	3.4479	Ave		3.3046				12.1		15.0			
sec-Butylbenzene	+++++ 4.2866	3.1867 4.3553	4.9050 4.1601	4.4013 4.3781	4.5446	Ave		4.2772				11.5		15.0			
1,3-Dichlorobenzene	1.5565 1.6467	1.6841 1.6325	2.0991 1.5445	1.8208 1.5944	1.7925	Ave		1.7079				10.3		15.0			
4-Isopropyltoluene	+++++ 3.5678	2.5536 3.6474	3.9940 3.4527	3.6858 3.6156	3.6921	Ave		3.5261				12.0		15.0			
1,4-Dichlorobenzene	2.0853 1.6420	1.9411 1.6068	2.1614 1.5496	1.8780 1.6144	1.7942	Ave		1.8081				12.3		15.0			
n-Butylbenzene	2.7018 3.2409	2.4114 3.3003	3.4625 3.1626	3.1569 3.3151	3.3451	Ave		3.1219				10.9		15.0			
1,2-Dichlorobenzene	1.5868 1.4949	1.6927 1.4893	1.9910 1.3787	1.6570 1.4246	1.6460	Ave		1.5957				11.5		15.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.0673	+++++ 0.0698	0.0605 0.0711	0.0605 0.0768	0.0685	Ave		0.0678				8.6		15.0			
1,2,4-Trichlorobenzene	1.0781 0.9039	0.9490 0.9116	1.0768 0.8892	0.9286 0.9012	1.0071	Ave		0.9606				7.8		15.0			
Hexachlorobutadiene	0.7521 0.5872	0.6981 0.5789	0.8360 0.5499	0.6882 0.5656	0.6732	Ave		0.6588				14.7		15.0			
Naphthalene	1.4853 1.6372	1.3520 1.6432	1.6018 1.5920	1.4130 1.6126	1.8026	Ave		1.5711				8.6		15.0			
1,2,3-Trichlorobenzene	1.0069 0.8223	0.8801 0.8007	1.0544 0.7651	0.8900 0.7701	0.9464	Ave		0.8818				11.8		15.0			
Dibromofluoromethane (Surr)	+++++ 0.2285	0.2793 0.2329	0.2954 0.2283	0.2569 0.2297	0.2422	Ave		0.2492				10.4		15.0			
1,2-Dichloroethane-d4 (Surr)	+++++ 0.2950	+++++ 0.2992	0.4136 0.2980	0.3787 0.3010	0.3478	Ave		0.3333				14.3		15.0			
Toluene-d8 (Surr)	+++++ 1.3185	1.5223 1.3277	1.5468 1.3487	1.5064 1.4017	1.3865	Ave		1.4198				6.5		15.0			
4-Bromofluorobenzene (Surr)	+++++ 0.4893	0.6230 0.4973	0.6119 0.4963	0.5922 0.5058	0.5522	Ave		0.5460				10.3		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-357692/11	UX81321.D
Level 2	STD8260 240-357692/10	UX81320.D
Level 3	STD8260 240-357692/9	UX81319.D
Level 4	STD8260 240-357692/8	UX81318.D
Level 5	ICIS 240-357692/7	UX81317.D
Level 6	STD8260 240-357692/6	UX81316.D
Level 7	STD8260 240-357692/5	UX81315.D
Level 8	STD8260 240-357692/4	UX81314.D
Level 9	STD8260 240-357692/3	UX81313.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dichlorodifluoromethane	FB	Ave	4954 279141	11174 568268	29394 1094502	56816 1373276	109960	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Chloromethane	FB	Ave	8440 377249	15102 782368	41536 1468786	76006 1752480	147866	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Vinyl chloride	FB	Ave	5487 254844	10504 528781	27745 996224	51655 1256546	99076	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Butadiene	FB	Ave	6585 337503	12554 703743	36794 1337228	68611 1663875	130486	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromomethane	FB	Ave	3453 131870	5758 259205	15778 +++++	28489 +++++	51381	1.00 50.0	2.00 100	5.00 +++++	10.0 +++++	20.0
Chloroethane	FB	Ave	4021 162914	6302 337091	17902 602571	33353 725083	61254	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Dichlorofluoromethane	FB	Ave	8036 366114	15336 748575	38905 1399147	74434 1741764	139832	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Trichlorofluoromethane	FB	Ave	6941 336605	13430 694656	36088 1319595	68701 1679321	131734	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Ethyl ether	FB	Ave	3641 160486	6912 325028	20196 750398	44669 796758	77628	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Acrolein	FB	Ave	3077 148548	5811 310901	15697 580200	31190 707839	60063	5.00 250	10.0 500	25.0 1000	50.0 1250	100
1,1-Dichloroethene	FB	Ave	+++++ 210810	7276 430842	25859 829898	46378 1036862	83850	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,2-Trichlorotrifluoroethane	FB	Lin1	+++++ 171020	+++++ 341379	23368 659252	38761 829321	72182	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Acetone	FB	Lin1	8761 146743	11040 293982	21639 553074	36404 661144	66070	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Iodomethane	FB	Ave	6143 348650	13916 713306	41801 1355553	74560 1660680	136339	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Carbon disulfide	FB	Ave	9772 651749	18848 1395081	67608 2724689	129123 3492065	244291	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
3-Chloro-1-propene	FB	Ave	2013 130039	3786 265798	13121 537366	25635 659307	47819	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Methyl acetate	FB	Ave	6680 303910	12467 612946	37174 1230504	71049 1462299	129517	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Methylene Chloride	FB	Lin1	+++++ 235812	+++++ 461669	37969 886976	58700 1072076	101081	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
tert-Butyl alcohol	FB	Lin1	+++++ 126034	+++++ 248932	16112 488711	28607 549097	55379	+++++ 500	+++++ 1000	50.0 2000	100 2500	200
Acrylonitrile	FB	Ave	13246 674305	27329 1352070	81548 2673958	151772 3215370	282909	10.0 500	20.0 1000	50.0 2000	100 2500	200
Methyl tert-butyl ether	FB	Ave	7988 478061	17476 942386	57230 1877478	101072 2206379	193503	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
trans-1,2-Dichloroethene	FB	Ave	4253 242388	10039 485444	27659 942413	54416 1162386	98910	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Hexane	FB	Ave	+++++ 59456	3171 118233	7222 268996	16394 325890	26149	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1-Dichloroethane	FB	Ave	8161 459125	17793 939049	57144 1900339	104286 2292372	190905	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Vinyl acetate	FB	Ave	5929 370592	11855 791901	37308 1791726	83438 2073901	160918	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Butanone (MEK)	FB	Ave	+++++ 182435	+++++ 355736	+++++ 746209	46287 870694	84603	+++++ 100	+++++ 200	+++++ 400	20.0 500	40.0
cis-1,2-Dichloroethene	FB	Ave	4927 243569	9981 495620	29007 987552	58583 1181472	104699	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2,2-Dichloropropane	FB	Ave	+++++ 279105	12059 581481	33561 1111249	60563 1359759	107000	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromochloromethane	FB	Ave	1545 96331	3693 192288	11615 385769	23175 454825	40143	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Tetrahydrofuran	FB	Ave	2323 109131	4474 221119	13557 461313	25760 548900	46373	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Chloroform	FB	Ave	7619 400540	16042 815970	50446 1657497	93014 2006254	167955	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,1-Trichloroethane	FB	Ave	5350 368526	11914 775118	40374 1531278	79062 1879237	147588	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Cyclohexane	FB	Ave	8060 560745	16008 1156249	62750 2287237	121575 2841772	220311	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1-Dichloropropene	FB	Ave	5477 307663	11150 638286	35959 1364720	72955 1675933	134776	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Carbon tetrachloride	FB	Ave	4641 319152	9760 669938	34404 1357018	66651 1690270	124163	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isobutyl alcohol	FB	Ave	+++++ 181266	+++++ 361847	21957 683475	41460 815822	77314	+++++ 1250	+++++ 2500	125 5000	250 6250	500
1,2-Dichloroethane	FB	Ave	7633 316745	12164 638927	38904 1325302	77342 1586225	138304	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Benzene	FB	Ave	17847 865021	34676 1751961	108012 3680557	208401 4453816	370100	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
n-Heptane	FB	Ave	+++++ 59847	+++++ 118441	7188 270516	15090 338550	25091	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Trichloroethene	FB	Ave	4184 207406	8273 428549	24960 908539	50560 1123462	90273	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Methylcyclohexane	FB	Ave	6894 436655	12335 889809	48836 1761807	95800 2203449	175834	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2-Dichloropropane	FB	Ave	4336 206965	8249 421401	26112 896196	49933 1056573	86161	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,4-Dioxane	FB	Ave	+++++ 25584	+++++ 51439	2670 98751	5871 121958	11603	+++++ 1000	+++++ 2000	100 4000	200 5000	400
Dibromomethane	FB	Ave	1371 97929	3503 198429	11375 412001	23725 492798	40829	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromodichloromethane	FB	Ave	+++++ 232274	7944 501325	24676 1102314	51177 1343020	94352	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Chloroethyl vinyl ether	FB	Ave	+++++ 117608	4004 238519	12433 560409	26164 666909	50690	+++++ 100	4.00 200	10.0 400	20.0 500	40.0
cis-1,3-Dichloropropene	FB	Ave	+++++ 236025	+++++ 488791	22452 1139544	47463 1350116	88314	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	4911 359116	10965 708591	39119 1467377	78694 1735491	146650	2.00 100	4.00 200	10.0 400	20.0 500	40.0
Toluene	CBNZ d5	Ave	16379 837309	28675 1675291	103180 3628284	201227 4438593	353237	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	+++++ 183828	+++++ 387714	18247 916021	35152 1098891	69682	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Ethyl methacrylate	CBNZ d5	Ave	+++++ 150415	4352 296628	13439 656597	31936 785221	58344	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,2-Trichloroethane	CBNZ d5	Ave	2458 120770	4552 234770	16284 501489	30656 596283	52228	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,3-Dichloropropane	CBNZ d5	Ave	3762 226496	9578 433619	28619 942988	55594 1119305	96835	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Tetrachloroethene	CBNZ d5	Ave	3440 171520	6550 344850	21602 729503	43167 895306	70037	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Hexanone	CBNZ d5	Ave	+++++ 239551	+++++ 446144	25920 929872	50573 1110288	99548	+++++ 100	+++++ 200	10.0 400	20.0 500	40.0
Chlorodibromomethane	CBNZ d5	Ave	+++++ 124046	3544 264524	12150 604889	24835 733136	48556	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2-Dibromoethane	CBNZ d5	Ave	1905 116324	3837 227155	12813 482135	26127 582247	47752	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Chlorobenzene	CBNZ d5	Ave	11526 512075	23223 1018313	70045 2150667	130132 2604849	220017	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	2525 184395	5435 379046	18168 791915	38686 934020	70803	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Ethylbenzene	CBNZ d5	Ave	4669 294909	10301 582722	35903 1247932	67457 1519044	121847	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
m-Xylene & p-Xylene	CBNZ d5	Ave	5508 361893	11944 714281	43610 1529564	85510 1875798	146588	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
o-Xylene	CBNZ d5	Ave	5423 366089	11181 724001	41083 1484130	83564 1776991	146819	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Styrene	CBNZ d5	Ave	+++++ 554125	+++++ 1110846	59673 2392654	119313 2876694	218050	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Bromoform	CBNZ d5	Ave	+++++ 61028	+++++ 133219	5989 318784	11592 388118	23525	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Isopropylbenzene	CBNZ d5	Ave	+++++ 1014922	29281 2085272	112676 4280140	227156 5206425	414366	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	2314 139763	4636 282641	18133 564985	32781 685403	58802	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Bromobenzene	DCBd 4	Ave	4121 209300	7826 409384	26730 854780	49172 1011266	91059	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	+++++ 54682	+++++ 110568	5054 240184	11095 296216	20788	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
1,2,3-Trichloropropane	DCBd 4	Ave	844 49440	1988 92650	6462 186159	12189 220138	20936	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
N-Propylbenzene	DCBd 4	Ave	+++++ 266952	7655 528032	32503 1083287	61299 1317129	109265	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Chlorotoluene	DCBd 4	Ave	3473 219702	7972 448041	26883 909232	54403 1092667	91359	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	+++++ 877704	25121 1780660	101172 3590633	197320 4256165	357230	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
4-Chlorotoluene	DCBd 4	Ave	+++++ 220141	7696 448042	28417 908290	54989 1087895	92890	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
tert-Butylbenzene	DCBd 4	Ave	+++++ 766530	22056 1583557	94902 3229218	167997 3811337	310450	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	+++++ 883583	25351 1763719	102457 3599002	201921 4328883	361496	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
sec-Butylbenzene	DCBd 4	Ave	+++++ 1142564	33430 2286684	132012 4659804	254422 5598145	476479	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	7802 438931	17667 857099	56496 1730048	105256 2038691	187931	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 03:55 Calibration End Date: 11/30/2018 06:53 Calibration ID: 48276

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4-Isopropyltoluene	DCBd 4	Ave	+++++ 950992	26789 1915042	107495 3867480	213061 4623154	387101	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,4-Dichlorobenzene	DCBd 4	Ave	10453 437671	20363 843618	58173 1735706	108560 2064288	188112	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
n-Butylbenzene	DCBd 4	Ave	13543 863846	25297 1732791	93191 3542510	182489 4238891	350724	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2-Dichlorobenzene	DCBd 4	Ave	7954 398457	17757 781961	53587 1544350	95787 1821587	172575	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	+++++ 17937	+++++ 36669	1628 79629	3498 98170	7177	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	5404 240935	9956 478635	28981 996056	53677 1152276	105593	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Hexachlorobutadiene	DCBd 4	Ave	3770 156505	7324 303954	22500 615978	39783 723274	70584	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Naphthalene	DCBd 4	Ave	7445 436395	14183 862747	43110 1783274	81683 2061939	188996	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	5047 219171	9233 420378	28379 857020	51445 984705	99225	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Dibromofluoromethane (Surr)	FB	Ave	+++++ 175617	8626 374903	22334 790934	44946 933742	76605	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	+++++ 226756	+++++ 481793	31273 1032509	66248 1223319	110019	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0
Toluene-d8 (Surr)	CBNZ d5	Ave	+++++ 651162	30864 1344000	80521 2925810	170055 3544273	280681	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	+++++ 241679	12632 503436	31855 1076768	66853 1278951	111780	+++++ 50.0	2.00 100	5.00 200	10.0 250	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 07:16 Calibration End Date: 11/30/2018 10:15 Calibration ID: 48278

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-357692/20	UX81330.D
Level 2	STDA9 240-357692/19	UX81329.D
Level 3	STDA9 240-357692/18	UX81328.D
Level 4	STDA9 240-357692/17	UX81327.D
Level 5	STDA9 240-357692/16	UX81326.D
Level 6	STDA9 240-357692/15	UX81325.D
Level 7	STDA9 240-357692/14	UX81324.D
Level 8	STDA9 240-357692/13	UX81323.D
Level 9	STDA9 240-357692/12	UX81322.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Acetonitrile	+++++ 0.0329	0.0356 0.0337	0.0459 0.0323	0.0392 0.0312	0.0354	Ave		0.0358				13.4		15.0			
Diisopropyl ether	0.2075 0.2265	0.2212 0.2336	0.2380 0.2310	0.2296 0.2213	0.2281	Ave		0.2263				3.9		15.0			
2-Chloro-1,3-butadiene	0.6583 0.6872	0.5621 0.7038	0.7374 0.7349	0.6720 0.7133	0.6898	Ave		0.6843				7.7		15.0			
Ethyl tert-butyl ether	0.8577 0.8634	0.7525 0.9006	0.9754 0.8720	0.8739 0.8389	0.8630	Ave		0.8664				6.7		15.0			
Propionitrile	0.0358 0.0292	0.0288 0.0290	0.0395 0.0297	0.0322 0.0279	0.0305	Ave		0.0314				12.3		15.0			
Ethyl acetate	+++++ 0.2199	0.2603 0.2147	0.2868 0.2386	0.2429 0.2114	0.2332	Ave		0.2385				10.6		15.0			
Methacrylonitrile	0.2017 0.1685	0.1567 0.1659	0.2088 0.1779	0.1815 0.1657	0.1760	Ave		0.1781				9.7		15.0			
Tert-amyl methyl ether	0.5006 0.5709	0.4504 0.6108	0.6352 0.5856	0.5857 0.5598	0.5648	Ave		0.5626				10.0		15.0			
n-Butanol	+++++ 0.0047	0.0033 0.0049	0.0041 0.0051	0.0042 0.0047	0.0039	Ave		0.0044				13.5		15.0			
Ethyl acrylate	0.2335 0.2212	0.1751 0.2186	0.2229 0.2539	0.2132 0.2163	0.2098	Ave		0.2183				9.6		15.0			
Methyl methacrylate	0.2107 0.2163	0.1800 0.2146	0.2359 0.2439	0.2088 0.2090	0.2089	Ave		0.2142				8.5		15.0			
2-Nitropropane	+++++ 0.0323	+++++ 0.0369	0.0317 0.0496	0.0285 +++++	0.0330	Qua	0.1320	0.0241	0.0000629						1.0000		0.9900
n-Butyl acetate	+++++ 0.3234	+++++ 0.3306	0.3296 0.3775	0.2936 +++++	0.2820	Ave		0.3228				10.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 07:16 Calibration End Date: 11/30/2018 10:15 Calibration ID: 48278

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1-Chlorohexane	+++++ 0.4332	+++++ 0.4538	0.4223 0.4976	0.3987 0.4493	0.4197	Ave		0.4392				7.2		15.0			
Cyclohexanone	+++++ 0.0079	+++++ 0.0090	0.0077 0.0095	0.0081 0.0091	0.0071	Ave		0.0084				10.5		15.0			
Pentachloroethane	+++++ 0.3616	0.2003 0.3981	0.2813 0.3817	0.2591 0.3865	0.2885	Lin1	-1.192	0.3858							0.9980		0.9900
1,2,3-Trimethylbenzene	3.5343 3.4716	2.6987 3.4357	3.4621 3.3796	3.0677 3.2470	3.4050	Ave		3.3002				8.1		15.0			
Benzyl chloride	+++++ 0.0831	+++++ 0.1056	+++++ 0.1342	0.0509 0.1368	0.0610	Qua	-0.916	0.1023	0.0001604						0.9990		0.9900
1,3,5-Trichlorobenzene	1.6308 1.1935	1.2237 1.1858	1.4381 1.1229	1.2026 1.0996	1.2971	Ave		1.2660				13.4		15.0			
2-Methylnaphthalene	1.4491 1.2035	1.1110 1.2078	0.9369 1.0829	1.0546 0.9959	1.1963	Ave		1.1376				13.2		15.0			
1-Chloro-1-fluoroethane TIC	0.6206 0.4708	0.4384 0.4847	0.6340 0.4735	0.5483 0.4627	0.4858	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 07:16 Calibration End Date: 11/30/2018 10:15 Calibration ID: 48278

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-357692/20	UX81330.D
Level 2	STDA9 240-357692/19	UX81329.D
Level 3	STDA9 240-357692/18	UX81328.D
Level 4	STDA9 240-357692/17	UX81327.D
Level 5	STDA9 240-357692/16	UX81326.D
Level 6	STDA9 240-357692/15	UX81325.D
Level 7	STDA9 240-357692/14	UX81324.D
Level 8	STDA9 240-357692/13	UX81323.D
Level 9	STDA9 240-357692/12	UX81322.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acetonitrile	FB	Ave	+++++ 264533	10991 528905	33544 1080699	56990 1285693	111839	+++++ 500	20.0 1000	50.0 2000	100 2500	200
Diisopropyl ether	FB	Ave	3021 182224	6825 366997	17391 772697	33385 911194	72081	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Chloro-1,3-butadiene	FB	Ave	9584 552939	17344 1105506	53891 2458699	97706 2936617	218000	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Ethyl tert-butyl ether	FB	Ave	12487 694739	23218 1414715	71280 2917288	127064 3454008	272705	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Propionitrile	FB	Ave	5206 234764	8884 456055	28900 993083	46836 1149165	96247	10.0 500	20.0 1000	50.0 2000	100 2500	200
Ethyl acetate	FB	Ave	+++++ 353926	16061 674415	41914 1596709	70627 1740454	147407	+++++ 100	4.00 200	10.0 400	20.0 500	40.0
Methacrylonitrile	FB	Ave	29366 1355765	48364 2606121	152577 5952587	263838 6820427	556135	10.0 500	20.0 1000	50.0 2000	100 2500	200
Tert-amyl methyl ether	FB	Ave	7288 459333	13897 959532	46421 1959070	85152 2304938	178498	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
n-Butanol	FB	Ave	+++++ 95019	2575 192593	7539 428345	15168 484393	31043	+++++ 1250	50.0 2500	125 5000	250 6250	500
Ethyl acrylate	FB	Ave	3399 178012	5404 343402	16289 849313	30994 890732	66288	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Methyl methacrylate	FB	Ave	6134 348045	11105 674095	34474 1631845	60710 1721261	132047	2.00 100	4.00 200	10.0 400	20.0 500	40.0
2-Nitropropane	FB	Qua	+++++ 52002	+++++ 115986	4628 331782	8294 +++++	20877	+++++ 100	+++++ 200	10.0 400	20.0 +++++	40.0
n-Butyl acetate	FB	Ave	+++++ 260212	+++++ 519258	24087 1263084	42684 +++++	89111	+++++ 50.0	+++++ 100	5.00 200	10.0 +++++	20.0
1-Chlorohexane	CBNZ d5	Ave	+++++ 228804	+++++ 464802	20911 1102927	38265 1193853	86918	+++++ 50.0	+++++ 100	5.00 200	10.0 250	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 357692

SDG No.:

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) Y

Calibration Start Date: 11/30/2018 07:16 Calibration End Date: 11/30/2018 10:15 Calibration ID: 48278

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Cyclohexanone	CBNZ d5	Ave	+++++ 41847	+++++ 92378	3813 211319	7769 242673	14736	+++++ 500	+++++ 1000	50.0 2000	100 2500	200
Pentachloroethane	DCBd 4	Lin1	+++++ 182005	3809 405387	13315 822330	24861 1019931	57367	+++++ 100	4.00 200	10.0 400	20.0 500	40.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	15897 873600	25657 1749353	81944 3640722	147174 4284228	338551	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
Benzyl chloride	DCBd 4	Qua	+++++ 20910	+++++ 53749	+++++ 144556	2441 180471	6069	+++++ 50.0	+++++ 100	+++++ 200	10.0 250	20.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	7335 300329	11634 603796	34038 1209602	57694 1450903	128969	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0
2-Methylnaphthalene	DCBd 4	Ave	13036 605698	21125 1229959	44349 2333072	101194 2627993	237895	2.00 100	4.00 200	10.0 400	20.0 500	40.0
1-Chloro-1-fluoroethane TIC	FB	None	9035 378859	13527 761389	46331 1584321	79721 1904925	153533	1.00 50.0	2.00 100	5.00 200	10.0 250	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
None = No Calib Curve
Qua = Quadratic ISTD

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-357692/21 Calibration Date: 11/30/2018 10:37

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 03:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 06:53

Lab File ID: UX81331.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3456	0.4014		0.0290	0.0250	16.2	50.0
Chloromethane	Ave	0.4792	0.4988	0.1000	0.0260	0.0250	4.1	50.0
Vinyl chloride	Ave	0.3248	0.3392		0.0261	0.0250	4.4	20.0
Butadiene	Ave	0.4212	0.3852		0.0229	0.0250	-8.5	50.0
Bromomethane	Ave	0.1820	0.1707		0.0235	0.0250	-6.2	50.0
Chloroethane	Ave	0.2062	0.1998		0.0242	0.0250	-3.1	50.0
Dichlorofluoromethane	Ave	0.4630	0.4649		0.0251	0.0250	0.4	50.0
Trichlorofluoromethane	Ave	0.4255	0.4216		0.0248	0.0250	-0.9	50.0
Ethyl ether	Ave	0.2276	0.2484		0.0273	0.0250	9.2	50.0
Acrolein	Ave	0.0375	0.0245		0.0816	0.125	-34.7	50.0
1,1-Dichloroethene	Ave	0.2680	0.2588		0.0241	0.0250	-3.5	20.0
1,1,2-Trichlorotrifluoroethane	Lin1		0.2166		0.0247	0.0250	-1.2	50.0
Acetone	Lin1		0.0952		0.0523	0.0500	4.6	50.0
Iodomethane	Ave	0.4389	0.4288		0.0244	0.0250	-2.3	50.0
Carbon disulfide	Ave	0.7778	0.7462		0.0240	0.0250	-4.1	50.0
3-Chloro-1-propene	Ave	0.1527	0.1540		0.0252	0.0250	0.8	50.0
Methyl acetate	Ave	0.2016	0.1948		0.0483	0.0500	-3.4	50.0
Methylene Chloride	Lin1		0.3070		0.0251	0.0250	0.2	50.0
tert-Butyl alcohol	Lin1		0.0171		0.274	0.250	9.7	50.0
Acrylonitrile	Ave	0.0873	0.0874		0.250	0.250	0.1	50.0
Methyl tert-butyl ether	Ave	0.5906	0.5890		0.0249	0.0250	-0.3	50.0
trans-1,2-Dichloroethene	Ave	0.3069	0.3107		0.0253	0.0250	1.2	50.0
Hexane	Ave	0.0854	0.0776		0.0227	0.0250	-9.2	20.0
1,1-Dichloroethane	Ave	0.5941	0.5846	0.1000	0.0246	0.0250	-1.6	50.0
Vinyl acetate	Ave	0.4716	0.4796		0.0254	0.0250	1.7	50.0
2,2-Dichloropropane	Ave	0.3623	0.3053		0.0211	0.0250	-15.7	50.0
2-Butanone (MEK)	Ave	0.1183	0.1251		0.0528	0.0500	5.7	50.0
cis-1,2-Dichloroethene	Ave	0.3210	0.3163		0.0246	0.0250	-1.4	50.0
Bromochloromethane	Ave	0.1222	0.1250		0.0256	0.0250	2.3	50.0
Chloroform	Ave	0.5263	0.5115		0.0243	0.0250	-2.8	20.0
Tetrahydrofuran	Ave	0.0730	0.0705		0.0483	0.0500	-3.4	50.0
1,1,1-Trichloroethane	Ave	0.4496	0.4461		0.0248	0.0250	-0.8	50.0
Cyclohexane	Ave	0.6736	0.6974		0.0259	0.0250	3.5	50.0
1,1-Dichloropropene	Ave	0.4037	0.3829		0.0237	0.0250	-5.1	50.0
Carbon tetrachloride	Ave	0.3867	0.3738		0.0242	0.0250	-3.3	50.0
Isobutyl alcohol	Ave	0.0093	0.0099		0.661	0.625	5.8	50.0
1,2-Dichloroethane	Ave	0.4287	0.4222		0.0246	0.0250	-1.5	50.0
Benzene	Ave	1.159	1.084		0.0234	0.0250	-6.4	50.0
n-Heptane	Ave	0.0819	0.0717		0.0219	0.0250	-12.5	50.0
Trichloroethene	Ave	0.2794	0.2650		0.0237	0.0250	-5.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-357692/21 Calibration Date: 11/30/2018 10:37

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 03:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 06:53

Lab File ID: UX81331.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.2775	0.2771		0.0250	0.0250	-0.1	20.0
Methylcyclohexane	Ave	0.5291	0.5119		0.0242	0.0250	-3.2	50.0
1,4-Dioxane	Ave	0.0016	0.0016		0.500	0.500	0.0	50.0
Dibromomethane	Ave	0.1230	0.1192		0.0242	0.0250	-3.1	50.0
Bromodichloromethane	Ave	0.3046	0.2843		0.0233	0.0250	-6.7	50.0
2-Chloroethyl vinyl ether	Ave	0.0769	0.0675		0.0219	0.0250	-12.2	50.0
cis-1,3-Dichloropropene	Ave	0.3028	0.2796		0.0231	0.0250	-7.6	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2143	0.2261		0.0528	0.0500	5.5	50.0
Toluene	Ave	1.701	1.631		0.0240	0.0250	-4.1	20.0
trans-1,3-Dichloropropene	Ave	0.3740	0.3148		0.0210	0.0250	-15.8	50.0
Ethyl methacrylate	Ave	0.2818	0.2870		0.0255	0.0250	1.8	50.0
1,1,2-Trichloroethane	Ave	0.2502	0.2595		0.0259	0.0250	3.7	50.0
1,3-Dichloropropane	Ave	0.4585	0.4711		0.0257	0.0250	2.8	50.0
Tetrachloroethene	Ave	0.3536	0.3329		0.0235	0.0250	-5.9	50.0
2-Hexanone	Ave	0.2308	0.2346		0.0508	0.0500	1.6	50.0
Chlorodibromomethane	Ave	0.2437	0.2234		0.0229	0.0250	-8.3	50.0
1,2-Dibromoethane	Ave	0.2225	0.2265		0.0255	0.0250	1.8	50.0
Chlorobenzene	Ave	1.103	1.005	0.3000	0.0228	0.0250	-8.8	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3377	0.3479		0.0258	0.0250	3.0	50.0
Ethylbenzene	Ave	0.5783	0.5724		0.0247	0.0250	-1.0	20.0
m-Xylene & p-Xylene	Ave	0.7038	0.6947		0.0247	0.0250	-1.3	50.0
o-Xylene	Ave	0.6869	0.7051		0.0257	0.0250	2.7	50.0
Styrene	Ave	1.106	1.061		0.0240	0.0250	-4.0	50.0
Bromoform	Ave	0.1271	0.1137	0.1000	0.0224	0.0250	-10.6	50.0
Isopropylbenzene	Ave	1.977	1.939		0.0245	0.0250	-1.9	50.0
1,1,2,2-Tetrachloroethane	Ave	0.5343	0.5652	0.3000	0.0264	0.0250	5.8	50.0
Bromobenzene	Ave	0.8222	0.7770		0.0236	0.0250	-5.5	50.0
1,2,3-Trichloropropane	Ave	0.1899	0.1960		0.0258	0.0250	3.2	50.0
trans-1,4-Dichloro-2-butene	Ave	0.2057	0.2043		0.0248	0.0250	-0.7	50.0
N-Propylbenzene	Ave	1.006	0.9517		0.0237	0.0250	-5.4	50.0
2-Chlorotoluene	Ave	0.8453	0.8084		0.0239	0.0250	-4.4	50.0
1,3,5-Trimethylbenzene	Ave	3.274	3.038		0.0232	0.0250	-7.2	50.0
4-Chlorotoluene	Ave	0.8710	0.8088		0.0232	0.0250	-7.1	50.0
tert-Butylbenzene	Ave	2.906	2.627		0.0226	0.0250	-9.6	50.0
1,2,4-Trimethylbenzene	Ave	3.305	3.039		0.0230	0.0250	-8.0	50.0
sec-Butylbenzene	Ave	4.277	3.918		0.0229	0.0250	-8.4	50.0
1,3-Dichlorobenzene	Ave	1.708	1.583		0.0232	0.0250	-7.3	50.0
4-Isopropyltoluene	Ave	3.526	3.205		0.0227	0.0250	-9.1	50.0
1,4-Dichlorobenzene	Ave	1.808	1.593		0.0220	0.0250	-11.9	50.0
n-Butylbenzene	Ave	3.122	2.807		0.0225	0.0250	-10.1	50.0
1,2-Dichlorobenzene	Ave	1.596	1.481		0.0232	0.0250	-7.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-357692/21 Calibration Date: 11/30/2018 10:37

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 03:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 06:53

Lab File ID: UX81331.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.0678	0.0626		0.0231	0.0250	-7.7	50.0
1,2,4-Trichlorobenzene	Ave	0.9606	0.7594		0.0198	0.0250	-20.9	50.0
Hexachlorobutadiene	Ave	0.6588	0.5260		0.0200	0.0250	-20.2	50.0
Naphthalene	Ave	1.571	1.320		0.0210	0.0250	-16.0	50.0
1,2,3-Trichlorobenzene	Ave	0.8818	0.7263		0.0206	0.0250	-17.6	50.0
Dibromofluoromethane (Surr)	Ave	0.2492	0.2160		0.0434	0.0500	-13.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3333	0.2833		0.0425	0.0500	-15.0	50.0
Toluene-d8 (Surr)	Ave	1.420	1.251		0.0441	0.0500	-11.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5460	0.4758		0.0436	0.0500	-12.9	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-357692/22 Calibration Date: 11/30/2018 11:00

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 03:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 06:53

Lab File ID: UX81332.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2492	0.2099		0.0421	0.0500	-15.8	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3333	0.2837		0.0426	0.0500	-14.9	50.0
Toluene-d8 (Surr)	Ave	1.420	1.160		0.0409	0.0500	-18.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5460	0.4235		0.0388	0.0500	-22.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-357692/22 Calibration Date: 11/30/2018 11:00

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 07:16

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 10:15

Lab File ID: UX81332.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0358	0.0354		0.247	0.250	-1.0	50.0
Diisopropyl ether	Ave	0.2263	0.2300		0.0254	0.0250	1.6	50.0
2-Chloro-1,3-butadiene	Ave	0.6843	0.6772		0.0247	0.0250	-1.0	50.0
Ethyl tert-butyl ether	Ave	0.8664	0.8597		0.0248	0.0250	-0.8	50.0
Ethyl acetate	Ave	0.2385	0.2259		0.0474	0.0500	-5.3	50.0
Propionitrile	Ave	0.0314	0.0299		0.238	0.250	-4.8	50.0
Methacrylonitrile	Ave	0.1781	0.1701		0.239	0.250	-4.5	50.0
Tert-amyl methyl ether	Ave	0.5626	0.5658		0.0251	0.0250	0.6	50.0
n-Butanol	Ave	0.0044	0.0038		0.535	0.625	-14.4	50.0
Ethyl acrylate	Ave	0.2183	0.2149		0.0246	0.0250	-1.6	50.0
Methyl methacrylate	Ave	0.2142	0.2152		0.0502	0.0500	0.4	50.0
2-Nitropropane	Qua		0.0288		0.0483	0.0500	-3.3	50.0
n-Butyl acetate	Ave	0.3228	0.2952		0.0229	0.0250	-8.6	50.0
1-Chlorohexane	Ave	0.4392	0.4186		0.0238	0.0250	-4.7	50.0
Cyclohexanone	Ave	0.0084	0.0055		0.164	0.250	-34.4	50.0
Pentachloroethane	Lin1		0.3213		0.0447	0.0500	-10.6	50.0
1,2,3-Trimethylbenzene	Ave	3.300	3.148		0.0238	0.0250	-4.6	50.0
Benzyl chloride	Qua		0.0649		0.0239	0.0250	-4.4	50.0
1,3,5-Trichlorobenzene	Ave	1.266	1.105		0.0218	0.0250	-12.7	50.0
2-Methylnaphthalene	Ave	1.138	0.6373		0.0280	0.0500	-44.0	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: BFB8847.D BFB Injection Date: 01/10/2019

Instrument ID: A3UX8 BFB Injection Time: 02:24

Analysis Batch No.: 363459

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	28.4	
75	30.0 - 60.0 % of mass 95	52.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	76.7	
175	5.0 - 9.0 % of mass 174	5.7	(7.4) 1
176	95.0 - 101.0 % of mass 174	74.0	(96.4) 1
177	5.0 - 9.0 % of mass 176	4.9	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-363459/5	UX82184.D	01/10/2019	03:21
	CCVIS 240-363459/6	UX82185.D	01/10/2019	03:44
	MB 240-363459/8	UX82187.D	01/10/2019	04:30
	LCS 240-363459/9	UX82188.D	01/10/2019	04:54
SB-MW154-9-10	240-106686-2	UX82201.D	01/10/2019	10:00
SB-MW154-10-12	240-106686-3	UX82202.D	01/10/2019	10:23
SB-MW154-12-13	240-106686-4	UX82203.D	01/10/2019	10:47
SB-MW155-8-9	240-106686-5	UX82204.D	01/10/2019	11:10
SB-MW155-9-11	240-106686-6	UX82205.D	01/10/2019	11:33
SB-MW155-11-12	240-106686-7	UX82206.D	01/10/2019	11:55
SB-MW158-9-10	240-106686-8	UX82207.D	01/10/2019	12:18
SB-MW158-10-11	240-106686-9	UX82208.D	01/10/2019	12:42
SB-MW158-11-12	240-106686-10	UX82209.D	01/10/2019	13:05
SB-MW158-11-12 MS	240-106686-10 MS	UX82210.D	01/10/2019	13:28
SB-MW158-11-12 MSD	240-106686-10 MSD	UX82211.D	01/10/2019	13:51

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCV 240-363459/5 Calibration Date: 01/10/2019 03:21

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 07:16

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 10:15

Lab File ID: UX82184.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0358	0.0345		0.193	0.200	-3.6	50.0
Diisopropyl ether	Ave	0.2263	0.2015		0.0178	0.0200	-11.0	50.0
2-Chloro-1,3-butadiene	Ave	0.6843	0.5994		0.0175	0.0200	-12.4	50.0
Ethyl tert-butyl ether	Ave	0.8664	0.6635		0.0153	0.0200	-23.4	50.0
Ethyl acetate	Ave	0.2385	0.2473		0.0415	0.0400	3.7	50.0
Propionitrile	Ave	0.0314	0.0336		0.214	0.200	7.1	50.0
Methacrylonitrile	Ave	0.1781	0.1841		0.207	0.200	3.4	50.0
Tert-amyl methyl ether	Ave	0.5626	0.4754		0.0169	0.0200	-15.5	50.0
n-Butanol	Ave	0.0044	0.0042		0.483	0.500	-3.4	50.0
Ethyl acrylate	Ave	0.2183	0.2232		0.0204	0.0200	2.2	50.0
Methyl methacrylate	Ave	0.2142	0.2183		0.0408	0.0400	1.9	50.0
2-Nitropropane	Qua		0.0402		0.0538	0.0400	34.5	50.0
n-Butyl acetate	Ave	0.3228	0.2878		0.0178	0.0200	-10.8	50.0
1-Chlorohexane	Ave	0.4392	0.3640		0.0166	0.0200	-17.1	50.0
Cyclohexanone	Ave	0.0084	0.0063		0.151	0.200	-24.5	50.0
Pentachloroethane	Lin1		0.2932		0.0335	0.0400	-16.3	50.0
1,2,3-Trimethylbenzene	Ave	3.300	2.853		0.0173	0.0200	-13.6	50.0
Benzyl chloride	Qua		0.0708		0.0220	0.0200	10.2	50.0
1,3,5-Trichlorobenzene	Ave	1.266	0.9942		0.0157	0.0200	-21.5	50.0
2-Methylnaphthalene	Ave	1.138	0.5721		0.0201	0.0400	-49.7	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-363459/6 Calibration Date: 01/10/2019 03:44

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 03:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 06:53

Lab File ID: UX82185.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3456	0.3589		0.0208	0.0200	3.8	50.0
Chloromethane	Ave	0.4792	0.4111	0.1000	0.0172	0.0200	-14.2	50.0
Vinyl chloride	Ave	0.3248	0.2936		0.0181	0.0200	-9.6	20.0
Butadiene	Ave	0.4212	0.3849		0.0183	0.0200	-8.6	50.0
Bromomethane	Ave	0.1820	0.1658		0.0182	0.0200	-8.9	50.0
Chloroethane	Ave	0.2062	0.1837		0.0178	0.0200	-10.9	50.0
Dichlorofluoromethane	Ave	0.4630	0.4504		0.0195	0.0200	-2.7	50.0
Trichlorofluoromethane	Ave	0.4255	0.4471		0.0210	0.0200	5.1	50.0
Ethyl ether	Ave	0.2276	0.2514		0.0221	0.0200	10.5	50.0
Acrolein	Ave	0.0375	0.0262		0.0699	0.100	-30.1	50.0
1,1-Dichloroethene	Ave	0.2680	0.2892		0.0216	0.0200	7.9	20.0
1,1,2-Trichlorotrifluoroethane	Lin1		0.2341		0.0210	0.0200	5.1	50.0
Acetone	Lin1		0.0967		0.0415	0.0400	3.8	50.0
Iodomethane	Ave	0.4389	0.4400		0.0200	0.0200	0.2	50.0
Carbon disulfide	Ave	0.7778	0.8155		0.0210	0.0200	4.8	50.0
3-Chloro-1-propene	Ave	0.1527	0.1605		0.0210	0.0200	5.1	50.0
Methyl acetate	Ave	0.2016	0.2057		0.0408	0.0400	2.0	50.0
Methylene Chloride	Lin1		0.3109		0.0195	0.0200	-2.7	50.0
tert-Butyl alcohol	Lin1		0.0190		0.240	0.200	20.2	50.0
Acrylonitrile	Ave	0.0873	0.0942		0.216	0.200	8.0	50.0
Methyl tert-butyl ether	Ave	0.5906	0.6039		0.0204	0.0200	2.2	50.0
trans-1,2-Dichloroethene	Ave	0.3069	0.3269		0.0213	0.0200	6.5	50.0
Hexane	Ave	0.0854	0.0929		0.0217	0.0200	8.7	20.0
1,1-Dichloroethane	Ave	0.5941	0.5966	0.1000	0.0201	0.0200	0.4	50.0
Vinyl acetate	Ave	0.4716	0.5313		0.0225	0.0200	12.7	50.0
2-Butanone (MEK)	Ave	0.1183	0.1472		0.0498	0.0400	24.4	50.0
cis-1,2-Dichloroethene	Ave	0.3210	0.3341		0.0208	0.0200	4.1	50.0
2,2-Dichloropropane	Ave	0.3623	0.2947		0.0163	0.0200	-18.7	50.0
Bromochloromethane	Ave	0.1222	0.1365		0.0223	0.0200	11.7	50.0
Tetrahydrofuran	Ave	0.0730	0.0731		0.0400	0.0400	0.1	50.0
Chloroform	Ave	0.5263	0.5621		0.0214	0.0200	6.8	20.0
1,1,1-Trichloroethane	Ave	0.4496	0.4550		0.0202	0.0200	1.2	50.0
Cyclohexane	Ave	0.6736	0.6761		0.0201	0.0200	0.4	50.0
1,1-Dichloropropene	Ave	0.4037	0.4389		0.0217	0.0200	8.7	50.0
Carbon tetrachloride	Ave	0.3867	0.4023		0.0208	0.0200	4.0	50.0
Isobutyl alcohol	Ave	0.0093	0.0106		0.569	0.500	13.9	50.0
1,2-Dichloroethane	Ave	0.4287	0.4451		0.0208	0.0200	3.8	50.0
Benzene	Ave	1.159	1.240		0.0214	0.0200	7.0	50.0
n-Heptane	Ave	0.0819	0.0967		0.0236	0.0200	18.0	50.0
Trichloroethene	Ave	0.2794	0.3050		0.0218	0.0200	9.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-363459/6 Calibration Date: 01/10/2019 03:44

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 03:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 06:53

Lab File ID: UX82185.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.5291	0.5687		0.0215	0.0200	7.5	50.0
1,2-Dichloropropane	Ave	0.2775	0.2821		0.0203	0.0200	1.7	20.0
Dibromomethane	Ave	0.1230	0.1468		0.0239	0.0200	19.3	50.0
1,4-Dioxane	Ave	0.0016	0.0019		0.462	0.400	15.6	50.0
Bromodichloromethane	Ave	0.3046	0.3279		0.0215	0.0200	7.7	50.0
2-Chloroethyl vinyl ether	Ave	0.0769	0.0907		0.0472	0.0400	17.9	50.0
cis-1,3-Dichloropropene	Ave	0.3028	0.2973		0.0196	0.0200	-1.8	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2143	0.2437		0.0455	0.0400	13.7	50.0
Toluene	Ave	1.701	1.795		0.0211	0.0200	5.5	20.0
trans-1,3-Dichloropropene	Ave	0.3740	0.3264		0.0175	0.0200	-12.7	50.0
Ethyl methacrylate	Ave	0.2818	0.3129		0.0222	0.0200	11.0	50.0
1,1,2-Trichloroethane	Ave	0.2502	0.2824		0.0226	0.0200	12.9	50.0
1,3-Dichloropropane	Ave	0.4585	0.4838		0.0211	0.0200	5.5	50.0
Tetrachloroethene	Ave	0.3536	0.3775		0.0213	0.0200	6.7	50.0
2-Hexanone	Ave	0.2308	0.2530		0.0439	0.0400	9.6	50.0
Chlorodibromomethane	Ave	0.2437	0.2686		0.0220	0.0200	10.2	50.0
1,2-Dibromoethane	Ave	0.2225	0.2512		0.0226	0.0200	12.9	50.0
Chlorobenzene	Ave	1.103	1.103	0.3000	0.0200	0.0200	0.0	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3377	0.3692		0.0219	0.0200	9.3	50.0
Ethylbenzene	Ave	0.5783	0.6170		0.0213	0.0200	6.7	20.0
m-Xylene & p-Xylene	Ave	0.7038	0.7289		0.0207	0.0200	3.6	50.0
o-Xylene	Ave	0.6869	0.7247		0.0211	0.0200	5.5	50.0
Styrene	Ave	1.106	1.145		0.0207	0.0200	3.6	50.0
Bromoform	Ave	0.1271	0.1289	0.1000	0.0203	0.0200	1.4	50.0
Isopropylbenzene	Ave	1.977	1.998		0.0202	0.0200	1.1	50.0
1,1,2,2-Tetrachloroethane	Ave	0.5343	0.6565	0.3000	0.0246	0.0200	22.9	50.0
Bromobenzene	Ave	0.8222	0.8358		0.0203	0.0200	1.7	50.0
1,2,3-Trichloropropane	Ave	0.1899	0.2290		0.0241	0.0200	20.6	50.0
trans-1,4-Dichloro-2-butene	Ave	0.2057	0.2148		0.0209	0.0200	4.4	50.0
N-Propylbenzene	Ave	1.006	1.035		0.0206	0.0200	2.9	50.0
2-Chlorotoluene	Ave	0.8453	0.8730		0.0207	0.0200	3.3	50.0
1,3,5-Trimethylbenzene	Ave	3.274	3.263		0.0199	0.0200	-0.3	50.0
4-Chlorotoluene	Ave	0.8710	0.8988		0.0206	0.0200	3.2	50.0
tert-Butylbenzene	Ave	2.906	2.805		0.0193	0.0200	-3.5	50.0
1,2,4-Trimethylbenzene	Ave	3.305	3.360		0.0203	0.0200	1.7	50.0
sec-Butylbenzene	Ave	4.277	4.208		0.0197	0.0200	-1.6	50.0
1,3-Dichlorobenzene	Ave	1.708	1.762		0.0206	0.0200	3.2	50.0
4-Isopropyltoluene	Ave	3.526	3.540		0.0201	0.0200	0.4	50.0
1,4-Dichlorobenzene	Ave	1.808	1.795		0.0199	0.0200	-0.7	50.0
n-Butylbenzene	Ave	3.122	3.123		0.0200	0.0200	0.0	50.0
1,2-Dichlorobenzene	Ave	1.596	1.688		0.0212	0.0200	5.8	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-363459/6 Calibration Date: 01/10/2019 03:44

Instrument ID: A3UX8 Calib Start Date: 11/30/2018 03:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/30/2018 06:53

Lab File ID: UX82185.D Conc. Units: ng/uL Heated Purge: (Y/N) Y

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.0678	0.0702		0.0207	0.0200	3.6	50.0
1,2,4-Trichlorobenzene	Ave	0.9606	0.8720		0.0182	0.0200	-9.2	50.0
Hexachlorobutadiene	Ave	0.6588	0.5410		0.0164	0.0200	-17.9	50.0
Naphthalene	Ave	1.571	1.529		0.0195	0.0200	-2.7	50.0
1,2,3-Trichlorobenzene	Ave	0.8818	0.8109		0.0184	0.0200	-8.0	50.0
Dibromofluoromethane (Surr)	Ave	0.2492	0.2181		0.0438	0.0500	-12.5	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3333	0.2821		0.0423	0.0500	-15.4	50.0
Toluene-d8 (Surr)	Ave	1.420	1.223		0.0431	0.0500	-13.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5460	0.4546		0.0416	0.0500	-16.7	50.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Sample No.: ICIS 240-357692/7 Date Analyzed: 11/30/2018 05:24

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UX81317.D Heated Purge: (Y/N) Y

Calibration ID: 48276

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		790737	5.16	506095	7.69	262114	9.88
UPPER LIMIT		1581474	5.66	1012190	8.19	524228	10.38
LOWER LIMIT		395369	4.66	253048	7.19	131057	9.38
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-357692/21		780031	5.16	502924	7.69	279431	9.88
ICV 240-357692/22		754483	5.16	524233	7.69	252903	9.88
CCVIS 240-363459/6		706804	5.16	481314	7.69	262791	9.88

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Sample No.: CCVIS 240-363459/6 Date Analyzed: 01/10/2019 03:44

Instrument ID: A3UX8 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UX82185.D Heated Purge: (Y/N) Y

Calibration ID: 48278

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		706804	5.16	481314	7.69	262791	9.88
UPPER LIMIT		1413608	5.66	962628	8.19	525582	10.38
LOWER LIMIT		353402	4.66	240657	7.19	131396	9.38
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-363459/5		706799	5.16	500274	7.69	244735	9.88
MB 240-363459/8		667685	5.16	477393	7.69	246222	9.88
LCS 240-363459/9		733754	5.16	503593	7.69	276894	9.88
240-106686-2	SB-MW154-9-10	560692	5.17	404094	7.69	198574	9.88
240-106686-3	SB-MW154-10-12	632873	5.16	459601	7.69	227360	9.88
240-106686-4	SB-MW154-12-13	602387	5.16	434186	7.69	208509	9.88
240-106686-5	SB-MW155-8-9	530022	5.16	385819	7.69	178291	9.88
240-106686-6	SB-MW155-9-11	579256	5.16	412007	7.69	195091	9.88
240-106686-7	SB-MW155-11-12	581979	5.16	424789	7.69	201136	9.88
240-106686-8	SB-MW158-9-10	592697	5.16	423237	7.69	200458	9.88
240-106686-9	SB-MW158-10-11	596088	5.16	425328	7.69	213452	9.88
240-106686-10	SB-MW158-11-12	560904	5.16	398305	7.69	191912	9.88
240-106686-10 MS	SB-MW158-11-12 MS	625014	5.16	431814	7.69	241127	9.88
240-106686-10 MSD	SB-MW158-11-12 MSD	634687	5.16	425111	7.69	236214	9.88

FB = Fluorobenzene
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
CBNZd5 = Chlorobenzene-d5
Area Limit = 50%-200% of internal standard area
DCBd4 = 1,4-Dichlorobenzene-d4
RT Limit = ± 0.5 minutes of internal standard RT
DCBd4 = 1,4-Dichlorobenzene-d4

Column used to flag values outside QC limits

FORM VIII 8260B

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Instrument ID: A3UX8 Start Date: 11/30/2018 03:22

Analysis Batch Number: 357692 End Date: 11/30/2018 14:40

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-357692/1		11/30/2018 03:22	1	BFB8814.D	DB-624 0.18(mm)
STD8260 240-357692/3 IC		11/30/2018 03:55	1	UX81313.D	DB-624 0.18(mm)
STD8260 240-357692/4 IC		11/30/2018 04:18	1	UX81314.D	DB-624 0.18(mm)
STD8260 240-357692/5 IC		11/30/2018 04:40	1	UX81315.D	DB-624 0.18(mm)
STD8260 240-357692/6 IC		11/30/2018 05:01	1	UX81316.D	DB-624 0.18(mm)
ICIS 240-357692/7		11/30/2018 05:24	1	UX81317.D	DB-624 0.18(mm)
STD8260 240-357692/8 IC		11/30/2018 05:47	1	UX81318.D	DB-624 0.18(mm)
STD8260 240-357692/9 IC		11/30/2018 06:09	1	UX81319.D	DB-624 0.18(mm)
STD8260 240-357692/10 IC		11/30/2018 06:31	1	UX81320.D	DB-624 0.18(mm)
STD8260 240-357692/11 IC		11/30/2018 06:53	1	UX81321.D	DB-624 0.18(mm)
STDA9 240-357692/12 IC		11/30/2018 07:16	1	UX81322.D	DB-624 0.18(mm)
STDA9 240-357692/13 IC		11/30/2018 07:38	1	UX81323.D	DB-624 0.18(mm)
STDA9 240-357692/14 IC		11/30/2018 08:00	1	UX81324.D	DB-624 0.18(mm)
STDA9 240-357692/15 IC		11/30/2018 08:23	1	UX81325.D	DB-624 0.18(mm)
STDA9 240-357692/16 IC		11/30/2018 08:45	1	UX81326.D	DB-624 0.18(mm)
STDA9 240-357692/17 IC		11/30/2018 09:08	1	UX81327.D	DB-624 0.18(mm)
STDA9 240-357692/18 IC		11/30/2018 09:30	1	UX81328.D	DB-624 0.18(mm)
STDA9 240-357692/19 IC		11/30/2018 09:52	1	UX81329.D	DB-624 0.18(mm)
STDA9 240-357692/20 IC		11/30/2018 10:15	1	UX81330.D	DB-624 0.18(mm)
ICV 240-357692/21		11/30/2018 10:37	1	UX81331.D	DB-624 0.18(mm)
ICV 240-357692/22		11/30/2018 11:00	1	UX81332.D	DB-624 0.18(mm)
ZZZZZ		11/30/2018 12:06	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 12:28	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 13:12	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 13:34	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 13:57	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 14:19	1		DB-624 0.18(mm)
ZZZZZ		11/30/2018 14:40	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Instrument ID: A3UX8 Start Date: 01/10/2019 02:24

Analysis Batch Number: 363459 End Date: 01/10/2019 13:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-363459/1		01/10/2019 02:24	1	BFB8847.D	DB-624 0.18(mm)
CCV 240-363459/5		01/10/2019 03:21	1	UX82184.D	DB-624 0.18(mm)
CCVIS 240-363459/6		01/10/2019 03:44	1	UX82185.D	DB-624 0.18(mm)
MB 240-363459/8		01/10/2019 04:30	1	UX82187.D	DB-624 0.18(mm)
LCS 240-363459/9		01/10/2019 04:54	1	UX82188.D	DB-624 0.18(mm)
240-106686-2		01/10/2019 10:00	1	UX82201.D	DB-624 0.18(mm)
240-106686-3		01/10/2019 10:23	1	UX82202.D	DB-624 0.18(mm)
240-106686-4		01/10/2019 10:47	1	UX82203.D	DB-624 0.18(mm)
240-106686-5		01/10/2019 11:10	1	UX82204.D	DB-624 0.18(mm)
240-106686-6		01/10/2019 11:33	1	UX82205.D	DB-624 0.18(mm)
240-106686-7		01/10/2019 11:55	1	UX82206.D	DB-624 0.18(mm)
240-106686-8		01/10/2019 12:18	1	UX82207.D	DB-624 0.18(mm)
240-106686-9		01/10/2019 12:42	1	UX82208.D	DB-624 0.18(mm)
240-106686-10		01/10/2019 13:05	1	UX82209.D	DB-624 0.18(mm)
240-106686-10 MS		01/10/2019 13:28	1	UX82210.D	DB-624 0.18(mm)
240-106686-10 MSD		01/10/2019 13:51	1	UX82211.D	DB-624 0.18(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 363459 Batch Start Date: 01/10/19 02:24 Batch Analyst: Macenczak, Steven

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM568718 00013	VMAROLISTDW 00280	vmbfb 00021	VMFASAW 00263
BFB 240-363459/1		8260B		5 mL	5 mL			1 uL	
CCV 240-363459/5		8260B		5 mL	5 mL	1 uL			
CCVIS 240-363459/6		8260B		5 g	5 mL	1 uL	2 uL		
MB 240-363459/8		8260B		5 g	5 mL	1 uL			
LCS 240-363459/9		8260B		5 g	5 mL	1 uL			2.5 uL
240-106686-B-2-B	SB-MW154-9-10	8260B	T	5 g	5 mL	1 uL			
240-106686-B-3-B	SB-MW154-10-12	8260B	T	5 g	5 mL	1 uL			
240-106686-B-4-B	SB-MW154-12-13	8260B	T	5 g	5 mL	1 uL			
240-106686-B-5-B	SB-MW155-8-9	8260B	T	5 g	5 mL	1 uL			
240-106686-B-6-B	SB-MW155-9-11	8260B	T	5 g	5 mL	1 uL			
240-106686-B-7-B	SB-MW155-11-12	8260B	T	5 g	5 mL	1 uL			
240-106686-B-8-B	SB-MW158-9-10	8260B	T	5 g	5 mL	1 uL			
240-106686-B-9-B	SB-MW158-10-11	8260B	T	5 g	5 mL	1 uL			
240-106686-B-10-E	SB-MW158-11-12	8260B	T	5 g	5 mL	1 uL			
240-106686-B-10-F MS	SB-MW158-11-12	8260B	T	5 g	5 mL	1 uL			2.5 uL
240-106686-B-10-G MSD	SB-MW158-11-12	8260B	T	5 g	5 mL	1 uL			2.5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASGW 00291	VMFASPW 00284	VMRA9W 00280	VMRGAS 00277	VMRPRIMW 00317	VMUX8SS 00030
BFB 240-363459/1		8260B							
CCV 240-363459/5		8260B				2 uL			
CCVIS 240-363459/6		8260B					2 uL	2 uL	1.1547 uL
MB 240-363459/8		8260B							1.1547 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 363459 Batch Start Date: 01/10/19 02:24 Batch Analyst: Macenczak, Steven

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASGW 00291	VMFASPW 00284	VMRA9W 00280	VMRGAS 00277	VMRPRIMW 00317	VMUX8SS 00030
LCS 240-363459/9		8260B		2.5 uL	2.5 uL				1.1547 uL
240-106686-B-2-B	SB-MW154-9-10	8260B	T						1.1547 uL
240-106686-B-3-B	SB-MW154-10-12	8260B	T						1.1547 uL
240-106686-B-4-B	SB-MW154-12-13	8260B	T						1.1547 uL
240-106686-B-5-B	SB-MW155-8-9	8260B	T						1.1547 uL
240-106686-B-6-B	SB-MW155-9-11	8260B	T						1.1547 uL
240-106686-B-7-B	SB-MW155-11-12	8260B	T						1.1547 uL
240-106686-B-8-B	SB-MW158-9-10	8260B	T						1.1547 uL
240-106686-B-9-B	SB-MW158-10-11	8260B	T						1.1547 uL
240-106686-B-10-E	SB-MW158-11-12	8260B	T						1.1547 uL
240-106686-B-10-F MS	SB-MW158-11-12	8260B	T	2.5 uL	2.5 uL				1.1547 uL
240-106686-B-10-G MSD	SB-MW158-11-12	8260B	T	2.5 uL	2.5 uL				1.1547 uL

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 363484 Batch Start Date: 01/10/19 05:27 Batch Analyst: Lata, Todd

Batch Method: 5030A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount				
240-106686-B-2	SB-MW154-9-10	5030A, 8260B	T	5.36 g	5 mL				
240-106686-B-3	SB-MW154-10-12	5030A, 8260B	T	5.42 g	5 mL				
240-106686-B-4	SB-MW154-12-13	5030A, 8260B	T	5.23 g	5 mL				
240-106686-B-5	SB-MW155-8-9	5030A, 8260B	T	5.26 g	5 mL				
240-106686-B-6	SB-MW155-9-11	5030A, 8260B	T	5.20 g	5 mL				
240-106686-B-7	SB-MW155-11-12	5030A, 8260B	T	5.02 g	5 mL				
240-106686-B-8	SB-MW158-9-10	5030A, 8260B	T	5.03 g	5 mL				
240-106686-B-9	SB-MW158-10-11	5030A, 8260B	T	5.11 g	5 mL				
240-106686-B-10	SB-MW158-11-12	5030A, 8260B	T	5.39 g	5 mL				
240-106686-B-10 MS	SB-MW158-11-12	5030A, 8260B	T	5.07 g	5 mL				
240-106686-B-10 MSD	SB-MW158-11-12	5030A, 8260B	T	5.09 g	5 mL				

Batch Notes	
Balance ID	B035
Blank Matrix ID	178797

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
	MRL 240-364762/34	105	105	79	81

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	10-150
DCA = 1,2-Dichloroethane-d4 (Surr)	10-150
TOL = Toluene-d8 (Surr)	10-150
BFB = 4-Bromofluorobenzene (Surr)	10-150

Column to be used to flag recovery values

FORM II 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-010819	240-106686-1	94	94	100	95
TB-010819	240-106686-1	112	112	79	78
	MB 240-364651/6	89	92	97	90
	MB 240-364762/6	109	107	76	79
	LCS 240-364651/4	91	93	102	99
	LCS 240-364762/4	102	103	82	86
	240-107003-B-12 MS	104	107	82	88
	240-107003-B-12 MSD	114	110	78	86

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX9148.D

Lab ID: LCS 240-364651/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
tert-Butyl alcohol	100	105	105	10-161	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ7823.D

Lab ID: LCS 240-364762/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	12.1	121	80-124	
1,1,1-Trichloroethane	10.0	13.1	131	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.21	82	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	13.0	130	50-156	
1,1-Dichloroethane	10.0	10.0	100	75-133	
1,1-Dichloroethene	10.0	9.77	98	65-139	
1,1-Dichloropropene	10.0	10.2	102	78-126	
1,2,3-Trichlorobenzene	10.0	8.70	87	39-138	
1,2,3-Trichloropropane	10.0	8.59	86	66-139	
1,2,4-Trichlorobenzene	10.0	8.51	85	42-133	
1,2,4-Trimethylbenzene	10.0	8.06	81	74-120	
1,2-Dibromo-3-Chloropropane	10.0	9.05	91	46-132	
1,2-Dichlorobenzene	10.0	10.5	105	78-120	
1,2-Dichloroethane	10.0	11.6	116	71-135	
1,2-Dichloropropane	10.0	8.53	85	78-133	
1,3-Dichlorobenzene	10.0	10.0	100	78-120	
1,3-Dichloropropane	10.0	9.29	93	72-134	
1,4-Dichlorobenzene	10.0	10.3	103	78-120	
2,2-Dichloropropane	10.0	11.0	110	42-150	
2-Chloroethyl vinyl ether	10.0	7.09 J	71	55-137	
2-Chlorotoluene	10.0	9.60	96	78-123	
2-Hexanone	20.0	13.0	65	43-148	
Bromobenzene	10.0	10.4	104	74-129	
Bromochloromethane	10.0	11.6	116	74-130	
4-Chlorotoluene	10.0	9.45	94	77-125	
4-Isopropyltoluene	10.0	7.83	78	69-122	
Acetone	20.0	18.9	95	21-162	
Benzene	10.0	9.32	93	80-123	
Bromoform	10.0	13.0	130	49-141	
Bromomethane	10.0	8.46	85	41-175	
Carbon disulfide	10.0	9.66	97	60-138	
Carbon tetrachloride	10.0	12.8	128	63-140	
Chlorobenzene	10.0	10.5	105	80-121	
Chloroethane	10.0	6.86	69	33-173	
Chloroform	10.0	11.4	114	79-127	
Chloromethane	10.0	8.22	82	54-143	
cis-1,2-Dichloroethene	10.0	10.3	103	76-128	
cis-1,3-Dichloropropene	10.0	8.98	90	64-132	
Hexachlorobutadiene	10.0	7.94	79	38-136	
Dibromomethane	10.0	9.45	94	74-124	
Bromodichloromethane	10.0	11.0	110	77-125	
Dichlorodifluoromethane	10.0	12.2	122	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ7823.D

Lab ID: LCS 240-364762/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.14	91	80-120	
1,2-Dibromoethane	10.0	9.60	96	77-123	
Naphthalene	10.0	6.13	61	28-141	
m-Xylene & p-Xylene	10.0	9.53	95	80-120	
n-Butylbenzene	10.0	6.59	66	57-126	
Isopropylbenzene	10.0	9.32	93	74-120	
N-Propylbenzene	10.0	8.43	84	77-123	
2-Butanone (MEK)	20.0	13.7	68	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	14.3	72	49-143	
sec-Butylbenzene	10.0	7.26	73	68-123	
Methyl tert-butyl ether	10.0	9.29	93	51-133	
Methylene Chloride	10.0	13.1	131	70-134	
o-Xylene	10.0	9.60	96	80-120	
Styrene	10.0	9.09	91	79-120	
tert-Butylbenzene	10.0	8.15	82	70-121	
Tetrachloroethene	10.0	12.0	120	74-130	
Toluene	10.0	9.15	92	78-129	
trans-1,2-Dichloroethene	10.0	10.2	102	78-133	
trans-1,3-Dichloropropene	10.0	9.27	93	55-128	
Trichloroethene	10.0	11.6	116	76-125	
Trichlorofluoromethane	10.0	10.5	105	51-164	
Vinyl acetate	10.0	8.23	82	45-151	
Vinyl chloride	10.0	8.42	84	58-143	
tert-Butyl alcohol	100	89.6	90	10-161	
Xylenes, Total	20.0	19.1	96	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY
sample not included in SDG.

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ7850.D

Lab ID: 240-107003-B-12 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	1430	34 U	1310	92	51-138	
1,1,2,2-Tetrachloroethane	1430	19 U	858	60	60-137	
1,1,2-Trichlorotrifluoroethane	1430	59 U	1120	78	31-156	
1,1-Dichloroethane	1430	24 U	1080	76	63-136	
1,1-Dichloroethene	1430	27 U	987	69	53-140	
1,2,4-Trichlorobenzene	1430	53 J	955	63	30-126	
1,2-Dibromo-3-Chloropropane	1430	130 U	922	65	38-124	
1,2-Dichlorobenzene	1430	21 U	1140	80	64-120	
1,2-Dichloroethane	1430	30 J	1410	96	65-135	
1,2-Dichloropropane	1430	21 U	1060	74	70-132	
1,3-Dichlorobenzene	1430	21 U	1090	76	62-120	
1,4-Dichlorobenzene	1430	23 U	1180	83	63-120	
2-Hexanone	2860	77 U	1300 J	45	42-150	
Acetone	2860	770 U	2130	75	10-168	
Benzene	1430	19 U	1060	74	71-122	
Bromoform	1430	110 U	1390	97	44-129	
Bromomethane	1430	60 U	908	64	19-187	
Carbon disulfide	1430	40 U	898	63	43-144	
Carbon tetrachloride	1430	37 U	1250	88	41-143	
Chlorobenzene	1430	20 U	1110	78	70-123	
Chloroethane	1430	120 U	698	49	11-189	
Chloroform	1430	19 U	1280	90	68-130	
Chloromethane	1430	29 U	1290	91	31-154	
cis-1,2-Dichloroethene	1430	1200	2230	70	64-130	
cis-1,3-Dichloropropene	1430	87 U	1050	73	48-127	
Bromodichloromethane	1430	24 U	1270	89	64-125	
Dichlorodifluoromethane	1430	50 U	1050	74	28-136	
Ethylbenzene	1430	16 U	957	67	66-120	
1,2-Dibromoethane	1430	17 U	1130	79	71-123	
m-Xylene & p-Xylene	1430	11 U	965	68	63-121	
Isopropylbenzene	1430	13 U	870	61	59-120	
2-Butanone (MEK)	2860	170 U	1480	52	37-156	
4-Methyl-2-pentanone (MIBK)	2860	60 U	1460	51	44-143	
Methyl tert-butyl ether	1430	10 U	1030	72	41-136	
Methylene Chloride	1430	370 U	1430	100	61-130	
o-Xylene	1430	13 U	941	66	69-120	F1
Styrene	1430	14 U	992	69	68-120	
Tetrachloroethene	1430	21 U	1190	83	51-136	
Toluene	1430	20 U	1010	71	62-132	
trans-1,2-Dichloroethene	1430	27 U	1100	77	68-133	
trans-1,3-Dichloropropene	1430	96 U	1020	71	40-125	
Trichloroethene	1430	4000	5040	72	55-131	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ7850.D

Lab ID: 240-107003-B-12 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Trichlorofluoromethane	1430	64 U	956	67	37-174	
Vinyl chloride	1430	240	954	50	43-154	
Xylenes, Total	2860	21 U	1910	67	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

sample not included in SDG

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ7851.D

Lab ID: 240-107003-B-12 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1-Trichloroethane	1430	1720	120	27	27	51-138	
1,1,2,2-Tetrachloroethane	1430	1010	70	16	31	60-137	
1,1,2-Trichlorotrifluoroethane	1430	1750	123	44	35	31-156	F2
1,1-Dichloroethane	1430	1360	95	23	23	63-136	
1,1-Dichloroethene	1430	1330	93	29	35	53-140	
1,2,4-Trichlorobenzene	1430	1190	79	22	35	30-126	
1,2-Dibromo-3-Chloropropane	1430	1140	80	21	35	38-124	
1,2-Dichlorobenzene	1430	1250	88	9	30	64-120	
1,2-Dichloroethane	1430	1680	116	18	24	65-135	
1,2-Dichloropropane	1430	1230	86	15	26	70-132	
1,3-Dichlorobenzene	1430	1240	87	13	31	62-120	
1,4-Dichlorobenzene	1430	1310	91	10	28	63-120	
2-Hexanone	2860	1440	51	11	35	42-150	
Acetone	2860	2700	95	24	35	10-168	
Benzene	1430	1290	90	19	22	71-122	
Bromoform	1430	1720	120	21	28	44-129	
Bromomethane	1430	1230	86	30	35	19-187	
Carbon disulfide	1430	1300	91	37	33	43-144	F2
Carbon tetrachloride	1430	1830	128	37	30	41-143	F2
Chlorobenzene	1430	1300	91	15	23	70-123	
Chloroethane	1430	1110	78	46	35	11-189	F2
Chloroform	1430	1670	117	27	23	68-130	F2
Chloromethane	1430	1750	122	30	35	31-154	
cis-1,2-Dichloroethene	1430	2540	93	13	21	64-130	
cis-1,3-Dichloropropene	1430	1140	80	9	30	48-127	
Bromodichloromethane	1430	1460	102	14	27	64-125	
Dichlorodifluoromethane	1430	1530	107	37	35	28-136	F2
Ethylbenzene	1430	1210	85	24	24	66-120	
1,2-Dibromoethane	1430	1260	88	11	27	71-123	
m-Xylene & p-Xylene	1430	1180	82	20	25	63-121	
Isopropylbenzene	1430	1160	81	28	31	59-120	
2-Butanone (MEK)	2860	1670	58	12	35	37-156	
4-Methyl-2-pentanone (MIBK)	2860	1740	61	18	35	44-143	
Methyl tert-butyl ether	1430	1370	96	29	29	41-136	
Methylene Chloride	1430	1780	125	21	29	61-130	
o-Xylene	1430	1180	83	23	25	69-120	
Styrene	1430	1150	81	15	26	68-120	
Tetrachloroethene	1430	1480	104	22	23	51-136	
Toluene	1430	1190	83	16	23	62-132	
trans-1,2-Dichloroethene	1430	1560	109	35	24	68-133	F2
trans-1,3-Dichloropropene	1430	1090	76	6	27	40-125	
Trichloroethene	1430	5500	104	9	23	55-131	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ7851.D

Lab ID: 240-107003-B-12 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Trichlorofluoromethane	1430	1470	103	42	35	37-174	F2
Vinyl chloride	1430	1380	79	36	29	43-154	F2
Xylenes, Total	2860	2360	83	21	25	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: UXX9150.D Lab Sample ID: MB 240-364651/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX10 Date Analyzed: 01/18/2019 13:40

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-364651/4	UXX9148.D	01/18/2019 12:51
TB-010819	240-106686-1	UXX9154.D	01/18/2019 15:20

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-364651/6

Matrix: Water | Lab File ID: UXX9150.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/18/2019 13:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 364651 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	90		59-120
2037-26-5	Toluene-d8 (Surr)	97		70-123
1868-53-7	Dibromofluoromethane (Surr)	89		75-128

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: UXJ7827.D Lab Sample ID: MB 240-364762/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX11 Date Analyzed: 01/21/2019 11:53

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-364762/4	UXJ7823.D	01/21/2019 10:24
TB-010819	240-106686-1	UXJ7833.D	01/21/2019 14:05
	240-107003-B-12 MS	UXJ7850.D	01/21/2019 20:20
	240-107003-B-12 MSD	UXJ7851.D	01/21/2019 20:42

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-364762/6

Matrix: Water | Lab File ID: UXJ7827.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/21/2019 11:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 364762 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-106686-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-364762/6

Matrix: Water | Lab File ID: UXJ7827.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 01/21/2019 11:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 364762 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.86	J	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-364762/6

Matrix: Water Lab File ID: UXJ7827.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 01/21/2019 11:53

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 364762 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		70-121
460-00-4	4-Bromofluorobenzene (Surr)	79		59-120
2037-26-5	Toluene-d8 (Surr)	76		70-123
1868-53-7	Dibromofluoromethane (Surr)	109		75-128

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: BFB1940.D BFB Injection Date: 10/02/2018

Instrument ID: A3UX10 BFB Injection Time: 14:58

Analysis Batch No.: 348191

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.4	
75	30.0 - 60.0 % of mass 95	52.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	1.5	(2.0) 1
174	50.0 - 120.00 % of mass 95	73.9	
175	5.0 - 9.0 % of mass 174	5.6	(7.5) 1
176	95.0 - 101.0 % of mass 174	74.0	(100.0) 1
177	5.0 - 9.0 % of mass 176	6.7	(9.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-348191/2	UXX5939.D	10/02/2018	15:27
	STD8260 240-348191/3	UXX5940.D	10/02/2018	15:52
	STD8260 240-348191/4	UXX5941.D	10/02/2018	16:17
	STD8260 240-348191/5	UXX5942.D	10/02/2018	16:42
	STD8260 240-348191/6	UXX5943.D	10/02/2018	17:06
	STD8260 240-348191/7	UXX5944.D	10/02/2018	17:31
	STD8260 240-348191/8	UXX5945.D	10/02/2018	17:56
	ICV 240-348191/9	UXX5946.D	10/02/2018	18:21
	STDA9 240-348191/10	UXX5947.D	10/02/2018	18:46
	STDA9 240-348191/11	UXX5948.D	10/02/2018	19:11
	STDA9 240-348191/12	UXX5949.D	10/02/2018	19:36
	STDA9 240-348191/13	UXX5950.D	10/02/2018	20:01
	STDA9 240-348191/14	UXX5951.D	10/02/2018	20:25
	STDA9 240-348191/15	UXX5952.D	10/02/2018	20:50
	STDA9 240-348191/16	UXX5953.D	10/02/2018	21:14
	ICV 240-348191/17	UXX5954.D	10/02/2018	21:39

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-348191/8	UXX5945.D
Level 2	STD8260 240-348191/7	UXX5944.D
Level 3	STD8260 240-348191/6	UXX5943.D
Level 4	STD8260 240-348191/5	UXX5942.D
Level 5	STD8260 240-348191/4	UXX5941.D
Level 6	STD8260 240-348191/3	UXX5940.D
Level 7	STD8260 240-348191/2	UXX5939.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3986 0.3382	0.3469 0.3117	0.3262	0.3301	0.3565	Ave		0.3440			0.1000	8.2		20.0			
Chloromethane	0.4771 0.3669	0.4153 0.3611	0.3616	0.4096	0.4292	Ave		0.4030			0.1000	10.7		20.0			
Butadiene	0.3883 0.3725	0.3775 0.3703	0.3527	0.3739	0.4108	Ave		0.3780				4.7		20.0			
Vinyl chloride	0.4026 0.3470	0.3452 0.3521	0.3372	0.3489	0.3811	Ave		0.3591			0.1000	6.6		20.0			
Bromomethane	0.2403 0.1972	0.1914 0.2205	0.2119	0.2029	0.2209	Ave		0.2122			0.0500	7.9		20.0			
Chloroethane	0.1117 0.2143	0.2186 0.2313	0.2159	0.2153	0.2303	Lin1	-0.083	0.2307			0.0500	9.5			0.9980		0.9900
Dichlorofluoromethane	0.5501 0.5074	0.4617 0.5209	0.5054	0.5164	0.5386	Ave		0.5143				5.5		20.0			
Trichlorofluoromethane	0.4682 0.3899	0.3776 0.4011	0.3751	0.3751	0.4149	Ave		0.4003			0.1000	8.4		20.0			
Ethyl ether	0.2561 0.2177	0.2417 0.2142	0.2353	0.2411	0.2397	Ave		0.2351				6.2		20.0			
Acrolein	0.0403 0.0375	0.0410 0.0339	0.0386	0.0353	0.0397	Ave		0.0380				7.0		20.0			
1,1-Dichloroethene	0.3446 0.2740	0.2791 0.2715	0.2796	0.2787	0.2876	Ave		0.2879			0.1000	8.9		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1322 0.2035	0.2059 0.2056	0.2050	0.2313	0.2165	Ave		0.2000			0.0500	15.7		20.0			
Acetone	0.1463 0.0675	0.0965 0.0644	0.0885	0.0777	0.0810	Lin1	0.1639	0.0640			0.0100	9.3			0.9950		0.9900
Iodomethane	0.5427 0.5017	0.5096 0.5092	0.5234	0.5285	0.5479	Ave		0.5233				3.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon disulfide	1.0127 0.9201	0.9409 0.9562	0.9557	0.9958	0.9910	Ave		0.9675			0.1000	3.4		20.0			
3-Chloro-1-propene	0.2357 0.2033	0.2057 0.2087	0.2074	0.2014	0.2273	Ave		0.2128				6.2		20.0			
Methyl acetate	0.1949 0.1408	0.1585 0.1440	0.1606	0.1661	0.1583	Ave		0.1605			0.1000	11.0		20.0			
Methylene Chloride	0.4013 0.3119	0.3665 0.3223	0.3560	0.3559	0.3536	Ave		0.3525			0.1000	8.3		20.0			
tert-Butyl alcohol	0.0301 0.0258	0.0299 0.0249	0.0307	0.0239	0.0295	Ave		0.0278				10.3		20.0			
Acrylonitrile	0.0977 0.0917	0.0937 0.0925	0.0997	0.0941	0.1011	Ave		0.0958				3.9		20.0			
trans-1,2-Dichloroethene	0.3348 0.3058	0.3029 0.3147	0.3236	0.3237	0.3275	Ave		0.3190			0.1000	3.7		20.0			
Methyl tert-butyl ether	0.8966 0.8291	0.8616 0.8787	0.9302	0.8910	0.9034	Ave		0.8844			0.1000	3.7		20.0			
Hexane	0.0638 0.0462	0.0514 0.0518	0.0557	0.0504	0.0584	Ave		0.0540				10.8		20.0			
1,1-Dichloroethane	0.6013 0.5343	0.5352 0.5612	0.5907	0.5768	0.5836	Ave		0.5690			0.2000	4.6		20.0			
Vinyl acetate	0.4651 0.4165	0.4611 0.4455	0.4553	0.4524	0.4613	Ave		0.4510				3.7		20.0			
cis-1,2-Dichloroethene	0.3394 0.3093	0.3313 0.3253	0.3471	0.3356	0.3565	Ave		0.3349			0.1000	4.5		20.0			
2,2-Dichloropropane	0.1122 0.0904	0.0933 0.0944	0.0896	0.0949	0.0920	Ave		0.0953				8.1		20.0			
2-Butanone (MEK)	0.0989 0.0762	0.1048 0.0805	0.0993	0.0843	0.1037	Ave		0.0926			0.0100	12.8		20.0			
Chlorobromomethane	0.1660 0.1357	0.1344 0.1470	0.1502	0.1576	0.1564	Ave		0.1496				7.8		20.0			
Tetrahydrofuran	0.0829 0.0579	0.0682 0.0560	0.0714	0.0638	0.0664	Ave		0.0667				13.5		20.0			
Chloroform	0.5292 0.4519	0.4814 0.4740	0.4981	0.5143	0.5073	Ave		0.4937			0.2000	5.3		20.0			
1,1,1-Trichloroethane	0.5311 0.4378	0.4701 0.4721	0.4782	0.4982	0.4838	Ave		0.4816			0.1000	5.9		20.0			
Cyclohexane	0.5437 0.5052	0.5073 0.5448	0.5405	0.5590	0.5488	Ave		0.5356			0.1000	3.9		20.0			
1,1-Dichloropropene	0.3852 0.3109	0.3326 0.3420	0.3441	0.3617	0.3598	Ave		0.3480				6.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Carbon tetrachloride	0.4279 0.3710	0.3569 0.3965	0.3801	0.3987	0.4092	Ave		0.3915			0.1000	6.1		20.0			
Isobutyl alcohol	0.0108 0.0076	0.0096 0.0079	0.0104	0.0082	0.0095	Ave		0.0091				13.5		20.0			
Benzene	1.2600 1.0302	1.1482 1.1226	1.1302	1.1667	1.1698	Ave		1.1468			0.5000	6.0		20.0			
1,2-Dichloroethane	0.4897 0.3706	0.4209 0.3931	0.4112	0.4346	0.4186	Ave		0.4198			0.1000	8.9		20.0			
n-Heptane	0.0494 0.0413	0.0394 0.0413	0.0433	0.0511	0.0432	Ave		0.0441				9.9		20.0			
Trichloroethene	0.3156 0.2617	0.2659 0.2787	0.2980	0.2867	0.2938	Ave		0.2858			0.1500	6.6		20.0			
Methylcyclohexane	0.4067 0.3851	0.3951 0.3940	0.3993	0.4239	0.4117	Ave		0.4023			0.1000	3.2		20.0			
1,2-Dichloropropane	0.3159 0.2729	0.2918 0.2858	0.2942	0.3131	0.3103	Ave		0.2977			0.1000	5.4		20.0			
Dibromomethane	0.1949 0.1463	0.1721 0.1554	0.1696	0.1743	0.1697	Ave		0.1689				9.1		20.0			
1,4-Dioxane	0.0027 0.0025	0.0034 0.0021	0.0025	0.0023	0.0032	Ave		0.0027				17.2		20.0			
Dichlorobromomethane	0.3945 0.3317	0.3718 0.3664	0.3726	0.3885	0.3911	Ave		0.3738			0.1500	5.8		20.0			
2-Chloroethyl vinyl ether	0.1630 0.1498	0.1513 0.1529	0.1583	0.1630	0.1603	Ave		0.1569				3.5		20.0			
cis-1,3-Dichloropropene	0.4299 0.3874	0.3932 0.4199	0.4217	0.4239	0.4223	Ave		0.4140			0.1500	4.0		20.0			
4-Methyl-2-pentanone (MIBK)	0.2462 0.2049	0.2263 0.2115	0.2414	0.2454	0.2341	Ave		0.2300			0.0500	7.2		20.0			
Toluene	1.6334 1.3415	1.5205 1.5700	1.5373	1.5169	1.5509	Ave		1.5244			0.4000	5.9		20.0			
trans-1,3-Dichloropropene	0.4811 0.4083	0.4262 0.4652	0.4474	0.4658	0.4662	Ave		0.4515			0.1000	5.7		20.0			
Ethyl methacrylate	0.3847 0.3241	0.3570 0.3716	0.3779	0.3963	0.3796	Ave		0.3702				6.4		20.0			
1,1,2-Trichloroethane	0.3190 0.2429	0.2893 0.2789	0.2791	0.2838	0.2918	Ave		0.2836			0.1000	8.0		20.0			
Tetrachloroethene	0.2711 0.2317	0.2798 0.2653	0.2578	0.2769	0.2759	Ave		0.2655			0.1500	6.3		20.0			
1,3-Dichloropropane	0.5727 0.4146	0.4670 0.4596	0.4848	0.5094	0.4964	Ave		0.4864				10.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Hexanone	0.2005 0.1601	0.1931 0.1646	0.2046	0.1909	0.1907	Ave		0.1864			0.0500	9.2		20.0			
Chlorodibromomethane	0.3016 0.2988	0.2926 0.3369	0.3271	0.3245	0.3319	Ave		0.3162				5.7		20.0			
Ethylene Dibromide	0.3003 0.2550	0.2684 0.2802	0.2701	0.2818	0.2992	Ave		0.2793				5.9		20.0			
Chlorobenzene	1.0444 0.8960	1.0188 1.0039	0.9937	0.9947	1.0128	Ave		0.9949			0.3000	4.7		20.0			
1,1,1,2-Tetrachloroethane	0.3982 0.3308	0.3718 0.3876	0.3847	0.3675	0.3862	Ave		0.3753				5.9		20.0			
Ethylbenzene	0.6089 0.5076	0.5249 0.5575	0.5496	0.5604	0.5762	Ave		0.5550				6.0		20.0			
m-Xylene & p-Xylene	0.7544 0.6259	0.6871 0.7113	0.6580	0.6907	0.6851	Ave		0.6875				5.9		20.0			
o-Xylene	0.7596 0.6453	0.7221 0.7473	0.6952	0.7106	0.7318	Ave		0.7160				5.3		20.0			
Styrene	1.1786 1.0718	1.1098 1.2402	1.0656	1.1379	1.1730	Ave		1.1396			0.3000	5.5		20.0			
Bromoform	0.1792 0.1903	0.1888 0.2289	0.1821	0.1866	0.2026	Ave		0.1941			0.1000	8.8		20.0			
Isopropylbenzene	1.8296 1.5815	1.6753 1.9166	1.7107	1.7237	1.7825	Ave		1.7457			0.1000	6.2		20.0			
1,1,2,2-Tetrachloroethane	0.7123 0.5621	0.6782 0.5883	0.7162	0.7613	0.7109	Ave		0.6756			0.3000	10.8		20.0			
Bromobenzene	0.7588 0.6600	0.7936 0.7327	0.7832	0.8349	0.8102	Ave		0.7676				7.5		20.0			
1,2,3-Trichloropropane	0.2209 0.1826	0.2336 0.1825	0.2254	0.2224	0.2166	Ave		0.2120				9.8		20.0			
trans-1,4-Dichloro-2-butene	0.0971 0.1237	0.1507 0.1392	0.1591	0.1362	0.1485	Ave		0.1364				15.2		20.0			
N-Propylbenzene	0.7888 0.7117	0.7971 0.7749	0.8072	0.8562	0.8507	Ave		0.7981				6.1		20.0			
2-Chlorotoluene	0.8519 0.6536	0.6781 0.7034	0.7591	0.7984	0.7975	Ave		0.7489				9.7		20.0			
1,3,5-Trimethylbenzene	2.4725 2.2872	2.4258 2.5026	2.5932	2.6801	2.6778	Ave		2.5199				5.6		20.0			
4-Chlorotoluene	0.7474 0.6827	0.7494 0.7252	0.7413	0.8080	0.7621	Ave		0.7451				5.1		20.0			
tert-Butylbenzene	2.1833 1.7620	2.1298 1.9882	1.9822	2.1193	2.1556	Ave		2.0458				7.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,4-Trimethylbenzene	3.0184 2.4470	2.7364 2.6608	2.8336	2.7881	2.8564	Ave		2.7630				6.5		20.0			
sec-Butylbenzene	2.8650 2.4842	2.7533 2.7550	2.7314	2.8090	2.9317	Ave		2.7614				5.1		20.0			
1,3-Dichlorobenzene	1.6396 1.3415	1.5060 1.4575	1.5179	1.5621	1.5464	Ave		1.5102			0.6000	6.2		20.0			
4-Isopropyltoluene	2.4637 2.1908	2.2931 2.4151	2.4682	2.4741	2.5061	Ave		2.4016				4.8		20.0			
1,4-Dichlorobenzene	1.5988 1.3676	1.5405 1.5084	1.5328	1.6208	1.5998	Ave		1.5384			0.5000	5.6		20.0			
n-Butylbenzene	1.9641 1.7432	1.9760 1.8954	1.9703	2.0006	2.0286	Ave		1.9397				4.9		20.0			
1,2-Dichlorobenzene	1.5565 1.3671	1.5596 1.4796	1.5968	1.5809	1.6164	Ave		1.5367			0.4000	5.6		20.0			
1,2-Dibromo-3-Chloropropane	0.1680 0.1243	0.1634 0.1389	0.1712	0.1562	0.1559	Ave		0.1540			0.0500	10.9		20.0			
1,2,4-Trichlorobenzene	1.0593 0.8110	1.0103 0.8100	0.9076	0.9011	1.0217	Ave		0.9316			0.2000	10.9		20.0			
Hexachlorobutadiene	0.4119 0.2653	0.3002 0.2445	0.2971	0.2897	0.3260	Ave		0.3050				17.7		20.0			
Naphthalene	2.6504 2.1132	2.4882 2.0761	2.5897	2.4549	2.6105	Ave		2.4261				9.8		20.0			
1,2,3-Trichlorobenzene	1.0673 0.7835	0.9878 0.7246	0.9377	0.8773	0.9727	Ave		0.9073				13.3		20.0			
Dibromofluoromethane (Surr)	0.2613 0.2569	0.2591 0.2541	0.2664	0.2702	0.2708	Ave		0.2627				2.5		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3641 0.3199	0.3549 0.3210	0.3402	0.3167	0.3329	Ave		0.3357				5.5		20.0			
Toluene-d8 (Surr)	1.2871 1.1605	1.3529 1.2930	1.2292	1.2496	1.2649	Ave		1.2625				4.7		20.0			
4-Bromofluorobenzene (Surr)	0.4660 0.4795	0.4708 0.5146	0.4769	0.4653	0.4919	Ave		0.4807				3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-348191/8	UXX5945.D
Level 2	STD8260 240-348191/7	UXX5944.D
Level 3	STD8260 240-348191/6	UXX5943.D
Level 4	STD8260 240-348191/5	UXX5942.D
Level 5	STD8260 240-348191/4	UXX5941.D
Level 6	STD8260 240-348191/3	UXX5940.D
Level 7	STD8260 240-348191/2	UXX5939.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	29702 514557	49306 983706	96492	125358	281542	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Chloromethane	FB	Ave	35559 558142	59028 1139409	106974	155540	339023	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Butadiene	FB	Ave	28939 566804	53656 1168420	104330	141964	324473	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Vinyl chloride	FB	Ave	30003 527876	49059 1111107	99749	132484	300976	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Bromomethane	FB	Ave	17909 299966	27208 695854	62698	77029	174504	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Chloroethane	FB	Lin1	8326 326090	31062 729967	63869	81755	181873	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	40997 771948	65618 1643670	149507	196060	425393	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	34895 593135	53671 1265887	110955	142428	327669	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethyl ether	FB	Ave	19083 331251	34347 675875	69595	91555	189334	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Acrolein	FB	Ave	15013 285095	29169 534864	57102	67032	156817	5.00 100	10.0 200	20.0	25.0	50.0
1,1-Dichloroethene	FB	Ave	25681 416816	39664 856734	82722	105838	227156	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,2-Trichloro-1,2,2-trifluoroetha ne	FB	Ave	9855 309577	29262 648736	60642	87826	171003	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Acetone	FB	Lin1	21800 205299	27438 406703	52366	59024	127962	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Iodomethane	FB	Ave	40446 763308	72419 1606886	154849	200675	432735	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Carbon disulfide	FB	Ave	75471 1399853	133722 3017501	282734	378111	782683	1.00 20.0	2.00 40.0	4.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
3-Chloro-1-propene	FB	Ave	17566 309282	29228 658534	61342	76468	179488	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Methyl acetate	FB	Ave	29045 428545	45042 909030	95048	126100	249995	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Methylene Chloride	FB	Ave	29904 474592	52083 1017150	105307	135144	279268	1.00 20.0	2.00 40.0	4.00	5.00	10.0
tert-Butyl alcohol	FB	Ave	22408 392784	42479 785080	90900	90591	233093	10.0 200	20.0 400	40.0	50.0	100
Acrylonitrile	FB	Ave	72831 1395587	133123 2918908	294885	357275	798555	10.0 200	20.0 400	40.0	50.0	100
trans-1,2-Dichloroethene	FB	Ave	24954 465280	43043 993015	95719	122892	258631	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Methyl tert-butyl ether	FB	Ave	66819 1261437	122456 2773005	275180	338334	713524	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Hexane	FB	Ave	4752 70252	7303 163590	16483	19143	46098	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1-Dichloroethane	FB	Ave	44813 812922	76059 1771078	174733	219004	460948	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Vinyl acetate	FB	Ave	34661 633638	65528 1405879	134694	171771	364316	1.00 20.0	2.00 40.0	4.00	5.00	10.0
cis-1,2-Dichloroethene	FB	Ave	25292 470642	47089 1026709	102678	127410	281579	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2,2-Dichloropropane	FB	Ave	8364 137490	13262 297781	26495	36034	72680	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	14745 231977	29788 508179	58774	64038	163857	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Chlorobromomethane	FB	Ave	12372 206532	19102 464023	44433	59842	123496	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Tetrahydrofuran	FB	Ave	12349 176156	19381 353680	42256	48442	104928	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Chloroform	FB	Ave	39440 687485	68417 1495865	147357	195295	400639	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,1-Trichloroethane	FB	Ave	39579 666091	66817 1489765	141477	189167	382116	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Cyclohexane	FB	Ave	40517 768592	72096 1719352	159885	212264	433465	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	28707 473071	47265 1079383	101794	137348	284153	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Carbon tetrachloride	FB	Ave	31891 564380	50727 1251286	112446	151393	323195	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Isobutyl alcohol	CBNZ d5	Ave	15567 252528	25786 508277	61586	65605	150525	25.0 500	50.0 1000	100	125	250

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Benzene	FB	Ave	93899 1567390	163180 3542746	334335	443011	923963	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dichloroethane	FB	Ave	36495 563877	59820 1240480	121653	165013	330637	1.00 20.0	2.00 40.0	4.00	5.00	10.0
n-Heptane	FB	Ave	3680 62798	5603 130324	12823	19398	34121	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Trichloroethene	FB	Ave	23518 398156	37793 879438	88143	108876	232021	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Methylcyclohexane	FB	Ave	30311 585934	56155 1243335	118131	160970	325155	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dichloropropane	FB	Ave	23541 415183	41474 902011	87035	118902	245104	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Dibromomethane	FB	Ave	14524 222579	24453 490472	50177	66172	134033	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,4-Dioxane	FB	Ave	3984 77487	9548 133459	14536	17749	51135	20.0 400	40.0 800	80.0	100	200
Dichlorobromomethane	FB	Ave	29398 504627	52845 1156392	110220	147502	308915	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Ave	24294 455859	43002 964865	93684	123818	253171	2.00 40.0	4.00 80.0	8.00	10.0	20.0
cis-1,3-Dichloropropene	FB	Ave	32036 589452	55884 1325129	124749	160953	333506	1.00 20.0	2.00 40.0	4.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	36693 623507	64321 1335139	142818	186347	369803	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Toluene	CBNZ d5	Ave	94411 1773988	163738 4022193	364924	486520	987739	1.00 20.0	2.00 40.0	4.00	5.00	10.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	27810 539870	45894 1191800	106207	149395	296932	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Ave	22235 428540	38450 952039	89700	127102	241738	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,2-Trichloroethane	CBNZ d5	Ave	18441 321237	31150 714597	66256	91013	185848	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Tetrachloroethene	CBNZ d5	Ave	15669 306405	30127 679783	61206	88799	175682	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,3-Dichloropropane	CBNZ d5	Ave	33102 548275	50296 1177346	115086	163398	316160	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Hexanone	CBNZ d5	Ave	23174 423322	41590 843364	97136	122476	242960	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Chlorodibromomethane	CBNZ d5	Ave	17431 395090	31514 863135	77635	104067	211372	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethylene Dibromide	CBNZ d5	Ave	17360 337253	28905 717928	64125	90394	190578	1.00 20.0	2.00 40.0	4.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chlorobenzene	CBNZ d5	Ave	60368 1184812	109713 2571998	235880	319037	645008	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	23016 437489	40039 993121	91323	117864	245955	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	35195 671218	56525 1428374	130454	179744	366978	1.00 20.0	2.00 40.0	4.00	5.00	10.0
m-Xylene & p-Xylene	CBNZ d5	Ave	43604 827660	73996 1822298	156186	221524	436330	1.00 20.0	2.00 40.0	4.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	43905 853338	77759 1914562	165032	227919	466041	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Styrene	CBNZ d5	Ave	68125 1417346	119516 3177334	252959	364983	747052	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Bromoform	CBNZ d5	Ave	10359 251662	20327 586449	43222	59836	129035	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Isopropylbenzene	CBNZ d5	Ave	105750 2091262	180416 4910038	406092	552849	1135218	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	22805 447641	40471 975654	92437	130252	253276	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Bromobenzene	DCBd 4	Ave	24293 525557	47356 1215279	101075	142846	288667	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	7073 145421	13937 302742	29093	38050	77183	1.00 20.0	2.00 40.0	4.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	3110 98479	8994 230911	20531	23302	52920	1.00 20.0	2.00 40.0	4.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	25253 566807	47561 1285152	104182	146487	303075	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	27274 520503	40464 1166610	97963	136591	284129	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	79157 1821446	144751 4150687	334679	458536	954033	1.00 20.0	2.00 40.0	4.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	23929 543666	44716 1202708	95669	138235	271503	1.00 20.0	2.00 40.0	4.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	69898 1403191	127089 3297539	255822	362585	767980	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	96634 1948656	163283 4413140	365703	477013	1017650	1.00 20.0	2.00 40.0	4.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	91722 1978322	164294 4569258	352509	480582	1044498	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	52492 1068286	89865 2417404	195901	267256	550957	1.00 20.0	2.00 40.0	4.00	5.00	10.0
4-Isopropyltoluene	DCBd 4	Ave	78874 1744696	136832 4005507	318550	423296	892863	1.00 20.0	2.00 40.0	4.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,4-Dichlorobenzene	DCBd 4	Ave	51185 1089088	91925 2501722	197818	277301	569972	1.00 20.0	2.00 40.0	4.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	62879 1388235	117911 3143613	254281	342280	722754	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	49830 1088688	93064 2454053	206076	270475	575895	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	5380 98986	9748 230360	22093	26723	55531	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	33912 645835	60286 1343492	117135	154166	364018	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	13186 211312	17916 405483	38345	49562	116162	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Naphthalene	DCBd 4	Ave	84851 1682830	148471 3443386	334226	420006	930050	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	34169 623919	58942 1201706	121014	150099	346559	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Dibromofluoromethane (Surr)	FB	Ave	19470 390826	36825 801982	78811	102613	213883	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	27137 486740	50442 1012863	100639	120256	262894	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Toluene-d8 (Surr)	CBNZ d5	Ave	74395 1534612	145690 3312433	291793	400786	805597	1.00 20.0	2.00 40.0	4.00	5.00	10.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	26936 634068	50696 1318259	113207	149244	313290	1.00 20.0	2.00 40.0	4.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 15:27 Calibration End Date: 10/02/2018 17:56 Calibration ID: 47199

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-348191/8	UXX5945.D
Level 2	STD8260 240-348191/7	UXX5944.D
Level 3	STD8260 240-348191/6	UXX5943.D
Level 4	STD8260 240-348191/5	UXX5942.D
Level 5	STD8260 240-348191/4	UXX5941.D
Level 6	STD8260 240-348191/3	UXX5940.D
Level 7	STD8260 240-348191/2	UXX5939.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Chloroethane	-15.4						50					
Acetone	0.5						50					

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 18:46 Calibration End Date: 10/02/2018 21:14 Calibration ID: 47201

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-348191/16	UXX5953.D
Level 2	STDA9 240-348191/15	UXX5952.D
Level 3	STDA9 240-348191/14	UXX5951.D
Level 4	STDA9 240-348191/13	UXX5950.D
Level 5	STDA9 240-348191/12	UXX5949.D
Level 6	STDA9 240-348191/11	UXX5948.D
Level 7	STDA9 240-348191/10	UXX5947.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0248 0.0296	0.0311 0.0264	0.0282	0.0312	0.0284	Ave		0.0285				8.2		20.0			
Isopropyl ether	0.2859 0.2638	0.2629 0.2534	0.2649	0.2723	0.2646	Ave		0.2668				3.8		20.0			
2-Chloro-1,3-butadiene	0.4236 0.4837	0.4595 0.4524	0.4515	0.4761	0.4654	Ave		0.4589				4.3		20.0			
Tert-butyl ethyl ether	1.0369 1.0942	0.9995 1.0362	1.0293	1.0578	1.0486	Ave		1.0432				2.8		20.0			
Ethyl acetate	0.2091 0.1720	0.1829 0.1636	0.1787	0.1860	0.1711	Ave		0.1805				8.2		20.0			
Propionitrile	0.0327 0.0321	0.0314 0.0306	0.0317	0.0320	0.0329	Ave		0.0319				2.5		20.0			
Methacrylonitrile	0.1174 0.1215	0.1197 0.1236	0.1186	0.1246	0.1236	Ave		0.1213				2.3		20.0			
Tert-amyl methyl ether	0.8449 0.9108	0.8409 0.9077	0.8518	0.8930	0.8686	Ave		0.8740				3.4		20.0			
n-Butanol	0.0094 0.0094	0.0104 0.0091	0.0094	0.0104	0.0102	Ave		0.0098				5.7		20.0			
Ethyl acrylate	0.2971 0.3127	0.2852 0.2955	0.2858	0.2870	0.3039	Ave		0.2953				3.5		20.0			
Methyl methacrylate	0.1717 0.1995	0.1871 0.1831	0.1835	0.1882	0.1902	Ave		0.1862				4.5		20.0			
2-Nitropropane	0.0593 0.0612	0.0509 0.0587	0.0587	0.0583	0.0573	Ave		0.0577				5.6		20.0			
n-Butyl acetate	0.2208 0.2176	0.2132 0.2092	0.2211	0.2002	0.2094	Ave		0.2130				3.5		20.0			
1-Chlorohexane	0.3743 0.3924	0.3510 0.3842	0.3756	0.3874	0.3754	Ave		0.3772				3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 18:46 Calibration End Date: 10/02/2018 21:14 Calibration ID: 47201

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0233 0.0229	0.0243 0.0206	0.0225	0.0241	0.0251	Ave		0.0233				6.3		20.0			
Pentachloroethane	0.1982 0.2161	0.2248 0.2345	0.2157	0.2370	0.1404	Ave		0.2095				15.8		20.0			
1,2,3-Trimethylbenzene	2.9755 2.9408	2.8944 3.1097	2.9076	3.0893	3.0441	Ave		2.9945				2.9		20.0			
Benzyl chloride	0.1638 0.2485	0.2107 0.2719	0.2081	0.2393	0.2290	Ave		0.2245				15.4		20.0			
1,3,5-Trichlorobenzene	0.9634 0.9263	0.9863 0.9788	0.9363	0.9645	0.9837	Ave		0.9627				2.4		20.0			
2-Methylnaphthalene	1.6895 1.6058	1.6701 1.2588	1.5009	1.8260	1.7931	Ave		1.6206				11.9		20.0			
1-Chloro-1-fluoroethane TIC	0.0942 0.3249	0.0025 0.2953	0.3001	0.3142	0.3074	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 18:46 Calibration End Date: 10/02/2018 21:14 Calibration ID: 47201

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-348191/16	UXX5953.D
Level 2	STDA9 240-348191/15	UXX5952.D
Level 3	STDA9 240-348191/14	UXX5951.D
Level 4	STDA9 240-348191/13	UXX5950.D
Level 5	STDA9 240-348191/12	UXX5949.D
Level 6	STDA9 240-348191/11	UXX5948.D
Level 7	STDA9 240-348191/10	UXX5947.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Ave	19137 454628	47410 867840	84488	116568	222121	10.0 200	20.0 400	40.0	50.0	100
Isopropyl ether	FB	Ave	22027 405742	40081 832328	79251	101900	206714	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Chloro-1,3-butadiene	FB	Ave	32630 743875	70056 1485985	135097	178161	363629	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Tert-butyl ethyl ether	FB	Ave	79881 1682708	152392 3403919	307994	395810	819238	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Ethyl acetate	FB	Ave	32221 528949	55781 1074531	106957	139212	267326	2.00 40.0	4.00 80.0	8.00	10.0	20.0
Propionitrile	FB	Ave	25229 493812	47812 1006421	94964	119883	257293	10.0 200	20.0 400	40.0	50.0	100
Methacrylonitrile	FB	Ave	90439 1867794	182524 4061695	354745	466075	965823	10.0 200	20.0 400	40.0	50.0	100
Tert-amyl methyl ether	FB	Ave	65092 1400675	128206 2981774	254884	334155	678568	1.00 20.0	2.00 40.0	4.00	5.00	10.0
n-Butanol	CBNZ d5	Ave	14074 308942	30403 575535	54972	75335	156071	25.0 500	50.0 1000	100	125	250
Ethyl acrylate	FB	Ave	22889 480847	43483 970669	85531	107388	237448	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Methyl methacrylate	FB	Ave	26456 613559	57067 1202793	109790	140851	297125	2.00 40.0	4.00 80.0	8.00	10.0	20.0
2-Nitropropane	FB	Ave	9135 188156	15519 385413	35101	43638	89460	2.00 40.0	4.00 80.0	8.00	10.0	20.0
n-Butyl acetate	CBNZ d5	Ave	13244 286447	24986 527034	51779	57817	128200	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1-Chlorohexane	CBNZ d5	Ave	22455 516619	41143 968020	87976	111904	229854	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Cyclohexanone	DCBd 4	Ave	7065 158799	15056 280311	28227	37360	79413	10.0 200	20.0 400	40.0	50.0	100

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 348191

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/02/2018 18:46 Calibration End Date: 10/02/2018 21:14 Calibration ID: 47201

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Pentachloroethane	CBNZ d5	Ave	23778 568960	52694 1181839	101051	136893	171916	2.00 40.0	4.00 80.0	8.00	10.0	20.0
1,2,3-Trimethylbenzene	DCBd 4	Ave	90130 2042284	179035 4222901	365175	479512	964178	1.00 20.0	2.00 40.0	4.00	5.00	10.0
Benzyl chloride	DCBd 4	Ave	4961 172601	13030 369230	26134	37138	72546	1.00 20.0	2.00 40.0	4.00	5.00	10.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	29182 643263	61009 1329156	117587	149702	311582	1.00 20.0	2.00 40.0	4.00	5.00	10.0
2-Methylnaphthalene	DCBd 4	Ave	102348 2230272	206615 3418791	377018	566840	1135847	2.00 40.0	4.00 80.0	8.00	10.0	20.0
1-Chloro-1-fluoroethane TIC	FB	None	7259 499667	387 969913	89798	117578	240192	1.00 20.0	2.00 40.0	4.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
None = No Calib Curve

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

opnly affects tert-butyl alcohol

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-348191/9 Calibration Date: 10/02/2018 18:21

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX5946.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3440	0.3451	0.1000	0.0100	0.0100	0.3	30.0
Chloromethane	Ave	0.4030	0.3613	0.1000	0.00896	0.0100	-10.4	30.0
Butadiene	Ave	0.3780	0.3331		0.00881	0.0100	-11.9	30.0
Vinyl chloride	Ave	0.3591	0.3452	0.1000	0.00961	0.0100	-3.9	30.0
Bromomethane	Ave	0.2122	0.1913	0.0500	0.00901	0.0100	-9.9	30.0
Chloroethane	Lin1		0.1940	0.0500	0.00877	0.0100	-12.3	30.0
Dichlorofluoromethane	Ave	0.5143	0.4937		0.00960	0.0100	-4.0	30.0
Trichlorofluoromethane	Ave	0.4003	0.3666	0.1000	0.00916	0.0100	-8.4	30.0
Ethyl ether	Ave	0.2351	0.2403		0.0102	0.0100	2.2	30.0
Acrolein	Ave	0.0380	0.0424		0.0557	0.0500	11.4	50.0
1,1-Dichloroethene	Ave	0.2879	0.3055	0.1000	0.0106	0.0100	6.1	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2000	0.2166	0.0500	0.0108	0.0100	8.3	30.0
Acetone	Lin1		0.0612	0.0100	0.0166	0.0200	-17.2	50.0
Iodomethane	Ave	0.5233	0.5267		0.0101	0.0100	0.7	30.0
Carbon disulfide	Ave	0.9675	0.9637	0.1000	0.00996	0.0100	-0.4	30.0
3-Chloro-1-propene	Ave	0.2128	0.2096		0.00985	0.0100	-1.5	30.0
Methyl acetate	Ave	0.1605	0.1565	0.1000	0.0195	0.0200	-2.5	30.0
Methylene Chloride	Ave	0.3525	0.3388	0.1000	0.00961	0.0100	-3.9	50.0
tert-Butyl alcohol	Ave	0.0278	0.0215		0.0774	0.100	-22.6	50.0
Acrylonitrile	Ave	0.0958	0.0915		0.0955	0.100	-4.5	30.0
Methyl tert-butyl ether	Ave	0.8844	0.8779	0.1000	0.00993	0.0100	-0.7	30.0
trans-1,2-Dichloroethene	Ave	0.3190	0.3363	0.1000	0.0105	0.0100	5.4	30.0
Hexane	Ave	0.0540	0.0562		0.0104	0.0100	4.1	30.0
1,1-Dichloroethane	Ave	0.5690	0.5736	0.2000	0.0101	0.0100	0.8	30.0
Vinyl acetate	Ave	0.4510	0.4649		0.0103	0.0100	3.1	50.0
2,2-Dichloropropane	Ave	0.0953	0.0924		0.00970	0.0100	-3.0	30.0
2-Butanone (MEK)	Ave	0.0926	0.0789	0.0100	0.0171	0.0200	-14.7	30.0
cis-1,2-Dichloroethene	Ave	0.3349	0.3388	0.1000	0.0101	0.0100	1.2	30.0
Chlorobromomethane	Ave	0.1496	0.1507		0.0101	0.0100	0.7	30.0
Tetrahydrofuran	Ave	0.0667	0.0564		0.0169	0.0200	-15.4	30.0
Chloroform	Ave	0.4937	0.4935	0.2000	0.0100	0.0100	-0.0	30.0
1,1,1-Trichloroethane	Ave	0.4816	0.4753	0.1000	0.00987	0.0100	-1.3	30.0
Cyclohexane	Ave	0.5356	0.5471	0.1000	0.0102	0.0100	2.1	30.0
1,1-Dichloropropene	Ave	0.3480	0.3613		0.0104	0.0100	3.8	30.0
Carbon tetrachloride	Ave	0.3915	0.3928	0.1000	0.0100	0.0100	0.3	30.0
Isobutyl alcohol	Ave	0.0091	0.0077		0.211	0.250	-15.8	30.0
Benzene	Ave	1.147	1.145	0.5000	0.00999	0.0100	-0.1	30.0
1,2-Dichloroethane	Ave	0.4198	0.4202	0.1000	0.0100	0.0100	0.1	30.0
n-Heptane	Ave	0.0441	0.0488		0.0111	0.0100	10.6	30.0
Trichloroethene	Ave	0.2858	0.2864	0.1500	0.0100	0.0100	0.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-348191/9 Calibration Date: 10/02/2018 18:21

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX5946.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4023	0.3992	0.1000	0.00992	0.0100	-0.8	30.0
1,2-Dichloropropane	Ave	0.2977	0.3081	0.1000	0.0103	0.0100	3.5	30.0
1,4-Dioxane	Ave	0.0027	0.0016		0.120	0.200	-40.1	50.0
Dibromomethane	Ave	0.1689	0.1608		0.00952	0.0100	-4.8	30.0
Dichlorobromomethane	Ave	0.3738	0.3860	0.1500	0.0103	0.0100	3.3	30.0
2-Chloroethyl vinyl ether	Ave	0.1569	0.1547		0.00985	0.0100	-1.5	30.0
cis-1,3-Dichloropropene	Ave	0.4140	0.4330	0.1500	0.0105	0.0100	4.6	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2300	0.2246	0.0500	0.0195	0.0200	-2.3	30.0
Toluene	Ave	1.524	1.527	0.4000	0.0100	0.0100	0.2	30.0
trans-1,3-Dichloropropene	Ave	0.4515	0.4624	0.1000	0.0102	0.0100	2.4	30.0
Ethyl methacrylate	Ave	0.3702	0.3874		0.0105	0.0100	4.7	30.0
1,1,2-Trichloroethane	Ave	0.2836	0.2833	0.1000	0.00999	0.0100	-0.0	30.0
Tetrachloroethene	Ave	0.2655	0.2614	0.1500	0.00984	0.0100	-1.6	30.0
1,3-Dichloropropane	Ave	0.4864	0.4763		0.00979	0.0100	-2.1	30.0
2-Hexanone	Ave	0.1864	0.1863	0.0500	0.0200	0.0200	-0.0	30.0
Chlorodibromomethane	Ave	0.3162	0.3326		0.0105	0.0100	5.2	30.0
Ethylene Dibromide	Ave	0.2793	0.2762		0.00989	0.0100	-1.1	30.0
Chlorobenzene	Ave	0.9949	0.9762	0.3000	0.00981	0.0100	-1.9	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3753	0.3601		0.00960	0.0100	-4.0	30.0
Ethylbenzene	Ave	0.5550	0.5421		0.00977	0.0100	-2.3	30.0
m-Xylene & p-Xylene	Ave	0.6875	0.6797		0.00989	0.0100	-1.1	30.0
o-Xylene	Ave	0.7160	0.6810		0.00951	0.0100	-4.9	30.0
Styrene	Ave	1.140	1.099	0.3000	0.00965	0.0100	-3.5	30.0
Bromoform	Ave	0.1941	0.1912	0.1000	0.00985	0.0100	-1.5	30.0
Isopropylbenzene	Ave	1.746	1.691	0.1000	0.00969	0.0100	-3.1	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6756	0.6826	0.3000	0.0101	0.0100	1.0	30.0
Bromobenzene	Ave	0.7676	0.7690		0.0100	0.0100	0.2	30.0
1,2,3-Trichloropropane	Ave	0.2120	0.2116		0.00998	0.0100	-0.2	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1364	0.1573		0.0115	0.0100	15.3	30.0
N-Propylbenzene	Ave	0.7981	0.8486		0.0106	0.0100	6.3	30.0
2-Chlorotoluene	Ave	0.7489	0.7353		0.00982	0.0100	-1.8	30.0
1,3,5-Trimethylbenzene	Ave	2.520	2.599		0.0103	0.0100	3.2	30.0
4-Chlorotoluene	Ave	0.7451	0.7947		0.0107	0.0100	6.6	30.0
tert-Butylbenzene	Ave	2.046	2.073		0.0101	0.0100	1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.763	2.787		0.0101	0.0100	0.9	30.0
sec-Butylbenzene	Ave	2.761	2.810		0.0102	0.0100	1.8	30.0
1,3-Dichlorobenzene	Ave	1.510	1.514	0.6000	0.0100	0.0100	0.3	30.0
4-Isopropyltoluene	Ave	2.402	2.473		0.0103	0.0100	3.0	30.0
1,4-Dichlorobenzene	Ave	1.538	1.522	0.5000	0.00989	0.0100	-1.1	30.0
n-Butylbenzene	Ave	1.940	1.904		0.00981	0.0100	-1.9	30.0
1,2-Dichlorobenzene	Ave	1.537	1.510	0.4000	0.00983	0.0100	-1.7	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-348191/9 Calibration Date: 10/02/2018 18:21

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX5946.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1540	0.1474	0.0500	0.00957	0.0100	-4.3	50.0
1,2,4-Trichlorobenzene	Ave	0.9316	0.8227	0.2000	0.00883	0.0100	-11.7	50.0
Hexachlorobutadiene	Ave	0.3050	0.2234		0.00733	0.0100	-26.7	30.0
Naphthalene	Ave	2.426	2.081		0.00858	0.0100	-14.2	50.0
1,2,3-Trichlorobenzene	Ave	0.9073	0.7077		0.00780	0.0100	-22.0	30.0
Dibromofluoromethane (Surr)	Ave	0.2627	0.2751		0.0105	0.0100	4.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3357	0.3486		0.0104	0.0100	3.9	30.0
Toluene-d8 (Surr)	Ave	1.262	1.312		0.0104	0.0100	3.9	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4807	0.4846		0.0101	0.0100	0.8	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-348191/17 Calibration Date: 10/02/2018 21:39

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 18:46

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 21:14

Lab File ID: UXX5954.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0285	0.0258		0.0905	0.100	-9.5	30.0
Isopropyl ether	Ave	0.2668	0.2824		0.0106	0.0100	5.9	30.0
2-Chloro-1,3-butadiene	Ave	0.4589	0.4729		0.0103	0.0100	3.1	30.0
Tert-butyl ethyl ether	Ave	1.043	1.055		0.0101	0.0100	1.2	30.0
Ethyl acetate	Ave	0.1805	0.1894		0.0210	0.0200	4.9	50.0
Propionitrile	Ave	0.0319	0.0345		0.108	0.100	7.9	30.0
Methacrylonitrile	Ave	0.1213	0.1277		0.105	0.100	5.3	30.0
Tert-amyl methyl ether	Ave	0.8740	0.8858		0.0101	0.0100	1.4	30.0
n-Butanol	Ave	0.0098	0.0093		0.238	0.250	-4.7	30.0
Ethyl acrylate	Ave	0.2953	0.3009		0.0102	0.0100	1.9	30.0
Methyl methacrylate	Ave	0.1862	0.1870		0.0201	0.0200	0.4	30.0
2-Nitropropane	Ave	0.0577	0.0602		0.0208	0.0200	4.2	30.0
n-Butyl acetate	Ave	0.2130	0.2141		0.0100	0.0100	0.5	30.0
1-Chlorohexane	Ave	0.3772	0.3855		0.0102	0.0100	2.2	30.0
Cyclohexanone	Ave	0.0233	0.0197		0.0846	0.100	-15.4	30.0
Pentachloroethane	Ave	0.2095	0.2180		0.0208	0.0200	4.0	30.0
1,2,3-Trimethylbenzene	Ave	2.994	2.955		0.00987	0.0100	-1.3	30.0
Benzyl chloride	Ave	0.2245	0.2556		0.0114	0.0100	13.9	30.0
1,3,5-Trichlorobenzene	Ave	0.9627	0.9202		0.00956	0.0100	-4.4	30.0
2-Methylnaphthalene	Ave	1.621	1.137		0.0140	0.0200	-29.9	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: BFB2123.D BFB Injection Date: 01/18/2019

Instrument ID: A3UX10 BFB Injection Time: 11:33

Analysis Batch No.: 364651

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	26.0	
75	30.0 - 60.0 % of mass 95	55.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	1.0	(1.3) 1
174	50.0 - 120.00 % of mass 95	77.9	
175	5.0 - 9.0 % of mass 174	5.4	(7.0) 1
176	95.0 - 101.0 % of mass 174	74.4	(95.6) 1
177	5.0 - 9.0 % of mass 176	4.1	(5.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-364651/2	UXX9146.D	01/18/2019	12:01
	CCV 240-364651/3	UXX9147.D	01/18/2019	12:26
	LCS 240-364651/4	UXX9148.D	01/18/2019	12:51
	MB 240-364651/6	UXX9150.D	01/18/2019	13:40
TB-010819	240-106686-1	UXX9154.D	01/18/2019	15:20

only affects tert-butyl alcohol

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-364651/2 Calibration Date: 01/18/2019 12:01

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX9146.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3440	0.3179	0.1000	0.00924	0.0100	-7.6	20.0
Chloromethane	Ave	0.4030	0.5166	0.1000	0.0128	0.0100	28.2*	20.0
Butadiene	Ave	0.3780	0.4527		0.0120	0.0100	19.8	20.0
Vinyl chloride	Ave	0.3591	0.4143	0.1000	0.0115	0.0100	15.4	20.0
Bromomethane	Ave	0.2122	0.2249	0.0500	0.0106	0.0100	6.0	20.0
Chloroethane	Lin1		0.2465	0.0500	0.0110	0.0100	10.5	20.0
Dichlorofluoromethane	Ave	0.5143	0.5389		0.0105	0.0100	4.8	20.0
Trichlorofluoromethane	Ave	0.4003	0.3834	0.1000	0.00958	0.0100	-4.2	20.0
Ethyl ether	Ave	0.2351	0.2464		0.0105	0.0100	4.8	20.0
Acrolein	Ave	0.0380	0.0370		0.0486	0.0500	-2.8	50.0
1,1-Dichloroethene	Ave	0.2879	0.2801	0.1000	0.00973	0.0100	-2.7	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2000	0.2265	0.0500	0.0113	0.0100	13.2	20.0
Acetone	Lin1		0.0756	0.0100	0.0211	0.0200	5.3	50.0
Iodomethane	Ave	0.5233	0.5306		0.0101	0.0100	1.4	20.0
Carbon disulfide	Ave	0.9675	1.073	0.1000	0.0111	0.0100	10.9	20.0
3-Chloro-1-propene	Ave	0.2128	0.2057		0.00967	0.0100	-3.3	20.0
Methyl acetate	Ave	0.1605	0.1562	0.1000	0.0195	0.0200	-2.7	20.0
Methylene Chloride	Ave	0.3525	0.4177	0.1000	0.0118	0.0100	18.5	50.0
tert-Butyl alcohol	Ave	0.0278	0.0261		0.0938	0.100	-6.2	50.0
Acrylonitrile	Ave	0.0958	0.0982		0.103	0.100	2.5	20.0
Methyl tert-butyl ether	Ave	0.8844	0.8607	0.1000	0.00973	0.0100	-2.7	20.0
trans-1,2-Dichloroethene	Ave	0.3190	0.3083	0.1000	0.00966	0.0100	-3.4	20.0
Hexane	Ave	0.0540	0.0484		0.00896	0.0100	-10.4	20.0
1,1-Dichloroethane	Ave	0.5690	0.5933	0.2000	0.0104	0.0100	4.3	20.0
Vinyl acetate	Ave	0.4510	0.4024		0.00892	0.0100	-10.8	50.0
2,2-Dichloropropane	Ave	0.0953	0.0926		0.00973	0.0100	-2.7	20.0
cis-1,2-Dichloroethene	Ave	0.3349	0.3246	0.1000	0.00969	0.0100	-3.1	20.0
2-Butanone (MEK)	Ave	0.0926	0.0845	0.0100	0.0183	0.0200	-8.7	20.0
Chlorobromomethane	Ave	0.1496	0.1298		0.00868	0.0100	-13.2	20.0
Tetrahydrofuran	Ave	0.0667	0.0580		0.0174	0.0200	-13.0	20.0
Chloroform	Ave	0.4937	0.4901	0.2000	0.00993	0.0100	-0.7	20.0
1,1,1-Trichloroethane	Ave	0.4816	0.4646	0.1000	0.00965	0.0100	-3.5	20.0
Cyclohexane	Ave	0.5356	0.6134	0.1000	0.0115	0.0100	14.5	20.0
1,1-Dichloropropene	Ave	0.3480	0.3086		0.00887	0.0100	-11.3	20.0
Carbon tetrachloride	Ave	0.3915	0.3681	0.1000	0.00940	0.0100	-6.0	20.0
Isobutyl alcohol	Ave	0.0091	0.0112		0.305	0.250	22.1*	20.0
Benzene	Ave	1.147	1.118	0.5000	0.00975	0.0100	-2.5	20.0
1,2-Dichloroethane	Ave	0.4198	0.3913	0.1000	0.00932	0.0100	-6.8	20.0
n-Heptane	Ave	0.0441	0.0343		0.00776	0.0100	-22.4*	20.0
Trichloroethene	Ave	0.2858	0.2406	0.1500	0.00842	0.0100	-15.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-364651/2 Calibration Date: 01/18/2019 12:01

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX9146.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4023	0.3662	0.1000	0.00910	0.0100	-9.0	20.0
1,2-Dichloropropane	Ave	0.2977	0.3089	0.1000	0.0104	0.0100	3.7	20.0
Dibromomethane	Ave	0.1689	0.1443		0.00854	0.0100	-14.6	20.0
1,4-Dioxane	Ave	0.0027	0.0016		0.119	0.200	-40.5	50.0
Dichlorobromomethane	Ave	0.3738	0.3583	0.1500	0.00959	0.0100	-4.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1569	0.1119		0.0143	0.0200	-28.7*	20.0
cis-1,3-Dichloropropene	Ave	0.4140	0.3572	0.1500	0.00863	0.0100	-13.7	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2300	0.2270	0.0500	0.0197	0.0200	-1.3	20.0
Toluene	Ave	1.524	1.501	0.4000	0.00984	0.0100	-1.6	20.0
trans-1,3-Dichloropropene	Ave	0.4515	0.4277	0.1000	0.00947	0.0100	-5.3	20.0
Ethyl methacrylate	Ave	0.3702	0.3375		0.00912	0.0100	-8.8	20.0
1,1,2-Trichloroethane	Ave	0.2836	0.2540	0.1000	0.00896	0.0100	-10.4	20.0
Tetrachloroethene	Ave	0.2655	0.2207	0.1500	0.00831	0.0100	-16.9	20.0
1,3-Dichloropropane	Ave	0.4864	0.4710		0.00968	0.0100	-3.2	20.0
2-Hexanone	Ave	0.1864	0.2041	0.0500	0.0219	0.0200	9.5	20.0
Chlorodibromomethane	Ave	0.3162	0.2839		0.00898	0.0100	-10.2	20.0
Ethylene Dibromide	Ave	0.2793	0.2562		0.00917	0.0100	-8.3	20.0
Chlorobenzene	Ave	0.9949	0.9235	0.3000	0.00928	0.0100	-7.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3753	0.3646		0.00971	0.0100	-2.9	20.0
Ethylbenzene	Ave	0.5550	0.5030		0.00906	0.0100	-9.4	20.0
m-Xylene & p-Xylene	Ave	0.6875	0.6078		0.00884	0.0100	-11.6	20.0
o-Xylene	Ave	0.7160	0.6711		0.00937	0.0100	-6.3	20.0
Styrene	Ave	1.140	1.039	0.3000	0.00911	0.0100	-8.9	20.0
Bromoform	Ave	0.1941	0.1438	0.1000	0.00741	0.0100	-25.9*	20.0
Isopropylbenzene	Ave	1.746	1.662	0.1000	0.00952	0.0100	-4.8	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6756	0.6966	0.3000	0.0103	0.0100	3.1	20.0
Bromobenzene	Ave	0.7676	0.7188		0.00936	0.0100	-6.4	20.0
1,2,3-Trichloropropane	Ave	0.2120	0.1808		0.00853	0.0100	-14.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1364	0.1956		0.0143	0.0100	43.4*	20.0
N-Propylbenzene	Ave	0.7981	0.7431		0.00931	0.0100	-6.9	20.0
2-Chlorotoluene	Ave	0.7489	0.7240		0.00967	0.0100	-3.3	20.0
1,3,5-Trimethylbenzene	Ave	2.520	2.737		0.0109	0.0100	8.6	20.0
4-Chlorotoluene	Ave	0.7451	0.7104		0.00953	0.0100	-4.7	20.0
tert-Butylbenzene	Ave	2.046	2.014		0.00985	0.0100	-1.5	20.0
1,2,4-Trimethylbenzene	Ave	2.763	2.784		0.0101	0.0100	0.7	20.0
sec-Butylbenzene	Ave	2.761	2.780		0.0101	0.0100	0.7	20.0
1,3-Dichlorobenzene	Ave	1.510	1.398	0.6000	0.00926	0.0100	-7.4	20.0
4-Isopropyltoluene	Ave	2.402	2.383		0.00992	0.0100	-0.8	20.0
1,4-Dichlorobenzene	Ave	1.538	1.442	0.5000	0.00937	0.0100	-6.3	20.0
n-Butylbenzene	Ave	1.940	1.986		0.0102	0.0100	2.4	20.0
1,2-Dichlorobenzene	Ave	1.537	1.496	0.4000	0.00974	0.0100	-2.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-364651/2 Calibration Date: 01/18/2019 12:01

Instrument ID: A3UX10 Calib Start Date: 10/02/2018 15:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 10/02/2018 17:56

Lab File ID: UXX9146.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1540	0.1246	0.0500	0.00809	0.0100	-19.1	50.0
1,2,4-Trichlorobenzene	Ave	0.9316	0.8066	0.2000	0.00866	0.0100	-13.4	50.0
Hexachlorobutadiene	Ave	0.3050	0.2207		0.00724	0.0100	-27.6*	20.0
Naphthalene	Ave	2.426	1.871		0.00771	0.0100	-22.9	50.0
1,2,3-Trichlorobenzene	Ave	0.9073	0.6730		0.00742	0.0100	-25.8*	20.0
Dibromofluoromethane (Surr)	Ave	0.2627	0.2396		0.00912	0.0100	-8.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3357	0.3006		0.00895	0.0100	-10.5	20.0
Toluene-d8 (Surr)	Ave	1.262	1.274		0.0101	0.0100	0.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4807	0.4411		0.00918	0.0100	-8.2	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: J80807A.D BFB Injection Date: 08/07/2018

Instrument ID: A3UX11 BFB Injection Time: 09:44

Analysis Batch No.: 339716

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.7	
75	30.0 - 60.0 % of mass 95	52.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	5.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	83.4	
175	5.0 - 9.0 % of mass 174	6.5	(7.8) 1
176	95.0 - 101.0 % of mass 174	80.3	(96.3) 1
177	5.0 - 9.0 % of mass 176	5.3	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-339716/2	UXJ3440.D	08/07/2018	10:19
	STD8260 240-339716/3	UXJ3441.D	08/07/2018	10:41
	STD8260 240-339716/4	UXJ3442.D	08/07/2018	11:03
	STD8260 240-339716/5	UXJ3443.D	08/07/2018	11:26
	STD8260 240-339716/6	UXJ3444.D	08/07/2018	11:48
	STD8260 240-339716/7	UXJ3445.D	08/07/2018	12:10
	ICV 240-339716/14	UXJ3446.D	08/07/2018	12:33
	STD6 240-339716/8	UXJ3447.D	08/07/2018	12:55
	STD5 240-339716/9	UXJ3448.D	08/07/2018	13:17
	STD4 240-339716/10	UXJ3449.D	08/07/2018	13:39
	STD3 240-339716/11	UXJ3450.D	08/07/2018	14:02
	STD2 240-339716/12	UXJ3451.D	08/07/2018	14:24
	STD1 240-339716/13	UXJ3452.D	08/07/2018	14:46
	ICV 240-339716/15	UXJ3453.D	08/07/2018	15:08

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-339716/7	UXJ3445.D
Level 2	STD8260 240-339716/6	UXJ3444.D
Level 3	STD8260 240-339716/5	UXJ3443.D
Level 4	STD8260 240-339716/4	UXJ3442.D
Level 5	STD8260 240-339716/3	UXJ3441.D
Level 6	STD8260 240-339716/2	UXJ3440.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2113 0.2754	0.2205	0.2514	0.2701	0.2552	Ave		0.2473			0.1000	10.5		20.0			
Chloromethane	0.2966 0.2658	0.2669	0.2369	0.2642	0.2510	Ave		0.2636			0.1000	7.5		20.0			
Butadiene	0.2900 0.2983	0.2996	0.2687	0.3063	0.2906	Ave		0.2922				4.5		20.0			
Vinyl chloride	0.3410 0.3462	0.2906	0.2962	0.3301	0.3303	Ave		0.3224			0.1000	7.3		20.0			
Bromomethane	0.2143 0.2276	0.2109	0.1862	0.2232	0.2234	Ave		0.2143			0.0500	7.0		20.0			
Chloroethane	0.2081 0.2175	0.1820	0.1874	0.2169	0.2056	Ave		0.2029			0.0500	7.4		20.0			
Dichlorofluoromethane	0.4987 0.4862	0.4843	0.4363	0.4824	0.4794	Ave		0.4779				4.5		20.0			
Trichlorofluoromethane	0.4391 0.4677	0.4073	0.4077	0.4518	0.4481	Ave		0.4369			0.1000	5.6		20.0			
Ethyl ether	0.2465 0.2533	0.2557	0.2353	0.2364	0.2339	Ave		0.2435				4.0		20.0			
Acrolein	0.0759 0.0704	0.0703	0.0643	0.0544	0.0664	Ave		0.0670				10.9		20.0			
1,1-Dichloroethene	0.2835 0.2705	0.2694	0.2278	0.2497	0.2218	Ave		0.2538			0.1000	9.8		20.0			
1,1,2-Trichlorotrifluoroethane	0.1886 0.2004	0.1793	0.1651	0.1792	0.1891	Ave		0.1836			0.0500	6.5		20.0			
Acetone	+++++ 0.1256	0.1097	0.1140	0.0844	0.1085	Ave		0.1084			0.0100	13.9		20.0			
Iodomethane	0.3765 0.3938	0.3974	0.3709	0.3713	0.3649	Ave		0.3791				3.5		20.0			
Carbon disulfide	0.7838 0.8002	0.8291	0.7111	0.7182	0.7157	Ave		0.7597			0.1000	6.7		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1842 0.1931	0.1799	0.1853	0.1883	0.1745	Ave		0.1842				3.5		20.0			
Methyl acetate	0.3120 0.2718	0.3005	0.2764	0.2441	0.2852	Ave		0.2816			0.1000	8.4		20.0			
Methylene Chloride	0.2465 0.2541	0.2600	0.2384	0.2463	0.2371	Ave		0.2471			0.1000	3.6		20.0			
2-Methyl-2-propanol	0.0449 0.0482	0.0271	0.0375	0.0294	0.0406	Ave		0.0379				22.1	*	20.0			
Acrylonitrile	0.1530 0.1402	0.1434	0.1325	0.1156	0.1393	Ave		0.1373				9.2		20.0			
trans-1,2-Dichloroethene	0.3173 0.2799	0.2938	0.2593	0.2627	0.2556	Ave		0.2781			0.1000	8.6		20.0			
Methyl tert-butyl ether	0.7025 0.7293	0.7524	0.6521	0.7053	0.7147	Ave		0.7094			0.1000	4.7		20.0			
Hexane	0.0938 0.0874	0.0868	0.0886	0.0782	0.0870	Ave		0.0870				5.8		20.0			
1,1-Dichloroethane	0.4671 0.4860	0.5026	0.4549	0.4627	0.4600	Ave		0.4722			0.2000	3.9		20.0			
Vinyl acetate	0.6550 0.5994	0.6109	0.5939	0.5414	0.6173	Ave		0.6030				6.1		20.0			
cis-1,2-Dichloroethene	0.3206 0.2886	0.3118	0.2909	0.2867	0.2694	Ave		0.2947			0.1000	6.3		20.0			
2,2-Dichloropropane	0.3140 0.3009	0.3134	0.2669	0.2887	0.2881	Ave		0.2953				6.1		20.0			
2-Butanone (MEK)	0.2472 0.1771	0.2101	0.2018	0.1738	0.2098	Ave		0.2033			0.0100	13.2		20.0			
Bromochloromethane	0.1318 0.1289	0.1340	0.1263	0.1173	0.1214	Ave		0.1266				5.0		20.0			
Tetrahydrofuran	0.1508 0.1185	0.1488	0.1299	0.1111	0.1419	Ave		0.1335				12.3		20.0			
Chloroform	0.4501 0.4385	0.4667	0.4153	0.4412	0.4277	Ave		0.4399			0.2000	4.0		20.0			
1,1,1-Trichloroethane	0.3505 0.3769	0.3912	0.3364	0.3638	0.3835	Ave		0.3670			0.1000	5.7		20.0			
Cyclohexane	0.4465 0.4693	0.4545	0.4480	0.4464	0.4630	Ave		0.4546			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3360 0.3907	0.4134	0.3824	0.3708	0.3879	Ave		0.3802				6.8		20.0			
Carbon tetrachloride	0.3518 0.3442	0.3644	0.3271	0.3395	0.3353	Ave		0.3437			0.1000	3.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0232 0.0262	0.0226	0.0234	0.0215	0.0234	Ave		0.0234				6.6		20.0			
Benzene	1.1222 1.0686	1.1019	1.0204	1.0205	1.0586	Ave		1.0654			0.5000	3.9		20.0			
1,2-Dichloroethane	0.3988 0.3589	0.3944	0.3421	0.3584	0.3661	Ave		0.3698			0.1000	6.0		20.0			
n-Heptane	0.0871 0.0904	0.0824	0.0879	0.0817	0.0951	Ave		0.0874				5.8		20.0			
Trichloroethene	0.3118 0.2724	0.2870	0.2668	0.2668	0.2765	Ave		0.2802			0.1500	6.1		20.0			
Methylcyclohexane	0.4796 0.5195	0.4976	0.4828	0.4753	0.4956	Ave		0.4917			0.1000	3.3		20.0			
1,2-Dichloropropane	0.2481 0.2339	0.2676	0.2413	0.2322	0.2578	Ave		0.2468			0.1000	5.6		20.0			
Dibromomethane	0.1916 0.1495	0.1735	0.1559	0.1491	0.1584	Ave		0.1630				10.2		20.0			
1,4-Dioxane	0.0018 0.0033	0.0024	0.0024	0.0031	0.0033	Lin1	-0.039	0.0033				10.4			0.9970		0.9900
Bromodichloromethane	0.3350 0.3199	0.3431	0.3269	0.3198	0.3511	Ave		0.3326			0.1500	3.8		20.0			
2-Chloroethyl vinyl ether	0.1977 0.1548	0.1743	0.1871	0.1596	0.2016	Ave		0.1792				10.9		20.0			
cis-1,3-Dichloropropene	0.4612 0.3848	0.4081	0.4004	0.3785	0.4269	Ave		0.4100			0.1500	7.4		20.0			
4-Methyl-2-pentanone (MIBK)	0.4093 0.3080	0.3605	0.3540	0.3413	0.3856	Ave		0.3598			0.0500	9.8		20.0			
Toluene	1.7043 1.7429	1.6573	1.5865	1.5729	1.6036	Ave		1.6446			0.4000	4.2		20.0			
trans-1,3-Dichloropropene	0.5821 0.5592	0.5801	0.5507	0.5256	0.5622	Ave		0.5600			0.1000	3.7		20.0			
Ethyl methacrylate	0.5398 0.5010	0.4957	0.4938	0.4974	0.5240	Ave		0.5086				3.7		20.0			
1,1,2-Trichloroethane	0.3576 0.3110	0.3495	0.3053	0.3019	0.3142	Ave		0.3232			0.1000	7.4		20.0			
Tetrachloroethene	0.3108 0.3162	0.3056	0.3023	0.2968	0.3015	Ave		0.3055			0.1500	2.3		20.0			
1,3-Dichloropropane	0.6243 0.5618	0.5686	0.5628	0.5497	0.5759	Ave		0.5738				4.6		20.0			
2-Hexanone	0.4399 0.3405	0.4417	0.4008	0.4080	0.4290	Ave		0.4100			0.0500	9.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.3603 0.3658	0.3663	0.3459	0.3625	0.3623	Ave		0.3605				2.1		20.0			
1,2-Dibromoethane	0.3783 0.3173	0.3326	0.3203	0.3113	0.3285	Ave		0.3314				7.3		20.0			
Chlorobenzene	1.0540 0.9885	1.0242	0.9549	0.9534	0.9623	Ave		0.9896			0.3000	4.2		20.0			
1,1,1,2-Tetrachloroethane	0.3479 0.3526	0.3676	0.3148	0.3480	0.3192	Ave		0.3417				6.0		20.0			
Ethylbenzene	0.5165 0.5598	0.5941	0.5439	0.5446	0.5431	Ave		0.5503				4.7		20.0			
m-Xylene & p-Xylene	0.6867 0.6950	0.6556	0.6501	0.6526	0.6632	Ave		0.6672				2.8		20.0			
o-Xylene	0.5987 0.6716	0.6053	0.5917	0.6313	0.6267	Ave		0.6209				4.7		20.0			
Styrene	1.0210 1.1055	1.0931	1.0019	1.0434	1.0703	Ave		1.0559			0.3000	3.9		20.0			
Bromoform	0.2735 0.2509	0.2607	0.2468	0.2535	0.2508	Ave		0.2560			0.1000	3.8		20.0			
Isopropylbenzene	1.7319 1.8318	1.7227	1.6269	1.6508	1.6772	Ave		1.7069			0.1000	4.3		20.0			
1,1,2,2-Tetrachloroethane	1.1031 0.9672	1.0518	0.9569	0.9397	0.9566	Ave		0.9959			0.3000	6.6		20.0			
Bromobenzene	0.7755 0.7728	0.8428	0.7858	0.7561	0.7689	Ave		0.7837				3.9		20.0			
1,2,3-Trichloropropane	0.3314 0.3089	0.4042	0.3343	0.3161	0.3211	Ave		0.3360				10.3		20.0			
trans-1,4-Dichloro-2-butene	0.3422 0.2837	0.3748	0.3406	0.3053	0.3210	Ave		0.3279				9.7		20.0			
N-Propylbenzene	0.9682 0.9979	1.0752	0.9566	0.9342	0.9606	Ave		0.9821				5.1		20.0			
2-Chlorotoluene	0.8084 0.8069	0.8134	0.7783	0.7502	0.7658	Ave		0.7872				3.3		20.0			
1,3,5-Trimethylbenzene	2.8352 3.0005	2.8313	2.6946	2.6857	2.7266	Ave		2.7957				4.3		20.0			
4-Chlorotoluene	0.8308 0.8083	0.8444	0.7792	0.7838	0.8006	Ave		0.8078				3.2		20.0			
tert-Butylbenzene	2.4727 2.6589	2.3455	2.3803	2.2804	2.5152	Ave		2.4422				5.6		20.0			
1,2,4-Trimethylbenzene	2.9497 2.9942	2.9370	2.7123	2.7345	2.8285	Ave		2.8593				4.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	3.4706 4.0032	3.6555	3.5136	3.4874	3.7065	Ave		3.6395				5.6		20.0			
1,3-Dichlorobenzene	1.4827 1.4294	1.5563	1.4178	1.3884	1.4512	Ave		1.4543			0.6000	4.1		20.0			
4-Isopropyltoluene	3.0208 3.2959	2.9682	2.9564	2.9783	3.0893	Ave		3.0515				4.2		20.0			
1,4-Dichlorobenzene	1.6181 1.4192	1.5822	1.4416	1.3856	1.4486	Ave		1.4826			0.5000	6.4		20.0			
1,2-Dichlorobenzene	1.4461 1.3943	1.3583	1.2761	1.3011	1.3169	Ave		1.3488			0.4000	4.7		20.0			
n-Butylbenzene	2.7917 2.9438	2.8420	2.6351	2.6422	2.8208	Ave		2.7793				4.3		20.0			
1,2-Dibromo-3-Chloropropane	0.3099 0.2581	0.3427	0.2561	0.2752	0.2727	Ave		0.2858			0.0500	11.9		20.0			
1,2,4-Trichlorobenzene	1.0343 0.9847	0.9843	0.7977	0.9054	0.8895	Ave		0.9327			0.2000	9.2		20.0			
Hexachlorobutadiene	0.4843 0.4537	0.4398	0.3857	0.4171	0.4414	Ave		0.4370				7.6		20.0			
Naphthalene	3.4842 3.3259	3.4926	2.6724	2.9660	3.0196	Ave		3.1601				10.4		20.0			
1,2,3-Trichlorobenzene	1.0474 0.9738	0.9604	0.7324	0.8501	0.8838	Ave		0.9080				12.2		20.0			
Dibromofluoromethane (Surr)	0.2447 0.2301	0.2304	0.2188	0.2371	0.2276	Ave		0.2315				3.8		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3450 0.2970	0.3032	0.3004	0.2852	0.2919	Ave		0.3038				7.0		20.0			
Toluene-d8 (Surr)	1.4697 1.5033	1.4153	1.3785	1.4367	1.3796	Ave		1.4305				3.5		20.0			
4-Bromofluorobenzene (Surr)	0.4653 0.4235	0.4605	0.4377	0.4361	0.4275	Ave		0.4418				3.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-339716/7	UXJ3445.D
Level 2	STD8260 240-339716/6	UXJ3444.D
Level 3	STD8260 240-339716/5	UXJ3443.D
Level 4	STD8260 240-339716/4	UXJ3442.D
Level 5	STD8260 240-339716/3	UXJ3441.D
Level 6	STD8260 240-339716/2	UXJ3440.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	11447 680542	24307	78668	149776	299562	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	16064 656815	29429	74130	146467	294607	1.00 40.0	2.00	5.00	10.0	20.0
Butadiene	FB	Ave	15707 737188	33026	84061	169822	341072	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	18472 855669	32033	92669	183026	387649	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	11609 562463	23252	58260	123749	262162	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	11273 537569	20060	58618	120262	241257	1.00 40.0	2.00	5.00	10.0	20.0
Dichlorofluoromethane	FB	Ave	27013 1201481	53394	136517	267487	562616	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	23783 1155720	44898	127566	250505	525921	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	13350 626092	28188	73608	131078	274472	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	20554 869540	38758	100650	150752	389886	5.00 200	10.0	25.0	50.0	100
1,1-Dichloroethene	FB	Ave	15357 668425	29702	71260	138473	260337	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichlorotrifluoroethane	FB	Ave	10215 495336	19766	51665	99374	221945	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Ave	+++++ 620984	24190	71322	93553	254621	+++++ 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	20393 973158	43807	116037	205879	428259	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	42453 1977439	91401	222489	398185	839958	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	9976 477102	19836	57973	104381	204745	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	33796 1343182	66247	172965	270646	669329	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Ave	13349 628048	28664	74577	136538	278311	1.00 40.0	2.00	5.00	10.0	20.0
2-Methyl-2-propanol	FB	Ave	24332 1190225	29851	117292	162902	476148	10.0 400	20.0	50.0	100	200
Acrylonitrile	FB	Ave	82887 3464418	158046	414552	640991	1634644	10.0 400	20.0	50.0	100	200
trans-1,2-Dichloroethene	FB	Ave	17186 691777	32394	81111	145636	299988	1.00 40.0	2.00	5.00	10.0	20.0
Methyl tert-butyl ether	FB	Ave	38047 1802263	82947	204029	391069	838756	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	5081 215881	9568	27721	43367	102155	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	25297 1201087	55413	142321	256570	539873	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	35474 1481308	67352	185806	300206	724519	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	17367 713342	34379	91004	158946	316134	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	17008 743537	34552	83505	160045	338075	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone (MEK)	FB	Ave	26778 875113	46317	126300	192750	492424	2.00 80.0	4.00	10.0	20.0	40.0
Bromochloromethane	FB	Ave	7138 318611	14777	39523	65062	142518	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	16339 585780	32813	81294	123173	333033	2.00 80.0	4.00	10.0	20.0	40.0
Chloroform	FB	Ave	24379 1083638	51449	129926	244613	501955	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	18983 931388	43130	105256	201707	450056	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	24183 1159678	50101	140158	247503	543404	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	18196 965529	45576	119651	205613	455305	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	19054 850585	40172	102346	188229	393530	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	CBNZ d5	Ave	21575 957042	38424	122584	186697	480963	25.0 1000	50.0	125	250	500
Benzene	FB	Ave	60783 2640949	121475	319255	565813	1242477	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	21600 886906	43476	107027	198704	429725	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	4716 223487	9082	27500	45282	111633	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	16887 673282	31643	83470	147933	324527	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	25977 1283821	54859	151042	263525	581668	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	13436 577957	29503	75481	128767	302581	1.00 40.0	2.00	5.00	10.0	20.0
Dibromomethane	FB	Ave	10376 369432	19130	48788	82671	185891	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Lin1	1918 162405	5338	14931	34216	78610	20.0 800	40.0	100	200	400
Bromodichloromethane	FB	Ave	18145 790624	37827	102276	177327	412016	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	21411 765103	38440	117064	176954	473304	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Ave	24977 950990	44990	125258	209879	501026	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	44337 1522147	79494	221502	378476	905194	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBNZ d5	Ave	63519 2549041	112761	332828	546511	1320444	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	21693 817796	39470	115532	182616	462927	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBNZ d5	Ave	20120 732749	33729	103598	172832	431485	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBNZ d5	Ave	13327 454815	23780	64042	104891	258691	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBNZ d5	Ave	11584 462493	20793	63410	103114	248308	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBNZ d5	Ave	23267 821677	38684	118078	190991	474232	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBNZ d5	Ave	32791 996108	60100	168177	283510	706466	2.00 80.0	4.00	10.0	20.0	40.0
Chlorodibromomethane	CBNZ d5	Ave	13430 535056	24924	72573	125959	298297	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBNZ d5	Ave	14101 464134	22631	67192	108178	270470	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBNZ d5	Ave	39284 1445704	69684	200325	331254	792434	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	12967 515655	25008	66047	120907	262847	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBNZ d5	Ave	19250 818805	40421	114108	189214	447245	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBNZ d5	Ave	25593 1016432	44605	136385	226746	546104	1.00 40.0	2.00	5.00	10.0	20.0
o-Xylene	CBNZ d5	Ave	22312 982329	41183	124136	219346	516074	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBNZ d5	Ave	38054 1616898	74370	210192	362539	881322	1.00 40.0	2.00	5.00	10.0	20.0
Bromoform	CBNZ d5	Ave	10193 367005	17740	51778	88073	206508	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBNZ d5	Ave	64547 2679188	117205	341312	573572	1381113	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	19176 691868	33798	93320	156931	380086	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCBd 4	Ave	13480 552835	27082	76632	126278	305507	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCBd 4	Ave	5760 220975	12987	32603	52789	127593	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	5949 202931	12042	33220	50989	127538	1.00 40.0	2.00	5.00	10.0	20.0
N-Propylbenzene	DCBd 4	Ave	16830 713853	34550	93283	156009	381705	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCBd 4	Ave	14053 577244	26138	75895	125283	304270	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	49285 2146431	90977	262780	448521	1083408	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCBd 4	Ave	14441 578262	27131	75986	130897	318105	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCBd 4	Ave	42983 1902063	75366	232129	380825	999390	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	51274 2141910	94372	264501	456670	1123868	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCBd 4	Ave	60330 2863772	117460	342649	582400	1472736	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	25774 1022537	50007	138268	231863	576608	1.00 40.0	2.00	5.00	10.0	20.0
4-Isopropyltoluene	DCBd 4	Ave	52511 2357752	95376	288310	497384	1227502	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCBd 4	Ave	28127 1015242	50840	140588	231395	575598	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichlorobenzene	DCBd 4	Ave	25138 997412	43644	124444	217283	523269	1.00 40.0	2.00	5.00	10.0	20.0
n-Butylbenzene	DCBd 4	Ave	48529 2105884	91321	256969	441254	1120808	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	5387 184621	11011	24972	45966	108371	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	17979 704390	31628	77795	151209	353429	1.00 40.0	2.00	5.00	10.0	20.0
Hexachlorobutadiene	DCBd 4	Ave	8418 324575	14131	37618	69657	175378	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCBd 4	Ave	60566 2379214	112226	260613	495330	1199814	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	18207 696616	30859	71420	141976	351154	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	13254 568670	25405	68445	131439	267150	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	18685 734090	33428	93994	158114	342588	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBNZ d5	Ave	54774 2198709	96293	289196	499207	1136029	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	17342 619411	31328	91818	151542	352027	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 10:19 Calibration End Date: 08/07/2018 12:10 Calibration ID: 46382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-339716/7	UXJ3445.D
Level 2	STD8260 240-339716/6	UXJ3444.D
Level 3	STD8260 240-339716/5	UXJ3443.D
Level 4	STD8260 240-339716/4	UXJ3442.D
Level 5	STD8260 240-339716/3	UXJ3441.D
Level 6	STD8260 240-339716/2	UXJ3440.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
1,4-Dioxane	12.0						50					

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 12:55 Calibration End Date: 08/07/2018 14:46 Calibration ID: 46385

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-339716/13	UXJ3452.D
Level 2	STD2 240-339716/12	UXJ3451.D
Level 3	STD3 240-339716/11	UXJ3450.D
Level 4	STD4 240-339716/10	UXJ3449.D
Level 5	STD5 240-339716/9	UXJ3448.D
Level 6	STD6 240-339716/8	UXJ3447.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0504 0.0338	0.0225	0.0412	0.0369	0.0398	Ave		0.0374				24.6	*	20.0			
2-Chloro-1,3-butadiene	0.4031 0.4070	0.4129	0.4184	0.4459	0.4336	Ave		0.4202				3.9		20.0			
Diisopropyl ether	0.2076 0.2133	0.2205	0.2186	0.2234	0.2226	Ave		0.2177				2.8		20.0			
Ethyl tert-butyl ether	0.6780 0.6534	0.6925	0.6983	0.6895	0.7178	Ave		0.6883				3.1		20.0			
Propionitrile	0.0592 0.0508	0.0616	0.0631	0.0547	0.0601	Ave		0.0583				7.9		20.0			
Ethyl acetate	0.3997 0.3455	0.3384	0.3311	0.3182	0.3412	Ave		0.3457				8.1		20.0			
Methacrylonitrile	0.2199 0.2139	0.2003	0.2005	0.2025	0.2141	Ave		0.2085				4.1		20.0			
Tert-amyl methyl ether	0.8494 0.7274	0.7941	0.7968	0.7870	0.7877	Ave		0.7904				4.9		20.0			
n-Butanol	0.0224 0.0191	0.0206	0.0232	0.0211	0.0253	Ave		0.0220				9.9		20.0			
Ethyl acrylate	0.4425 0.4331	0.3506	0.3690	0.3745	0.3787	Ave		0.3914				9.5		20.0			
Methyl methacrylate	0.2765 0.2861	0.2395	0.2436	0.2468	0.2551	Ave		0.2579				7.4		20.0			
2-Nitropropane	0.1202 0.1120	0.1061	0.1059	0.1047	0.1112	Ave		0.1100				5.3		20.0			
n-Butyl acetate	0.4934 0.4597	0.4116	0.4118	0.4058	0.4258	Ave		0.4347				8.0		20.0			
1-Chlorohexane	0.5927 0.5351	0.5084	0.4904	0.5382	0.5407	Ave		0.5342				6.5		20.0			
Cyclohexanone	0.0623 0.0494	0.0662	0.0591	0.0576	0.0718	Ave		0.0611				12.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 12:55 Calibration End Date: 08/07/2018 14:46 Calibration ID: 46385

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.2149 0.2210	0.2243	0.2152	0.2259	0.2345	Ave		0.2226				3.3		20.0			
1,2,3-Trimethylbenzene	2.7583 2.9261	2.7403	2.7042	2.8828	3.0256	Ave		2.8395				4.4		20.0			
Benzyl chloride	0.3040 0.4246	0.3146	0.3526	0.3957	0.4116	Ave		0.3672				13.9		20.0			
1,3,5-Trichlorobenzene	1.1377 1.0486	1.0259	1.0232	1.0488	1.1163	Ave		1.0668				4.5		20.0			
2-Methylnaphthalene	2.2775 1.8631	2.3102	2.2390	1.9982	2.2702	Ave		2.1597				8.5		20.0			
1-Chloro-1-fluoroethane TIC	0.2557 0.2668	0.2672	0.2782	0.2489	0.2713	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 12:55 Calibration End Date: 08/07/2018 14:46 Calibration ID: 46385

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-339716/13	UXJ3452.D
Level 2	STD2 240-339716/12	UXJ3451.D
Level 3	STD3 240-339716/11	UXJ3450.D
Level 4	STD4 240-339716/10	UXJ3449.D
Level 5	STD5 240-339716/9	UXJ3448.D
Level 6	STD6 240-339716/8	UXJ3447.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Ave	25553 740177	22780	102139	207823	424313	10.0 400	20.0	50.0	100	200
2-Chloro-1,3-butadiene	FB	Ave	20425 892252	41778	103841	250984	462681	1.00 40.0	2.00	5.00	10.0	20.0
Diisopropyl ether	FB	Ave	10521 467561	22310	54238	125758	237468	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl tert-butyl ether	FB	Ave	34352 1432261	70076	173285	388158	765868	1.00 40.0	2.00	5.00	10.0	20.0
Propionitrile	FB	Ave	29980 1114170	62332	156678	307855	641035	10.0 400	20.0	50.0	100	200
Ethyl acetate	FB	Ave	40502 1514661	68481	164324	358250	728108	2.00 80.0	4.00	10.0	20.0	40.0
Methacrylonitrile	FB	Ave	111420 4689243	202644	497655	1139678	2283823	10.0 400	20.0	50.0	100	200
Tert-amyl methyl ether	FB	Ave	43040 1594508	80350	197729	443007	840453	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	CBNZ d5	Ave	19309 700971	33014	91107	183825	411170	25.0 1000	50.0	125	250	500
Ethyl acrylate	FB	Ave	22420 949489	35472	91584	210808	404016	1.00 40.0	2.00	5.00	10.0	20.0
Methyl methacrylate	FB	Ave	28021 1254285	48475	120914	277911	544258	2.00 80.0	4.00	10.0	20.0	40.0
2-Nitropropane	FB	Ave	12179 490974	21475	52555	117900	237344	2.00 80.0	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Ave	25002 1007633	41644	102193	228436	454274	1.00 40.0	2.00	5.00	10.0	20.0
1-Chlorohexane	CBNZ d5	Ave	20476 784692	32535	77134	187155	350920	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexanone	DCBd 4	Ave	10365 337885	20423	44442	94477	220253	10.0 400	20.0	50.0	100	200
Pentachloroethane	CBNZ d5	Ave	14846 648119	28711	67693	157131	304403	2.00 80.0	4.00	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-106686-1 Analy Batch No.: 339716

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2018 12:55 Calibration End Date: 08/07/2018 14:46 Calibration ID: 46385

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCBd 4	Ave	45880 2000640	84513	203284	473023	927608	1.00 40.0	2.00	5.00	10.0	20.0
Benzyl chloride	DCBd 4	Ave	5056 290282	9704	26509	64933	126187	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	18924 716926	31641	76919	172099	342234	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCBd 4	Ave	75765 2547751	142498	336620	655753	1392029	2.00 80.0	4.00	10.0	20.0	40.0
1-Chloro-1-fluoroethane TIC	FB	None	12958 584926	27033	69048	140085	289412	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
None = No Calib Curve

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-339716/14 Calibration Date: 08/07/2018 12:33

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 12:10

Lab File ID: UXJ3446.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2473	0.2531	0.1000	0.0102	0.0100	2.3	30.0
Chloromethane	Ave	0.2636	0.2421	0.1000	0.00919	0.0100	-8.1	30.0
Butadiene	Ave	0.2922	0.2582		0.00883	0.0100	-11.7	30.0
Vinyl chloride	Ave	0.3224	0.3029	0.1000	0.00940	0.0100	-6.0	30.0
Bromomethane	Ave	0.2143	0.1941	0.0500	0.00906	0.0100	-9.4	30.0
Chloroethane	Ave	0.2029	0.1980	0.0500	0.00976	0.0100	-2.4	30.0
Dichlorofluoromethane	Ave	0.4779	0.4509		0.00943	0.0100	-5.7	30.0
Trichlorofluoromethane	Ave	0.4369	0.4246	0.1000	0.00972	0.0100	-2.8	30.0
Ethyl ether	Ave	0.2435	0.2553		0.0105	0.0100	4.9	30.0
Acrolein	Ave	0.0670	0.0382		0.0285	0.0500	-42.9	50.0
1,1-Dichloroethene	Ave	0.2538	0.2622	0.1000	0.0103	0.0100	3.3	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.1836	0.1904	0.0500	0.0104	0.0100	3.7	30.0
Acetone	Ave	0.1084	0.0853	0.0100	0.0157	0.0200	-21.4	50.0
Iodomethane	Ave	0.3791	0.3949		0.0104	0.0100	4.2	30.0
Carbon disulfide	Ave	0.7597	0.7656	0.1000	0.0101	0.0100	0.8	30.0
3-Chloro-1-propene	Ave	0.1842	0.1988		0.0108	0.0100	7.9	30.0
Methyl acetate	Ave	0.2816	0.2330	0.1000	0.0165	0.0200	-17.3	30.0
Methylene Chloride	Ave	0.2471	0.2557	0.1000	0.0103	0.0100	3.5	50.0
2-Methyl-2-propanol	Ave	0.0379	0.0268		0.0707	0.100	-29.3	50.0
Acrylonitrile	Ave	0.1373	0.1135		0.0827	0.100	-17.3	30.0
trans-1,2-Dichloroethene	Ave	0.2781	0.2923	0.1000	0.0105	0.0100	5.1	30.0
Methyl tert-butyl ether	Ave	0.7094	0.7342	0.1000	0.0104	0.0100	3.5	30.0
Hexane	Ave	0.0870	0.0882		0.0101	0.0100	1.5	30.0
1,1-Dichloroethane	Ave	0.4722	0.5009	0.2000	0.0106	0.0100	6.1	30.0
Vinyl acetate	Ave	0.6030	0.5266		0.00873	0.0100	-12.7	50.0
2,2-Dichloropropane	Ave	0.2953	0.2889		0.00978	0.0100	-2.2	30.0
cis-1,2-Dichloroethene	Ave	0.2947	0.2913	0.1000	0.00989	0.0100	-1.1	30.0
2-Butanone (MEK)	Ave	0.2033	0.1491	0.0100	0.0147	0.0200	-26.6	30.0
Bromochloromethane	Ave	0.1266	0.1362		0.0108	0.0100	7.5	30.0
Tetrahydrofuran	Ave	0.1335	0.1084		0.0162	0.0200	-18.8	30.0
Chloroform	Ave	0.4399	0.4597	0.2000	0.0104	0.0100	4.5	30.0
1,1,1-Trichloroethane	Ave	0.3670	0.3888	0.1000	0.0106	0.0100	5.9	30.0
Cyclohexane	Ave	0.4546	0.4751	0.1000	0.0105	0.0100	4.5	30.0
1,1-Dichloropropene	Ave	0.3802	0.3927		0.0103	0.0100	3.3	30.0
Carbon tetrachloride	Ave	0.3437	0.3680	0.1000	0.0107	0.0100	7.1	30.0
Isobutyl alcohol	Ave	0.0234	0.0188		0.201	0.250	-19.4	30.0
Benzene	Ave	1.065	1.076	0.5000	0.0101	0.0100	1.0	30.0
1,2-Dichloroethane	Ave	0.3698	0.3676	0.1000	0.00994	0.0100	-0.6	30.0
n-Heptane	Ave	0.0874	0.0887		0.0101	0.0100	1.5	30.0
Trichloroethene	Ave	0.2802	0.2827	0.1500	0.0101	0.0100	0.9	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-339716/14 Calibration Date: 08/07/2018 12:33

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 12:10

Lab File ID: UXJ3446.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4917	0.4942	0.1000	0.0101	0.0100	0.5	30.0
1,2-Dichloropropane	Ave	0.2468	0.2525	0.1000	0.0102	0.0100	2.3	30.0
Dibromomethane	Ave	0.1630	0.1515		0.00929	0.0100	-7.1	30.0
1,4-Dioxane	Lin1		0.0024		0.153	0.200	-23.6	50.0
Bromodichloromethane	Ave	0.3326	0.3375	0.1500	0.0101	0.0100	1.4	30.0
2-Chloroethyl vinyl ether	Ave	0.1792	0.1585		0.00885	0.0100	-11.5	30.0
cis-1,3-Dichloropropene	Ave	0.4100	0.4046	0.1500	0.00987	0.0100	-1.3	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3598	0.2976	0.0500	0.0165	0.0200	-17.3	30.0
Toluene	Ave	1.645	1.713	0.4000	0.0104	0.0100	4.1	30.0
trans-1,3-Dichloropropene	Ave	0.5600	0.5330	0.1000	0.00952	0.0100	-4.8	30.0
Ethyl methacrylate	Ave	0.5086	0.5175		0.0102	0.0100	1.7	30.0
1,1,2-Trichloroethane	Ave	0.3232	0.3355	0.1000	0.0104	0.0100	3.8	30.0
Tetrachloroethene	Ave	0.3055	0.3233	0.1500	0.0106	0.0100	5.8	30.0
1,3-Dichloropropane	Ave	0.5738	0.5544		0.00966	0.0100	-3.4	30.0
2-Hexanone	Ave	0.4100	0.3457	0.0500	0.0169	0.0200	-15.7	30.0
Chlorodibromomethane	Ave	0.3605	0.3794		0.0105	0.0100	5.2	30.0
1,2-Dibromoethane	Ave	0.3314	0.3225		0.00973	0.0100	-2.7	30.0
Chlorobenzene	Ave	0.9896	0.997	0.3000	0.0101	0.0100	0.8	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3417	0.3525		0.0103	0.0100	3.2	30.0
Ethylbenzene	Ave	0.5503	0.5639		0.0102	0.0100	2.5	30.0
m-Xylene & p-Xylene	Ave	0.6672	0.6995		0.0105	0.0100	4.8	30.0
o-Xylene	Ave	0.6209	0.6635		0.0107	0.0100	6.9	30.0
Styrene	Ave	1.056	1.090	0.3000	0.0103	0.0100	3.2	30.0
Bromoform	Ave	0.2560	0.2510	0.1000	0.00980	0.0100	-2.0	30.0
Isopropylbenzene	Ave	1.707	1.780	0.1000	0.0104	0.0100	4.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.996	0.9709	0.3000	0.00975	0.0100	-2.5	30.0
Bromobenzene	Ave	0.7837	0.7974		0.0102	0.0100	1.8	30.0
1,2,3-Trichloropropane	Ave	0.3360	0.3229		0.00961	0.0100	-3.9	30.0
trans-1,4-Dichloro-2-butene	Ave	0.3279	0.3185		0.00971	0.0100	-2.9	30.0
N-Propylbenzene	Ave	0.9821	1.034		0.0105	0.0100	5.3	30.0
2-Chlorotoluene	Ave	0.7872	0.8272		0.0105	0.0100	5.1	30.0
1,3,5-Trimethylbenzene	Ave	2.796	2.874		0.0103	0.0100	2.8	30.0
4-Chlorotoluene	Ave	0.8078	0.7903		0.00978	0.0100	-2.2	30.0
tert-Butylbenzene	Ave	2.442	2.520		0.0103	0.0100	3.2	30.0
1,2,4-Trimethylbenzene	Ave	2.859	2.894		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	3.639	3.786		0.0104	0.0100	4.0	30.0
1,3-Dichlorobenzene	Ave	1.454	1.448	0.6000	0.00996	0.0100	-0.4	30.0
4-Isopropyltoluene	Ave	3.051	3.147		0.0103	0.0100	3.1	30.0
1,4-Dichlorobenzene	Ave	1.483	1.508	0.5000	0.0102	0.0100	1.7	30.0
1,2-Dichlorobenzene	Ave	1.349	1.403	0.4000	0.0104	0.0100	4.0	30.0
n-Butylbenzene	Ave	2.779	2.781		0.0100	0.0100	0.0	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-339716/14 Calibration Date: 08/07/2018 12:33

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 12:10

Lab File ID: UXJ3446.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.2858	0.2452	0.0500	0.00858	0.0100	-14.2	50.0
1,2,4-Trichlorobenzene	Ave	0.9327	0.8708	0.2000	0.00934	0.0100	-6.6	50.0
Hexachlorobutadiene	Ave	0.4370	0.4181		0.00957	0.0100	-4.3	30.0
Naphthalene	Ave	3.160	2.756		0.00872	0.0100	-12.8	50.0
1,2,3-Trichlorobenzene	Ave	0.9080	0.8430		0.00928	0.0100	-7.2	30.0
Dibromofluoromethane (Surr)	Ave	0.2315	0.2470		0.0213	0.0200	6.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3038	0.3037		0.0200	0.0200	-0.0	30.0
Toluene-d8 (Surr)	Ave	1.431	1.484		0.0208	0.0200	3.8	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4418	0.4465		0.0202	0.0200	1.1	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-339716/15 Calibration Date: 08/07/2018 15:08

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 12:10

Lab File ID: UXJ3453.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2315	0.2532		0.0219	0.0200	9.4	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3038	0.3257		0.0214	0.0200	7.2	30.0
Toluene-d8 (Surr)	Ave	1.431	1.510		0.0211	0.0200	5.6	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4418	0.4573		0.0207	0.0200	3.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: ICV 240-339716/15 Calibration Date: 08/07/2018 15:08

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 12:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 14:46

Lab File ID: UXJ3453.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0374	0.0408		0.109	0.100	9.1	30.0
2-Chloro-1,3-butadiene	Ave	0.4202	0.4117		0.00980	0.0100	-2.0	30.0
Diisopropyl ether	Ave	0.2177	0.2091		0.00961	0.0100	-3.9	30.0
Ethyl tert-butyl ether	Ave	0.6883	0.6814		0.00990	0.0100	-1.0	30.0
Propionitrile	Ave	0.0583	0.0539		0.0925	0.100	-7.5	30.0
Ethyl acetate	Ave	0.3457	0.2992		0.0173	0.0200	-13.4	50.0
Methacrylonitrile	Ave	0.2085	0.1939		0.0930	0.100	-7.0	30.0
Tert-amyl methyl ether	Ave	0.7904	0.7617		0.00964	0.0100	-3.6	30.0
n-Butanol	Ave	0.0220	0.0168		0.191	0.250	-23.7	30.0
Ethyl acrylate	Ave	0.3914	0.3507		0.00896	0.0100	-10.4	30.0
Methyl methacrylate	Ave	0.2579	0.2382		0.0185	0.0200	-7.7	30.0
2-Nitropropane	Ave	0.1100	0.0996		0.0181	0.0200	-9.5	30.0
n-Butyl acetate	Ave	0.4347	0.4016		0.00924	0.0100	-7.6	30.0
1-Chlorohexane	Ave	0.5342	0.5239		0.00981	0.0100	-1.9	30.0
Cyclohexanone	Ave	0.0611	0.0386		0.0631	0.100	-36.9*	30.0
Pentachloroethane	Ave	0.2226	0.1821		0.0164	0.0200	-18.2	30.0
1,2,3-Trimethylbenzene	Ave	2.840	2.866		0.0101	0.0100	0.9	30.0
Benzyl chloride	Ave	0.3672	0.3176		0.00865	0.0100	-13.5	30.0
1,3,5-Trichlorobenzene	Ave	1.067	1.015		0.00952	0.0100	-4.8	30.0
2-Methylnaphthalene	Ave	2.160	1.857		0.0172	0.0200	-14.0	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab File ID: BFB121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX11 BFB Injection Time: 09:28

Analysis Batch No.: 364762

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.6	
75	30.0 - 60.0 % of mass 95	52.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	1.1	(1.1) 1
174	50.0 - 120.00 % of mass 95	102.0	
175	5.0 - 9.0 % of mass 174	8.6	(8.5) 1
176	95.0 - 101.0 % of mass 174	100.0	(98.1) 1
177	5.0 - 9.0 % of mass 176	7.2	(7.2) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-364762/2	UXJ7822.D	01/21/2019	10:02
	LCS 240-364762/4	UXJ7823.D	01/21/2019	10:24
	CCV 240-364762/3	UXJ7824.D	01/21/2019	10:47
	MRL 240-364762/34	UXJ7826.D	01/21/2019	11:31
	MB 240-364762/6	UXJ7827.D	01/21/2019	11:53
TB-010819	240-106686-1	UXJ7833.D	01/21/2019	14:05
	240-107003-B-12 MS	UXJ7850.D	01/21/2019	20:20
	240-107003-B-12 MSD	UXJ7851.D	01/21/2019	20:42

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-364762/2 Calibration Date: 01/21/2019 10:02

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 12:10

Lab File ID: UXJ7822.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2473	0.3403	0.1000	0.0138	0.0100	37.6*	20.0
Chloromethane	Ave	0.2636	0.2532	0.1000	0.00961	0.0100	-3.9	20.0
Butadiene	Ave	0.2922	0.2487		0.00851	0.0100	-14.9	20.0
Vinyl chloride	Ave	0.3224	0.2758	0.1000	0.00855	0.0100	-14.5	20.0
Bromomethane	Ave	0.2143	0.1896	0.0500	0.00885	0.0100	-11.5	20.0
Chloroethane	Ave	0.2029	0.1502	0.0500	0.00740	0.0100	-26.0*	20.0
Dichlorofluoromethane	Ave	0.4779	0.4084		0.00855	0.0100	-14.5	20.0
Trichlorofluoromethane	Ave	0.4369	0.4825	0.1000	0.0110	0.0100	10.4	20.0
Ethyl ether	Ave	0.2435	0.2025		0.00832	0.0100	-16.8	20.0
Acrolein	Ave	0.0670	0.0297		0.0221	0.0500	-55.7*	50.0
1,1-Dichloroethene	Ave	0.2538	0.2445	0.1000	0.00963	0.0100	-3.7	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.1836	0.2187	0.0500	0.0119	0.0100	19.1	20.0
Acetone	Ave	0.1084	0.1054	0.0100	0.0194	0.0200	-2.8	50.0
Iodomethane	Ave	0.3791	0.4725		0.0125	0.0100	24.6*	20.0
Carbon disulfide	Ave	0.7597	0.7489	0.1000	0.00986	0.0100	-1.4	20.0
3-Chloro-1-propene	Ave	0.1842	0.1552		0.00843	0.0100	-15.7	20.0
Methyl acetate	Ave	0.2816	0.2030	0.1000	0.0144	0.0200	-27.9*	20.0
Methylene Chloride	Ave	0.2471	0.3246	0.1000	0.0131	0.0100	31.4	50.0
2-Methyl-2-propanol	Ave	0.0379	0.0354		0.0932	0.100	-6.8	50.0
Acrylonitrile	Ave	0.1373	0.0995		0.0724	0.100	-27.6*	20.0
trans-1,2-Dichloroethene	Ave	0.2781	0.2742	0.1000	0.00986	0.0100	-1.4	20.0
Methyl tert-butyl ether	Ave	0.7094	0.6605	0.1000	0.00931	0.0100	-6.9	20.0
Hexane	Ave	0.0870	0.0714		0.00821	0.0100	-17.9	20.0
1,1-Dichloroethane	Ave	0.4722	0.4665	0.2000	0.00988	0.0100	-1.2	20.0
Vinyl acetate	Ave	0.6030	0.4629		0.00768	0.0100	-23.2	50.0
2,2-Dichloropropane	Ave	0.2953	0.3136		0.0106	0.0100	6.2	20.0
cis-1,2-Dichloroethene	Ave	0.2947	0.2919	0.1000	0.00991	0.0100	-0.9	20.0
2-Butanone (MEK)	Ave	0.2033	0.1274	0.0100	0.0125	0.0200	-37.3*	20.0
Bromochloromethane	Ave	0.1266	0.1463		0.0116	0.0100	15.5	20.0
Tetrahydrofuran	Ave	0.1335	0.0759		0.0114	0.0200	-43.1*	20.0
Chloroform	Ave	0.4399	0.4847	0.2000	0.0110	0.0100	10.2	20.0
1,1,1-Trichloroethane	Ave	0.3670	0.4413	0.1000	0.0120	0.0100	20.2*	20.0
Cyclohexane	Ave	0.4546	0.3659	0.1000	0.00805	0.0100	-19.5	20.0
1,1-Dichloropropene	Ave	0.3802	0.3551		0.00934	0.0100	-6.6	20.0
Carbon tetrachloride	Ave	0.3437	0.4409	0.1000	0.0128	0.0100	28.3*	20.0
Isobutyl alcohol	Ave	0.0234	0.0177		0.190	0.250	-24.1*	20.0
Benzene	Ave	1.065	0.9799	0.5000	0.00920	0.0100	-8.0	20.0
1,2-Dichloroethane	Ave	0.3698	0.3966	0.1000	0.0107	0.0100	7.2	20.0
n-Heptane	Ave	0.0874	0.0620		0.00709	0.0100	-29.1*	20.0
Trichloroethene	Ave	0.2802	0.3281	0.1500	0.0117	0.0100	17.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-364762/2 Calibration Date: 01/21/2019 10:02

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 12:10

Lab File ID: UXJ7822.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.4917	0.3835	0.1000	0.00780	0.0100	-22.0*	20.0
1,2-Dichloropropane	Ave	0.2468	0.1987	0.1000	0.00805	0.0100	-19.5	20.0
Dibromomethane	Ave	0.1630	0.1550		0.00951	0.0100	-4.9	20.0
1,4-Dioxane	Lin1		0.0029		0.186	0.200	-7.2	50.0
Bromodichloromethane	Ave	0.3326	0.3656	0.1500	0.0110	0.0100	9.9	20.0
2-Chloroethyl vinyl ether	Ave	0.1792	0.1328		0.0148	0.0200	-25.9*	20.0
cis-1,3-Dichloropropene	Ave	0.4100	0.3565	0.1500	0.00869	0.0100	-13.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3598	0.2191	0.0500	0.0122	0.0200	-39.1*	20.0
Toluene	Ave	1.645	1.499	0.4000	0.00912	0.0100	-8.8	20.0
trans-1,3-Dichloropropene	Ave	0.5600	0.5094	0.1000	0.00910	0.0100	-9.0	20.0
Ethyl methacrylate	Ave	0.5086	0.3668		0.00721	0.0100	-27.9*	20.0
1,1,2-Trichloroethane	Ave	0.3232	0.2918	0.1000	0.00903	0.0100	-9.7	20.0
Tetrachloroethene	Ave	0.3055	0.3857	0.1500	0.0126	0.0100	26.2*	20.0
1,3-Dichloropropane	Ave	0.5738	0.5130		0.00894	0.0100	-10.6	20.0
2-Hexanone	Ave	0.4100	0.2212	0.0500	0.0108	0.0200	-46.1*	20.0
Chlorodibromomethane	Ave	0.3605	0.3875		0.0107	0.0100	7.5	20.0
1,2-Dibromoethane	Ave	0.3314	0.3048		0.00920	0.0100	-8.0	20.0
Chlorobenzene	Ave	0.9896	0.9511	0.3000	0.00961	0.0100	-3.9	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3417	0.3924		0.0115	0.0100	14.8	20.0
Ethylbenzene	Ave	0.5503	0.4770		0.00867	0.0100	-13.3	20.0
m-Xylene & p-Xylene	Ave	0.6672	0.5925		0.00888	0.0100	-11.2	20.0
o-Xylene	Ave	0.6209	0.5828		0.00939	0.0100	-6.1	20.0
Styrene	Ave	1.056	0.9737	0.3000	0.00922	0.0100	-7.8	20.0
Bromoform	Ave	0.2560	0.3018	0.1000	0.0118	0.0100	17.9	20.0
Isopropylbenzene	Ave	1.707	1.505	0.1000	0.00882	0.0100	-11.8	20.0
Bromobenzene	Ave	0.7837	0.8012		0.0102	0.0100	2.2	20.0
1,1,2,2-Tetrachloroethane	Ave	0.996	0.7210	0.3000	0.00724	0.0100	-27.6*	20.0
1,2,3-Trichloropropane	Ave	0.3360	0.2706		0.00805	0.0100	-19.5	20.0
trans-1,4-Dichloro-2-butene	Ave	0.3279	0.2354		0.00718	0.0100	-28.2*	20.0
N-Propylbenzene	Ave	0.9821	0.7949		0.00809	0.0100	-19.1	20.0
2-Chlorotoluene	Ave	0.7872	0.7248		0.00921	0.0100	-7.9	20.0
1,3,5-Trimethylbenzene	Ave	2.796	2.266		0.00810	0.0100	-19.0	20.0
4-Chlorotoluene	Ave	0.8078	0.7247		0.00897	0.0100	-10.3	20.0
tert-Butylbenzene	Ave	2.442	1.980		0.00811	0.0100	-18.9	20.0
1,2,4-Trimethylbenzene	Ave	2.859	2.309		0.00808	0.0100	-19.2	20.0
sec-Butylbenzene	Ave	3.639	2.647		0.00727	0.0100	-27.3*	20.0
1,3-Dichlorobenzene	Ave	1.454	1.414	0.6000	0.00973	0.0100	-2.7	20.0
4-Isopropyltoluene	Ave	3.051	2.281		0.00748	0.0100	-25.2*	20.0
1,4-Dichlorobenzene	Ave	1.483	1.472	0.5000	0.00993	0.0100	-0.7	20.0
1,2-Dichlorobenzene	Ave	1.349	1.394	0.4000	0.0103	0.0100	3.4	20.0
n-Butylbenzene	Ave	2.779	1.871		0.00673	0.0100	-32.7*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCVIS 240-364762/2 Calibration Date: 01/21/2019 10:02

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 12:10

Lab File ID: UXJ7822.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.2858	0.2349	0.0500	0.00822	0.0100	-17.8	50.0
1,2,4-Trichlorobenzene	Ave	0.9327	0.8594	0.2000	0.00921	0.0100	-7.9	50.0
Hexachlorobutadiene	Ave	0.4370	0.3569		0.00817	0.0100	-18.3	20.0
Naphthalene	Ave	3.160	2.107		0.00667	0.0100	-33.3	50.0
1,2,3-Trichlorobenzene	Ave	0.9080	0.8591		0.00946	0.0100	-5.4	20.0
Dibromofluoromethane (Surr)	Ave	0.2315	0.2418		0.0209	0.0200	4.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3038	0.3213		0.0212	0.0200	5.8	20.0
Toluene-d8 (Surr)	Ave	1.431	1.207		0.0169	0.0200	-15.6	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4418	0.3840		0.0174	0.0200	-13.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Lab Sample ID: CCV 240-364762/3 Calibration Date: 01/21/2019 10:47

Instrument ID: A3UX11 Calib Start Date: 08/07/2018 12:55

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 08/07/2018 14:46

Lab File ID: UXJ7824.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0374	0.0248		0.0663	0.100	-33.7*	20.0
2-Chloro-1,3-butadiene	Ave	0.4202	0.4090		0.00973	0.0100	-2.7	20.0
Diisopropyl ether	Ave	0.2177	0.1762		0.00810	0.0100	-19.0	20.0
Ethyl tert-butyl ether	Ave	0.6883	0.5256		0.00764	0.0100	-23.6*	20.0
Propionitrile	Ave	0.0583	0.0332		0.0570	0.100	-43.0*	20.0
Ethyl acetate	Ave	0.3457	0.2124		0.0123	0.0200	-38.6	50.0
Methacrylonitrile	Ave	0.2085	0.1455		0.0698	0.100	-30.2*	20.0
Tert-amyl methyl ether	Ave	0.7904	0.5591		0.00707	0.0100	-29.3*	20.0
n-Butanol	Ave	0.0220	0.0125		0.142	0.250	-43.1*	20.0
Ethyl acrylate	Ave	0.3914	0.2290		0.00585	0.0100	-41.5*	20.0
Methyl methacrylate	Ave	0.2579	0.1645		0.0128	0.0200	-36.2*	20.0
2-Nitropropane	Ave	0.1100	0.0750		0.0136	0.0200	-31.8*	20.0
n-Butyl acetate	Ave	0.4347	0.2324		0.00535	0.0100	-46.5*	20.0
1-Chlorohexane	Ave	0.5342	0.3947		0.00739	0.0100	-26.1*	20.0
Cyclohexanone	Ave	0.0611	0.0232		0.0380	0.100	-62.0*	20.0
Pentachloroethane	Ave	0.2226	0.2620		0.0235	0.0200	17.7	20.0
1,2,3-Trimethylbenzene	Ave	2.840	2.132		0.00751	0.0100	-24.9*	20.0
Benzyl chloride	Ave	0.3672	0.3417		0.00931	0.0100	-6.9	20.0
1,3,5-Trichlorobenzene	Ave	1.067	0.9107		0.00854	0.0100	-14.6	20.0
2-Methylnaphthalene	Ave	2.160	0.6228		0.00577	0.0200	-71.2*	20.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Sample No.: STD8260 240-348191/4 Date Analyzed: 10/02/2018 16:17

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXX5941.D Heated Purge: (Y/N) N

Calibration ID: 47199

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		789818	5.57	636861	8.25	356275	10.49
UPPER LIMIT		1579636	6.07	1273722	8.75	712550	10.99
LOWER LIMIT		394909	5.07	318431	7.75	178138	9.99
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-348191/9		756139	5.57	615440	8.25	331268	10.49
ICV 240-348191/17		812172	5.57	634991	8.25	333549	10.49
CCVIS 240-364651/2		637142	5.57	467571	8.25	243214	10.49

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Sample No.: CCVIS 240-364651/2 Date Analyzed: 01/18/2019 12:01

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXX9146.D Heated Purge: (Y/N) N

Calibration ID: 47201

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		637142	5.57	467571	8.25	243214	10.49
UPPER LIMIT		1274284	6.07	935142	8.75	486428	10.99
LOWER LIMIT		318571	5.07	233786	7.75	121607	9.99
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-364651/3		614456	5.56	463133	8.24	228521	10.49
LCS 240-364651/4		717618	5.57	515748	8.25	260603	10.49
MB 240-364651/6		679036	5.56	517797	8.25	254923	10.49
240-106686-1	TB-010819	671900	5.57	482881	8.25	262402	10.49

FB = Fluorobenzene
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
CBNZd5 = Chlorobenzene-d5
Area Limit = 50%-200% of internal standard area
DCBd4 = 1,4-Dichlorobenzene-d4
RT Limit = ± 0.5 minutes of internal standard RT
DCBd4 = 1,4-Dichlorobenzene-d4

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Sample No.: STD8260 240-339716/4 Date Analyzed: 08/07/2018 11:03

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ3442.D Heated Purge: (Y/N) N

Calibration ID: 46382

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1108911	4.66	694915	7.31	334003	9.52
UPPER LIMIT		2217822	5.16	1389830	7.81	668006	10.02
LOWER LIMIT		554456	4.16	347458	6.81	167002	9.02
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-339716/14		1156749	4.66	715134	7.31	341994	9.52
ICV 240-339716/15		1010902	4.66	619828	7.31	295366	9.52
CCVIS 240-364762/2		1024747	4.65	677209	7.30	366219	9.52

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Sample No.: CCVIS 240-364762/2 Date Analyzed: 01/21/2019 10:02

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ7822.D Heated Purge: (Y/N) N

Calibration ID: 46388

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1024747	4.65	677209	7.30	366219	9.52
UPPER LIMIT		2049494	5.15	1354418	7.80	732438	10.02
LOWER LIMIT		512374	4.15	338605	6.80	183110	9.02
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-364762/4		909627	4.66	626755	7.30	346262	9.52
CCV 240-364762/3		923948	4.65	596547	7.30	295096	9.52
MRL 240-364762/34		874043	4.65	592277	7.30	299439	9.52
MB 240-364762/6		800559	4.65	571884	7.30	292210	9.52
240-106686-1	TB-010819	808075	4.66	538263	7.30	269867	9.52
240-107003-B-12 MS		897913	4.65	628642	7.30	340245	9.52
240-107003-B-12 MSD		794302	4.66	552631	7.30	319215	9.52

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4
Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Instrument ID: A3UX11 Start Date: 08/07/2018 09:44

Analysis Batch Number: 339716 End Date: 08/07/2018 18:07

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-339716/1		08/07/2018 09:44	1	J80807A.D	DB-624 0.18(mm)
STD8260 240-339716/2 IC		08/07/2018 10:19	1	UXJ3440.D	DB-624 0.18(mm)
STD8260 240-339716/3 IC		08/07/2018 10:41	1	UXJ3441.D	DB-624 0.18(mm)
STD8260 240-339716/4 ICIS		08/07/2018 11:03	1	UXJ3442.D	DB-624 0.18(mm)
STD8260 240-339716/5 IC		08/07/2018 11:26	1	UXJ3443.D	DB-624 0.18(mm)
STD8260 240-339716/6 IC		08/07/2018 11:48	1	UXJ3444.D	DB-624 0.18(mm)
STD8260 240-339716/7 IC		08/07/2018 12:10	1	UXJ3445.D	DB-624 0.18(mm)
ICV 240-339716/14		08/07/2018 12:33	1	UXJ3446.D	DB-624 0.18(mm)
STD6 240-339716/8 IC		08/07/2018 12:55	1	UXJ3447.D	DB-624 0.18(mm)
STD5 240-339716/9 IC		08/07/2018 13:17	1	UXJ3448.D	DB-624 0.18(mm)
STD4 240-339716/10 IC		08/07/2018 13:39	1	UXJ3449.D	DB-624 0.18(mm)
STD3 240-339716/11 IC		08/07/2018 14:02	1	UXJ3450.D	DB-624 0.18(mm)
STD2 240-339716/12 IC		08/07/2018 14:24	1	UXJ3451.D	DB-624 0.18(mm)
STD1 240-339716/13 IC		08/07/2018 14:46	1	UXJ3452.D	DB-624 0.18(mm)
ICV 240-339716/15		08/07/2018 15:08	1	UXJ3453.D	DB-624 0.18(mm)
STD 240-339716/16 IC		08/07/2018 15:31	1		DB-624 0.18(mm)
STD 240-339716/17 IC		08/07/2018 15:53	1		DB-624 0.18(mm)
STD 240-339716/18 IC		08/07/2018 16:15	1		DB-624 0.18(mm)
STD 240-339716/19 IC		08/07/2018 16:37	1		DB-624 0.18(mm)
STD 240-339716/20 IC		08/07/2018 17:00	1		DB-624 0.18(mm)
STD 240-339716/21 IC		08/07/2018 17:22	1		DB-624 0.18(mm)
MRL 240-339716/22 MDLV		08/07/2018 17:45	1		DB-624 0.18(mm)
MRL 240-339716/23 MDLV		08/07/2018 18:07	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Instrument ID: A3UX10 Start Date: 10/02/2018 14:58

Analysis Batch Number: 348191 End Date: 10/02/2018 21:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-348191/1		10/02/2018 14:58	1	BFB1940.D	DB-624 0.18(mm)
STD8260 240-348191/2 IC		10/02/2018 15:27	1	UXX5939.D	DB-624 0.18(mm)
STD8260 240-348191/3 IC		10/02/2018 15:52	1	UXX5940.D	DB-624 0.18(mm)
STD8260 240-348191/4 ICIS		10/02/2018 16:17	1	UXX5941.D	DB-624 0.18(mm)
STD8260 240-348191/5 IC		10/02/2018 16:42	1	UXX5942.D	DB-624 0.18(mm)
STD8260 240-348191/6 IC		10/02/2018 17:06	1	UXX5943.D	DB-624 0.18(mm)
STD8260 240-348191/7 IC		10/02/2018 17:31	1	UXX5944.D	DB-624 0.18(mm)
STD8260 240-348191/8 IC		10/02/2018 17:56	1	UXX5945.D	DB-624 0.18(mm)
ICV 240-348191/9		10/02/2018 18:21	1	UXX5946.D	DB-624 0.18(mm)
STDA9 240-348191/10 IC		10/02/2018 18:46	1	UXX5947.D	DB-624 0.18(mm)
STDA9 240-348191/11 IC		10/02/2018 19:11	1	UXX5948.D	DB-624 0.18(mm)
STDA9 240-348191/12 IC		10/02/2018 19:36	1	UXX5949.D	DB-624 0.18(mm)
STDA9 240-348191/13 IC		10/02/2018 20:01	1	UXX5950.D	DB-624 0.18(mm)
STDA9 240-348191/14 IC		10/02/2018 20:25	1	UXX5951.D	DB-624 0.18(mm)
STDA9 240-348191/15 IC		10/02/2018 20:50	1	UXX5952.D	DB-624 0.18(mm)
STDA9 240-348191/16 IC		10/02/2018 21:14	1	UXX5953.D	DB-624 0.18(mm)
ICV 240-348191/17		10/02/2018 21:39	1	UXX5954.D	DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Instrument ID: A3UX10 Start Date: 01/18/2019 11:33

Analysis Batch Number: 364651 End Date: 01/18/2019 15:20

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-364651/1		01/18/2019 11:33	1	BFB2123.D	DB-624 0.18(mm)
CCVIS 240-364651/2		01/18/2019 12:01	1	UXX9146.D	DB-624 0.18(mm)
CCV 240-364651/3		01/18/2019 12:26	1	UXX9147.D	DB-624 0.18(mm)
LCS 240-364651/4		01/18/2019 12:51	1	UXX9148.D	DB-624 0.18(mm)
MB 240-364651/6		01/18/2019 13:40	1	UXX9150.D	DB-624 0.18(mm)
240-106686-1		01/18/2019 15:20	1	UXX9154.D	DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Instrument ID: A3UX11 Start Date: 01/21/2019 09:28

Analysis Batch Number: 364762 End Date: 01/21/2019 20:42

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-364762/1		01/21/2019 09:28	1	BFB121.D	DB-624 0.18(mm)
CCVIS 240-364762/2		01/21/2019 10:02	1	UXJ7822.D	DB-624 0.18(mm)
LCS 240-364762/4		01/21/2019 10:24	1	UXJ7823.D	DB-624 0.18(mm)
CCV 240-364762/3		01/21/2019 10:47	1	UXJ7824.D	DB-624 0.18(mm)
MRL 240-364762/5 MDLV		01/21/2019 11:09	1		DB-624 0.18(mm)
MRL 240-364762/34		01/21/2019 11:31	1	UXJ7826.D	DB-624 0.18(mm)
MB 240-364762/6		01/21/2019 11:53	1	UXJ7827.D	DB-624 0.18(mm)
ZZZZZ		01/21/2019 12:37	12.5		DB-624 0.18(mm)
ZZZZZ		01/21/2019 12:59	500		DB-624 0.18(mm)
ZZZZZ		01/21/2019 13:20	10		DB-624 0.18(mm)
ZZZZZ		01/21/2019 13:42	5		DB-624 0.18(mm)
240-106686-1		01/21/2019 14:05	1	UXJ7833.D	DB-624 0.18(mm)
ZZZZZ		01/21/2019 14:27	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 14:49	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 15:11	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 15:33	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 15:55	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 16:17	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 16:39	142.86		DB-624 0.18(mm)
ZZZZZ		01/21/2019 17:01	142.86		DB-624 0.18(mm)
ZZZZZ		01/21/2019 17:23	142.86		DB-624 0.18(mm)
ZZZZZ		01/21/2019 19:13	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 19:35	1		DB-624 0.18(mm)
ZZZZZ		01/21/2019 19:57	142.86		DB-624 0.18(mm)
240-107003-B-12 MS		01/21/2019 20:20	142.86	UXJ7850.D	DB-624 0.18(mm)
240-107003-B-12 MSD		01/21/2019 20:42	142.86	UXJ7851.D	DB-624 0.18(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 339716 Batch Start Date: 08/07/18 09:44 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	vm50is_stk_A 00001	vm50ss_stk 00077	vm50ss_stk 00078	VMAROLISTDW 00258
BFB 240-339716/1		8260C		5 mL	5 mL				
STD8260 240-339716/2 IC		8260C		5 mL	5 mL	2 uL	32 uL		32 uL
STD8260 240-339716/3 IC		8260C		5 mL	5 mL	2 uL	16 uL		16 uL
STD8260 240-339716/4 ICIS		8260C		5 mL	5 mL	2 uL	8 uL		8 uL
STD8260 240-339716/5 IC		8260C		5 mL	5 mL	2 uL	4 uL		4 uL
STD8260 240-339716/6 IC		8260C		5 mL	5 mL	2 uL	1.6 uL		1.6 uL
STD8260 240-339716/7 IC		8260C		5 mL	5 mL	2 uL	0.8 uL		0.8 uL
STD6 240-339716/8 IC		8260C		5 mL	5 mL	2 uL			
STD5 240-339716/9 IC		8260C		5 mL	5 mL	2 uL			
STD4 240-339716/10 IC		8260C		5 mL	5 mL	2 uL			
STD3 240-339716/11 IC		8260C		5 mL	5 mL	2 uL			
STD2 240-339716/12 IC		8260C		5 mL	5 mL	2 uL			
STD1 240-339716/13 IC		8260C		5 mL	5 mL	2 uL			
ICV 240-339716/14		8260C		5 mL	5 mL	2 uL		2 uL	
ICV 240-339716/15		8260C		5 mL	5 mL	2 uL		2 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00020	VMFASA9W 00196	VMFASAW 00243	VMFASGW 00269	VMFASPW 00261	VMRA9W 00260
BFB 240-339716/1		8260C		1 uL					
STD8260 240-339716/2 IC		8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 339716 Batch Start Date: 08/07/18 09:44 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00020	VMFASA9W 00196	VMFASAW 00243	VMFASGW 00269	VMFASPW 00261	VMRA9W 00260
STD8260 240-339716/3 IC		8260C							
STD8260 240-339716/4 ICIS		8260C							
STD8260 240-339716/5 IC		8260C							
STD8260 240-339716/6 IC		8260C							
STD8260 240-339716/7 IC		8260C							
STD6 240-339716/8 IC		8260C							32 uL
STD5 240-339716/9 IC		8260C							16 uL
STD4 240-339716/10 IC		8260C							8 uL
STD3 240-339716/11 IC		8260C							4 uL
STD2 240-339716/12 IC		8260C							1.6 uL
STD1 240-339716/13 IC		8260C							0.8 uL
ICV 240-339716/14		8260C				8 uL	8 uL	8 uL	
ICV 240-339716/15		8260C			8 uL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRGAS 00256	VMRPRIMW 00295				
BFB 240-339716/1		8260C							
STD8260 240-339716/2 IC		8260C		32 uL	32 uL				
STD8260 240-339716/3 IC		8260C		16 uL	16 uL				
STD8260 240-339716/4 ICIS		8260C		8 uL	8 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 339716 Batch Start Date: 08/07/18 09:44 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRGAS 00256	VMRPRIMW 00295				
STD8260 240-339716/5 IC		8260C		4 uL	4 uL				
STD8260 240-339716/6 IC		8260C		1.6 uL	1.6 uL				
STD8260 240-339716/7 IC		8260C		0.8 uL	0.8 uL				
STD6 240-339716/8 IC		8260C							
STD5 240-339716/9 IC		8260C							
STD4 240-339716/10 IC		8260C							
STD3 240-339716/11 IC		8260C							
STD2 240-339716/12 IC		8260C							
STD1 240-339716/13 IC		8260C							
ICV 240-339716/14		8260C							
ICV 240-339716/15		8260C							

Batch Notes	
pH Indicator ID	HC746949

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 348191 Batch Start Date: 10/02/18 14:58 Batch Analyst: Williams, Larry

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM50IS 00071	vm50ss 00337	VMAROLISTDW 00267	vmbfb 00020
BFB 240-348191/1		8260C		5 mL	5 mL				1 uL
STD8260 240-348191/2 IC		8260C		5 mL	5 mL	1 uL	32 uL	32 uL	
STD8260 240-348191/3 IC		8260C		5 mL	5 mL	1 uL	16 uL	16 uL	
STD8260 240-348191/4 ICIS		8260C		5 mL	5 mL	1 uL	8 uL	8 uL	
STD8260 240-348191/5 IC		8260C		5 mL	5 mL	1 uL	4 uL	4 uL	
STD8260 240-348191/6 IC		8260C		5 mL	5 mL	1 uL	3.2 uL	3.2 uL	
STD8260 240-348191/7 IC		8260C		5 mL	5 mL	1 uL	1.6 uL	1.6 uL	
STD8260 240-348191/8 IC		8260C		5 mL	5 mL	1 uL	0.8 uL	0.8 uL	
ICV 240-348191/9		8260C		5 mL	5 mL	1 uL	8 uL		
STDA9 240-348191/10 IC		8260C		5 mL	5 mL	1 uL			
STDA9 240-348191/11 IC		8260C		5 mL	5 mL	1 uL			
STDA9 240-348191/12 IC		8260C		5 mL	5 mL	1 uL			
STDA9 240-348191/13 IC		8260C		5 mL	5 mL	1 uL			
STDA9 240-348191/14 IC		8260C		5 mL	5 mL	1 uL			
STDA9 240-348191/15 IC		8260C		5 mL	5 mL	1 uL			
STDA9 240-348191/16 IC		8260C		5 mL	5 mL	1 uL			
ICV 240-348191/17		8260C		5 mL	5 mL	1 uL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 348191 Batch Start Date: 10/02/18 14:58 Batch Analyst: Williams, Larry

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00203	VMFASAW 00250	VMFASGW 00276	VMFASPW 00269	VMRA9W 00267	VMRGAS 00263
BFB 240-348191/1		8260C							
STD8260 240-348191/2 IC		8260C							32 uL
STD8260 240-348191/3 IC		8260C							16 uL
STD8260 240-348191/4 ICIS		8260C							8 uL
STD8260 240-348191/5 IC		8260C							4 uL
STD8260 240-348191/6 IC		8260C							3.2 uL
STD8260 240-348191/7 IC		8260C							1.6 uL
STD8260 240-348191/8 IC		8260C							0.8 uL
ICV 240-348191/9		8260C			8 uL	8 uL	8 uL		
STDA9 240-348191/10 IC		8260C						32 uL	
STDA9 240-348191/11 IC		8260C						16 uL	
STDA9 240-348191/12 IC		8260C						8 uL	
STDA9 240-348191/13 IC		8260C						4 uL	
STDA9 240-348191/14 IC		8260C						3.2 uL	
STDA9 240-348191/15 IC		8260C						1.6 uL	
STDA9 240-348191/16 IC		8260C						0.8 uL	
ICV 240-348191/17		8260C		8 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 348191 Batch Start Date: 10/02/18 14:58 Batch Analyst: Williams, Larry

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00303					
BFB 240-348191/1		8260C							
STD8260 240-348191/2 IC		8260C		32 uL					
STD8260 240-348191/3 IC		8260C		16 uL					
STD8260 240-348191/4 ICIS		8260C		8 uL					
STD8260 240-348191/5 IC		8260C		4 uL					
STD8260 240-348191/6 IC		8260C		3.2 uL					
STD8260 240-348191/7 IC		8260C		1.6 uL					
STD8260 240-348191/8 IC		8260C		0.8 uL					
ICV 240-348191/9		8260C							
STDA9 240-348191/10 IC		8260C							
STDA9 240-348191/11 IC		8260C							
STDA9 240-348191/12 IC		8260C							
STDA9 240-348191/13 IC		8260C							
STDA9 240-348191/14 IC		8260C							
STDA9 240-348191/15 IC		8260C							
STDA9 240-348191/16 IC		8260C							
ICV 240-348191/17		8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 348191 Batch Start Date: 10/02/18 14:58 Batch Analyst: Williams, Larry

Batch Method: 8260C Batch End Date:

Batch Notes	
pH Indicator ID	HC746949

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 364651 Batch Start Date: 01/18/19 11:33 Batch Analyst: Williams, Larry

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00074	vm50ss_stk 00079	VMAROLISTDW 00281
BFB 240-364651/1		8260C		5 mL	5 mL				
CCVIS 240-364651/2		8260C		5 mL	5 mL		1 uL	1 uL	8 uL
CCV 240-364651/3		8260C		5 mL	5 mL		1 uL		
LCS 240-364651/4		8260C		5 mL	5 mL		1 uL	1 uL	
MB 240-364651/6		8260C		5 mL	5 mL		1 uL	1 uL	
240-106686-B-1	TB-010819	8260C	T	5 mL	5 mL	<2 SU	1 uL	1 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMBFB 00021	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00281	VMRGAS 00278
BFB 240-364651/1		8260C		1 uL					
CCVIS 240-364651/2		8260C							8 uL
CCV 240-364651/3		8260C						8 uL	
LCS 240-364651/4		8260C			8 uL	8 uL	8 uL		
MB 240-364651/6		8260C							
240-106686-B-1	TB-010819	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
BFB 240-364651/1		8260C							
CCVIS 240-364651/2		8260C		8 uL					
CCV 240-364651/3		8260C							
LCS 240-364651/4		8260C							
MB 240-364651/6		8260C							
240-106686-B-1	TB-010819	8260C	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 364651 Batch Start Date: 01/18/19 11:33 Batch Analyst: Williams, Larry

Batch Method: 8260C Batch End Date:

Batch Notes	
pH Indicator ID	hc861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 364762 Batch Start Date: 01/21/19 09:28 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00073	vm50ss_stk 00079	VMAROLISTDW 00281
BFB 240-364762/1		8260C		5 mL	5 mL				
CCVIS 240-364762/2		8260C		5 mL	5 mL		2 uL	2 uL	8 uL
CCV 240-364762/3		8260C		5 mL	5 mL		2 uL		
LCS 240-364762/4		8260C		5 mL	5 mL		2 uL	2 uL	
MB 240-364762/6		8260C		5 mL	5 mL		2 uL	2 uL	
MRL 240-364762/34		8260C		5 mL	5 mL		2 uL	2 uL	
240-106686-A-1	TB-010819	8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	
240-107003-B-12 MS		8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	
240-107003-B-12 MSD		8260C	T	5 mL	5 mL	<2 SU	2 uL	2 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
BFB 240-364762/1		8260C		1 uL					
CCVIS 240-364762/2		8260C							8 uL
CCV 240-364762/3		8260C						8 uL	
LCS 240-364762/4		8260C			8 uL	8 uL	8 uL		
MB 240-364762/6		8260C							
MRL 240-364762/34		8260C						0.8 uL	
240-106686-A-1	TB-010819	8260C	T						
240-107003-B-12 MS		8260C	T		8 uL	8 uL	8 uL		
240-107003-B-12 MSD		8260C	T		8 uL	8 uL	8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
BFB 240-364762/1		8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-106686-1

SDG No.:

Batch Number: 364762 Batch Start Date: 01/21/19 09:28 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
CCVIS 240-364762/2		8260C		8 uL					
CCV 240-364762/3		8260C							
LCS 240-364762/4		8260C							
MB 240-364762/6		8260C							
MRL 240-364762/34		8260C							
240-106686-A-1	TB-010819	8260C	T						
240-107003-B-12 MS		8260C	T						
240-107003-B-12 MSD		8260C	T						

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

VOC Calibration Calculations:

Initial Calibration 11/30/2018
Instrument A3UX8

Carbon disulfide

Analyte Concentration	Analyte Response	Internal Standard Response	Internal Standard Amount	RRF	Reported RRF
1	9772	781170	50	0.62547	0.6255
2	18848	772034	50	0.61034	0.6103
5	67608	756044	50	0.89423	0.8942
10	129123	874740	50	0.73807	0.7381
20	244291	790737	50	0.77235	0.7724
50	651749	768605	50	0.84796	0.848
100	1395081	805018	50	0.86649	0.8665
200	2724689	866098	50	0.78648	0.7865
250	3492065	812894	50	0.85917	0.8592
			Average	0.77784	0.7778
			Standard Deviation	0.1036	
			RSD	0.1332	
			%RSD	13.32163	13.3

Continuing Calibration 01/10/2019 @3:44
Instrument A3UX8

Carbon disulfide

Analyte Concentration	Analyte Response	Internal Standard Response	Internal Standard Amount	RRF	%D	Reported RRF	Reported %D
20	230558	706804	50	0.8155	4.8463383	0.8155	4.8

Sample Calculation
Sample Identification SB-MW158-11-12 MS
Compound Carbon disulfide 26 ug/kg

Compound Area	217460		Percent Solids	0.848
Internal Standard Amount (ng)	50		Volume Purged (ml)	5
Dilution Factor	1		Injection Volume (µl)	1
Internal Standard Area	625014		Sample Weight (g)	5.07
Average RRF	0.77784			
Concentration	26.01	ug/L		

Surrogate Dibromofluoromethane

Compound Area	144288			
Internal Standard Amount (ng)	50			
Dilution Factor	1		Volume Extract (ml)	1
Internal Standard Area	625014		Injection Volume (µl)	1
Average RRF	0.2492			
Concentration	46.319348			
Surrogate %R	92.64	Spike amount	50	

LCS %R 680-520101/4

Carbon disulfide	Spike amount	LCS concentration
82.80	25	20.70

MS/MSD
Sample ID SB-MW158-11-12 (no detected results)

MS Concentration	26.00	ug/kg
Sample Concentration	0	ug/kg
MS Spike added	29.1	ug/kg
MS %Rec	89.35	%
MSD Concentration	25.60	ug/kg
MSD Spike added	29	ug/kg
MSD %Rec	88.28	%
MS/MSD RPD	1.55	

Tune
11/30/2018 @ 3:22 A3UX8

Raw Abundance m/z 95	Raw Abundance m/z 50	% Abundance
175936	54936	31.22

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190110-83575.b\UX82210.D
Lims ID: 240-106686-B-10-F MS
Client ID:
Sample Type: MS
Inject. Date: 10-Jan-2019 13:28:30 ALS Bottle#: 29 Worklist Smp#: 31
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083575-031
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190110-83575.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 10-Jan-2019 14:50:38 Calib Date: 30-Nov-2018 10:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: macenczaks Date: 10-Jan-2019 14:29:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.157	5.157	0.000	98	625014	50.0	50.0	
* 2 Chlorobenzene-d5	117	7.690	7.689	0.001	97	431814	50.0	50.0	
* 3 1,4-Dichlorobenzene-d4	152	9.879	9.878	0.001	96	241127	50.0	50.0	
$ 4 Dibromofluoromethane (Surr	113	4.637	4.636	0.001	93	144288	50.0	46.3	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.897	4.896	0.001	99	192158	50.0	46.1	
$ 6 Toluene-d8 (Surr)	98	6.435	6.435	0.000	95	549469	50.0	44.8	
$ 7 4-Bromofluorobenzene (Surr	95	8.766	8.766	0.000	85	205686	50.0	43.6	
9 Dichlorodifluoromethane	85	1.596	1.595	0.001	98	92082	25.0	21.3	
10 Chloromethane	50	1.773	1.773	0.000	100	122382	25.0	20.4	
11 Vinyl chloride	62	1.891	1.891	0.000	100	89836	25.0	22.1	
13 Bromomethane	94	2.187	2.187	0.000	94	48504	25.0	21.3	
14 Chloroethane	64	2.282	2.281	0.001	95	55390	25.0	21.5	
16 Trichlorofluoromethane	101	2.507	2.506	0.001	100	124387	25.0	23.4	
19 1,1-Dichloroethene	96	2.933	2.932	0.001	96	78776	25.0	23.5	
20 1,1,2-Trichloro-1,2,2-trif	151	2.945	2.944	0.001	96	62399	25.0	22.6	
21 Acetone	43	2.968	2.968	0.000	97	64084	50.0	56.7	
24 Carbon disulfide	76	3.122	3.121	0.001	98	217460	25.0	22.4	
28 Methylene Chloride	84	3.311	3.311	0.000	94	93615	25.0	24.3	
29 2-Methyl-2-propanol	59	3.394	3.394	0.000	86	46224	250.0	233.6	
31 trans-1,2-Dichloroethene	96	3.524	3.524	0.000	92	93738	25.0	24.4	
32 Methyl tert-butyl ether	73	3.524	3.524	0.000	93	169335	25.0	22.9	
34 1,1-Dichloroethane	63	3.844	3.843	0.001	98	169206	25.0	22.8	
35 Vinyl acetate	43	3.868	3.867	0.001	97	114848	25.0	19.5	
36 Isopropyl ether	87		3.891					ND	
38 Tert-butyl ethyl ether	59		4.164					ND	
40 2-Butanone (MEK)	43	4.282	4.281	0.001	54	78356	50.0	53.0	
39 cis-1,2-Dichloroethene	96	4.282	4.281	0.001	89	95434	25.0	23.8	
41 2,2-Dichloropropane	77	4.293	4.293	0.000	72	72601	25.0	16.0	
45 Chlorobromomethane	128	4.459	4.459	0.000	90	39439	25.0	25.8	
47 Chloroform	83	4.518	4.506	0.012	99	156527	25.0	23.8	
48 1,1,1-Trichloroethane	97	4.672	4.672	0.000	95	128927	25.0	22.9	
50 1,1-Dichloropropene	75	4.790	4.790	0.000	85	113028	25.0	22.4	

TestAmerica Canton
Recovery Report

Data File: \\chromna\Canton\ChromData\A3UX8\20190110-83575.b\UX82210.D
Lims ID: 240-106686-B-10-F MS
Client ID:
Sample Type: MS
Inject. Date: 10-Jan-2019 13:28:30 ALS Bottle#: 29 Worklist Smp#: 31
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0083575-031
Operator ID: 402279 Instrument ID: A3UX8

Method: \\chromna\Canton\ChromData\A3UX8\20190110-83575.b\8260_8.m
Limit Group: MSV 8260B ICAL
Last Update: 10-Jan-2019 14:50:38 Calib Date: 30-Nov-2018 10:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\UX81330.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: macenczaks Date: 10-Jan-2019 14:29:32

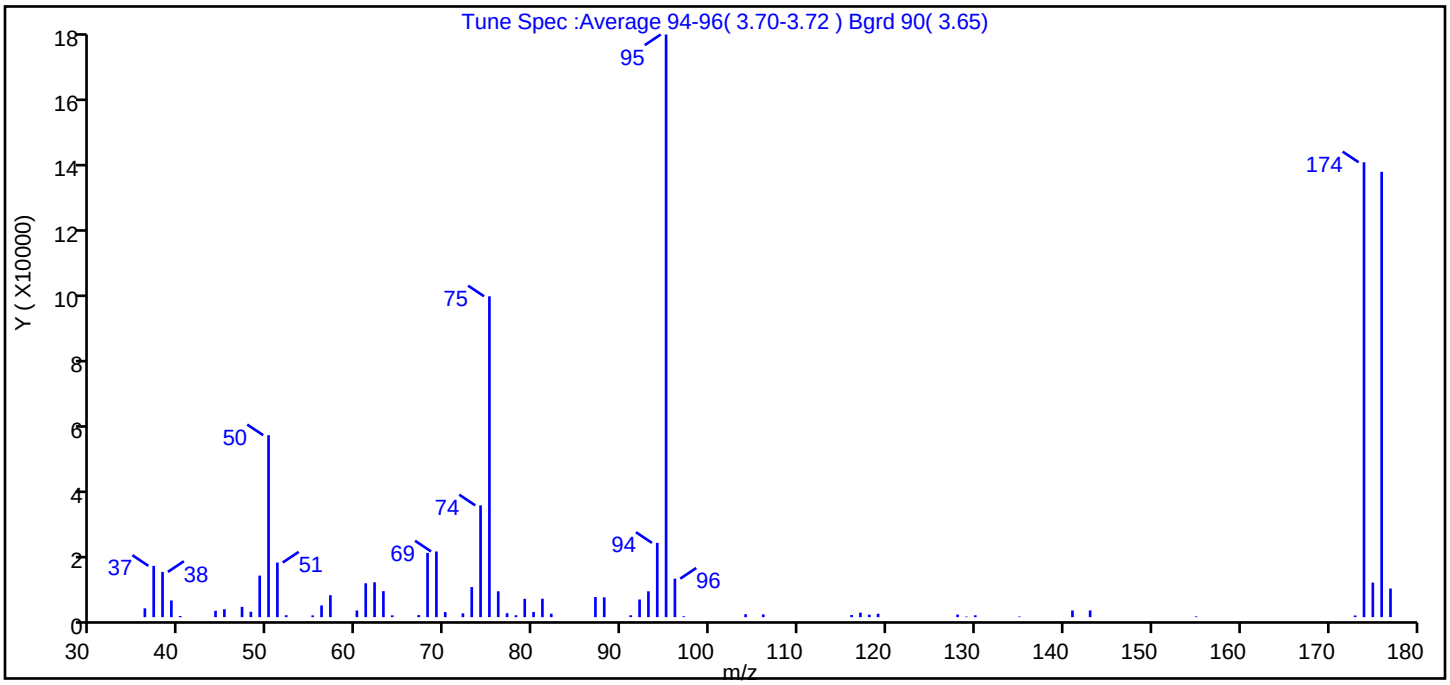
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Dibromofluoromethane (Surr)	50.0	46.3	92.66
$ 5 1,2-Dichloroethane-d4 (Surr)	50.0	46.1	92.23
$ 6 Toluene-d8 (Surr)	50.0	44.8	89.62
$ 7 4-Bromofluorobenzene (Surr)	50.0	43.6	87.24

MS Tune Report

TestAmerica Canton

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\BFB8814.D
Injection Date: 30-Nov-2018 03:22:30 Instrument ID: A3UX8
Lims ID: BFB
Client ID:
Operator ID: 402279 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: 8260_8 Limit Group: MSV 8260B ICAL
Tune Method: BFB Method 8260

$ 8 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	31.2
75	30 to 60% of m/z 95	55.1
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.3 (0.4)
174	50 to 120% of m/z 95	78.1
175	5 to 9% of m/z 174	5.9 (7.6)
176	Greater than 95% but less than 101% of m/z 174	76.4 (97.9)
177	5 to 9% of m/z 176	4.9 (6.4)

Data File: \\chromdocs2018\q3\Canton\ChromData\A3UX8\20181130-82416.b\BFB8814.D\8260_8.rslt\spectra.d
Injection Date: 30-Nov-2018 03:22:30
Spectrum: Tune Spec :Average 94-96(3.70-3.72) Bgrd 90(3.65)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 63

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2666	60.00	2006	79.00	5546	117.00	1355
37.00	15484	61.00	10227	80.00	1537	118.00	739
38.00	13662	62.00	10522	81.00	5555	119.00	1030
39.00	5040	63.00	7848	82.00	1037	128.00	784
40.00	353	64.00	544	87.00	6064	129.00	173
44.00	1911	67.00	626	88.00	5981	130.00	570
45.00	2395	68.00	19400	91.00	566	135.00	184
47.00	3103	69.00	19832	92.00	5333	141.00	2016
48.00	1645	70.00	1523	93.00	7803	143.00	2032
49.00	12538	72.00	1142	94.00	22432	155.00	219
50.00	54936	73.00	9093	95.00	175936	173.00	498
51.00	16488	74.00	33752	96.00	11620	174.00	137344
52.00	583	75.00	96872	97.00	254	175.00	10429
55.00	530	76.00	7806	104.00	890	176.00	134464
56.00	3537	77.00	1191	106.00	835	177.00	8642
57.00	6629	78.00	581	116.00	637		

TETRA TECH INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **APRIL 19, 2019**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION – VOC / PCBH / METALS / MISCELLANEOUS PARAMETERS**
MRC BLOCK E/F MASS DISCHARGE – FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) 240-107706-1

SAMPLES: 4 / Water /

MRC-MW155A-020519	MRC-MW157A-020519
MRC-MW159A-020519	TB-020519

OVERVIEW

The sample set for MRC Block E/F Mass Discharge, SDG 240-107706-1, consists of three (3) water environmental samples and one (1) trip blank. Samples were analyzed for volatile organic compounds (VOC), polychlorinated biphenyl homologs (PCBH), metals, and miscellaneous parameters (alkalinity, bromide, hardness as CaCO3, nitrite/nitrate-N, salinity, sulfate, and total dissolved solids (TDS). No field duplicate pairs are included in this SDG.

The samples were collected by Tetra Tech on February 5, 2019 and analyzed by Test America. Analyses were conducted in accordance with EPA SW-846 Methods 8260C (VOC), 6010C/6020A (metals), and 9056A (anions) as well as EPA Method 680 (PCBH), MCAWW Method 300.0 (bromide), and Standard Methods 2320B-2011 (alkalinity), 2340C-2011 (hardness), 4500 NO3 F (nitrite/nitrate-N), 2520B (salinity), and 2540C-2011 (TDS) analytical and reporting protocols. Iron and manganese were analyzed by both Methods 6010C and 6020A - remaining metals were analyzed by Method 6020A only.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, initial/continuing calibrations, laboratory method blank results, laboratory control sample/laboratory control sample results, matrix spike/matrix spike duplicate results, surrogate spike recoveries, laboratory control sample results, interference check sample results, compound identification, analyte quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

MAJOR PROBLEMS

- The laboratory case narrative report states that 2-chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample, and all VOC samples were preserved in hydrochloric acid. Non-detected results for 2-chloroethyl vinyl ether were rejected (UR) in all samples.

MINOR PROBLEMS

- The VOC continuing calibration verification (CCV) performed on 02/08/19 at 12:55 on instrument A3UX15 had percent differences (%Ds) that were greater than the 20% quality control limit for vinyl acetate, 2-chloroethyl vinyl ether, 4-methyl-2-pentanone, trans-1,3-dichloropropene, 2-hexanone, bromoform, 1,1,2,2-tetratechloroethane, 1,2-dibromo-3-chloropropane, and naphthalene. All samples were affected. Non-detected results for the aforementioned analytes were qualified as estimated (UJ).

- The VOC CCV performed on 02/08/19 at 13:39 on instrument A3UX15 had a %D for tert-amyl methyl ether that was greater than the 20% quality control limit. All samples were affected. Non-detected results for tert-amyl methyl ether were qualified as estimated (UJ).

- The PCBH CCV performed on 02/21/19 at 16:43 on instrument CMSX had a %D that was greater than the 20% quality control limit for decachlorobiphenyl (PCB-209). Sample MRC-MW159A-090519 was affected. The non-detected results for decachlorobiphenyl and nonachlorobiphenyls were qualified as estimated (UJ) in the affected sample.

- Detected results reported below the reporting limit (RL) but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Non-detected results were reported to the MDL.

VOC results in sample MRC-MW157A-020519 were analyzed at a dilution factor of 125.

The following metal was detected in the method blanks at the following maximum concentration:

Analyte	Maximum Concentration	< or > RL
Manganese	3.66 ug/L(1)	< RL

1 - Detected in method blank associated with preparation batch 240-367176 and the 6020A analysis affecting all samples.

No qualification was necessary because all associated manganese results were greater than the RL.

Nitrate/nitrite as N was detected in the calibration blanks the following maximum concentration:

Analyte	Maximum Concentration	< or > RL
Nitrate/nitrite-N	0.0463 mg/L(1)	< RL

1 - Detected in calibration blank analyzed on 02/17/19 at 13:13 affecting all samples.

No qualification was necessary because all associated nitrate/nitrite-N results were greater than the RL.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Some non-detected VOC and PCBH results were qualified due to calibration noncompliance.

Other Factors Affecting Data Quality: Detected results reported below the RL but above the MDL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA “National Functional Guidelines for Organic Superfund Methods Data Review” (January 2017) and the “National Functional Guidelines for Inorganic Superfund Methods Data Review” (January 2017). The text of this report has been formulated to address only those problem areas affecting data quality.

Leigh A. Ciofani

Tetra Tech
Leigh Ciofani
Environmental Scientist/Data Validator

Joseph A. Samchuck

Tetra Tech
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08784	NSAMPLE	MRC-MW155A-020519			MRC-MW157A-020519			MRC-MW159A-020519			TB-020519		
SDG: 240-107706-1	LAB_ID	240-107706-2			240-107706-4			240-107706-3			240-107706-1		
FRACTION: OV	SAMP_DATE	2/5/2019			2/5/2019			2/5/2019			2/5/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U		18	U		0.14	U		0.14	U	
1,1,1-TRICHLOROETHANE		0.24	U		30	U		0.24	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	UJ	C	16	UJ	C	0.13	UJ	C	0.13	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U		51	U		0.41	U		0.41	U	
1,1-DICHLOROETHANE		0.17	U		21	U		0.17	U		0.17	U	
1,1-DICHLOROETHENE		0.19	U		24	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.14	U		18	U		0.14	U		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	U		68	U		0.54	U		0.54	U	
1,2,3-TRICHLOROPROPANE		0.24	U		30	U		0.24	U		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	U		18	U		0.14	U		0.14	U	
1,2,4-TRICHLOROBENZENE		0.26	U		33	U		0.26	U		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U		8.8	U		0.07	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	UJ	C	110	UJ	C	0.91	UJ	C	0.91	UJ	C
1,2-DIBROMOETHANE		0.12	U		15	U		0.12	U		0.12	U	
1,2-DICHLOROBENZENE		0.15	U		19	U		0.15	U		0.15	U	
1,2-DICHLOROETHANE		0.21	U		26	U		0.21	U		0.21	U	
1,2-DICHLOROPROPANE		0.15	U		19	U		0.15	U		0.15	U	
1,3-DICHLOROBENZENE		0.15	U		19	U		0.15	U		0.15	U	
1,3-DICHLOROPROPANE		0.21	U		26	U		0.21	U		0.21	U	
1,4-DICHLOROBENZENE		0.16	U		20	U		0.16	U		0.16	U	
2,2-DICHLOROPROPANE		0.31	U		57	J	P	0.31	U		0.31	U	
2-BUTANONE		1.2	U		150	U		1.2	U		1.2	U	
2-CHLOROETHYL VINYL ETHER		0.26	UR	M	33	UR	M	0.26	UR	M	0.26	UR	M
2-CHLOROTOLUENE		0.15	U		19	U		0.15	U		0.15	U	
2-HEXANONE		0.54	UJ	C	68	UJ	C	0.54	UJ	C	0.54	UJ	C
4-CHLOROTOLUENE		0.09	U		11	U		0.09	U		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U		16	U		0.13	U		0.13	U	
4-METHYL-2-PENTANONE		0.42	UJ	C	53	UJ	C	0.42	UJ	C	0.42	UJ	C
ACETONE		5.4	U		680	U		5.4	U		5.4	U	
BENZENE		0.13	U		16	U		0.13	U		0.13	U	
BROMOBENZENE		0.12	U		15	U		0.12	U		0.12	U	
BROMOCHLOROMETHANE		0.14	U		18	U		0.14	U		0.14	U	
BROMODICHLOROMETHANE		0.17	U		21	U		0.17	U		0.17	U	
BROMOFORM		0.76	UJ	C	95	UJ	C	0.76	UJ	C	0.76	UJ	C
BROMOMETHANE		0.42	U		53	U		0.42	U		0.42	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW155A-020519			MRC-MW157A-020519			MRC-MW159A-020519			TB-020519		
SDG: 240-107706-1	LAB_ID	240-107706-2			240-107706-4			240-107706-3			240-107706-1		
FRACTION: OV	SAMP_DATE	2/5/2019			2/5/2019			2/5/2019			2/5/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.28	U		35	U		0.28	U		0.28	U	
CARBON TETRACHLORIDE		0.26	U		33	U		0.26	U		0.26	U	
CHLOROBENZENE		0.14	U		18	U		0.14	U		0.14	U	
CHLORODIBROMOMETHANE		0.39	U		49	U		0.39	U		0.39	U	
CHLOROETHANE		0.83	U		100	U		0.83	U		0.83	U	
CHLOROFORM		0.13	U		16	U		0.13	U		0.13	U	
CHLOROMETHANE		0.2	U		25	U		0.2	U		0.2	U	
CIS-1,2-DICHLOROETHENE		0.16	U		330			0.16	U		0.16	U	
CIS-1,3-DICHLOROPROPENE		0.61	U		76	U		0.61	U		0.61	U	
DIBROMOMETHANE		0.09	U		11	U		0.09	U		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	U		44	U		0.35	U		0.35	U	
DIISOPROPYL ETHER		0.17	U		21	U		0.17	U		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	U		19	U		0.15	U		0.15	U	
ETHYLBENZENE		0.11	U		14	U		0.11	U		0.11	U	
HEXACHLOROBUTADIENE		0.83	U		100	U		0.83	U		0.83	U	
ISOPROPYLBENZENE		0.09	U		11	U		0.09	U		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U		8.8	U		0.07	U		0.07	U	
METHYLENE CHLORIDE		2.6	U		330	U		2.6	U		2.6	U	
NAPHTHALENE		0.32	UJ	C	40	UJ	C	0.32	UJ	C	0.32	UJ	C
N-BUTYLBENZENE		0.14	U		18	U		0.14	U		0.14	U	
N-PROPYLBENZENE		0.15	U		19	U		0.15	U		0.15	U	
SEC-BUTYLBENZENE		0.13	U		16	U		0.13	U		0.13	U	
STYRENE		0.1	U		13	U		0.1	U		0.1	U	
TERT-AMYL METHYL ETHER		0.11	UJ	C	14	UJ	C	0.11	UJ	C	0.11	UJ	C
TERT-BUTYLBENZENE		0.14	U		18	U		0.14	U		0.14	U	
TERTIARY-BUTYL ALCOHOL		1.7	U		210	U		1.7	U		1.7	U	
TETRACHLOROETHENE		0.15	U		19	U		0.15	U		0.15	U	
TOLUENE		0.14	U		18	U		0.14	U		0.14	U	
TOTAL XYLENES		0.15	U		19	U		0.15	U		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		24	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.67	UJ	C	84	UJ	C	0.67	UJ	C	0.67	UJ	C
TRICHLOROETHENE		0.15	J	P	2600			0.17	J	P	0.1	U	
TRICHLOROFLUOROMETHANE		0.45	U		56	U		0.45	U		0.45	U	
VINYL ACETATE		0.19	UJ	C	24	UJ	C	0.19	UJ	C	0.19	UJ	C
VINYL CHLORIDE		0.2	U		25	U		0.2	U		0.2	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW155A-020519			MRC-MW157A-020519			MRC-MW159A-020519		
SDG: 240-107706-1	LAB_ID	240-107706-2			240-107706-4			240-107706-3		
FRACTION: PCB	SAMP_DATE	2/5/2019			2/5/2019			2/5/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.069	U		0.09	U		0.069	UJ	C
DICHLOROBIPHENYLS		0.0054	U		0.0069	U		0.0053	U	
HEPTACHLOROBIPHENYLS		0.03	U		0.039	U		0.029	U	
HEXACHLOROBIPHENYLS		0.015	U		0.019	U		0.015	U	
MONOCHLOROBIPHENYLS		0.0056	U		0.0072	U		0.0055	U	
NONACHLOROBIPHENYLS		0.049	U		0.063	U		0.048	UJ	C
OCTACHLOROBIPHENYLS		0.038	U		0.049	U		0.037	U	
PENTACHLOROBIPHENYLS		0.014	U		0.018	U		0.014	U	
TETRACHLOROBIPHENYLS		0.013	U		0.017	U		0.013	U	
TRICHLOROBIPHENYLS		0.0064	U		0.0084	U		0.0064	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW155A-020519			MRC-MW155A-020519-RE			MRC-MW157A-020519			MRC-MW157A-020519-RE		
SDG: 240-107706-1	LAB_ID	240-107706-2			240-107706-2			240-107706-4			240-107706-4		
FRACTION: M	SAMP_DATE	2/5/2019			2/5/2019			2/5/2019			2/5/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		77						310					
ANTIMONY		0.57	U					0.57	U				
ARSENIC		0.75	U					0.75	U				
BARIUM		44						62					
BERYLLIUM		0.64	J	P				0.31	U				
CADMIUM		0.21	U					0.21	U				
CALCIUM		60000						32000					
CHROMIUM		1.4	J	P				1.3	J	P			
COBALT		0.49	J	P				5.1					
COPPER		35						13					
IRON		140	J	P	140			370			360		
LEAD		0.45	U					0.49	J	P			
MAGNESIUM		14000						5900					
MANGANESE		15			17			96			96		
NICKEL		2.2						9.4					
POTASSIUM		1600						21000					
SELENIUM		0.89	U					0.89	U				
SILVER		0.053	U					0.053	U				
SODIUM		100000						16000					
THALLIUM		0.2	U					0.2	U				
VANADIUM		0.82	U					2.1	J	P			
ZINC		24						29					

PROJ_NO: 08784	NSAMPLE	MRC-MW159A-020519			MRC-MW159A-020519-RE		
SDG: 240-107706-1	LAB_ID	240-107706-3			240-107706-3		
FRACTION: M	SAMP_DATE	2/5/2019			2/5/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		150					
ANTIMONY		1.8	J	P			
ARSENIC		0.75	U				
BARIUM		60					
BERYLLIUM		0.94	J	P			
CADMIUM		0.21	U				
CALCIUM		130000					
CHROMIUM		0.98	U				
COBALT		5.6					
COPPER		4.7					
IRON		430			380		
LEAD		0.45	U				
MAGNESIUM		32000					
MANGANESE		150			140		
NICKEL		2.5					
POTASSIUM		12000					
SELENIUM		0.89	U				
SILVER		0.053	U				
SODIUM		7900					
THALLIUM		0.2	U				
VANADIUM		1.1	J	P			
ZINC		15	U				

PROJ_NO: 08784	NSAMPLE	MRC-MW155A-020519						MRC-MW157A-020519					
SDG: 240-107706-1	LAB_ID	240-107706-2						240-107706-4					
FRACTION: MISC	SAMP_DATE	2/5/2019						2/5/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY	150						94					
BROMIDE	0.14	J	P				0.044	U				
HARDNESS AS CACO3	250						130					
NITRITE/NITRATE-N	0.4						0.35					
SALINITY				2	U					2	U	
SULFATE	34						68					
TOTAL DISSOLVED SOLIDS	550						240					

PROJ_NO: 08784	NSAMPLE	MRC-MW159A-020519					
SDG: 240-107706-1	LAB_ID	240-107706-3					
FRACTION: MISC	SAMP_DATE	2/5/2019					
MEDIA: WATER	QC_TYPE	NM					
	UNITS	MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		210					
BROMIDE		0.044	U				
HARDNESS AS CACO3		540					
NITRITE/NITRATE-N		0.23					
SALINITY					2	U	
SULFATE		190					
TOTAL DISSOLVED SOLIDS		660					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW155A-020519 | Lab Sample ID: 240-107706-2

Matrix: Water | Lab File ID: UXC8744.D

Analysis Method: 8260C | Date Collected: 02/05/2019 09:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW155A-020519 | Lab Sample ID: 240-107706-2

Matrix: Water | Lab File ID: UXC8744.D

Analysis Method: 8260C | Date Collected: 02/05/2019 09:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.15	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW155A-020519 Lab Sample ID: 240-107706-2

Matrix: Water Lab File ID: UXC8744.D

Analysis Method: 8260C Date Collected: 02/05/2019 09:00

Sample wt/vol: 5(mL) Date Analyzed: 02/08/2019 16:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367370 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	88		70-123
1868-53-7	Dibromofluoromethane (Surr)	87		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW157A-020519 | Lab Sample ID: 240-107706-4

Matrix: Water | Lab File ID: UXC8746.D

Analysis Method: 8260C | Date Collected: 02/05/2019 12:55

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:56

Soil Aliquot Vol: | Dilution Factor: 125

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	18	U	130	18
71-55-6	1,1,1-Trichloroethane	30	U	130	30
79-34-5	1,1,2,2-Tetrachloroethane	16	U	130	16
76-13-1	1,1,2-Trichlorotrifluoroethane	51	U	130	51
75-34-3	1,1-Dichloroethane	21	U	130	21
75-35-4	1,1-Dichloroethene	24	U	130	24
563-58-6	1,1-Dichloropropene	18	U	130	18
87-61-6	1,2,3-Trichlorobenzene	68	U	130	68
96-18-4	1,2,3-Trichloropropane	30	U	130	30
526-73-8	1,2,3-Trimethylbenzene	18	U	630	18
120-82-1	1,2,4-Trichlorobenzene	33	U	130	33
95-63-6	1,2,4-Trimethylbenzene	8.8	U	130	8.8
96-12-8	1,2-Dibromo-3-Chloropropane	110	U	250	110
95-50-1	1,2-Dichlorobenzene	19	U	130	19
107-06-2	1,2-Dichloroethane	26	U	130	26
78-87-5	1,2-Dichloropropane	19	U	130	19
541-73-1	1,3-Dichlorobenzene	19	U	130	19
142-28-9	1,3-Dichloropropane	26	U	130	26
106-46-7	1,4-Dichlorobenzene	20	U	130	20
594-20-7	2,2-Dichloropropane	57	J	130	39
110-75-8	2-Chloroethyl vinyl ether	33	U	1300	33
95-49-8	2-Chlorotoluene	19	U	130	19
591-78-6	2-Hexanone	68	U	1300	68
108-86-1	Bromobenzene	15	U	130	15
74-97-5	Bromochloromethane	18	U	130	18
106-43-4	4-Chlorotoluene	11	U	130	11
99-87-6	4-Isopropyltoluene	16	U	130	16
67-64-1	Acetone	680	U	1300	680
71-43-2	Benzene	16	U	130	16
75-25-2	Bromoform	95	U	130	95
74-83-9	Bromomethane	53	U	130	53
75-15-0	Carbon disulfide	35	U	130	35
56-23-5	Carbon tetrachloride	33	U	130	33
108-90-7	Chlorobenzene	18	U	130	18
75-00-3	Chloroethane	100	U	130	100
67-66-3	Chloroform	16	U	130	16

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW157A-020519 | Lab Sample ID: 240-107706-4

Matrix: Water | Lab File ID: UXC8746.D

Analysis Method: 8260C | Date Collected: 02/05/2019 12:55

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:56

Soil Aliquot Vol: | Dilution Factor: 125

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	25	U	130	25
156-59-2	cis-1,2-Dichloroethene	330		130	20
10061-01-5	cis-1,3-Dichloropropene	76	U	130	76
87-68-3	Hexachlorobutadiene	100	U	130	100
74-95-3	Dibromomethane	11	U	130	11
75-27-4	Bromodichloromethane	21	U	130	21
75-71-8	Dichlorodifluoromethane	44	U	130	44
100-41-4	Ethylbenzene	14	U	130	14
106-93-4	1,2-Dibromoethane	15	U	130	15
108-20-3	Diisopropyl ether	21	U	1300	21
91-20-3	Naphthalene	40	U	130	40
104-51-8	n-Butylbenzene	18	U	130	18
98-82-8	Isopropylbenzene	11	U	130	11
103-65-1	N-Propylbenzene	19	U	130	19
78-93-3	2-Butanone (MEK)	150	U	1300	150
108-10-1	4-Methyl-2-pentanone (MIBK)	53	U	1300	53
135-98-8	sec-Butylbenzene	16	U	130	16
1634-04-4	Methyl tert-butyl ether	8.8	U	130	8.8
994-05-8	Tert-amyl methyl ether	14	U	630	14
75-09-2	Methylene Chloride	330	U	630	330
100-42-5	Styrene	13	U	130	13
637-92-3	Ethyl tert-butyl ether	19	U	630	19
98-06-6	tert-Butylbenzene	18	U	130	18
127-18-4	Tetrachloroethene	19	U	130	19
108-88-3	Toluene	18	U	130	18
156-60-5	trans-1,2-Dichloroethene	24	U	130	24
10061-02-6	trans-1,3-Dichloropropene	84	U	130	84
79-01-6	Trichloroethene	2600		130	13
75-69-4	Trichlorofluoromethane	56	U	130	56
108-05-4	Vinyl acetate	24	U	250	24
75-01-4	Vinyl chloride	25	U	130	25
75-65-0	tert-Butyl alcohol	210	U	6300	210
1330-20-7	Xylenes, Total	19	U	250	19
124-48-1	Chlorodibromomethane	49	U	130	49

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW157A-020519 | Lab Sample ID: 240-107706-4

Matrix: Water | Lab File ID: UXC8746.D

Analysis Method: 8260C | Date Collected: 02/05/2019 12:55

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:56

Soil Aliquot Vol: | Dilution Factor: 125

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-121
460-00-4	4-Bromofluorobenzene (Surr)	86		59-120
2037-26-5	Toluene-d8 (Surr)	92		70-123
1868-53-7	Dibromofluoromethane (Surr)	93		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW159A-020519 | Lab Sample ID: 240-107706-3

Matrix: Water | Lab File ID: UXC8745.D

Analysis Method: 8260C | Date Collected: 02/05/2019 10:14

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW159A-020519 | Lab Sample ID: 240-107706-3

Matrix: Water | Lab File ID: UXC8745.D

Analysis Method: 8260C | Date Collected: 02/05/2019 10:14

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.17	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW159A-020519 | Lab Sample ID: 240-107706-3

Matrix: Water | Lab File ID: UXC8745.D

Analysis Method: 8260C | Date Collected: 02/05/2019 10:14

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		70-121
460-00-4	4-Bromofluorobenzene (Surr)	80		59-120
2037-26-5	Toluene-d8 (Surr)	87		70-123
1868-53-7	Dibromofluoromethane (Surr)	86		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: TB-020519 | Lab Sample ID: 240-107706-1

Matrix: Water | Lab File ID: UXC8743.D

Analysis Method: 8260C | Date Collected: 02/05/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 15:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: TB-020519 | Lab Sample ID: 240-107706-1

Matrix: Water | Lab File ID: UXC8743.D

Analysis Method: 8260C | Date Collected: 02/05/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 15:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: TB-020519 | Lab Sample ID: 240-107706-1

Matrix: Water | Lab File ID: UXC8743.D

Analysis Method: 8260C | Date Collected: 02/05/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 15:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		70-121
460-00-4	4-Bromofluorobenzene (Surr)	84		59-120
2037-26-5	Toluene-d8 (Surr)	89		70-123
1868-53-7	Dibromofluoromethane (Surr)	89		75-128

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW155A-020519 | Lab Sample ID: 240-107706-2

Matrix: Water | Lab File ID: xb2513.D

Analysis Method: 680 | Date Collected: 02/05/2019 09:00

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1007.9(mL) | Date Analyzed: 02/25/2019 16:56

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559536 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.099	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.069	U	0.50	0.069
25512-42-9	Dichlorobiphenyl	0.0054	U	0.099	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0064	U	0.099	0.0064

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	35		25-113

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW157A-020519 | Lab Sample ID: 240-107706-4

Matrix: Water | Lab File ID: xb2709.D

Analysis Method: 680 | Date Collected: 02/05/2019 12:55

Extract. Method: 680 | Date Extracted: 02/26/2019 13:54

Sample wt/vol: 777.5(mL) | Date Analyzed: 02/27/2019 17:46

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559821 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.039	U	0.39	0.039
26601-64-9	Hexachlorobiphenyl	0.019	U	0.26	0.019
53742-07-7	Nonachlorobiphenyl	0.063	U	0.64	0.063
55722-26-4	Octachlorobiphenyl	0.049	U	0.39	0.049
27323-18-8	Monochlorobiphenyl	0.0072	U	0.13	0.0072
2051-24-3	DCB Decachlorobiphenyl	0.090	U	0.64	0.090
25512-42-9	Dichlorobiphenyl	0.0069	U	0.13	0.0069
25429-29-2	Pentachlorobiphenyl	0.018	U	0.26	0.018
26914-33-0	Tetrachlorobiphenyl	0.017	U	0.26	0.017
25323-68-6	Trichlorobiphenyl	0.0084	U	0.13	0.0084

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW159A-020519 | Lab Sample ID: 240-107706-3

Matrix: Water | Lab File ID: xb2041.D

Analysis Method: 680 | Date Collected: 02/05/2019 10:14

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1021.7(mL) | Date Analyzed: 02/21/2019 11:58

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.029	U	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.048	U	0.49	0.048
55722-26-4	Octachlorobiphenyl	0.037	U	0.29	0.037
27323-18-8	Monochlorobiphenyl	0.0055	U	0.098	0.0055
2051-24-3	DCB Decachlorobiphenyl	0.069	U	0.49	0.069
25512-42-9	Dichlorobiphenyl	0.0053	U	0.098	0.0053
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0064	U	0.098	0.0064

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	47		25-113

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW155A-020519 Lab Sample ID: 240-107706-2

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 09:00

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	140	200	26	ug/L	J		1	6010C
7439-96-5	Manganese	15	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	77	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	44	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.64	1.0	0.31	ug/L	J		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	0.49	1.0	0.19	ug/L	J		1	6020A
7440-47-3	Chromium	1.4	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	35	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	140	100	47	ug/L			1	6020A
7439-96-5	Manganese	17	5.0	2.1	ug/L		B	1	6020A
7440-02-0	Nickel	2.2	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	24	20	15	ug/L			1	6020A
7440-70-2	Calcium	60000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	1600	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	14000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	100000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW157A-020519 Lab Sample ID: 240-107706-4

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 12:55

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	370	200	26	ug/L			1	6010C
7439-96-5	Manganese	96	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	310	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	62	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.31	1.0	0.31	ug/L	U		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	5.1	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	1.3	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	13	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	360	100	47	ug/L			1	6020A
7439-96-5	Manganese	96	5.0	2.1	ug/L		B	1	6020A
7440-02-0	Nickel	9.4	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.49	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	2.1	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	29	20	15	ug/L			1	6020A
7440-70-2	Calcium	32000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	21000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	5900	1000	200	ug/L			1	6020A
7440-23-5	Sodium	16000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW159A-020519 Lab Sample ID: 240-107706-3

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 10:14

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	430	200	26	ug/L			1	6010C
7439-96-5	Manganese	150	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	150	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	60	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.94	1.0	0.31	ug/L	J		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	5.6	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	0.98	2.0	0.98	ug/L	U		1	6020A
7440-50-8	Copper	4.7	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	380	100	47	ug/L			1	6020A
7439-96-5	Manganese	140	5.0	2.1	ug/L		B	1	6020A
7440-02-0	Nickel	2.5	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	1.8	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	1.1	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	15	20	15	ug/L	U		1	6020A
7440-70-2	Calcium	130000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	12000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	32000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	7900	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW155A-020519 Lab Sample ID: 240-107706-2

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 09:00

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	250	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	150	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	550	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.14	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	34	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW155A-020519 Lab Sample ID: 240-107706-2

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 09:00

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.40	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW155A-020519 Lab Sample ID: 240-107706-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 09:00

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW157A-020519 Lab Sample ID: 240-107706-4

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 12:55

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	130	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	94	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	240	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	68	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW157A-020519 Lab Sample ID: 240-107706-4

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 12:55

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.35	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW157A-020519 Lab Sample ID: 240-107706-4

Lab Name: TestAmerica Pittsburgh Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 12:55

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW159A-020519 Lab Sample ID: 240-107706-3

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 10:14

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	540	25	12	mg/L			1	2340C-2011
	Alkalinity	210	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	660	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	190	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW159A-020519 Lab Sample ID: 240-107706-3

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 10:14

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.23	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW159A-020519 Lab Sample ID: 240-107706-3

Lab Name: TestAmerica Pittsburgh Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 10:14

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

APPENDIX C

SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass Discharge

Report Number: 240-107706-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The PCB by 680 and NO2/NO3 analysis were performed at TestAmerica Nashville Laboratory. The Specific Conductance and Salinity analysis were performed at TestAmerica Pittsburgh Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 2/6/2019 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-020519 (240-107706-1), MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/08/2019.

Sample MRC-MW157A-020519 (240-107706-4)[125X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 367370 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TB-020519 (240-107706-1), MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following samples were received in hydrochloric acid preserved vials: TB-020519 (240-107706-1), MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The samples were prepared on 02/19/2019 and 02/26/2019 and analyzed on 02/21/2019, 02/25/2019 and 02/27/2019.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batches 680-558728 and 680-559624.

The SOP for the 680 Method allows that for soils the CCVIS has a limit of <30%D for each analyte and for liquids <20%D for each analyte . It also allows that the capping CCV for soils has the limit of <30% average %D with no analyte >60%D and for liquids <20% average D with no analyte >40%D. Due to software limitations for this method, the limits are set at <20%D. (CCV 680-559059/21)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/07/2019 and analyzed on 02/08/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 02/07/2019 and analyzed on 02/08/2019.

Manganese was detected in method blank MB 240-367176/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 02/11/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 02/08/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 02/08/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for anions in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 02/08/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for Salinity in accordance with SM 2520B. The samples were analyzed on 02/19/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE
Samples MRC-MW155A-020519 (240-107706-2), MRC-MW159A-020519 (240-107706-3) and MRC-MW157A-020519 (240-107706-4) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 02/17/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107706-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
680	Liquid-Liquid Extraction (Separatory Funnel)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107706-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107706-1	TB-020519	Water	02/05/19 00:00	02/06/19 09:50
240-107706-2	MRC-MW155A-020519	Water	02/05/19 09:00	02/06/19 09:40
240-107706-3	MRC-MW159A-020519	Water	02/05/19 10:14	02/06/19 09:40
240-107706-4	MRC-MW157A-020519	Water	02/05/19 12:55	02/06/19 09:40

2.8/2.8

North Canton
4101 Shuffel Street, N. W.

North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

Baltimore
Chain of Custody Record #201

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Mike Martin	Site Contact: Walt Pryor	Date: 2/5/19	COC No:
20251 Century Blvd, Suite 200	**Analysis Turnaround Time**			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) _____			
(301) 528-3021 Phone	TAT if different from Below: **STANDARD TAT**			SDG No.
(301) 528-3000 FAX	☐ 2 weeks			
Project Name: MRC BLOCK E/F MASS DISCHARGE	☐ 1 week Standard			
Site: MRC BLOCK E	☐ 2 days			
PO # 112IC08784	☐ 1 day			Sampler: Walt Pryor

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (SW0846 8260C)	Total Metals/Hardness (6020A, 2340C)	Sulfate, Nitrates, TDS (9056A, 4500-NO3E, 2540C)	Bromide (300)	Iron and Manganese (6010C)	Alkalinity (SM 2320B)	Salinity (2520B)	PCBs (680)	Sample Specific Notes:
TB- 020519	2/5/19	–	GRAB	WATER	2		x	–	–	–	–	–	–	–	
MRC-MW155A-020519	↓	0900	↓	↓	11		3	1	1	1	1	1	1	2	
MRC-MW159A-020519	↓	1014	↓	↓	11		3	1	1	1	1	1	1	2	
MRC-MW152A-020519	↓	1255	↓	↓	11		3	1	1	1	1	1	1	2	
							2	4	6	1	4	1	1	1	

240-107706 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☒ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☒ *Disposal By Lab* ☐ *Archive For _____ Months*

Special Instructions/QC Requirements & Comments: Block E/F Mass discharge well sampling

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt P	TA INC	2/5/19 1530	[signature]	2/5/19 1530	
[signature]		2/5/19 1530	[signature]	TA	2-6-19 0940

Form No. CA-C-WI-002, Rev. 2, dated 03/06/2012

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 107706
Canton Facility

Client TA Site Name _____ Cooler unpacked by: Ryan Cribley

Cooler Received on 2-6-19 Opened on 2-6-19 0940

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam (Plastic Bag) None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 2.8 °C Corrected Cooler Temp. 2.8 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered (Yes) No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW155A-020519	240-107706-F-2	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW155A-020519	240-107706-G-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW155A-020519	240-107706-I-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW159A-020519	240-107706-F-3	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW159A-020519	240-107706-G-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW159A-020519	240-107706-I-3	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW157A-020519	240-107706-F-4	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW157A-020519	240-107706-G-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW157A-020519	240-107706-I-4	Plastic 500ml - with Nitric Acid	<2	_____	_____

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-020519	240-107706-1	89	94	89	84
MRC-MW155A-020519	240-107706-2	87	92	88	83
MRC-MW159A-020519	240-107706-3	86	91	87	80
MRC-MW157A-020519	240-107706-4	93	97	92	86
	MB 240-367370/6	85	89	85	82
	LCS 240-367370/4	94	88	89	88

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab File ID: UXC8740.D Lab Sample ID: MB 240-367370/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/08/2019 14:45

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367370/4	UXC8736.D	02/08/2019 13:17
TB-020519	240-107706-1	UXC8743.D	02/08/2019 15:50
MRC-MW155A-020519	240-107706-2	UXC8744.D	02/08/2019 16:12
MRC-MW159A-020519	240-107706-3	UXC8745.D	02/08/2019 16:34
MRC-MW157A-020519	240-107706-4	UXC8746.D	02/08/2019 16:56

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367370/6

Matrix: Water | Lab File ID: UXC8740.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367370/6

Matrix: Water | Lab File ID: UXC8740.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367370/6

Matrix: Water | Lab File ID: UXC8740.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		70-121
460-00-4	4-Bromofluorobenzene (Surr)	82		59-120
2037-26-5	Toluene-d8 (Surr)	85		70-123
1868-53-7	Dibromofluoromethane (Surr)	85		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8736.D

Lab ID: LCS 240-367370/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.17	92	80-124	
1,1,1-Trichloroethane	10.0	10.8	108	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.21	82	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	10.2	102	50-156	
1,1-Dichloroethane	10.0	10.5	105	75-133	
1,1-Dichloroethene	10.0	9.19	92	65-139	
1,1-Dichloropropene	10.0	10.1	101	78-126	
1,2,3-Trichlorobenzene	10.0	8.78	88	39-138	
1,2,3-Trichloropropane	10.0	8.35	84	66-139	
1,2,4-Trichlorobenzene	10.0	8.64	86	42-133	
1,2,4-Trimethylbenzene	10.0	9.51	95	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.73	57	46-132	
1,2-Dichlorobenzene	10.0	9.69	97	78-120	
1,2-Dichloroethane	10.0	10.1	101	71-135	
1,2-Dichloropropane	10.0	10.1	101	78-133	
1,3-Dichlorobenzene	10.0	9.51	95	78-120	
1,3-Dichloropropane	10.0	9.13	91	72-134	
1,4-Dichlorobenzene	10.0	9.55	95	78-120	
2,2-Dichloropropane	10.0	10.4	104	42-150	
2-Chloroethyl vinyl ether	10.0	7.38 J	74	55-137	
2-Chlorotoluene	10.0	9.72	97	78-123	
2-Hexanone	20.0	14.3	72	43-148	
Bromobenzene	10.0	9.58	96	74-129	
Bromochloromethane	10.0	10.6	106	74-130	
4-Chlorotoluene	10.0	9.42	94	77-125	
4-Isopropyltoluene	10.0	9.69	97	69-122	
Acetone	20.0	19.0	95	21-162	
Benzene	10.0	10.5	105	80-123	
Bromoform	10.0	6.23	62	49-141	
Bromomethane	10.0	8.36	84	41-175	
Carbon disulfide	10.0	8.25	83	60-138	
Carbon tetrachloride	10.0	9.80	98	63-140	
Chlorobenzene	10.0	9.81	98	80-121	
Chloroethane	10.0	8.53	85	33-173	
Chloroform	10.0	10.4	104	79-127	
Chloromethane	10.0	8.12	81	54-143	
cis-1,2-Dichloroethene	10.0	10.5	105	76-128	
cis-1,3-Dichloropropene	10.0	8.99	90	64-132	
Hexachlorobutadiene	10.0	8.65	86	38-136	
Dibromomethane	10.0	9.44	94	74-124	
Bromodichloromethane	10.0	9.01	90	77-125	
Dichlorodifluoromethane	10.0	7.28	73	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8736.D

Lab ID: LCS 240-367370/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.91	99	80-120	
1,2-Dibromoethane	10.0	8.62	86	77-123	
Naphthalene	10.0	7.16	72	28-141	
m-Xylene & p-Xylene	10.0	9.78	98	80-120	
n-Butylbenzene	10.0	9.13	91	57-126	
Isopropylbenzene	10.0	10.1	101	74-120	
N-Propylbenzene	10.0	9.47	95	77-123	
2-Butanone (MEK)	20.0	17.1	85	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	15.2	76	49-143	
sec-Butylbenzene	10.0	9.51	95	68-123	
Methyl tert-butyl ether	10.0	8.59	86	51-133	
Methylene Chloride	10.0	9.56	96	70-134	
o-Xylene	10.0	10.1	101	80-120	
Styrene	10.0	9.27	93	79-120	
tert-Butylbenzene	10.0	9.14	91	70-121	
Tetrachloroethene	10.0	10.2	102	74-130	
Toluene	10.0	9.99	100	78-129	
trans-1,2-Dichloroethene	10.0	10.8	108	78-133	
trans-1,3-Dichloropropene	10.0	7.58	76	55-128	
Trichloroethene	10.0	10.3	103	76-125	
Trichlorofluoromethane	10.0	9.81	98	51-164	
Vinyl acetate	10.0	8.23	82	45-151	
Vinyl chloride	10.0	9.17	92	58-143	
tert-Butyl alcohol	100	72.4	72	10-161	
Xylenes, Total	20.0	19.9	99	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	47729 2392918	112693	296202	593761	1222220	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	58046 2319242	119628	276149	585358	1207742	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	57558 2025909	104647	261470	574312	1027051	1.00 40.0	2.00	5.00	10.0	20.0
Butadiene	FB	Ave	71088 2665435	148568	361713	698736	1378009	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	47411 1506749	100403	198900	423055	791041	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	40558 1406432	82718	182320	372694	733356	1.00 40.0	2.00	5.00	10.0	20.0
Dichlorofluoromethane	FB	Ave	103682 3477509	201291	471934	910063	1834172	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	68568 3407867	157640	408598	855986	1703371	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	44605 1653914	87432	212667	419544	869536	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	32229 1148055	55282	144856	290454	603583	5.00 200	10.0	25.0	50.0	100
1,1-Dichloroethene	FB	Ave	57094 2182381	120279	277159	516876	1125076	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichlorotrifluoroethane	FB	Ave	42550 1880984	91700	228498	462285	967763	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Lin1	17181 332724	23252	50751	89168	190030	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	93588 3255913	156089	446819	909454	1760595	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	160687 5174431	283969	742305	1445567	2744114	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	27003 1418141	58477	154763	317161	716236	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	79740 3067156	150240	380996	723073	1550490	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	154915 2032773	198393	338417	580808	1097865	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	36240 1508945	82343	184510	328142	832907	10.0 400	20.0	50.0	100	200
Acrylonitrile	FB	Ave	175156 7643188	352291	868795	1699336	3768272	10.0 400	20.0	50.0	100	200
Methyl tert-butyl ether	FB	Ave	139955 6078083	285516	714788	1439491	3075308	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,2-Dichloroethene	FB	Ave	54736 2072831	103155	251570	500088	1069131	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	10725 455555	22194	51427	104918	230317	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	81126 3448011	166930	409730	832192	1773410	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	88027 4206187	177639	476538	992089	2098831	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	57035 2264494	116480	278759	565374	1189038	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	11684 445323	21907	58586	120845	241048	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone (MEK)	FB	Ave	12505 511818	24387	59681	120010	256717	2.00 80.0	4.00	10.0	20.0	40.0
Bromochloromethane	FB	Ave	28543 1150919	56716	140018	275468	595090	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	31985 1272086	62314	150812	279158	634219	2.00 80.0	4.00	10.0	20.0	40.0
Chloroform	FB	Ave	83929 3460990	169874	422474	847597	1793716	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	63803 2533663	130349	334136	689229	1356966	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	68915 3105972	144320	368473	742256	1592895	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	66437 2816568	140972	343617	688186	1474449	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	56945 2706723	124489	318843	648774	1385341	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	31904 1496664	73133	177736	322275	821992	25.0 1000	50.0	125	250	500
Benzene	FB	Ave	207184 8390558	412777	1016161	2024145	4352726	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	68031 2877185	142414	350758	707702	1492475	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	8801 415529	19095	48491	101813	218160	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	59121 2403531	120531	296310	593061	1274454	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	60130 2723193	127322	326169	654672	1428283	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	43707 1981074	97800	239856	483376	1020861	1.00 40.0	2.00	5.00	10.0	20.0
Dibromomethane	FB	Ave	31111 1256838	65366	157375	317664	664429	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Ave	5185 326819	14227	39232	71764	183906	20.0 800	40.0	100	200	400
Bromodichloromethane	FB	Ave	57382 2704273	121869	306036	637533	1409597	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	61442 2796269	123378	319533	640886	1383920	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Ave	62099 3274371	138202	356486	746312	1652896	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	98299 4186633	187250	495239	970866	2114735	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBNZ d5	Ave	209687 9034071	428381	1080197	2172974	4691174	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	57707 3169409	125256	333930	706531	1578892	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBNZ d5	Ave	61421 2869285	129112	316654	647349	1421429	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBNZ d5	Ave	41853 1840913	87521	218933	437245	940456	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBNZ d5	Ave	44889 1992562	95990	241473	482895	1049416	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBNZ d5	Ave	72217 3294456	153833	378264	779324	1663194	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBNZ d5	Ave	58616 2937075	135481	337296	666112	1487023	2.00 80.0	4.00	10.0	20.0	40.0
Chlorodibromomethane	CBNZ d5	Ave	36977 2200067	82891	222991	469828	1084488	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBNZ d5	Ave	45295 1979685	91132	237763	469490	999728	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBNZ d5	Ave	138107 6035718	286159	714138	1441533	3072375	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	46702 2220799	95060	253355	522591	1113186	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBNZ d5	Ave	73699 3208633	146696	374569	758362	1624425	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBNZ d5	Ave	168049 7830315	351787	872988	1818169	3890600	1.00 40.0	2.00	5.00	10.0	20.0
o-Xylene	CBNZ d5	Ave	88147 3825283	176986	449671	918350	1968397	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBNZ d5	Ave	137740 6714209	289260	754758	1550959	3394736	1.00 40.0	2.00	5.00	10.0	20.0
Bromoform	CBNZ d5	Lin1	19867 1639155	51580	138461	306750	770158	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBNZ d5	Ave	198841 9246149	416807	1070139	2200366	4695119	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	54865 2441270	112833	283791	577712	1238040	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCBd 4	Ave	63640 2849353	131876	330598	678570	1450127	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCBd 4	Ave	18846 848462	40526	99350	201010	423192	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	3277 574750	16039	23872	66363	276245	1.00 40.0	2.00	5.00	10.0	20.0
N-Propylbenzene	DCBd 4	Ave	54874 2529942	117423	290505	601438	1274023	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCBd 4	Ave	53702 2322347	107735	275264	555062	1188057	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	160683 7300680	332591	840604	1766210	3784392	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCBd 4	Ave	170473 7526400	356628	881245	1798133	3844885	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCBd 4	Ave	141080 6973779	300630	749194	1551899	3285832	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	169136 7660047	359918	876431	1848645	3917785	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCBd 4	Ave	173094 7876504	373619	937713	1935865	4155710	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	113176 4738373	229119	572540	1168047	2462678	1.00 40.0	2.00	5.00	10.0	20.0
4-Isopropyltoluene	DCBd 4	Ave	154318 7046098	334169	830781	1751242	3739399	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCBd 4	Ave	119243 4936571	241629	582208	1199185	2527274	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
n-Butylbenzene	DCBd 4	Ave	127428 5435677	263153	659506	1384405	2918965	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCBd 4	Ave	109056 4571601	224899	556492	1159176	2381785	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	10572 585195	24334	65389	138143	306515	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	73453 2553990	145803	356465	739836	1510157	1.00 40.0	2.00	5.00	10.0	20.0
Hexachlorobutadiene	DCBd 4	Ave	41867 1091039	78276	175613	359850	696597	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCBd 4	Ave	172653 6820199	348942	926474	1891386	3879317	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	65430 2286670	131338	324635	663704	1364016	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	41840 1806247	80448	225163	447792	947952	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	55383 2257190	106482	288691	573781	1190875	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBNZ d5	Ave	174193 7359833	333303	912990	1816996	3883966	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	60446 2700470	120695	328418	649263	1374232	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Acetone	5.5						50					
Methylene Chloride	5.1						50					
Bromoform	19.5						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Ave	43776 1719436	78140	216790	375778	846508	10.0 400	20.0	50.0	100	200
Diisopropyl ether	FB	Ave	43843 1750827	82274	218424	423417	889067	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloro-1,3-butadiene	FB	Ave	78005 3085189	151016	379041	729996	1534644	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl tert-butyl ether	FB	Ave	140382 5753247	273366	703226	1363608	2849689	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl acetate	FB	Ave	90776 3822356	173055	465746	871063	1885113	2.00 80.0	4.00	10.0	20.0	40.0
Propionitrile	FB	Ave	60838 2683433	120712	346296	618722	1307620	10.0 400	20.0	50.0	100	200
Methacrylonitrile	FB	Ave	299007 13192364	589937	1557675	3048167	6587251	10.0 400	20.0	50.0	100	200
Tert-amyl methyl ether	FB	Ave	139226 5803487	265089	690261	1376169	2893429	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Ave	27517 1141061	53519	142999	252385	538091	25.0 1000	50.0	125	250	500
Ethyl acrylate	FB	Ave	55889 2595809	111797	311313	570379	1269397	1.00 40.0	2.00	5.00	10.0	20.0
Methyl methacrylate	FB	Ave	82902 3746376	164974	443947	839432	1854426	2.00 80.0	4.00	10.0	20.0	40.0
2-Nitropropane	FB	Ave	24091 1187179	51098	135714	254301	578091	2.00 80.0	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Ave	62560 3081411	130855	371884	688240	1496211	1.00 40.0	2.00	5.00	10.0	20.0
1-Chlorohexane	CBNZ d5	Ave	56623 2299838	112915	287030	522245	1142204	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexanone	DCBd 4	Lin1	18061 496922	26838	72655	115834	240064	10.0 400	20.0	50.0	100	200
Pentachloroethane	CBNZ d5	Ave	49671 2629484	105733	282130	577976	1287207	2.00 80.0	4.00	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCBd 4	Ave	159891 7509792	343441	887789	1750222	3743187	1.00 40.0	2.00	5.00	10.0	20.0
Benzyl chloride	DCBd 4	Ave	18125 1117019	36545	113409	234360	534799	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	70436 2856330	145613	362674	730581	1512196	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCBd 4	Ave	146578 6396329	332448	834898	1722729	3597249	2.00 80.0	4.00	10.0	20.0	40.0
1-Chloro-1-fluoroethane TIC	FB	None	38810 1466901	1184	184959	389588	796152	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
None = No Calib Curve

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Cyclohexanone	4.9						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab File ID: BFB0208.D BFB Injection Date: 02/08/2019

Instrument ID: A3UX15 BFB Injection Time: 12:12

Analysis Batch No.: 367370

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.8	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	100.8	
175	5.0 - 9.0 % of mass 174	6.6	(6.5) 1
176	95.0 - 101.0 % of mass 174	99.3	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.1	(6.1) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367370/2	UXC8735.D	02/08/2019	12:55
	LCS 240-367370/4	UXC8736.D	02/08/2019	13:17
	CCV 240-367370/3	UXC8737.D	02/08/2019	13:39
	MB 240-367370/6	UXC8740.D	02/08/2019	14:45
TB-020519	240-107706-1	UXC8743.D	02/08/2019	15:50
MRC-MW155A-020519	240-107706-2	UXC8744.D	02/08/2019	16:12
MRC-MW159A-020519	240-107706-3	UXC8745.D	02/08/2019	16:34
MRC-MW157A-020519	240-107706-4	UXC8746.D	02/08/2019	16:56

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCVIS 240-367370/2 Calibration Date: 02/08/2019 12:55

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8735.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3194	0.1000	0.0104	0.0100	4.0	20.0
Chloromethane	Ave	0.3135	0.2905	0.1000	0.00927	0.0100	-7.3	20.0
Vinyl chloride	Ave	0.2885	0.3042	0.1000	0.0105	0.0100	5.5	20.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	20.0
Bromomethane	Ave	0.2308	0.2169	0.0500	0.00940	0.0100	-6.0	20.0
Chloroethane	Ave	0.2041	0.1953	0.0500	0.00957	0.0100	-4.3	20.0
Dichlorofluoromethane	Ave	0.5102	0.4818		0.00944	0.0100	-5.6	20.0
Trichlorofluoromethane	Ave	0.4337	0.4764	0.1000	0.0110	0.0100	9.9	20.0
Ethyl ether	Ave	0.2310	0.2244		0.00971	0.0100	-2.9	20.0
Acrolein	Ave	0.0317	0.0364		0.0575	0.0500	14.9	50.0
1,1-Dichloroethene	Ave	0.3005	0.2918	0.1000	0.00971	0.0100	-2.9	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2537	0.0500	0.0103	0.0100	2.8	20.0
Acetone	Lin1		0.0226	0.0100	0.0186	0.0200	-7.1	50.0
Iodomethane	Ave	0.4675	0.4990		0.0107	0.0100	6.7	20.0
Carbon disulfide	Ave	0.7741	0.6903	0.1000	0.00892	0.0100	-10.8	20.0
3-Chloro-1-propene	Ave	0.1698	0.1713		0.0101	0.0100	0.9	20.0
Methyl acetate	Ave	0.2050	0.1764	0.1000	0.0172	0.0200	-14.0	20.0
Methylene Chloride	Lin1		0.3159	0.1000	0.0102	0.0100	2.5	50.0
tert-Butyl alcohol	Ave	0.0203	0.0166		0.0819	0.100	-18.1	50.0
Acrylonitrile	Ave	0.0962	0.0873		0.0907	0.100	-9.3	20.0
Methyl tert-butyl ether	Ave	0.7834	0.7001	0.1000	0.00894	0.0100	-10.6	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.3041	0.1000	0.0109	0.0100	8.8	20.0
Hexane	Ave	0.0586	0.0589		0.0100	0.0100	0.4	20.0
1,1-Dichloroethane	Ave	0.4517	0.4927	0.2000	0.0109	0.0100	9.1	20.0
Vinyl acetate	Ave	0.5198	0.3775		0.00726	0.0100	-27.4	50.0
2,2-Dichloropropane	Ave	0.0624	0.0684		0.0110	0.0100	9.7	20.0
2-Butanone (MEK)	Ave	0.0333	0.0273	0.0100	0.0164	0.0200	-18.0	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3454	0.1000	0.0112	0.0100	12.2	20.0
Bromochloromethane	Ave	0.1531	0.1636		0.0107	0.0100	6.9	20.0
Tetrahydrofuran	Ave	0.0828	0.0671		0.0162	0.0200	-18.9	20.0
Chloroform	Ave	0.4606	0.5082	0.2000	0.0110	0.0100	10.3	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3911	0.1000	0.0110	0.0100	10.3	20.0
Cyclohexane	Ave	0.3993	0.4126	0.1000	0.0103	0.0100	3.3	20.0
1,1-Dichloropropene	Ave	0.3748	0.3983		0.0106	0.0100	6.3	20.0
Carbon tetrachloride	Ave	0.3441	0.3477	0.1000	0.0101	0.0100	1.1	20.0
Isobutyl alcohol	Ave	0.0077	0.0064		0.208	0.250	-16.9	20.0
Benzene	Ave	1.116	1.233	0.5000	0.0110	0.0100	10.5	20.0
1,2-Dichloroethane	Ave	0.3820	0.3936	0.1000	0.0103	0.0100	3.0	20.0
n-Heptane	Ave	0.0532	0.0494		0.00928	0.0100	-7.2	20.0
Trichloroethene	Ave	0.3240	0.3645	0.1500	0.0112	0.0100	12.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCVIS 240-367370/2 Calibration Date: 02/08/2019 12:55

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8735.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3636	0.1000	0.0103	0.0100	3.2	20.0
1,2-Dichloropropane	Ave	0.2590	0.2663	0.1000	0.0103	0.0100	2.8	20.0
1,4-Dioxane	Ave	0.0020	0.0024		0.244	0.200	22.2	50.0
Dibromomethane	Ave	0.1717	0.1647		0.00959	0.0100	-4.1	20.0
Bromodichloromethane	Ave	0.3410	0.3312	0.1500	0.00971	0.0100	-2.9	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1324		0.0152	0.0200	-24.1*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3663	0.1500	0.00929	0.0100	-7.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2024	0.0500	0.0151	0.0200	-24.4*	20.0
Toluene	Ave	1.476	1.516	0.4000	0.0103	0.0100	2.7	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3705	0.1000	0.00798	0.0100	-20.2*	20.0
Ethyl methacrylate	Ave	0.4442	0.3497		0.00787	0.0100	-21.3*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2764	0.1000	0.00927	0.0100	-7.3	20.0
Tetrachloroethene	Ave	0.3268	0.3439	0.1500	0.0105	0.0100	5.2	20.0
1,3-Dichloropropane	Ave	0.5243	0.4843		0.00924	0.0100	-7.6	20.0
2-Hexanone	Ave	0.2283	0.1700	0.0500	0.0149	0.0200	-25.5*	20.0
Chlorodibromomethane	Ave	0.3116	0.2744		0.00881	0.0100	-11.9	20.0
1,2-Dibromoethane	Ave	0.3191	0.2759		0.00865	0.0100	-13.5	20.0
Chlorobenzene	Ave	0.9777	1.001	0.3000	0.0102	0.0100	2.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3362		0.00974	0.0100	-2.6	20.0
Ethylbenzene	Ave	0.5145	0.5207		0.0101	0.0100	1.2	20.0
m-Xylene & p-Xylene	Ave	1.221	1.236		0.0101	0.0100	1.2	20.0
o-Xylene	Ave	0.6189	0.6449		0.0104	0.0100	4.2	20.0
Styrene	Ave	1.036	1.065	0.3000	0.0103	0.0100	2.8	20.0
Bromoform	Lin1		0.1666	0.1000	0.00718	0.0100	-28.2*	20.0
Isopropylbenzene	Ave	1.463	1.541	0.1000	0.0105	0.0100	5.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5642	0.3000	0.00796	0.0100	-20.4*	20.0
Bromobenzene	Ave	0.8274	0.8129		0.00982	0.0100	-1.8	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2011		0.00815	0.0100	-18.5	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.1211		0.0119	0.0100	19.5	20.0
N-Propylbenzene	Ave	0.7286	0.7102		0.00975	0.0100	-2.5	20.0
2-Chlorotoluene	Ave	0.6821	0.6719		0.00985	0.0100	-1.5	20.0
1,3,5-Trimethylbenzene	Ave	2.119	2.073		0.00978	0.0100	-2.2	20.0
4-Chlorotoluene	Ave	2.205	2.114		0.00959	0.0100	-4.1	20.0
tert-Butylbenzene	Ave	1.897	1.770		0.00933	0.0100	-6.7	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.225		0.00999	0.0100	-0.1	20.0
sec-Butylbenzene	Ave	2.327	2.217		0.00953	0.0100	-4.7	20.0
1,3-Dichlorobenzene	Ave	1.425	1.407	0.6000	0.00988	0.0100	-1.2	20.0
4-Isopropyltoluene	Ave	2.083	2.024		0.00972	0.0100	-2.8	20.0
1,4-Dichlorobenzene	Ave	1.477	1.455	0.5000	0.00985	0.0100	-1.5	20.0
n-Butylbenzene	Ave	1.649	1.548		0.00939	0.0100	-6.1	20.0
1,2-Dichlorobenzene	Ave	1.387	1.375	0.4000	0.00992	0.0100	-0.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCVIS 240-367370/2 Calibration Date: 02/08/2019 12:55

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8735.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0938	0.0500	0.00582	0.0100	-41.8	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7725	0.2000	0.00879	0.0100	-12.1	50.0
Hexachlorobutadiene	Ave	0.4386	0.3567		0.00813	0.0100	-18.7	20.0
Naphthalene	Ave	2.209	1.532		0.00694	0.0100	-30.6	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6880		0.00871	0.0100	-12.9	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2260		0.00761	0.00797	-4.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2747		0.00720	0.00797	-9.7	20.0
Toluene-d8 (Surr)	Ave	1.214	1.098		0.00721	0.00797	-9.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3929		0.00721	0.00797	-9.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCV 240-367370/3 Calibration Date: 02/08/2019 13:39

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8737.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0288		0.125	0.100	24.8*	20.0
Diisopropyl ether	Ave	0.2405	0.2487		0.0103	0.0100	3.4	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4165		0.00983	0.0100	-1.7	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6880		0.00882	0.0100	-11.8	20.0
Ethyl acetate	Ave	0.2538	0.2069		0.0163	0.0200	-18.5	50.0
Propionitrile	Ave	0.0357	0.0342		0.0958	0.100	-4.2	20.0
Methacrylonitrile	Ave	0.1733	0.1557		0.0898	0.100	-10.2	20.0
Tert-amyl methyl ether	Ave	0.7765	0.6043		0.00778	0.0100	-22.2*	20.0
n-Butanol	Ave	0.0061	0.0038		0.156	0.250	-37.7*	20.0
Ethyl acrylate	Ave	0.3330	0.2516		0.00755	0.0100	-24.5*	20.0
Methyl methacrylate	Ave	0.2430	0.1957		0.0161	0.0200	-19.5	20.0
2-Nitropropane	Ave	0.0745	0.0303		0.00814	0.0200	-59.3*	20.0
n-Butyl acetate	Ave	0.3918	0.2938		0.00750	0.0100	-25.0*	20.0
1-Chlorohexane	Ave	0.3968	0.3306		0.00833	0.0100	-16.7	20.0
Cyclohexanone	Lin1		0.0113		0.0690	0.100	-31.0*	20.0
Pentachloroethane	Ave	0.2034	0.1799		0.0177	0.0200	-11.6	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.229		0.00970	0.0100	-3.0	20.0
Benzyl chloride	Ave	0.2963	0.1422		0.00480	0.0100	-52.0*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9064		0.00958	0.0100	-4.2	20.0
2-Methylnaphthalene	Ave	1.076	0.7065		0.0131	0.0200	-34.3*	20.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-367370/2		1771075	5.20	1445689	7.88	859854	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Sample No.: CCVIS 240-367370/2 Date Analyzed: 02/08/2019 12:55

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8735.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1771075	5.20	1445689	7.88	859854	10.12
UPPER LIMIT		3542150	5.70	2891378	8.38	1719708	10.62
LOWER LIMIT		885538	4.70	722845	7.38	429927	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367370/4		1859981	5.20	1523524	7.88	880859	10.12
CCV 240-367370/3		1723888	5.20	1390828	7.88	755414	10.12
MB 240-367370/6		1756530	5.20	1437868	7.88	809655	10.12
240-107706-1	TB-020519	1745781	5.20	1437450	7.88	793753	10.12
240-107706-2	MRC-MW155A-020519	1739716	5.20	1452316	7.88	804599	10.12
240-107706-3	MRC-MW159A-020519	1791125	5.20	1454708	7.88	800696	10.12
240-107706-4	MRC-MW157A-020519	1675267	5.20	1320006	7.88	762108	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

SAMPLE IDENTIFICATION	MRC-MW155A-020519	
COMPOUND	Trichloroethene	
COMPOUND AREA	8653	
INTERNAL STANDARD AMOUNT (ug)	10	
DILUTION FACTOR	1	
INTERNAL STANDARD AREA	1739716	
AVERAGE RRF	0.324	
8653 x 10 / 1739716 x 0.324	0.1535	ug/L
0.153512355599746 x 1	0.15	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW155A-020519 | Lab Sample ID: 240-107706-2

Matrix: Water | Lab File ID: UXC8744.D

Analysis Method: 8260C | Date Collected: 02/05/2019 09:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW155A-020519 | Lab Sample ID: 240-107706-2

Matrix: Water | Lab File ID: UXC8744.D

Analysis Method: 8260C | Date Collected: 02/05/2019 09:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 16:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.15	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Client Sample ID: MRC-MW155A-020519 Lab Sample ID: 240-107706-2

Matrix: Water Lab File ID: UXC8744.D

Analysis Method: 8260C Date Collected: 02/05/2019 09:00

Sample wt/vol: 5(mL) Date Analyzed: 02/08/2019 16:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367370 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	88		70-123
1868-53-7	Dibromofluoromethane (Surr)	87		75-128

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX15\20190208-84351.b\UXC8744.D
Lims ID: 240-107706-A-2
Client ID: MRC-MW155A-020519
Sample Type: Client
Inject. Date: 08-Feb-2019 16:12:30 ALS Bottle#: 10 Worklist Smp#: 35
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0084351-035
Misc. Info.: C90208A,8260LLUX15,,43582
Operator ID: Instrument ID: A3UX15

Method: \\chromna\Canton\ChromData\A3UX15\20190208-84351.b\8260_15.m
Limit Group: MSV 8260C ICAL
Last Update: 11-Feb-2019 08:55:13 Calib Date: 21-Jan-2019 19:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX15\20190121-83824.b\UXC8431.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0321

First Level Reviewer: evansle Date: 11-Feb-2019 08:43:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.196	5.196	0.000	99	1739716	10.0	
* 2 Chlorobenzene-d5	117	7.876	7.876	0.000	84	1452316	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.117	10.117	0.000	93	804599	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.639	4.639	0.001	95	284445	6.91	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.923	4.923	0.000	100	389562	7.36	
$ 6 Toluene-d8 (Surr)	98	6.560	6.560	0.000	93	1232014	6.99	
$ 7 4-Bromofluorobenzene (Surr	95	8.991	8.979	0.012	96	417969	6.63	
9 Dichlorodifluoromethane	85		1.532				ND	
10 Chloromethane	50		1.686				ND	
11 Vinyl chloride	62		1.781				ND	
13 Bromomethane	94		2.065				ND	
14 Chloroethane	64		2.148				ND	
16 Trichlorofluoromethane	101		2.362				ND	
19 1,1-Dichloroethene	96		2.777				ND	
20 1,1,2-Trichloro-1,2,2-trif	151		2.789				ND	
22 Acetone	58	2.824	2.824	0.000	98	12636	0.9627	
24 Carbon disulfide	76		2.978				ND	
28 Methylene Chloride	84		3.180				ND	
29 2-Methyl-2-propanol	59		3.263				ND	
31 Methyl tert-butyl ether	73		3.405				ND	
30 trans-1,2-Dichloroethene	96		3.405				ND	
34 1,1-Dichloroethane	63		3.761				ND	
36 Vinyl acetate	43		3.785				ND	
35 Isopropyl ether	87		3.796				ND	
38 Tert-butyl ethyl ether	59		4.093				ND	
41 2-Butanone (MEK)	72		4.247				ND	
40 2,2-Dichloropropane	97		4.247				ND	
39 cis-1,2-Dichloroethene	96		4.247				ND	
45 Chlorobromomethane	128		4.449				ND	
47 Chloroform	83		4.496				ND	
48 1,1,1-Trichloroethane	97		4.662				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 1,1-Dichloropropene	75		4.793				ND	
50 Carbon tetrachloride	117		4.805				ND	
53 Benzene	78		4.971				ND	
54 1,2-Dichloroethane	62		4.982				ND	
55 Tert-amyl methyl ether	73		5.042				ND	
58 Trichloroethene	130	5.504	5.504	0.000	89	8653	0.1535	
61 1,2-Dichloropropane	63		5.706				ND	
63 Dibromomethane	93		5.812				ND	
65 Dichlorobromomethane	83		5.931				ND	
67 2-Chloroethyl vinyl ether	63		6.180				ND	
68 cis-1,3-Dichloropropene	75		6.322				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.453				ND	
70 Toluene	91		6.619				ND	
71 trans-1,3-Dichloropropene	75		6.809				ND	
74 Tetrachloroethene	164		7.117				ND	
75 1,3-Dichloropropane	76		7.129				ND	
76 2-Hexanone	43		7.188				ND	
79 Chlorodibromomethane	129		7.342				ND	
80 Ethylene Dibromide	107		7.461				ND	
82 Chlorobenzene	112		7.900				ND	
83 1,1,1,2-Tetrachloroethane	131		7.971				ND	
84 Ethylbenzene	106		7.994				ND	
85 m-Xylene & p-Xylene	91		8.101				ND	
86 o-Xylene	106		8.481				ND	
87 Styrene	104		8.493				ND	
88 Bromoform	173		8.682				ND	
89 Isopropylbenzene	105		8.825				ND	
93 1,1,2,2-Tetrachloroethane	83		9.121				ND	
92 Bromobenzene	156		9.145				ND	
94 1,2,3-Trichloropropane	110		9.168				ND	
96 N-Propylbenzene	120		9.228				ND	
97 2-Chlorotoluene	126		9.323				ND	
99 4-Chlorotoluene	91		9.417				ND	
101 tert-Butylbenzene	119		9.714				ND	
103 1,2,4-Trimethylbenzene	105		9.761				ND	
105 sec-Butylbenzene	105		9.927				ND	
106 1,3-Dichlorobenzene	146		10.046				ND	
107 4-Isopropyltoluene	119		10.070				ND	
108 1,4-Dichlorobenzene	146		10.141				ND	
109 1,2,3-Trimethylbenzene	105		10.176				ND	
111 n-Butylbenzene	91		10.473				ND	
112 1,2-Dichlorobenzene	146		10.508				ND	
113 1,2-Dibromo-3-Chloropropan	157		11.291				ND	
115 1,2,4-Trichlorobenzene	180		12.109				ND	
116 Hexachlorobutadiene	225		12.275				ND	
117 Naphthalene	128		12.358				ND	
118 1,2,3-Trichlorobenzene	180		12.607				ND	
S 129 Xylenes, Total	106		16.530				ND	

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107706-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

Method 680

Polychlorinated Biphenyls (PCBs) (GC/MS) by Method 680

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13CDCB #
MRC-MW155A-020519	240-107706-2	35
MRC-MW159A-020519	240-107706-3	47
MRC-MW157A-020519	240-107706-4	71
	MB 680-558728/12-A	71
	MB 680-559624/3-A	65
	LCS 680-558728/13-A	75
	LCS 680-559624/4-A	82
	LCSD 680-558728/14-A	68
	LCSD 680-559624/5-A	85

	QC LIMITS
13CDCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab File ID: xb2031.D Lab Sample ID: MB 680-558728/12-A

Matrix: Water Date Extracted: 02/19/2019 13:42

Instrument ID: CMSX Date Analyzed: 02/21/2019 07:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-558728/13-A	xb2032.D	02/21/2019 07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019 08:10
MRC-MW159A-020519	240-107706-3	xb2041.D	02/21/2019 11:58
MRC-MW155A-020519	240-107706-2	xb2513.D	02/25/2019 16:56

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107706-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-558728/12-A

Matrix: Water | Lab File ID: xb2031.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2032.D

Lab ID: LCS 680-558728/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.67	78	62-130	
Hexachlorobiphenyl	4.00	3.37	84	62-130	
Nonachlorobiphenyl	10.0	14.6	146	70-195	
Octachlorobiphenyl	6.00	5.09	85	64-130	
Monochlorobiphenyl	2.00	1.08	54	42-130	
DCB Decachlorobiphenyl	10.0	7.81	78	59-130	
Dichlorobiphenyl	2.00	1.32	66	49-130	
Pentachlorobiphenyl	4.00	3.47	87	63-130	
Tetrachlorobiphenyl	4.00	2.93	73	54-130	
Trichlorobiphenyl	2.00	1.47	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2033.D

Lab ID: LCSD 680-558728/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.45	74	5	40	62-130	
Hexachlorobiphenyl	4.00	3.21	80	5	40	62-130	
Nonachlorobiphenyl	10.0	13.2	132	10	40	70-195	
Octachlorobiphenyl	6.00	4.75	79	7	40	64-130	
Monochlorobiphenyl	2.00	1.36	68	23	40	42-130	
DCB Decachlorobiphenyl	10.0	7.14	71	9	40	59-130	
Dichlorobiphenyl	2.00	1.47	73	11	40	49-130	
Pentachlorobiphenyl	4.00	3.33	83	4	40	63-130	
Tetrachlorobiphenyl	4.00	3.04	76	4	40	54-130	
Trichlorobiphenyl	2.00	1.52	76	3	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab File ID: xb2706.D Lab Sample ID: MB 680-559624/3-A

Matrix: Water Date Extracted: 02/26/2019 13:54

Instrument ID: CMSX Date Analyzed: 02/27/2019 16:20

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-559624/4-A	xb2707.D	02/27/2019 16:49
	LCSD 680-559624/5-A	xb2708.D	02/27/2019 17:18
MRC-MW157A-020519	240-107706-4	xb2709.D	02/27/2019 17:46

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107706-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-559624/3-A

Matrix: Water | Lab File ID: xb2706.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/26/2019 13:54

Sample wt/vol: 1000(mL) | Date Analyzed: 02/27/2019 16:20

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559821 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	65		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2707.D

Lab ID: LCS 680-559624/4-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.59	77	62-130	
Hexachlorobiphenyl	4.00	3.25	81	62-130	
Nonachlorobiphenyl	10.0	15.2	152	70-195	
Octachlorobiphenyl	6.00	4.98	83	64-130	
Monochlorobiphenyl	2.00	1.29	65	42-130	
DCB Decachlorobiphenyl	10.0	8.61	86	59-130	
Dichlorobiphenyl	2.00	1.41	70	49-130	
Pentachlorobiphenyl	4.00	3.26	81	63-130	
Tetrachlorobiphenyl	4.00	2.94	74	54-130	
Trichlorobiphenyl	2.00	1.46	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2708.D

Lab ID: LCSD 680-559624/5-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.93	82	7	40	62-130	
Hexachlorobiphenyl	4.00	3.53	88	8	40	62-130	
Nonachlorobiphenyl	10.0	16.1	161	6	40	70-195	
Octachlorobiphenyl	6.00	5.33	89	7	40	64-130	
Monochlorobiphenyl	2.00	1.43	71	10	40	42-130	
DCB Decachlorobiphenyl	10.0	9.10	91	5	40	59-130	
Dichlorobiphenyl	2.00	1.56	78	10	40	49-130	
Pentachlorobiphenyl	4.00	3.51	88	7	40	63-130	
Tetrachlorobiphenyl	4.00	3.25	81	10	40	54-130	
Trichlorobiphenyl	2.00	1.59	79	9	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab File ID: xa0805.D DFTPP Injection Date: 01/08/2019

Instrument ID: CMSX DFTPP Injection Time: 14:10

Analysis Batch No.: 554469

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.9
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	25.1
365	Greater than 1% of mass 198	3.8
441	Present but less than mass 443	13.7 (87.5) 2
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	15.6 (18.3) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-554469/3	xa0807.D	01/08/2019	15:11
	IC 680-554469/5	xa0809.D	01/08/2019	16:08
	IC 680-554469/6	xa0810.D	01/08/2019	16:37
	IC 680-554469/27	xa0850.D	01/08/2019	17:05
	IC 680-554469/7	xa0811.D	01/08/2019	17:34
	IC 680-554469/8	xa0812.D	01/08/2019	18:02
	ICV 680-554469/9	xa0813.D	01/08/2019	18:31

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107706-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 240-107706-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Monochlorobiphenyl	CRY	Ave	8242 813481	15382	70279	157619	299489	0.0500 5.00	0.100	0.500	1.00	2.00
Dichlorobiphenyl	CRY	Ave	5634 599778	10649	48537	112170	214973	0.0500 5.00	0.100	0.500	1.00	2.00
Trichlorobiphenyl	CRY	Ave	3987 441580	7502	35031	81047	154555	0.0500 5.00	0.100	0.500	1.00	2.00
Tetrachlorobiphenyl	CRY	Ave	5574 615833	10606	50081	113059	216849	0.100 10.0	0.200	1.00	2.00	4.00
Pentachlorobiphenyl	CRY	Ave	4430 525344	8255	40050	94602	179296	0.100 10.0	0.200	1.00	2.00	4.00
Hexachlorobiphenyl	CRY	Ave	4409 515192	8063	39570	95892	180616	0.100 10.0	0.200	1.00	2.00	4.00
Heptachlorobiphenyl	CRY	Ave	8087 711849	13173	54642	129695	247124	0.150 15.0	0.300	1.50	3.00	6.00
Octachlorobiphenyl	CRY	Ave	5679 662783	10462	52287	120191	235791	0.150 15.0	0.300	1.50	3.00	6.00
Nonachlorobiphenyl	CRY	Ave				55196					5.00	
DCB Decachlorobiphenyl	CRY	Ave	1830 243534	3384	17538	42007	81970	0.250 25.0	0.500	2.50	5.00	10.0
Decachlorobiphenyl-13C12	CRY	Ave	2369 234805	4106	24902	55313	103476	0.250 20.0	0.500	2.50	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 680-554469/9 Calibration Date: 01/08/2019 18:31

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xa0813.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8517		1.03	1.00	2.6	20.0
Dichlorobiphenyl	Ave	0.5847	0.5801		0.992	1.00	-0.8	20.0
Trichlorobiphenyl	Ave	0.4198	0.4573		1.09	1.00	8.9	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.3118		2.11	2.00	5.6	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2531		2.11	2.00	5.5	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2508		2.10	2.00	5.2	20.0
Heptachlorobiphenyl	Ave	0.2376	0.2274		2.87	3.00	-4.3	20.0
Octachlorobiphenyl	Ave	0.2054	0.2183		3.19	3.00	6.3	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0419		5.00	5.00	-0.0	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0577		5.35	5.00	7.1	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab File ID: xb2028.D DFTPP Injection Date: 02/21/2019

Instrument ID: CMSX DFTPP Injection Time: 05:43

Analysis Batch No.: 559059

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	59.5
197	Less than 1 % of mass 198	0.9
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	28.0
365	Greater than 1% of mass 198	3.5
441	Present but less than mass 443	15.1 (86.3) 2
442	Greater than 40% of mass 198	96.2
443	17 - 23% of mass 442	17.5 (18.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559059/2	xb2029.D	02/21/2019	06:14
	CCVIS 680-559059/3	xb2030.D	02/21/2019	06:44
	MB 680-558728/12-A	xb2031.D	02/21/2019	07:13
	LCS 680-558728/13-A	xb2032.D	02/21/2019	07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019	08:10
MRC-MW159A-020519	240-107706-3	xb2041.D	02/21/2019	11:58
	CCV 680-559059/21	xb2051.D	02/21/2019	16:43

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCVIS 680-559059/3 Calibration Date: 02/21/2019 06:44

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2030.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.7268		0.875	1.00	-12.5	20.0
Dichlorobiphenyl	Ave	0.5847	0.5079		0.869	1.00	-13.1	20.0
Trichlorobiphenyl	Ave	0.4198	0.3597		0.857	1.00	-14.3	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2563		1.74	2.00	-13.2	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2131		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2136		1.79	2.00	-10.4	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1920		2.42	3.00	-19.2	20.0
Octachlorobiphenyl	Ave	0.2054	0.1725		2.52	3.00	-16.0	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0343		4.08	5.00	-18.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0462		4.29	5.00	-14.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCV 680-559059/21 Calibration Date: 02/21/2019 16:43

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2051.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8070		0.972	1.00	-2.8	20.0
Dichlorobiphenyl	Ave	0.5847	0.5601		0.958	1.00	-4.2	20.0
Trichlorobiphenyl	Ave	0.4198	0.4000		0.953	1.00	-4.7	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2879		1.95	2.00	-2.4	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2300		1.92	2.00	-4.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2246		1.88	2.00	-5.8	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1938		2.45	3.00	-18.4	20.0
Octachlorobiphenyl	Ave	0.2054	0.1765		2.58	3.00	-14.1	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0315		3.75	5.00	-25.0*	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0422		3.92	5.00	-21.6*	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab File ID: xb2502.D DFTPP Injection Date: 02/25/2019

Instrument ID: CMSX DFTPP Injection Time: 11:57

Analysis Batch No.: 559536

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	57.2
197	Less than 1 % of mass 198	0.6
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	7.2
275	10 - 30% of mass 198	25.4
365	Greater than 1% of mass 198	3.9
441	Present but less than mass 443	12.6 (74.1) 2
442	Greater than 40% of mass 198	85.2
443	17 - 23% of mass 442	17.0 (20.0) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559536/2	xb2503.D	02/25/2019	12:28
	ICISAV 680-559536/3	xb2504.D	02/25/2019	13:07
	IC 680-559536/4	xb2507.D	02/25/2019	14:04
	IC 680-559536/8	xb2508.D	02/25/2019	14:33
	IC 680-559536/9	xb2509.D	02/25/2019	15:02
	IC 680-559536/10	xb2510.D	02/25/2019	15:30
	IC 680-559536/11	xb2511.D	02/25/2019	15:59
	ICV 680-559536/12	xb2512.D	02/25/2019	16:27
MRC-MW155A-020519	240-107706-2	xb2513.D	02/25/2019	16:56
	CCV 680-559536/7	xb2515.D	02/25/2019	17:53

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107706-1 Analy Batch No.: 559536

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/25/2019 13:07 Calibration End Date: 02/25/2019 15:59 Calibration ID: 63879

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-559536/11	xb2511.D
Level 2	IC 680-559536/10	xb2510.D
Level 3	IC 680-559536/9	xb2509.D
Level 4	ICISAV 680-559536/3	xb2504.D
Level 5	IC 680-559536/8	xb2508.D
Level 6	IC 680-559536/4	xb2507.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.7768 0.8303	0.7679	0.7192	0.7084	0.8005	Ave		0.7672				6.1		20.0			
Dichlorobiphenyl	0.5231 0.6057	0.5247	0.4982	0.4848	0.5644	Ave		0.5335				8.4		20.0			
Trichlorobiphenyl	0.3701 0.4389	0.3719	0.3515	0.3760	0.4066	Ave		0.3858				8.2		20.0			
PCB-104				0.3059		Ave		0.3059						30.0			
Tetrachlorobiphenyl	0.2496 0.3004	0.2491	0.2474	0.2506	0.2786	Ave		0.2626				8.4		20.0			
Pentachlorobiphenyl	0.1904 0.2506	0.1911	0.1944	0.1975	0.2274	Ave		0.2085				11.9		20.0			
PCB-77				0.4052		Ave		0.4052						30.0			
Hexachlorobiphenyl	0.1811 0.2345	0.1804	0.1856	0.1913	0.2198	Ave		0.1988				11.5		20.0			
Heptachlorobiphenyl	0.2199 0.2149	0.1886	0.1711	0.1710	0.1962	Ave		0.1936				10.8		20.0			
Octachlorobiphenyl	0.1586 0.1992	0.1499	0.1557	0.1606	0.1806	Ave		0.1674				11.2		20.0			
PCB-208				0.0538		Ave		0.0538						30.0			
DCB Decachlorobiphenyl	0.0264 0.0421	0.0261	0.0293	0.0289	0.0338	Ave		0.0311				19.5		20.0			
Decachlorobiphenyl-13C12	0.0369 0.0537	0.0343	0.0421	0.0410	0.0451	Ave		0.0422				16.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 240-107706-1 Analy Batch No.: 559536

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/25/2019 13:07 Calibration End Date: 02/25/2019 15:59 Calibration ID: 63879

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-559536/11	xb2511.D
Level 2	IC 680-559536/10	xb2510.D
Level 3	IC 680-559536/9	xb2509.D
Level 4	ICISAV 680-559536/3	xb2504.D
Level 5	IC 680-559536/8	xb2508.D
Level 6	IC 680-559536/4	xb2507.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Monochlorobiphenyl	CRY	Ave	7419 831971	15897	77564	157105	335414	0.0500 5.00	0.100	0.500	1.00	2.00
Dichlorobiphenyl	CRY	Ave	4996 606979	10862	53734	107521	236477	0.0500 5.00	0.100	0.500	1.00	2.00
Trichlorobiphenyl	CRY	Ave	3535 439760	7698	37905	83389	170369	0.0500 5.00	0.100	0.500	1.00	2.00
PCB-104	CRY	Ave				135693					2.00	
Tetrachlorobiphenyl	CRY	Ave	4767 601944	10313	53368	111139	233496	0.100 10.0	0.200	1.00	2.00	4.00
Pentachlorobiphenyl	CRY	Ave	3637 502135	7911	41923	87585	190549	0.100 10.0	0.200	1.00	2.00	4.00
PCB-77	CRY	Ave				179738					2.00	
Hexachlorobiphenyl	CRY	Ave	3459 469969	7470	40027	84870	184183	0.100 10.0	0.200	1.00	2.00	4.00
Heptachlorobiphenyl	CRY	Ave	6300 646151	11710	55348	113769	246590	0.150 15.0	0.300	1.50	3.00	6.00
Octachlorobiphenyl	CRY	Ave	4543 598796	9312	50383	106848	226947	0.150 15.0	0.300	1.50	3.00	6.00
PCB-208	CRY	Ave				47750					4.00	
DCB Decachlorobiphenyl	CRY	Ave	1260 210942	2698	15783	32060	70810	0.250 25.0	0.500	2.50	5.00	10.0
Decachlorobiphenyl-13C12	CRY	Ave	1762 215192	3550	22714	45456	94422	0.250 20.0	0.500	2.50	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 680-559536/12 Calibration Date: 02/25/2019 16:27

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2512.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nonachlorobiphenyl	Ave	0.0526	0.0562		7.22	4.00	6.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICV 680-559536/12 Calibration Date: 02/25/2019 16:27

Instrument ID: CMSX Calib Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 02/25/2019 15:59

Lab File ID: xb2512.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.7672	0.7447		0.971	1.00	-2.9	20.0
Dichlorobiphenyl	Ave	0.5335	0.5015		0.940	1.00	-6.0	20.0
Trichlorobiphenyl	Ave	0.3858	0.3920		1.02	1.00	1.6	20.0
Tetrachlorobiphenyl	Ave	0.2626	0.2641		2.01	2.00	0.6	20.0
Pentachlorobiphenyl	Ave	0.2085	0.2083		2.00	2.00	-0.1	20.0
Hexachlorobiphenyl	Ave	0.1988	0.1999		2.01	2.00	0.6	20.0
Heptachlorobiphenyl	Ave	0.1936	0.1805		2.80	3.00	-6.8	20.0
Octachlorobiphenyl	Ave	0.1674	0.1674		3.00	3.00	-0.0	20.0
DCB Decachlorobiphenyl	Ave	0.0311	0.0310		4.98	5.00	-0.3	20.0
Decachlorobiphenyl-13C12	Ave	0.0422	0.0433		5.13	5.00	2.6	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCV 680-559536/7 Calibration Date: 02/25/2019 17:53

Instrument ID: CMSX Calib Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 02/25/2019 15:59

Lab File ID: xb2515.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.7672	0.6514		0.849	1.00	-15.1	20.0
Dichlorobiphenyl	Ave	0.5335	0.4435		0.831	1.00	-16.9	20.0
Trichlorobiphenyl	Ave	0.3858	0.3522		0.913	1.00	-8.7	20.0
Tetrachlorobiphenyl	Ave	0.2626	0.2346		1.79	2.00	-10.7	20.0
Pentachlorobiphenyl	Ave	0.2085	0.1851		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.1988	0.1774		1.78	2.00	-10.8	20.0
Heptachlorobiphenyl	Ave	0.1936	0.1620		2.51	3.00	-16.3	20.0
Octachlorobiphenyl	Ave	0.1674	0.1519		2.72	3.00	-9.3	20.0
DCB Decachlorobiphenyl	Ave	0.0311	0.0288		4.63	5.00	-7.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0422	0.0401		4.75	5.00	-5.0	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab File ID: xb2702.D DFTPP Injection Date: 02/27/2019

Instrument ID: CMSX DFTPP Injection Time: 14:22

Analysis Batch No.: 559821

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	58.6
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.1
275	10 - 30% of mass 198	25.6
365	Greater than 1% of mass 198	3.1
441	Present but less than mass 443	14.7 (90.3) 2
442	Greater than 40% of mass 198	87.5
443	17 - 23% of mass 442	16.3 (18.6) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559821/2	xb2703.D	02/27/2019	14:53
	CCVIS 680-559821/3	xb2704.D	02/27/2019	15:23
	MB 680-559624/3-A	xb2706.D	02/27/2019	16:20
	LCS 680-559624/4-A	xb2707.D	02/27/2019	16:49
	LCSD 680-559624/5-A	xb2708.D	02/27/2019	17:18
MRC-MW157A-020519	240-107706-4	xb2709.D	02/27/2019	17:46
	CCV 680-559821/13	xb2714.D	02/27/2019	20:09

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCVIS 680-559821/3 Calibration Date: 02/27/2019 15:23

Instrument ID: CMSX Calib Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 02/25/2019 15:59

Lab File ID: xb2704.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.7672	0.6938		0.904	1.00	-9.6	20.0
Dichlorobiphenyl	Ave	0.5335	0.4921		0.922	1.00	-7.8	20.0
Trichlorobiphenyl	Ave	0.3858	0.3486		0.904	1.00	-9.6	20.0
Tetrachlorobiphenyl	Ave	0.2626	0.2434		1.85	2.00	-7.3	20.0
Pentachlorobiphenyl	Ave	0.2085	0.1957		1.88	2.00	-6.2	20.0
Hexachlorobiphenyl	Ave	0.1988	0.1943		1.95	2.00	-2.3	20.0
Heptachlorobiphenyl	Ave	0.1936	0.1723		2.67	3.00	-11.0	20.0
Octachlorobiphenyl	Ave	0.1674	0.1579		2.83	3.00	-5.7	20.0
DCB Decachlorobiphenyl	Ave	0.0311	0.0305		4.91	5.00	-1.8	20.0
Decachlorobiphenyl-13C12	Ave	0.0422	0.0407		4.83	5.00	-3.4	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Lab Sample ID: CCV 680-559821/13 Calibration Date: 02/27/2019 20:09

Instrument ID: CMSX Calib Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 02/25/2019 15:59

Lab File ID: xb2714.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.7672	0.6740		0.879	1.00	-12.1	20.0
Dichlorobiphenyl	Ave	0.5335	0.4750		0.890	1.00	-11.0	20.0
Trichlorobiphenyl	Ave	0.3858	0.3417		0.886	1.00	-11.4	20.0
Tetrachlorobiphenyl	Ave	0.2626	0.2363		1.80	2.00	-10.0	20.0
Pentachlorobiphenyl	Ave	0.2085	0.1929		1.85	2.00	-7.5	20.0
Hexachlorobiphenyl	Ave	0.1988	0.1864		1.87	2.00	-6.3	20.0
Heptachlorobiphenyl	Ave	0.1936	0.1675		2.60	3.00	-13.5	20.0
Octachlorobiphenyl	Ave	0.1674	0.1554		2.79	3.00	-7.2	20.0
DCB Decachlorobiphenyl	Ave	0.0311	0.0303		4.87	5.00	-2.6	20.0
Decachlorobiphenyl-13C12	Ave	0.0422	0.0403		4.78	5.00	-4.5	20.0

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Sample No.: CCVIS 680-559059/3 Date Analyzed: 02/21/2019 06:44

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2030.D Heated Purge: (Y/N) N

Calibration ID: 63054

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		170892	12.41	169663	18.67		
UPPER LIMIT		222160	12.91	220562	19.17		
LOWER LIMIT		119624	11.91	118764	18.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-558728/12-A		143915	12.41	132159	18.67		
LCS 680-558728/13-A		164188	12.41	171582	18.67		
LCSD 680-558728/14-A		179669	12.41	188862	18.67		
240-107706-3	MRC-MW159A-020519	186609	12.41	188056	18.67		
CCV 680-559059/21		159076	12.41	142687	18.67		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Instrument ID: CMSX Calibration Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calibration End Date: 02/25/2019 15:59

Calibration ID: 63879

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		161613	12.38	155674	18.63		
UPPER LIMIT		242420	12.88	233511	19.13		
LOWER LIMIT		80807	11.88	77837	18.13		
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 680-559536/12		159287	12.38	149107	18.63		
240-107706-2	MRC-MW155A-020519	145532	12.38	157221	18.63		
CCV 680-559536/7		180140	12.38	185267	18.63		
CCVIS 680-559821/3		174833	12.38	172131	18.63		
MB 680-559624/3-A		157619	12.38	166079	18.63		
LCS 680-559624/4-A		189494	12.38	201227	18.63		
LCSD 680-559624/5-A		142733	12.38	147833	18.63		
240-107706-4	MRC-MW157A-020519	158071	12.38	159192	18.63		
CCV 680-559821/13		174038	12.38	179097	18.63		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107706-1

SDG No.:

Sample No.: CCVIS 680-559821/3 Date Analyzed: 02/27/2019 15:23

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2704.D Heated Purge: (Y/N) N

Calibration ID: 63879

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		174833	12.38	172131	18.63		
UPPER LIMIT		227283	12.88	223770	19.13		
LOWER LIMIT		122383	11.88	120492	18.13		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-559624/3-A		157619	12.38	166079	18.63		
LCS 680-559624/4-A		189494	12.38	201227	18.63		
LCSD 680-559624/5-A		142733	12.38	147833	18.63		
240-107706-4	MRC-MW157A-020519	158071	12.38	159192	18.63		
CCV 680-559821/13		174038	12.38	179097	18.63		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

SAMPLE IDENTIFICATION	LCS 680-558728/13-A
COMPOUND	Monochlorobiphenyl
COMPOUND AREA	205079
INTERNAL STANDARD AMOUNT (ng)	0.75
DILUTION FACTOR	1
INTERNAL STANDARD AREA	171582
AVERAGE RRF	0.8305

205079 x 0.75 x 1 / 171582 x 0.8305 = 1.0794 ng/ml

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107706-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 680-558728/13-A

Matrix: Water | Lab File ID: xb2032.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:41

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	4.67		0.30	0.030
26601-64-9	Hexachlorobiphenyl	3.37		0.20	0.015
53742-07-7	Nonachlorobiphenyl	14.6		0.50	0.049
55722-26-4	Octachlorobiphenyl	5.09		0.30	0.038
27323-18-8	Monochlorobiphenyl	1.08		0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	7.81		0.50	0.070
25512-42-9	Dichlorobiphenyl	1.32		0.10	0.0054
25429-29-2	Pentachlorobiphenyl	3.47		0.20	0.014
26914-33-0	Tetrachlorobiphenyl	2.93		0.20	0.013
25323-68-6	Trichlorobiphenyl	1.47		0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	75		25-113

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\xb2032.D
Lims ID: LCS 680-558728/13-A
Client ID:
Sample Type: LCS
Inject. Date: 21-Feb-2019 07:41:30 ALS Bottle#: 26 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: LCS 680-558728/13-A
Misc. Info.: 680-0053932-005
Operator ID: Instrument ID: CMSX

Method: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\680_CMSX.m
Limit Group: 680
Last Update: 22-Feb-2019 09:37:47 Calib Date: 08-Jan-2019 18:02:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Savannah\ChromData\CMSX\20190108-53107.b\xa0812.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: CTX0319

First Level Reviewer: davisn Date: 22-Feb-2019 09:37:47

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/ml	Flags
A 23 Total Monochlorobiphenyls	188	9.762	9.265 - 10.260		0	205079	1.08	
A 24 Total Dichlorobiphenyls	222	11.569	10.603 - 12.535		0	176787	1.32	
* 5 Phenanthrene-d10	188	12.409	12.409	0.0	100	164188	0.7500	
A 25 Total Trichlorobiphenyls	256	13.255	11.910 - 14.600		0	141116	1.47	
A 26 Total Tetrachlorobiphenyls	292	14.773	13.047 - 16.499		0	197767	2.93	
A 27 Total Pentachlorobiphenyls	326	16.192	14.339 - 18.045		0	190369	3.47	
A 28 Total Hexachlorobiphenyls	360	17.480	15.502 - 19.457		0	183545	3.37	
* 15 Chrysene-d12	240	18.669	18.668	0.001	100	171582	0.7500	a
A 29 Total Heptachlorobiphenyls	394	18.749	17.146 - 20.353		0	253613	4.67	
A 30 Total Octachlorobiphenyls	430	19.718	18.642 - 20.795		0	238961	5.09	
A 31 Total Nonachlorobiphenyls	464	20.250	18.500 - 22.000		0	139953	14.6	
19 PCB-208	464	20.286	20.286	0.0	96	140097	0	
$ 22 Decachlorobiphenyl-13C12	510	21.797	21.796	0.001	77	23217	1.88	a
32 DCB Decachlorobiphenyl	498	21.797	21.796	0.001	77	74989	7.81	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

WorkSheet Quantitation Report

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 23 Total Monochlorobiphenyls									
188	9.328	9.265 -	10.260	22	205079	1.08			
190	9.328				66572		2.5- 3.5	3.1	
152	9.328				115591		50.7- 50.7	0.6	
153	9.328				48419		23.2- 23.2	1.4	
A 24 Total Dichlorobiphenyls									
222	11.569	10.603 -	12.535	23	176787	1.32			
224	11.569				113344		1.3- 1.7	1.6	
152	11.554				139546		31.7- 111.7	0.8	
153	11.554				17682		0.0- 49.1	6.4	
186	11.554				16961		0.0- 48.9	6.7	
188	11.569				6120		0.0- 43.3	18.5	
* 5 Phenanthrene-d10									
188	12.409	12.409	0.0	100	164188	0.7500			
189	12.409	12.409	0.0		24329		5.9- 7.5	6.7	
A 25 Total Trichlorobiphenyls									
256	13.087	11.910 -	14.600	95	141116	1.47			
258	13.087				135077		0.8- 1.2	1.0	
186	13.087				95422		26.5- 106.5	1.4	
188	13.087				30921		0.0- 61.5	4.4	
A 26 Total Tetrachlorobiphenyls									
292	13.367	13.047 -	16.499	0	197767	2.93			
290	13.367				154086		1.1- 1.5	1.3	
220	13.353				193028		58.1- 138.1	0.8	
222	13.353				123321		22.9- 102.9	1.2	
A 27 Total Pentachlorobiphenyls									
326	16.249	14.339 -	18.045	91	190369	3.47			
324	16.249				119339		1.4- 1.8	1.6	
254	16.231				142739		41.9- 121.9	0.8	
256	16.249				136737		38.2- 118.2	0.9	
258	16.249				44114		0.0- 65.4	2.7	
A 28 Total Hexachlorobiphenyls									
360	16.439	15.502 -	19.457	59	183545	3.37			
362	16.439				145798		1.0- 1.4	1.3	
288	16.439				111244		61.3- 61.3	1.3	
290	16.439				141842		220.6- 220.6	1.0	
292	16.439				67177		0.0- 0.0	2.2	
* 15 Chrysene-d12									a
240	18.669	18.668	0.001	100	171582	0.7500			a
241	18.669	18.668	0.001		33019		4.3- 5.9	5.2	
A 29 Total Heptachlorobiphenyls									
394	17.217	17.146 -	20.353	97	253613	4.67			
396	17.217				240228		0.8- 1.2	1.1	
322	17.199				110283		48.3- 48.3	2.2	
324	17.199				176673		77.4- 77.4	1.4	

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 30 Total Octachlorobiphenyls									
430	18.859	18.642	-20.795	96	238961	5.09			
428	18.859				217376		0.9- 1.3	1.1	
356	18.842				88632		39.6- 39.6	2.5	
358	18.842				166788		75.2- 75.2	1.3	
360	18.842				132602		59.6- 59.6	1.6	
A 31 Total Nonachlorobiphenyls									
464	20.286	18.500	-22.000	66	139953	14.6			
466	20.286				101255		1.1- 1.5	1.4	
390	20.286				70728		0.0- 0.0	1.4	
392	20.286				152776		0.0- 0.0	0.7	
394	20.286				142469		0.0- 0.0	0.7	
$ 22 Decachlorobiphenyl-13C12									a
510	21.797	21.796	0.001	77	23217	1.88			a
512	21.797	21.796	0.001		17660		0.9- 1.3	1.3	
32 DCB Decachlorobiphenyl									
498	21.797	21.796	0.001	77	74989	7.81			
500	21.797	21.796	0.001		60499		0.9- 1.3	1.2	
424	21.797	21.796	0.001		35328		0.0- 0.0	1.0	
426	21.797	21.796	0.001		86957		0.0- 0.0	1.0	
428	21.797	21.796	0.001		93723		0.0- 0.0	1.0	
430	21.797	21.796	0.001		58374		0.0- 0.0	1.0	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107706-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW155A-020519	240-107706-2
MRC-MW159A-020519	240-107706-3
MRC-MW157A-020519	240-107706-4

Comments:

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-367445/4 02/08/2019 09:42				CCV 240-367445/30 02/08/2019 11:43				CCV 240-367445/42 02/08/2019 12:38			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	13100		12500	105	23900		25000	95	24900		25000	100
Manganese	1530		1500	102	1900		2000	95	1960		2000	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	CCV 240-367445/54 02/08/2019 13:33											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	23700		25000	95								
Manganese	1880		2000	94								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-367445/6 02/08/2019 09:52				CCVL 240-367445/56 02/08/2019 13:42							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	204		200	102	192	J	200	96				
Manganese	12.7	J	15.0	85	12.4	J	15.0	83				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-367464/7 02/08/2019 12:57				CCV 240-367464/97 02/08/2019 16:26				CCV 240-367464/109 02/08/2019 16:54			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	188		200	94	236		250	95	239		250	96
Antimony	38.9		40.0	97	50.8		50.0	102	52.0		50.0	104
Arsenic	38.3		40.0	96	46.0		50.0	92	48.0		50.0	96
Barium	36.1		40.0	90	47.7		50.0	95	49.4		50.0	99
Beryllium	38.1		40.0	95	48.7		50.0	97	50.8		50.0	102
Cadmium	36.4		40.0	91	47.2		50.0	94	48.2		50.0	96
Calcium	18700		20000	94	24400		25000	98	24700		25000	99
Chromium	38.4		40.0	96	49.9		50.0	100	50.4		50.0	101
Cobalt	37.3		40.0	93	46.3		50.0	93	47.8		50.0	96
Copper	38.0		40.0	95	47.0		50.0	94	48.2		50.0	96
Iron	9130		10000	91	11400		12500	92	11700		12500	94
Lead	38.9		40.0	97	48.9		50.0	98	50.1		50.0	100
Magnesium	18800		20000	94	23500		25000	94	24200		25000	97
Manganese	188		200	94	246		250	98	248		250	99
Nickel	38.6		40.0	97	46.1		50.0	92	48.3		50.0	97
Potassium	19300		20000	97	24400		25000	98	24800		25000	99
Selenium	37.9		40.0	95	48.6		50.0	97	50.0		50.0	100
Silver	38.6		40.0	97	50.0		50.0	100	50.5		50.0	101
Sodium	18900		20000	94	23500		25000	94	24100		25000	96
Thallium	38.0		40.0	95	49.0		50.0	98	50.1		50.0	100
Vanadium	37.7		40.0	94	49.9		50.0	100	50.5		50.0	101
Zinc	37.6		40.0	94	46.0		50.0	92	48.2		50.0	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	CCV 240-367464/116 02/08/2019 17:10											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	244		250	97								
Antimony	52.4		50.0	105								
Arsenic	48.1		50.0	96								
Barium	49.7		50.0	99								
Beryllium	47.9		50.0	96								
Cadmium	48.2		50.0	96								
Calcium	24800		25000	99								
Chromium	49.7		50.0	99								
Cobalt	48.7		50.0	97								
Copper	48.7		50.0	97								
Iron	12000		12500	96								
Lead	48.7		50.0	97								
Magnesium	24600		25000	99								
Manganese	248		250	99								
Nickel	48.5		50.0	97								
Potassium	25200		25000	101								
Selenium	48.5		50.0	97								
Silver	50.6		50.0	101								
Sodium	24400		25000	98								
Thallium	48.7		50.0	97								
Vanadium	49.9		50.0	100								
Zinc	48.1		50.0	96								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICV Source: MTMSCRI6020AW_00079 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00079

Analyte	ICVL 240-367464/9 02/08/2019 13:01				CCVL 240-367464/118 02/08/2019 17:15							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	44.4	J	50.0	89	44.2	J	50.0	88				
Antimony	2.00		2.00	100	2.01		2.00	101				
Arsenic	5.00		5.00	100	4.71	J	5.00	94				
Barium	4.82	J	5.00	96	5.06		5.00	101				
Beryllium	0.981	J	1.00	98	1.05		1.00	105				
Cadmium	0.929	J	1.00	93	1.03		1.00	103				
Calcium	939	J	1000	94	948	J	1000	95				
Chromium	1.97	J	2.00	98	1.99	J	2.00	100				
Cobalt	0.944	J	1.00	94	0.967	J	1.00	97				
Copper	1.96	J	2.00	98	2.00		2.00	100				
Iron	97.4	J	100	97	96.9	J	100	97				
Lead	1.03		1.00	103	1.06		1.00	106				
Magnesium	991	J	1000	99	982	J	1000	98				
Manganese	4.57	J	5.00	91	4.81	J	5.00	96				
Nickel	1.90	J	2.00	95	1.59	J	2.00	79				
Potassium	1020		1000	102	1040		1000	104				
Selenium	4.61	J	5.00	92	4.86	J	5.00	97				
Silver	1.00		1.00	100	0.999	J	1.00	100				
Sodium	980	J	1000	98	1020		1000	102				
Thallium	1.01		1.00	101	1.03		1.00	103				
Vanadium	4.80	J	5.00	96	4.78	J	5.00	96				
Zinc	18.2	J	20.0	91	18.2	J	20.0	91				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367445/5 02/08/2019 09:47		CCB 240-367445/31 02/08/2019 11:47		CCB 240-367445/43 02/08/2019 12:43		CCB 240-367445/55 02/08/2019 13:37	
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U	26	U
Manganese	15	2.1	U	2.1	U	2.1	U	2.1	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367464/8 02/08/2019 12:59		CCB 240-367464/98 02/08/2019 16:28		CCB 240-367464/110 02/08/2019 16:56		CCB 240-367464/117 02/08/2019 17:13	
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367176/1-A

Instrument Code: I12 Batch No.: 367445

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	26	U		6010C
7439-96-5	Manganese	2.1	U		6010C

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367176/1-A

Instrument Code: I14 Batch No.: 367464

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	1.7	U		6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	3.66	J		6020A
7440-02-0	Nickel	1.5	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICSA 240-367445/8 Instrument ID: I12

Lab File ID: I12020819A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**181740**	**91**
Manganese		**-1.48**	
Aluminum	*500000*	*490620*	*98*
Antimony		*-0.233*	
Arsenic		*-7.18*	
Barium		*0.0948*	
Beryllium		*0.383*	
Boron		*0.286*	
Cadmium		*0.922*	
Calcium	*500000*	*458860*	*92*
Chromium		*3.15*	
Cobalt		*-4.75*	
Copper		*-0.459*	
Lead		*2.49*	
Lithium		*22.6*	
Magnesium	*500000*	*495590*	*99*
Molybdenum		*-1.28*	
Nickel		*3.61*	
Potassium		*-6.25*	
Selenium		*0.650*	
Silicon		*6.55*	
Silver		*-1.26*	
Sodium		*69.4*	
Strontium		*8.16*	
Thallium		*-3.39*	
Tin		*0.678*	
Titanium		*-1.72*	
Vanadium		*0.444*	
Zinc		*-2.40*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICSAB 240-367445/9 Instrument ID: I12

Lab File ID: I12020819A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Iron	**200000**	**181690**	**91**
Manganese	**500**	**469**	**94**
Aluminum	*500000*	*486790*	*97*
Antimony	*1000*	*982*	*98*
Arsenic	*1000*	*986*	*99*
Barium	*500*	*480*	*96*
Beryllium	*500*	*462*	*92*
Boron	*500*	*501*	*100*
Cadmium	*1000*	*994*	*99*
Calcium	*500000*	*465920*	*93*
Chromium	*500*	*464*	*93*
Cobalt	*500*	*495*	*99*
Copper	*500*	*525*	*105*
Lead	*1000*	*864*	*86*
Lithium	*500*	*529*	*106*
Magnesium	*500000*	*498270*	*100*
Molybdenum	*1000*	*950*	*95*
Nickel	*1000*	*984*	*98*
Potassium	*10000*	*10003*	*100*
Selenium	*1000*	*979*	*98*
Silicon	*10000*	*9631*	*96*
Silver	*1000*	*1078*	*108*
Sodium	*10000*	*10023*	*100*
Strontium	*1500*	*1354*	*90*
Thallium	*1000*	*933*	*93*
Tin	*500*	*500*	*100*
Titanium	*500*	*495*	*99*
Vanadium	*500*	*465*	*93*
Zinc	*1000*	*987*	*99*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICSA 240-367464/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**47785**	**96**
Antimony		**0.0310**	
Arsenic		**0.0730**	
Barium		**0.0280**	
Beryllium		**-0.0060**	
Cadmium		**0.169**	
Calcium	**50000**	**47102**	**94**
Chromium		**0.170**	
Cobalt		**0.0080**	
Copper		**0.118**	
Iron	**50000**	**46913**	**94**
Lead		**0.0370**	
Magnesium	**50000**	**47397**	**95**
Manganese		**0.0170**	
Nickel		**0.0720**	
Potassium	**50000**	**47781**	**96**
Selenium		**0.0690**	
Silver		**0.0100**	
Sodium	**50000**	**47478**	**95**
Thallium		**0.0020**	
Vanadium		**0.118**	
Zinc		**-0.558**	
Boron		*2.42*	
Lithium		*0.107*	
Molybdenum	*1000*	*1063*	*106*
Strontium		*0.432*	
Tin		*-0.194*	
Titanium	*1000*	*988*	*99*
Tungsten		*0.105*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Lab Sample ID: ICSAB 240-367464/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Aluminum	**50000**	**46948**	**94**
Antimony	**100**	**102**	**102**
Arsenic	**100**	**94.9**	**95**
Barium	**100**	**95.6**	**96**
Beryllium	**100**	**95.8**	**96**
Cadmium	**100**	**93.8**	**94**
Calcium	**50000**	**46932**	**94**
Chromium	**100**	**93.7**	**94**
Cobalt	**100**	**93.1**	**93**
Copper	**100**	**92.3**	**92**
Iron	**50000**	**45597**	**91**
Lead	**100**	**96.5**	**97**
Magnesium	**50000**	**46615**	**93**
Manganese	**100**	**94.5**	**94**
Nickel	**100**	**92.7**	**93**
Potassium	**50000**	**46821**	**94**
Selenium	**100**	**97.7**	**98**
Silver	**100**	**98.2**	**98**
Sodium	**50000**	**46352**	**93**
Thallium	**100**	**93.8**	**94**
Vanadium	**100**	**93.7**	**94**
Zinc	**100**	**94.1**	**94**
Boron	*100*	*93.8*	*94*
Lithium	*100*	*99.6*	*100*
Molybdenum	*1100*	*1146*	*104*
Strontium	*100*	*95.4*	*95*
Tin	*100*	*103*	*103*
Titanium	*1100*	*1068*	*97*
Tungsten	*100*	*100*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW155A-020519 MS
Lab ID: 240-107706-2 MS
Lab Name: TestAmerica Canton
Job No.: 240-107706-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Iron	1100		140	J	1000	96	75-125		6010C
Manganese	495		15		500	96	75-125		6010C
Silver	96.2		0.053	U	100	96	75-125		6020A
Aluminum	9590		77		10000	95	75-125		6020A
Arsenic	916		0.75	U	1000	92	75-125		6020A
Barium	966		44		1000	92	75-125		6020A
Beryllium	957		0.64	J	1000	96	75-125		6020A
Cadmium	896		0.21	U	1000	90	75-125		6020A
Cobalt	919		0.49	J	1000	92	75-125		6020A
Chromium	950		1.4	J	1000	95	75-125		6020A
Copper	946		35		1000	91	75-125		6020A
Iron	9130		140		10000	90	75-125		6020A
Manganese	964		17		1000	95	75-125		6020A
Nickel	905		2.2		1000	90	75-125		6020A
Lead	942		0.45	U	1000	94	75-125		6020A
Antimony	96.7		0.57	U	100	97	75-125		6020A
Selenium	941		0.89	U	1000	94	75-125		6020A
Thallium	236		0.20	U	250	95	75-125		6020A
Vanadium	955		0.82	U	1000	96	75-125		6020A
Zinc	929		24		1000	91	75-125		6020A
Calcium	66400		60000		10000	64	75-125	4	6020A
Potassium	11000		1600		10000	93	75-125		6020A
Magnesium	22700		14000		10000	91	75-125		6020A
Sodium	112000		100000		10000	89	75-125	4	6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW155A-020519 MSD | Lab ID: 240-107706-2 MSD

Lab Name: TestAmerica Canton | Job No.: 240-107706-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Iron	1120		1000	98	75-125	2	20		6010C
Manganese	499		500	97	75-125	1	20		6010C
Silver	96.8		100	97	75-125	1	20		6020A
Aluminum	9580		10000	95	75-125	0	20		6020A
Arsenic	913		1000	91	75-125	0	20		6020A
Barium	963		1000	92	75-125	0	20		6020A
Beryllium	963		1000	96	75-125	1	20		6020A
Cadmium	897		1000	90	75-125	0	20		6020A
Cobalt	917		1000	92	75-125	0	20		6020A
Chromium	947		1000	95	75-125	0	20		6020A
Copper	938		1000	90	75-125	1	20		6020A
Iron	9010		10000	89	75-125	1	20		6020A
Manganese	949		1000	93	75-125	2	20		6020A
Nickel	899		1000	90	75-125	1	20		6020A
Lead	960		1000	96	75-125	2	20		6020A
Antimony	97.1		100	97	75-125	0	20		6020A
Selenium	933		1000	93	75-125	1	20		6020A
Thallium	236		250	94	75-125	0	20		6020A
Vanadium	950		1000	95	75-125	1	20		6020A
Zinc	936		1000	91	75-125	1	20		6020A
Calcium	66000		10000	61	75-125	1	20	4	6020A
Potassium	10900		10000	92	75-125	1	20		6020A
Magnesium	22500		10000	90	75-125	1	20		6020A
Sodium	112000		10000	87	75-125	0	20	4	6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367176/2-A

Lab Name: TestAmerica Canton Job No.: 240-107706-1

Sample Matrix: Water LCS Source: MTICP1_00079

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	1020		102	80	120		6010C
Manganese	500	501		100	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367176/3-A

Lab Name: TestAmerica Canton Job No.: 240-107706-1

Sample Matrix: Water LCS Source: MTICPMSB_00037

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	96.9		97	80	120		6020A
Aluminum	10000	9520		95	80	120		6020A
Arsenic	1000	878		88	80	120		6020A
Barium	1000	919		92	80	120		6020A
Beryllium	1000	914		91	80	120		6020A
Cadmium	1000	898		90	80	120		6020A
Cobalt	1000	914		91	80	120		6020A
Chromium	1000	945		95	80	120		6020A
Copper	1000	904		90	80	120		6020A
Iron	10000	8860		89	80	120		6020A
Manganese	1000	973		97	80	120		6020A
Nickel	1000	910		91	80	120		6020A
Lead	1000	964		96	80	120		6020A
Antimony	100	96.1		96	80	120		6020A
Selenium	1000	917		92	80	120		6020A
Thallium	250	238		95	80	120		6020A
Vanadium	1000	941		94	80	120		6020A
Zinc	1000	920		92	80	120		6020A
Calcium	10000	8650		87	80	120		6020A
Potassium	10000	9610		96	80	120		6020A
Magnesium	10000	9320		93	80	120		6020A
Sodium	10000	9320		93	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107706-2

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107706-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Iron	140	J	133	J	NC		6010C
Manganese	15		15.5	J	NC		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107706-2

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107706-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Silver	0.053	U	0.27	U	NC		6020A
Aluminum	77		170	U	NC		6020A
Arsenic	0.75	U	3.8	U	NC		6020A
Barium	44		43.5		NC		6020A
Beryllium	0.64	J	1.5	U	NC		6020A
Cadmium	0.21	U	1.1	U	NC		6020A
Cobalt	0.49	J	0.95	U	NC		6020A
Chromium	1.4	J	4.9	U	NC		6020A
Copper	35		34.4		NC		6020A
Iron	140		240	U	NC		6020A
Manganese	17		17.2	J	NC		6020A
Nickel	2.2		7.4	U	NC		6020A
Lead	0.45	U	2.3	U	NC		6020A
Antimony	0.57	U	2.9	U	NC		6020A
Selenium	0.89	U	4.5	U	NC		6020A
Thallium	0.20	U	1.0	U	NC		6020A
Vanadium	0.82	U	4.1	U	NC		6020A
Zinc	24		75	U	NC		6020A
Calcium	60000		61700		NC		6020A
Potassium	1600		1650	J	NC		6020A
Magnesium	14000		14000		NC		6020A
Sodium	100000		106000		2.8		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG No.:

ICP-AES Instrument ID: I12 Date: 12/21/2018

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	V	
Aluminum										0.034040				0.056989	
Antimony		-0.00006			-0.000422			-0.000035						0.002232	
Arsenic		0.000009			-0.000202	0.00931			-0.0003555	0.00123617					
Beryllium														0.000235	
Cadmium			0.012308					0.000004							
Chromium									0.000415						
Cobalt													0.002128		
Copper				0.000018	0.000361			-0.000032					-0.003157		
Lead		-0.000091					0.00057707	0.000048			0.000131	0.000025			
Lithium				0.000011											
Nickel					0.000518			0.000059							
Selenium		-0.000032							0.000338						
Thallium		0.000034			0.003802			-0.000025	-0.00062023					0.001371	
Vanadium								0.000064							
Zinc						-0.001092									

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107706-1

SDG No.:

Instrument ID: I12 Date: 01/28/2019 12:19

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		15000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107706-1

SDG No.:

Instrument ID: I14 Date: 10/02/2018 11:17

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367176/1-A	02/07/2019 14:00	367176		50	50
LCS 240-367176/2-A	02/07/2019 14:00	367176		50	50
240-107706-2	02/07/2019 14:00	367176		50	50
240-107706-2 MS	02/07/2019 14:00	367176		50	50
240-107706-2 MSD	02/07/2019 14:00	367176		50	50
240-107706-3	02/07/2019 14:00	367176		50	50
240-107706-4	02/07/2019 14:00	367176		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367176/1-A	02/07/2019 14:00	367176		50	50
LCS 240-367176/3-A	02/07/2019 14:00	367176		50	50
240-107706-2	02/07/2019 14:00	367176		50	50
240-107706-2 MS	02/07/2019 14:00	367176		50	50
240-107706-2 MSD	02/07/2019 14:00	367176		50	50
240-107706-3	02/07/2019 14:00	367176		50	50
240-107706-4	02/07/2019 14:00	367176		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/08/2019 09:28 End Date: 02/08/2019 18:33

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ICIS 240-367445/1	1		09:28	X	X																								
CALSTD 240-367445/2 IC			09:33	X	X																								
CALSTD 240-367445/3 IC			09:38	X	X																								
ICV 240-367445/4	1		09:42	X	X																								
ICB 240-367445/5	1		09:47	X	X																								
ICVL 240-367445/6	1		09:52	X	X																								
ZZZZZZ			09:56																										
ICSA 240-367445/8	1		10:01	X	X																								
ICSAB 240-367445/9	1		10:06	X	X																								
CCV 240-367445/10			10:10																										
CCB 240-367445/11			10:15																										
ZZZZZZ			10:19																										
ZZZZZZ			10:24																										
ZZZZZZ			10:29																										
ZZZZZZ			10:33																										
ZZZZZZ			10:38																										
ZZZZZZ			10:43																										
CCV 240-367445/18			10:48																										
CCB 240-367445/19			10:52																										
ZZZZZZ			10:57																										
ZZZZZZ			11:02																										
HIGHSTD 240-367445/22 IC			11:06	X	X																								
ZZZZZZ			11:11																										
ZZZZZZ			11:16																										
ZZZZZZ			11:20																										
ZZZZZZ			11:25																										
ZZZZZZ			11:29																										
ZZZZZZ			11:34																										
ZZZZZZ			11:38																										
CCV 240-367445/30	1		11:43	X	X																								
CCB 240-367445/31	1		11:47	X	X																								
ZZZZZZ			11:52																										
ZZZZZZ			11:56																										
ZZZZZZ			12:01																										
ZZZZZZ			12:06																										
ZZZZZZ			12:10																										
ZZZZZZ			12:15																										
MB 240-367176/1-A	1	R	12:20	X	X																								
LCS 240-367176/2-A	1	R	12:25	X	X																								
240-107706-2	1	R	12:29	X	X																								
240-107706-2 SD	5	R	12:34	X	X																								
CCV 240-367445/42	1		12:38	X	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/08/2019 09:28 End Date: 02/08/2019 18:33

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
CCB 240-367445/43	1		12:43	X	X																							
ZZZZZZ			12:47																									
240-107706-2 MS	1	R	12:52	X	X																							
240-107706-2 MSD	1	R	12:56	X	X																							
240-107706-3	1	R	13:00	X	X																							
240-107706-4	1	R	13:05	X	X																							
ZZZZZZ			13:10																									
ZZZZZZ			13:14																									
ZZZZZZ			13:19																									
ZZZZZZ			13:24																									
ZZZZZZ			13:28																									
CCV 240-367445/54	1		13:33	X	X																							
CCB 240-367445/55	1		13:37	X	X																							
CCVL 240-367445/56	1		13:42	X	X																							
ZZZZZZ			13:47																									
ZZZZZZ			13:51																									
ZZZZZZ			13:56																									
ZZZZZZ			14:01																									
ZZZZZZ			14:05																									
ZZZZZZ			14:10																									
ZZZZZZ			14:15																									
ZZZZZZ			14:19																									
ZZZZZZ			14:24																									
CCV 240-367445/66			14:29																									
CCB 240-367445/67			14:33																									
ZZZZZZ			14:38																									
ZZZZZZ			14:42																									
ZZZZZZ			14:47																									
ZZZZZZ			14:51																									
ZZZZZZ			14:56																									
ZZZZZZ			15:00																									
ZZZZZZ			15:05																									
ZZZZZZ			15:10																									
ZZZZZZ			15:14																									
ZZZZZZ			15:18																									
CCV 240-367445/78			15:23																									
CCB 240-367445/79			15:27																									
ZZZZZZ			15:32																									
ZZZZZZ			15:37																									
ZZZZZZ			15:41																									
ZZZZZZ			15:46																									
ZZZZZZ			15:50																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/08/2019 09:28 End Date: 02/08/2019 18:33

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			15:55																									
ZZZZZZ			15:59																									
ZZZZZZ			16:04																									
ZZZZZZ			16:08																									
ZZZZZZ			16:13																									
CCV 240-367445/90			16:18																									
CCB 240-367445/91			16:22																									
ZZZZZZ			16:27																									
ZZZZZZ			16:32																									
ZZZZZZ			16:36																									
ZZZZZZ			16:41																									
ZZZZZZ			16:46																									
ZZZZZZ			16:51																									
ZZZZZZ			16:55																									
ZZZZZZ			17:00																									
ZZZZZZ			17:04																									
ZZZZZZ			17:09																									
CCV 240-367445/102			17:14																									
CCB 240-367445/103			17:18																									
ZZZZZZ			17:23																									
ZZZZZZ			17:27																									
ZZZZZZ			17:32																									
ZZZZZZ			17:37																									
ZZZZZZ			17:42																									
ZZZZZZ			17:46																									
ZZZZZZ			17:51																									
ZZZZZZ			17:55																									
ZZZZZZ			18:00																									
ZZZZZZ			18:05																									
CCV 240-367445/114			18:10																									
CCB 240-367445/115			18:14																									
ZZZZZZ			18:19																									
ZZZZZZ			18:24																									
CCV 240-367445/118			18:28																									
CCB 240-367445/119			18:33																									

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/08/2019 12:42 End Date: 02/08/2019 17:25

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn						
RINSE 240-367464/1			12:42																												
ICIS 240-367464/2			12:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD1 240-367464/3 IC	1		12:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD2 240-367464/4 IC	1		12:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD3 240-367464/5 IC	1		12:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD4 240-367464/6 IC	1		12:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICV 240-367464/7	1		12:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICB 240-367464/8	1		12:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICVL 240-367464/9	1		13:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSA 240-367464/10	1		13:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSAB 240-367464/11	1		13:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-367464/12			13:08																												
CCB 240-367464/13			13:11																												
ZZZZZZ			13:13																												
ZZZZZZ			13:16																												
ZZZZZZ			13:18																												
ZZZZZZ			13:20																												
ZZZZZZ			13:22																												
ZZZZZZ			13:25																												
ZZZZZZ			13:27																												
ZZZZZZ			13:29																												
ZZZZZZ			13:31																												
ZZZZZZ			13:33																												
CCV 240-367464/24			13:36																												
CCB 240-367464/25			13:38																												
ZZZZZZ			13:40																												
ZZZZZZ			13:43																												
ZZZZZZ			13:45																												
ZZZZZZ			13:47																												
ZZZZZZ			13:50																												
ZZZZZZ			13:52																												
ZZZZZZ			13:54																												
ZZZZZZ			13:57																												
ZZZZZZ			13:59																												
ZZZZZZ			14:01																												
CCV 240-367464/36			14:04																												
CCB 240-367464/37			14:06																												
ZZZZZZ			14:09																												
ZZZZZZ			14:11																												
ZZZZZZ			14:13																												
ZZZZZZ			14:16																												
ZZZZZZ			14:18																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/08/2019 12:42 End Date: 02/08/2019 17:25

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			14:20																												
ZZZZZZ			14:23																												
ZZZZZZ			14:25																												
ZZZZZZ			14:27																												
ZZZZZZ			14:30																												
CCV 240-367464/48			14:32																												
CCB 240-367464/49			14:34																												
ZZZZZZ			14:37																												
ZZZZZZ			14:39																												
ZZZZZZ			14:41																												
ZZZZZZ			14:44																												
ZZZZZZ			14:46																												
ZZZZZZ			14:49																												
ZZZZZZ			14:51																												
ZZZZZZ			14:53																												
ZZZZZZ			14:56																												
ZZZZZZ			14:58																												
CCV 240-367464/60			15:00																												
CCB 240-367464/61			15:03																												
ZZZZZZ			15:05																												
ZZZZZZ			15:07																												
CCV 240-367464/64			15:10																												
CCB 240-367464/65			15:12																												
CCVL 240-367464/66			15:14																												
ZZZZZZ			15:17																												
ZZZZZZ			15:19																												
ZZZZZZ			15:21																												
ZZZZZZ			15:24																												
ZZZZZZ			15:26																												
ZZZZZZ			15:28																												
ZZZZZZ			15:30																												
ZZZZZZ			15:32																												
ZZZZZZ			15:35																												
CCV 240-367464/76			15:37																												
CCB 240-367464/77			15:39																												
ZZZZZZ			15:42																												
ZZZZZZ			15:44																												
ZZZZZZ			15:46																												
ZZZZZZ			15:49																												
ZZZZZZ			15:51																												
ZZZZZZ			15:53																												
ZZZZZZ			15:56																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/08/2019 12:42 End Date: 02/08/2019 17:25

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn							
ZZZZZZ			15:58																												
ZZZZZZ			16:00																												
ZZZZZZ			16:03																												
CCV 240-367464/88			16:05																												
CCB 240-367464/89			16:07																												
ZZZZZZ			16:10																												
ZZZZZZ			16:12																												
ZZZZZZ			16:14																												
ZZZZZZ			16:17																												
ZZZZZZ			16:19																												
ZZZZZZ			16:21																												
ZZZZZZ			16:24																												
CCV 240-367464/97	1		16:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-367464/98	1		16:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCVL 240-367464/99			16:31																												
ZZZZZZ			16:33																												
MB 240-367176/1-A	1	R	16:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
LCS 240-367176/3-A	1	R	16:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107706-2	1	R	16:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107706-2 SD	5	R	16:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			16:45																												
240-107706-2 MS	1	R	16:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107706-2 MSD	1	R	16:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107706-3	1	R	16:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-367464/109	1		16:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-367464/110	1		16:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107706-4	1	R	16:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			17:01																												
ZZZZZZ			17:03																												
ZZZZZZ			17:06																												
ZZZZZZ			17:08																												
CCV 240-367464/116	1		17:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-367464/117	1		17:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCVL 240-367464/118	1		17:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			17:18																												
ZZZZZZ			17:20																												
CCV 240-367464/121			17:22																												
CCB 240-367464/122			17:25																												

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICP Instrument ID: I12 Start Date: 02/08/2019 End Date: 02/08/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-367445/1	09:28										
ICV 240-367445/4	09:42	90		97		97		101			
ICB 240-367445/5	09:47	99		99		100		101			
ICVL 240-367445/6	09:52	96		98		99		101			
ICSA 240-367445/8	10:01	73		86		85		98			
ICSAB 240-367445/9	10:06	72		86		84		98			
CCV 240-367445/30	11:43	83		93		94		99			
CCB 240-367445/31	11:47	98		97		99		99			
MB 240-367176/1-A	12:20	99		99		100		102			
LCS 240-367176/2-A	12:25	86		94		94		100			
240-107706-2	12:29	87		95		94		100			
240-107706-2 SD	12:34	95		98		98		101			
CCV 240-367445/42	12:38	85		95		94		100			
CCB 240-367445/43	12:43	97		98		98		98			
240-107706-2 MS	12:52	82		92		92		100			
240-107706-2 MSD	12:56	82		92		92		99			
240-107706-3	13:00	88		94		95		100			
240-107706-4	13:05	92		97		98		102			
CCV 240-367445/54	13:33	84		94		95		101			
CCB 240-367445/55	13:37	99		99		101		102			
CCVL 240-367445/56	13:42	96		98		99		101			

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/08/2019 End Date: 02/08/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-367464/3 IC	12:47	96		98		100		100		99	
STD2 240-367464/4 IC	12:49	94		96		100		99		96	
STD3 240-367464/5 IC	12:52	91		95		99		99		94	
STD4 240-367464/6 IC	12:54	96		99		103		101		101	
ICV 240-367464/7	12:57	93		99		102		101		99	
ICB 240-367464/8	12:59	97		101		103		103		104	
ICVL 240-367464/9	13:01	98		101		104		104		105	
ICSA 240-367464/10	13:04	92		95		96		95		89	
ICSAB 240-367464/11	13:06	84		93		96		94		90	
CCV 240-367464/97	16:26	79		96		100		97		98	
CCB 240-367464/98	16:28	80		97		103		95		104	
MB 240-367176/1-A	16:36	84		99		107		99		106	
LCS 240-367176/3-A	16:38	91		99		102		95		98	
240-107706-2	16:40	83		98		101		96		97	
240-107706-2 SD	16:42	82		97		100		97		100	
240-107706-2 MS	16:47	83		94		97		92		91	
240-107706-2 MSD	16:49	82		95		98		94		92	
240-107706-3	16:51	83		95		100		93		96	
CCV 240-367464/109	16:54	74		88		94		91		92	
CCB 240-367464/110	16:56	82		94		98		92		99	
240-107706-4	16:58	83		95		98		93		94	
CCV 240-367464/116	17:10	81		90		92		87		90	
CCB 240-367464/117	17:13	86		94		96		92		98	
CCVL 240-367464/118	17:15	86		94		95		91		95	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/08/2019 End Date: 02/08/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-367464/3 IC	12:47	100		99		100		100		101	
STD2 240-367464/4 IC	12:49	96		97		96		101		100	
STD3 240-367464/5 IC	12:52	96		97		95		100		101	
STD4 240-367464/6 IC	12:54	103		103		102		102		102	
ICV 240-367464/7	12:57	100		100		101		102		101	
ICB 240-367464/8	12:59	104		102		104		105		105	
ICVL 240-367464/9	13:01	105		105		105		105		106	
ICSA 240-367464/10	13:04	94		94		95		102		102	
ICSAB 240-367464/11	13:06	94		95		94		101		101	
CCV 240-367464/97	16:26	102		104		103		106		107	
CCB 240-367464/98	16:28	104		106		103		103		104	
MB 240-367176/1-A	16:36	104		107		105		105		105	
LCS 240-367176/3-A	16:38	99		103		99		102		103	
240-107706-2	16:40	97		101		99		100		102	
240-107706-2 SD	16:42	100		102		103		102		103	
240-107706-2 MS	16:47	93		98		95		99		101	
240-107706-2 MSD	16:49	95		98		97		100		101	
240-107706-3	16:51	97		100		97		102		102	
CCV 240-367464/109	16:54	95		94		94		97		97	
CCB 240-367464/110	16:56	99		102		98		101		101	
240-107706-4	16:58	95		99		98		100		101	
CCV 240-367464/116	17:10	88		90		88		93		94	
CCB 240-367464/117	17:13	97		97		97		98		97	
CCVL 240-367464/118	17:15	95		96		95		96		95	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/08/2019 End Date: 02/08/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-367464/3 IC	12:47	99									
STD2 240-367464/4 IC	12:49	98									
STD3 240-367464/5 IC	12:52	96									
STD4 240-367464/6 IC	12:54	100									
ICV 240-367464/7	12:57	99									
ICB 240-367464/8	12:59	104									
ICVL 240-367464/9	13:01	105									
ICSA 240-367464/10	13:04	98									
ICSAB 240-367464/11	13:06	98									
CCV 240-367464/97	16:26	103									
CCB 240-367464/98	16:28	102									
MB 240-367176/1-A	16:36	104									
LCS 240-367176/3-A	16:38	100									
240-107706-2	16:40	95									
240-107706-2 SD	16:42	98									
240-107706-2 MS	16:47	95									
240-107706-2 MSD	16:49	98									
240-107706-3	16:51	99									
CCV 240-367464/109	16:54	94									
CCB 240-367464/110	16:56	98									
240-107706-4	16:58	98									
CCV 240-367464/116	17:10	89									
CCB 240-367464/117	17:13	95									
CCVL 240-367464/118	17:15	94									

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367176 Batch Start Date: 02/07/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/07/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00079	MTICP2A 00090	MTTMHCL 00235
MB 240-367176/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-367176/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107706-I-2	MRC-MW155A-020519	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107706-I-2 MS	MRC-MW155A-020519	3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107706-I-2 MSD	MRC-MW155A-020519	3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107706-I-3	MRC-MW159A-020519	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107706-I-4	MRC-MW157A-020519	3005A, 6010C	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-367176/1		3005A, 6010C		1 mL					
LCS 240-367176/2		3005A, 6010C		1 mL					
240-107706-I-2	MRC-MW155A-020519	3005A, 6010C	R	1 mL					
240-107706-I-2 MS	MRC-MW155A-020519	3005A, 6010C	R	1 mL					
240-107706-I-2 MSD	MRC-MW155A-020519	3005A, 6010C	R	1 mL					
240-107706-I-3	MRC-MW159A-020519	3005A, 6010C	R	1 mL					
240-107706-I-4	MRC-MW157A-020519	3005A, 6010C	R	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367176 Batch Start Date: 02/07/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/07/19 22:00

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb2
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367176 Batch Start Date: 02/07/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/07/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00038	MTICPMSB 00037	MTTMHCL 00235
MB 240-367176/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-367176/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107706-I-2	MRC-MW155A-020519	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107706-I-2 MS	MRC-MW155A-020519	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107706-I-2 MSD	MRC-MW155A-020519	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107706-I-3	MRC-MW159A-020519	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107706-I-4	MRC-MW157A-020519	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-367176/1		3005A, 6020A		1 mL					
LCS 240-367176/3		3005A, 6020A		1 mL					
240-107706-I-2	MRC-MW155A-020519	3005A, 6020A	R	1 mL					
240-107706-I-2 MS	MRC-MW155A-020519	3005A, 6020A	R	1 mL					
240-107706-I-2 MSD	MRC-MW155A-020519	3005A, 6020A	R	1 mL					
240-107706-I-3	MRC-MW159A-020519	3005A, 6020A	R	1 mL					
240-107706-I-4	MRC-MW157A-020519	3005A, 6020A	R	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367176 Batch Start Date: 02/07/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/07/19 22:00

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb2
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW155A-020519 Lab Sample ID: 240-107706-2

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG ID.:

Matrix: Water Date Sampled: 02/05/2019 09:00

Reporting Basis: WET Date Received: 02/06/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	140	200	26	ug/L	J		1	6010C
7439-96-5	Manganese	15	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	77	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	44	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.64	1.0	0.31	ug/L	J		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	0.49	1.0	0.19	ug/L	J		1	6020A
7440-47-3	Chromium	1.4	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	35	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	140	100	47	ug/L			1	6020A
7439-96-5	Manganese	17	5.0	2.1	ug/L		B	1	6020A
7440-02-0	Nickel	2.2	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	24	20	15	ug/L			1	6020A
7440-70-2	Calcium	60000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	1600	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	14000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	100000	1000	330	ug/L			1	6020A

Sample Report

Sample Name	240-107706-i-2-a
File Name	103SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\I14020819E.b
Acq Time	2019-02-08 16:40:36
Sample Type	Sample
Total Dilution	1.0000
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	0.311	ug/l	18.1	30792.44	10000	
Be	9	6	No Gas	0.640	ug/l	8.8	671.13	2000	
B	11	45	No Gas	38.534	ug/l	1.9	26564.27	300	
Na	23	45	He	103543.349	ug/l	0.4	43770403.82	500000	
Mg	24	45	He	13563.853	ug/l	0.9	3155611.96	500000	
Al	27	45	He	77.145	ug/l	5.3	9084.64	200000	
K	39	45	He	1647.024	ug/l	0.5	497439.68	500000	
Ca	44	45	He	59981.588	ug/l	2.7	419230.70	500000	
Ti	47	45	He	2.364	ug/l	13.6	196.67	2500	
V	51	45	He	0.462	ug/l	22.8	591.50	10000	
Cr	52	45	He	1.446	ug/l	2.4	4663.03	10000	
Mn	55	45	He	16.827	ug/l	0.1	34187.91	10000	
Fe	56	103	He	138.342	ug/l	0.9	365107.24	200000	
Co	59	103	He	0.489	ug/l	1.5	2170.19	5000	
Ni	60	103	He	2.165	ug/l	4.2	3381.55	10000	
Cu	63	103	He	34.516	ug/l	1.8	102885.49	10000	
Zn	66	103	He	23.744	ug/l	0.9	16354.04	10000	
As	75	103	He	0.419	ug/l	58.1	293.87	10000	
Se	78	103	H2	0.363	ug/l	10.4	67.67	10000	
Sr	88	103	He	189.965	ug/l	2.0	620997.46	10000	
Mo	95	103	He	1.002	ug/l	6.2	1600.11	2000	
Ag	107	103	He	0.009	ug/l	29.6	75.56	100	
Cd	111	115	He	0.114	ug/l	20.9	119.89	4000	
Sn	118	115	He	1.052	ug/l	12.4	4032.86	2000	
Sb	123	115	He	0.218	ug/l	14.6	588.91	200	
Ba	137	115	He	43.672	ug/l	2.0	51406.68	10000	
W	182	159	He	0.112	ug/l	27.8	683.36	2500	
Tl	205	165	He	0.086	ug/l	18.6	852.26	2000	
Pb	208	165	He	0.291	ug/l	2.0	4310.34	4000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li6	6	No Gas	553452.28	0.7	666212.45	83.07	59.5	120.4	
Sc	45	No Gas	1713975.00	0.5	1751895.83	97.84	59.5	120.4	
Sc	45	H2	1419264.33	3.2	1404452.75	101.05	59.5	120.4	
Sc	45	He	310484.67	0.3	322556.35	96.26	59.5	120.4	
Rh	103	H2	380718.70	3.2	393369.47	96.78	59.5	120.4	

Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Rh	103	He	1791307.22	1.5	1852367.57	96.7	59.5	120.4	
In	115	H2	2099852.00	1.9	2085755.83	100.68	59.5	120.4	
In	115	He	1173320.84	2.1	1187350.75	98.82	59.5	120.4	
Tb	159	He	2489690.39	1.2	2484591.22	100.21	59.5	120.4	
Ho	165	He	2467679.97	2.0	2419999.97	101.97	59.5	120.4	
Bi	209	He	1513346.22	1.5	1588325.74	95.28	59.5	120.4	

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW155A-020519	240-107706-2
MRC-MW159A-020519	240-107706-3
MRC-MW157A-020519	240-107706-4

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107706-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW155A-020519	240-107706-2
MRC-MW159A-020519	240-107706-3
MRC-MW157A-020519	240-107706-4

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107706-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW155A-020519	240-107706-2
MRC-MW159A-020519	240-107706-3
MRC-MW157A-020519	240-107706-4

Comments:

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Analyst: LKG Batch Start Date: 08/07/2018

Reporting Units: mg/L Analytical Batch No.: 339523

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:20	Sulfate	52.9	50.0	106	90-110		WCICLCS_00669
11	ICB	15:41	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Analyst: JMB Batch Start Date: 02/08/2019

Reporting Units: mg/L Analytical Batch No.: 367366

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	12:48	Sulfate	52.0	50.0	104	90-110		WCICCCV_00860
2	CCB	13:08	Sulfate	0.35				U	
13	CCV	16:56	Sulfate	52.0	50.0	104	90-110		WCICCCV_00860
14	CCB	17:17	Sulfate	0.35				U	
25	CCV	21:05	Sulfate	52.3	50.0	105	90-110		WCICCCV_00860
26	CCB	21:26	Sulfate	0.35				U	
37	CCV	01:13	Sulfate	52.5	50.0	105	90-110		WCICCCV_00860
38	CCB	01:34	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG No.:

Analyst: MSP Batch Start Date: 02/17/2019

Reporting Units: mg/L Analytical Batch No.: 575925

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:50	Nitrate Nitrite as N	3.26	3.00	109	90-110		W_ICAl_00027
2	ICB	12:51	Nitrate Nitrite as N	0.040				U	
3	CCV	12:52	Nitrate Nitrite as N	4.88	5.00	98	90-110		W_Nitrate_00020
4	CCV	12:53	Nitrate Nitrite as N	4.93	5.00	99	90-110		IC Primary_00012
5	CCB	12:54	Nitrate Nitrite as N	0.040				U	
20	CCV	13:12	Nitrate Nitrite as N	4.76	5.00	95	90-110		W_Nitrate_00020
21	CCB	13:13	Nitrate Nitrite as N	0.0463				J	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 367751	Date: 02/11/2019 16:56						
2320B-2011	MB 240-367751/3	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 367926	Date: 02/13/2019 13:29						
2340C-2011	MB 240-367926/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 367321	Date: 02/08/2019 09:13						
2540 C-2011	MB 240-367321/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 367366	Date: 02/08/2019 13:29						
9056A	MB 240-367366/3	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-367366/3	Sulfate	0.35	U	mg/L	1.0	1

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575925 Date: 02/17/2019 12:55							
SM 4500 NO3 F	MB 490-575925/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107706-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 270629 Date: 02/19/2019 06:40							
SM 2520B	MB 180-270629/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367366 Date: 02/08/2019 22:28											
300.0	240-107706-4	Bromide	0.044	U	mg/L						
300.0	240-107706-4 MS	Bromide	10.8		mg/L	10.0	108	80-120			
Batch ID: 367366 Date: 02/08/2019 22:28											
9056A	240-107706-4	Sulfate	68		mg/L						
9056A	240-107706-4 MS	Sulfate	118		mg/L	50.0	101	80-120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367366 Date: 02/08/2019 22:48											
300.0	240-107706-4 MSD	Bromide	10.9		mg/L	10.0	109	80-120	1	15	
Batch ID: 367366 Date: 02/08/2019 22:48											
9056A	240-107706-4 MSD	Sulfate	119		mg/L	50.0	102	80-120	0	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 367751 Date: 02/11/2019 19:36								
2320B-2011	MRC-MW159A-020519	240-107706-3	Alkalinity	210	mg/L			
2320B-2011	MRC-MW159A-020519	240-107706-3 DU	Alkalinity	211	mg/L	1	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367751	Date: 02/11/2019 16:52										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-367751/2	Alkalinity	261		mg/L	271	96	86-123			
Batch ID: 367926	Date: 02/13/2019 13:34										
						LCS Source: WCHARDNESS_00031					
2340C-2011	LCS 240-367926/2	Hardness as calcium carbonate	264		mg/L	246	107	90-110			
Batch ID: 367321	Date: 02/08/2019 09:13										
						LCS Source: WCPHENOVSOLID_00038					
2540 C-2011	LCS 240-367321/2	Total Dissolved Solids	204		mg/L	204	100	80-120			
Batch ID: 367366	Date: 02/08/2019 13:50										
						LCS Source: WCICLCS_00695					
9056A	LCS 240-367366/4	Sulfate	51.7		mg/L	50.0	103	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925	Date: 02/17/2019 12:57										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575925/7	Nitrate Nitrite as N	3.23		mg/L	3.00	108	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107706-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 02/13/2019 13:29 End Date: 02/13/2019 16:00

Lab Sample Id	D/F	Type	Time	Analytes
				HardCC
MB 240-367926/1	1	T	13:29	X
LCS 240-367926/2	1	T	13:34	X
ZZZZZZ			13:39	
ZZZZZZ			13:44	
ZZZZZZ			13:49	
ZZZZZZ			13:55	
ZZZZZZ			14:00	
ZZZZZZ			14:05	
ZZZZZZ			14:10	
240-107706-2	1	T	14:16	X
240-107706-3	1	T	14:21	X
240-107706-4	1	T	14:26	X
ZZZZZZ			14:31	
ZZZZZZ			14:37	
ZZZZZZ			14:42	
ZZZZZZ			14:47	
ZZZZZZ			14:52	
ZZZZZZ			14:57	
ZZZZZZ			15:03	
ZZZZZZ			15:08	
ZZZZZZ			15:13	
ZZZZZZ			15:18	
ZZZZZZ			15:24	
ZZZZZZ			15:29	
ZZZZZZ			15:34	
ZZZZZZ			15:39	
ZZZZZZ			15:45	
ZZZZZZ			15:50	
ZZZZZZ			15:55	
ZZZZZZ			16:00	

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/11/2019 16:47 End Date: 02/11/2019 20:34

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			16:47																									
LCS 240-367751/2	1	T	16:52	X																								
MB 240-367751/3	1	T	16:56	X																								
ZZZZZZ			17:01																									
ZZZZZZ			17:05																									
ZZZZZZ			17:10																									
ZZZZZZ			17:15																									
ZZZZZZ			17:19																									
ZZZZZZ			17:24																									
ZZZZZZ			17:28																									
ZZZZZZ			17:34																									
ZZZZZZ			17:35																									
ZZZZZZ			17:39																									
ZZZZZZ			17:43																									
ZZZZZZ			17:47																									
ZZZZZZ			17:51																									
ZZZZZZ			17:55																									
ZZZZZZ			17:58																									
ZZZZZZ			18:02																									
ZZZZZZ			18:07																									
ZZZZZZ			18:10																									
ZZZZZZ			18:14																									
ZZZZZZ			18:15																									
ZZZZZZ			18:18																									
ZZZZZZ			18:22																									
ZZZZZZ			18:26																									
ZZZZZZ			18:29																									
ZZZZZZ			18:32																									
ZZZZZZ			18:35																									
ZZZZZZ			18:40																									
ZZZZZZ			18:46																									
ZZZZZZ			18:51																									
ZZZZZZ			18:57																									
ZZZZZZ			18:59																									
ZZZZZZ			19:05																									
ZZZZZZ			19:10																									
ZZZZZZ			19:17																									
ZZZZZZ			19:23																									
240-107706-2	1	T	19:27	X																								
240-107706-3	1	T	19:31	X																								
240-107706-3 DU	1	T	19:36	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/11/2019 16:47 End Date: 02/11/2019 20:34

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
240-107706-4	1	T	19:41	X																								
ZZZZZZ			19:45																									
ZZZZZZ			19:49																									
ZZZZZZ			19:51																									
ZZZZZZ			19:56																									
ZZZZZZ			20:00																									
ZZZZZZ			20:04																									
ZZZZZZ			20:09																									
ZZZZZZ			20:13																									
ZZZZZZ			20:18																									
ZZZZZZ			20:22																									
ZZZZZZ			20:27																									
ZZZZZZ			20:32																									
ZZZZZZ			20:34																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 02/08/2019 09:13 End Date: 02/08/2019 09:13

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-367321/1	1	T	09:13	X																								
LCS 240-367321/2	1	T	09:13	X																								
ZZZZZZ			09:13																									
ZZZZZZ			09:13																									
ZZZZZZ			09:13																									
ZZZZZZ			09:13																									
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ZZZZZZ			09:13																									
ZZZZZZ			09:13																									
ZZZZZZ			09:13																									
240-107706-3	1	T	09:13	X																								
240-107706-4	1	T	09:13	X																								
ZZZZZZ			09:13																									
240-107706-2	1	T	09:13	X																								
ZZZZZZ			09:13																									
ZZZZZZ			09:13																									

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 08/07/2018 12:13 End Date: 08/07/2018 15:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339523/1 IC	1		12:13	X																								
STD2 240-339523/2 IC	1		12:34	X																								
STD3 240-339523/3 IC	1		12:55	X																								
STD4 240-339523/4 IC	1		13:16	X																								
STD5 240-339523/5 ICRT	1		13:36	X																								
STD6 240-339523/6 IC	1		13:57	X																								
STD7 240-339523/7 IC	1		14:18	X																								
STD8 240-339523/8 IC	1		14:39	X																								
STD9 240-339523/9 IC	1		14:59	X																								
ICV 240-339523/10	1		15:20	X																								
ICB 240-339523/11	1		15:41	X																								

Prep Types:
=

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 02/08/2019 12:48 End Date: 02/09/2019 07:47

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
CCV 240-367366/1	1		12:48		X																								
CCB 240-367366/2	1		13:08		X																								
MB 240-367366/3	1	T	13:29		X																								
LCS 240-367366/4	1	T	13:50		X																								
ZZZZZZ			14:31																										
ZZZZZZ			14:52																										
ZZZZZZ			15:13																										
ZZZZZZ			15:34																										
ZZZZZZ			15:54																										
ZZZZZZ			16:15																										
ZZZZZZ			16:36																										
CCV 240-367366/13	1		16:56		X																								
CCB 240-367366/14	1		17:17		X																								
ZZZZZZ			17:38																										
ZZZZZZ			17:59																										
ZZZZZZ			18:19																										
ZZZZZZ			18:40																										
ZZZZZZ			19:01																										
ZZZZZZ			19:21																										
ZZZZZZ			19:42																										
240-107706-2	1	T	20:03	X	X																								
ZZZZZZ			20:23																										
240-107706-3	1	T	20:44	X	X																								
CCV 240-367366/25	1		21:05		X																								
CCB 240-367366/26	1		21:26		X																								
ZZZZZZ			21:46																										
240-107706-4	1	T	22:07	X	X																								
240-107706-4 MS	1	T	22:28	X	X																								
240-107706-4 MSD	1	T	22:48	X	X																								
ZZZZZZ			23:50																										
ZZZZZZ			00:11																										
ZZZZZZ			00:32																										
ZZZZZZ			00:52																										
CCV 240-367366/37	1		01:13		X																								
CCB 240-367366/38	1		01:34		X																								
ZZZZZZ			01:55																										
ZZZZZZ			02:15																										
ZZZZZZ			02:36																										
ZZZZZZ			02:57																										
ZZZZZZ			03:18																										
ZZZZZZ			03:38																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 02/08/2019 12:48 End Date: 02/09/2019 07:47

Lab Sample Id	D/F	Type	Time	Analytes																								
				Br	SO4																							
ZZZZZZ			03:59																									
ZZZZZZ			04:20																									
ZZZZZZ			04:40																									
ZZZZZZ			05:01																									
CCV 240-367366/49			05:22																									
CCB 240-367366/50			05:42																									
ZZZZZZ			06:03																									
ZZZZZZ			06:24																									
ZZZZZZ			06:45																									
ZZZZZZ			07:05																									
CCV 240-367366/55			07:26																									
CCB 240-367366/56			07:47																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/17/2019 12:50 End Date: 02/17/2019 13:27

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575925/1	1		12:50	X																								
ICB 490-575925/2	1		12:51	X																								
CCV 490-575925/3	1		12:52	X																								
CCV 490-575925/4	1		12:53	X																								
CCB 490-575925/5	1		12:54	X																								
MB 490-575925/6	1	T	12:55	X																								
LCS 490-575925/7	1	T	12:57	X																								
240-107706-2	1	T	12:58	X																								
240-107706-3	1	T	12:59	X																								
240-107706-4	1	T	13:00	X																								
ZZZZZZ			13:01																									
ZZZZZZ			13:02																									
ZZZZZZ			13:04																									
ZZZZZZ			13:05																									
ZZZZZZ			13:06																									
ZZZZZZ			13:07																									
ZZZZZZ			13:08																									
ZZZZZZ			13:10																									
ZZZZZZ			13:11																									
CCV 490-575925/20	1		13:12	X																								
CCB 490-575925/21	1		13:13	X																								
ZZZZZZ			13:14																									
ZZZZZZ			13:15																									
ZZZZZZ			13:17																									
ZZZZZZ			13:18																									
ZZZZZZ			13:19																									
ZZZZZZ			13:20																									
ZZZZZZ			13:21																									
ZZZZZZ			13:23																									
ZZZZZZ			13:24																									
ZZZZZZ			13:25																									
CCV 490-575925/32			13:26																									
CCB 490-575925/33			13:27																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107706-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/19/2019 06:40 End Date: 02/19/2019 06:40

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-270629/1	1	T	06:40	X																								
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
240-107706-2	1	T	06:40	X																								
240-107706-3	1	T	06:40	X																								
240-107706-4	1	T	06:40	X																								
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367926 Batch Start Date: 02/13/19 13:29 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 02/13/19 16:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCHARDNESS 00031		
MB 240-367926/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-367926/2		2340C-2011		25 mL	25 mL	6.60 mL	25 mL		
240-107706-G-2	MRC-MW155A-020519	2340C-2011	T	25 mL	25 mL	6.30 mL			
240-107706-G-3	MRC-MW159A-020519	2340C-2011	T	5 mL	25 mL	2.70 mL			
240-107706-G-4	MRC-MW157A-020519	2340C-2011	T	25 mL	25 mL	3.25 mL			

Batch Notes	
Batch Comment	BEAKERS--4010980
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C9, E3
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367751 Batch Start Date: 02/11/19 16:47 Batch Analyst: Carson, Monica

Batch Method: 2320B-2011 Batch End Date: 02/12/19 14:03

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-367751/2		2320B-2011		InitialAmount is blank	10 mL				
MB 240-367751/3		2320B-2011		InitialAmount is blank					
240-107706-H-2	MRC-MW155A-020519	2320B-2011	T	InitialAmount is blank					
240-107706-H-3	MRC-MW159A-020519	2320B-2011	T	InitialAmount is blank					
240-107706-H-3 DU	MRC-MW159A-020519	2320B-2011	T	InitialAmount is blank					
240-107706-H-4	MRC-MW157A-020519	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4- 4005008
pH Buffer 2 ID	7- 4017506
pH Buffer 3 ID	10- 3892955
pH Buffer 4 ID	12- 3891579
Nominal Amount Used	10 mL
pH Meter ID	severus
Probe ID	WCP 137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367321 Batch Start Date: 02/08/19 09:13 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-367321/1		2540 C-2011			3.3414 g	100 mL	3.3413 g	3.3412 g	0 g
LCS 240-367321/2		2540 C-2011			3.3643 g	100 mL	3.3847 g	3.3847 g	0 g
240-107706-H-3	MRC-MW159A-020519	2540 C-2011	T	999 umhos/cm	3.2987 g	100 mL	3.3650 g	3.3645 g	0 g
240-107706-H-4	MRC-MW157A-020519	2540 C-2011	T	373 umhos/cm	3.2743 g	100 mL	3.2980 g	3.2984 g	0 g
240-107706-H-2	MRC-MW155A-020519	2540 C-2011	T	940 umhos/cm	3.2668 g	100 mL	3.3224 g	3.3219 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 240-367321/1		2540 C-2011		Pass No Unit	N/A No Unit	N/A	-0.0001 g	-0.0002 g	N/A g
LCS 240-367321/2		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0204 g	0.0204 g	N/A g
240-107706-H-3	MRC-MW159A-020519	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0663 g	0.0658 g	N/A g
240-107706-H-4	MRC-MW157A-020519	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0237 g	0.0241 g	N/A g
240-107706-H-2	MRC-MW155A-020519	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0556 g	0.0551 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID00038		
MB 240-367321/1		2540 C-2011		N/A g	100 mL	OK			
LCS 240-367321/2		2540 C-2011		N/A g	100 mL	OK	100 mL		
240-107706-H-3	MRC-MW159A-020519	2540 C-2011	T	N/A g	100 mL	OK			
240-107706-H-4	MRC-MW157A-020519	2540 C-2011	T	N/A g	100 mL	OK			
240-107706-H-2	MRC-MW155A-020519	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367321 Batch Start Date: 02/08/19 09:13 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date:

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/11/2019 12:19
Date/Time - Out - CW (WT2)	02/11/2019 13:30
Temperature - Start - CW (WT2) - Correct	180 Celsius
Temperature - End - CW (WT2) - Correct	181 Celsius
Temperature - Start-CW(WT2) -Uncorrected	180 Celsius
Temperature - End-CW(WT2) -Uncorrected	181 Celsius
Temperature - Start - Corrected	105 Celsius
Temperature - End - Corrected	105 Celsius
Date/Time - In	02/08/2019 10:05
Date/Time - Out	02/11/2019 08:04
Filter ID	60020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O06
Thermometer ID - Low Temperature	84922
Thermometer ID	181417084
Temperature - Start - Uncorrected	105 Celsius
Temperature - End - Uncorrected	105 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/11/2019 08:05 No Unit
Weight(WT1) Date/Time Out	02/11/2019 09:51
Weight(WT1) Start Temp	182 Celsius
Weight(WT1) Temp Out	181 Celsius
Uncorrected Weight(WT1) Start Temp	182 Celsius
Uncorrected Weight(WT1) Temp Out	181 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339523/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339523/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339523/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339523/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339523/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339523/6 IC		300.0		5 mL	2 mL				
STD7 240-339523/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339523/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339523/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367366 Batch Start Date: 02/08/19 12:48 Batch Analyst: Burns, Jill

Batch Method: 300.0 Batch End Date: 02/09/19 07:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICSOLNA1 00018	WCICSOLNB1 00018		
240-107706-E-2	MRC-MW155A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-2	MRC-MW155A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-3	MRC-MW159A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-3	MRC-MW159A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-4	MRC-MW157A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-4 MS	MRC-MW157A-020519	300.0 & 9056A	T	5 mL	5 mL	0.1 mL	0.1 mL		
240-107706-E-4 MSD	MRC-MW157A-020519	300.0 & 9056A	T	5 mL	5 mL	0.1 mL	0.1 mL		

Batch Notes	
Eluent 1 ID	WATER

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICLCS 00669			
ICV 240-339523/10		9056A		5 mL	1.0 mL	5 mL			
ICB 240-339523/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367366 Batch Start Date: 02/08/19 12:48 Batch Analyst: Burns, Jill

Batch Method: 9056A Batch End Date: 02/09/19 07:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICSOLNA1 00018	WCICSOLNB1 00018		
240-107706-E-2	MRC-MW155A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-2	MRC-MW155A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-3	MRC-MW159A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-3	MRC-MW159A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-4	MRC-MW157A-020519	300.0 & 9056A	T	5 mL	5 mL				
240-107706-E-4 MS	MRC-MW157A-020519	300.0 & 9056A	T	5 mL	5 mL	0.1 mL	0.1 mL		
240-107706-E-4 MSD	MRC-MW157A-020519	300.0 & 9056A	T	5 mL	5 mL	0.1 mL	0.1 mL		

Batch Notes	
Eluent 1 ID	WATER

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107706-1

SDG No.:

Batch Number: 367366 Batch Start Date: 02/08/19 12:48 Batch Analyst: Burns, Jill

Batch Method: 9056A Batch End Date: 02/09/19 07:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICCCV 00860	WCICLCS 00695		
CCV 240-367366/1		9056A		5 mL	5 mL	5 mL			
CCB 240-367366/2		9056A		5 mL	5 mL				
MB 240-367366/3		9056A		5 mL	5 mL				
LCS 240-367366/4		9056A		5 mL	5 mL		5 mL		
CCV 240-367366/13		9056A		5 mL	5 mL	5 mL			
CCB 240-367366/14		9056A		5 mL	5 mL				
CCV 240-367366/25		9056A		5 mL	5 mL	5 mL			
CCB 240-367366/26		9056A		5 mL	5 mL				
CCV 240-367366/37		9056A		5 mL	5 mL	5 mL			
CCB 240-367366/38		9056A		5 mL	5 mL				

Batch Notes	
Eluent 1 ID	WATER

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575925/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575925/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575925/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575925/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575925/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575925/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575925/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
240-107706-F-2	MRC-MW155A-020519	SM 4500 NO3 F	T	50 mL	50 mL				6.91
240-107706-F-3	MRC-MW159A-020519	SM 4500 NO3 F	T	50 mL	50 mL				8.85
240-107706-F-4	MRC-MW157A-020519	SM 4500 NO3 F	T	50 mL	50 mL				5.63
CCV 490-575925/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/21		SM 4500 NO3 F		50 mL	50 mL				

Batch Notes	
Acid used for pH adjustment	4547067
Base used for pH adjustment	4273883
Batch Comment	cent tubes 809161; pH probe VVZ10915; pH meter AB92340683
Buffer Reagent ID	4832283
Carrier Identification	DI water
Color Reagent ID	4832299
Filter ID	180611314
Pipette/Syringe/Dispenser ID	26061004, 26121028

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107706-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TETRA TECH INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **MAY 1, 2019**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION – VOC / PCBH / METALS / MISCELLANEOUS PARAMETERS**
MRC BLOCK E/F MASS DISCHARGE – FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) 240-107850-1

SAMPLES: 5 / Water / VOC / Metals / Miscellaneous Parameters

MRC-MW144B-020719 MRC-MW146B-020719 MRC-MW147B-020719
TB-020719

1 / Water / PCBH

MRC-MW156A-020719

OVERVIEW

The sample set for MRC Block E/F Mass Discharge, SDG 240-107850-1, consists of four (4) water environmental samples and one (1) trip blank. Samples were analyzed for volatile organic compounds (VOC), polychlorinated biphenyl homologs (PCBH), metals, and miscellaneous parameters (alkalinity, bromide, hardness as CaCO3, nitrite/nitrate-N, salinity, sulfate, and total dissolved solids [TDS]). No field duplicate pairs are included in this SDG.

The samples were collected by Tetra Tech on February 7, 2019 and analyzed by Test America. Analyses were conducted in accordance with EPA SW-846 Methods 8260C (VOC), 6010C/6020A (metals), and 9056A (anions) as well as EPA Method 680 (PCBH), MCAWW Method 300.0 (bromide), and Standard Methods 2320B-2011 (alkalinity), 2340C-2011 (hardness), 4500 NO3 F (nitrite/nitrate-N), 2520B (salinity), and 2540C-2011 (TDS) analytical and reporting protocols. Iron and manganese were analyzed by both Methods 6010C and 6020A - remaining metals were analyzed by Method 6020A only.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, initial/continuing calibrations, laboratory method blank results, laboratory control sample/laboratory control sample duplicate results, matrix spike/matrix spike duplicate results, surrogate spike recoveries, interference check sample results, compound identification, analyte quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

MAJOR PROBLEMS

- The laboratory case narrative report states that 2-chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample, and all VOC samples were preserved in hydrochloric acid. Non-detected results for 2-chloroethyl vinyl ether were rejected (UR) in all samples.

MINOR PROBLEMS

- The VOC continuing calibration verification (CCV) performed on 02/11/19 at 10:51 on instrument A3UX15 had percent differences (%Ds) that were greater than the 20% quality control limit for carbon disulfide, tertiary-butyl alcohol, vinyl acetate, 2-chloroethyl vinyl ether, cis-1,3-dichloropropene, 4-

methyl-2-pentanone, trans-1,3-dichloropropene, 2-hexanone, chlorodibromomethane, bromoform, 1,1,2,2-tetrachloroethane, and 1,2-dibromo-3-chloropropane. Sample TB-020719 was affected. Detected and non-detected results for the aforementioned analytes were qualified as estimated (J and UJ, respectively) in sample TB-020719.

- The VOC CCV performed on 02/11/19 at 11:35 on instrument A3UX15 had a %D for tert-amyl methyl ether that was greater than the 20% quality control limit. Sample TB-020719 was affected. The non-detected result for tert-amyl methyl ether was qualified as estimated (UJ) in the affected sample.

- The VOC CCV performed on 02/13/19 at 11:48 on instrument A3UX15 had %Ds that were greater than the 20% quality control limit for carbon disulfide, methylene chloride, 2-chloroethyl vinyl ether, trans-1,3-dichloropropene, bromoform, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, and 1,2,3-trichlorobenzene. Samples MRC-MW144B-020719 and MRC-MW147B-020719 were affected. Non-detected results for the aforementioned analytes were qualified as estimated (UJ) in the affected samples.

- The VOC CCV performed on 02/13/19 at 12:32 on instrument A3UX15 had %Ds that were greater than the 20% quality control limit for ethyl tert-butyl ether and tert-amyl methyl ether. Samples MRC-MW144B-020719 and MRC-MW147B-020719 were affected. Non-detected results for the aforementioned analytes were qualified as non-detected (UJ) in the affected samples.

- The VOC CCV performed on 02/14/19 at 11:10 on instrument A3UX15 had %Ds that were greater than the 20% quality control limit for chloromethane, tertiary-butyl alcohol, vinyl acetate, 2-chloroethyl vinyl ether, 4-methyl-2-pentanone, trans-1,3-dichloropropene, 2-hexanone, bromoform, 1,1,2,2-tetrachloroethane, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, and 1,2,3-trichlorobenzene. Samples MRC-MW156A-020719 and MRC-MW146B-020719 were affected. Non-detected results for the aforementioned analytes were qualified as estimated (UJ) in the affected samples.

- The VOC CCV performed on 02/14/10 at 11:54 on instrument A3UX15 had %Ds that were greater than the 20% quality control limit for ethyl tert-butyl ether and tert-amyl methyl ether. Samples MRC-MW156A-020719 and MRC-MW146B-020719 were affected. Non-detected results for these analytes were qualified as estimated (UJ) in the affected samples.

- The VOC matrix spike (MS)/matrix spike duplicate (MSD) analysis performed on sample MRC-MW147B-020719 had MS and MSD percent recoveries (%Rs) that were less than laboratory quality control limits for tertiary-butyl alcohol. Additionally, relative percent differences (RPDs) were greater than the laboratory quality control limit for 1,1,2-trichlorotrifluoroethane, dichlorodifluoromethane, and trichlorofluoromethane. No qualification was necessary for 1,1,2-trichlorotrifluoroethane, dichlorodifluoromethane, and trichlorofluoromethane, as results for these analytes were non-detected in sample MRC-MW147B-020719. The non-detected result for tertiary-butyl alcohol in sample MRC-MW147B-020719 was qualified as estimated (UJ).

- The following VOCs were detected in the trip blank at the following maximum concentration:

Analyte	Maximum Concentration	< or > Reporting Limit (RL)
Chloromethane	0.21 ug/L(1)	< RL
Tertiary-butyl alcohol	1.9 ug/L(1)	< RL
Trichloroethene	0.17 ug/L(1)	< RL

1 - Detected in trip blank TB-020719 affecting all samples.

The detected trichloroethene result in sample MRC-MW156A-020719 was less than the RL and was qualified as non-detected (U) due to trip blank contamination.

- The following metal was detected in the method blanks at the following maximum concentration:

Analyte	Maximum Concentration	< or > RL
Copper	2.19 ug/L(1)	< RL

1 - Detected in method blank (> LOQ) associated with preparation batch 240-367484 affecting all samples.

Detected copper results in samples MRC-MW147B-020719 and MRC-MW156A-020719 were less than 10x the blank concentration and were qualified as non-detected (U) due to method blank contamination.

- Detected results reported below the RL but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Non-detected results were reported to the MDL.

VOC results in samples MRC-MW144B-020719 and MRC-MW147B-020719 were analyzed at a dilution factors of 142.86 and 200, respectively.

The PCBH CCV performed on 02/21/19 at 16:43 on instrument CMSX had a %D that was greater than the 20% quality control limit for decachlorobiphenyl. No qualification was necessary because no environmental samples from this SDG were associated with this CCV.

Nitrate/nitrite as N was detected in the calibration blanks the following maximum concentration:

Analyte	Maximum Concentration	< or > RL
Nitrate/nitrite-N	0.0463 mg/L(1)	< RL

1 - Detected in calibration blank analyzed on 02/17/19 at 13:13 affecting all samples.

No qualification was necessary because all associated nitrate/nitrite-N results were either non-detected or detected at a concentration greater than the RL.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Some non-detected VOC results were qualified due to calibration noncompliance. Several metals results were qualified due to method blank contamination.

Other Factors Affecting Data Quality: Results for 2-chloroethyl vinyl ether in water samples were rejected due to sample preservation noncompliance. One VOC result was qualified as non-detected due to trip blank contamination. One VOC result was qualified due to MS/MSD noncompliance. Detected results reported below the RL but above the MDL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA “National Functional Guidelines for Organic Superfund Methods Data Review” (January 2017) and the “National Functional Guidelines for Inorganic Superfund Methods Data Review” (January 2017). The text of this report has been formulated to address only those problem areas affecting data quality.

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Environmental Scientist/Data Validator

Joseph A. Samchuck

Tetra Tech
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08784	NSAMPLE	MRC-MW144B-020719			MRC-MW146B-020719			MRC-MW147B-020719			MRC-MW156A-020719		
SDG: 240-107850-1	LAB_ID	240-107850-3			240-107850-4			240-107850-5			240-107850-2		
FRACTION: OV	SAMP_DATE	2/7/2019			2/7/2019			2/7/2019			2/7/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		20	U		0.14	U		28	U		0.14	U	
1,1,1-TRICHLOROETHANE		34	U		0.24	U		48	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		19	U		0.13	UJ	C	26	U		0.13	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		59	U		0.41	U		82	U		0.41	U	
1,1-DICHLOROETHANE		24	U		0.17	U		34	U		0.17	U	
1,1-DICHLOROETHENE		27	U		0.19	U		38	U		0.19	U	
1,1-DICHLOROPROPENE		20	U		0.14	U		28	U		0.14	U	
1,2,3-TRICHLOROBENZENE		77	UJ	C	0.54	UJ	C	110	UJ	C	0.54	UJ	C
1,2,3-TRICHLOROPROPANE		34	U		0.24	U		48	U		0.24	U	
1,2,3-TRIMETHYLBENZENE		20	U		0.14	U		28	U		0.14	U	
1,2,4-TRICHLOROBENZENE		37	UJ	C	0.26	UJ	C	52	UJ	C	0.26	UJ	C
1,2,4-TRIMETHYLBENZENE		10	U		0.07	U		14	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		130	UJ	C	0.91	UJ	C	180	UJ	C	0.91	UJ	C
1,2-DIBROMOETHANE		17	U		0.12	U		24	U		0.12	U	
1,2-DICHLOROBENZENE		21	U		0.15	U		30	U		0.15	U	
1,2-DICHLOROETHANE		30	U		0.21	U		42	U		0.21	U	
1,2-DICHLOROPROPANE		21	U		0.15	U		30	U		0.15	U	
1,3-DICHLOROBENZENE		21	U		0.15	U		30	U		0.15	U	
1,3-DICHLOROPROPANE		30	U		0.21	U		42	U		0.21	U	
1,4-DICHLOROBENZENE		23	U		0.16	U		32	U		0.16	U	
2,2-DICHLOROPROPANE		44	U		0.31	U		62	U		0.31	U	
2-BUTANONE		170	U		1.2	U		230	U		1.2	U	
2-CHLOROETHYL VINYL ETHER		37	UR	M	0.26	UR	M	52	UR	M	0.26	UR	M
2-CHLOROTOLUENE		21	U		0.15	U		30	U		0.15	U	
2-HEXANONE		77	U		0.54	UJ	C	110	U		0.54	UJ	C
4-CHLOROTOLUENE		13	U		0.09	U		18	U		0.09	U	
4-ISOPROPYLTOLUENE		19	U		0.13	U		26	U		0.13	U	
4-METHYL-2-PENTANONE		60	U		0.42	UJ	C	84	U		0.42	UJ	C
ACETONE		770	U		5.4	U		1100	U		5.4	U	
BENZENE		19	U		0.13	U		26	U		0.13	U	
BROMOBENZENE		17	U		0.12	U		24	U		0.12	U	
BROMOCHLOROMETHANE		20	U		0.14	U		28	U		0.14	U	
BROMODICHLOROMETHANE		24	U		0.17	U		34	U		0.17	U	
BROMOFORM		110	UJ	C	0.76	UJ	C	150	UJ	C	0.76	UJ	C
BROMOMETHANE		60	U		0.42	U		84	U		0.42	U	

PROJ_NO: 08784	NSAMPLE	TB-020719		
SDG: 240-107850-1	LAB_ID	240-107850-1		
FRACTION: OV	SAMP_DATE	2/7/2019		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U	
1,1,1-TRICHLOROETHANE		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U	
1,1-DICHLOROETHANE		0.17	U	
1,1-DICHLOROETHENE		0.19	U	
1,1-DICHLOROPROPENE		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	U	
1,2,3-TRICHLOROPROPANE		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	U	
1,2,4-TRICHLOROBENZENE		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	UJ	C
1,2-DIBROMOETHANE		0.12	U	
1,2-DICHLOROBENZENE		0.15	U	
1,2-DICHLOROETHANE		0.21	U	
1,2-DICHLOROPROPANE		0.15	U	
1,3-DICHLOROBENZENE		0.15	U	
1,3-DICHLOROPROPANE		0.21	U	
1,4-DICHLOROBENZENE		0.16	U	
2,2-DICHLOROPROPANE		0.31	U	
2-BUTANONE		1.2	U	
2-CHLOROETHYL VINYL ETHER		0.26	UR	M
2-CHLOROTOLUENE		0.15	U	
2-HEXANONE		0.54	UJ	C
4-CHLOROTOLUENE		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U	
4-METHYL-2-PENTANONE		0.42	UJ	C
ACETONE		5.4	U	
BENZENE		0.13	U	
BROMOBENZENE		0.12	U	
BROMOCHLOROMETHANE		0.14	U	
BROMODICHLOROMETHANE		0.17	U	
BROMOFORM		0.76	UJ	C
BROMOMETHANE		0.42	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW144B-020719			MRC-MW146B-020719			MRC-MW147B-020719			MRC-MW156A-020719		
SDG: 240-107850-1	LAB_ID	240-107850-3			240-107850-4			240-107850-5			240-107850-2		
FRACTION: OV	SAMP_DATE	2/7/2019			2/7/2019			2/7/2019			2/7/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		40	UJ	C	0.28	U		56	UJ	C	0.28	U	
CARBON TETRACHLORIDE		37	U		0.26	U		52	U		0.26	U	
CHLOROBENZENE		20	U		0.14	U		28	U		0.14	U	
CHLORODIBROMOMETHANE		56	U		0.39	U		78	U		0.39	U	
CHLOROETHANE		120	U		0.83	U		170	U		0.83	U	
CHLOROFORM		19	U		0.13	U		26	U		0.13	U	
CHLOROMETHANE		29	U		0.2	UJ	C	40	U		0.2	UJ	C
CIS-1,2-DICHLOROETHENE		54	J	P	4.6			33	J	P	0.16	U	
CIS-1,3-DICHLOROPROPENE		87	U		0.61	U		120	U		0.61	U	
DIBROMOMETHANE		13	U		0.09	U		18	U		0.09	U	
DICHLORODIFLUOROMETHANE		50	U		0.35	U		70	U		0.35	U	
DIISOPROPYL ETHER		24	U		0.17	U		34	U		0.17	U	
ETHYL TERT-BUTYL ETHER		21	UJ	C	0.15	UJ	C	30	UJ	C	0.15	UJ	C
ETHYLBENZENE		16	U		0.11	U		22	U		0.11	U	
HEXACHLOROBUTADIENE		120	UJ	C	0.83	UJ	C	170	UJ	C	0.83	UJ	C
ISOPROPYLBENZENE		13	U		0.09	U		18	U		0.09	U	
METHYL TERT-BUTYL ETHER		10	U		0.07	U		14	U		0.07	U	
METHYLENE CHLORIDE		370	UJ	C	2.6	U		520	UJ	C	2.6	U	
NAPHTHALENE		46	UJ	C	0.32	UJ	C	64	UJ	C	0.32	UJ	C
N-BUTYLBENZENE		20	U		0.14	U		28	U		0.14	U	
N-PROPYLBENZENE		21	U		0.15	U		30	U		0.15	U	
SEC-BUTYLBENZENE		19	U		0.13	U		26	U		0.13	U	
STYRENE		14	U		0.1	U		20	U		0.1	U	
TERT-AMYL METHYL ETHER		16	UJ	C	0.11	UJ	C	22	UJ	C	0.11	UJ	C
TERT-BUTYLBENZENE		20	U		0.14	U		28	U		0.14	U	
TERTIARY-BUTYL ALCOHOL		240	U		1.7	UJ	C	340	UJ	D	1.7	UJ	C
TETRACHLOROETHENE		21	U		0.15	U		30	U		0.15	U	
TOLUENE		20	U		0.14	U		28	U		0.14	U	
TOTAL XYLENES		21	U		0.15	U		30	U		0.15	U	
TRANS-1,2-DICHLOROETHENE		27	U		0.19	U		38	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		96	UJ	C	0.67	UJ	C	130	UJ	C	0.67	UJ	C
TRICHLOROETHENE		3600			20			3500			0.14	U	B
TRICHLOROFLUOROMETHANE		64	U		0.45	U		90	U		0.45	U	
VINYL ACETATE		27	U		0.19	UJ	C	38	U		0.19	UJ	C
VINYL CHLORIDE		29	U		0.2	U		40	U		0.2	U	

PROJ_NO: 08784	NSAMPLE	TB-020719		
SDG: 240-107850-1	LAB_ID	240-107850-1		
FRACTION: OV	SAMP_DATE	2/7/2019		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CARBON DISULFIDE		0.28	UJ	C
CARBON TETRACHLORIDE		0.26	U	
CHLOROBENZENE		0.14	U	
CHLORODIBROMOMETHANE		0.39	UJ	C
CHLOROETHANE		0.83	U	
CHLOROFORM		0.13	U	
CHLOROMETHANE		0.21	J	P
CIS-1,2-DICHLOROETHENE		0.16	U	
CIS-1,3-DICHLOROPROPENE		0.61	UJ	C
DIBROMOMETHANE		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	U	
DIISOPROPYL ETHER		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	U	
ETHYLBENZENE		0.11	U	
HEXACHLOROBUTADIENE		0.83	U	
ISOPROPYLBENZENE		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U	
METHYLENE CHLORIDE		2.6	U	
NAPHTHALENE		0.32	U	
N-BUTYLBENZENE		0.14	U	
N-PROPYLBENZENE		0.15	U	
SEC-BUTYLBENZENE		0.13	U	
STYRENE		0.1	U	
TERT-AMYL METHYL ETHER		0.11	UJ	C
TERT-BUTYLBENZENE		0.14	U	
TERTIARY-BUTYL ALCOHOL		1.9	J	CP
TETRACHLOROETHENE		0.15	U	
TOLUENE		0.14	U	
TOTAL XYLENES		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.67	UJ	C
TRICHLOROETHENE		0.17	J	P
TRICHLOROFLUOROMETHANE		0.45	U	
VINYL ACETATE		0.19	UJ	C
VINYL CHLORIDE		0.2	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW156A-020719		
SDG: 240-107850-1	LAB_ID	240-107850-2		
FRACTION: PCB	SAMP_DATE	2/7/2019		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.08	U	
DICHLOROBIPHENYLS		0.0062	U	
HEPTACHLOROBIPHENYLS		0.034	U	
HEXACHLOROBIPHENYLS		0.017	U	
MONOCHLOROBIPHENYLS		0.0064	U	
NONACHLOROBIPHENYLS		0.056	U	
OCTACHLOROBIPHENYLS		0.044	U	
PENTACHLOROBIPHENYLS		0.016	U	
TETRACHLOROBIPHENYLS		0.015	U	
TRICHLOROBIPHENYLS		0.0075	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW144B-020719			MRC-MW144B-020719-RE			MRC-MW146B-020719			MRC-MW146B-020719-RE		
SDG: 240-107850-1	LAB_ID	240-107850-3			240-107850-3			240-107850-4			240-107850-4		
FRACTION: M	SAMP_DATE	2/7/2019			2/7/2019			2/7/2019			2/7/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		140						3000					
ANTIMONY		0.57	U					0.57	U				
ARSENIC		0.75	U					0.75	U				
BARIUM		60						130					
BERYLLIUM		1.7						22					
CADMIUM		0.21	U					1					
CALCIUM		14000						18000					
CHROMIUM		1.3	J	P				3.4					
COBALT		37						260					
COPPER		26						240					
IRON		2400			2400			2300			2500		
LEAD		0.57	J	P				0.56	J	P			
MAGNESIUM		4300						28000					
MANGANESE		140			140			530			600		
NICKEL		67						420					
POTASSIUM		16000						3500					
SELENIUM		0.89	U					0.89	U				
SILVER		0.08	J	P				0.053	U				
SODIUM		34000						190000					
THALLIUM		0.2	U					0.2	U				
VANADIUM		1.1	J	P				0.82	U				
ZINC		90						690					

PROJ_NO: 08784	NSAMPLE	MRC-MW147B-020719			MRC-MW147B-020719-RE			MRC-MW156A-020719			MRC-MW156A-020719-RE		
SDG: 240-107850-1	LAB_ID	240-107850-5			240-107850-5			240-107850-2			240-107850-2		
FRACTION: M	SAMP_DATE	2/7/2019			2/7/2019			2/7/2019			2/7/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		220						87					
ANTIMONY		0.57	U					0.57	U				
ARSENIC		0.75	U					0.75	U				
BARIUM		63						23					
BERYLLIUM		1.7						0.31	U				
CADMIUM		0.21	U					0.21	U				
CALCIUM		6400						110000					
CHROMIUM		1.3	J	P				1.1	J	P			
COBALT		33						0.7	J	P			
COPPER		21	U	A				2.1	U	A			
IRON		2500			2300			290			290		
LEAD		1.1						0.45	U				
MAGNESIUM		4300						30000					
MANGANESE		160			180			44			46		
NICKEL		49						2.2					
POTASSIUM		14000						11000					
SELENIUM		0.89	U					0.89	U				
SILVER		0.053	U					0.053	U				
SODIUM		28000						20000					
THALLIUM		0.2	U					0.2	U				
VANADIUM		0.85	J	P				0.82	U				
ZINC		84						15	U				

PROJ_NO: 08784	NSAMPLE	MRC-MW144B-020719						MRC-MW146B-020719					
SDG: 240-107850-1	LAB_ID	240-107850-3						240-107850-4					
FRACTION: MISC	SAMP_DATE	2/7/2019						2/7/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY	44						2.6	U				
BROMIDE	0.28	J	P				0.13	J	P			
HARDNESS AS CACO3	62						200					
NITRITE/NITRATE-N	0.28						2.4					
SALINITY				2	U					2	U	
SULFATE	15						160					
TOTAL DISSOLVED SOLIDS	190						770					

PROJ_NO: 08784	NSAMPLE	MRC-MW147B-020719						MRC-MW156A-020719					
SDG: 240-107850-1	LAB_ID	240-107850-5						240-107850-2					
FRACTION: MISC	SAMP_DATE	2/7/2019						2/7/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		27						280					
BROMIDE		0.79						0.044	U				
HARDNESS AS CACO3		46						440					
NITRITE/NITRATE-N		0.43						0.04	U				
SALINITY					2	U					2	U	
SULFATE		11						190					
TOTAL DISSOLVED SOLIDS		130						570					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW144B-020719 | Lab Sample ID: 240-107850-3

Matrix: Water | Lab File ID: UXC8817.D

Analysis Method: 8260C | Date Collected: 02/07/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:49

Soil Aliquot Vol: | Dilution Factor: 142.86

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	20	U	140	20
71-55-6	1,1,1-Trichloroethane	34	U	140	34
79-34-5	1,1,2,2-Tetrachloroethane	19	U	140	19
76-13-1	1,1,2-Trichlorotrifluoroethane	59	U	140	59
75-34-3	1,1-Dichloroethane	24	U	140	24
75-35-4	1,1-Dichloroethene	27	U	140	27
563-58-6	1,1-Dichloropropene	20	U	140	20
87-61-6	1,2,3-Trichlorobenzene	77	U	140	77
96-18-4	1,2,3-Trichloropropane	34	U	140	34
526-73-8	1,2,3-Trimethylbenzene	20	U	710	20
120-82-1	1,2,4-Trichlorobenzene	37	U	140	37
95-63-6	1,2,4-Trimethylbenzene	10	U	140	10
96-12-8	1,2-Dibromo-3-Chloropropane	130	U	290	130
95-50-1	1,2-Dichlorobenzene	21	U	140	21
107-06-2	1,2-Dichloroethane	30	U	140	30
78-87-5	1,2-Dichloropropane	21	U	140	21
541-73-1	1,3-Dichlorobenzene	21	U	140	21
142-28-9	1,3-Dichloropropane	30	U	140	30
106-46-7	1,4-Dichlorobenzene	23	U	140	23
594-20-7	2,2-Dichloropropane	44	U	140	44
110-75-8	2-Chloroethyl vinyl ether	37	U	1400	37
95-49-8	2-Chlorotoluene	21	U	140	21
591-78-6	2-Hexanone	77	U	1400	77
108-86-1	Bromobenzene	17	U	140	17
74-97-5	Bromochloromethane	20	U	140	20
106-43-4	4-Chlorotoluene	13	U	140	13
99-87-6	4-Isopropyltoluene	19	U	140	19
67-64-1	Acetone	770	U	1400	770
71-43-2	Benzene	19	U	140	19
75-25-2	Bromoform	110	U	140	110
74-83-9	Bromomethane	60	U	140	60
75-15-0	Carbon disulfide	40	U	140	40
56-23-5	Carbon tetrachloride	37	U	140	37
108-90-7	Chlorobenzene	20	U	140	20
75-00-3	Chloroethane	120	U	140	120
67-66-3	Chloroform	19	U	140	19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW144B-020719 | Lab Sample ID: 240-107850-3

Matrix: Water | Lab File ID: UXC8817.D

Analysis Method: 8260C | Date Collected: 02/07/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:49

Soil Aliquot Vol: | Dilution Factor: 142.86

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	29	U	140	29
156-59-2	cis-1,2-Dichloroethene	54	J	140	23
10061-01-5	cis-1,3-Dichloropropene	87	U	140	87
87-68-3	Hexachlorobutadiene	120	U	140	120
74-95-3	Dibromomethane	13	U	140	13
75-27-4	Bromodichloromethane	24	U	140	24
75-71-8	Dichlorodifluoromethane	50	U	140	50
100-41-4	Ethylbenzene	16	U	140	16
106-93-4	1,2-Dibromoethane	17	U	140	17
108-20-3	Diisopropyl ether	24	U	1400	24
91-20-3	Naphthalene	46	U	140	46
104-51-8	n-Butylbenzene	20	U	140	20
98-82-8	Isopropylbenzene	13	U	140	13
103-65-1	N-Propylbenzene	21	U	140	21
78-93-3	2-Butanone (MEK)	170	U	1400	170
108-10-1	4-Methyl-2-pentanone (MIBK)	60	U	1400	60
135-98-8	sec-Butylbenzene	19	U	140	19
1634-04-4	Methyl tert-butyl ether	10	U	140	10
994-05-8	Tert-amyl methyl ether	16	U	710	16
75-09-2	Methylene Chloride	370	U	710	370
100-42-5	Styrene	14	U	140	14
637-92-3	Ethyl tert-butyl ether	21	U	710	21
98-06-6	tert-Butylbenzene	20	U	140	20
127-18-4	Tetrachloroethene	21	U	140	21
108-88-3	Toluene	20	U	140	20
156-60-5	trans-1,2-Dichloroethene	27	U	140	27
10061-02-6	trans-1,3-Dichloropropene	96	U	140	96
79-01-6	Trichloroethene	3600		140	14
75-69-4	Trichlorofluoromethane	64	U	140	64
108-05-4	Vinyl acetate	27	U	290	27
75-01-4	Vinyl chloride	29	U	140	29
75-65-0	tert-Butyl alcohol	240	U	7100	240
1330-20-7	Xylenes, Total	21	U	290	21
124-48-1	Chlorodibromomethane	56	U	140	56

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW144B-020719 | Lab Sample ID: 240-107850-3

Matrix: Water | Lab File ID: UXC8817.D

Analysis Method: 8260C | Date Collected: 02/07/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:49

Soil Aliquot Vol: | Dilution Factor: 142.86

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	90		70-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW146B-020719 | Lab Sample ID: 240-107850-4

Matrix: Water | Lab File ID: UXC8832.D

Analysis Method: 8260C | Date Collected: 02/07/2019 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 14:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW146B-020719 | Lab Sample ID: 240-107850-4

Matrix: Water | Lab File ID: UXC8832.D

Analysis Method: 8260C | Date Collected: 02/07/2019 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 14:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	4.6		1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	20		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW146B-020719 | Lab Sample ID: 240-107850-4

Matrix: Water | Lab File ID: UXC8832.D

Analysis Method: 8260C | Date Collected: 02/07/2019 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 14:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		70-121
460-00-4	4-Bromofluorobenzene (Surr)	78		59-120
2037-26-5	Toluene-d8 (Surr)	84		70-123
1868-53-7	Dibromofluoromethane (Surr)	89		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW147B-020719 | Lab Sample ID: 240-107850-5

Matrix: Water | Lab File ID: UXC8819.D

Analysis Method: 8260C | Date Collected: 02/07/2019 13:55

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 17:32

Soil Aliquot Vol: | Dilution Factor: 200

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	28	U	200	28
71-55-6	1,1,1-Trichloroethane	48	U	200	48
79-34-5	1,1,2,2-Tetrachloroethane	26	U	200	26
76-13-1	1,1,2-Trichlorotrifluoroethane	82	U F2	200	82
75-34-3	1,1-Dichloroethane	34	U	200	34
75-35-4	1,1-Dichloroethene	38	U	200	38
563-58-6	1,1-Dichloropropene	28	U	200	28
87-61-6	1,2,3-Trichlorobenzene	110	U	200	110
96-18-4	1,2,3-Trichloropropane	48	U	200	48
526-73-8	1,2,3-Trimethylbenzene	28	U	1000	28
120-82-1	1,2,4-Trichlorobenzene	52	U	200	52
95-63-6	1,2,4-Trimethylbenzene	14	U	200	14
96-12-8	1,2-Dibromo-3-Chloropropane	180	U	400	180
95-50-1	1,2-Dichlorobenzene	30	U	200	30
107-06-2	1,2-Dichloroethane	42	U	200	42
78-87-5	1,2-Dichloropropane	30	U	200	30
541-73-1	1,3-Dichlorobenzene	30	U	200	30
142-28-9	1,3-Dichloropropane	42	U	200	42
106-46-7	1,4-Dichlorobenzene	32	U	200	32
594-20-7	2,2-Dichloropropane	62	U	200	62
110-75-8	2-Chloroethyl vinyl ether	52	U	2000	52
95-49-8	2-Chlorotoluene	30	U	200	30
591-78-6	2-Hexanone	110	U	2000	110
108-86-1	Bromobenzene	24	U	200	24
74-97-5	Bromochloromethane	28	U	200	28
106-43-4	4-Chlorotoluene	18	U	200	18
99-87-6	4-Isopropyltoluene	26	U	200	26
67-64-1	Acetone	1100	U	2000	1100
71-43-2	Benzene	26	U	200	26
75-25-2	Bromoform	150	U	200	150
74-83-9	Bromomethane	84	U	200	84
75-15-0	Carbon disulfide	56	U	200	56
56-23-5	Carbon tetrachloride	52	U	200	52
108-90-7	Chlorobenzene	28	U	200	28
75-00-3	Chloroethane	170	U	200	170
67-66-3	Chloroform	26	U	200	26

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW147B-020719 | Lab Sample ID: 240-107850-5

Matrix: Water | Lab File ID: UXC8819.D

Analysis Method: 8260C | Date Collected: 02/07/2019 13:55

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 17:32

Soil Aliquot Vol: | Dilution Factor: 200

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	40	U	200	40
156-59-2	cis-1,2-Dichloroethene	33	J	200	32
10061-01-5	cis-1,3-Dichloropropene	120	U	200	120
87-68-3	Hexachlorobutadiene	170	U	200	170
74-95-3	Dibromomethane	18	U	200	18
75-27-4	Bromodichloromethane	34	U	200	34
75-71-8	Dichlorodifluoromethane	70	U F2	200	70
100-41-4	Ethylbenzene	22	U	200	22
106-93-4	1,2-Dibromoethane	24	U	200	24
108-20-3	Diisopropyl ether	34	U	2000	34
91-20-3	Naphthalene	64	U	200	64
104-51-8	n-Butylbenzene	28	U	200	28
98-82-8	Isopropylbenzene	18	U	200	18
103-65-1	N-Propylbenzene	30	U	200	30
78-93-3	2-Butanone (MEK)	230	U	2000	230
108-10-1	4-Methyl-2-pentanone (MIBK)	84	U	2000	84
135-98-8	sec-Butylbenzene	26	U	200	26
1634-04-4	Methyl tert-butyl ether	14	U	200	14
994-05-8	Tert-amyl methyl ether	22	U	1000	22
75-09-2	Methylene Chloride	520	U	1000	520
100-42-5	Styrene	20	U	200	20
637-92-3	Ethyl tert-butyl ether	30	U	1000	30
98-06-6	tert-Butylbenzene	28	U	200	28
127-18-4	Tetrachloroethene	30	U	200	30
108-88-3	Toluene	28	U	200	28
156-60-5	trans-1,2-Dichloroethene	38	U	200	38
10061-02-6	trans-1,3-Dichloropropene	130	U	200	130
79-01-6	Trichloroethene	3500		200	20
75-69-4	Trichlorofluoromethane	90	U F2	200	90
108-05-4	Vinyl acetate	38	U	400	38
75-01-4	Vinyl chloride	40	U	200	40
75-65-0	tert-Butyl alcohol	340	U F1	10000	340
1330-20-7	Xylenes, Total	30	U	400	30
124-48-1	Chlorodibromomethane	78	U	200	78

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW147B-020719 | Lab Sample ID: 240-107850-5

Matrix: Water | Lab File ID: UXC8819.D

Analysis Method: 8260C | Date Collected: 02/07/2019 13:55

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 17:32

Soil Aliquot Vol: | Dilution Factor: 200

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	88		70-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW156A-020719 | Lab Sample ID: 240-107850-2

Matrix: Water | Lab File ID: UXC8831.D

Analysis Method: 8260C | Date Collected: 02/07/2019 08:50

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 13:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW156A-020719 | Lab Sample ID: 240-107850-2

Matrix: Water | Lab File ID: UXC8831.D

Analysis Method: 8260C | Date Collected: 02/07/2019 08:50

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 13:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.14	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW156A-020719 | Lab Sample ID: 240-107850-2

Matrix: Water | Lab File ID: UXC8831.D

Analysis Method: 8260C | Date Collected: 02/07/2019 08:50

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 13:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		70-121
460-00-4	4-Bromofluorobenzene (Surr)	78		59-120
2037-26-5	Toluene-d8 (Surr)	82		70-123
1868-53-7	Dibromofluoromethane (Surr)	87		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: TB-020719 | Lab Sample ID: 240-107850-1

Matrix: Water | Lab File ID: UXC8775.D

Analysis Method: 8260C | Date Collected: 02/07/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 14:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: TB-020719 | Lab Sample ID: 240-107850-1

Matrix: Water | Lab File ID: UXC8775.D

Analysis Method: 8260C | Date Collected: 02/07/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 14:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.21	J	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.17	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.9	J	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: TB-020719 | Lab Sample ID: 240-107850-1

Matrix: Water | Lab File ID: UXC8775.D

Analysis Method: 8260C | Date Collected: 02/07/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 14:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		70-121
460-00-4	4-Bromofluorobenzene (Surr)	80		59-120
2037-26-5	Toluene-d8 (Surr)	86		70-123
1868-53-7	Dibromofluoromethane (Surr)	83		75-128

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW156A-020719 | Lab Sample ID: 240-107850-2

Matrix: Water | Lab File ID: xb2514.D

Analysis Method: 680 | Date Collected: 02/07/2019 08:50

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 871.6(mL) | Date Analyzed: 02/25/2019 17:24

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559536 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.034	U	0.34	0.034
26601-64-9	Hexachlorobiphenyl	0.017	U	0.23	0.017
53742-07-7	Nonachlorobiphenyl	0.056	U	0.57	0.056
55722-26-4	Octachlorobiphenyl	0.044	U	0.34	0.044
27323-18-8	Monochlorobiphenyl	0.0064	U	0.11	0.0064
2051-24-3	DCB Decachlorobiphenyl	0.080	U	0.57	0.080
25512-42-9	Dichlorobiphenyl	0.0062	U	0.11	0.0062
25429-29-2	Pentachlorobiphenyl	0.016	U	0.23	0.016
26914-33-0	Tetrachlorobiphenyl	0.015	U	0.23	0.015
25323-68-6	Trichlorobiphenyl	0.0075	U	0.11	0.0075

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	66		25-113

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW144B-020719 Lab Sample ID: 240-107850-3

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 11:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	2400	200	26	ug/L			1	6010C
7439-96-5	Manganese	140	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.080	1.0	0.053	ug/L	J		1	6020A
7429-90-5	Aluminum	140	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	60	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.7	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	37	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	1.3	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	26	2.0	1.7	ug/L		B	1	6020A
7439-89-6	Iron	2400	100	47	ug/L			1	6020A
7439-96-5	Manganese	140	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	67	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.57	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	1.1	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	90	20	15	ug/L			1	6020A
7440-70-2	Calcium	14000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	16000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	4300	1000	200	ug/L			1	6020A
7440-23-5	Sodium	34000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW146B-020719 Lab Sample ID: 240-107850-4

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	2300	200	26	ug/L			1	6010C
7439-96-5	Manganese	530	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	3000	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	130	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	22	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	1.0	1.0	0.21	ug/L			1	6020A
7440-48-4	Cobalt	260	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	3.4	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	240	2.0	1.7	ug/L		B	1	6020A
7439-89-6	Iron	2500	100	47	ug/L			1	6020A
7439-96-5	Manganese	600	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	420	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.56	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	690	20	15	ug/L			1	6020A
7440-70-2	Calcium	18000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	3500	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	28000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	190000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW147B-020719 Lab Sample ID: 240-107850-5

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:55

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	2500	200	26	ug/L			1	6010C
7439-96-5	Manganese	160	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	220	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	63	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.7	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	33	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	1.3	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	21	2.0	1.7	ug/L		B	1	6020A
7439-89-6	Iron	2300	100	47	ug/L			1	6020A
7439-96-5	Manganese	180	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	49	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	1.1	1.0	0.45	ug/L			1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.85	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	84	20	15	ug/L			1	6020A
7440-70-2	Calcium	6400	1000	580	ug/L			1	6020A
7440-09-7	Potassium	14000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	4300	1000	200	ug/L			1	6020A
7440-23-5	Sodium	28000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW156A-020719 Lab Sample ID: 240-107850-2

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 08:50

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	290	200	26	ug/L			1	6010C
7439-96-5	Manganese	44	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	87	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	23	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.31	1.0	0.31	ug/L	U		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	0.70	1.0	0.19	ug/L	J		1	6020A
7440-47-3	Chromium	1.1	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	2.1	2.0	1.7	ug/L		B	1	6020A
7439-89-6	Iron	290	100	47	ug/L			1	6020A
7439-96-5	Manganese	46	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	2.2	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	15	20	15	ug/L	U		1	6020A
7440-70-2	Calcium	110000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	11000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	30000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	20000	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW144B-020719 Lab Sample ID: 240-107850-3

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 11:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	62	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	44	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	190	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.28	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	15	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW144B-020719 Lab Sample ID: 240-107850-3

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 11:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.28	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW144B-020719 Lab Sample ID: 240-107850-3

Lab Name: TestAmerica Pittsburgh Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 11:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW146B-020719 Lab Sample ID: 240-107850-4

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	200	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	2.6	5.0	2.6	mg/L	U		1	2320B-2011
	Total Dissolved Solids	770	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.13	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	160	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW146B-020719 Lab Sample ID: 240-107850-4

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	2.4	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW146B-020719 Lab Sample ID: 240-107850-4

Lab Name: TestAmerica Pittsburgh Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:00

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW147B-020719 Lab Sample ID: 240-107850-5

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:55

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	46	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	27	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	130	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.79	0.50	0.044	mg/L			1	300.0
14808-79-8	Sulfate	11	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW147B-020719 Lab Sample ID: 240-107850-5

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:55

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.43	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW147B-020719 Lab Sample ID: 240-107850-5

Lab Name: TestAmerica Pittsburgh Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 13:55

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW156A-020719 Lab Sample ID: 240-107850-2

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 08:50

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	440	25	12	mg/L			1	2340C-2011
	Alkalinity	280	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	570	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	190	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW156A-020719 Lab Sample ID: 240-107850-2

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 08:50

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.040	0.10	0.040	mg/L	U		1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW156A-020719 Lab Sample ID: 240-107850-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 08:50

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

APPENDIX C

SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass Discharge

Report Number: 240-107850-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The 680 Polychlorinated Biphenyls analysis was performed at the TestAmerica Savannah laboratory. The 4500NO3-F Nitrate Nitrite as N analysis was performed at the TestAmerica Nashville laboratory. The 9050A Specific Conductance and the 2520-B Salinity analyses were performed at the TestAmerica Pittsburgh laboratory.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 2/8/2019 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.5º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-020719 (240-107850-1), MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/11/2019, 02/13/2019 and 02/14/2019.

Methylene Chloride was detected in method blank MB 240-367892/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Samples MRC-MW144B-020719 (240-107850-3)[142.86X] and MRC-MW147B-020719 (240-107850-5)[200X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 307509 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TB-020719 (240-107850-1)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following samples were received in hydrochloric preserved vials: TB-020719 (240-107850-1), MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5)

The continuing calibration verification (CCV) for analytical batch 367892 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. MRC-MW144B-020719 (240-107850-3) and MRC-MW147B-020719 (240-107850-5)

No MS/MSD in batch due to an incorrect dilution. Batch contained the following samples: MRC-MW156A-020719 (240-107850-2) and

MRC-MW146B-020719 (240-107850-4)

The continuing calibration verification (CCV) for analytical batch 368049 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. MRC-MW156A-020719 (240-107850-2) and MRC-MW146B-020719 (240-107850-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)
Sample MRC-MW156A-020719 (240-107850-2) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The sample was prepared on 02/19/2019 and analyzed on 02/25/2019.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 680-558728.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/11/2019 and analyzed on 02/12/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 02/11/2019 and analyzed on 02/13/2019.

Copper was detected in method blank MB 240-367484/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 02/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 02/19/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 02/12/2019 and 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for anions in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 02/12/2019 and 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for Salinity in accordance with SM 2520B. The samples were analyzed on 02/27/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE
Samples MRC-MW156A-020719 (240-107850-2), MRC-MW144B-020719 (240-107850-3), MRC-MW146B-020719 (240-107850-4) and MRC-MW147B-020719 (240-107850-5) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 02/17/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-107850-1
Project/Site: MRC Block E/F Mass Discharge

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
680	Liquid-Liquid Extraction (Separatory Funnel)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107850-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107850-1	TB-020719	Water	02/07/19 00:00	02/08/19 10:00
240-107850-2	MRC-MW156A-020719	Water	02/07/19 08:50	02/08/19 10:00
240-107850-3	MRC-MW144B-020719	Water	02/07/19 11:00	02/08/19 10:00
240-107850-4	MRC-MW146B-020719	Water	02/07/19 13:00	02/08/19 10:00
240-107850-5	MRC-MW147B-020719	Water	02/07/19 13:55	02/08/19 10:00

North Canton
4101 Shuffel Street, N. W.

North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

0.5/0.5

Chain of Custody Record

Baltimore #201

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Mike Martin	Site Contact: Walt Pryor	Date: 2/7/19	COC No:
20251 Century Blvd, Suite 200	Analysis Turnaround Time			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W)			
(301) 528-3021 Phone	TAT if different from Below STANDARD TAT			SDG No.
(301) 528-3000 FAX	☐ 2 weeks			
Project Name: MRC BLOCK E/F MASS DISCHARGE	☐ 1 week			
Site: MRC BLOCK E	☐ 2 days			Sampler: Walt Pryor
PO # 112IC08784	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (SW0846 8260C)	Total Metals/Hardness (6020A, 2340C)	Sulfate, Nitrates, TDS (9056A, 4500-NO3E, 2540C	Bromide (300)	Iron and Manganese (6010C	Alkalinity (SM 2320B)	Salinity (2520B)	PCBs (680)	Sample Specific Notes:
TB-020719	2/7/19	—	GRAB	WATER	2		x								
MRC-MW156A-020719	↓	0850	GRAB	↓	10		X	X	X	A	X	a	X	X	* Not enough water for 2 aliquots
MRC-MW144B-020719		1100	↓		9		X	X	X	X	X	a	X		
MRC-MW146B-020719		1300			9		X	X	X	X	X	X	X		
MRC-MW147B-020719		1355			9		X	X	X	X	X	X	X		
				2/7/19											

240-107850 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

2	4	6	1	4	1	1	1

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: Block E/F Mass discharge well sampling. MW156A only has one amber due to insufficient volume in well
NEED TB FROM TA COURIER

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Tetra Tech Inc	2/7/19		TA	2/7/19 1500
	TA	2/7/19 1700		TA	2-8-19 1000

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 107850**
Canton Facility

Client TA Site Name

Cooler Received on 2-8-19 Opened on 2-8-19 1000

Cooler unpacked by: Ryan Cribley

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # TA Foam Box Client Cooler Box Other

Packing material used: (Bubble Wrap) Foam (Plastic Bag) None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 0.5 °C Corrected Cooler Temp. 0.5 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Coord (Yes) No
16. Was a LL Hg or Me Hg trip blank present? Yes (No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

~~Trip Blanks were labeled to stay in cooler.~~ SC

18. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW156A-020719	240-107850-F-2	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW156A-020719	240-107850-G-2	Plastic 250ml - with Nitric Acid	<2		
MRC-MW156A-020719	240-107850-I-2	Plastic 500ml - with Nitric Acid	<2		
MRC-MW144B-020719	240-107850-F-3	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW144B-020719	240-107850-G-3	Plastic 250ml - with Nitric Acid	<2		
MRC-MW144B-020719	240-107850-I-3	Plastic 500ml - with Nitric Acid	<2		
MRC-MW146B-020719	240-107850-F-4	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW146B-020719	240-107850-G-4	Plastic 250ml - with Nitric Acid	<2		
MRC-MW146B-020719	240-107850-I-4	Plastic 500ml - with Nitric Acid	<2		
MRC-MW147B-020719	240-107850-F-5	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW147B-020719	240-107850-G-5	Plastic 250ml - with Nitric Acid	<2		
MRC-MW147B-020719	240-107850-I-5	Plastic 500ml - with Nitric Acid	<2		

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-020719	240-107850-1	83	90	86	80
MRC-MW156A-020719	240-107850-2	87	93	82	78
MRC-MW144B-020719	240-107850-3	91	99	90	83
MRC-MW146B-020719	240-107850-4	89	93	84	78
MRC-MW147B-020719	240-107850-5	91	98	88	81
	MB 240-367509/6	86	92	86	81
	MB 240-367892/6	91	97	89	85
	MB 240-368049/6	88	95	86	83
	LCS 240-367509/4	97	94	94	92
	LCS 240-367892/4	90	88	84	84
	LCS 240-368049/4	90	87	85	85
MRC-MW147B-020719 MS	240-107850-5 MS	91	89	86	85
MRC-MW147B-020719 MSD	240-107850-5 MSD	89	89	88	85

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab File ID: UXC8770.D Lab Sample ID: MB 240-367509/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/11/2019 12:40

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367509/4	UXC8766.D	02/11/2019 11:13
TB-020719	240-107850-1	UXC8775.D	02/11/2019 14:30

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	86		70-123
1868-53-7	Dibromofluoromethane (Surr)	86		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.03	90	80-124	
1,1,1-Trichloroethane	10.0	10.5	105	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.69	87	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.62	96	50-156	
1,1-Dichloroethane	10.0	10.5	105	75-133	
1,1-Dichloroethene	10.0	9.12	91	65-139	
1,1-Dichloropropene	10.0	9.95	99	78-126	
1,2,3-Trichlorobenzene	10.0	8.95	90	39-138	
1,2,3-Trichloropropane	10.0	8.85	88	66-139	
1,2,4-Trichlorobenzene	10.0	8.66	87	42-133	
1,2,4-Trimethylbenzene	10.0	9.49	95	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.72	57	46-132	
1,2-Dichlorobenzene	10.0	9.87	99	78-120	
1,2-Dichloroethane	10.0	10.3	103	71-135	
1,2-Dichloropropane	10.0	10.6	106	78-133	
1,3-Dichlorobenzene	10.0	9.58	96	78-120	
1,3-Dichloropropane	10.0	9.50	95	72-134	
1,4-Dichlorobenzene	10.0	9.63	96	78-120	
2,2-Dichloropropane	10.0	10.5	105	42-150	
2-Chloroethyl vinyl ether	10.0	8.08 J	81	55-137	
2-Chlorotoluene	10.0	9.67	97	78-123	
2-Hexanone	20.0	15.5	77	43-148	
Bromobenzene	10.0	9.69	97	74-129	
Bromochloromethane	10.0	10.7	107	74-130	
4-Chlorotoluene	10.0	9.49	95	77-125	
4-Isopropyltoluene	10.0	9.40	94	69-122	
Acetone	20.0	17.4	87	21-162	
Benzene	10.0	10.6	106	80-123	
Bromoform	10.0	5.03	50	49-141	
Bromomethane	10.0	8.44	84	41-175	
Carbon disulfide	10.0	7.88	79	60-138	
Carbon tetrachloride	10.0	9.20	92	63-140	
Chlorobenzene	10.0	10.0	100	80-121	
Chloroethane	10.0	8.43	84	33-173	
Chloroform	10.0	10.5	105	79-127	
Chloromethane	10.0	8.83	88	54-143	
cis-1,2-Dichloroethene	10.0	10.6	106	76-128	
cis-1,3-Dichloropropene	10.0	8.94	89	64-132	
Hexachlorobutadiene	10.0	8.16	82	38-136	
Dibromomethane	10.0	9.67	97	74-124	
Bromodichloromethane	10.0	8.78	88	77-125	
Dichlorodifluoromethane	10.0	7.36	74	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.78	98	80-120	
1,2-Dibromoethane	10.0	8.95	89	77-123	
Naphthalene	10.0	7.76	78	28-141	
m-Xylene & p-Xylene	10.0	9.69	97	80-120	
n-Butylbenzene	10.0	8.82	88	57-126	
Isopropylbenzene	10.0	9.80	98	74-120	
N-Propylbenzene	10.0	9.40	94	77-123	
2-Butanone (MEK)	20.0	17.5	87	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.8	84	49-143	
sec-Butylbenzene	10.0	9.10	91	68-123	
Methyl tert-butyl ether	10.0	8.88	89	51-133	
Methylene Chloride	10.0	9.41	94	70-134	
o-Xylene	10.0	9.98	100	80-120	
Styrene	10.0	9.34	93	79-120	
tert-Butylbenzene	10.0	9.02	90	70-121	
Tetrachloroethene	10.0	9.77	98	74-130	
Toluene	10.0	10.0	100	78-129	
trans-1,2-Dichloroethene	10.0	10.7	107	78-133	
trans-1,3-Dichloropropene	10.0	7.22	72	55-128	
Trichloroethene	10.0	10.3	103	76-125	
Trichlorofluoromethane	10.0	9.69	97	51-164	
Vinyl acetate	10.0	8.28	83	45-151	
Vinyl chloride	10.0	8.69	87	58-143	
tert-Butyl alcohol	100	59.8	60	10-161	
Xylenes, Total	20.0	19.7	98	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab File ID: UXC8811.D Lab Sample ID: MB 240-367892/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/13/2019 13:38

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367892/4	UXC8807.D	02/13/2019 12:10
MRC-MW144B-020719	240-107850-3	UXC8817.D	02/13/2019 16:49
MRC-MW147B-020719	240-107850-5	UXC8819.D	02/13/2019 17:32
MRC-MW147B-020719 MS	240-107850-5 MS	UXC8821.D	02/13/2019 18:16
MRC-MW147B-020719 MSD	240-107850-5 MSD	UXC8822.D	02/13/2019 18:38

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367892/6

Matrix: Water | Lab File ID: UXC8811.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367892/6

Matrix: Water | Lab File ID: UXC8811.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.78	J	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367892/6

Matrix: Water | Lab File ID: UXC8811.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-121
460-00-4	4-Bromofluorobenzene (Surr)	85		59-120
2037-26-5	Toluene-d8 (Surr)	89		70-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.60	86	80-124	
1,1,1-Trichloroethane	10.0	10.1	101	69-134	
1,1,2,2-Tetrachloroethane	10.0	7.96	80	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.94	99	50-156	
1,1-Dichloroethane	10.0	10.0	100	75-133	
1,1-Dichloroethene	10.0	8.97	90	65-139	
1,1-Dichloropropene	10.0	9.59	96	78-126	
1,2,3-Trichlorobenzene	10.0	8.32	83	39-138	
1,2,3-Trichloropropane	10.0	8.35	84	66-139	
1,2,4-Trichlorobenzene	10.0	8.22	82	42-133	
1,2,4-Trimethylbenzene	10.0	8.77	88	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.66	57	46-132	
1,2-Dichlorobenzene	10.0	9.22	92	78-120	
1,2-Dichloroethane	10.0	9.95	99	71-135	
1,2-Dichloropropane	10.0	9.85	99	78-133	
1,3-Dichlorobenzene	10.0	8.91	89	78-120	
1,3-Dichloropropane	10.0	8.96	90	72-134	
1,4-Dichlorobenzene	10.0	8.98	90	78-120	
2,2-Dichloropropane	10.0	9.68	97	42-150	
2-Chloroethyl vinyl ether	10.0	7.11 J	71	55-137	
2-Chlorotoluene	10.0	8.99	90	78-123	
2-Hexanone	20.0	15.3	77	43-148	
Bromobenzene	10.0	9.08	91	74-129	
Bromochloromethane	10.0	10.2	102	74-130	
4-Chlorotoluene	10.0	8.70	87	77-125	
4-Isopropyltoluene	10.0	8.79	88	69-122	
Acetone	20.0	16.3	81	21-162	
Benzene	10.0	10.1	101	80-123	
Bromoform	10.0	5.22	52	49-141	
Bromomethane	10.0	7.90	79	41-175	
Carbon disulfide	10.0	7.70	77	60-138	
Carbon tetrachloride	10.0	8.94	89	63-140	
Chlorobenzene	10.0	9.44	94	80-121	
Chloroethane	10.0	7.96	80	33-173	
Chloroform	10.0	10.1	101	79-127	
Chloromethane	10.0	7.52	75	54-143	
cis-1,2-Dichloroethene	10.0	10.1	101	76-128	
cis-1,3-Dichloropropene	10.0	8.48	85	64-132	
Hexachlorobutadiene	10.0	7.72	77	38-136	
Dibromomethane	10.0	9.26	93	74-124	
Bromodichloromethane	10.0	8.40	84	77-125	
Dichlorodifluoromethane	10.0	5.94	59	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.29	93	80-120	
1,2-Dibromoethane	10.0	8.51	85	77-123	
Naphthalene	10.0	7.20	72	28-141	
m-Xylene & p-Xylene	10.0	9.41	94	80-120	
n-Butylbenzene	10.0	8.24	82	57-126	
Isopropylbenzene	10.0	9.54	95	74-120	
N-Propylbenzene	10.0	8.77	88	77-123	
2-Butanone (MEK)	20.0	17.0	85	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	15.5	78	49-143	
sec-Butylbenzene	10.0	8.62	86	68-123	
Methyl tert-butyl ether	10.0	8.10	81	51-133	
Methylene Chloride	10.0	13.1	131	70-134	
o-Xylene	10.0	9.59	96	80-120	
Styrene	10.0	9.02	90	79-120	
tert-Butylbenzene	10.0	8.40	84	70-121	
Tetrachloroethene	10.0	9.78	98	74-130	
Toluene	10.0	9.59	96	78-129	
trans-1,2-Dichloroethene	10.0	10.2	102	78-133	
trans-1,3-Dichloropropene	10.0	6.92	69	55-128	
Trichloroethene	10.0	9.91	99	76-125	
Trichlorofluoromethane	10.0	8.99	90	51-164	
Vinyl acetate	10.0	7.96	80	45-151	
Vinyl chloride	10.0	7.98	80	58-143	
tert-Butyl alcohol	100	60.7	61	10-161	
Xylenes, Total	20.0	19.0	95	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8821.D

Lab ID: 240-107850-5 MS Client ID: MRC-MW147B-020719 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	2000	28 U	1540	77	67-123	
1,1,1-Trichloroethane	2000	48 U	1730	86	51-138	
1,1,2,2-Tetrachloroethane	2000	26 U	1540	77	60-137	
1,1,2-Trichlorotrifluoroethane	2000	82 U	822	41	31-156	
1,1-Dichloroethane	2000	34 U	1900	95	63-136	
1,1-Dichloroethene	2000	38 U	1610	80	53-140	
1,1-Dichloropropene	2000	28 U	1690	84	62-127	
1,2,3-Trichlorobenzene	2000	110 U	1530	76	34-123	
1,2,3-Trichloropropane	2000	48 U	1610	80	61-143	
1,2,4-Trichlorobenzene	2000	52 U	1470	73	30-126	
1,2,4-Trimethylbenzene	2000	14 U	1600	80	62-120	
1,2-Dibromo-3-Chloropropane	2000	180 U	962	48	38-124	
1,2-Dichlorobenzene	2000	30 U	1750	87	64-120	
1,2-Dichloroethane	2000	42 U	1920	96	65-135	
1,2-Dichloropropane	2000	30 U	1900	95	70-132	
1,3-Dichlorobenzene	2000	30 U	1680	84	62-120	
1,3-Dichloropropane	2000	42 U	1750	88	68-135	
1,4-Dichlorobenzene	2000	32 U	1720	86	63-120	
2,2-Dichloropropane	2000	62 U	1560	78	27-132	
2-Chloroethyl vinyl ether	2000	52 U	1170 J	59	10-120	
2-Chlorotoluene	2000	30 U	1660	83	64-123	
2-Hexanone	4000	110 U	2960	74	42-150	
Bromobenzene	2000	24 U	1700	85	66-127	
Bromochloromethane	2000	28 U	1930	96	73-120	
4-Chlorotoluene	2000	18 U	1630	82	63-126	
4-Isopropyltoluene	2000	26 U	1500	75	59-120	
Acetone	4000	1100 U	3680	92	10-168	
Benzene	2000	26 U	1950	97	71-122	
Bromoform	2000	150 U	926	46	44-129	
Bromomethane	2000	84 U	1350	68	19-187	
Carbon disulfide	2000	56 U	1150	58	43-144	
Carbon tetrachloride	2000	52 U	1360	68	41-143	
Chlorobenzene	2000	28 U	1840	92	70-123	
Chloroethane	2000	170 U	1450	72	11-189	
Chloroform	2000	26 U	1950	98	68-130	
Chloromethane	2000	40 U	1630	81	31-154	
cis-1,2-Dichloroethene	2000	33 J	1980	97	64-130	
cis-1,3-Dichloropropene	2000	120 U	1500	75	48-127	
Hexachlorobutadiene	2000	170 U	1160	58	32-128	
Dibromomethane	2000	18 U	1780	89	71-120	
Bromodichloromethane	2000	34 U	1550	77	64-125	
Dichlorodifluoromethane	2000	70 U	666	33	28-136	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8821.D

Lab ID: 240-107850-5 MS Client ID: MRC-MW147B-020719 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethylbenzene	2000	22 U	1750	87	66-120	
1,2-Dibromoethane	2000	24 U	1630	82	71-123	
Naphthalene	2000	64 U	1330	66	31-142	
m-Xylene & p-Xylene	2000	16 U	1750	87	63-121	
n-Butylbenzene	2000	28 U	1340	67	51-120	
Isopropylbenzene	2000	18 U	1700	85	59-120	
N-Propylbenzene	2000	30 U	1560	78	61-123	
2-Butanone (MEK)	4000	230 U	3380	85	37-156	
4-Methyl-2-pentanone (MIBK)	4000	84 U	3030	76	44-143	
sec-Butylbenzene	2000	26 U	1430	71	60-120	
Methyl tert-butyl ether	2000	14 U	1470	74	41-136	
Methylene Chloride	2000	520 U	1860	93	61-130	
o-Xylene	2000	18 U	1770	89	69-120	
Styrene	2000	20 U	1720	86	68-120	
tert-Butylbenzene	2000	28 U	1460	73	61-120	
Tetrachloroethene	2000	30 U	1690	85	51-136	
Toluene	2000	28 U	1820	91	62-132	
trans-1,2-Dichloroethene	2000	38 U	1960	98	68-133	
trans-1,3-Dichloropropene	2000	130 U	1210	60	40-125	
Trichloroethene	2000	3500	5230	87	55-131	
Trichlorofluoromethane	2000	90 U	1130	57	37-174	
Vinyl acetate	2000	38 U	1410	70	37-148	
Vinyl chloride	2000	40 U	1340	67	43-154	
tert-Butyl alcohol	20000	340 U	12600	63	70-130	F1
Xylenes, Total	4000	30 U	3520	88	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8822.D

Lab ID: 240-107850-5 MSD Client ID: MRC-MW147B-020719 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	2000	1650	83	7	13	67-123	
1,1,1-Trichloroethane	2000	1890	95	9	27	51-138	
1,1,2,2-Tetrachloroethane	2000	1650	83	7	31	60-137	
1,1,2-Trichlorotrifluoroethane	2000	1970	99	82	35	31-156	F2
1,1-Dichloroethane	2000	1950	97	2	23	63-136	
1,1-Dichloroethene	2000	1770	88	9	35	53-140	
1,1-Dichloropropene	2000	1910	95	12	20	62-127	
1,2,3-Trichlorobenzene	2000	1680	84	10	35	34-123	
1,2,3-Trichloropropane	2000	1730	86	7	22	61-143	
1,2,4-Trichlorobenzene	2000	1590	79	8	35	30-126	
1,2,4-Trimethylbenzene	2000	1710	85	6	27	62-120	
1,2-Dibromo-3-Chloropropane	2000	1040	52	8	35	38-124	
1,2-Dichlorobenzene	2000	1820	91	4	30	64-120	
1,2-Dichloroethane	2000	1990	99	4	24	65-135	
1,2-Dichloropropane	2000	1970	99	4	26	70-132	
1,3-Dichlorobenzene	2000	1750	88	5	31	62-120	
1,3-Dichloropropane	2000	1840	92	5	15	68-135	
1,4-Dichlorobenzene	2000	1790	90	4	28	63-120	
2,2-Dichloropropane	2000	1740	87	11	18	27-132	
2-Chloroethyl vinyl ether	2000	1240 J	62	6	35	10-120	
2-Chlorotoluene	2000	1740	87	5	20	64-123	
2-Hexanone	4000	3030	76	2	35	42-150	
Bromobenzene	2000	1800	90	6	19	66-127	
Bromochloromethane	2000	2010	100	4	15	73-120	
4-Chlorotoluene	2000	1730	87	6	20	63-126	
4-Isopropyltoluene	2000	1680	84	11	24	59-120	
Acetone	4000	3940	99	7	35	10-168	
Benzene	2000	2000	100	3	22	71-122	
Bromoform	2000	921	46	1	28	44-129	
Bromomethane	2000	1470	74	8	35	19-187	
Carbon disulfide	2000	1360	68	17	33	43-144	
Carbon tetrachloride	2000	1650	82	19	30	41-143	
Chlorobenzene	2000	1900	95	3	23	70-123	
Chloroethane	2000	1540	77	6	35	11-189	
Chloroform	2000	1980	99	1	23	68-130	
Chloromethane	2000	1630	82	0	35	31-154	
cis-1,2-Dichloroethene	2000	2010	99	1	21	64-130	
cis-1,3-Dichloropropene	2000	1580	79	5	30	48-127	
Hexachlorobutadiene	2000	1440	72	21	35	32-128	
Dibromomethane	2000	1860	93	4	16	71-120	
Bromodichloromethane	2000	1620	81	4	27	64-125	
Dichlorodifluoromethane	2000	1270	64	63	35	28-136	F2

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8822.D

Lab ID: 240-107850-5 MSD Client ID: MRC-MW147B-020719 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	2000	1820	91	4	24	66-120	
1,2-Dibromoethane	2000	1720	86	5	27	71-123	
Naphthalene	2000	1490	75	12	35	31-142	
m-Xylene & p-Xylene	2000	1780	89	1	25	63-121	
n-Butylbenzene	2000	1540	77	14	27	51-120	
Isopropylbenzene	2000	1830	92	7	31	59-120	
N-Propylbenzene	2000	1710	85	9	20	61-123	
2-Butanone (MEK)	4000	3740	93	10	35	37-156	
4-Methyl-2-pentanone (MIBK)	4000	3200	80	6	35	44-143	
sec-Butylbenzene	2000	1650	82	14	24	60-120	
Methyl tert-butyl ether	2000	1550	78	5	29	41-136	
Methylene Chloride	2000	1920	96	3	29	61-130	
o-Xylene	2000	1850	93	4	25	69-120	
Styrene	2000	1770	89	3	26	68-120	
tert-Butylbenzene	2000	1630	81	11	20	61-120	
Tetrachloroethene	2000	1950	98	14	23	51-136	
Toluene	2000	1890	94	4	23	62-132	
trans-1,2-Dichloroethene	2000	2000	100	2	24	68-133	
trans-1,3-Dichloropropene	2000	1250	62	3	27	40-125	
Trichloroethene	2000	5300	91	1	23	55-131	
Trichlorofluoromethane	2000	1800	90	45	35	37-174	F2
Vinyl acetate	2000	1550	77	9	18	37-148	
Vinyl chloride	2000	1530	77	14	29	43-154	
tert-Butyl alcohol	20000	11800	59	7	35	70-130	F1
Xylenes, Total	4000	3630	91	3	25	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab File ID: UXC8829.D Lab Sample ID: MB 240-368049/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/14/2019 12:59

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-368049/4	UXC8825.D	02/14/2019 11:32
MRC-MW156A-020719	240-107850-2	UXC8831.D	02/14/2019 13:44
MRC-MW146B-020719	240-107850-4	UXC8832.D	02/14/2019 14:06

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-368049/6

Matrix: Water | Lab File ID: UXC8829.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-368049/6

Matrix: Water | Lab File ID: UXC8829.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/14/2019 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368049 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-368049/6

Matrix: Water Lab File ID: UXC8829.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 02/14/2019 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 368049 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	86		70-123
1868-53-7	Dibromofluoromethane (Surr)	88		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8825.D

Lab ID: LCS 240-368049/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.68	87	80-124	
1,1,1-Trichloroethane	10.0	9.99	100	69-134	
1,1,2,2-Tetrachloroethane	10.0	7.99	80	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.92	99	50-156	
1,1-Dichloroethane	10.0	10.1	101	75-133	
1,1-Dichloroethene	10.0	8.79	88	65-139	
1,1-Dichloropropene	10.0	9.74	97	78-126	
1,2,3-Trichlorobenzene	10.0	8.31	83	39-138	
1,2,3-Trichloropropane	10.0	8.56	86	66-139	
1,2,4-Trichlorobenzene	10.0	8.23	82	42-133	
1,2,4-Trimethylbenzene	10.0	8.91	89	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.72	57	46-132	
1,2-Dichlorobenzene	10.0	9.18	92	78-120	
1,2-Dichloroethane	10.0	10.1	101	71-135	
1,2-Dichloropropane	10.0	10.2	102	78-133	
1,3-Dichlorobenzene	10.0	9.10	91	78-120	
1,3-Dichloropropane	10.0	9.06	91	72-134	
1,4-Dichlorobenzene	10.0	9.15	91	78-120	
2,2-Dichloropropane	10.0	9.11	91	42-150	
2-Chloroethyl vinyl ether	10.0	7.34 J	73	55-137	
2-Chlorotoluene	10.0	9.06	91	78-123	
2-Hexanone	20.0	15.6	78	43-148	
Bromobenzene	10.0	9.08	91	74-129	
Bromochloromethane	10.0	10.2	102	74-130	
4-Chlorotoluene	10.0	8.93	89	77-125	
4-Isopropyltoluene	10.0	8.88	89	69-122	
Acetone	20.0	18.1	90	21-162	
Benzene	10.0	10.3	103	80-123	
Bromoform	10.0	6.36	64	49-141	
Bromomethane	10.0	7.29	73	41-175	
Carbon disulfide	10.0	7.34	73	60-138	
Carbon tetrachloride	10.0	9.09	91	63-140	
Chlorobenzene	10.0	9.64	96	80-121	
Chloroethane	10.0	8.11	81	33-173	
Chloroform	10.0	10.2	102	79-127	
Chloromethane	10.0	8.29	83	54-143	
cis-1,2-Dichloroethene	10.0	10.2	102	76-128	
cis-1,3-Dichloropropene	10.0	8.87	89	64-132	
Hexachlorobutadiene	10.0	7.85	78	38-136	
Dibromomethane	10.0	9.41	94	74-124	
Bromodichloromethane	10.0	8.85	88	77-125	
Dichlorodifluoromethane	10.0	6.20	62	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8825.D

Lab ID: LCS 240-368049/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.35	93	80-120	
1,2-Dibromoethane	10.0	8.56	86	77-123	
Naphthalene	10.0	6.94	69	28-141	
m-Xylene & p-Xylene	10.0	9.43	94	80-120	
n-Butylbenzene	10.0	8.30	83	57-126	
Isopropylbenzene	10.0	9.46	95	74-120	
N-Propylbenzene	10.0	9.04	90	77-123	
2-Butanone (MEK)	20.0	18.5	92	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.1	80	49-143	
sec-Butylbenzene	10.0	8.72	87	68-123	
Methyl tert-butyl ether	10.0	8.09	81	51-133	
Methylene Chloride	10.0	9.59	96	70-134	
o-Xylene	10.0	9.46	95	80-120	
Styrene	10.0	9.05	91	79-120	
tert-Butylbenzene	10.0	8.51	85	70-121	
Tetrachloroethene	10.0	10.1	101	74-130	
Toluene	10.0	9.72	97	78-129	
trans-1,2-Dichloroethene	10.0	10.4	104	78-133	
trans-1,3-Dichloropropene	10.0	7.26	73	55-128	
Trichloroethene	10.0	10.2	102	76-125	
Trichlorofluoromethane	10.0	8.94	89	51-164	
Vinyl acetate	10.0	7.85	78	45-151	
Vinyl chloride	10.0	7.70	77	58-143	
tert-Butyl alcohol	100	69.5	70	10-161	
Xylenes, Total	20.0	18.9	94	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	47729 2392918	112693	296202	593761	1222220	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	58046 2319242	119628	276149	585358	1207742	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	57558 2025909	104647	261470	574312	1027051	1.00 40.0	2.00	5.00	10.0	20.0
Butadiene	FB	Ave	71088 2665435	148568	361713	698736	1378009	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	47411 1506749	100403	198900	423055	791041	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	40558 1406432	82718	182320	372694	733356	1.00 40.0	2.00	5.00	10.0	20.0
Dichlorofluoromethane	FB	Ave	103682 3477509	201291	471934	910063	1834172	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	68568 3407867	157640	408598	855986	1703371	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	44605 1653914	87432	212667	419544	869536	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	32229 1148055	55282	144856	290454	603583	5.00 200	10.0	25.0	50.0	100
1,1-Dichloroethene	FB	Ave	57094 2182381	120279	277159	516876	1125076	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichlorotrifluoroethane	FB	Ave	42550 1880984	91700	228498	462285	967763	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Lin1	17181 332724	23252	50751	89168	190030	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	93588 3255913	156089	446819	909454	1760595	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	160687 5174431	283969	742305	1445567	2744114	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	27003 1418141	58477	154763	317161	716236	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	79740 3067156	150240	380996	723073	1550490	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	154915 2032773	198393	338417	580808	1097865	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	36240 1508945	82343	184510	328142	832907	10.0 400	20.0	50.0	100	200
Acrylonitrile	FB	Ave	175156 7643188	352291	868795	1699336	3768272	10.0 400	20.0	50.0	100	200
Methyl tert-butyl ether	FB	Ave	139955 6078083	285516	714788	1439491	3075308	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,2-Dichloroethene	FB	Ave	54736 2072831	103155	251570	500088	1069131	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	10725 455555	22194	51427	104918	230317	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	81126 3448011	166930	409730	832192	1773410	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	88027 4206187	177639	476538	992089	2098831	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	57035 2264494	116480	278759	565374	1189038	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	11684 445323	21907	58586	120845	241048	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone (MEK)	FB	Ave	12505 511818	24387	59681	120010	256717	2.00 80.0	4.00	10.0	20.0	40.0
Bromochloromethane	FB	Ave	28543 1150919	56716	140018	275468	595090	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	31985 1272086	62314	150812	279158	634219	2.00 80.0	4.00	10.0	20.0	40.0
Chloroform	FB	Ave	83929 3460990	169874	422474	847597	1793716	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	63803 2533663	130349	334136	689229	1356966	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	68915 3105972	144320	368473	742256	1592895	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	66437 2816568	140972	343617	688186	1474449	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	56945 2706723	124489	318843	648774	1385341	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	31904 1496664	73133	177736	322275	821992	25.0 1000	50.0	125	250	500
Benzene	FB	Ave	207184 8390558	412777	1016161	2024145	4352726	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	68031 2877185	142414	350758	707702	1492475	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	8801 415529	19095	48491	101813	218160	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	59121 2403531	120531	296310	593061	1274454	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	60130 2723193	127322	326169	654672	1428283	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	43707 1981074	97800	239856	483376	1020861	1.00 40.0	2.00	5.00	10.0	20.0
Dibromomethane	FB	Ave	31111 1256838	65366	157375	317664	664429	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Ave	5185 326819	14227	39232	71764	183906	20.0 800	40.0	100	200	400
Bromodichloromethane	FB	Ave	57382 2704273	121869	306036	637533	1409597	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	61442 2796269	123378	319533	640886	1383920	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Ave	62099 3274371	138202	356486	746312	1652896	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	98299 4186633	187250	495239	970866	2114735	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBNZ d5	Ave	209687 9034071	428381	1080197	2172974	4691174	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	57707 3169409	125256	333930	706531	1578892	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBNZ d5	Ave	61421 2869285	129112	316654	647349	1421429	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBNZ d5	Ave	41853 1840913	87521	218933	437245	940456	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBNZ d5	Ave	44889 1992562	95990	241473	482895	1049416	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBNZ d5	Ave	72217 3294456	153833	378264	779324	1663194	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBNZ d5	Ave	58616 2937075	135481	337296	666112	1487023	2.00 80.0	4.00	10.0	20.0	40.0
Chlorodibromomethane	CBNZ d5	Ave	36977 2200067	82891	222991	469828	1084488	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBNZ d5	Ave	45295 1979685	91132	237763	469490	999728	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBNZ d5	Ave	138107 6035718	286159	714138	1441533	3072375	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	46702 2220799	95060	253355	522591	1113186	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBNZ d5	Ave	73699 3208633	146696	374569	758362	1624425	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBNZ d5	Ave	168049 7830315	351787	872988	1818169	3890600	1.00 40.0	2.00	5.00	10.0	20.0
o-Xylene	CBNZ d5	Ave	88147 3825283	176986	449671	918350	1968397	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBNZ d5	Ave	137740 6714209	289260	754758	1550959	3394736	1.00 40.0	2.00	5.00	10.0	20.0
Bromoform	CBNZ d5	Lin1	19867 1639155	51580	138461	306750	770158	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBNZ d5	Ave	198841 9246149	416807	1070139	2200366	4695119	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	54865 2441270	112833	283791	577712	1238040	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCBd 4	Ave	63640 2849353	131876	330598	678570	1450127	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCBd 4	Ave	18846 848462	40526	99350	201010	423192	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	3277 574750	16039	23872	66363	276245	1.00 40.0	2.00	5.00	10.0	20.0
N-Propylbenzene	DCBd 4	Ave	54874 2529942	117423	290505	601438	1274023	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCBd 4	Ave	53702 2322347	107735	275264	555062	1188057	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	160683 7300680	332591	840604	1766210	3784392	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCBd 4	Ave	170473 7526400	356628	881245	1798133	3844885	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCBd 4	Ave	141080 6973779	300630	749194	1551899	3285832	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	169136 7660047	359918	876431	1848645	3917785	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCBd 4	Ave	173094 7876504	373619	937713	1935865	4155710	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	113176 4738373	229119	572540	1168047	2462678	1.00 40.0	2.00	5.00	10.0	20.0
4-Isopropyltoluene	DCBd 4	Ave	154318 7046098	334169	830781	1751242	3739399	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCBd 4	Ave	119243 4936571	241629	582208	1199185	2527274	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
n-Butylbenzene	DCBd 4	Ave	127428 5435677	263153	659506	1384405	2918965	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCBd 4	Ave	109056 4571601	224899	556492	1159176	2381785	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	10572 585195	24334	65389	138143	306515	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	73453 2553990	145803	356465	739836	1510157	1.00 40.0	2.00	5.00	10.0	20.0
Hexachlorobutadiene	DCBd 4	Ave	41867 1091039	78276	175613	359850	696597	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCBd 4	Ave	172653 6820199	348942	926474	1891386	3879317	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	65430 2286670	131338	324635	663704	1364016	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	41840 1806247	80448	225163	447792	947952	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	55383 2257190	106482	288691	573781	1190875	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBNZ d5	Ave	174193 7359833	333303	912990	1816996	3883966	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	60446 2700470	120695	328418	649263	1374232	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Acetone	5.5						50					
Methylene Chloride	5.1						50					
Bromoform	19.5						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Ave	43776 1719436	78140	216790	375778	846508	10.0 400	20.0	50.0	100	200
Diisopropyl ether	FB	Ave	43843 1750827	82274	218424	423417	889067	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloro-1,3-butadiene	FB	Ave	78005 3085189	151016	379041	729996	1534644	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl tert-butyl ether	FB	Ave	140382 5753247	273366	703226	1363608	2849689	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl acetate	FB	Ave	90776 3822356	173055	465746	871063	1885113	2.00 80.0	4.00	10.0	20.0	40.0
Propionitrile	FB	Ave	60838 2683433	120712	346296	618722	1307620	10.0 400	20.0	50.0	100	200
Methacrylonitrile	FB	Ave	299007 13192364	589937	1557675	3048167	6587251	10.0 400	20.0	50.0	100	200
Tert-amyl methyl ether	FB	Ave	139226 5803487	265089	690261	1376169	2893429	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Ave	27517 1141061	53519	142999	252385	538091	25.0 1000	50.0	125	250	500
Ethyl acrylate	FB	Ave	55889 2595809	111797	311313	570379	1269397	1.00 40.0	2.00	5.00	10.0	20.0
Methyl methacrylate	FB	Ave	82902 3746376	164974	443947	839432	1854426	2.00 80.0	4.00	10.0	20.0	40.0
2-Nitropropane	FB	Ave	24091 1187179	51098	135714	254301	578091	2.00 80.0	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Ave	62560 3081411	130855	371884	688240	1496211	1.00 40.0	2.00	5.00	10.0	20.0
1-Chlorohexane	CBNZ d5	Ave	56623 2299838	112915	287030	522245	1142204	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexanone	DCBd 4	Lin1	18061 496922	26838	72655	115834	240064	10.0 400	20.0	50.0	100	200
Pentachloroethane	CBNZ d5	Ave	49671 2629484	105733	282130	577976	1287207	2.00 80.0	4.00	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCBd 4	Ave	159891 7509792	343441	887789	1750222	3743187	1.00 40.0	2.00	5.00	10.0	20.0
Benzyl chloride	DCBd 4	Ave	18125 1117019	36545	113409	234360	534799	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	70436 2856330	145613	362674	730581	1512196	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCBd 4	Ave	146578 6396329	332448	834898	1722729	3597249	2.00 80.0	4.00	10.0	20.0	40.0
1-Chloro-1-fluoroethane TIC	FB	None	38810 1466901	1184	184959	389588	796152	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
None = No Calib Curve

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107850-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Cyclohexanone	4.9						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab File ID: BFB0211.D BFB Injection Date: 02/11/2019

Instrument ID: A3UX15 BFB Injection Time: 10:27

Analysis Batch No.: 367509

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.1	
75	30.0 - 60.0 % of mass 95	50.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.7	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	101.9	
175	5.0 - 9.0 % of mass 174	6.3	(6.2) 1
176	95.0 - 101.0 % of mass 174	100.4	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367509/2	UXC8765.D	02/11/2019	10:51
	LCS 240-367509/4	UXC8766.D	02/11/2019	11:13
	CCV 240-367509/3	UXC8767.D	02/11/2019	11:35
	MB 240-367509/6	UXC8770.D	02/11/2019	12:40
TB-020719	240-107850-1	UXC8775.D	02/11/2019	14:30

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3306	0.1000	0.0108	0.0100	7.6	20.0
Chloromethane	Ave	0.3135	0.3315	0.1000	0.0106	0.0100	5.7	20.0
Butadiene	Ave	0.3794	0.3395		0.00895	0.0100	-10.5	20.0
Vinyl chloride	Ave	0.2885	0.2932	0.1000	0.0102	0.0100	1.6	20.0
Bromomethane	Ave	0.2308	0.2097	0.0500	0.00908	0.0100	-9.2	20.0
Chloroethane	Ave	0.2041	0.1903	0.0500	0.00932	0.0100	-6.8	20.0
Dichlorofluoromethane	Ave	0.5102	0.4772		0.00935	0.0100	-6.5	20.0
Trichlorofluoromethane	Ave	0.4337	0.4369	0.1000	0.0101	0.0100	0.7	20.0
Ethyl ether	Ave	0.2310	0.2152		0.00932	0.0100	-6.8	20.0
Acrolein	Ave	0.0317	0.0415		0.0654	0.0500	30.8	50.0
1,1-Dichloroethene	Ave	0.3005	0.2630	0.1000	0.00875	0.0100	-12.5	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2317	0.0500	0.00939	0.0100	-6.1	20.0
Acetone	Lin1		0.0215	0.0100	0.0175	0.0200	-12.3	50.0
Iodomethane	Ave	0.4675	0.4437		0.00949	0.0100	-5.1	20.0
Carbon disulfide	Ave	0.7741	0.6041	0.1000	0.00780	0.0100	-22.0*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1568		0.00923	0.0100	-7.7	20.0
Methyl acetate	Ave	0.2050	0.1752	0.1000	0.0171	0.0200	-14.6	20.0
Methylene Chloride	Lin1		0.2911	0.1000	0.00925	0.0100	-7.5	50.0
tert-Butyl alcohol	Ave	0.0203	0.0152		0.0751	0.100	-24.9	50.0
Acrylonitrile	Ave	0.0962	0.0865		0.0899	0.100	-10.1	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6912	0.1000	0.00882	0.0100	-11.8	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2769	0.1000	0.00990	0.0100	-1.0	20.0
Hexane	Ave	0.0586	0.0490		0.00835	0.0100	-16.5	20.0
1,1-Dichloroethane	Ave	0.4517	0.4471	0.2000	0.00990	0.0100	-1.0	20.0
Vinyl acetate	Ave	0.5198	0.3452		0.00664	0.0100	-33.6	50.0
2,2-Dichloropropane	Ave	0.0624	0.0620		0.00994	0.0100	-0.6	20.0
2-Butanone (MEK)	Ave	0.0333	0.0269	0.0100	0.0162	0.0200	-19.0	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3120	0.1000	0.0101	0.0100	1.4	20.0
Bromochloromethane	Ave	0.1531	0.1522		0.00994	0.0100	-0.6	20.0
Tetrahydrofuran	Ave	0.0828	0.0641		0.0155	0.0200	-22.5*	20.0
Chloroform	Ave	0.4606	0.4672	0.2000	0.0101	0.0100	1.4	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3486	0.1000	0.00983	0.0100	-1.7	20.0
Cyclohexane	Ave	0.3993	0.3736	0.1000	0.00936	0.0100	-6.4	20.0
1,1-Dichloropropene	Ave	0.3748	0.3470		0.00926	0.0100	-7.4	20.0
Carbon tetrachloride	Ave	0.3441	0.3064	0.1000	0.00891	0.0100	-10.9	20.0
Isobutyl alcohol	Ave	0.0077	0.0067		0.216	0.250	-13.5	20.0
Benzene	Ave	1.116	1.108	0.5000	0.00992	0.0100	-0.8	20.0
1,2-Dichloroethane	Ave	0.3820	0.3654	0.1000	0.00957	0.0100	-4.3	20.0
n-Heptane	Ave	0.0532	0.0432		0.00811	0.0100	-18.9	20.0
Trichloroethene	Ave	0.3240	0.3113	0.1500	0.00961	0.0100	-3.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3263	0.1000	0.00926	0.0100	-7.4	20.0
1,2-Dichloropropane	Ave	0.2590	0.2427	0.1000	0.00937	0.0100	-6.3	20.0
1,4-Dioxane	Ave	0.0020	0.0017		0.174	0.200	-13.1	50.0
Dibromomethane	Ave	0.1717	0.1548		0.00901	0.0100	-9.9	20.0
Bromodichloromethane	Ave	0.3410	0.2813	0.1500	0.00825	0.0100	-17.5	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1175		0.0135	0.0200	-32.7*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3121	0.1500	0.00791	0.0100	-20.9*	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2001	0.0500	0.0149	0.0200	-25.3*	20.0
Toluene	Ave	1.476	1.394	0.4000	0.00944	0.0100	-5.6	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3270	0.1000	0.00704	0.0100	-29.6*	20.0
Ethyl methacrylate	Ave	0.4442	0.3282		0.00739	0.0100	-26.1*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2666	0.1000	0.00894	0.0100	-10.6	20.0
Tetrachloroethene	Ave	0.3268	0.3095	0.1500	0.00947	0.0100	-5.3	20.0
1,3-Dichloropropane	Ave	0.5243	0.4627		0.00882	0.0100	-11.8	20.0
2-Hexanone	Ave	0.2283	0.1734	0.0500	0.0152	0.0200	-24.1*	20.0
Chlorodibromomethane	Ave	0.3116	0.2276		0.00730	0.0100	-27.0*	20.0
1,2-Dibromoethane	Ave	0.3191	0.2642		0.00828	0.0100	-17.2	20.0
Chlorobenzene	Ave	0.9777	0.9075	0.3000	0.00928	0.0100	-7.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3172		0.00919	0.0100	-8.1	20.0
Ethylbenzene	Ave	0.5145	0.4715		0.00916	0.0100	-8.4	20.0
m-Xylene & p-Xylene	Ave	1.221	1.096		0.00898	0.0100	-10.2	20.0
o-Xylene	Ave	0.6189	0.5994		0.00969	0.0100	-3.1	20.0
Styrene	Ave	1.036	0.9417	0.3000	0.00909	0.0100	-9.1	20.0
Bromoform	Lin1		0.1219	0.1000	0.00542	0.0100	-45.8*	20.0
Isopropylbenzene	Ave	1.463	1.403	0.1000	0.00959	0.0100	-4.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5572	0.3000	0.00786	0.0100	-21.4*	20.0
Bromobenzene	Ave	0.8274	0.7248		0.00876	0.0100	-12.4	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.1984		0.00804	0.0100	-19.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0703		0.00693	0.0100	-30.7*	20.0
N-Propylbenzene	Ave	0.7286	0.6321		0.00867	0.0100	-13.3	20.0
2-Chlorotoluene	Ave	0.6821	0.6150		0.00902	0.0100	-9.8	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.928		0.00910	0.0100	-9.0	20.0
4-Chlorotoluene	Ave	2.205	1.890		0.00857	0.0100	-14.3	20.0
tert-Butylbenzene	Ave	1.897	1.667		0.00878	0.0100	-12.2	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.035		0.00914	0.0100	-8.6	20.0
sec-Butylbenzene	Ave	2.327	2.095		0.00901	0.0100	-9.9	20.0
1,3-Dichlorobenzene	Ave	1.425	1.263	0.6000	0.00887	0.0100	-11.3	20.0
4-Isopropyltoluene	Ave	2.083	1.884		0.00904	0.0100	-9.6	20.0
1,4-Dichlorobenzene	Ave	1.477	1.296	0.5000	0.00877	0.0100	-12.3	20.0
n-Butylbenzene	Ave	1.649	1.400		0.00849	0.0100	-15.1	20.0
1,2-Dichlorobenzene	Ave	1.387	1.288	0.4000	0.00928	0.0100	-7.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0961	0.0500	0.00596	0.0100	-40.4	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7988	0.2000	0.00909	0.0100	-9.1	50.0
Hexachlorobutadiene	Ave	0.4386	0.3511		0.00801	0.0100	-19.9	20.0
Naphthalene	Ave	2.209	1.776		0.00804	0.0100	-19.6	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7384		0.00934	0.0100	-6.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2646		0.00693	0.00797	-13.0	20.0
Toluene-d8 (Surr)	Ave	1.214	1.077		0.00707	0.00797	-11.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3688		0.00677	0.00797	-15.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCV 240-367509/3 Calibration Date: 02/11/2019 11:35

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8767.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0259		0.112	0.100	12.2	20.0
Diisopropyl ether	Ave	0.2405	0.2296		0.00955	0.0100	-4.5	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3804		0.00898	0.0100	-10.2	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6235		0.00800	0.0100	-20.0	20.0
Ethyl acetate	Ave	0.2538	0.1979		0.0156	0.0200	-22.0	50.0
Propionitrile	Ave	0.0357	0.0334		0.0937	0.100	-6.3	20.0
Methacrylonitrile	Ave	0.1733	0.1482		0.0855	0.100	-14.5	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5715		0.00736	0.0100	-26.4*	20.0
n-Butanol	Ave	0.0061	0.0037		0.154	0.250	-38.5*	20.0
Ethyl acrylate	Ave	0.3330	0.2421		0.00727	0.0100	-27.3*	20.0
Methyl methacrylate	Ave	0.2430	0.1897		0.0156	0.0200	-21.9*	20.0
2-Nitropropane	Ave	0.0745	0.0280		0.00753	0.0200	-62.4*	20.0
n-Butyl acetate	Ave	0.3918	0.2807		0.00716	0.0100	-28.4*	20.0
1-Chlorohexane	Ave	0.3968	0.2920		0.00736	0.0100	-26.4*	20.0
Cyclohexanone	Lin1		0.0104		0.0631	0.100	-36.9*	20.0
Pentachloroethane	Ave	0.2034	0.1517		0.0149	0.0200	-25.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.013		0.00876	0.0100	-12.4	20.0
Benzyl chloride	Ave	0.2963	0.1293		0.00436	0.0100	-56.4*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8316		0.00879	0.0100	-12.1	20.0
2-Methylnaphthalene	Ave	1.076	0.6690		0.0124	0.0200	-37.8*	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab File ID: BFB0213.D BFB Injection Date: 02/13/2019

Instrument ID: A3UX15 BFB Injection Time: 11:22

Analysis Batch No.: 367892

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.8	
75	30.0 - 60.0 % of mass 95	50.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.6	(0.5) 1
174	50.0 - 120.00 % of mass 95	105.7	
175	5.0 - 9.0 % of mass 174	7.0	(6.6) 1
176	95.0 - 101.0 % of mass 174	101.4	(96.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367892/2	UXC8806.D	02/13/2019	11:48
	LCS 240-367892/4	UXC8807.D	02/13/2019	12:10
	CCV 240-367892/3	UXC8808.D	02/13/2019	12:32
	MB 240-367892/6	UXC8811.D	02/13/2019	13:38
MRC-MW144B-020719	240-107850-3	UXC8817.D	02/13/2019	16:49
MRC-MW147B-020719	240-107850-5	UXC8819.D	02/13/2019	17:32
MRC-MW147B-020719 MS	240-107850-5 MS	UXC8821.D	02/13/2019	18:16
MRC-MW147B-020719 MSD	240-107850-5 MSD	UXC8822.D	02/13/2019	18:38

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.2644	0.1000	0.00861	0.0100	-13.9	20.0
Chloromethane	Ave	0.3135	0.2740	0.1000	0.00874	0.0100	-12.6	20.0
Butadiene	Ave	0.3794	0.2948		0.00777	0.0100	-22.3*	20.0
Vinyl chloride	Ave	0.2885	0.2406	0.1000	0.00834	0.0100	-16.6	20.0
Bromomethane	Ave	0.2308	0.1961	0.0500	0.00850	0.0100	-15.0	20.0
Chloroethane	Ave	0.2041	0.1732	0.0500	0.00848	0.0100	-15.2	20.0
Dichlorofluoromethane	Ave	0.5102	0.4461		0.00874	0.0100	-12.6	20.0
Trichlorofluoromethane	Ave	0.4337	0.4175	0.1000	0.00963	0.0100	-3.7	20.0
Ethyl ether	Ave	0.2310	0.2280		0.00987	0.0100	-1.3	20.0
Acrolein	Ave	0.0317	0.0400		0.0631	0.0500	26.2	50.0
1,1-Dichloroethene	Ave	0.3005	0.2646	0.1000	0.00881	0.0100	-11.9	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2394	0.0500	0.00970	0.0100	-3.0	20.0
Acetone	Lin1		0.0240	0.0100	0.0198	0.0200	-0.9	50.0
Iodomethane	Ave	0.4675	0.4375		0.00936	0.0100	-6.4	20.0
Carbon disulfide	Ave	0.7741	0.5971	0.1000	0.00771	0.0100	-22.9*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1633		0.00962	0.0100	-3.8	20.0
Methyl acetate	Ave	0.2050	0.1768	0.1000	0.0172	0.0200	-13.8	20.0
Methylene Chloride	Lin1		0.4011	0.1000	0.0137	0.0100	36.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0163		0.0803	0.100	-19.7	50.0
Acrylonitrile	Ave	0.0962	0.0916		0.0952	0.100	-4.8	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6712	0.1000	0.00857	0.0100	-14.3	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2866	0.1000	0.0103	0.0100	2.5	20.0
Hexane	Ave	0.0586	0.0527		0.00899	0.0100	-10.1	20.0
1,1-Dichloroethane	Ave	0.4517	0.4693	0.2000	0.0104	0.0100	3.9	20.0
Vinyl acetate	Ave	0.5198	0.4189		0.00806	0.0100	-19.4	50.0
2,2-Dichloropropane	Ave	0.0624	0.0587		0.00942	0.0100	-5.8	20.0
2-Butanone (MEK)	Ave	0.0333	0.0305	0.0100	0.0184	0.0200	-8.2	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3242	0.1000	0.0105	0.0100	5.3	20.0
Bromochloromethane	Ave	0.1531	0.1616		0.0106	0.0100	5.5	20.0
Tetrahydrofuran	Ave	0.0828	0.0686		0.0166	0.0200	-17.1	20.0
Chloroform	Ave	0.4606	0.4880	0.2000	0.0106	0.0100	6.0	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3575	0.1000	0.0101	0.0100	0.8	20.0
Cyclohexane	Ave	0.3993	0.3773	0.1000	0.00945	0.0100	-5.5	20.0
1,1-Dichloropropene	Ave	0.3748	0.3719		0.00992	0.0100	-0.8	20.0
Carbon tetrachloride	Ave	0.3441	0.3171	0.1000	0.00922	0.0100	-7.8	20.0
Isobutyl alcohol	Ave	0.0077	0.0070		0.227	0.250	-9.4	20.0
Benzene	Ave	1.116	1.180	0.5000	0.0106	0.0100	5.7	20.0
1,2-Dichloroethane	Ave	0.3820	0.3993	0.1000	0.0105	0.0100	4.5	20.0
n-Heptane	Ave	0.0532	0.0463		0.00870	0.0100	-13.0	20.0
Trichloroethene	Ave	0.3240	0.3428	0.1500	0.0106	0.0100	5.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3350	0.1000	0.00950	0.0100	-5.0	20.0
1,2-Dichloropropane	Ave	0.2590	0.2611	0.1000	0.0101	0.0100	0.8	20.0
1,4-Dioxane	Ave	0.0020	0.0026		0.260	0.200	30.1	50.0
Dibromomethane	Ave	0.1717	0.1669		0.00972	0.0100	-2.8	20.0
Bromodichloromethane	Ave	0.3410	0.3135	0.1500	0.00919	0.0100	-8.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1388		0.0159	0.0200	-20.5*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3525	0.1500	0.00894	0.0100	-10.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2257	0.0500	0.0169	0.0200	-15.7	20.0
Toluene	Ave	1.476	1.435	0.4000	0.00972	0.0100	-2.8	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3495	0.1000	0.00752	0.0100	-24.8*	20.0
Ethyl methacrylate	Ave	0.4442	0.3465		0.00780	0.0100	-22.0*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2780	0.1000	0.00932	0.0100	-6.8	20.0
Tetrachloroethene	Ave	0.3268	0.3212	0.1500	0.00983	0.0100	-1.7	20.0
1,3-Dichloropropane	Ave	0.5243	0.4898		0.00934	0.0100	-6.6	20.0
2-Hexanone	Ave	0.2283	0.1843	0.0500	0.0161	0.0200	-19.3	20.0
Chlorodibromomethane	Ave	0.3116	0.2594		0.00833	0.0100	-16.7	20.0
1,2-Dibromoethane	Ave	0.3191	0.2750		0.00862	0.0100	-13.8	20.0
Chlorobenzene	Ave	0.9777	0.9502	0.3000	0.00972	0.0100	-2.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.2977		0.00863	0.0100	-13.7	20.0
Ethylbenzene	Ave	0.5145	0.4912		0.00955	0.0100	-4.5	20.0
m-Xylene & p-Xylene	Ave	1.221	1.165		0.00955	0.0100	-4.5	20.0
o-Xylene	Ave	0.6189	0.5935		0.00959	0.0100	-4.1	20.0
Styrene	Ave	1.036	1.012	0.3000	0.00977	0.0100	-2.3	20.0
Bromoform	Lin1		0.1557	0.1000	0.00675	0.0100	-32.5*	20.0
Isopropylbenzene	Ave	1.463	1.374	0.1000	0.00939	0.0100	-6.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5684	0.3000	0.00802	0.0100	-19.8	20.0
Bromobenzene	Ave	0.8274	0.7586		0.00917	0.0100	-8.3	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2002		0.00811	0.0100	-18.9	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.1131		0.0112	0.0100	11.5	20.0
N-Propylbenzene	Ave	0.7286	0.6484		0.00890	0.0100	-11.0	20.0
2-Chlorotoluene	Ave	0.6821	0.6162		0.00903	0.0100	-9.7	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.868		0.00882	0.0100	-11.8	20.0
4-Chlorotoluene	Ave	2.205	1.951		0.00885	0.0100	-11.5	20.0
tert-Butylbenzene	Ave	1.897	1.591		0.00839	0.0100	-16.1	20.0
1,2,4-Trimethylbenzene	Ave	2.227	1.990		0.00894	0.0100	-10.6	20.0
sec-Butylbenzene	Ave	2.327	1.997		0.00858	0.0100	-14.2	20.0
1,3-Dichlorobenzene	Ave	1.425	1.317	0.6000	0.00924	0.0100	-7.6	20.0
4-Isopropyltoluene	Ave	2.083	1.821		0.00874	0.0100	-12.6	20.0
1,4-Dichlorobenzene	Ave	1.477	1.350	0.5000	0.00914	0.0100	-8.6	20.0
n-Butylbenzene	Ave	1.649	1.338		0.00812	0.0100	-18.8	20.0
1,2-Dichlorobenzene	Ave	1.387	1.278	0.4000	0.00921	0.0100	-7.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0952	0.0500	0.00591	0.0100	-40.9	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.6817	0.2000	0.00776	0.0100	-22.4	50.0
Hexachlorobutadiene	Ave	0.4386	0.3104		0.00708	0.0100	-29.2*	20.0
Naphthalene	Ave	2.209	1.476		0.00668	0.0100	-33.2	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6052		0.00766	0.0100	-23.4*	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2175		0.00732	0.00797	-8.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2720		0.00713	0.00797	-10.6	20.0
Toluene-d8 (Surr)	Ave	1.214	1.047		0.00687	0.00797	-13.8	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3760		0.00690	0.00797	-13.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCV 240-367892/3 Calibration Date: 02/13/2019 12:32

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8808.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0282		0.122	0.100	22.1*	20.0
Diisopropyl ether	Ave	0.2405	0.2294		0.00954	0.0100	-4.6	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3741		0.00883	0.0100	-11.7	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.5945		0.00762	0.0100	-23.8*	20.0
Ethyl acetate	Ave	0.2538	0.2228		0.0176	0.0200	-12.2	50.0
Propionitrile	Ave	0.0357	0.0361		0.101	0.100	1.1	20.0
Methacrylonitrile	Ave	0.1733	0.1604		0.0925	0.100	-7.5	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5323		0.00686	0.0100	-31.4*	20.0
n-Butanol	Ave	0.0061	0.0040		0.163	0.250	-34.7*	20.0
Ethyl acrylate	Ave	0.3330	0.2775		0.00833	0.0100	-16.7	20.0
Methyl methacrylate	Ave	0.2430	0.2131		0.0175	0.0200	-12.3	20.0
2-Nitropropane	Ave	0.0745	0.0279		0.00750	0.0200	-62.5*	20.0
n-Butyl acetate	Ave	0.3918	0.3008		0.00768	0.0100	-23.2*	20.0
1-Chlorohexane	Ave	0.3968	0.3067		0.00773	0.0100	-22.7*	20.0
Cyclohexanone	Lin1		0.0109		0.0663	0.100	-33.7*	20.0
Pentachloroethane	Ave	0.2034	0.1499		0.0147	0.0200	-26.3*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.035		0.00886	0.0100	-11.4	20.0
Benzyl chloride	Ave	0.2963	0.1196		0.00404	0.0100	-59.6*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8253		0.00872	0.0100	-12.8	20.0
2-Methylnaphthalene	Ave	1.076	0.6682		0.0124	0.0200	-37.9*	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab File ID: BFB0214.D BFB Injection Date: 02/14/2019

Instrument ID: A3UX15 BFB Injection Time: 10:42

Analysis Batch No.: 368049

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.5	
75	30.0 - 60.0 % of mass 95	51.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.4	
173	Less than 2.0 % of mass 174	0.4	(0.4) 1
174	50.0 - 120.00 % of mass 95	102.4	
175	5.0 - 9.0 % of mass 174	7.1	(6.9) 1
176	95.0 - 101.0 % of mass 174	100.3	(98.0) 1
177	5.0 - 9.0 % of mass 176	7.0	(7.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-368049/2	UXC8824.D	02/14/2019	11:10
	LCS 240-368049/4	UXC8825.D	02/14/2019	11:32
	CCV 240-368049/3	UXC8826.D	02/14/2019	11:54
	MB 240-368049/6	UXC8829.D	02/14/2019	12:59
MRC-MW156A-020719	240-107850-2	UXC8831.D	02/14/2019	13:44
MRC-MW146B-020719	240-107850-4	UXC8832.D	02/14/2019	14:06

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-368049/2 Calibration Date: 02/14/2019 11:10

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8824.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.2526	0.1000	0.00822	0.0100	-17.8	20.0
Chloromethane	Ave	0.3135	0.2499	0.1000	0.00797	0.0100	-20.3*	20.0
Vinyl chloride	Ave	0.2885	0.2559	0.1000	0.00887	0.0100	-11.3	20.0
Butadiene	Ave	0.3794	0.2859		0.00754	0.0100	-24.6*	20.0
Bromomethane	Ave	0.2308	0.1929	0.0500	0.00836	0.0100	-16.4	20.0
Chloroethane	Ave	0.2041	0.1682	0.0500	0.00824	0.0100	-17.6	20.0
Dichlorofluoromethane	Ave	0.5102	0.4278		0.00838	0.0100	-16.2	20.0
Trichlorofluoromethane	Ave	0.4337	0.4066	0.1000	0.00938	0.0100	-6.2	20.0
Ethyl ether	Ave	0.2310	0.2185		0.00946	0.0100	-5.4	20.0
Acrolein	Ave	0.0317	0.0374		0.0590	0.0500	18.0	50.0
1,1-Dichloroethene	Ave	0.3005	0.2669	0.1000	0.00888	0.0100	-11.2	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2293	0.0500	0.00929	0.0100	-7.1	20.0
Acetone	Lin1		0.0233	0.0100	0.0192	0.0200	-4.1	50.0
Iodomethane	Ave	0.4675	0.5127		0.0110	0.0100	9.7	20.0
Carbon disulfide	Ave	0.7741	0.6532	0.1000	0.00844	0.0100	-15.6	20.0
3-Chloro-1-propene	Ave	0.1698	0.1570		0.00924	0.0100	-7.6	20.0
Methyl acetate	Ave	0.2050	0.1668	0.1000	0.0163	0.0200	-18.7	20.0
Methylene Chloride	Lin1		0.3179	0.1000	0.0103	0.0100	3.3	50.0
tert-Butyl alcohol	Ave	0.0203	0.0148		0.0732	0.100	-26.8	50.0
Acrylonitrile	Ave	0.0962	0.0885		0.0920	0.100	-8.0	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6717	0.1000	0.00857	0.0100	-14.3	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2900	0.1000	0.0104	0.0100	3.7	20.0
Hexane	Ave	0.0586	0.0506		0.00863	0.0100	-13.7	20.0
1,1-Dichloroethane	Ave	0.4517	0.4652	0.2000	0.0103	0.0100	3.0	20.0
Vinyl acetate	Ave	0.5198	0.3887		0.00748	0.0100	-25.2	50.0
2,2-Dichloropropane	Ave	0.0624	0.0653		0.0105	0.0100	4.6	20.0
2-Butanone (MEK)	Ave	0.0333	0.0290	0.0100	0.0174	0.0200	-12.8	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3223	0.1000	0.0105	0.0100	4.7	20.0
Bromochloromethane	Ave	0.1531	0.1616		0.0106	0.0100	5.5	20.0
Tetrahydrofuran	Ave	0.0828	0.0674		0.0163	0.0200	-18.6	20.0
Chloroform	Ave	0.4606	0.4815	0.2000	0.0105	0.0100	4.5	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3716	0.1000	0.0105	0.0100	4.8	20.0
Cyclohexane	Ave	0.3993	0.3661	0.1000	0.00917	0.0100	-8.3	20.0
1,1-Dichloropropene	Ave	0.3748	0.3672		0.00980	0.0100	-2.0	20.0
Carbon tetrachloride	Ave	0.3441	0.3195	0.1000	0.00929	0.0100	-7.1	20.0
Isobutyl alcohol	Ave	0.0077	0.0064		0.210	0.250	-16.2	20.0
Benzene	Ave	1.116	1.162	0.5000	0.0104	0.0100	4.0	20.0
1,2-Dichloroethane	Ave	0.3820	0.3829	0.1000	0.0100	0.0100	0.2	20.0
n-Heptane	Ave	0.0532	0.0437		0.00821	0.0100	-17.9	20.0
Trichloroethene	Ave	0.3240	0.3445	0.1500	0.0106	0.0100	6.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-368049/2 Calibration Date: 02/14/2019 11:10

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8824.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3270	0.1000	0.00928	0.0100	-7.2	20.0
1,2-Dichloropropane	Ave	0.2590	0.2549	0.1000	0.00984	0.0100	-1.6	20.0
1,4-Dioxane	Ave	0.0020	0.0021		0.215	0.200	7.3	50.0
Dibromomethane	Ave	0.1717	0.1624		0.00946	0.0100	-5.4	20.0
Bromodichloromethane	Ave	0.3410	0.3103	0.1500	0.00910	0.0100	-9.0	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1276		0.0146	0.0200	-26.9*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3391	0.1500	0.00860	0.0100	-14.0	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2059	0.0500	0.0154	0.0200	-23.1*	20.0
Toluene	Ave	1.476	1.436	0.4000	0.00973	0.0100	-2.7	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3353	0.1000	0.00722	0.0100	-27.8*	20.0
Ethyl methacrylate	Ave	0.4442	0.3208		0.00722	0.0100	-27.8*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2727	0.1000	0.00915	0.0100	-8.5	20.0
Tetrachloroethene	Ave	0.3268	0.3236	0.1500	0.00990	0.0100	-1.0	20.0
1,3-Dichloropropane	Ave	0.5243	0.4667		0.00890	0.0100	-11.0	20.0
2-Hexanone	Ave	0.2283	0.1666	0.0500	0.0146	0.0200	-27.0*	20.0
Chlorodibromomethane	Ave	0.3116	0.2572		0.00825	0.0100	-17.5	20.0
1,2-Dibromoethane	Ave	0.3191	0.2670		0.00837	0.0100	-16.3	20.0
Chlorobenzene	Ave	0.9777	0.9406	0.3000	0.00962	0.0100	-3.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3114		0.00903	0.0100	-9.7	20.0
Ethylbenzene	Ave	0.5145	0.4866		0.00946	0.0100	-5.4	20.0
m-Xylene & p-Xylene	Ave	1.221	1.155		0.00946	0.0100	-5.4	20.0
o-Xylene	Ave	0.6189	0.5980		0.00966	0.0100	-3.4	20.0
Styrene	Ave	1.036	0.9862	0.3000	0.00952	0.0100	-4.8	20.0
Bromoform	Lin1		0.1511	0.1000	0.00657	0.0100	-34.3*	20.0
Isopropylbenzene	Ave	1.463	1.406	0.1000	0.00961	0.0100	-3.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5615	0.3000	0.00792	0.0100	-20.8*	20.0
Bromobenzene	Ave	0.8274	0.7521		0.00909	0.0100	-9.1	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2018		0.00818	0.0100	-18.2	20.0
N-Propylbenzene	Ave	0.7286	0.6446		0.00885	0.0100	-11.5	20.0
2-Chlorotoluene	Ave	0.6821	0.6171		0.00905	0.0100	-9.5	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.880		0.00887	0.0100	-11.3	20.0
4-Chlorotoluene	Ave	2.205	1.953		0.00885	0.0100	-11.5	20.0
tert-Butylbenzene	Ave	1.897	1.610		0.00848	0.0100	-15.2	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.021		0.00907	0.0100	-9.3	20.0
sec-Butylbenzene	Ave	2.327	1.987		0.00854	0.0100	-14.6	20.0
1,3-Dichlorobenzene	Ave	1.425	1.285	0.6000	0.00902	0.0100	-9.8	20.0
4-Isopropyltoluene	Ave	2.083	1.792		0.00860	0.0100	-14.0	20.0
1,4-Dichlorobenzene	Ave	1.477	1.334	0.5000	0.00903	0.0100	-9.7	20.0
n-Butylbenzene	Ave	1.649	1.331		0.00807	0.0100	-19.3	20.0
1,2-Dichlorobenzene	Ave	1.387	1.271	0.4000	0.00916	0.0100	-8.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0915	0.0500	0.00568	0.0100	-43.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 240-368049/2 Calibration Date: 02/14/2019 11:10

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8824.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	0.8784	0.6857	0.2000	0.00781	0.0100	-21.9	50.0
Hexachlorobutadiene	Ave	0.4386	0.3070		0.00700	0.0100	-30.0*	20.0
Naphthalene	Ave	2.209	1.497		0.00678	0.0100	-32.2	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6311		0.00799	0.0100	-20.1*	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2700		0.00707	0.00797	-11.2	20.0
Toluene-d8 (Surr)	Ave	1.214	1.044		0.00686	0.00797	-13.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3636		0.00668	0.00797	-16.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCV 240-368049/3 Calibration Date: 02/14/2019 11:54

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8826.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0273		0.118	0.100	18.0	20.0
Diisopropyl ether	Ave	0.2405	0.2223		0.00924	0.0100	-7.6	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3741		0.00883	0.0100	-11.7	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.5815		0.00746	0.0100	-25.4*	20.0
Ethyl acetate	Ave	0.2538	0.2009		0.0158	0.0200	-20.9	50.0
Propionitrile	Ave	0.0357	0.0333		0.0932	0.100	-6.8	20.0
Methacrylonitrile	Ave	0.1733	0.1466		0.0846	0.100	-15.4	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5032		0.00648	0.0100	-35.2*	20.0
n-Butanol	Ave	0.0061	0.0038		0.155	0.250	-37.9*	20.0
Ethyl acrylate	Ave	0.3330	0.2448		0.00735	0.0100	-26.5*	20.0
Methyl methacrylate	Ave	0.2430	0.1881		0.0155	0.0200	-22.6*	20.0
2-Nitropropane	Ave	0.0745	0.0239		0.00643	0.0200	-67.9*	20.0
n-Butyl acetate	Ave	0.3918	0.2683		0.00685	0.0100	-31.5*	20.0
1-Chlorohexane	Ave	0.3968	0.2933		0.00739	0.0100	-26.1*	20.0
Cyclohexanone	Lin1		0.0104		0.0625	0.100	-37.5*	20.0
Pentachloroethane	Ave	0.2034	0.1529		0.0150	0.0200	-24.8*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	1.985		0.00864	0.0100	-13.6	20.0
Benzyl chloride	Ave	0.2963	0.1066		0.00360	0.0100	-64.0*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8256		0.00872	0.0100	-12.8	20.0
2-Methylnaphthalene	Ave	1.076	0.6060		0.0113	0.0200	-43.7*	20.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-367509/2		1607043	5.20	1260395	7.88	745296	10.12
CCVIS 240-367892/2		1803643	5.20	1542696	7.88	927814	10.12
CCVIS 240-368049/2		1842664	5.20	1527265	7.88	903648	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Sample No.: CCVIS 240-367509/2 Date Analyzed: 02/11/2019 10:51

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8765.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1607043	5.20	1260395	7.88	745296	10.12
UPPER LIMIT		3214086	5.70	2520790	8.38	1490592	10.62
LOWER LIMIT		803522	4.70	630198	7.38	372648	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367509/4		1796449	5.20	1507511	7.88	863122	10.12
CCV 240-367509/3		1829504	5.20	1503859	7.88	817203	10.12
MB 240-367509/6		1730580	5.20	1472271	7.88	810355	10.12
240-107850-1	TB-020719	1832192	5.21	1526034	7.88	853603	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Sample No.: CCVIS 240-367892/2 Date Analyzed: 02/13/2019 11:48

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8806.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1803643	5.20	1542696	7.88	927814	10.12
UPPER LIMIT		3607286	5.70	3085392	8.38	1855628	10.62
LOWER LIMIT		901822	4.70	771348	7.38	463907	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367892/4		1866937	5.20	1555716	7.88	933071	10.12
CCV 240-367892/3		1758419	5.20	1529185	7.88	842177	10.12
MB 240-367892/6		1565514	5.20	1326978	7.88	735680	10.12
240-107850-3	MRC-MW144B-020719	1638268	5.20	1401974	7.88	786422	10.12
240-107850-5	MRC-MW147B-020719	1660523	5.20	1436462	7.88	799087	10.12
240-107850-5 MS	MRC-MW147B-020719 MS	1797266	5.20	1524370	7.88	921656	10.12
240-107850-5 MSD	MRC-MW147B-020719 MSD	1839508	5.20	1544658	7.88	912568	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Sample No.: CCVIS 240-368049/2 Date Analyzed: 02/14/2019 11:10

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8824.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1842664	5.20	1527265	7.88	903648	10.12
UPPER LIMIT		3685328	5.70	3054530	8.38	1807296	10.62
LOWER LIMIT		921332	4.70	763633	7.38	451824	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-368049/4		1842575	5.20	1560050	7.88	925493	10.12
CCV 240-368049/3		1808303	5.20	1558249	7.88	859508	10.12
MB 240-368049/6		1708617	5.20	1477578	7.88	817829	10.12
240-107850-2	MRC-MW156A-020719	1699856	5.20	1485516	7.88	808646	10.12
240-107850-4	MRC-MW146B-020719	1682802	5.20	1463130	7.88	805086	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

SAMPLE IDENTIFICATION	MRC-MW144B-020719	
COMPOUND	Trichloroethene	
COMPOUND AREA	1349881	
INTERNAL STANDARD AMOUNT (ug)	10	
DILUTION FACTOR	142.86	
INTERNAL STANDARD AREA	1638268	
AVERAGE RRF	0.324	
1349881 x 10 / 1638268 x 0.324	25.4311	ug/L
25.4311222749639 x 142.86	3633.09	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW144B-020719 | Lab Sample ID: 240-107850-3

Matrix: Water | Lab File ID: UXC8817.D

Analysis Method: 8260C | Date Collected: 02/07/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:49

Soil Aliquot Vol: | Dilution Factor: 142.86

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	20	U	140	20
71-55-6	1,1,1-Trichloroethane	34	U	140	34
79-34-5	1,1,2,2-Tetrachloroethane	19	U	140	19
76-13-1	1,1,2-Trichlorotrifluoroethane	59	U	140	59
75-34-3	1,1-Dichloroethane	24	U	140	24
75-35-4	1,1-Dichloroethene	27	U	140	27
563-58-6	1,1-Dichloropropene	20	U	140	20
87-61-6	1,2,3-Trichlorobenzene	77	U	140	77
96-18-4	1,2,3-Trichloropropane	34	U	140	34
526-73-8	1,2,3-Trimethylbenzene	20	U	710	20
120-82-1	1,2,4-Trichlorobenzene	37	U	140	37
95-63-6	1,2,4-Trimethylbenzene	10	U	140	10
96-12-8	1,2-Dibromo-3-Chloropropane	130	U	290	130
95-50-1	1,2-Dichlorobenzene	21	U	140	21
107-06-2	1,2-Dichloroethane	30	U	140	30
78-87-5	1,2-Dichloropropane	21	U	140	21
541-73-1	1,3-Dichlorobenzene	21	U	140	21
142-28-9	1,3-Dichloropropane	30	U	140	30
106-46-7	1,4-Dichlorobenzene	23	U	140	23
594-20-7	2,2-Dichloropropane	44	U	140	44
110-75-8	2-Chloroethyl vinyl ether	37	U	1400	37
95-49-8	2-Chlorotoluene	21	U	140	21
591-78-6	2-Hexanone	77	U	1400	77
108-86-1	Bromobenzene	17	U	140	17
74-97-5	Bromochloromethane	20	U	140	20
106-43-4	4-Chlorotoluene	13	U	140	13
99-87-6	4-Isopropyltoluene	19	U	140	19
67-64-1	Acetone	770	U	1400	770
71-43-2	Benzene	19	U	140	19
75-25-2	Bromoform	110	U	140	110
74-83-9	Bromomethane	60	U	140	60
75-15-0	Carbon disulfide	40	U	140	40
56-23-5	Carbon tetrachloride	37	U	140	37
108-90-7	Chlorobenzene	20	U	140	20
75-00-3	Chloroethane	120	U	140	120
67-66-3	Chloroform	19	U	140	19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW144B-020719 | Lab Sample ID: 240-107850-3

Matrix: Water | Lab File ID: UXC8817.D

Analysis Method: 8260C | Date Collected: 02/07/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:49

Soil Aliquot Vol: | Dilution Factor: 142.86

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	29	U	140	29
156-59-2	cis-1,2-Dichloroethene	54	J	140	23
10061-01-5	cis-1,3-Dichloropropene	87	U	140	87
87-68-3	Hexachlorobutadiene	120	U	140	120
74-95-3	Dibromomethane	13	U	140	13
75-27-4	Bromodichloromethane	24	U	140	24
75-71-8	Dichlorodifluoromethane	50	U	140	50
100-41-4	Ethylbenzene	16	U	140	16
106-93-4	1,2-Dibromoethane	17	U	140	17
108-20-3	Diisopropyl ether	24	U	1400	24
91-20-3	Naphthalene	46	U	140	46
104-51-8	n-Butylbenzene	20	U	140	20
98-82-8	Isopropylbenzene	13	U	140	13
103-65-1	N-Propylbenzene	21	U	140	21
78-93-3	2-Butanone (MEK)	170	U	1400	170
108-10-1	4-Methyl-2-pentanone (MIBK)	60	U	1400	60
135-98-8	sec-Butylbenzene	19	U	140	19
1634-04-4	Methyl tert-butyl ether	10	U	140	10
994-05-8	Tert-amyl methyl ether	16	U	710	16
75-09-2	Methylene Chloride	370	U	710	370
100-42-5	Styrene	14	U	140	14
637-92-3	Ethyl tert-butyl ether	21	U	710	21
98-06-6	tert-Butylbenzene	20	U	140	20
127-18-4	Tetrachloroethene	21	U	140	21
108-88-3	Toluene	20	U	140	20
156-60-5	trans-1,2-Dichloroethene	27	U	140	27
10061-02-6	trans-1,3-Dichloropropene	96	U	140	96
79-01-6	Trichloroethene	3600	✓	140	14
75-69-4	Trichlorofluoromethane	64	U	140	64
108-05-4	Vinyl acetate	27	U	290	27
75-01-4	Vinyl chloride	29	U	140	29
75-65-0	tert-Butyl alcohol	240	U	7100	240
1330-20-7	Xylenes, Total	21	U	290	21
124-48-1	Chlorodibromomethane	56	U	140	56

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Client Sample ID: MRC-MW144B-020719 Lab Sample ID: 240-107850-3

Matrix: Water Lab File ID: UXC8817.D

Analysis Method: 8260C Date Collected: 02/07/2019 11:00

Sample wt/vol: 5(mL) Date Analyzed: 02/13/2019 16:49

Soil Aliquot Vol: Dilution Factor: 142.86

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367892 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	90		70-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-128

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX15\20190213-84450.b\UXC8817.D
Lims ID: 240-107850-B-3
Client ID: MRC-MW144B-020719
Sample Type: Client
Inject. Date: 13-Feb-2019 16:49:30 ALS Bottle#: 12 Worklist Smp#: 39
Purge Vol: 5.000 mL Dil. Factor: 142.8600
Sample Info: 240-0084450-039
Misc. Info.: C90213A,8260LLUX15,,43582
Operator ID: Instrument ID: A3UX15

Method: \\chromna\Canton\ChromData\A3UX15\20190213-84450.b\8260_15.m
Limit Group: MSV 8260C ICAL
Last Update: 14-Feb-2019 09:53:08 Calib Date: 21-Jan-2019 19:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX15\20190121-83824.b\UXC8431.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0301

First Level Reviewer: evansle Date: 14-Feb-2019 09:41:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.196	5.196	0.000	99	1638268	10.0	
* 2 Chlorobenzene-d5	117	7.876	7.876	0.000	84	1401974	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.117	10.117	0.000	93	786422	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.639	4.639	0.000	95	281766	7.27	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.923	4.923	0.000	100	392657	7.88	
$ 6 Toluene-d8 (Surr)	98	6.560	6.560	0.000	93	1222350	7.18	
$ 7 4-Bromofluorobenzene (Surr	95	8.991	8.991	0.000	96	400684	6.58	
9 Dichlorodifluoromethane	85		1.532				ND	
10 Chloromethane	50		1.698				ND	
11 Vinyl chloride	62		1.793				ND	
13 Bromomethane	94		2.065				ND	
14 Chloroethane	64		2.148				ND	
16 Trichlorofluoromethane	101		2.362				ND	
19 1,1-Dichloroethene	96		2.777				ND	
20 1,1,2-Trichloro-1,2,2-trif	151		2.801				ND	
22 Acetone	58		2.824				ND	
24 Carbon disulfide	76		2.990				ND	
28 Methylene Chloride	84		3.180				ND	
29 2-Methyl-2-propanol	59		3.263				ND	
31 Methyl tert-butyl ether	73		3.405				ND	
30 trans-1,2-Dichloroethene	96		3.417				ND	
34 1,1-Dichloroethane	63		3.761				ND	
36 Vinyl acetate	43		3.785				ND	
35 Isopropyl ether	87		3.797				ND	
38 Tert-butyl ethyl ether	59		4.093				ND	
41 2-Butanone (MEK)	72		4.247				ND	
40 2,2-Dichloropropane	97		4.247				ND	
39 cis-1,2-Dichloroethene	96	4.236	4.247	-0.011	77	19159	0.3799	
45 Chlorobromomethane	128		4.449				ND	
47 Chloroform	83		4.496				ND	
48 1,1,1-Trichloroethane	97		4.662				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 1,1-Dichloropropene	75		4.793				ND	
50 Carbon tetrachloride	117		4.805				ND	
53 Benzene	78		4.971				ND	
54 1,2-Dichloroethane	62		4.994				ND	
55 Tert-amyl methyl ether	73		5.042				ND	
58 Trichloroethene	130	5.504	5.516	-0.012	95	1349881	25.4	
61 1,2-Dichloropropane	63		5.706				ND	
63 Dibromomethane	93		5.813				ND	
65 Dichlorobromomethane	83		5.931				ND	
67 2-Chloroethyl vinyl ether	63		6.180				ND	
68 cis-1,3-Dichloropropene	75		6.323				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.453				ND	
70 Toluene	91		6.619				ND	
71 trans-1,3-Dichloropropene	75		6.809				ND	
74 Tetrachloroethene	164		7.117				ND	
75 1,3-Dichloropropane	76		7.141				ND	
76 2-Hexanone	43		7.200				ND	
79 Chlorodibromomethane	129		7.342				ND	
80 Ethylene Dibromide	107		7.461				ND	
82 Chlorobenzene	112		7.900				ND	
83 1,1,1,2-Tetrachloroethane	131		7.983				ND	
84 Ethylbenzene	106		7.995				ND	
85 m-Xylene & p-Xylene	91		8.101				ND	
86 o-Xylene	106		8.481				ND	
87 Styrene	104		8.493				ND	
88 Bromoform	173		8.682				ND	
89 Isopropylbenzene	105		8.837				ND	
93 1,1,2,2-Tetrachloroethane	83		9.121				ND	
92 Bromobenzene	156		9.145				ND	
94 1,2,3-Trichloropropane	110		9.169				ND	
96 N-Propylbenzene	120		9.228				ND	
97 2-Chlorotoluene	126		9.323				ND	
99 4-Chlorotoluene	91		9.429				ND	
101 tert-Butylbenzene	119		9.714				ND	
103 1,2,4-Trimethylbenzene	105		9.762				ND	
105 sec-Butylbenzene	105		9.928				ND	
106 1,3-Dichlorobenzene	146		10.046				ND	
107 4-Isopropyltoluene	119		10.070				ND	
108 1,4-Dichlorobenzene	146		10.141				ND	
109 1,2,3-Trimethylbenzene	105		10.176				ND	
111 n-Butylbenzene	91		10.473				ND	
112 1,2-Dichlorobenzene	146		10.509				ND	
113 1,2-Dibromo-3-Chloropropan	157		11.291				ND	
115 1,2,4-Trichlorobenzene	180		12.109				ND	
116 Hexachlorobutadiene	225		12.276				ND	
117 Naphthalene	128		12.359				ND	
118 1,2,3-Trichlorobenzene	180		12.608				ND	
S 129 Xylenes, Total	106		16.530				ND	

Method 680

Polychlorinated Biphenyls (PCBs) (GC/MS) by Method 680

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13CDCB #
MRC-MW156A-020719	240-107850-2	66
	MB 680-558728/12-A	71
	LCS 680-558728/13-A	75
	LCSD 680-558728/14-A	68

	QC LIMITS
13CDCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab File ID: xb2031.D Lab Sample ID: MB 680-558728/12-A

Matrix: Water Date Extracted: 02/19/2019 13:42

Instrument ID: CMSX Date Analyzed: 02/21/2019 07:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-558728/13-A	xb2032.D	02/21/2019 07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019 08:10
MRC-MW156A-020719	240-107850-2	xb2514.D	02/25/2019 17:24

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-558728/12-A

Matrix: Water | Lab File ID: xb2031.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2032.D

Lab ID: LCS 680-558728/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.67	78	62-130	
Hexachlorobiphenyl	4.00	3.37	84	62-130	
Nonachlorobiphenyl	10.0	14.6	146	70-195	
Octachlorobiphenyl	6.00	5.09	85	64-130	
Monochlorobiphenyl	2.00	1.08	54	42-130	
DCB Decachlorobiphenyl	10.0	7.81	78	59-130	
Dichlorobiphenyl	2.00	1.32	66	49-130	
Pentachlorobiphenyl	4.00	3.47	87	63-130	
Tetrachlorobiphenyl	4.00	2.93	73	54-130	
Trichlorobiphenyl	2.00	1.47	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2033.D

Lab ID: LCSD 680-558728/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.45	74	5	40	62-130	
Hexachlorobiphenyl	4.00	3.21	80	5	40	62-130	
Nonachlorobiphenyl	10.0	13.2	132	10	40	70-195	
Octachlorobiphenyl	6.00	4.75	79	7	40	64-130	
Monochlorobiphenyl	2.00	1.36	68	23	40	42-130	
DCB Decachlorobiphenyl	10.0	7.14	71	9	40	59-130	
Dichlorobiphenyl	2.00	1.47	73	11	40	49-130	
Pentachlorobiphenyl	4.00	3.33	83	4	40	63-130	
Tetrachlorobiphenyl	4.00	3.04	76	4	40	54-130	
Trichlorobiphenyl	2.00	1.52	76	3	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab File ID: xa0805.D DFTPP Injection Date: 01/08/2019

Instrument ID: CMSX DFTPP Injection Time: 14:10

Analysis Batch No.: 554469

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.9
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	25.1
365	Greater than 1% of mass 198	3.8
441	Present but less than mass 443	13.7 (87.5) 2
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	15.6 (18.3) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-554469/3	xa0807.D	01/08/2019	15:11
	IC 680-554469/5	xa0809.D	01/08/2019	16:08
	IC 680-554469/6	xa0810.D	01/08/2019	16:37
	IC 680-554469/27	xa0850.D	01/08/2019	17:05
	IC 680-554469/7	xa0811.D	01/08/2019	17:34
	IC 680-554469/8	xa0812.D	01/08/2019	18:02
	ICV 680-554469/9	xa0813.D	01/08/2019	18:31

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107850-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Total Dichlorobiphenyls	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Total Trichlorobiphenyls	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Total Tetrachlorobiphenyls	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Total Pentachlorobiphenyls	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 240-107850-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Monochlorobiphenyl	CRY	Ave	8242 813481	15382	70279	157619	299489	0.0500 5.00	0.100	0.500	1.00	2.00
Total Dichlorobiphenyls	CRY	Ave	5634 599778	10649	48537	112170	214973	0.0500 5.00	0.100	0.500	1.00	2.00
Total Trichlorobiphenyls	CRY	Ave	3987 441580	7502	35031	81047	154555	0.0500 5.00	0.100	0.500	1.00	2.00
Total Tetrachlorobiphenyls	CRY	Ave	5574 615833	10606	50081	113059	216849	0.100 10.0	0.200	1.00	2.00	4.00
Total Pentachlorobiphenyls	CRY	Ave	4430 525344	8255	40050	94602	179296	0.100 10.0	0.200	1.00	2.00	4.00
Hexachlorobiphenyl	CRY	Ave	4409 515192	8063	39570	95892	180616	0.100 10.0	0.200	1.00	2.00	4.00
Heptachlorobiphenyl	CRY	Ave	8087 711849	13173	54642	129695	247124	0.150 15.0	0.300	1.50	3.00	6.00
Octachlorobiphenyl	CRY	Ave	5679 662783	10462	52287	120191	235791	0.150 15.0	0.300	1.50	3.00	6.00
Nonachlorobiphenyl	CRY	Ave				55196					5.00	
DCB Decachlorobiphenyl	CRY	Ave	1830 243534	3384	17538	42007	81970	0.250 25.0	0.500	2.50	5.00	10.0
Decachlorobiphenyl-13C12	CRY	Ave	2369 234805	4106	24902	55313	103476	0.250 20.0	0.500	2.50	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 680-554469/9 Calibration Date: 01/08/2019 18:31

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xa0813.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8517		1.03	1.00	2.6	20.0
Total Dichlorobiphenyls	Ave	0.5847	0.5801		0.992	1.00	-0.8	20.0
Total Trichlorobiphenyls	Ave	0.4198	0.4573		1.09	1.00	8.9	20.0
Total Tetrachlorobiphenyls	Ave	0.2951	0.3118		2.11	2.00	5.6	20.0
Total Pentachlorobiphenyls	Ave	0.2400	0.2531		2.11	2.00	5.5	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2508		2.10	2.00	5.2	20.0
Heptachlorobiphenyl	Ave	0.2376	0.2274		2.87	3.00	-4.3	20.0
Octachlorobiphenyl	Ave	0.2054	0.2183		3.19	3.00	6.3	20.0
Nonachlorobiphenyl	Ave	0.0526	0.0779		7.42	4.00	48.0*	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0419		5.00	5.00	-0.0	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0577		5.35	5.00	7.1	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab File ID: xb2028.D DFTPP Injection Date: 02/21/2019

Instrument ID: CMSX DFTPP Injection Time: 05:43

Analysis Batch No.: 559059

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	59.5
197	Less than 1 % of mass 198	0.9
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	28.0
365	Greater than 1% of mass 198	3.5
441	Present but less than mass 443	15.1 (86.3) 2
442	Greater than 40% of mass 198	96.2
443	17 - 23% of mass 442	17.5 (18.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559059/2	xb2029.D	02/21/2019	06:14
	CCVIS 680-559059/3	xb2030.D	02/21/2019	06:44
	MB 680-558728/12-A	xb2031.D	02/21/2019	07:13
	LCS 680-558728/13-A	xb2032.D	02/21/2019	07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019	08:10
	CCV 680-559059/21	xb2051.D	02/21/2019	16:43

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCVIS 680-559059/3 Calibration Date: 02/21/2019 06:44

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2030.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.7268		0.875	1.00	-12.5	20.0
Total Dichlorobiphenyls	Ave	0.5847	0.5079		0.869	1.00	-13.1	20.0
Total Trichlorobiphenyls	Ave	0.4198	0.3597		0.857	1.00	-14.3	20.0
Total Tetrachlorobiphenyls	Ave	0.2951	0.2563		1.74	2.00	-13.2	20.0
Total Pentachlorobiphenyls	Ave	0.2400	0.2131		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2136		1.79	2.00	-10.4	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1920		2.42	3.00	-19.2	20.0
Octachlorobiphenyl	Ave	0.2054	0.1725		2.52	3.00	-16.0	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0343		4.08	5.00	-18.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0462		4.29	5.00	-14.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCV 680-559059/21 Calibration Date: 02/21/2019 16:43

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2051.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8070		0.972	1.00	-2.8	20.0
Total Dichlorobiphenyls	Ave	0.5847	0.5601		0.958	1.00	-4.2	20.0
Total Trichlorobiphenyls	Ave	0.4198	0.4000		0.953	1.00	-4.7	20.0
Total Tetrachlorobiphenyls	Ave	0.2951	0.2879		1.95	2.00	-2.4	20.0
Total Pentachlorobiphenyls	Ave	0.2400	0.2300		1.92	2.00	-4.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2246		1.88	2.00	-5.8	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1938		2.45	3.00	-18.4	20.0
Octachlorobiphenyl	Ave	0.2054	0.1765		2.58	3.00	-14.1	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0315		3.75	5.00	-25.0*	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0422		3.92	5.00	-21.6*	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab File ID: xb2502.D DFTPP Injection Date: 02/25/2019

Instrument ID: CMSX DFTPP Injection Time: 11:57

Analysis Batch No.: 559536

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	57.2
197	Less than 1 % of mass 198	0.6
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	7.2
275	10 - 30% of mass 198	25.4
365	Greater than 1% of mass 198	3.9
441	Present but less than mass 443	12.6 (74.1) 2
442	Greater than 40% of mass 198	85.2
443	17 - 23% of mass 442	17.0 (20.0) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559536/2	xb2503.D	02/25/2019	12:28
	ICISAV 680-559536/3	xb2504.D	02/25/2019	13:07
	IC 680-559536/4	xb2507.D	02/25/2019	14:04
	IC 680-559536/8	xb2508.D	02/25/2019	14:33
	IC 680-559536/9	xb2509.D	02/25/2019	15:02
	IC 680-559536/10	xb2510.D	02/25/2019	15:30
	IC 680-559536/11	xb2511.D	02/25/2019	15:59
	ICV 680-559536/12	xb2512.D	02/25/2019	16:27
MRC-MW156A-020719	240-107850-2	xb2514.D	02/25/2019	17:24
	CCV 680-559536/7	xb2515.D	02/25/2019	17:53

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107850-1 Analy Batch No.: 559536

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/25/2019 13:07 Calibration End Date: 02/25/2019 15:59 Calibration ID: 63879

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-559536/11	xb2511.D
Level 2	IC 680-559536/10	xb2510.D
Level 3	IC 680-559536/9	xb2509.D
Level 4	ICISAV 680-559536/3	xb2504.D
Level 5	IC 680-559536/8	xb2508.D
Level 6	IC 680-559536/4	xb2507.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.7768 0.8303	0.7679	0.7192	0.7084	0.8005	Ave		0.7672				6.1		20.0			
Dichlorobiphenyl	0.5231 0.6057	0.5247	0.4982	0.4848	0.5644	Ave		0.5335				8.4		20.0			
Trichlorobiphenyl	0.3701 0.4389	0.3719	0.3515	0.3760	0.4066	Ave		0.3858				8.2		20.0			
PCB-104				0.3059		Ave		0.3059						30.0			
Tetrachlorobiphenyl	0.2496 0.3004	0.2491	0.2474	0.2506	0.2786	Ave		0.2626				8.4		20.0			
Pentachlorobiphenyl	0.1904 0.2506	0.1911	0.1944	0.1975	0.2274	Ave		0.2085				11.9		20.0			
PCB-77				0.4052		Ave		0.4052						30.0			
Hexachlorobiphenyl	0.1811 0.2345	0.1804	0.1856	0.1913	0.2198	Ave		0.1988				11.5		20.0			
Heptachlorobiphenyl	0.2199 0.2149	0.1886	0.1711	0.1710	0.1962	Ave		0.1936				10.8		20.0			
Octachlorobiphenyl	0.1586 0.1992	0.1499	0.1557	0.1606	0.1806	Ave		0.1674				11.2		20.0			
PCB-208				0.0538		Ave		0.0538						30.0			
DCB Decachlorobiphenyl	0.0264 0.0421	0.0261	0.0293	0.0289	0.0338	Ave		0.0311				19.5		20.0			
Decachlorobiphenyl-13C12	0.0369 0.0537	0.0343	0.0421	0.0410	0.0451	Ave		0.0422				16.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 240-107850-1 Analy Batch No.: 559536

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/25/2019 13:07 Calibration End Date: 02/25/2019 15:59 Calibration ID: 63879

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-559536/11	xb2511.D
Level 2	IC 680-559536/10	xb2510.D
Level 3	IC 680-559536/9	xb2509.D
Level 4	ICISAV 680-559536/3	xb2504.D
Level 5	IC 680-559536/8	xb2508.D
Level 6	IC 680-559536/4	xb2507.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Monochlorobiphenyl	CRY	Ave	7419 831971	15897	77564	157105	335414	0.0500 5.00	0.100	0.500	1.00	2.00
Dichlorobiphenyl	CRY	Ave	4996 606979	10862	53734	107521	236477	0.0500 5.00	0.100	0.500	1.00	2.00
Trichlorobiphenyl	CRY	Ave	3535 439760	7698	37905	83389	170369	0.0500 5.00	0.100	0.500	1.00	2.00
PCB-104	CRY	Ave				135693					2.00	
Tetrachlorobiphenyl	CRY	Ave	4767 601944	10313	53368	111139	233496	0.100 10.0	0.200	1.00	2.00	4.00
Pentachlorobiphenyl	CRY	Ave	3637 502135	7911	41923	87585	190549	0.100 10.0	0.200	1.00	2.00	4.00
PCB-77	CRY	Ave				179738					2.00	
Hexachlorobiphenyl	CRY	Ave	3459 469969	7470	40027	84870	184183	0.100 10.0	0.200	1.00	2.00	4.00
Heptachlorobiphenyl	CRY	Ave	6300 646151	11710	55348	113769	246590	0.150 15.0	0.300	1.50	3.00	6.00
Octachlorobiphenyl	CRY	Ave	4543 598796	9312	50383	106848	226947	0.150 15.0	0.300	1.50	3.00	6.00
PCB-208	CRY	Ave				47750					4.00	
DCB Decachlorobiphenyl	CRY	Ave	1260 210942	2698	15783	32060	70810	0.250 25.0	0.500	2.50	5.00	10.0
Decachlorobiphenyl-13C12	CRY	Ave	1762 215192	3550	22714	45456	94422	0.250 20.0	0.500	2.50	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 680-559536/12 Calibration Date: 02/25/2019 16:27

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2512.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nonachlorobiphenyl	Ave	0.0526	0.0562		7.22	4.00	6.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICV 680-559536/12 Calibration Date: 02/25/2019 16:27

Instrument ID: CMSX Calib Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 02/25/2019 15:59

Lab File ID: xb2512.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.7672	0.7447		0.971	1.00	-2.9	20.0
Dichlorobiphenyl	Ave	0.5335	0.5015		0.940	1.00	-6.0	20.0
Trichlorobiphenyl	Ave	0.3858	0.3920		1.02	1.00	1.6	20.0
Tetrachlorobiphenyl	Ave	0.2626	0.2641		2.01	2.00	0.6	20.0
Pentachlorobiphenyl	Ave	0.2085	0.2083		2.00	2.00	-0.1	20.0
Hexachlorobiphenyl	Ave	0.1988	0.1999		2.01	2.00	0.6	20.0
Heptachlorobiphenyl	Ave	0.1936	0.1805		2.80	3.00	-6.8	20.0
Octachlorobiphenyl	Ave	0.1674	0.1674		3.00	3.00	-0.0	20.0
DCB Decachlorobiphenyl	Ave	0.0311	0.0310		4.98	5.00	-0.3	20.0
Decachlorobiphenyl-13C12	Ave	0.0422	0.0433		5.13	5.00	2.6	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Lab Sample ID: CCV 680-559536/7 Calibration Date: 02/25/2019 17:53

Instrument ID: CMSX Calib Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 02/25/2019 15:59

Lab File ID: xb2515.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.7672	0.6514		0.849	1.00	-15.1	20.0
Dichlorobiphenyl	Ave	0.5335	0.4435		0.831	1.00	-16.9	20.0
Trichlorobiphenyl	Ave	0.3858	0.3522		0.913	1.00	-8.7	20.0
Tetrachlorobiphenyl	Ave	0.2626	0.2346		1.79	2.00	-10.7	20.0
Pentachlorobiphenyl	Ave	0.2085	0.1851		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.1988	0.1774		1.78	2.00	-10.8	20.0
Heptachlorobiphenyl	Ave	0.1936	0.1620		2.51	3.00	-16.3	20.0
Octachlorobiphenyl	Ave	0.1674	0.1519		2.72	3.00	-9.3	20.0
DCB Decachlorobiphenyl	Ave	0.0311	0.0288		4.63	5.00	-7.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0422	0.0401		4.75	5.00	-5.0	20.0

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Sample No.: CCVIS 680-559059/3 Date Analyzed: 02/21/2019 06:44

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2030.D Heated Purge: (Y/N) N

Calibration ID: 63054

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		170892	12.41	169663	18.67		
UPPER LIMIT		222160	12.91	220562	19.17		
LOWER LIMIT		119624	11.91	118764	18.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-558728/12-A		143915	12.41	132159	18.67		
LCS 680-558728/13-A		164188	12.41	171582	18.67		
LCSD 680-558728/14-A		179669	12.41	188862	18.67		
CCV 680-559059/21		159076	12.41	142687	18.67		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107850-1

SDG No.:

Instrument ID: CMSX Calibration Start Date: 02/25/2019 13:07

GC Column: HP-5MS ID: 0.25(mm) Calibration End Date: 02/25/2019 15:59

Calibration ID: 63879

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		161613	12.38	155674	18.63		
UPPER LIMIT		242420	12.88	233511	19.13		
LOWER LIMIT		80807	11.88	77837	18.13		
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 680-559536/12		159287	12.38	149107	18.63		
240-107850-2	MRC-MW156A-020719	178186	12.38	200138	18.63		
CCV 680-559536/7		180140	12.38	185267	18.63		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

SAMPLE IDENTIFICATION	LCS 680-558728/13-A
COMPOUND	Monochlorobiphenyl
COMPOUND AREA	205079
INTERNAL STANDARD AMOUNT (ng)	0.75
DILUTION FACTOR	1
INTERNAL STANDARD AREA	171582
AVERAGE RRF	0.8305

205079 x 0.75 x 1 / 171582 x 0.8305 = 1.0794 ng/ml

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107850-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 680-558728/13-A

Matrix: Water | Lab File ID: xb2032.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:41

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	4.67		0.30	0.030
26601-64-9	Hexachlorobiphenyl	3.37		0.20	0.015
53742-07-7	Nonachlorobiphenyl	14.6		0.50	0.049
55722-26-4	Octachlorobiphenyl	5.09		0.30	0.038
27323-18-8	Monochlorobiphenyl	1.08		0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	7.81		0.50	0.070
25512-42-9	Dichlorobiphenyl	1.32		0.10	0.0054
25429-29-2	Pentachlorobiphenyl	3.47		0.20	0.014
26914-33-0	Tetrachlorobiphenyl	2.93		0.20	0.013
25323-68-6	Trichlorobiphenyl	1.47		0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	75		25-113

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\xb2032.D
Lims ID: LCS 680-558728/13-A
Client ID:
Sample Type: LCS
Inject. Date: 21-Feb-2019 07:41:30 ALS Bottle#: 26 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: LCS 680-558728/13-A
Misc. Info.: 680-0053932-005
Operator ID: Instrument ID: CMSX

Method: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\680_CMSX.m
Limit Group: 680
Last Update: 22-Feb-2019 09:37:47 Calib Date: 08-Jan-2019 18:02:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Savannah\ChromData\CMSX\20190108-53107.b\xa0812.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: CTX0319

First Level Reviewer: davisn Date: 22-Feb-2019 09:37:47

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/ml	Flags
A 23 Total Monochlorobiphenyls	188	9.762	9.265 - 10.260		0	205079	1.08	
A 24 Total Dichlorobiphenyls	222	11.569	10.603 - 12.535		0	176787	1.32	
* 5 Phenanthrene-d10	188	12.409	12.409	0.0	100	164188	0.7500	
A 25 Total Trichlorobiphenyls	256	13.255	11.910 - 14.600		0	141116	1.47	
A 26 Total Tetrachlorobiphenyls	292	14.773	13.047 - 16.499		0	197767	2.93	
A 27 Total Pentachlorobiphenyls	326	16.192	14.339 - 18.045		0	190369	3.47	
A 28 Total Hexachlorobiphenyls	360	17.480	15.502 - 19.457		0	183545	3.37	
* 15 Chrysene-d12	240	18.669	18.668	0.001	100	171582	0.7500	a
A 29 Total Heptachlorobiphenyls	394	18.749	17.146 - 20.353		0	253613	4.67	
A 30 Total Octachlorobiphenyls	430	19.718	18.642 - 20.795		0	238961	5.09	
A 31 Total Nonachlorobiphenyls	464	20.250	18.500 - 22.000		0	139953	14.6	
19 PCB-208	464	20.286	20.286	0.0	96	140097	0	
$ 22 Decachlorobiphenyl-13C12	510	21.797	21.796	0.001	77	23217	1.88	a
32 DCB Decachlorobiphenyl	498	21.797	21.796	0.001	77	74989	7.81	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

WorkSheet Quantitation Report

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 23 Total Monochlorobiphenyls									
188	9.328	9.265 -	10.260	22	205079	1.08			
190	9.328				66572		2.5- 3.5	3.1	
152	9.328				115591		50.7- 50.7	0.6	
153	9.328				48419		23.2- 23.2	1.4	
A 24 Total Dichlorobiphenyls									
222	11.569	10.603 -	12.535	23	176787	1.32			
224	11.569				113344		1.3- 1.7	1.6	
152	11.554				139546		31.7- 111.7	0.8	
153	11.554				17682		0.0- 49.1	6.4	
186	11.554				16961		0.0- 48.9	6.7	
188	11.569				6120		0.0- 43.3	18.5	
* 5 Phenanthrene-d10									
188	12.409	12.409	0.0	100	164188	0.7500			
189	12.409	12.409	0.0		24329		5.9- 7.5	6.7	
A 25 Total Trichlorobiphenyls									
256	13.087	11.910 -	14.600	95	141116	1.47			
258	13.087				135077		0.8- 1.2	1.0	
186	13.087				95422		26.5- 106.5	1.4	
188	13.087				30921		0.0- 61.5	4.4	
A 26 Total Tetrachlorobiphenyls									
292	13.367	13.047 -	16.499	0	197767	2.93			
290	13.367				154086		1.1- 1.5	1.3	
220	13.353				193028		58.1- 138.1	0.8	
222	13.353				123321		22.9- 102.9	1.2	
A 27 Total Pentachlorobiphenyls									
326	16.249	14.339 -	18.045	91	190369	3.47			
324	16.249				119339		1.4- 1.8	1.6	
254	16.231				142739		41.9- 121.9	0.8	
256	16.249				136737		38.2- 118.2	0.9	
258	16.249				44114		0.0- 65.4	2.7	
A 28 Total Hexachlorobiphenyls									
360	16.439	15.502 -	19.457	59	183545	3.37			
362	16.439				145798		1.0- 1.4	1.3	
288	16.439				111244		61.3- 61.3	1.3	
290	16.439				141842		220.6- 220.6	1.0	
292	16.439				67177		0.0- 0.0	2.2	
* 15 Chrysene-d12									a
240	18.669	18.668	0.001	100	171582	0.7500			a
241	18.669	18.668	0.001		33019		4.3- 5.9	5.2	
A 29 Total Heptachlorobiphenyls									
394	17.217	17.146 -	20.353	97	253613	4.67			
396	17.217				240228		0.8- 1.2	1.1	
322	17.199				110283		48.3- 48.3	2.2	
324	17.199				176673		77.4- 77.4	1.4	

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 30 Total Octachlorobiphenyls									
430	18.859	18.642	-20.795	96	238961	5.09			
428	18.859				217376		0.9- 1.3	1.1	
356	18.842				88632		39.6- 39.6	2.5	
358	18.842				166788		75.2- 75.2	1.3	
360	18.842				132602		59.6- 59.6	1.6	
A 31 Total Nonachlorobiphenyls									
464	20.286	18.500	-22.000	66	139953	14.6			
466	20.286				101255		1.1- 1.5	1.4	
390	20.286				70728		0.0- 0.0	1.4	
392	20.286				152776		0.0- 0.0	0.7	
394	20.286				142469		0.0- 0.0	0.7	
$ 22 Decachlorobiphenyl-13C12									a
510	21.797	21.796	0.001	77	23217	1.88			a
512	21.797	21.796	0.001		17660		0.9- 1.3	1.3	
32 DCB Decachlorobiphenyl									
498	21.797	21.796	0.001	77	74989	7.81			
500	21.797	21.796	0.001		60499		0.9- 1.3	1.2	
424	21.797	21.796	0.001		35328		0.0- 0.0	1.0	
426	21.797	21.796	0.001		86957		0.0- 0.0	1.0	
428	21.797	21.796	0.001		93723		0.0- 0.0	1.0	
430	21.797	21.796	0.001		58374		0.0- 0.0	1.0	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107850-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Total Dichlorobiphenyls	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Total Trichlorobiphenyls	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Total Tetrachlorobiphenyls	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Total Pentachlorobiphenyls	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW156A-020719	240-107850-2
MRC-MW144B-020719	240-107850-3
MRC-MW146B-020719	240-107850-4
MRC-MW147B-020719	240-107850-5

Comments:

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-367825/4 02/12/2019 11:07				CCV 240-367825/102 02/12/2019 18:13				CCV 240-367825/114 02/12/2019 19:05			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	12700		12500	101	24400		25000	98	24100		25000	96
Manganese	1500		1500	100	2040		2000	102	2030		2000	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	CCV 240-367825/126 02/12/2019 19:56											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	24300		25000	97								
Manganese	2020		2000	101								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-367825/6 02/12/2019 11:16				CCVL 240-367825/195 02/13/2019 08:02							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	201		200	100	201		200	100				
Manganese	13.5	J	15.0	90	14.5	J	15.0	97				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-368010/7 02/13/2019 14:10				CCV 240-368010/108 02/13/2019 18:03				CCV 240-368010/120 02/13/2019 18:31			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	192		200	96	255		250	102	256		250	103
Antimony	39.5		40.0	99	50.4		50.0	101	50.3		50.0	101
Arsenic	39.5		40.0	99	46.5		50.0	93	45.8		50.0	92
Barium	37.8		40.0	94	49.2		50.0	98	48.6		50.0	97
Beryllium	38.8		40.0	97	48.1		50.0	96	49.6		50.0	99
Cadmium	38.4		40.0	96	48.6		50.0	97	48.6		50.0	97
Calcium	20400		20000	102	26300		25000	105	26200		25000	105
Chromium	39.6		40.0	99	50.9		50.0	102	50.9		50.0	102
Cobalt	39.4		40.0	98	48.3		50.0	97	48.3		50.0	97
Copper	39.5		40.0	99	48.6		50.0	97	48.5		50.0	97
Iron	9600		10000	96	12100		12500	97	12200		12500	97
Lead	39.8		40.0	99	49.3		50.0	99	49.9		50.0	100
Magnesium	19200		20000	96	25800		25000	103	26100		25000	105
Manganese	194		200	97	251		250	100	252		250	101
Nickel	39.7		40.0	99	48.2		50.0	96	48.1		50.0	96
Potassium	19300		20000	97	25500		25000	102	25500		25000	102
Selenium	38.9		40.0	97	50.2		50.0	100	51.2		50.0	102
Silver	40.8		40.0	102	48.6		50.0	97	49.0		50.0	98
Sodium	19600		20000	98	25800		25000	103	26600		25000	106
Thallium	38.8		40.0	97	49.4		50.0	99	49.8		50.0	100
Vanadium	39.1		40.0	98	50.4		50.0	101	50.5		50.0	101
Zinc	38.9		40.0	97	47.7		50.0	95	48.1		50.0	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	CCV 240-368010/132 02/13/2019 18:59				CCV 240-368010/144 02/13/2019 19:26							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	254		250	102	259		250	104				
Antimony	49.9		50.0	100	51.0		50.0	102				
Arsenic	45.3		50.0	91	46.1		50.0	92				
Barium	48.8		50.0	98	49.3		50.0	99				
Beryllium	48.6		50.0	97	47.7		50.0	95				
Cadmium	48.6		50.0	97	48.8		50.0	98				
Calcium	26100		25000	104	26600		25000	107				
Chromium	51.3		50.0	103	51.6		50.0	103				
Cobalt	47.9		50.0	96	48.0		50.0	96				
Copper	49.0		50.0	98	48.2		50.0	96				
Iron	12100		12500	97	12100		12500	97				
Lead	49.9		50.0	100	49.9		50.0	100				
Magnesium	26000		25000	104	26200		25000	105				
Manganese	254		250	101	256		250	102				
Nickel	47.7		50.0	95	47.7		50.0	95				
Potassium	25500		25000	102	25900		25000	104				
Selenium	51.5		50.0	103	50.8		50.0	102				
Silver	49.1		50.0	98	48.9		50.0	98				
Sodium	26300		25000	105	26400		25000	106				
Thallium	49.8		50.0	100	49.9		50.0	100				
Vanadium	50.6		50.0	101	51.4		50.0	103				
Zinc	47.8		50.0	96	47.7		50.0	95				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICV Source: MTMSCRI6020AW_00079 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00079

Analyte	ICVL 240-368010/9 02/13/2019 14:14				CCVL 240-368010/153 02/13/2019 19:47							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	51.4		50.0	103	51.5		50.0	103				
Antimony	2.08		2.00	104	2.04		2.00	102				
Arsenic	4.87	J	5.00	97	4.53	J	5.00	91				
Barium	5.36		5.00	107	5.19		5.00	104				
Beryllium	1.01		1.00	101	0.995	J	1.00	100				
Cadmium	1.05		1.00	105	1.07		1.00	107				
Calcium	1110		1000	111	1100		1000	110				
Chromium	2.00		2.00	100	2.05		2.00	102				
Cobalt	1.02		1.00	102	1.01		1.00	101				
Copper	2.14		2.00	107	2.11		2.00	105				
Iron	110		100	110	104		100	104				
Lead	1.12		1.00	112	1.11		1.00	111				
Magnesium	1080		1000	108	1090		1000	109				
Manganese	5.02		5.00	100	5.05		5.00	101				
Nickel	2.05		2.00	102	1.96	J	2.00	98				
Potassium	1120		1000	112	1110		1000	111				
Selenium	5.06		5.00	101	5.05		5.00	101				
Silver	1.05		1.00	105	1.04		1.00	104				
Sodium	1080		1000	108	1130		1000	113				
Thallium	1.08		1.00	108	1.08		1.00	108				
Vanadium	5.01		5.00	100	4.92	J	5.00	98				
Zinc	20.3		20.0	101	19.6	J	20.0	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367825/5 02/12/2019 11:11		CCB 240-367825/103 02/12/2019 18:17		CCB 240-367825/115 02/12/2019 19:09		CCB 240-367825/127 02/12/2019 20:00	
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U	26	U
Manganese	15	2.1	U	2.1	U	2.1	U	2.1	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-368010/8 02/13/2019 14:12		CCB 240-368010/109 02/13/2019 18:06		CCB 240-368010/121 02/13/2019 18:34		CCB 240-368010/133 02/13/2019 19:01	
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-368010/145 02/13/2019 19:29							
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U						
Antimony	2.0	0.57	U						
Arsenic	5.0	0.75	U						
Barium	5.0	2.2	U						
Beryllium	1.0	0.31	U						
Cadmium	1.0	0.21	U						
Calcium	1000	580	U						
Chromium	2.0	0.98	U						
Cobalt	1.0	0.19	U						
Copper	2.0	1.7	U						
Iron	100	47	U						
Lead	1.0	0.45	U						
Magnesium	1000	200	U						
Manganese	5.0	2.1	U						
Nickel	2.0	1.5	U						
Potassium	1000	220	U						
Selenium	5.0	0.89	U						
Silver	1.0	0.053	U						
Sodium	1000	330	U						
Thallium	1.0	0.20	U						
Vanadium	5.0	0.82	U						
Zinc	20	15	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367484/1-A

Instrument Code: I9 Batch No.: 367825

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	26	U		6010C
7439-96-5	Manganese	2.1	U		6010C

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367484/1-A

Instrument Code: I14 Batch No.: 368010

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	2.19			6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	2.1	U		6020A
7440-02-0	Nickel	1.5	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICSA 240-367825/8 Instrument ID: I9

Lab File ID: I9021219A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**189110**	**95**
Manganese		**0.0456**	
Aluminum	*500000*	*491470*	*98*
Antimony		*-0.612*	
Arsenic		*-7.05*	
Barium		*-0.107*	
Beryllium		*-0.151*	
Boron		*-2.91*	
Cadmium		*1.16*	
Calcium	*500000*	*460700*	*92*
Chromium		*3.99*	
Cobalt		*-1.66*	
Copper		*-0.261*	
Lead		*2.09*	
Lithium		*11.2*	
Magnesium	*500000*	*486490*	*97*
Molybdenum		*0.292*	
Nickel		*3.93*	
Potassium		*23.8*	
Selenium		*-0.513*	
Silicon		*0.0766*	
Silver		*-0.424*	
Sodium		*66.5*	
Strontium		*6.45*	
Thallium		*-8.76*	
Tin		*4.17*	
Titanium		*-0.555*	
Vanadium		*-1.57*	
Zinc		*0.579*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICSAB 240-367825/9 Instrument ID: I9

Lab File ID: I9021219A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Iron	**200000**	**187120**	**94**
Manganese	**500**	**484**	**97**
Aluminum	*500000*	*481610*	*96*
Antimony	*1000*	*1005*	*101*
Arsenic	*1000*	*968*	*97*
Barium	*500*	*485*	*97*
Beryllium	*500*	*469*	*94*
Boron	*500*	*521*	*104*
Cadmium	*1000*	*1022*	*102*
Calcium	*500000*	*461300*	*92*
Chromium	*500*	*485*	*97*
Cobalt	*500*	*478*	*96*
Copper	*500*	*546*	*109*
Lead	*1000*	*947*	*95*
Lithium	*500*	*539*	*108*
Magnesium	*500000*	*478220*	*96*
Molybdenum	*1000*	*1013*	*101*
Nickel	*1000*	*944*	*94*
Potassium	*10000*	*10054*	*101*
Selenium	*1000*	*973*	*97*
Silicon	*10000*	*9623*	*96*
Silver	*1000*	*1054*	*105*
Sodium	*10000*	*10150*	*102*
Strontium	*1500*	*1404*	*94*
Thallium	*1000*	*998*	*100*
Tin	*500*	*498*	*100*
Titanium	*500*	*506*	*101*
Vanadium	*500*	*465*	*93*
Zinc	*1000*	*910*	*91*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICSA 240-368010/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**45542**	**91**
Antimony		**0.0380**	
Arsenic		**-0.0330**	
Barium		**0.0400**	
Beryllium		**0.0080**	
Cadmium		**0.288**	
Calcium	**50000**	**47833**	**96**
Chromium		**0.0920**	
Cobalt		**0.0040**	
Copper		**0.169**	
Iron	**50000**	**48740**	**97**
Lead		**0.0430**	
Magnesium	**50000**	**48632**	**97**
Manganese		**-0.0670**	
Nickel		**0.130**	
Potassium	**50000**	**48649**	**97**
Selenium		**0.0330**	
Silver		**0.0100**	
Sodium	**50000**	**48626**	**97**
Thallium		**0.0030**	
Vanadium		**-0.0730**	
Zinc		**0.527**	
Boron		*6.05*	
Lithium		*-0.0360*	
Molybdenum	*1000*	*1018*	*102*
Strontium		*0.455*	
Tin		*0.0210*	
Titanium	*1000*	*989*	*99*
Tungsten		*0.111*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Lab Sample ID: ICSAB 240-368010/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Aluminum	**50000**	**44122**	**88**
Antimony	**100**	**97.9**	**98**
Arsenic	**100**	**96.5**	**96**
Barium	**100**	**94.8**	**95**
Beryllium	**100**	**94.6**	**95**
Cadmium	**100**	**94.2**	**94**
Calcium	**50000**	**46933**	**94**
Chromium	**100**	**95.6**	**96**
Cobalt	**100**	**97.2**	**97**
Copper	**100**	**95.1**	**95**
Iron	**50000**	**47246**	**94**
Lead	**100**	**97.2**	**97**
Magnesium	**50000**	**47843**	**96**
Manganese	**100**	**95.8**	**96**
Nickel	**100**	**97.3**	**97**
Potassium	**50000**	**47152**	**94**
Selenium	**100**	**98.0**	**98**
Silver	**100**	**100**	**100**
Sodium	**50000**	**47743**	**95**
Thallium	**100**	**94.2**	**94**
Vanadium	**100**	**96.3**	**96**
Zinc	**100**	**96.1**	**96**
Boron	*100*	*97.4*	*97*
Lithium	*100*	*93.3*	*93*
Molybdenum	*1100*	*1097*	*100*
Strontium	*100*	*96.1*	*96*
Tin	*100*	*99.8*	*100*
Titanium	*1100*	*1066*	*97*
Tungsten	*100*	*97.3*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367484/2-A

Lab Name: TestAmerica Canton Job No.: 240-107850-1

Sample Matrix: Water LCS Source: MTICP1_00082

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	878		88	80	120		6010C
Manganese	500	456		91	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367484/3-A

Lab Name: TestAmerica Canton Job No.: 240-107850-1

Sample Matrix: Water LCS Source: MTICPMSB_00039

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	95.8		96	80	120		6020A
Aluminum	10000	9030		90	80	120		6020A
Arsenic	1000	835		83	80	120		6020A
Barium	1000	929		93	80	120		6020A
Beryllium	1000	926		93	80	120		6020A
Cadmium	1000	928		93	80	120		6020A
Cobalt	1000	895		90	80	120		6020A
Chromium	1000	953		95	80	120		6020A
Copper	1000	893		89	80	120		6020A
Iron	10000	8880		89	80	120		6020A
Manganese	1000	939		94	80	120		6020A
Nickel	1000	908		91	80	120		6020A
Lead	1000	966		97	80	120		6020A
Antimony	100	92.1		92	80	120		6020A
Selenium	1000	940		94	80	120		6020A
Thallium	250	237		95	80	120		6020A
Vanadium	1000	939		94	80	120		6020A
Zinc	1000	878		88	80	120		6020A
Calcium	10000	10100		101	80	120		6020A
Potassium	10000	9480		95	80	120		6020A
Magnesium	10000	9680		97	80	120		6020A
Sodium	10000	9860		99	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG No.:

ICP-AES Instrument ID: I9 Date: 01/25/2019

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	Tl	V
Aluminum										0.01401160					0.026101
Antimony		-0.000056			-0.000451			-0.000015							0.002940
Arsenic		0.000005			-0.000198	0.00022072			-0.000355	0.00045569					
Barium															
Beryllium															0.000086
Boron															
Cadmium			0.008775					-0.00001							
Calcium															
Chromium															
Cobalt													0.001923		
Copper				0.000018	0.000453			-0.000018					-0.000463		
Iron															
Lead		-0.000129					0.00001699	0.000043			0.000260	0.000066831			
Lithium															
Magnesium															
Manganese															
Molybdenum															
Nickel					0.000799			0.000054							
Potassium															
Selenium		-0.000049							0.000231						
Silver															
Sodium															
Strontium															
Thallium		-0.000010			0.003994			0.000007	0.00168520				-0.000498		-0.000210
Tin															
Titanium															
Vanadium								0.000027							
Zinc						-0.000286									

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107850-1

SDG No.:

Instrument ID: I9 Date: 01/28/2019 12:15

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		10000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107850-1

SDG No.:

Instrument ID: I14 Date: 10/02/2018 11:17

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367484/1-A	02/11/2019 14:00	367484		50	50
LCS 240-367484/2-A	02/11/2019 14:00	367484		50	50
240-107850-2	02/11/2019 14:00	367484		50	50
240-107850-3	02/11/2019 14:00	367484		50	50
240-107850-4	02/11/2019 14:00	367484		50	50
240-107850-5	02/11/2019 14:00	367484		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367484/1-A	02/11/2019 14:00	367484		50	50
LCS 240-367484/3-A	02/11/2019 14:00	367484		50	50
240-107850-2	02/11/2019 14:00	367484		50	50
240-107850-3	02/11/2019 14:00	367484		50	50
240-107850-4	02/11/2019 14:00	367484		50	50
240-107850-5	02/11/2019 14:00	367484		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ICIS 240-367825/1	1		10:54	X	X																								
CALSTD 240-367825/2 IC			10:59	X	X																								
CALSTD 240-367825/3 IC			11:03	X	X																								
ICV 240-367825/4	1		11:07	X	X																								
ICB 240-367825/5	1		11:11	X	X																								
ICVL 240-367825/6	1		11:16	X	X																								
ZZZZZZ			11:20																										
ICSA 240-367825/8	1		11:25	X	X																								
ICSAB 240-367825/9	1		11:29	X	X																								
CCV 240-367825/10			11:33																										
CCB 240-367825/11			11:37																										
ZZZZZZ			11:42																										
ZZZZZZ			11:46																										
ZZZZZZ			11:50																										
ZZZZZZ			11:55																										
ZZZZZZ			11:59																										
ZZZZZZ			12:04																										
CCV 240-367825/18			12:08																										
CCB 240-367825/19			12:12																										
ZZZZZZ			12:17																										
ZZZZZZ			12:21																										
ZZZZZZ			12:26																										
ZZZZZZ			12:30																										
ZZZZZZ			12:34																										
ZZZZZZ			12:39																										
ZZZZZZ			12:43																										
ZZZZZZ			12:47																										
ZZZZZZ			12:51																										
ZZZZZZ			12:56																										
CCV 240-367825/30			13:00																										
CCB 240-367825/31			13:04																										
ZZZZZZ			13:09																										
ZZZZZZ			13:13																										
ZZZZZZ			13:17																										
ZZZZZZ			13:22																										
ZZZZZZ			13:26																										
ZZZZZZ			13:31																										
ZZZZZZ			13:35																										
ZZZZZZ			13:39																										
ZZZZZZ			13:44																										
ZZZZZZ			13:49																										
CCV 240-367825/42			13:53																										

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
CCB 240-367825/43			13:57																									
ZZZZZZ			14:01																									
ZZZZZZ			14:06																									
ZZZZZZ			14:10																									
ZZZZZZ			14:15																									
ZZZZZZ			14:19																									
ZZZZZZ			14:23																									
ZZZZZZ			14:27																									
ZZZZZZ			14:32																									
ZZZZZZ			14:36																									
ZZZZZZ			14:40																									
CCV 240-367825/54			14:44																									
CCB 240-367825/55			14:48																									
ZZZZZZ			14:53																									
ZZZZZZ			14:57																									
ZZZZZZ			15:01																									
ZZZZZZ			15:05																									
ZZZZZZ			15:10																									
ZZZZZZ			15:14																									
ZZZZZZ			15:18																									
ZZZZZZ			15:23																									
ZZZZZZ			15:28																									
ZZZZZZ			15:32																									
CCV 240-367825/66			15:37																									
CCB 240-367825/67			15:41																									
ZZZZZZ			15:45																									
ZZZZZZ			15:50																									
ZZZZZZ			15:54																									
ZZZZZZ			15:58																									
ZZZZZZ			16:03																									
ZZZZZZ			16:07																									
ZZZZZZ			16:12																									
ZZZZZZ			16:16																									
ZZZZZZ			16:20																									
ZZZZZZ			16:25																									
CCV 240-367825/78			16:29																									
CCB 240-367825/79			16:33																									
CCVL 240-367825/80			16:38																									
ZZZZZZ			16:42																									
ZZZZZZ			16:47																									
ZZZZZZ			16:51																									
ZZZZZZ			16:55																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			16:59																										
ZZZZZZ			17:04																										
ZZZZZZ			17:08																										
ZZZZZZ			17:12																										
ZZZZZZ			17:16																										
CCV 240-367825/90			17:21																										
CCB 240-367825/91			17:25																										
ZZZZZZ			17:29																										
ZZZZZZ			17:34																										
ZZZZZZ			17:38																										
ZZZZZZ			17:42																										
ZZZZZZ			17:47																										
ZZZZZZ			17:51																										
ZZZZZZ			17:56																										
ZZZZZZ			18:00																										
ZZZZZZ			18:05																										
ZZZZZZ			18:09																										
CCV 240-367825/102	1		18:13	X	X																								
CCB 240-367825/103	1		18:17	X	X																								
ZZZZZZ			18:22																										
ZZZZZZ			18:26																										
ZZZZZZ			18:30																										
ZZZZZZ			18:35																										
ZZZZZZ			18:39																										
ZZZZZZ			18:44																										
ZZZZZZ			18:48																										
MB 240-367484/1-A	1	R	18:52	X	X																								
LCS 240-367484/2-A	1	R	18:57	X	X																								
ZZZZZZ			19:01																										
CCV 240-367825/114	1		19:05	X	X																								
CCB 240-367825/115	1		19:09	X	X																								
ZZZZZZ			19:14																										
ZZZZZZ			19:18																										
ZZZZZZ			19:22																										
ZZZZZZ			19:26																										
ZZZZZZ			19:30																										
240-107850-2	1	R	19:34	X	X																								
240-107850-3	1	R	19:39	X	X																								
240-107850-4	1	R	19:43	X	X																								
240-107850-5	1	R	19:47	X	X																								
ZZZZZZ			19:52																										
CCV 240-367825/126	1		19:56	X	X																								

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ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
CCB 240-367825/127	1		20:00	X	X																								
ZZZZZZ			20:05																										
ZZZZZZ			20:09																										
ZZZZZZ			20:13																										
ZZZZZZ			20:18																										
ZZZZZZ			20:22																										
ZZZZZZ			20:26																										
ZZZZZZ			20:31																										
ZZZZZZ			20:35																										
ZZZZZZ			20:40																										
ZZZZZZ			20:44																										
CCV 240-367825/138			20:49																										
CCB 240-367825/139			20:53																										
ZZZZZZ			20:57																										
ZZZZZZ			21:01																										
ZZZZZZ			21:06																										
ZZZZZZ			21:10																										
ZZZZZZ			21:15																										
ZZZZZZ			21:19																										
ZZZZZZ			21:23																										
ZZZZZZ			21:27																										
ZZZZZZ			21:31																										
ZZZZZZ			21:36																										
CCV 240-367825/150			21:40																										
CCB 240-367825/151			21:44																										
ZZZZZZ			21:49																										
ZZZZZZ			21:53																										
ZZZZZZ			21:57																										
ZZZZZZ			22:02																										
ZZZZZZ			22:06																										
ZZZZZZ			22:11																										
ZZZZZZ			22:15																										
ZZZZZZ			22:20																										
ZZZZZZ			22:24																										
ZZZZZZ			22:28																										
CCV 240-367825/162			22:33																										
CCB 240-367825/163			22:37																										
ZZZZZZ			22:41																										
ZZZZZZ			22:45																										
ZZZZZZ			22:50																										
ZZZZZZ			22:54																										
ZZZZZZ			22:59																										

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ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			23:03																										
ZZZZZZ			23:07																										
ZZZZZZ			23:12																										
ZZZZZZ			23:16																										
ZZZZZZ			23:20																										
CCV 240-367825/174			23:24																										
CCB 240-367825/175			23:28																										
ZZZZZZ			23:32																										
ZZZZZZ			23:36																										
ZZZZZZ			23:40																										
ZZZZZZ			23:45																										
ZZZZZZ			23:49																										
ZZZZZZ			23:54																										
ZZZZZZ			23:58																										
ZZZZZZ			00:02																										
ZZZZZZ			00:07																										
ZZZZZZ			00:11																										
CCV 240-367825/186			00:16																										
CCB 240-367825/187			00:20																										
ZZZZZZ			00:24																										
ZZZZZZ			00:28																										
ccv-4012001 CCV			00:33																										
CCB 240-367825/191			00:37																										
ZZZZZZ			00:42																										
CCV 240-367825/193			00:46																										
CCB 240-367825/194			00:50																										
CCVL 240-367825/195	1		08:02	X	X																								

Prep Types:
R = Total Recoverable

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/13/2019 13:56 End Date: 02/13/2019 21:07

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn							
RINSE 240-368010/1			13:56																												
ICIS 240-368010/2			13:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD1 240-368010/3 IC	1		14:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD2 240-368010/4 IC	1		14:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD3 240-368010/5 IC	1		14:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD4 240-368010/6 IC	1		14:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICV 240-368010/7	1		14:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICB 240-368010/8	1		14:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICVL 240-368010/9	1		14:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICSA 240-368010/10	1		14:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICSAB 240-368010/11	1		14:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCV 240-368010/12			14:21																												
CCB 240-368010/13			14:24																												
ZZZZZZ			14:26																												
ZZZZZZ			14:29																												
ZZZZZZ			14:31																												
ZZZZZZ			14:33																												
ZZZZZZ			14:35																												
ZZZZZZ			14:38																												
ZZZZZZ			14:40																												
ZZZZZZ			14:42																												
ZZZZZZ			14:45																												
ZZZZZZ			14:47																												
CCV 240-368010/24			14:49																												
CCB 240-368010/25			14:51																												
ZZZZZZ			14:54																												
ZZZZZZ			14:56																												
ZZZZZZ			14:58																												
ZZZZZZ			15:01																												
ZZZZZZ			15:03																												
ZZZZZZ			15:05																												
ZZZZZZ			15:08																												
ZZZZZZ			15:10																												
ZZZZZZ			15:12																												
ZZZZZZ			15:15																												
CCV 240-368010/36			15:17																												
CCB 240-368010/37			15:19																												
ZZZZZZ			15:22																												
ZZZZZZ			15:24																												
ZZZZZZ			15:26																												
ZZZZZZ			15:29																												
ZZZZZZ			15:31																												

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/13/2019 13:56 End Date: 02/13/2019 21:07

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			15:33																												
ZZZZZZ			15:36																												
ZZZZZZ			15:38																												
ZZZZZZ			15:40																												
ZZZZZZ			15:42																												
CCV 240-368010/48			15:45																												
CCB 240-368010/49			15:47																												
ZZZZZZ			15:49																												
ZZZZZZ			15:52																												
ZZZZZZ			15:54																												
ZZZZZZ			15:56																												
ZZZZZZ			15:59																												
ZZZZZZ			16:01																												
ZZZZZZ			16:03																												
ZZZZZZ			16:06																												
ZZZZZZ			16:08																												
ZZZZZZ			16:10																												
CCV 240-368010/60			16:13																												
CCB 240-368010/61			16:15																												
ZZZZZZ			16:17																												
ZZZZZZ			16:20																												
ZZZZZZ			16:22																												
ZZZZZZ			16:24																												
ZZZZZZ			16:27																												
ZZZZZZ			16:29																												
ZZZZZZ			16:31																												
ZZZZZZ			16:34																												
ZZZZZZ			16:36																												
ZZZZZZ			16:38																												
CCV 240-368010/72			16:40																												
CCB 240-368010/73			16:43																												
ZZZZZZ			16:45																												
ZZZZZZ			16:48																												
ZZZZZZ			16:50																												
ZZZZZZ			16:52																												
ZZZZZZ			16:55																												
ZZZZZZ			16:57																												
ZZZZZZ			16:59																												
ZZZZZZ			17:02																												
ZZZZZZ			17:04																												
ZZZZZZ			17:06																												
CCV 240-368010/84			17:09																												

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/13/2019 13:56 End Date: 02/13/2019 21:07

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
CCB 240-368010/85			17:11																												
ZZZZZZ			17:13																												
ZZZZZZ			17:16																												
ZZZZZZ			17:18																												
ZZZZZZ			17:20																												
ZZZZZZ			17:23																												
ZZZZZZ			17:25																												
ZZZZZZ			17:27																												
ZZZZZZ			17:29																												
ZZZZZZ			17:31																												
ZZZZZZ			17:33																												
CCV 240-368010/96			17:36																												
CCB 240-368010/97			17:38																												
ZZZZZZ			17:40																												
ZZZZZZ			17:43																												
ZZZZZZ			17:45																												
ZZZZZZ			17:47																												
ZZZZZZ			17:49																												
ZZZZZZ			17:52																												
ZZZZZZ			17:54																												
ZZZZZZ			17:56																												
ZZZZZZ			17:59																												
ZZZZZZ			18:01																												
CCV 240-368010/108	1		18:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368010/109	1		18:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			18:08																												
ZZZZZZ			18:10																												
ZZZZZZ			18:13																												
ZZZZZZ			18:15																												
ZZZZZZ			18:18																												
ZZZZZZ			18:20																												
ZZZZZZ			18:22																												
ZZZZZZ			18:25																												
ZZZZZZ			18:27																												
MB 240-367484/1-A	1	R	18:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-368010/120	1		18:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368010/121	1		18:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
LCS 240-367484/3-A	1	R	18:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			18:38																												
ZZZZZZ			18:41																												
ZZZZZZ			18:43																												
ZZZZZZ			18:45																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/13/2019 13:56 End Date: 02/13/2019 21:07

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn							
ZZZZZZ			18:47																												
ZZZZZZ			18:49																												
240-107850-2	1	R	18:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107850-3	1	R	18:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107850-4	1	R	18:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-368010/132	1		18:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368010/133	1		19:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107850-5	1	R	19:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			19:06																												
ZZZZZZ			19:08																												
ZZZZZZ			19:10																												
ZZZZZZ			19:13																												
ZZZZZZ			19:15																												
ZZZZZZ			19:17																												
ZZZZZZ			19:19																												
ZZZZZZ			19:22																												
ZZZZZZ			19:24																												
CCV 240-368010/144	1		19:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368010/145	1		19:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			19:31																												
ZZZZZZ			19:33																												
ZZZZZZ			19:36																												
ZZZZZZ			19:38																												
ZZZZZZ			19:40																												
CCV 240-368010/151			19:43																												
CCB 240-368010/152			19:45																												
CCVL 240-368010/153	1		19:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			19:50																												
ZZZZZZ			19:52																												
ZZZZZZ			19:55																												
ZZZZZZ			19:57																												
ZZZZZZ			19:59																												
ZZZZZZ			20:01																												
ZZZZZZ			20:03																												
ZZZZZZ			20:05																												
ZZZZZZ			20:07																												
CCV 240-368010/163			20:10																												
CCB 240-368010/164			20:12																												
ZZZZZZ			20:14																												
ZZZZZZ			20:17																												
ZZZZZZ			20:19																												
ZZZZZZ			20:21																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/13/2019 13:56 End Date: 02/13/2019 21:07

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
CCV 240-368010/169			20:24																												
CCB 240-368010/170			20:26																												
CCVL 240-368010/171			20:28																												
ZZZZZZ			20:31																												
ZZZZZZ			20:33																												
ZZZZZZ			20:35																												
ZZZZZZ			20:37																												
ZZZZZZ			20:40																												
ZZZZZZ			20:42																												
ZZZZZZ			20:44																												
ZZZZZZ			20:46																												
CCV 240-368010/180			20:48																												
CCB 240-368010/181			20:51																												
ZZZZZZ			20:53																												
ZZZZZZ			20:55																												
CCV 240-368010/184			20:58																												
CCB 240-368010/185			21:00																												
ZZZZZZ			21:02																												
CCV 240-368010/187			21:04																												
CCB 240-368010/188			21:07																												

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICP Instrument ID: I9 Start Date: 02/12/2019 End Date: 02/13/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-367825/1	10:54										
ICV 240-367825/4	11:07	100		99		99		100			
ICB 240-367825/5	11:11	99		100		98		100			
ICVL 240-367825/6	11:16	99		100		99		101			
ICSA 240-367825/8	11:25	90		89		91		95			
ICSAB 240-367825/9	11:29	91		91		94		97			
CCV 240-367825/102	18:13	98		96		100		98			
CCB 240-367825/103	18:17	98		98		99		99			
MB 240-367484/1-A	18:52	102		101		103		105			
LCS 240-367484/2-A	18:57	101		99		102		102			
CCV 240-367825/114	19:05	99		97		101		101			
CCB 240-367825/115	19:09	99		99		101		102			
240-107850-2	19:34	101		98		103		100			
240-107850-3	19:39	102		100		102		103			
240-107850-4	19:43	104		111		113		110			
240-107850-5	19:47	103		100		103		101			
CCV 240-367825/126	19:56	99		97		100		99			
CCB 240-367825/127	20:00	99		98		100		100			
CCVL 240-367825/195	08:02	113		105		101		103			

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/13/2019 End Date: 02/13/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-368010/3 IC	14:00	101		100		99		100		97	
STD2 240-368010/4 IC	14:03	97		99		99		100		96	
STD3 240-368010/5 IC	14:05	99		100		99		100		94	
STD4 240-368010/6 IC	14:07	104		103		102		102		101	
ICV 240-368010/7	14:10	99		102		102		101		96	
ICB 240-368010/8	14:12	102		103		102		102		100	
ICVL 240-368010/9	14:14	100		102		103		102		100	
ICSA 240-368010/10	14:17	93		97		99		98		93	
ICSAB 240-368010/11	14:19	92		98		97		97		90	
CCV 240-368010/108	18:03	94		98		97		93		88	
CCB 240-368010/109	18:06	95		99		102		96		94	
MB 240-367484/1-A	18:29	102		101		102		95		94	
CCV 240-368010/120	18:31	97		98		100		93		88	
CCB 240-368010/121	18:34	100		100		100		95		92	
LCS 240-367484/3-A	18:36	97		97		99		92		88	
240-107850-2	18:52	93		98		98		92		84	
240-107850-3	18:54	94		96		100		92		87	
240-107850-4	18:56	90		95		97		91		83	
CCV 240-368010/132	18:59	93		96		98		92		85	
CCB 240-368010/133	19:01	96		99		100		93		90	
240-107850-5	19:03	94		97		99		92		86	
CCV 240-368010/144	19:26	97		102		102		95		91	
CCB 240-368010/145	19:29	98		103		104		97		95	
CCVL 240-368010/153	19:47	98		100		99		94		91	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/13/2019 End Date: 02/13/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-368010/3 IC	14:00	98		98		99		99		98	
STD2 240-368010/4 IC	14:03	97		96		96		99		98	
STD3 240-368010/5 IC	14:05	96		96		95		98		99	
STD4 240-368010/6 IC	14:07	102		101		102		102		100	
ICV 240-368010/7	14:10	98		99		99		101		100	
ICB 240-368010/8	14:12	101		102		101		102		101	
ICVL 240-368010/9	14:14	101		102		101		101		100	
ICSA 240-368010/10	14:17	94		95		94		98		98	
ICSAB 240-368010/11	14:19	93		94		95		100		99	
CCV 240-368010/108	18:03	96		97		94		99		98	
CCB 240-368010/109	18:06	100		103		98		101		101	
MB 240-367484/1-A	18:29	101		102		100		103		101	
CCV 240-368010/120	18:31	97		98		96		101		100	
CCB 240-368010/121	18:34	101		102		99		102		102	
LCS 240-367484/3-A	18:36	97		101		95		101		100	
240-107850-2	18:52	95		98		95		99		99	
240-107850-3	18:54	96		102		97		101		100	
240-107850-4	18:56	93		97		94		102		102	
CCV 240-368010/132	18:59	96		99		95		101		100	
CCB 240-368010/133	19:01	101		102		99		102		102	
240-107850-5	19:03	96		101		97		100		100	
CCV 240-368010/144	19:26	100		102		99		102		102	
CCB 240-368010/145	19:29	103		104		101		103		103	
CCVL 240-368010/153	19:47	99		100		99		99		99	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/13/2019 End Date: 02/13/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-368010/3 IC	14:00	99									
STD2 240-368010/4 IC	14:03	96									
STD3 240-368010/5 IC	14:05	95									
STD4 240-368010/6 IC	14:07	103									
ICV 240-368010/7	14:10	99									
ICB 240-368010/8	14:12	101									
ICVL 240-368010/9	14:14	100									
ICSA 240-368010/10	14:17	96									
ICSAB 240-368010/11	14:19	95									
CCV 240-368010/108	18:03	97									
CCB 240-368010/109	18:06	100									
MB 240-367484/1-A	18:29	103									
CCV 240-368010/120	18:31	98									
CCB 240-368010/121	18:34	102									
LCS 240-367484/3-A	18:36	100									
240-107850-2	18:52	96									
240-107850-3	18:54	100									
240-107850-4	18:56	96									
CCV 240-368010/132	18:59	99									
CCB 240-368010/133	19:01	102									
240-107850-5	19:03	100									
CCV 240-368010/144	19:26	100									
CCB 240-368010/145	19:29	103									
CCVL 240-368010/153	19:47	99									

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367484 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00082	MTICP2A 00090	MTTMHCL 00235
MB 240-367484/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-367484/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107850-I-2	MRC-MW156A-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107850-I-3	MRC-MW144B-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107850-I-4	MRC-MW146B-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107850-I-5	MRC-MW147B-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-367484/1		3005A, 6010C		1 mL					
LCS 240-367484/2		3005A, 6010C		1 mL					
240-107850-I-2	MRC-MW156A-020719	3005A, 6010C	R	1 mL					
240-107850-I-3	MRC-MW144B-020719	3005A, 6010C	R	1 mL					
240-107850-I-4	MRC-MW146B-020719	3005A, 6010C	R	1 mL					
240-107850-I-5	MRC-MW147B-020719	3005A, 6010C	R	1 mL					

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb4
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367484 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367484 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00038	MTICPMSB 00039	MTTMHCL 00235
MB 240-367484/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-367484/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107850-I-2	MRC-MW156A-020719	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107850-I-3	MRC-MW144B-020719	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107850-I-4	MRC-MW146B-020719	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107850-I-5	MRC-MW147B-020719	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-367484/1		3005A, 6020A		1 mL					
LCS 240-367484/3		3005A, 6020A		1 mL					
240-107850-I-2	MRC-MW156A-020719	3005A, 6020A	R	1 mL					
240-107850-I-3	MRC-MW144B-020719	3005A, 6020A	R	1 mL					
240-107850-I-4	MRC-MW146B-020719	3005A, 6020A	R	1 mL					
240-107850-I-5	MRC-MW147B-020719	3005A, 6020A	R	1 mL					

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb4
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367484 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW156A-020719 Lab Sample ID: 240-107850-2

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG ID.:

Matrix: Water Date Sampled: 02/07/2019 08:50

Reporting Basis: WET Date Received: 02/08/2019 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	290	200	26	ug/L			1	6010C
7439-96-5	Manganese	44	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	87	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	23	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.31	1.0	0.31	ug/L	U		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	0.70	1.0	0.19	ug/L	J		1	6020A
7440-47-3	Chromium	1.1	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	2.1	2.0	1.7	ug/L		B	1	6020A
7439-89-6	Iron	290	100	47	ug/L			1	6020A
7439-96-5	Manganese	46	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	2.2	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	15	20	15	ug/L	U		1	6020A
7440-70-2	Calcium	110000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	11000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	30000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	20000	1000	330	ug/L			1	6020A

Sample Report

Sample Name	240-107850-i-2-a
File Name	129SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\I14021319B.b
Acq Time	2019-02-13 18:52:08
Sample Type	Sample
Total Dilution	1.0000
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	45	No Gas	-0.042	ug/l	N/A	64851.45	10000	
Be	9	45	No Gas	0.175	ug/l	14.0	400.01	2000	
B	11	45	No Gas	8.212	ug/l	2.8	50389.64	300	
Na	23	45	He	19975.663	ug/l	1.2	15272706.61	500000	
Mg	24	45	He	30457.052	ug/l	1.3	12574191.17	500000	
Al	27	45	He	86.516	ug/l	2.6	18013.22	200000	
K	39	45	He	10658.128	ug/l	1.2	4725997.59	500000	
Ca	44	45	He	110650.078	ug/l	1.2	1167465.40	500000	
Ti	47	45	He	2.726	ug/l	14.0	370.01	2500	
V	51	45	He	0.235	ug/l	71.3	710.48	10000	
Cr	52	45	He	1.050	ug/l	1.8	5987.99	10000	
Mn	55	45	He	45.525	ug/l	0.3	136257.63	10000	
Fe	56	103	He	285.931	ug/l	1.7	1139885.58	200000	
Co	59	103	He	0.699	ug/l	1.1	4859.77	5000	
Ni	60	103	He	2.153	ug/l	3.2	3921.70	10000	
Cu	63	103	He	2.099	ug/l	2.3	10316.08	10000	
Zn	66	103	He	4.344	ug/l	1.5	4734.18	10000	
As	75	103	He	0.243	ug/l	132.4	216.10	10000	
Se	78	103	H2	0.214	ug/l	13.8	57.67	10000	
Sr	88	103	He	256.347	ug/l	0.9	1145069.78	10000	
Mo	95	103	He	5.387	ug/l	2.3	12211.07	2000	
Ag	107	103	He	0.008	ug/l	12.4	82.22	100	
Cd	111	115	He	0.066	ug/l	13.7	85.81	4000	
Sn	118	115	He	0.385	ug/l	5.9	2502.48	2000	
Sb	123	115	He	0.215	ug/l	4.0	707.80	200	
Ba	137	115	He	23.382	ug/l	2.2	32989.34	10000	
W	182	159	He	0.042	ug/l	76.9	577.87	2500	
Tl	205	165	He	0.064	ug/l	11.1	814.48	2000	
Pb	208	165	He	0.212	ug/l	6.6	4035.87	4000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li6	6	No Gas	1133474.97	0.9	1219118.63	92.97	59.5	120.4	
Sc	45	No Gas	2424189.97	0.5	2483599.62	97.61	59.5	120.4	
Sc	45	H2	2246972.17	4.1	2303513.67	97.55	59.5	120.4	
Sc	45	He	522627.06	0.3	570373.81	91.63	59.5	120.4	
Rh	103	H2	507475.48	4.3	604171.92	84	59.5	120.4	

Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Rh	103	He	2499162.96	0.8	2639313.99	94.69	59.5	120.4	
In	115	H2	2948010.83	2.3	3014873	97.78	59.5	120.4	
In	115	He	1557840.57	1.5	1636259.79	95.21	59.5	120.4	
Tb	159	He	3205746.47	0.5	3241940.5	98.88	59.5	120.4	
Ho	165	He	3269035.36	2.0	3293241.61	99.26	59.5	120.4	
Bi	209	He	2013483.95	2.0	2090729.01	96.31	59.5	120.4	

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367484 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00082	MTICP2A 00090	MTTMHCL 00235
MB 240-367484/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-367484/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107835-B-2 MS		3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107835-B-2 MSD		3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107850-I-2	MRC-MW156A-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107850-I-3	MRC-MW144B-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107850-I-4	MRC-MW146B-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107850-I-5	MRC-MW147B-020719	3005A, 6010C	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-367484/1		3005A, 6010C		1 mL					
LCS 240-367484/2		3005A, 6010C		1 mL					
240-107835-B-2 MS		3005A, 6010C	R	1 mL					
240-107835-B-2 MSD		3005A, 6010C	R	1 mL					
240-107850-I-2	MRC-MW156A-020719	3005A, 6010C	R	1 mL					
240-107850-I-3	MRC-MW144B-020719	3005A, 6010C	R	1 mL					
240-107850-I-4	MRC-MW146B-020719	3005A, 6010C	R	1 mL					
240-107850-I-5	MRC-MW147B-020719	3005A, 6010C	R	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW156A-020719	240-107850-2
MRC-MW144B-020719	240-107850-3
MRC-MW146B-020719	240-107850-4
MRC-MW147B-020719	240-107850-5

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107850-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW156A-020719	240-107850-2
MRC-MW144B-020719	240-107850-3
MRC-MW146B-020719	240-107850-4
MRC-MW147B-020719	240-107850-5

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107850-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW156A-020719	240-107850-2
MRC-MW144B-020719	240-107850-3
MRC-MW146B-020719	240-107850-4
MRC-MW147B-020719	240-107850-5

Comments:

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Analyst: LKG Batch Start Date: 08/07/2018

Reporting Units: mg/L Analytical Batch No.: 339523

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:20	Sulfate	52.9	50.0	106	90-110		WCICLCS_00669
11	ICB	15:41	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Analyst: JWW Batch Start Date: 02/12/2019

Reporting Units: mg/L Analytical Batch No.: 367774

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	13:08	Sulfate	52.8	50.0	106	90-110		WCICCCV_00861
2	CCB	13:29	Sulfate	0.35				U	
13	CCV	17:17	Sulfate	52.0	50.0	104	90-110		WCICCCV_00861
14	CCB	17:38	Sulfate	0.35				U	
25	CCV	21:25	Sulfate	52.8	50.0	106	90-110		WCICCCV_00861
26	CCB	21:46	Sulfate	0.35				U	
37	CCV	01:34	Sulfate	52.8	50.0	106	90-110		WCICCCV_00861
38	CCB	01:54	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG No.:

Analyst: MSP Batch Start Date: 02/17/2019

Reporting Units: mg/L Analytical Batch No.: 575925

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:50	Nitrate Nitrite as N	3.26	3.00	109	90-110		W_ICAl_00027
2	ICB	12:51	Nitrate Nitrite as N	0.040				U	
3	CCV	12:52	Nitrate Nitrite as N	4.88	5.00	98	90-110		W_Nitrate_00020
4	CCV	12:53	Nitrate Nitrite as N	4.93	5.00	99	90-110		IC Primary_00012
5	CCB	12:54	Nitrate Nitrite as N	0.040				U	
20	CCV	13:12	Nitrate Nitrite as N	4.76	5.00	95	90-110		W_Nitrate_00020
21	CCB	13:13	Nitrate Nitrite as N	0.0463				J	
32	CCV	13:26	Nitrate Nitrite as N	4.62	5.00	92	90-110		W_Nitrate_00020
33	CCB	13:27	Nitrate Nitrite as N	0.040				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 368201 Date: 02/14/2019 13:58							
2320B-2011	MB 240-368201/30	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 368671 Date: 02/19/2019 14:05							
2340C-2011	MB 240-368671/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 367870 Date: 02/13/2019 09:33							
2540 C-2011	MB 240-367870/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 367774 Date: 02/12/2019 13:49							
9056A	MB 240-367774/3	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-367774/3	Sulfate	0.35	U	mg/L	1.0	1

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575925 Date: 02/17/2019 12:55							
SM 4500 NO3 F	MB 490-575925/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107850-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 271440 Date: 02/27/2019 08:00							
SM 2520B	MB 180-271440/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 368671 Date: 02/19/2019 14:13								
2340C-2011	MRC-MW156A-020719	240-107850-2	Hardness as calcium carbonate	440	mg/L			
2340C-2011	MRC-MW156A-020719	240-107850-2 DU	Hardness as calcium carbonate	450	mg/L	2	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107850-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 271440 Date: 02/27/2019 08:00								
SM 2520B	MRC-MW156A-020719	240-107850-2	Salinity	2.0	No Unit			U
SM 2520B	MRC-MW156A-020719	240-107850-2 DU	Salinity	2.0	No Unit	NC	20	U

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 368201	Date: 02/14/2019 13:54										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-368201/29	Alkalinity	259		mg/L	271	96	86-123			
Batch ID: 368671	Date: 02/19/2019 14:09										
						LCS Source: WCHARDNESS_00031					
2340C-2011	LCS 240-368671/2	Hardness as calcium carbonate	254		mg/L	246	103	90-110			
Batch ID: 367870	Date: 02/13/2019 09:33										
						LCS Source: WCPHENOVSOLID_00039					
2540 C-2011	LCS 240-367870/2	Total Dissolved Solids	218		mg/L	202	108	80-120			
Batch ID: 367774	Date: 02/12/2019 14:10										
						LCS Source: WCICLCS_00696					
9056A	LCS 240-367774/4	Sulfate	52.4		mg/L	50.0	105	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925	Date: 02/17/2019 12:57										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575925/7	Nitrate Nitrite as N	3.23		mg/L	3.00	108	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107850-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 02/19/2019 14:05 End Date: 02/19/2019 16:07

Lab Sample Id	D/F	Type	Time	Analytes
				HardCC
MB 240-368671/1	1	T	14:05	X
LCS 240-368671/2	1	T	14:09	X
240-107850-2 DU	1	T	14:13	X
240-107850-2	1	T	14:17	X
240-107850-3	1	T	14:21	X
240-107850-4	1	T	14:26	X
240-107850-5	1	T	14:30	X
ZZZZZZ			14:34	
ZZZZZZ			14:38	
ZZZZZZ			14:43	
ZZZZZZ			14:47	
ZZZZZZ			14:51	
ZZZZZZ			14:55	
ZZZZZZ			15:00	
ZZZZZZ			15:04	
ZZZZZZ			15:08	
ZZZZZZ			15:12	
ZZZZZZ			15:16	
ZZZZZZ			15:21	
ZZZZZZ			15:25	
ZZZZZZ			15:29	
ZZZZZZ			15:33	
ZZZZZZ			15:38	
ZZZZZZ			15:42	
ZZZZZZ			15:46	
ZZZZZZ			15:50	
ZZZZZZ			15:55	
ZZZZZZ			15:59	
ZZZZZZ			16:03	
ZZZZZZ			16:07	

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/14/2019 11:41 End Date: 02/14/2019 15:39

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			11:41																									
ZZZZZZ			11:52																									
ZZZZZZ			11:57																									
ZZZZZZ			12:01																									
ZZZZZZ			12:05																									
ZZZZZZ			12:10																									
ZZZZZZ			12:15																									
ZZZZZZ			12:20																									
ZZZZZZ			12:25																									
ZZZZZZ			12:30																									
ZZZZZZ			12:34																									
ZZZZZZ			12:39																									
ZZZZZZ			12:41																									
ZZZZZZ			12:45																									
ZZZZZZ			12:50																									
ZZZZZZ			12:55																									
ZZZZZZ			13:00																									
ZZZZZZ			13:05																									
ZZZZZZ			13:09																									
ZZZZZZ			13:14																									
ZZZZZZ			13:19																									
ZZZZZZ			13:24																									
ZZZZZZ			13:29																									
ZZZZZZ			13:30																									
ZZZZZZ			13:35																									
ZZZZZZ			13:40																									
ZZZZZZ			13:45																									
ZZZZZZ			13:49																									
LCS 240-368201/29	1	T	13:54	X																								
MB 240-368201/30	1	T	13:58	X																								
ZZZZZZ			14:02																									
ZZZZZZ			14:07																									
ZZZZZZ			14:12																									
ZZZZZZ			14:16																									
ZZZZZZ			14:18																									
ZZZZZZ			14:23																									
ZZZZZZ			14:28																									
ZZZZZZ			14:33																									
ZZZZZZ			14:37																									
ZZZZZZ			14:42																									
ZZZZZZ			14:46																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/14/2019 11:41 End Date: 02/14/2019 15:39

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			14:51																									
ZZZZZZ			14:56																									
ZZZZZZ			15:01																									
ZZZZZZ			15:06																									
ZZZZZZ			15:08																									
240-107850-2	1	T	15:13	X																								
240-107850-3	1	T	15:17	X																								
240-107850-4	1	T	15:20	X																								
240-107850-5	1	T	15:24	X																								
ZZZZZZ			15:27																									
ZZZZZZ			15:32																									
ZZZZZZ			15:37																									
ZZZZZZ			15:39																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 02/13/2019 09:33 End Date: 02/13/2019 09:33

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-367870/1	1	T	09:33	X																								
LCS 240-367870/2	1	T	09:33	X																								
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
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ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
240-107850-2	1	T	09:33	X																								
240-107850-3	1	T	09:33	X																								
240-107850-4	1	T	09:33	X																								
240-107850-5	1	T	09:33	X																								
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									
ZZZZZZ			09:33																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 08/07/2018 12:13 End Date: 08/07/2018 15:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339523/1 IC	1		12:13	X																								
STD2 240-339523/2 IC	1		12:34	X																								
STD3 240-339523/3 IC	1		12:55	X																								
STD4 240-339523/4 IC	1		13:16	X																								
STD5 240-339523/5 ICRT	1		13:36	X																								
STD6 240-339523/6 IC	1		13:57	X																								
STD7 240-339523/7 IC	1		14:18	X																								
STD8 240-339523/8 IC	1		14:39	X																								
STD9 240-339523/9 IC	1		14:59	X																								
ICV 240-339523/10	1		15:20	X																								
ICB 240-339523/11	1		15:41	X																								

Prep Types:
=

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 02/12/2019 13:08 End Date: 02/13/2019 01:54

Lab Sample Id	D/F	Type	Time	Analytes																								
				Br	SO4																							
CCV 240-367774/1	1		13:08		X																							
CCB 240-367774/2	1		13:29		X																							
MB 240-367774/3	1	T	13:49		X																							
LCS 240-367774/4	1	T	14:10		X																							
ZZZZZZ			14:31																									
ZZZZZZ			14:52																									
ZZZZZZ			15:13																									
ZZZZZZ			15:33																									
ZZZZZZ			15:54																									
ZZZZZZ			16:15																									
ZZZZZZ			16:35																									
ZZZZZZ			16:56																									
CCV 240-367774/13	1		17:17		X																							
CCB 240-367774/14	1		17:38		X																							
ZZZZZZ			17:58																									
ZZZZZZ			18:19																									
ZZZZZZ			18:40																									
ZZZZZZ			19:00																									
ZZZZZZ			19:21																									
ZZZZZZ			19:42																									
ZZZZZZ			20:03																									
ZZZZZZ			20:23																									
ZZZZZZ			20:44																									
ZZZZZZ			21:05																									
CCV 240-367774/25	1		21:25		X																							
CCB 240-367774/26	1		21:46		X																							
ZZZZZZ			22:07																									
ZZZZZZ			22:27																									
ZZZZZZ			22:48																									
ZZZZZZ			23:09																									
240-107850-2	1	T	23:30	X	X																							
ZZZZZZ			23:50																									
240-107850-3	1	T	00:11	X	X																							
240-107850-4	1	T	00:32	X	X																							
ZZZZZZ			00:52																									
240-107850-5	1	T	01:13	X	X																							
CCV 240-367774/37	1		01:34		X																							
CCB 240-367774/38	1		01:54		X																							

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/17/2019 12:50 End Date: 02/17/2019 13:27

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575925/1	1		12:50	X																								
ICB 490-575925/2	1		12:51	X																								
CCV 490-575925/3	1		12:52	X																								
CCV 490-575925/4	1		12:53	X																								
CCB 490-575925/5	1		12:54	X																								
MB 490-575925/6	1	T	12:55	X																								
LCS 490-575925/7	1	T	12:57	X																								
ZZZZZZ			12:58																									
ZZZZZZ			12:59																									
ZZZZZZ			13:00																									
ZZZZZZ			13:01																									
ZZZZZZ			13:02																									
ZZZZZZ			13:04																									
ZZZZZZ			13:05																									
ZZZZZZ			13:06																									
ZZZZZZ			13:07																									
ZZZZZZ			13:08																									
240-107850-2	1	T	13:10	X																								
240-107850-3	1	T	13:11	X																								
CCV 490-575925/20	1		13:12	X																								
CCB 490-575925/21	1		13:13	X																								
ZZZZZZ			13:14																									
240-107850-5	1	T	13:15	X																								
ZZZZZZ			13:17																									
ZZZZZZ			13:18																									
ZZZZZZ			13:19																									
ZZZZZZ			13:20																									
ZZZZZZ			13:21																									
ZZZZZZ			13:23																									
ZZZZZZ			13:24																									
240-107850-4	1	T	13:25	X																								
CCV 490-575925/32	1		13:26	X																								
CCB 490-575925/33	1		13:27	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107850-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/27/2019 08:00 End Date: 02/27/2019 08:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-271440/1	1	T	08:00	X																								
240-107850-2	1	T	08:00	X																								
240-107850-2 DU	1	T	08:00	X																								
240-107850-3	1	T	08:00	X																								
240-107850-4	1	T	08:00	X																								
240-107850-5	1	T	08:00	X																								
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 368671 Batch Start Date: 02/19/19 14:05 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 02/19/19 16:12

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCHARDNESS 00031		
MB 240-368671/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-368671/2		2340C-2011		25 mL	25 mL	6.35 mL	25 mL		
240-107850-G-2 DU	MRC-MW156A-020719	2340C-2011	T	5 mL	25 mL	2.25 mL			
240-107850-G-2	MRC-MW156A-020719	2340C-2011	T	5 mL	25 mL	2.20 mL			
240-107850-G-3	MRC-MW144B-020719	2340C-2011	T	25 mL	25 mL	1.55 mL			
240-107850-G-4	MRC-MW146B-020719	2340C-2011	T	25 mL	25 mL	5.05 mL			
240-107850-G-5	MRC-MW147B-020719	2340C-2011	T	25 mL	25 mL	1.15 mL			

Batch Notes	
Batch Comment	BEAKERS--4010979
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C9
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 368201 Batch Start Date: 02/14/19 11:41 Batch Analyst: Carson, Monica

Batch Method: 2320B-2011 Batch End Date: 02/15/19 08:57

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-368201/29		2320B-2011		InitialAmount is blank	10 mL				
MB 240-368201/30		2320B-2011		InitialAmount is blank					
240-107850-D-2	MRC-MW156A-020719	2320B-2011	T	InitialAmount is blank					
240-107850-D-3	MRC-MW144B-020719	2320B-2011	T	InitialAmount is blank					
240-107850-D-4	MRC-MW146B-020719	2320B-2011	T	InitialAmount is blank					
240-107850-D-5	MRC-MW147B-020719	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4- 4005008
pH Buffer 2 ID	7- 4017506
pH Buffer 3 ID	10- 3892955
pH Buffer 4 ID	12- 3891579
Nominal Amount Used	10 mL
pH Meter ID	severus
Probe ID	WCP 137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367870 Batch Start Date: 02/13/19 09:33 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-367870/1		2540 C-2011			3.6984 g	100 mL	3.6983 g	3.6984 g	0 g
LCS 240-367870/2		2540 C-2011			3.7122 g	100 mL	3.7341 g	3.7340 g	0 g
240-107850-D-2	MRC-MW156A-020719	2540 C-2011	T	790 umhos/cm	3.7343 g	100 mL	3.7907 g	3.7909 g	0 g
240-107850-D-3	MRC-MW144B-020719	2540 C-2011	T	327 umhos/cm	3.6615 g	100 mL	3.6809 g	3.6806 g	0 g
240-107850-D-4	MRC-MW146B-020719	2540 C-2011	T	1313 umhos/cm	3.6708 g	100 mL	3.7479 g	3.7475 g	0 g
240-107850-D-5	MRC-MW147B-020719	2540 C-2011	T	256 umhos/cm	3.6810 g	100 mL	3.6942 g	3.6941 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 240-367870/1		2540 C-2011		Pass No Unit	N/A No Unit	N/A	-0.0001 g	0 g	N/A g
LCS 240-367870/2		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0219 g	0.0218 g	N/A g
240-107850-D-2	MRC-MW156A-020719	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0564 g	0.0566 g	N/A g
240-107850-D-3	MRC-MW144B-020719	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0194 g	0.0191 g	N/A g
240-107850-D-4	MRC-MW146B-020719	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0771 g	0.0767 g	N/A g
240-107850-D-5	MRC-MW147B-020719	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0132 g	0.0131 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00039		
MB 240-367870/1		2540 C-2011		N/A g	100 mL	OK			
LCS 240-367870/2		2540 C-2011		N/A g	100 mL	OK	100 mL		
240-107850-D-2	MRC-MW156A-020719	2540 C-2011	T	N/A g	100 mL	OK			
240-107850-D-3	MRC-MW144B-020719	2540 C-2011	T	N/A g	100 mL	OK			
240-107850-D-4	MRC-MW146B-020719	2540 C-2011	T	N/A g	100 mL	OK			
240-107850-D-5	MRC-MW147B-020719	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367870 Batch Start Date: 02/13/19 09:33 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date:

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/14/2019 11:52
Date/Time - Out - CW (WT2)	02/14/2019 12:57
Temperature - Start - CW (WT2) - Correct	181 Celsius
Temperature - End - CW (WT2) - Correct	182 Celsius
Temperature - Start-CW(WT2) -Uncorrected	181 Celsius
Temperature - End-CW(WT2) -Uncorrected	182 Celsius
Temperature - Start - Corrected	104 Celsius
Temperature - End - Corrected	105 Celsius
Date/Time - In	02/13/2019 10:17
Date/Time - Out	02/14/2019 08:08
Filter ID	60020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O06
Pipette/Syringe/Dispenser ID	A1, B12, E12
Thermometer ID - Low Temperature	84922
Thermometer ID	181417084
Temperature - Start - Uncorrected	104 Celsius
Temperature - End - Uncorrected	105 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/14/2019 08:09 No Unit
Weight(WT1) Date/Time Out	02/14/2019 10:02
Weight(WT1) Start Temp	182 Celsius
Weight(WT1) Temp Out	182 Celsius
Uncorrected Weight(WT1) Start Temp	182 Celsius
Uncorrected Weight(WT1) Temp Out	182 Celsius

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367870 Batch Start Date: 02/13/19 09:33 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339523/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339523/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339523/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339523/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339523/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339523/6 IC		300.0		5 mL	2 mL				
STD7 240-339523/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339523/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339523/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367774 Batch Start Date: 02/12/19 13:08 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107850-H-2	MRC-MW156A-020719	300.0 & 9056A	T	5 mL					
240-107850-H-2	MRC-MW156A-020719	300.0 & 9056A	T	5 mL					
240-107850-H-3	MRC-MW144B-020719	300.0 & 9056A	T	5 mL					
240-107850-H-4	MRC-MW146B-020719	300.0 & 9056A	T	5 mL					
240-107850-H-4	MRC-MW146B-020719	300.0 & 9056A	T	5 mL					
240-107850-H-5	MRC-MW147B-020719	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICLCS 00669			
ICV 240-339523/10		9056A		5 mL	1.0 mL	5 mL			
ICB 240-339523/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367774 Batch Start Date: 02/12/19 13:08 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107850-H-2	MRC-MW156A-020719	300.0 & 9056A	T	5 mL					
240-107850-H-2	MRC-MW156A-020719	300.0 & 9056A	T	5 mL					
240-107850-H-3	MRC-MW144B-020719	300.0 & 9056A	T	5 mL					
240-107850-H-4	MRC-MW146B-020719	300.0 & 9056A	T	5 mL					
240-107850-H-4	MRC-MW146B-020719	300.0 & 9056A	T	5 mL					
240-107850-H-5	MRC-MW147B-020719	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107850-1

SDG No.:

Batch Number: 367774 Batch Start Date: 02/12/19 13:08 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00861	WCICLCS 00696			
CCV 240-367774/1		9056A		5 mL	5 mL				
CCB 240-367774/2		9056A		5 mL					
MB 240-367774/3		9056A		5 mL					
LCS 240-367774/4		9056A		5 mL		5 mL			
CCV 240-367774/13		9056A		5 mL	5 mL				
CCB 240-367774/14		9056A		5 mL					
CCV 240-367774/25		9056A		5 mL	5 mL				
CCB 240-367774/26		9056A		5 mL					
CCV 240-367774/37		9056A		5 mL	5 mL				
CCB 240-367774/38		9056A		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575925/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575925/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575925/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575925/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575925/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575925/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575925/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
240-107850-F-2	MRC-MW156A-020719	SM 4500 NO3 F	T	50 mL	50 mL				7.38
240-107850-F-3	MRC-MW144B-020719	SM 4500 NO3 F	T	50 mL	50 mL				7.82
CCV 490-575925/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/21		SM 4500 NO3 F		50 mL	50 mL				
240-107850-F-5	MRC-MW147B-020719	SM 4500 NO3 F	T	50 mL	50 mL				5.7
240-107850-F-4	MRC-MW146B-020719	SM 4500 NO3 F	T	50 mL	50 mL				5.22
CCV 490-575925/32		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/33		SM 4500 NO3 F		50 mL	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107850-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Batch Notes	
Acid used for pH adjustment	4547067
Base used for pH adjustment	4273883
Batch Comment	cent tubes 809161; pH probe VVZ10915; pH meter AB92340683
Buffer Reagent ID	4832283
Carrier Identification	DI water
Color Reagent ID	4832299
Filter ID	180611314
Pipette/Syringe/Dispenser ID	26061004, 26121028

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **APRIL 11, 2019**

FROM: **J. KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **DATA VALIDATION – VOC, OVG, PCB, METALS, MISC**
MRC BLOCK E/F MASS DISCHARGE
SAMPLE DELIVERY GROUP (SDG) 240-107924-1

SAMPLES: **2 / Aqueous – VOC, METALS, MISC**

MRC-MW149B-020819 MRC-MW150B-020819

1 / Aqueous – VOC

TB-020819

Overview

The sample set for MRC Block E/F Mass Discharge, SDG 240-107924-1, consisted of two (2) aqueous samples and one (1) aqueous trip blank sample. The two (2) aqueous sample and the one (1) aqueous trip blank sample were analyzed for volatile organic compounds (VOCs) as listed above. The two (2) aqueous samples were also analyzed for metals, and the miscellaneous analyses alkalinity, bromide, hardness as CaCO3, nitrite/nitrate-N, salinity, sulfate, and total suspended solids (TSS), as listed above. No field duplicate sample pairs were included in the sample delivery group (SDG).

The samples were collected by Tetra Tech on February 8, 2019 and analyzed by TestAmerica Laboratories Inc., North Canton, Nashville, and Pittsburgh, for all analyses. All analyses were conducted in accordance with EPA SW-846 Methods 8260C for VOCs, 6020A (ICP/MS) for metals, 6010C (ICP) for metals, 9056A for anions, Standard Method (SM) 2320B for total alkalinity, SM 2340C for total hardness, SM 2540C for total dissolved solids (TSS), SM 2520B for salinity (electrical conductivity), SM 4500 NO3 F for nitrate-N, and MCAWW Method 300.0 for anions, analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, blank results, blank spike/blank spike duplicate results, matrix spike/matrix spike duplicate results, surrogate spike recoveries, internal standard recoveries, chromatographic resolution, ICP interference results, ICP serial dilution results, analyte identification, analyte quantitation, and detection limits. Areas of concern are listed below.

Major Problems

- The laboratory narrative indicated that the samples were acid preserved for the VOC analysis. The VOC analyte 2-chlororethyl vinyl ether is known to rapidly deteriorate under acidic conditions. All sample non-detected results for 2-chloroethyl vinyl ether were qualified rejected, (UR), due to the laboratory narrative indicating that the samples were acid preserved.

Minor Problems

- Detected results reported below the quantitation limit but above the method detection limit (MDL) were qualified as estimated, (J).

- The VOC continuing calibration verification (CCV) percent differences (%Ds) were greater than the 20% quality control (QC) limit for carbon disulfide, tert-butyl alcohol, vinyl acetate, 2-chloroethyl vinyl ether, cis-1,3-dichloropropene, 4-methyl-2-pentanone, trans-1,3-dichloropropene, 2-hexanone, chlorodibromomethane, bromoform, 1,1,2,2-tetrachloroethane, and tert-amyl methyl ether for instrument A3UX15 on 02/11/19 @ 10:51 & @ 11:35 affecting VOC sample TB-020819. The sample TB-020819 had non-detected results for the aforementioned analytes which were qualified estimated, (UJ), with the exception of the 2-chloroethyl vinyl ether results which were rejected for the sample preservation issue.

- The VOC CCV %Ds were greater than the 20% quality control (QC) limit for carbon disulfide, methylene chloride, 2-chloroethyl vinyl ether, trans-1,3-dichloropropene, bromoform, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, 1,2,3-trichlorobenzene, ethyl tert-butyl ether, and tert-amyl methyl ether for instrument A3UX15 on 02/13/19 @ 11:48 & @ 12:32 affecting VOC samples MRC-MW149B-020819 and MRC-MW150B-020819. The samples detected and non-detected results for the aforementioned analytes were qualified estimated, (J) and (UJ), respectively, with the exception of the 2-chloroethyl vinyl ether results which were rejected for the sample preservation issue.

Notes

Sample MRC-MW150B-020819 was diluted 2.5X for VOCs resulting in elevated levels reported for non-detected VOC analytes.

The VOC methylene chloride was detected in the method blank MB 240-367892/6. The associated SDG samples had non-detected results for methylene chloride and no action was taken.

Nitrate-Nitrite as N was detected in a continuing calibration blank, CCB @ 13:13 on 02/17/19, at 0.0463 mg/l <RL, affecting both SDG samples analyzed for nitrate-nitrite as N. No action was taken as the samples nitrate-nitrite as N concentrations were >RL.

Samples MRC-MW149B-020819 and MRC-MW150B-020819 were analyzed for iron and manganese using both Method 6010C and 6020A. No explanation was given in the laboratory narrative.

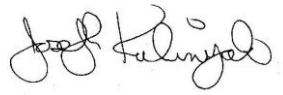
Non-detected sample analyte results were reported to the Method Detection Limit.

EXECUTIVE SUMMARY

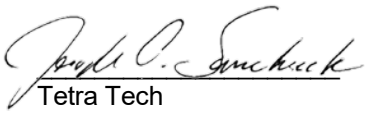
Laboratory Performance Issues: VOC results were qualified for CCV %D QC limit exceedances.

Other Factors Affecting Data Quality: Detected results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J). The sample and trip blank sample non-detected VOC 2-chlororethyl vinyl ether results were rejected due to sample acidification as noted in the laboratory narrative.

The data for these analyses were reviewed with reference to the USEPA National Functional Guidelines for Superfund Organic Methods Data Review (January 2017) and USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review (January 2017).



Tetra Tech
Joseph Kalinyak
Data Validator/Environmental Scientist



Tetra Tech
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08784	NSAMPLE	MRC-MW149B-020819			MRC-MW150B-020819			TB-020819		
SDG: 240-107924-1	LAB_ID	240-107924-2			240-107924-3			240-107924-1		
FRACTION: OV	SAMP_DATE	2/8/2019			2/8/2019			2/8/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U		0.35	U		0.14	UJ	C
1,1,1-TRICHLOROETHANE		0.24	U		0.6	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	U		0.33	U		0.13	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U		1	U		0.41	U	
1,1-DICHLOROETHANE		0.17	U		0.43	U		0.17	U	
1,1-DICHLOROETHENE		0.19	U		0.48	U		0.19	U	
1,1-DICHLOROPROPENE		0.14	U		0.35	U		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	UJ	C	1.4	UJ	C	0.54	U	
1,2,3-TRICHLOROPROPANE		0.24	U		0.6	U		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	U		0.35	U		0.14	U	
1,2,4-TRICHLOROBENZENE		0.26	UJ	C	0.65	UJ	C	0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U		0.18	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	UJ	C	2.3	UJ	C	0.91	UJ	C
1,2-DIBROMOETHANE		0.12	U		0.3	U		0.12	U	
1,2-DICHLOROBENZENE		0.15	U		0.38	U		0.15	U	
1,2-DICHLOROETHANE		0.21	U		0.53	U		0.21	U	
1,2-DICHLOROPROPANE		0.15	U		0.38	U		0.15	U	
1,3-DICHLOROBENZENE		0.15	U		0.38	U		0.15	U	
1,3-DICHLOROPROPANE		0.21	U		0.53	U		0.21	U	
1,4-DICHLOROBENZENE		0.16	U		0.4	U		0.16	U	
2,2-DICHLOROPROPANE		0.31	U		0.78	U		0.31	U	
2-BUTANONE		1.2	U		2.9	U		1.2	U	
2-CHLOROETHYL VINYL ETHER		0.26	UR	M	0.65	UR	M	0.26	UR	M
2-CHLOROTOLUENE		0.15	U		0.38	U		0.15	U	
2-HEXANONE		0.54	U		1.4	U		0.54	UJ	C
4-CHLOROTOLUENE		0.09	U		0.23	U		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U		0.33	U		0.13	U	
4-METHYL-2-PENTANONE		0.42	U		1.1	U		0.42	UJ	C
ACETONE		5.4	U		14	U		5.4	U	
BENZENE		0.13	U		0.33	U		0.13	U	
BROMOBENZENE		0.12	U		0.3	U		0.12	U	
BROMOCHLOROMETHANE		0.14	U		0.35	U		0.14	U	
BROMODICHLOROMETHANE		0.17	U		0.43	U		0.17	U	
BROMOFORM		0.76	UJ	C	1.9	UJ	C	0.76	UJ	C
BROMOMETHANE		0.42	U		1.1	U		0.42	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW149B-020819			MRC-MW150B-020819			TB-020819		
SDG: 240-107924-1	LAB_ID	240-107924-2			240-107924-3			240-107924-1		
FRACTION: OV	SAMP_DATE	2/8/2019			2/8/2019			2/8/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.62	J	CP	0.7	UJ	C	0.28	UJ	C
CARBON TETRACHLORIDE		0.26	U		0.65	U		0.26	U	
CHLOROBENZENE		0.14	U		0.35	U		0.14	U	
CHLORODIBROMOMETHANE		0.39	U		0.98	U		0.39	UJ	C
CHLOROETHANE		0.83	U		2.1	U		0.83	U	
CHLOROFORM		0.16	J	P	0.33	U		0.13	U	
CHLOROMETHANE		0.2	U		0.5	U		0.2	U	
CIS-1,2-DICHLOROETHENE		2.8			47			0.16	U	
CIS-1,3-DICHLOROPROPENE		0.61	U		1.5	U		0.61	UJ	C
DIBROMOMETHANE		0.09	U		0.23	U		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	U		0.88	U		0.35	U	
DIISOPROPYL ETHER		0.17	U		0.43	U		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	UJ	C	0.38	UJ	C	0.15	U	
ETHYLBENZENE		0.11	U		0.28	U		0.11	U	
HEXACHLOROBUTADIENE		0.83	UJ	C	2.1	UJ	C	0.83	U	
ISOPROPYLBENZENE		0.09	U		0.23	U		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U		0.18	U		0.07	U	
METHYLENE CHLORIDE		2.6	UJ	C	6.6	UJ	C	2.6	U	
NAPHTHALENE		0.32	UJ	C	0.8	UJ	C	0.32	U	
N-BUTYLBENZENE		0.14	U		0.35	U		0.14	U	
N-PROPYLBENZENE		0.15	U		0.38	U		0.15	U	
SEC-BUTYLBENZENE		0.13	U		0.33	U		0.13	U	
STYRENE		0.1	U		0.25	U		0.1	U	
TERT-AMYL METHYL ETHER		0.11	UJ	C	0.28	UJ	C	0.11	UJ	C
TERT-BUTYLBENZENE		0.14	U		0.35	U		0.14	U	
TERTIARY-BUTYL ALCOHOL		1.7	U		4.2	U		1.7	UJ	C
TETRACHLOROETHENE		0.15	U		0.38	U		0.15	U	
TOLUENE		0.14	U		0.35	U		0.14	U	
TOTAL XYLENES		0.15	U		0.38	U		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.48	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.67	UJ	C	1.7	UJ	C	0.67	UJ	C
TRICHLOROETHENE		4.3			79			0.1	U	
TRICHLOROFLUOROMETHANE		0.45	U		1.1	U		0.45	U	
VINYL ACETATE		0.19	U		0.48	U		0.19	UJ	C
VINYL CHLORIDE		0.2	U		1.8	J	P	0.2	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW149B-020819			MRC-MW150B-020819		
SDG: 240-107924-1	LAB_ID	240-107924-2			240-107924-3		
FRACTION: M	SAMP_DATE	2/8/2019			2/8/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		1700			150		
ANTIMONY		0.57	U		0.57	U	
ARSENIC		0.75	U		0.75	U	
BARIUM		63			70		
BERYLLIUM		8.1			1.3		
CADMIUM		0.27	J	P	0.21	U	
CALCIUM		16000			7100		
CHROMIUM		2.8			1.4	J	P
COBALT		33			20		
COPPER		84			36		
IRON		1600			1400		
LEAD		0.45	U		0.45	U	
MAGNESIUM		8400			3400		
MANGANESE		190			210		
NICKEL		63			20		
POTASSIUM		2800			4700		
SELENIUM		0.89	U		0.89	U	
SILVER		0.053	U		0.053	U	
SODIUM		170000			12000		
THALLIUM		0.2	J	P	0.2	U	
VANADIUM		0.82	U		0.82	U	
ZINC		250			70		

PROJ_NO: 08784	NSAMPLE	MRC-MW149B-020819						MRC-MW150B-020819					
SDG: 240-107924-1	LAB_ID	240-107924-2						240-107924-3					
FRACTION: MISC	SAMP_DATE	2/8/2019						2/8/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		2.6	U					9					
BROMIDE		0.097	J	P				0.08	J	P			
HARDNESS AS CACO3		100						40					
NITRITE/NITRATE-N		0.83						0.46					
SALINITY					2	U					2	U	
SULFATE		51						21					
TOTAL DISSOLVED SOLIDS		710						120					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: TB-020819 | Lab Sample ID: 240-107924-1

Matrix: Water | Lab File ID: UXC8784.D

Analysis Method: 8260C | Date Collected: 02/08/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 19:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: TB-020819 | Lab Sample ID: 240-107924-1

Matrix: Water | Lab File ID: UXC8784.D

Analysis Method: 8260C | Date Collected: 02/08/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 19:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: TB-020819 | Lab Sample ID: 240-107924-1

Matrix: Water | Lab File ID: UXC8784.D

Analysis Method: 8260C | Date Collected: 02/08/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 19:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	87		70-123
1868-53-7	Dibromofluoromethane (Surr)	90		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: MRC-MW149B-020819 | Lab Sample ID: 240-107924-2

Matrix: Water | Lab File ID: UXC8813.D

Analysis Method: 8260C | Date Collected: 02/08/2019 09:25

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 14:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.62	J	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.16	J	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: MRC-MW149B-020819 | Lab Sample ID: 240-107924-2

Matrix: Water | Lab File ID: UXC8813.D

Analysis Method: 8260C | Date Collected: 02/08/2019 09:25

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 14:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	2.8		1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	4.3		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: MRC-MW149B-020819 | Lab Sample ID: 240-107924-2

Matrix: Water | Lab File ID: UXC8813.D

Analysis Method: 8260C | Date Collected: 02/08/2019 09:25

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 14:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	88		70-123
1868-53-7	Dibromofluoromethane (Surr)	92		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: MRC-MW150B-020819 | Lab Sample ID: 240-107924-3

Matrix: Water | Lab File ID: UXC8820.D

Analysis Method: 8260C | Date Collected: 02/08/2019 11:10

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 17:54

Soil Aliquot Vol: | Dilution Factor: 2.5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.35	U	2.5	0.35
71-55-6	1,1,1-Trichloroethane	0.60	U	2.5	0.60
79-34-5	1,1,2,2-Tetrachloroethane	0.33	U	2.5	0.33
76-13-1	1,1,2-Trichlorotrifluoroethane	1.0	U	2.5	1.0
75-34-3	1,1-Dichloroethane	0.43	U	2.5	0.43
75-35-4	1,1-Dichloroethene	0.48	U	2.5	0.48
563-58-6	1,1-Dichloropropene	0.35	U	2.5	0.35
87-61-6	1,2,3-Trichlorobenzene	1.4	U	2.5	1.4
96-18-4	1,2,3-Trichloropropane	0.60	U	2.5	0.60
526-73-8	1,2,3-Trimethylbenzene	0.35	U	13	0.35
120-82-1	1,2,4-Trichlorobenzene	0.65	U	2.5	0.65
95-63-6	1,2,4-Trimethylbenzene	0.18	U	2.5	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	2.3	U	5.0	2.3
95-50-1	1,2-Dichlorobenzene	0.38	U	2.5	0.38
107-06-2	1,2-Dichloroethane	0.53	U	2.5	0.53
78-87-5	1,2-Dichloropropane	0.38	U	2.5	0.38
541-73-1	1,3-Dichlorobenzene	0.38	U	2.5	0.38
142-28-9	1,3-Dichloropropane	0.53	U	2.5	0.53
106-46-7	1,4-Dichlorobenzene	0.40	U	2.5	0.40
594-20-7	2,2-Dichloropropane	0.78	U	2.5	0.78
110-75-8	2-Chloroethyl vinyl ether	0.65	U	25	0.65
95-49-8	2-Chlorotoluene	0.38	U	2.5	0.38
591-78-6	2-Hexanone	1.4	U	25	1.4
108-86-1	Bromobenzene	0.30	U	2.5	0.30
74-97-5	Bromochloromethane	0.35	U	2.5	0.35
106-43-4	4-Chlorotoluene	0.23	U	2.5	0.23
99-87-6	4-Isopropyltoluene	0.33	U	2.5	0.33
67-64-1	Acetone	14	U	25	14
71-43-2	Benzene	0.33	U	2.5	0.33
75-25-2	Bromoform	1.9	U	2.5	1.9
74-83-9	Bromomethane	1.1	U	2.5	1.1
75-15-0	Carbon disulfide	0.70	U	2.5	0.70
56-23-5	Carbon tetrachloride	0.65	U	2.5	0.65
108-90-7	Chlorobenzene	0.35	U	2.5	0.35
75-00-3	Chloroethane	2.1	U	2.5	2.1
67-66-3	Chloroform	0.33	U	2.5	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: MRC-MW150B-020819 | Lab Sample ID: 240-107924-3

Matrix: Water | Lab File ID: UXC8820.D

Analysis Method: 8260C | Date Collected: 02/08/2019 11:10

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 17:54

Soil Aliquot Vol: | Dilution Factor: 2.5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.50	U	2.5	0.50
156-59-2	cis-1,2-Dichloroethene	47		2.5	0.40
10061-01-5	cis-1,3-Dichloropropene	1.5	U	2.5	1.5
87-68-3	Hexachlorobutadiene	2.1	U	2.5	2.1
74-95-3	Dibromomethane	0.23	U	2.5	0.23
75-27-4	Bromodichloromethane	0.43	U	2.5	0.43
75-71-8	Dichlorodifluoromethane	0.88	U	2.5	0.88
100-41-4	Ethylbenzene	0.28	U	2.5	0.28
106-93-4	1,2-Dibromoethane	0.30	U	2.5	0.30
108-20-3	Diisopropyl ether	0.43	U	25	0.43
91-20-3	Naphthalene	0.80	U	2.5	0.80
104-51-8	n-Butylbenzene	0.35	U	2.5	0.35
98-82-8	Isopropylbenzene	0.23	U	2.5	0.23
103-65-1	N-Propylbenzene	0.38	U	2.5	0.38
78-93-3	2-Butanone (MEK)	2.9	U	25	2.9
108-10-1	4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1
135-98-8	sec-Butylbenzene	0.33	U	2.5	0.33
1634-04-4	Methyl tert-butyl ether	0.18	U	2.5	0.18
994-05-8	Tert-amyl methyl ether	0.28	U	13	0.28
75-09-2	Methylene Chloride	6.6	U	13	6.6
100-42-5	Styrene	0.25	U	2.5	0.25
637-92-3	Ethyl tert-butyl ether	0.38	U	13	0.38
98-06-6	tert-Butylbenzene	0.35	U	2.5	0.35
127-18-4	Tetrachloroethene	0.38	U	2.5	0.38
108-88-3	Toluene	0.35	U	2.5	0.35
156-60-5	trans-1,2-Dichloroethene	0.48	U	2.5	0.48
10061-02-6	trans-1,3-Dichloropropene	1.7	U	2.5	1.7
79-01-6	Trichloroethene	79		2.5	0.25
75-69-4	Trichlorofluoromethane	1.1	U	2.5	1.1
108-05-4	Vinyl acetate	0.48	U	5.0	0.48
75-01-4	Vinyl chloride	1.8	J	2.5	0.50
75-65-0	tert-Butyl alcohol	4.2	U	130	4.2
1330-20-7	Xylenes, Total	0.38	U	5.0	0.38
124-48-1	Chlorodibromomethane	0.98	U	2.5	0.98

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Client Sample ID: MRC-MW150B-020819 Lab Sample ID: 240-107924-3

Matrix: Water Lab File ID: UXC8820.D

Analysis Method: 8260C Date Collected: 02/08/2019 11:10

Sample wt/vol: 5(mL) Date Analyzed: 02/13/2019 17:54

Soil Aliquot Vol: Dilution Factor: 2.5

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367892 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	85		70-123
1868-53-7	Dibromofluoromethane (Surr)	92		75-128

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW149B-020819 Lab Sample ID: 240-107924-2

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 09:25

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	1600	200	26	ug/L			1	6010C
7439-96-5	Manganese	190	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	1700	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	63	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	8.1	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.27	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	33	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.8	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	84	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	1600	100	47	ug/L			1	6020A
7439-96-5	Manganese	180	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	63	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	J		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	250	20	15	ug/L			1	6020A
7440-70-2	Calcium	16000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	2800	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	8400	1000	200	ug/L			1	6020A
7440-23-5	Sodium	170000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW150B-020819 Lab Sample ID: 240-107924-3

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 11:10

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	1400	200	26	ug/L			1	6010C
7439-96-5	Manganese	210	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	150	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	70	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.3	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	20	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	1.4	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	36	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	1300	100	47	ug/L			1	6020A
7439-96-5	Manganese	190	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	20	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	70	20	15	ug/L			1	6020A
7440-70-2	Calcium	7100	1000	580	ug/L			1	6020A
7440-09-7	Potassium	4700	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	3400	1000	200	ug/L			1	6020A
7440-23-5	Sodium	12000	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW149B-020819 Lab Sample ID: 240-107924-2

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 09:25

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	100	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	2.6	5.0	2.6	mg/L	U		1	2320B-2011
	Total Dissolved Solids	710	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.097	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	51	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW150B-020819 Lab Sample ID: 240-107924-3

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 11:10

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	40	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	9.0	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	120	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.080	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	21	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW149B-020819 Lab Sample ID: 240-107924-2

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 09:25

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.83	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW150B-020819 Lab Sample ID: 240-107924-3

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 11:10

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.46	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW149B-020819 Lab Sample ID: 240-107924-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 09:25

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW150B-020819 Lab Sample ID: 240-107924-3

Lab Name: TestAmerica Pittsburgh Job No.: 240-107924-1

SDG ID.:

Matrix: Water Date Sampled: 02/08/2019 11:10

Reporting Basis: WET Date Received: 02/09/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

APPENDIX C

SUPPORT DOCUMENTATION

1.0/1.0

North Canton
4101 Shuffel Street, N. W.

North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

Baltimore #201

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Mike Martin	Site Contact: Walt Pryor	Date: 2/8/19	COC No:
20251 Century Blvd, Suite 200	Analysis Turnaround Time			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W)			
(301) 528-3021 Phone	TAT if different from Below: STANDARD TAT			SDG No.
(301) 528-3000 FAX	☐ 2 weeks			
Project Name: MRC BLOCK E/F MASS DISCHARGE	☐ 1 week			
Site: MRC BLOCK E	☐ 2 days			Sampler: Walt Pryor
PO # 112IC08784	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (SW0846 8260C)	Total Metals/Hardness (6020A, 2340C)	Sulfate, Nitrates, TDS (9056A, 4500-NO3F, 2540C	Bromide (300)	Iron and Manganese (6010C	Alkalinity (SM 2320B)	Salinity (2520B)	PCBs (680)	Sample Specific Notes:
TB-020819	2/8/19	0000	GRAB	WATER	2		x								
MRC-MW149B-020719	↓	0925	↓	↓	9		x	x	x	x	x	x	x	0	No PCBs
MRC-MW150B-020819	↓	1110	↓	↓	9		x	x	x	x	x	x	x	0	No PCBs

2/8/19



Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other	2	4	6	1	4	1	1	1

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: Block E/F Mass discharge well sampling

Relinquished by:	Company: Tetra Tech	Date/Time: 2/8/19	Received by:	Company: TA	Date/Time: 2/8/19 1306
Relinquished by:	Company: TA	Date/Time: 2/8/19 1700	Received by:	Company: TA	Date/Time: 2/8/19 940
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 2, dated 03/06/2012

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 107924**
Canton Facility

Client MRC Site Name _____ Cooler unpacked by:

Cooler Received on 2/9/16 Opened on 2/9/16

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # NA Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 1.0 °C Corrected Cooler Temp. 1.0 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____.

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW149B-020819	240-107924-F-2	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW149B-020819	240-107924-G-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW149B-020819	240-107924-I-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW150B-020819	240-107924-F-3	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW150B-020819	240-107924-G-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW150B-020819	240-107924-I-3	Plastic 500ml - with Nitric Acid	<2	_____	_____

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass Discharge

Report Number: 240-107924-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The 4500NO3-F Nitrate Nitrite as N analysis was performed at the TestAmerica Nashville laboratory. The 9050A Specific Conductance and the 2520B Salinity analyses were performed at the TestAmerica Pittsburgh laboratory.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 2/9/2019 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.0º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-020819 (240-107924-1), MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/11/2019 and 02/13/2019.

Methylene Chloride was detected in method blank MB 240-367892/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

tert-Butyl alcohol failed the recovery criteria low for the MS of sample 240-107850-5 in batch 240-367892.

tert-Butyl alcohol failed the recovery criteria low for the MSD of sample 240-107850-5 in batch 240-367892.
1,1,2-Trichlorotrifluoroethane, Dichlorodifluoromethane and Trichlorofluoromethane exceeded the RPD limit.

Refer to the QC report for details.

Sample MRC-MW150B-020819 (240-107924-3)[2.5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260C: The continuing calibration verification (CCV) for analytical batch 307509 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required.

TB-020819 (240-107924-1)

Method(s) 8260C: The preservative used in the sample containers received is not compatible with the analytes requested. 2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample.

TB-020819 (240-107924-1)

Method(s) 8260C: The continuing calibration verification (CCV) for analytical batch 367892 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required.

MRC-MW149B-020819 (240-107924-2), MRC-MW150B-020819 (240-107924-3) and (240-107850-B-5)

Method(s) 8260C: The preservative used in the sample containers received is not compatible with the analytes requested. 2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample.

MRC-MW149B-020819 (240-107924-2), MRC-MW150B-020819 (240-107924-3) and (240-107850-B-5)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/11/2019 and analyzed on 02/12/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 02/11/2019 and analyzed on 02/12/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 02/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 02/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 02/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for anions in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 02/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY
Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for Salinity in accordance with SM 2520B. The samples were analyzed on 02/27/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE

Samples MRC-MW149B-020819 (240-107924-2) and MRC-MW150B-020819 (240-107924-3) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 02/17/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107924-1

GC/MS VOA

Analysis Batch: 367509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-1	TB-020819	Total/NA	Water	8260C	
MB 240-367509/6	Method Blank	Total/NA	Water	8260C	
LCS 240-367509/4	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 367892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total/NA	Water	8260C	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	8260C	
MB 240-367892/6	Method Blank	Total/NA	Water	8260C	
LCS 240-367892/4	Lab Control Sample	Total/NA	Water	8260C	

Metals

Prep Batch: 367490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total Recoverable	Water	3005A	
240-107924-3	MRC-MW150B-020819	Total Recoverable	Water	3005A	
MB 240-367490/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-367490/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-367490/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 367822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total Recoverable	Water	6020A	367490
240-107924-3	MRC-MW150B-020819	Total Recoverable	Water	6020A	367490
MB 240-367490/1-A	Method Blank	Total Recoverable	Water	6020A	367490
LCS 240-367490/3-A	Lab Control Sample	Total Recoverable	Water	6020A	367490

Analysis Batch: 367825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total Recoverable	Water	6010C	367490
240-107924-3	MRC-MW150B-020819	Total Recoverable	Water	6010C	367490
MB 240-367490/1-A	Method Blank	Total Recoverable	Water	6010C	367490
LCS 240-367490/2-A	Lab Control Sample	Total Recoverable	Water	6010C	367490

General Chemistry

Analysis Batch: 271440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total/NA	Water	SM 2520B	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	SM 2520B	
MB 180-271440/1	Method Blank	Total/NA	Water	SM 2520B	

Analysis Batch: 367926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total/NA	Water	2340C-2011	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	2340C-2011	
MB 240-367926/1	Method Blank	Total/NA	Water	2340C-2011	
LCS 240-367926/2	Lab Control Sample	Total/NA	Water	2340C-2011	

General Chemistry (Continued)

Analysis Batch: 368035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total/NA	Water	2540 C-2011	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	2540 C-2011	
MB 240-368035/1	Method Blank	Total/NA	Water	2540 C-2011	
LCS 240-368035/2	Lab Control Sample	Total/NA	Water	2540 C-2011	

Analysis Batch: 368146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total/NA	Water	300.0	
240-107924-2	MRC-MW149B-020819	Total/NA	Water	9056A	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	300.0	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	9056A	
MB 240-368146/3	Method Blank	Total/NA	Water	9056A	
LCS 240-368146/4	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 368201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total/NA	Water	2320B-2011	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	2320B-2011	
MB 240-368201/30	Method Blank	Total/NA	Water	2320B-2011	
LCS 240-368201/29	Lab Control Sample	Total/NA	Water	2320B-2011	

Analysis Batch: 575925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-107924-2	MRC-MW149B-020819	Total/NA	Water	SM 4500 NO3 F	
240-107924-3	MRC-MW150B-020819	Total/NA	Water	SM 4500 NO3 F	
MB 490-575925/6	Method Blank	Total/NA	Water	SM 4500 NO3 F	
LCS 490-575925/7	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107924-1

Client Sample ID: TB-020819
Date Collected: 02/08/19 00:00
Date Received: 02/09/19 09:40

Lab Sample ID: 240-107924-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	367509	02/11/19 19:03	LEE	TAL CAN

Client Sample ID: MRC-MW149B-020819
Date Collected: 02/08/19 09:25
Date Received: 02/09/19 09:40

Lab Sample ID: 240-107924-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	367892	02/13/19 14:21	LEE	TAL CAN
Total Recoverable	Prep	3005A			367490	02/11/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6010C		1	367825	02/12/19 18:44	WKD	TAL CAN
Total Recoverable	Prep	3005A			367490	02/11/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6020A		1	367822	02/12/19 20:42	RKT	TAL CAN
Total/NA	Analysis	2320B-2011		1	368201	02/14/19 15:27	MAC	TAL CAN
Total/NA	Analysis	2340C-2011		1	367926	02/13/19 15:29	JMB	TAL CAN
Total/NA	Analysis	2540 C-2011		1	368035	02/14/19 09:55	AMT	TAL CAN
Total/NA	Analysis	300.0		1	368146	02/14/19 22:30	JWW	TAL CAN
Total/NA	Analysis	9056A		1	368146	02/14/19 22:30	JWW	TAL CAN
Total/NA	Analysis	SM 2520B		1	271440	02/27/19 08:00	CLL	TAL PIT
Total/NA	Analysis	SM 4500 NO3 F		1	575925	02/17/19 13:17	MSP	TAL NSH

Client Sample ID: MRC-MW150B-020819
Date Collected: 02/08/19 11:10
Date Received: 02/09/19 09:40

Lab Sample ID: 240-107924-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2.5	367892	02/13/19 17:54	LEE	TAL CAN
Total Recoverable	Prep	3005A			367490	02/11/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6010C		1	367825	02/12/19 18:48	WKD	TAL CAN
Total Recoverable	Prep	3005A			367490	02/11/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6020A		1	367822	02/12/19 20:45	RKT	TAL CAN
Total/NA	Analysis	2320B-2011		1	368201	02/14/19 15:32	MAC	TAL CAN
Total/NA	Analysis	2340C-2011		1	367926	02/13/19 15:34	JMB	TAL CAN
Total/NA	Analysis	2540 C-2011		1	368035	02/14/19 09:55	AMT	TAL CAN
Total/NA	Analysis	300.0		1	368146	02/14/19 23:10	JWW	TAL CAN
Total/NA	Analysis	9056A		1	368146	02/14/19 23:10	JWW	TAL CAN
Total/NA	Analysis	SM 2520B		1	271440	02/27/19 08:00	CLL	TAL PIT
Total/NA	Analysis	SM 4500 NO3 F		1	575925	02/17/19 13:18	MSP	TAL NSH

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-107924-1
Project/Site: MRC Block E/F Mass Discharge

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SM = "Standard Methods For The Examination Of Water And Wastewater"
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177
TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107924-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107924-1	TB-020819	Water	02/08/19 00:00	02/09/19 09:40
240-107924-2	MRC-MW149B-020819	Water	02/08/19 09:25	02/09/19 09:40
240-107924-3	MRC-MW150B-020819	Water	02/08/19 11:10	02/09/19 09:40

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab File ID: BFB0211.D BFB Injection Date: 02/11/2019

Instrument ID: A3UX15 BFB Injection Time: 10:27

Analysis Batch No.: 367509

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.1	
75	30.0 - 60.0 % of mass 95	50.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.7	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	101.9	
175	5.0 - 9.0 % of mass 174	6.3	(6.2) 1
176	95.0 - 101.0 % of mass 174	100.4	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367509/2	UXC8765.D	02/11/2019	10:51
	LCS 240-367509/4	UXC8766.D	02/11/2019	11:13
	CCV 240-367509/3	UXC8767.D	02/11/2019	11:35
	MB 240-367509/6	UXC8770.D	02/11/2019	12:40
	240-107725-C-2 MS	UXC8773.D	02/11/2019	13:46
	240-107725-C-2 MSD	UXC8774.D	02/11/2019	14:08
TB-020819	240-107924-1	UXC8784.D	02/11/2019	19:03

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3306	0.1000	0.0108	0.0100	7.6	20.0
Chloromethane	Ave	0.3135	0.3315	0.1000	0.0106	0.0100	5.7	20.0
Butadiene	Ave	0.3794	0.3395		0.00895	0.0100	-10.5	20.0
Vinyl chloride	Ave	0.2885	0.2932	0.1000	0.0102	0.0100	1.6	20.0
Bromomethane	Ave	0.2308	0.2097	0.0500	0.00908	0.0100	-9.2	20.0
Chloroethane	Ave	0.2041	0.1903	0.0500	0.00932	0.0100	-6.8	20.0
Dichlorofluoromethane	Ave	0.5102	0.4772		0.00935	0.0100	-6.5	20.0
Trichlorofluoromethane	Ave	0.4337	0.4369	0.1000	0.0101	0.0100	0.7	20.0
Ethyl ether	Ave	0.2310	0.2152		0.00932	0.0100	-6.8	20.0
Acrolein	Ave	0.0317	0.0415		0.0654	0.0500	30.8	50.0
1,1-Dichloroethene	Ave	0.3005	0.2630	0.1000	0.00875	0.0100	-12.5	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2317	0.0500	0.00939	0.0100	-6.1	20.0
Acetone	Lin1		0.0215	0.0100	0.0175	0.0200	-12.3	50.0
Iodomethane	Ave	0.4675	0.4437		0.00949	0.0100	-5.1	20.0
Carbon disulfide	Ave	0.7741	0.6041	0.1000	0.00780	0.0100	-22.0*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1568		0.00923	0.0100	-7.7	20.0
Methyl acetate	Ave	0.2050	0.1752	0.1000	0.0171	0.0200	-14.6	20.0
Methylene Chloride	Lin1		0.2911	0.1000	0.00925	0.0100	-7.5	50.0
tert-Butyl alcohol	Ave	0.0203	0.0152		0.0751	0.100	-24.9	50.0
Acrylonitrile	Ave	0.0962	0.0865		0.0899	0.100	-10.1	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6912	0.1000	0.00882	0.0100	-11.8	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2769	0.1000	0.00990	0.0100	-1.0	20.0
Hexane	Ave	0.0586	0.0490		0.00835	0.0100	-16.5	20.0
1,1-Dichloroethane	Ave	0.4517	0.4471	0.2000	0.00990	0.0100	-1.0	20.0
Vinyl acetate	Ave	0.5198	0.3452		0.00664	0.0100	-33.6	50.0
2,2-Dichloropropane	Ave	0.0624	0.0620		0.00994	0.0100	-0.6	20.0
2-Butanone (MEK)	Ave	0.0333	0.0269	0.0100	0.0162	0.0200	-19.0	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3120	0.1000	0.0101	0.0100	1.4	20.0
Bromochloromethane	Ave	0.1531	0.1522		0.00994	0.0100	-0.6	20.0
Tetrahydrofuran	Ave	0.0828	0.0641		0.0155	0.0200	-22.5*	20.0
Chloroform	Ave	0.4606	0.4672	0.2000	0.0101	0.0100	1.4	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3486	0.1000	0.00983	0.0100	-1.7	20.0
Cyclohexane	Ave	0.3993	0.3736	0.1000	0.00936	0.0100	-6.4	20.0
1,1-Dichloropropene	Ave	0.3748	0.3470		0.00926	0.0100	-7.4	20.0
Carbon tetrachloride	Ave	0.3441	0.3064	0.1000	0.00891	0.0100	-10.9	20.0
Isobutyl alcohol	Ave	0.0077	0.0067		0.216	0.250	-13.5	20.0
Benzene	Ave	1.116	1.108	0.5000	0.00992	0.0100	-0.8	20.0
1,2-Dichloroethane	Ave	0.3820	0.3654	0.1000	0.00957	0.0100	-4.3	20.0
n-Heptane	Ave	0.0532	0.0432		0.00811	0.0100	-18.9	20.0
Trichloroethene	Ave	0.3240	0.3113	0.1500	0.00961	0.0100	-3.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3263	0.1000	0.00926	0.0100	-7.4	20.0
1,2-Dichloropropane	Ave	0.2590	0.2427	0.1000	0.00937	0.0100	-6.3	20.0
1,4-Dioxane	Ave	0.0020	0.0017		0.174	0.200	-13.1	50.0
Dibromomethane	Ave	0.1717	0.1548		0.00901	0.0100	-9.9	20.0
Bromodichloromethane	Ave	0.3410	0.2813	0.1500	0.00825	0.0100	-17.5	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1175		0.0135	0.0200	-32.7*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3121	0.1500	0.00791	0.0100	-20.9*	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2001	0.0500	0.0149	0.0200	-25.3*	20.0
Toluene	Ave	1.476	1.394	0.4000	0.00944	0.0100	-5.6	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3270	0.1000	0.00704	0.0100	-29.6*	20.0
Ethyl methacrylate	Ave	0.4442	0.3282		0.00739	0.0100	-26.1*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2666	0.1000	0.00894	0.0100	-10.6	20.0
Tetrachloroethene	Ave	0.3268	0.3095	0.1500	0.00947	0.0100	-5.3	20.0
1,3-Dichloropropane	Ave	0.5243	0.4627		0.00882	0.0100	-11.8	20.0
2-Hexanone	Ave	0.2283	0.1734	0.0500	0.0152	0.0200	-24.1*	20.0
Chlorodibromomethane	Ave	0.3116	0.2276		0.00730	0.0100	-27.0*	20.0
1,2-Dibromoethane	Ave	0.3191	0.2642		0.00828	0.0100	-17.2	20.0
Chlorobenzene	Ave	0.9777	0.9075	0.3000	0.00928	0.0100	-7.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3172		0.00919	0.0100	-8.1	20.0
Ethylbenzene	Ave	0.5145	0.4715		0.00916	0.0100	-8.4	20.0
m-Xylene & p-Xylene	Ave	1.221	1.096		0.00898	0.0100	-10.2	20.0
o-Xylene	Ave	0.6189	0.5994		0.00969	0.0100	-3.1	20.0
Styrene	Ave	1.036	0.9417	0.3000	0.00909	0.0100	-9.1	20.0
Bromoform	Lin1		0.1219	0.1000	0.00542	0.0100	-45.8*	20.0
Isopropylbenzene	Ave	1.463	1.403	0.1000	0.00959	0.0100	-4.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5572	0.3000	0.00786	0.0100	-21.4*	20.0
Bromobenzene	Ave	0.8274	0.7248		0.00876	0.0100	-12.4	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.1984		0.00804	0.0100	-19.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0703		0.00693	0.0100	-30.7*	20.0
N-Propylbenzene	Ave	0.7286	0.6321		0.00867	0.0100	-13.3	20.0
2-Chlorotoluene	Ave	0.6821	0.6150		0.00902	0.0100	-9.8	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.928		0.00910	0.0100	-9.0	20.0
4-Chlorotoluene	Ave	2.205	1.890		0.00857	0.0100	-14.3	20.0
tert-Butylbenzene	Ave	1.897	1.667		0.00878	0.0100	-12.2	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.035		0.00914	0.0100	-8.6	20.0
sec-Butylbenzene	Ave	2.327	2.095		0.00901	0.0100	-9.9	20.0
1,3-Dichlorobenzene	Ave	1.425	1.263	0.6000	0.00887	0.0100	-11.3	20.0
4-Isopropyltoluene	Ave	2.083	1.884		0.00904	0.0100	-9.6	20.0
1,4-Dichlorobenzene	Ave	1.477	1.296	0.5000	0.00877	0.0100	-12.3	20.0
n-Butylbenzene	Ave	1.649	1.400		0.00849	0.0100	-15.1	20.0
1,2-Dichlorobenzene	Ave	1.387	1.288	0.4000	0.00928	0.0100	-7.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0961	0.0500	0.00596	0.0100	-40.4	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7988	0.2000	0.00909	0.0100	-9.1	50.0
Hexachlorobutadiene	Ave	0.4386	0.3511		0.00801	0.0100	-19.9	20.0
Naphthalene	Ave	2.209	1.776		0.00804	0.0100	-19.6	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7384		0.00934	0.0100	-6.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2646		0.00693	0.00797	-13.0	20.0
Toluene-d8 (Surr)	Ave	1.214	1.077		0.00707	0.00797	-11.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3688		0.00677	0.00797	-15.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCV 240-367509/3 Calibration Date: 02/11/2019 11:35

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8767.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0259		0.112	0.100	12.2	20.0
Diisopropyl ether	Ave	0.2405	0.2296		0.00955	0.0100	-4.5	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3804		0.00898	0.0100	-10.2	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6235		0.00800	0.0100	-20.0	20.0
Ethyl acetate	Ave	0.2538	0.1979		0.0156	0.0200	-22.0	50.0
Propionitrile	Ave	0.0357	0.0334		0.0937	0.100	-6.3	20.0
Methacrylonitrile	Ave	0.1733	0.1482		0.0855	0.100	-14.5	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5715		0.00736	0.0100	-26.4*	20.0
n-Butanol	Ave	0.0061	0.0037		0.154	0.250	-38.5*	20.0
Ethyl acrylate	Ave	0.3330	0.2421		0.00727	0.0100	-27.3*	20.0
Methyl methacrylate	Ave	0.2430	0.1897		0.0156	0.0200	-21.9*	20.0
2-Nitropropane	Ave	0.0745	0.0280		0.00753	0.0200	-62.4*	20.0
n-Butyl acetate	Ave	0.3918	0.2807		0.00716	0.0100	-28.4*	20.0
1-Chlorohexane	Ave	0.3968	0.2920		0.00736	0.0100	-26.4*	20.0
Cyclohexanone	Lin1		0.0104		0.0631	0.100	-36.9*	20.0
Pentachloroethane	Ave	0.2034	0.1517		0.0149	0.0200	-25.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.013		0.00876	0.0100	-12.4	20.0
Benzyl chloride	Ave	0.2963	0.1293		0.00436	0.0100	-56.4*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8316		0.00879	0.0100	-12.1	20.0
2-Methylnaphthalene	Ave	1.076	0.6690		0.0124	0.0200	-37.8*	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab File ID: UXC8770.D Lab Sample ID: MB 240-367509/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/11/2019 12:40

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367509/4	UXC8766.D	02/11/2019 11:13
	240-107725-C-2 MS	UXC8773.D	02/11/2019 13:46
	240-107725-C-2 MSD	UXC8774.D	02/11/2019 14:08
TB-020819	240-107924-1	UXC8784.D	02/11/2019 19:03

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-367509/6

Matrix: Water Lab File ID: UXC8770.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367509 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	86		70-123
1868-53-7	Dibromofluoromethane (Surr)	86		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.03	90	80-124	
1,1,1-Trichloroethane	10.0	10.5	105	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.69	87	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.62	96	50-156	
1,1-Dichloroethane	10.0	10.5	105	75-133	
1,1-Dichloroethene	10.0	9.12	91	65-139	
1,1-Dichloropropene	10.0	9.95	99	78-126	
1,2,3-Trichlorobenzene	10.0	8.95	90	39-138	
1,2,3-Trichloropropane	10.0	8.85	88	66-139	
1,2,4-Trichlorobenzene	10.0	8.66	87	42-133	
1,2,4-Trimethylbenzene	10.0	9.49	95	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.72	57	46-132	
1,2-Dichlorobenzene	10.0	9.87	99	78-120	
1,2-Dichloroethane	10.0	10.3	103	71-135	
1,2-Dichloropropane	10.0	10.6	106	78-133	
1,3-Dichlorobenzene	10.0	9.58	96	78-120	
1,3-Dichloropropane	10.0	9.50	95	72-134	
1,4-Dichlorobenzene	10.0	9.63	96	78-120	
2,2-Dichloropropane	10.0	10.5	105	42-150	
2-Chloroethyl vinyl ether	10.0	8.08 J	81	55-137	
2-Chlorotoluene	10.0	9.67	97	78-123	
2-Hexanone	20.0	15.5	77	43-148	
Bromobenzene	10.0	9.69	97	74-129	
Bromochloromethane	10.0	10.7	107	74-130	
4-Chlorotoluene	10.0	9.49	95	77-125	
4-Isopropyltoluene	10.0	9.40	94	69-122	
Acetone	20.0	17.4	87	21-162	
Benzene	10.0	10.6	106	80-123	
Bromoform	10.0	5.03	50	49-141	
Bromomethane	10.0	8.44	84	41-175	
Carbon disulfide	10.0	7.88	79	60-138	
Carbon tetrachloride	10.0	9.20	92	63-140	
Chlorobenzene	10.0	10.0	100	80-121	
Chloroethane	10.0	8.43	84	33-173	
Chloroform	10.0	10.5	105	79-127	
Chloromethane	10.0	8.83	88	54-143	
cis-1,2-Dichloroethene	10.0	10.6	106	76-128	
cis-1,3-Dichloropropene	10.0	8.94	89	64-132	
Hexachlorobutadiene	10.0	8.16	82	38-136	
Dibromomethane	10.0	9.67	97	74-124	
Bromodichloromethane	10.0	8.78	88	77-125	
Dichlorodifluoromethane	10.0	7.36	74	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.78	98	80-120	
1,2-Dibromoethane	10.0	8.95	89	77-123	
Naphthalene	10.0	7.76	78	28-141	
m-Xylene & p-Xylene	10.0	9.69	97	80-120	
n-Butylbenzene	10.0	8.82	88	57-126	
Isopropylbenzene	10.0	9.80	98	74-120	
N-Propylbenzene	10.0	9.40	94	77-123	
2-Butanone (MEK)	20.0	17.5	87	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.8	84	49-143	
sec-Butylbenzene	10.0	9.10	91	68-123	
Methyl tert-butyl ether	10.0	8.88	89	51-133	
Methylene Chloride	10.0	9.41	94	70-134	
o-Xylene	10.0	9.98	100	80-120	
Styrene	10.0	9.34	93	79-120	
tert-Butylbenzene	10.0	9.02	90	70-121	
Tetrachloroethene	10.0	9.77	98	74-130	
Toluene	10.0	10.0	100	78-129	
trans-1,2-Dichloroethene	10.0	10.7	107	78-133	
trans-1,3-Dichloropropene	10.0	7.22	72	55-128	
Trichloroethene	10.0	10.3	103	76-125	
Trichlorofluoromethane	10.0	9.69	97	51-164	
Vinyl acetate	10.0	8.28	83	45-151	
Vinyl chloride	10.0	8.69	87	58-143	
tert-Butyl alcohol	100	59.8	60	10-161	
Xylenes, Total	20.0	19.7	98	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab File ID: BFB0213.D BFB Injection Date: 02/13/2019

Instrument ID: A3UX15 BFB Injection Time: 11:22

Analysis Batch No.: 367892

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.8	
75	30.0 - 60.0 % of mass 95	50.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.6	(0.5) 1
174	50.0 - 120.00 % of mass 95	105.7	
175	5.0 - 9.0 % of mass 174	7.0	(6.6) 1
176	95.0 - 101.0 % of mass 174	101.4	(96.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367892/2	UXC8806.D	02/13/2019	11:48
	LCS 240-367892/4	UXC8807.D	02/13/2019	12:10
	CCV 240-367892/3	UXC8808.D	02/13/2019	12:32
	MB 240-367892/6	UXC8811.D	02/13/2019	13:38
MRC-MW149B-020819	240-107924-2	UXC8813.D	02/13/2019	14:21
MRC-MW150B-020819	240-107924-3	UXC8820.D	02/13/2019	17:54
	240-107850-B-5 MS	UXC8821.D	02/13/2019	18:16
	240-107850-B-5 MSD	UXC8822.D	02/13/2019	18:38

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.2644	0.1000	0.00861	0.0100	-13.9	20.0
Chloromethane	Ave	0.3135	0.2740	0.1000	0.00874	0.0100	-12.6	20.0
Butadiene	Ave	0.3794	0.2948		0.00777	0.0100	-22.3*	20.0
Vinyl chloride	Ave	0.2885	0.2406	0.1000	0.00834	0.0100	-16.6	20.0
Bromomethane	Ave	0.2308	0.1961	0.0500	0.00850	0.0100	-15.0	20.0
Chloroethane	Ave	0.2041	0.1732	0.0500	0.00848	0.0100	-15.2	20.0
Dichlorofluoromethane	Ave	0.5102	0.4461		0.00874	0.0100	-12.6	20.0
Trichlorofluoromethane	Ave	0.4337	0.4175	0.1000	0.00963	0.0100	-3.7	20.0
Ethyl ether	Ave	0.2310	0.2280		0.00987	0.0100	-1.3	20.0
Acrolein	Ave	0.0317	0.0400		0.0631	0.0500	26.2	50.0
1,1-Dichloroethene	Ave	0.3005	0.2646	0.1000	0.00881	0.0100	-11.9	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2394	0.0500	0.00970	0.0100	-3.0	20.0
Acetone	Lin1		0.0240	0.0100	0.0198	0.0200	-0.9	50.0
Iodomethane	Ave	0.4675	0.4375		0.00936	0.0100	-6.4	20.0
Carbon disulfide	Ave	0.7741	0.5971	0.1000	0.00771	0.0100	-22.9*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1633		0.00962	0.0100	-3.8	20.0
Methyl acetate	Ave	0.2050	0.1768	0.1000	0.0172	0.0200	-13.8	20.0
Methylene Chloride	Lin1		0.4011	0.1000	0.0137	0.0100	36.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0163		0.0803	0.100	-19.7	50.0
Acrylonitrile	Ave	0.0962	0.0916		0.0952	0.100	-4.8	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6712	0.1000	0.00857	0.0100	-14.3	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2866	0.1000	0.0103	0.0100	2.5	20.0
Hexane	Ave	0.0586	0.0527		0.00899	0.0100	-10.1	20.0
1,1-Dichloroethane	Ave	0.4517	0.4693	0.2000	0.0104	0.0100	3.9	20.0
Vinyl acetate	Ave	0.5198	0.4189		0.00806	0.0100	-19.4	50.0
2,2-Dichloropropane	Ave	0.0624	0.0587		0.00942	0.0100	-5.8	20.0
2-Butanone (MEK)	Ave	0.0333	0.0305	0.0100	0.0184	0.0200	-8.2	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3242	0.1000	0.0105	0.0100	5.3	20.0
Bromochloromethane	Ave	0.1531	0.1616		0.0106	0.0100	5.5	20.0
Tetrahydrofuran	Ave	0.0828	0.0686		0.0166	0.0200	-17.1	20.0
Chloroform	Ave	0.4606	0.4880	0.2000	0.0106	0.0100	6.0	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3575	0.1000	0.0101	0.0100	0.8	20.0
Cyclohexane	Ave	0.3993	0.3773	0.1000	0.00945	0.0100	-5.5	20.0
1,1-Dichloropropene	Ave	0.3748	0.3719		0.00992	0.0100	-0.8	20.0
Carbon tetrachloride	Ave	0.3441	0.3171	0.1000	0.00922	0.0100	-7.8	20.0
Isobutyl alcohol	Ave	0.0077	0.0070		0.227	0.250	-9.4	20.0
Benzene	Ave	1.116	1.180	0.5000	0.0106	0.0100	5.7	20.0
1,2-Dichloroethane	Ave	0.3820	0.3993	0.1000	0.0105	0.0100	4.5	20.0
n-Heptane	Ave	0.0532	0.0463		0.00870	0.0100	-13.0	20.0
Trichloroethene	Ave	0.3240	0.3428	0.1500	0.0106	0.0100	5.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3350	0.1000	0.00950	0.0100	-5.0	20.0
1,2-Dichloropropane	Ave	0.2590	0.2611	0.1000	0.0101	0.0100	0.8	20.0
1,4-Dioxane	Ave	0.0020	0.0026		0.260	0.200	30.1	50.0
Dibromomethane	Ave	0.1717	0.1669		0.00972	0.0100	-2.8	20.0
Bromodichloromethane	Ave	0.3410	0.3135	0.1500	0.00919	0.0100	-8.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1388		0.0159	0.0200	-20.5*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3525	0.1500	0.00894	0.0100	-10.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2257	0.0500	0.0169	0.0200	-15.7	20.0
Toluene	Ave	1.476	1.435	0.4000	0.00972	0.0100	-2.8	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3495	0.1000	0.00752	0.0100	-24.8*	20.0
Ethyl methacrylate	Ave	0.4442	0.3465		0.00780	0.0100	-22.0*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2780	0.1000	0.00932	0.0100	-6.8	20.0
Tetrachloroethene	Ave	0.3268	0.3212	0.1500	0.00983	0.0100	-1.7	20.0
1,3-Dichloropropane	Ave	0.5243	0.4898		0.00934	0.0100	-6.6	20.0
2-Hexanone	Ave	0.2283	0.1843	0.0500	0.0161	0.0200	-19.3	20.0
Chlorodibromomethane	Ave	0.3116	0.2594		0.00833	0.0100	-16.7	20.0
1,2-Dibromoethane	Ave	0.3191	0.2750		0.00862	0.0100	-13.8	20.0
Chlorobenzene	Ave	0.9777	0.9502	0.3000	0.00972	0.0100	-2.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.2977		0.00863	0.0100	-13.7	20.0
Ethylbenzene	Ave	0.5145	0.4912		0.00955	0.0100	-4.5	20.0
m-Xylene & p-Xylene	Ave	1.221	1.165		0.00955	0.0100	-4.5	20.0
o-Xylene	Ave	0.6189	0.5935		0.00959	0.0100	-4.1	20.0
Styrene	Ave	1.036	1.012	0.3000	0.00977	0.0100	-2.3	20.0
Bromoform	Lin1		0.1557	0.1000	0.00675	0.0100	-32.5*	20.0
Isopropylbenzene	Ave	1.463	1.374	0.1000	0.00939	0.0100	-6.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5684	0.3000	0.00802	0.0100	-19.8	20.0
Bromobenzene	Ave	0.8274	0.7586		0.00917	0.0100	-8.3	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2002		0.00811	0.0100	-18.9	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.1131		0.0112	0.0100	11.5	20.0
N-Propylbenzene	Ave	0.7286	0.6484		0.00890	0.0100	-11.0	20.0
2-Chlorotoluene	Ave	0.6821	0.6162		0.00903	0.0100	-9.7	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.868		0.00882	0.0100	-11.8	20.0
4-Chlorotoluene	Ave	2.205	1.951		0.00885	0.0100	-11.5	20.0
tert-Butylbenzene	Ave	1.897	1.591		0.00839	0.0100	-16.1	20.0
1,2,4-Trimethylbenzene	Ave	2.227	1.990		0.00894	0.0100	-10.6	20.0
sec-Butylbenzene	Ave	2.327	1.997		0.00858	0.0100	-14.2	20.0
1,3-Dichlorobenzene	Ave	1.425	1.317	0.6000	0.00924	0.0100	-7.6	20.0
4-Isopropyltoluene	Ave	2.083	1.821		0.00874	0.0100	-12.6	20.0
1,4-Dichlorobenzene	Ave	1.477	1.350	0.5000	0.00914	0.0100	-8.6	20.0
n-Butylbenzene	Ave	1.649	1.338		0.00812	0.0100	-18.8	20.0
1,2-Dichlorobenzene	Ave	1.387	1.278	0.4000	0.00921	0.0100	-7.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0952	0.0500	0.00591	0.0100	-40.9	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.6817	0.2000	0.00776	0.0100	-22.4	50.0
Hexachlorobutadiene	Ave	0.4386	0.3104		0.00708	0.0100	-29.2*	20.0
Naphthalene	Ave	2.209	1.476		0.00668	0.0100	-33.2	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6052		0.00766	0.0100	-23.4*	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2175		0.00732	0.00797	-8.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2720		0.00713	0.00797	-10.6	20.0
Toluene-d8 (Surr)	Ave	1.214	1.047		0.00687	0.00797	-13.8	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3760		0.00690	0.00797	-13.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: CCV 240-367892/3 Calibration Date: 02/13/2019 12:32

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8808.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0282		0.122	0.100	22.1*	20.0
Diisopropyl ether	Ave	0.2405	0.2294		0.00954	0.0100	-4.6	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3741		0.00883	0.0100	-11.7	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.5945		0.00762	0.0100	-23.8*	20.0
Ethyl acetate	Ave	0.2538	0.2228		0.0176	0.0200	-12.2	50.0
Propionitrile	Ave	0.0357	0.0361		0.101	0.100	1.1	20.0
Methacrylonitrile	Ave	0.1733	0.1604		0.0925	0.100	-7.5	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5323		0.00686	0.0100	-31.4*	20.0
n-Butanol	Ave	0.0061	0.0040		0.163	0.250	-34.7*	20.0
Ethyl acrylate	Ave	0.3330	0.2775		0.00833	0.0100	-16.7	20.0
Methyl methacrylate	Ave	0.2430	0.2131		0.0175	0.0200	-12.3	20.0
2-Nitropropane	Ave	0.0745	0.0279		0.00750	0.0200	-62.5*	20.0
n-Butyl acetate	Ave	0.3918	0.3008		0.00768	0.0100	-23.2*	20.0
1-Chlorohexane	Ave	0.3968	0.3067		0.00773	0.0100	-22.7*	20.0
Cyclohexanone	Lin1		0.0109		0.0663	0.100	-33.7*	20.0
Pentachloroethane	Ave	0.2034	0.1499		0.0147	0.0200	-26.3*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.035		0.00886	0.0100	-11.4	20.0
Benzyl chloride	Ave	0.2963	0.1196		0.00404	0.0100	-59.6*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8253		0.00872	0.0100	-12.8	20.0
2-Methylnaphthalene	Ave	1.076	0.6682		0.0124	0.0200	-37.9*	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab File ID: UXC8811.D Lab Sample ID: MB 240-367892/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/13/2019 13:38

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367892/4	UXC8807.D	02/13/2019 12:10
MRC-MW149B-020819	240-107924-2	UXC8813.D	02/13/2019 14:21
MRC-MW150B-020819	240-107924-3	UXC8820.D	02/13/2019 17:54
	240-107850-B-5 MS	UXC8821.D	02/13/2019 18:16
	240-107850-B-5 MSD	UXC8822.D	02/13/2019 18:38

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367892/6

Matrix: Water | Lab File ID: UXC8811.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367892/6

Matrix: Water | Lab File ID: UXC8811.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.78	J	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-367892/6

Matrix: Water Lab File ID: UXC8811.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367892 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-121
460-00-4	4-Bromofluorobenzene (Surr)	85		59-120
2037-26-5	Toluene-d8 (Surr)	89		70-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.60	86	80-124	
1,1,1-Trichloroethane	10.0	10.1	101	69-134	
1,1,2,2-Tetrachloroethane	10.0	7.96	80	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.94	99	50-156	
1,1-Dichloroethane	10.0	10.0	100	75-133	
1,1-Dichloroethene	10.0	8.97	90	65-139	
1,1-Dichloropropene	10.0	9.59	96	78-126	
1,2,3-Trichlorobenzene	10.0	8.32	83	39-138	
1,2,3-Trichloropropane	10.0	8.35	84	66-139	
1,2,4-Trichlorobenzene	10.0	8.22	82	42-133	
1,2,4-Trimethylbenzene	10.0	8.77	88	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.66	57	46-132	
1,2-Dichlorobenzene	10.0	9.22	92	78-120	
1,2-Dichloroethane	10.0	9.95	99	71-135	
1,2-Dichloropropane	10.0	9.85	99	78-133	
1,3-Dichlorobenzene	10.0	8.91	89	78-120	
1,3-Dichloropropane	10.0	8.96	90	72-134	
1,4-Dichlorobenzene	10.0	8.98	90	78-120	
2,2-Dichloropropane	10.0	9.68	97	42-150	
2-Chloroethyl vinyl ether	10.0	7.11 J	71	55-137	
2-Chlorotoluene	10.0	8.99	90	78-123	
2-Hexanone	20.0	15.3	77	43-148	
Bromobenzene	10.0	9.08	91	74-129	
Bromochloromethane	10.0	10.2	102	74-130	
4-Chlorotoluene	10.0	8.70	87	77-125	
4-Isopropyltoluene	10.0	8.79	88	69-122	
Acetone	20.0	16.3	81	21-162	
Benzene	10.0	10.1	101	80-123	
Bromoform	10.0	5.22	52	49-141	
Bromomethane	10.0	7.90	79	41-175	
Carbon disulfide	10.0	7.70	77	60-138	
Carbon tetrachloride	10.0	8.94	89	63-140	
Chlorobenzene	10.0	9.44	94	80-121	
Chloroethane	10.0	7.96	80	33-173	
Chloroform	10.0	10.1	101	79-127	
Chloromethane	10.0	7.52	75	54-143	
cis-1,2-Dichloroethene	10.0	10.1	101	76-128	
cis-1,3-Dichloropropene	10.0	8.48	85	64-132	
Hexachlorobutadiene	10.0	7.72	77	38-136	
Dibromomethane	10.0	9.26	93	74-124	
Bromodichloromethane	10.0	8.40	84	77-125	
Dichlorodifluoromethane	10.0	5.94	59	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.29	93	80-120	
1,2-Dibromoethane	10.0	8.51	85	77-123	
Naphthalene	10.0	7.20	72	28-141	
m-Xylene & p-Xylene	10.0	9.41	94	80-120	
n-Butylbenzene	10.0	8.24	82	57-126	
Isopropylbenzene	10.0	9.54	95	74-120	
N-Propylbenzene	10.0	8.77	88	77-123	
2-Butanone (MEK)	20.0	17.0	85	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	15.5	78	49-143	
sec-Butylbenzene	10.0	8.62	86	68-123	
Methyl tert-butyl ether	10.0	8.10	81	51-133	
Methylene Chloride	10.0	13.1	131	70-134	
o-Xylene	10.0	9.59	96	80-120	
Styrene	10.0	9.02	90	79-120	
tert-Butylbenzene	10.0	8.40	84	70-121	
Tetrachloroethene	10.0	9.78	98	74-130	
Toluene	10.0	9.59	96	78-129	
trans-1,2-Dichloroethene	10.0	10.2	102	78-133	
trans-1,3-Dichloropropene	10.0	6.92	69	55-128	
Trichloroethene	10.0	9.91	99	76-125	
Trichlorofluoromethane	10.0	8.99	90	51-164	
Vinyl acetate	10.0	7.96	80	45-151	
Vinyl chloride	10.0	7.98	80	58-143	
tert-Butyl alcohol	100	60.7	61	10-161	
Xylenes, Total	20.0	19.0	95	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-020819	240-107924-1	90	98	87	83
MRC-MW149B-020819	240-107924-2	92	96	88	83
MRC-MW150B-020819	240-107924-3	92	97	85	81
	MB 240-367509/6	86	92	86	81
	MB 240-367892/6	91	97	89	85
	LCS 240-367509/4	97	94	94	92
	LCS 240-367892/4	90	88	84	84
	240-107725-C-2 MS	100	98	97	95
	240-107850-B-5 MS	91	89	86	85
	240-107725-C-2 MSD	91	90	88	88
	240-107850-B-5 MSD	89	89	88	85

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-367509/2		1607043	5.20	1260395	7.88	745296	10.12
CCVIS 240-367892/2		1803643	5.20	1542696	7.88	927814	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Sample No.: CCVIS 240-367509/2 Date Analyzed: 02/11/2019 10:51

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8765.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1607043	5.20	1260395	7.88	745296	10.12
UPPER LIMIT		3214086	5.70	2520790	8.38	1490592	10.62
LOWER LIMIT		803522	4.70	630198	7.38	372648	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367509/4		1796449	5.20	1507511	7.88	863122	10.12
CCV 240-367509/3		1829504	5.20	1503859	7.88	817203	10.12
MB 240-367509/6		1730580	5.20	1472271	7.88	810355	10.12
240-107725-C-2 MS		1677452	5.20	1383650	7.88	815572	10.12
240-107725-C-2 MSD		1827467	5.20	1569371	7.88	923259	10.12
240-107924-1	TB-020819	1626062	5.20	1391047	7.88	765568	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Sample No.: CCVIS 240-367892/2 Date Analyzed: 02/13/2019 11:48

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8806.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1803643	5.20	1542696	7.88	927814	10.12
UPPER LIMIT		3607286	5.70	3085392	8.38	1855628	10.62
LOWER LIMIT		901822	4.70	771348	7.38	463907	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367892/4		1866937	5.20	1555716	7.88	933071	10.12
CCV 240-367892/3		1758419	5.20	1529185	7.88	842177	10.12
MB 240-367892/6		1565514	5.20	1326978	7.88	735680	10.12
240-107924-2	MRC-MW149B-020819	1667522	5.20	1393135	7.88	792021	10.12
240-107924-3	MRC-MW150B-020819	1613680	5.20	1377621	7.88	763754	10.12
240-107850-B-5 MS		1797266	5.20	1524370	7.88	921656	10.12
240-107850-B-5 MSD		1839508	5.20	1544658	7.88	912568	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00281	vmbfb 00021
BFB 240-364786/1		8260C		5 mL	5 mL				1 uL
STD8260 240-364786/2 IC		8260C		5 mL	5 mL	1 uL	32 uL	32 uL	
STD8260 240-364786/3 IC		8260C		5 mL	5 mL	1 uL	16 uL	16 uL	
STD8260 240-364786/4 ICIS		8260C		5 mL	5 mL	1 uL	8 uL	8 uL	
STD8260 240-364786/5 IC		8260C		5 mL	5 mL	1 uL	4 uL	4 uL	
STD8260 240-364786/6 IC		8260C		5 mL	5 mL	1 uL	1.6 uL	1.6 uL	
STD8260 240-364786/7 IC		8260C		5 mL	5 mL	1 uL	0.8 uL	0.8 uL	
STD 240-364786/8 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/9 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/10 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/11 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/12 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/13 IC		8260C		5 mL	5 mL	1 uL			
ICV 240-364786/14		8260C		5 mL	5 mL	1 uL	0.797 uL		
ICV 240-364786/15		8260C		5 mL	5 mL	1 uL	0.797 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C							32 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
STD8260 240-364786/3 IC		8260C							16 uL
STD8260 240-364786/4 ICIS		8260C							8 uL
STD8260 240-364786/5 IC		8260C							4 uL
STD8260 240-364786/6 IC		8260C							1.6 uL
STD8260 240-364786/7 IC		8260C							0.8 uL
STD 240-364786/8 IC		8260C						32 uL	
STD 240-364786/9 IC		8260C						16 uL	
STD 240-364786/10 IC		8260C						8 uL	
STD 240-364786/11 IC		8260C						4 uL	
STD 240-364786/12 IC		8260C						1.6 uL	
STD 240-364786/13 IC		8260C						0.8 uL	
ICV 240-364786/14		8260C			8 uL	8 uL	8 uL		
ICV 240-364786/15		8260C		8 uL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C		32 uL					
STD8260 240-364786/3 IC		8260C		16 uL					
STD8260 240-364786/4 ICIS		8260C		8 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
STD8260 240-364786/5 IC		8260C		4 uL					
STD8260 240-364786/6 IC		8260C		1.6 uL					
STD8260 240-364786/7 IC		8260C		0.8 uL					
STD 240-364786/8 IC		8260C							
STD 240-364786/9 IC		8260C							
STD 240-364786/10 IC		8260C							
STD 240-364786/11 IC		8260C							
STD 240-364786/12 IC		8260C							
STD 240-364786/13 IC		8260C							
ICV 240-364786/14		8260C							
ICV 240-364786/15		8260C							

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367509 Batch Start Date: 02/11/19 10:27 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00284
BFB 240-367509/1		8260C		5 mL	5 mL				
CCVIS 240-367509/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-367509/3		8260C		5 mL	5 mL		1 uL		
LCS 240-367509/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-367509/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-107725-C-2 MS		8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107725-C-2 MSD		8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107924-A-1	TB-020819	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00267	VMFASGW 00295	VMFASPW 00287	VMRA9W 00284	VMRGAS 00281
BFB 240-367509/1		8260C		1 uL					
CCVIS 240-367509/2		8260C							8 uL
CCV 240-367509/3		8260C						8 uL	
LCS 240-367509/4		8260C			8 uL	8 uL	8 uL		
MB 240-367509/6		8260C							
240-107725-C-2 MS		8260C	T		8 uL	8 uL	8 uL		
240-107725-C-2 MSD		8260C	T		8 uL	8 uL	8 uL		
240-107924-A-1	TB-020819	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00320					
BFB 240-367509/1		8260C							
CCVIS 240-367509/2		8260C		8 uL					
CCV 240-367509/3		8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367509 Batch Start Date: 02/11/19 10:27 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00320					
LCS 240-367509/4		8260C							
MB 240-367509/6		8260C							
240-107725-C-2 MS		8260C	T						
240-107725-C-2 MSD		8260C	T						
240-107924-A-1	TB-020819	8260C	T						

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367892 Batch Start Date: 02/13/19 11:22 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00284
BFB 240-367892/1		8260C		5 mL	5 mL				
CCVIS 240-367892/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-367892/3		8260C		5 mL	5 mL		1 uL		
LCS 240-367892/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-367892/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-107924-B-2	MRC-MW149B-020819	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107924-B-3	MRC-MW150B-020819	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107850-B-5 MS		8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107850-B-5 MSD		8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00267	VMFASGW 00296	VMFASPW 00288	VMRA9W 00285	VMRGAS 00281
BFB 240-367892/1		8260C		1 uL					
CCVIS 240-367892/2		8260C							8 uL
CCV 240-367892/3		8260C						8 uL	
LCS 240-367892/4		8260C			8 uL	8 uL	8 uL		
MB 240-367892/6		8260C							
240-107924-B-2	MRC-MW149B-020819	8260C	T						
240-107924-B-3	MRC-MW150B-020819	8260C	T						
240-107850-B-5 MS		8260C	T		8 uL	8 uL	8 uL		
240-107850-B-5 MSD		8260C	T		8 uL	8 uL	8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00321					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367892 Batch Start Date: 02/13/19 11:22 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00321					
BFB 240-367892/1		8260C							
CCVIS 240-367892/2		8260C		8 uL					
CCV 240-367892/3		8260C							
LCS 240-367892/4		8260C							
MB 240-367892/6		8260C							
240-107924-B-2	MRC-MW149B-020819	8260C	T						
240-107924-B-3	MRC-MW150B-020819	8260C	T						
240-107850-B-5 MS		8260C	T						
240-107850-B-5 MSD		8260C	T						

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW149B-020819	240-107924-2
MRC-MW150B-020819	240-107924-3

Comments:

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ICIS 240-367825/1	1		10:54	X	X																								
CALSTD 240-367825/2 IC			10:59	X	X																								
CALSTD 240-367825/3 IC			11:03	X	X																								
ICV 240-367825/4	1		11:07	X	X																								
ICB 240-367825/5	1		11:11	X	X																								
ICVL 240-367825/6	1		11:16	X	X																								
ZZZZZZ			11:20																										
ICSA 240-367825/8	1		11:25	X	X																								
ICSAB 240-367825/9	1		11:29	X	X																								
CCV 240-367825/10			11:33																										
CCB 240-367825/11			11:37																										
ZZZZZZ			11:42																										
ZZZZZZ			11:46																										
ZZZZZZ			11:50																										
ZZZZZZ			11:55																										
ZZZZZZ			11:59																										
ZZZZZZ			12:04																										
CCV 240-367825/18			12:08																										
CCB 240-367825/19			12:12																										
ZZZZZZ			12:17																										
ZZZZZZ			12:21																										
ZZZZZZ			12:26																										
ZZZZZZ			12:30																										
ZZZZZZ			12:34																										
ZZZZZZ			12:39																										
ZZZZZZ			12:43																										
ZZZZZZ			12:47																										
ZZZZZZ			12:51																										
ZZZZZZ			12:56																										
CCV 240-367825/30			13:00																										
CCB 240-367825/31			13:04																										
ZZZZZZ			13:09																										
ZZZZZZ			13:13																										
ZZZZZZ			13:17																										
ZZZZZZ			13:22																										
ZZZZZZ			13:26																										
ZZZZZZ			13:31																										
ZZZZZZ			13:35																										
ZZZZZZ			13:39																										
ZZZZZZ			13:44																										
ZZZZZZ			13:49																										
CCV 240-367825/42			13:53																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
CCB 240-367825/43			13:57																										
ZZZZZZ			14:01																										
ZZZZZZ			14:06																										
ZZZZZZ			14:10																										
ZZZZZZ			14:15																										
ZZZZZZ			14:19																										
ZZZZZZ			14:23																										
ZZZZZZ			14:27																										
ZZZZZZ			14:32																										
ZZZZZZ			14:36																										
ZZZZZZ			14:40																										
CCV 240-367825/54			14:44																										
CCB 240-367825/55			14:48																										
ZZZZZZ			14:53																										
ZZZZZZ			14:57																										
ZZZZZZ			15:01																										
ZZZZZZ			15:05																										
ZZZZZZ			15:10																										
ZZZZZZ			15:14																										
ZZZZZZ			15:18																										
ZZZZZZ			15:23																										
ZZZZZZ			15:28																										
ZZZZZZ			15:32																										
CCV 240-367825/66			15:37																										
CCB 240-367825/67			15:41																										
ZZZZZZ			15:45																										
ZZZZZZ			15:50																										
ZZZZZZ			15:54																										
ZZZZZZ			15:58																										
ZZZZZZ			16:03																										
ZZZZZZ			16:07																										
ZZZZZZ			16:12																										
ZZZZZZ			16:16																										
ZZZZZZ			16:20																										
ZZZZZZ			16:25																										
CCV 240-367825/78	1		16:29	X	X																								
CCB 240-367825/79	1		16:33	X	X																								
CCVL 240-367825/80			16:38																										
MB 240-367490/1-A	1	R	16:42	X	X																								
LCS 240-367490/2-A	1	R	16:47	X	X																								
ZZZZZZ			16:51																										
240-107872-B-1-A SD ^5	5	R	16:55	X	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			16:59																										
240-107872-B-1-B MS	1	R	17:04	X	X																								
240-107872-B-1-C MSD	1	R	17:08	X	X																								
ZZZZZZ			17:12																										
ZZZZZZ			17:16																										
CCV 240-367825/90	1		17:21	X	X																								
CCB 240-367825/91	1		17:25	X	X																								
ZZZZZZ			17:29																										
ZZZZZZ			17:34																										
ZZZZZZ			17:38																										
ZZZZZZ			17:42																										
ZZZZZZ			17:47																										
ZZZZZZ			17:51																										
ZZZZZZ			17:56																										
ZZZZZZ			18:00																										
ZZZZZZ			18:05																										
ZZZZZZ			18:09																										
CCV 240-367825/102	1		18:13	X	X																								
CCB 240-367825/103	1		18:17	X	X																								
ZZZZZZ			18:22																										
ZZZZZZ			18:26																										
ZZZZZZ			18:30																										
ZZZZZZ			18:35																										
ZZZZZZ			18:39																										
240-107924-2	1	R	18:44	X	X																								
240-107924-3	1	R	18:48	X	X																								
ZZZZZZ			18:52																										
ZZZZZZ			18:57																										
ZZZZZZ			19:01																										
CCV 240-367825/114	1		19:05	X	X																								
CCB 240-367825/115	1		19:09	X	X																								
ZZZZZZ			19:14																										
ZZZZZZ			19:18																										
ZZZZZZ			19:22																										
ZZZZZZ			19:26																										
ZZZZZZ			19:30																										
ZZZZZZ			19:34																										
ZZZZZZ			19:39																										
ZZZZZZ			19:43																										
ZZZZZZ			19:47																										
ZZZZZZ			19:52																										
CCV 240-367825/126			19:56																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/12/2019 10:54 End Date: 02/13/2019 08:02

Lab Sample Id	D/F	Type	Time	Analytes																										
				Fe	Mn																									
ZZZZZZ			23:03																											
ZZZZZZ			23:07																											
ZZZZZZ			23:12																											
ZZZZZZ			23:16																											
ZZZZZZ			23:20																											
CCV 240-367825/174			23:24																											
CCB 240-367825/175			23:28																											
ZZZZZZ			23:32																											
ZZZZZZ			23:36																											
ZZZZZZ			23:40																											
ZZZZZZ			23:45																											
ZZZZZZ			23:49																											
ZZZZZZ			23:54																											
ZZZZZZ			23:58																											
ZZZZZZ			00:02																											
ZZZZZZ			00:07																											
ZZZZZZ			00:11																											
CCV 240-367825/186			00:16																											
CCB 240-367825/187			00:20																											
ZZZZZZ			00:24																											
ZZZZZZ			00:28																											
ccv-4012001 CCV			00:33																											
CCB 240-367825/191			00:37																											
ZZZZZZ			00:42																											
CCV 240-367825/193			00:46																											
CCB 240-367825/194			00:50																											
CCVL 240-367825/195	1		08:02	X	X																									

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-367825/4 02/12/2019 11:07				CCV 240-367825/78 02/12/2019 16:29				CCV 240-367825/90 02/12/2019 17:21			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	12700		12500	101	23700		25000	95	24200		25000	97
Manganese	1500		1500	100	2010		2000	100	2050		2000	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	CCV 240-367825/102 02/12/2019 18:13				CCV 240-367825/114 02/12/2019 19:05							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	24400		25000	98	24100		25000	96				
Manganese	2040		2000	102	2030		2000	101				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-367825/6 02/12/2019 11:16				CCVL 240-367825/195 02/13/2019 08:02							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	201		200	100	201		200	100				
Manganese	13.5	J	15.0	90	14.5	J	15.0	97				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-367825/115 02/12/2019 19:09							
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U						
Manganese	15	2.1	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367490/1-A

Instrument Code: I9 Batch No.: 367825

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	26	U		6010C
7439-96-5	Manganese	2.1	U		6010C

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICSA 240-367825/8 Instrument ID: I9

Lab File ID: I9021219A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**189110**	**95**
Manganese		**0.0456**	
Aluminum	*500000*	*491470*	*98*
Antimony		*-0.612*	
Arsenic		*-7.05*	
Barium		*-0.107*	
Beryllium		*-0.151*	
Boron		*-2.91*	
Cadmium		*1.16*	
Calcium	*500000*	*460700*	*92*
Chromium		*3.99*	
Cobalt		*-1.66*	
Copper		*-0.261*	
Lead		*2.09*	
Lithium		*11.2*	
Magnesium	*500000*	*486490*	*97*
Molybdenum		*0.292*	
Nickel		*3.93*	
Potassium		*23.8*	
Selenium		*-0.513*	
Silicon		*0.0766*	
Silver		*-0.424*	
Sodium		*66.5*	
Strontium		*6.45*	
Thallium		*-8.76*	
Tin		*4.17*	
Titanium		*-0.555*	
Vanadium		*-1.57*	
Zinc		*0.579*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICSAB 240-367825/9 Instrument ID: I9

Lab File ID: I9021219A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Iron	**200000**	**187120**	**94**
Manganese	**500**	**484**	**97**
Aluminum	*500000*	*481610*	*96*
Antimony	*1000*	*1005*	*101*
Arsenic	*1000*	*968*	*97*
Barium	*500*	*485*	*97*
Beryllium	*500*	*469*	*94*
Boron	*500*	*521*	*104*
Cadmium	*1000*	*1022*	*102*
Calcium	*500000*	*461300*	*92*
Chromium	*500*	*485*	*97*
Cobalt	*500*	*478*	*96*
Copper	*500*	*546*	*109*
Lead	*1000*	*947*	*95*
Lithium	*500*	*539*	*108*
Magnesium	*500000*	*478220*	*96*
Molybdenum	*1000*	*1013*	*101*
Nickel	*1000*	*944*	*94*
Potassium	*10000*	*10054*	*101*
Selenium	*1000*	*973*	*97*
Silicon	*10000*	*9623*	*96*
Silver	*1000*	*1054*	*105*
Sodium	*10000*	*10150*	*102*
Strontium	*1500*	*1404*	*94*
Thallium	*1000*	*998*	*100*
Tin	*500*	*498*	*100*
Titanium	*500*	*506*	*101*
Vanadium	*500*	*465*	*93*
Zinc	*1000*	*910*	*91*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-107872-B-1-B MS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Iron	1000		110	J	1000	90	75-125		6010C
Manganese	492		29		500	93	75-125		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-107872-B-1-C MSD

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Iron	1010		1000	90	75-125	0	20		6010C
Manganese	500		500	94	75-125	2	20		6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107924-1

SDG No.:

Instrument ID: I9 Date: 01/28/2019 12:15

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		10000	6010C

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367490/2-A

Lab Name: TestAmerica Canton Job No.: 240-107924-1

Sample Matrix: Water LCS Source: MTICP1_00082

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	927		93	80	120		6010C
Manganese	500	474		95	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107872-B-1-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107924-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Iron	110	J	130	U	NC		6010C
Manganese	29		27.5	J	NC		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/12/2019 15:08 End Date: 02/12/2019 20:56

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn						
RINSE 240-367822/1			15:08																												
ICIS 240-367822/2			15:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD1 240-367822/3 IC	1		15:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD2 240-367822/4 IC	1		15:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD3 240-367822/5 IC	1		15:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD4 240-367822/6 IC	1		15:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICV 240-367822/7	1		15:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICB 240-367822/8	1		15:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICVL 240-367822/9	1		15:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSA 240-367822/10	1		15:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSAB 240-367822/11	1		15:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-367822/12			15:34																												
CCB 240-367822/13			15:36																												
ZZZZZZ			15:40																												
ZZZZZZ			15:43																												
ZZZZZZ			15:45																												
ZZZZZZ			15:47																												
ZZZZZZ			15:49																												
ZZZZZZ			15:51																												
ZZZZZZ			15:54																												
ZZZZZZ			15:56																												
ZZZZZZ			15:58																												
ZZZZZZ			16:01																												
CCV 240-367822/24			16:03																												
CCB 240-367822/25			16:05																												
ZZZZZZ			16:08																												
ZZZZZZ			16:10																												
ZZZZZZ			16:12																												
ZZZZZZ			16:15																												
ZZZZZZ			16:17																												
ZZZZZZ			16:19																												
ZZZZZZ			16:22																												
ZZZZZZ			16:24																												
ZZZZZZ			16:26																												
ZZZZZZ			16:29																												
CCV 240-367822/36			16:31																												
CCB 240-367822/37			16:33																												
ZZZZZZ			16:36																												
ZZZZZZ			16:38																												
ZZZZZZ			16:40																												
ZZZZZZ			16:43																												
ZZZZZZ			16:45																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/12/2019 15:08 End Date: 02/12/2019 20:56

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			18:24																												
ZZZZZZ			18:26																												
ZZZZZZ			18:28																												
ZZZZZZ			18:31																												
ZZZZZZ			18:33																												
ZZZZZZ			18:35																												
ZZZZZZ			18:37																												
CCV 240-367822/92			18:40																												
CCB 240-367822/93			18:42																												
ZZZZZZ			18:45																												
ZZZZZZ			18:47																												
CCV 240-367822/96			18:49																												
CCB 240-367822/97			18:51																												
CCVL 240-367822/98			18:54																												
ZZZZZZ			18:56																												
ZZZZZZ			18:58																												
ZZZZZZ			19:01																												
ZZZZZZ			19:03																												
ZZZZZZ			19:05																												
ZZZZZZ			19:08																												
ZZZZZZ			19:10																												
ZZZZZZ			19:13																												
ZZZZZZ			19:15																												
CCV 240-367822/108			19:17																												
CCB 240-367822/109			19:19																												
ZZZZZZ			19:22																												
ZZZZZZ			19:24																												
ZZZZZZ			19:26																												
ZZZZZZ			19:29																												
CCV 240-367822/114	1		19:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCB 240-367822/115	1		19:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
CCVL 240-367822/116			19:36																												
MB 240-367490/1-A	1	R	19:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
LCS 240-367490/3-A	1	R	19:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ZZZZZZ			19:42																												
240-107872-B-1-A SD	5	R	19:45	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ZZZZZZ			19:47																												
240-107872-B-1-D MS	1	R	19:49	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
240-107872-B-1-E MSD	1	R	19:51	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
ZZZZZZ			19:54																												
ZZZZZZ			19:56																												
CCV 240-367822/126	1		19:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/12/2019 15:08 End Date: 02/12/2019 20:56

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
CCB 240-367822/127	1		20:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ZZZZZZ			20:03																												
ZZZZZZ			20:05																												
ZZZZZZ			20:07																												
ZZZZZZ			20:10																												
ZZZZZZ			20:12																												
ZZZZZZ			20:14																												
ZZZZZZ			20:17																												
ZZZZZZ			20:19																												
ZZZZZZ			20:21																												
ZZZZZZ			20:24																												
CCV 240-367822/138	1		20:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCB 240-367822/139	1		20:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ZZZZZZ			20:31																												
ZZZZZZ			20:33																												
ZZZZZZ			20:35																												
ZZZZZZ			20:38																												
ZZZZZZ			20:40																												
240-107924-2	1	R	20:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-107924-3	1	R	20:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCV 240-367822/147	1		20:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCB 240-367822/148	1		20:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCVL 240-367822/149	1		20:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCV 240-367822/150			20:54																												
CCB 240-367822/151			20:56																												

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-367822/7 02/12/2019 15:22				CCV 240-367822/126 02/12/2019 19:58				CCV 240-367822/138 02/12/2019 20:26			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	188		200	94	247		250	99	247		250	99
Antimony	39.1		40.0	98	52.8		50.0	106	52.5		50.0	105
Arsenic	38.1		40.0	95	49.2		50.0	98	48.7		50.0	97
Barium	37.5		40.0	94	50.4		50.0	101	50.2		50.0	100
Beryllium	38.3		40.0	96	50.5		50.0	101	48.8		50.0	98
Cadmium	37.7		40.0	94	49.0		50.0	98	48.1		50.0	96
Calcium	19400		20000	97	26200		25000	105	26100		25000	104
Chromium	38.4		40.0	96	49.0		50.0	98	48.7		50.0	97
Cobalt	38.5		40.0	96	49.8		50.0	100	49.5		50.0	99
Copper	37.6		40.0	94	49.5		50.0	99	49.6		50.0	99
Iron	9290		10000	93	12400		12500	100	12500		12500	100
Lead	38.8		40.0	97	48.7		50.0	97	49.6		50.0	99
Magnesium	18700		20000	94	24100		25000	97	23800		25000	95
Manganese	188		200	94	247		250	99	248		250	99
Nickel	38.2		40.0	95	49.1		50.0	98	49.2		50.0	98
Potassium	18700		20000	93	24600		25000	98	24600		25000	99
Selenium	37.2		40.0	93	50.0		50.0	100	51.4		50.0	103
Silver	39.1		40.0	98	50.0		50.0	100	49.7		50.0	99
Sodium	18900		20000	94	23600		25000	94	23200		25000	93
Thallium	37.7		40.0	94	48.4		50.0	97	49.4		50.0	99
Vanadium	37.7		40.0	94	49.7		50.0	99	49.9		50.0	100
Zinc	37.6		40.0	94	50.0		50.0	100	49.9		50.0	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00230

Analyte	ICV 240-367822/7 02/12/2019 15:22				CCV 240-367822/114 02/12/2019 19:31				CCV 240-367822/147 02/12/2019 20:47			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	188		200	94	240		250	96	248		250	99
Antimony	39.1		40.0	98	53.0		50.0	106	53.5		50.0	107
Arsenic	38.1		40.0	95	49.1		50.0	98	49.2		50.0	98
Barium	37.5		40.0	94	49.7		50.0	99	51.3		50.0	103
Beryllium	38.3		40.0	96	51.8		50.0	104	47.7		50.0	95
Cadmium	37.7		40.0	94	50.1		50.0	100	48.9		50.0	98
Calcium	19400		20000	97	25600		25000	102	26400		25000	105
Chromium	38.4		40.0	96	50.9		50.0	102	49.8		50.0	100
Cobalt	38.5		40.0	96	51.9		50.0	104	49.9		50.0	100
Copper	37.6		40.0	94	49.0		50.0	98	48.8		50.0	98
Iron	9290		10000	93	12100		12500	97	12300		12500	98
Lead	38.8		40.0	97	49.4		50.0	99	49.9		50.0	100
Magnesium	18700		20000	94	24200		25000	97	24000		25000	96
Manganese	188		200	94	249		250	99	250		250	100
Nickel	38.2		40.0	95	48.9		50.0	98	48.8		50.0	98
Potassium	18700		20000	93	24300		25000	97	24700		25000	99
Selenium	37.2		40.0	93	49.6		50.0	99	50.3		50.0	101
Silver	39.1		40.0	98	49.4		50.0	99	49.7		50.0	99
Sodium	18900		20000	94	24100		25000	96	23400		25000	94
Thallium	37.7		40.0	94	49.3		50.0	99	49.6		50.0	99
Vanadium	37.7		40.0	94	50.8		50.0	102	50.8		50.0	102
Zinc	37.6		40.0	94	48.6		50.0	97	49.6		50.0	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICV Source: MTMSCRI6020AW_00079 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00079

Analyte	ICVL 240-367822/9 02/12/2019 15:27				CCVL 240-367822/149 02/12/2019 20:52							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	50.1		50.0	100	51.6		50.0	103				
Antimony	2.07		2.00	104	2.11		2.00	106				
Arsenic	4.70	J	5.00	94	4.80	J	5.00	96				
Barium	5.26		5.00	105	5.43		5.00	109				
Beryllium	0.989	J	1.00	99	0.981	J	1.00	98				
Cadmium	1.00		1.00	100	1.02		1.00	102				
Calcium	1060		1000	106	1090		1000	109				
Chromium	1.96	J	2.00	98	1.99	J	2.00	99				
Cobalt	1.07		1.00	107	1.05		1.00	105				
Copper	2.12		2.00	106	2.07		2.00	104				
Iron	106		100	106	106		100	106				
Lead	1.07		1.00	107	1.10		1.00	110				
Magnesium	1040		1000	104	1010		1000	101				
Manganese	4.76	J	5.00	95	5.01		5.00	100				
Nickel	2.03		2.00	102	2.02		2.00	101				
Potassium	1080		1000	108	1060		1000	106				
Selenium	5.04		5.00	101	5.09		5.00	102				
Silver	1.07		1.00	107	1.08		1.00	108				
Sodium	1050		1000	105	983	J	1000	98				
Thallium	1.05		1.00	105	1.06		1.00	106				
Vanadium	5.02		5.00	100	4.96	J	5.00	99				
Zinc	20.1		20.0	101	20.0		20.0	100				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367822/8 02/12/2019 15:25		CCB 240-367822/115 02/12/2019 19:33		CCB 240-367822/127 02/12/2019 20:00		CCB 240-367822/139 02/12/2019 20:28	
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-367822/148 02/12/2019 20:49							
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U						
Antimony	2.0	0.57	U						
Arsenic	5.0	0.75	U						
Barium	5.0	2.2	U						
Beryllium	1.0	0.31	U						
Cadmium	1.0	0.21	U						
Calcium	1000	580	U						
Chromium	2.0	0.98	U						
Cobalt	1.0	0.19	U						
Copper	2.0	1.7	U						
Iron	100	47	U						
Lead	1.0	0.45	U						
Magnesium	1000	200	U						
Manganese	5.0	2.1	U						
Nickel	2.0	1.5	U						
Potassium	1000	220	U						
Selenium	5.0	0.89	U						
Silver	1.0	0.053	U						
Sodium	1000	330	U						
Thallium	1.0	0.20	U						
Vanadium	5.0	0.82	U						
Zinc	20	15	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367490/1-A

Instrument Code: I14 Batch No.: 367822

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	1.7	U		6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	2.1	U		6020A
7440-02-0	Nickel	1.5	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICSA 240-367822/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**47551**	**95**
Antimony		**0.0300**	
Arsenic		**0.0200**	
Barium		**0.0370**	
Beryllium		**0.0000**	
Cadmium		**0.219**	
Calcium	**50000**	**48423**	**97**
Chromium		**0.0910**	
Cobalt		**0.0030**	
Copper		**0.151**	
Iron	**50000**	**48553**	**97**
Lead		**0.0370**	
Magnesium	**50000**	**48553**	**97**
Manganese		**-0.0690**	
Nickel		**0.155**	
Potassium	**50000**	**48657**	**97**
Selenium		**0.0330**	
Silver		**0.0120**	
Sodium	**50000**	**49212**	**98**
Thallium		**0.0000**	
Vanadium		**0.0230**	
Zinc		**0.113**	
Boron		*1.72*	
Lithium		*0.246*	
Molybdenum	*1000*	*1074*	*107*
Strontium		*0.444*	
Tin		*-0.0150*	
Titanium	*1000*	*1009*	*101*
Tungsten		*0.121*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Lab Sample ID: ICSAB 240-367822/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Aluminum	**50000**	**45036**	**90**
Antimony	**100**	**101**	**101**
Arsenic	**100**	**95.6**	**96**
Barium	**100**	**94.5**	**95**
Beryllium	**100**	**98.1**	**98**
Cadmium	**100**	**93.8**	**94**
Calcium	**50000**	**46769**	**94**
Chromium	**100**	**93.6**	**94**
Cobalt	**100**	**96.3**	**96**
Copper	**100**	**93.7**	**94**
Iron	**50000**	**46744**	**93**
Lead	**100**	**96.7**	**97**
Magnesium	**50000**	**46140**	**92**
Manganese	**100**	**93.5**	**93**
Nickel	**100**	**94.6**	**95**
Potassium	**50000**	**46287**	**93**
Selenium	**100**	**94.4**	**94**
Silver	**100**	**97.5**	**97**
Sodium	**50000**	**46057**	**92**
Thallium	**100**	**95.5**	**95**
Vanadium	**100**	**94.6**	**95**
Zinc	**100**	**95.2**	**95**
Boron	*100*	*96.0*	*96*
Lithium	*100*	*103*	*103*
Molybdenum	*1100*	*1112*	*101*
Strontium	*100*	*93.9*	*94*
Tin	*100*	*101*	*101*
Titanium	*1100*	*1058*	*96*
Tungsten	*100*	*98.3*	*98*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-107872-B-1-D MS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Silver	92.2		0.053	U	100	92	75-125		6020A
Aluminum	8570		71		10000	85	75-125		6020A
Arsenic	951		0.75	U	1000	95	75-125		6020A
Barium	972		19		1000	95	75-125		6020A
Beryllium	972		0.74	J	1000	97	75-125		6020A
Cadmium	884		0.21	U	1000	88	75-125		6020A
Cobalt	886		0.75	J	1000	89	75-125		6020A
Chromium	885		0.98	U	1000	88	75-125		6020A
Copper	869		3.0		1000	87	75-125		6020A
Iron	9090		110		10000	90	75-125		6020A
Manganese	908		27		1000	88	75-125		6020A
Nickel	897		1.5	J	1000	90	75-125		6020A
Lead	894		0.95	J	1000	89	75-125		6020A
Antimony	98.2		0.57	U	100	98	75-125		6020A
Selenium	973		0.89	U	1000	97	75-125		6020A
Thallium	224		0.20	U	250	89	75-125		6020A
Vanadium	918		0.82	U	1000	92	75-125		6020A
Zinc	881		15	U	1000	88	75-125		6020A
Potassium	15100		6300		10000	88	75-125		6020A
Magnesium	352000		340000		10000	92	75-125	4	6020A
Sodium	79000		71000		10000	81	75-125	4	6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-107872-B-1-E MSD

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Silver	93.5		100	94	75-125	1	20		6020A
Aluminum	8620		10000	85	75-125	1	20		6020A
Arsenic	955		1000	95	75-125	0	20		6020A
Barium	982		1000	96	75-125	1	20		6020A
Beryllium	960		1000	96	75-125	1	20		6020A
Cadmium	886		1000	89	75-125	0	20		6020A
Cobalt	887		1000	89	75-125	0	20		6020A
Chromium	896		1000	90	75-125	1	20		6020A
Copper	875		1000	87	75-125	1	20		6020A
Iron	9120		10000	90	75-125	0	20		6020A
Manganese	922		1000	89	75-125	2	20		6020A
Nickel	888		1000	89	75-125	1	20		6020A
Lead	897		1000	90	75-125	0	20		6020A
Antimony	98.7		100	99	75-125	1	20		6020A
Selenium	992		1000	99	75-125	2	20		6020A
Thallium	224		250	90	75-125	0	20		6020A
Vanadium	924		1000	92	75-125	1	20		6020A
Zinc	882		1000	88	75-125	0	20		6020A
Potassium	15100		10000	88	75-125	0	20		6020A
Magnesium	354000		10000	110	75-125	1	20	4	6020A
Sodium	78900		10000	80	75-125	0	20	4	6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367490/3-A

Lab Name: TestAmerica Canton Job No.: 240-107924-1

Sample Matrix: Water LCS Source: MTICPMSB_00039

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	94.6		95	80	120		6020A
Aluminum	10000	8620		86	80	120		6020A
Arsenic	1000	890		89	80	120		6020A
Barium	1000	933		93	80	120		6020A
Beryllium	1000	965		97	80	120		6020A
Cadmium	1000	936		94	80	120		6020A
Cobalt	1000	947		95	80	120		6020A
Chromium	1000	920		92	80	120		6020A
Copper	1000	879		88	80	120		6020A
Iron	10000	8570		86	80	120		6020A
Manganese	1000	900		90	80	120		6020A
Nickel	1000	897		90	80	120		6020A
Lead	1000	939		94	80	120		6020A
Antimony	100	94.3		94	80	120		6020A
Selenium	1000	873		87	80	120		6020A
Thallium	250	233		93	80	120		6020A
Vanadium	1000	909		91	80	120		6020A
Zinc	1000	893		89	80	120		6020A
Calcium	10000	9830		98	80	120		6020A
Potassium	10000	8760		88	80	120		6020A
Magnesium	10000	8720		87	80	120		6020A
Sodium	10000	8740		87	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107872-B-1-A SD

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107924-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Silver	0.053	U	0.27	U	NC		6020A
Aluminum	71		170	U	NC		6020A
Arsenic	0.75	U	3.8	U	NC		6020A
Barium	19		18.8	J	NC		6020A
Beryllium	0.74	J	1.5	U	NC		6020A
Cadmium	0.21	U	1.1	U	NC		6020A
Cobalt	0.75	J	0.95	U	NC		6020A
Chromium	0.98	U	4.9	U	NC		6020A
Copper	3.0		8.5	U	NC		6020A
Iron	110		240	U	NC		6020A
Manganese	27		27.4		NC		6020A
Nickel	1.5	J	7.4	U	NC		6020A
Lead	0.95	J	2.3	U	NC		6020A
Antimony	0.57	U	2.9	U	NC		6020A
Selenium	0.89	U	4.5	U	NC		6020A
Thallium	0.20	U	1.0	U	NC		6020A
Vanadium	0.82	U	4.1	U	NC		6020A
Zinc	15	U	75	U	NC		6020A
Potassium	6300		6500		NC		6020A
Magnesium	340000		344000		0.48		6020A
Sodium	71000		71100		NC		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107924-1

SDG No.:

Instrument ID: I14 Date: 10/02/2018 11:17

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICP Instrument ID: I9 Start Date: 02/12/2019 End Date: 02/13/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-367825/1	10:54										
ICV 240-367825/4	11:07	100		99		99		100			
ICB 240-367825/5	11:11	99		100		98		100			
ICVL 240-367825/6	11:16	99		100		99		101			
ICSA 240-367825/8	11:25	90		89		91		95			
ICSAB 240-367825/9	11:29	91		91		94		97			
CCV 240-367825/78	16:29	96		94		97		96			
CCB 240-367825/79	16:33	97		96		98		98			
MB 240-367490/1-A	16:42	98		98		99		99			
LCS 240-367490/2-A	16:47	98		96		99		97			
240-107872-B-1-A SD ^5	16:55	100		97		101		99			
240-107872-B-1-B MS	17:04	93		92		98		94			
240-107872-B-1-C MSD	17:08	93		92		99		95			
CCV 240-367825/90	17:21	98		96		100		98			
CCB 240-367825/91	17:25	100		99		101		101			
CCV 240-367825/102	18:13	98		96		100		98			
CCB 240-367825/103	18:17	98		98		99		99			
240-107924-2	18:44	104		106		110		107			
240-107924-3	18:48	102		100		103		104			
CCV 240-367825/114	19:05	99		97		101		101			
CCB 240-367825/115	19:09	99		99		101		102			
CCVL 240-367825/195	08:02	113		105		101		103			

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/12/2019 End Date: 02/12/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-367822/3 IC	15:13	99		100		100		98		97	
STD2 240-367822/4 IC	15:15	97		98		98		97		95	
STD3 240-367822/5 IC	15:18	94		97		98		96		92	
STD4 240-367822/6 IC	15:20	100		99		100		99		101	
ICV 240-367822/7	15:22	97		100		101		99		97	
ICB 240-367822/8	15:25	97		101		104		100		101	
ICVL 240-367822/9	15:27	98		100		103		99		101	
ICSA 240-367822/10	15:29	94		98		99		95		91	
ICSAB 240-367822/11	15:32	90		98		99		95		92	
CCV 240-367822/114	19:31	83		96		101		94		95	
CCB 240-367822/115	19:33	87		99		105		96		102	
MB 240-367490/1-A	19:38	90		102		105		99		102	
LCS 240-367490/3-A	19:40	84		98		105		94		94	
240-107872-B-1-A SD	19:45	86		103		109		100		99	
240-107872-B-1-D MS	19:49	78		97		102		95		91	
240-107872-B-1-E MSD	19:51	81		101		103		94		97	
CCV 240-367822/126	19:58	90		107		106		100		107	
CCB 240-367822/127	20:00	95		109		107		103		116	
CCV 240-367822/138	20:26	97		110		106		103		115	
CCB 240-367822/139	20:28	102		115		109		104		123	
240-107924-2	20:42	97		111		103		97		108	
240-107924-3	20:45	96		107		103		98		113	
CCV 240-367822/147	20:47	92		104		100		95		108	
CCB 240-367822/148	20:49	94		105		102		97		115	
CCVL 240-367822/149	20:52	93		104		101		96		112	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/12/2019 End Date: 02/12/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-367822/3 IC	15:13	99		98		100		99		101	
STD2 240-367822/4 IC	15:15	95		95		96		99		97	
STD3 240-367822/5 IC	15:18	92		93		93		97		97	
STD4 240-367822/6 IC	15:20	100		100		99		99		99	
ICV 240-367822/7	15:22	98		99		98		100		100	
ICB 240-367822/8	15:25	101		101		100		100		100	
ICVL 240-367822/9	15:27	100		102		101		102		101	
ICSA 240-367822/10	15:29	93		95		92		97		97	
ICSAB 240-367822/11	15:32	94		96		94		98		98	
CCV 240-367822/114	19:31	97		102		97		100		101	
CCB 240-367822/115	19:33	102		108		101		102		102	
MB 240-367490/1-A	19:38	104		107		104		103		104	
LCS 240-367490/3-A	19:40	98		107		97		101		101	
240-107872-B-1-A SD	19:45	101		107		99		103		102	
240-107872-B-1-D MS	19:49	91		96		93		97		98	
240-107872-B-1-E MSD	19:51	89		97		92		96		96	
CCV 240-367822/126	19:58	97		102		101		99		100	
CCB 240-367822/127	20:00	103		104		106		101		102	
CCV 240-367822/138	20:26	99		103		105		103		103	
CCB 240-367822/139	20:28	105		108		109		105		106	
240-107924-2	20:42	93		97		99		98		100	
240-107924-3	20:45	96		102		104		101		102	
CCV 240-367822/147	20:47	94		97		98		97		98	
CCB 240-367822/148	20:49	98		101		103		100		100	
CCVL 240-367822/149	20:52	99		101		102		99		100	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/12/2019 End Date: 02/12/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-367822/3 IC	15:13	101									
STD2 240-367822/4 IC	15:15	96									
STD3 240-367822/5 IC	15:18	95									
STD4 240-367822/6 IC	15:20	101									
ICV 240-367822/7	15:22	99									
ICB 240-367822/8	15:25	101									
ICVL 240-367822/9	15:27	101									
ICSA 240-367822/10	15:29	95									
ICSAB 240-367822/11	15:32	95									
CCV 240-367822/114	19:31	98									
CCB 240-367822/115	19:33	101									
MB 240-367490/1-A	19:38	106									
LCS 240-367490/3-A	19:40	100									
240-107872-B-1-A SD	19:45	100									
240-107872-B-1-D MS	19:49	90									
240-107872-B-1-E MSD	19:51	89									
CCV 240-367822/126	19:58	97									
CCB 240-367822/127	20:00	101									
CCV 240-367822/138	20:26	101									
CCB 240-367822/139	20:28	105									
240-107924-2	20:42	93									
240-107924-3	20:45	101									
CCV 240-367822/147	20:47	94									
CCB 240-367822/148	20:49	99									
CCVL 240-367822/149	20:52	100									

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367490/1-A	02/11/2019 14:00	367490		50	50
LCS 240-367490/2-A	02/11/2019 14:00	367490		50	50
240-107872-B-1-B MS	02/11/2019 14:00	367490		50	50
240-107872-B-1-C MSD	02/11/2019 14:00	367490		50	50
240-107924-2	02/11/2019 14:00	367490		50	50
240-107924-3	02/11/2019 14:00	367490		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367490/1-A	02/11/2019 14:00	367490		50	50
LCS 240-367490/3-A	02/11/2019 14:00	367490		50	50
240-107872-B-1-D MS	02/11/2019 14:00	367490		50	50
240-107872-B-1-E MSD	02/11/2019 14:00	367490		50	50
240-107924-2	02/11/2019 14:00	367490		50	50
240-107924-3	02/11/2019 14:00	367490		50	50

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367490 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00082	MTICP2A 00090	MTTMHCL 00235
MB 240-367490/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-367490/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107872-B-1 MS		3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107872-B-1 MSD		3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107924-I-2	MRC-MW149B-020819	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107924-I-3	MRC-MW150B-020819	3005A, 6010C	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180
MB 240-367490/1		3005A, 6010C		1 mL
LCS 240-367490/2		3005A, 6010C		1 mL
240-107872-B-1 MS		3005A, 6010C	R	1 mL
240-107872-B-1 MSD		3005A, 6010C	R	1 mL
240-107924-I-2	MRC-MW149B-020819	3005A, 6010C	R	1 mL
240-107924-I-3	MRC-MW150B-020819	3005A, 6010C	R	1 mL

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb4
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367490 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367490 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00038	MTICPMSB 00039	MTTMHCL 00235
MB 240-367490/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-367490/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107872-B-1 MS		3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107872-B-1 MSD		3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107924-I-2	MRC-MW149B-020819	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107924-I-3	MRC-MW150B-020819	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-367490/1		3005A, 6020A		1 mL					
LCS 240-367490/3		3005A, 6020A		1 mL					
240-107872-B-1 MS		3005A, 6020A	R	1 mL					
240-107872-B-1 MSD		3005A, 6020A	R	1 mL					
240-107924-I-2	MRC-MW149B-020819	3005A, 6020A	R	1 mL					
240-107924-I-3	MRC-MW150B-020819	3005A, 6020A	R	1 mL					

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb4
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367490 Batch Start Date: 02/11/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/11/19 22:00

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW149B-020819	240-107924-2
MRC-MW150B-020819	240-107924-3

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107924-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW149B-020819	240-107924-2
MRC-MW150B-020819	240-107924-3

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107924-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW149B-020819	240-107924-2
MRC-MW150B-020819	240-107924-3

Comments:

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 02/13/2019 13:29 End Date: 02/13/2019 16:00

Lab Sample Id	D/F	Type	Time	Analytes
				HardCC
MB 240-367926/1	1	T	13:29	X
LCS 240-367926/2	1	T	13:34	X
ZZZZZZ			13:39	
ZZZZZZ			13:44	
ZZZZZZ			13:49	
ZZZZZZ			13:55	
ZZZZZZ			14:00	
ZZZZZZ			14:05	
ZZZZZZ			14:10	
ZZZZZZ			14:16	
ZZZZZZ			14:21	
ZZZZZZ			14:26	
ZZZZZZ			14:31	
ZZZZZZ			14:37	
ZZZZZZ			14:42	
240-107760-A-4 MS	1	T	14:47	X
240-107760-A-4 MSD	1	T	14:52	X
ZZZZZZ			14:57	
ZZZZZZ			15:03	
ZZZZZZ			15:08	
240-107796-I-4 DU	1	T	15:13	X
ZZZZZZ			15:18	
ZZZZZZ			15:24	
240-107924-2	1	T	15:29	X
240-107924-3	1	T	15:34	X
ZZZZZZ			15:39	
ZZZZZZ			15:45	
ZZZZZZ			15:50	
ZZZZZZ			15:55	
ZZZZZZ			16:00	

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/14/2019 11:41 End Date: 02/14/2019 15:39

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			11:41																									
ZZZZZZ			11:52																									
ZZZZZZ			11:57																									
ZZZZZZ			12:01																									
ZZZZZZ			12:05																									
ZZZZZZ			12:10																									
ZZZZZZ			12:15																									
ZZZZZZ			12:20																									
ZZZZZZ			12:25																									
ZZZZZZ			12:30																									
ZZZZZZ			12:34																									
ZZZZZZ			12:39																									
ZZZZZZ			12:41																									
ZZZZZZ			12:45																									
ZZZZZZ			12:50																									
ZZZZZZ			12:55																									
ZZZZZZ			13:00																									
ZZZZZZ			13:05																									
ZZZZZZ			13:09																									
ZZZZZZ			13:14																									
ZZZZZZ			13:19																									
ZZZZZZ			13:24																									
ZZZZZZ			13:29																									
ZZZZZZ			13:30																									
ZZZZZZ			13:35																									
ZZZZZZ			13:40																									
ZZZZZZ			13:45																									
ZZZZZZ			13:49																									
LCS 240-368201/29	1	T	13:54	X																								
MB 240-368201/30	1	T	13:58	X																								
ZZZZZZ			14:02																									
ZZZZZZ			14:07																									
ZZZZZZ			14:12																									
ZZZZZZ			14:16																									
ZZZZZZ			14:18																									
ZZZZZZ			14:23																									
ZZZZZZ			14:28																									
ZZZZZZ			14:33																									
ZZZZZZ			14:37																									
ZZZZZZ			14:42																									
ZZZZZZ			14:46																									

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/14/2019 11:41 End Date: 02/14/2019 15:39

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			14:51																									
240-107813-M-1 DU	1	T	14:56	X																								
ZZZZZZ			15:01																									
ZZZZZZ			15:06																									
ZZZZZZ			15:08																									
ZZZZZZ			15:13																									
ZZZZZZ			15:17																									
ZZZZZZ			15:20																									
ZZZZZZ			15:24																									
240-107924-2	1	T	15:27	X																								
240-107924-3	1	T	15:32	X																								
ZZZZZZ			15:37																									
ZZZZZZ			15:39																									

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 02/14/2019 09:55 End Date: 02/14/2019 09:55

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-368035/1	1	T	09:55	X																								
LCS 240-368035/2	1	T	09:55	X																								
240-107997-B-2 DU	1	T	09:55	X																								
ZZZZZZ			09:55																									
ZZZZZZ			09:55																									
ZZZZZZ			09:55																									
ZZZZZZ			09:55																									
240-107924-2	1	T	09:55	X																								
240-107924-3	1	T	09:55	X																								
ZZZZZZ			09:55																									
ZZZZZZ			09:55																									
ZZZZZZ			09:55																									
ZZZZZZ			09:55																									
ZZZZZZ			09:55																									
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ZZZZZZ			09:55																									
ZZZZZZ			09:55																									

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: VERONICA Analysis Method: 9056A

Start Date: 08/06/2018 12:54 End Date: 08/06/2018 16:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339515/1 IC	1		12:54	X																								
STD2 240-339515/2 IC	1		13:14	X																								
STD3 240-339515/3 IC	1		13:34	X																								
STD4 240-339515/4 IC	1		13:54	X																								
STD5 240-339515/5 ICRT	1		14:14	X																								
STD6 240-339515/6 IC	1		14:34	X																								
STD7 240-339515/7 IC	1		14:54	X																								
STD8 240-339515/8 IC	1		15:15	X																								
STD9 240-339515/9 IC	1		15:35	X																								
ICV 240-339515/10	1		15:55	X																								
ICB 240-339515/11	1		16:15	X																								

Prep Types:
=

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Analyst: LKG Batch Start Date: 08/06/2018

Reporting Units: mg/L Analytical Batch No.: 339515

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:55	Sulfate	52.4	50.0	105	90-110		WCICLCS_00669
11	ICB	16:15	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Instrument ID: VERONICA Analysis Method: 9056A

Start Date: 02/14/2019 17:48 End Date: 02/15/2019 04:52

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
CCV 240-368146/1	1		17:48		X																								
CCB 240-368146/2	1		18:08		X																								
MB 240-368146/3	1	T	18:28		X																								
LCS 240-368146/4	1	T	18:48		X																								
ZZZZZZ			19:09																										
240-108064-E-2 MS	1	T	19:29		X																								
240-108064-E-2 MSD	1	T	19:49		X																								
ZZZZZZ			20:09																										
ZZZZZZ			20:29																										
ZZZZZZ			20:49																										
ZZZZZZ			21:09																										
ZZZZZZ			21:29																										
CCV 240-368146/13	1		21:49		X																								
CCB 240-368146/14	1		22:10		X																								
240-107924-2	1	T	22:30	X	X																								
ZZZZZZ			22:50																										
240-107924-3	1	T	23:10	X	X																								
ZZZZZZ			23:30																										
ZZZZZZ			23:50																										
ZZZZZZ			00:10																										
ZZZZZZ			00:30																										
240-107995-A-1 MS	10	T	00:50		X																								
240-107995-A-1 MSD	10	T	01:11		X																								
ZZZZZZ			01:31																										
CCV 240-368146/25	1		01:51		X																								
CCB 240-368146/26	1		02:11		X																								
ZZZZZZ			02:31																										
ZZZZZZ			02:52																										
ZZZZZZ			03:12																										
ZZZZZZ			03:32																										
ZZZZZZ			03:52																										
ZZZZZZ			04:12																										
CCV 240-368146/33			04:32																										
CCB 240-368146/34			04:52																										

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Analyst: JWW Batch Start Date: 02/14/2019

Reporting Units: mg/L Analytical Batch No.: 368146

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	17:48	Sulfate	48.1	50.0	96	90-110		WCICCCV_00861
2	CCB	18:08	Sulfate	0.35				U	
13	CCV	21:49	Sulfate	48.0	50.0	96	90-110		WCICCCV_00861
14	CCB	22:10	Sulfate	0.35				U	
25	CCV	01:51	Sulfate	47.9	50.0	96	90-110		WCICCCV_00861
26	CCB	02:11	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/17/2019 12:50 End Date: 02/17/2019 13:27

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575925/1	1		12:50	X																								
ICB 490-575925/2	1		12:51	X																								
CCV 490-575925/3	1		12:52	X																								
CCV 490-575925/4	1		12:53	X																								
CCB 490-575925/5	1		12:54	X																								
MB 490-575925/6	1	T	12:55	X																								
LCS 490-575925/7	1	T	12:57	X																								
ZZZZZZ			12:58																									
ZZZZZZ			12:59																									
ZZZZZZ			13:00																									
ZZZZZZ			13:01																									
ZZZZZZ			13:02																									
240-107796-F-3 MS	1	T	13:04	X																								
240-107796-F-3 MSD	1	T	13:05	X																								
ZZZZZZ			13:06																									
ZZZZZZ			13:07																									
ZZZZZZ			13:08																									
ZZZZZZ			13:10																									
ZZZZZZ			13:11																									
CCV 490-575925/20	1		13:12	X																								
CCB 490-575925/21	1		13:13	X																								
ZZZZZZ			13:14																									
ZZZZZZ			13:15																									
240-107924-2	1	T	13:17	X																								
240-107924-3	1	T	13:18	X																								
ZZZZZZ			13:19																									
ZZZZZZ			13:20																									
ZZZZZZ			13:21																									
ZZZZZZ			13:23																									
ZZZZZZ			13:24																									
ZZZZZZ			13:25																									
CCV 490-575925/32	1		13:26	X																								
CCB 490-575925/33	1		13:27	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG No.:

Analyst: MSP Batch Start Date: 02/17/2019

Reporting Units: mg/L Analytical Batch No.: 575925

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:50	Nitrate Nitrite as N	3.26	3.00	109	90-110		W_ICAl_00027
2	ICB	12:51	Nitrate Nitrite as N	0.040				U	
3	CCV	12:52	Nitrate Nitrite as N	4.88	5.00	98	90-110		W_Nitrate_00020
4	CCV	12:53	Nitrate Nitrite as N	4.93	5.00	99	90-110		IC Primary_00012
5	CCB	12:54	Nitrate Nitrite as N	0.040				U	
20	CCV	13:12	Nitrate Nitrite as N	4.76	5.00	95	90-110		W_Nitrate_00020
21	CCB	13:13	Nitrate Nitrite as N	0.0463				J	
32	CCV	13:26	Nitrate Nitrite as N	4.62	5.00	92	90-110		W_Nitrate_00020
33	CCB	13:27	Nitrate Nitrite as N	0.040				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575925 Date: 02/17/2019 12:55							
SM 4500 NO3 F	MB 490-575925/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925 Date: 02/17/2019 13:04											
SM 4500 NO3 F	240-107796-F-3	Nitrate Nitrite as N	0.86		mg/L						
SM 4500 NO3 F	240-107796-F-3 MS	Nitrate Nitrite as N	3.96		mg/L	3.00	103	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925 Date: 02/17/2019 13:05											
SM 4500 NO3 F	240-107796-F-3 MSD	Nitrate Nitrite as N	4.15		mg/L	3.00	110	90-110	5	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925	Date: 02/17/2019 12:57										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575925/7	Nitrate Nitrite as N	3.23		mg/L	3.00	108	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107924-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/27/2019 08:00 End Date: 02/27/2019 08:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-271440/1	1	T	08:00	X																								
ZZZZZZ			08:00																									
240-107850-E-2 DU	1	T	08:00	X																								
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
240-107924-2	1	T	08:00	X																								
240-107924-3	1	T	08:00	X																								
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									

Prep Types:
T = Total/NA

FORM XIII-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107924-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 271440 Date: 02/27/2019 08:00							
SM 2520B	MB 180-271440/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 271440 Date: 02/27/2019 08:00								
SM 2520B		240-107850-E-2	Salinity	2.0	No Unit			U
SM 2520B		240-107850-E-2 DU	Salinity	2.0	No Unit	NC	20	U

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 368201 Date: 02/14/2019 13:58							
2320B-2011	MB 240-368201/30	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 367926 Date: 02/13/2019 13:29							
2340C-2011	MB 240-367926/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 368035 Date: 02/14/2019 09:55							
2540 C-2011	MB 240-368035/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 368146 Date: 02/14/2019 18:28							
9056A	MB 240-368146/3	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-368146/3	Sulfate	0.35	U	mg/L	1.0	1

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367926 Date: 02/13/2019 14:47											
2340C-2011	240-107760-A-4	Hardness as calcium carbonate	410		mg/L						
2340C-2011	240-107760-A-4 MS	Hardness as calcium carbonate	1420		mg/L	1000	101	80-120			
Batch ID: 368146 Date: 02/14/2019 19:29											
9056A	240-108064-E-2	Sulfate	29		mg/L						
9056A	240-108064-E-2 MS	Sulfate	80.8		mg/L	50.0	104	80-120			
Batch ID: 368146 Date: 02/15/2019 00:50											
9056A	240-107995-A-1	Sulfate	96		mg/L						
9056A	240-107995-A-1 MS	Sulfate	623		mg/L	500	106	80-120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367926 Date: 02/13/2019 14:52											
2340C-2011	240-107760-A-4 MSD	Hardness as calcium carbonate	1430		mg/L	1000	102	80-120	1	10	
Batch ID: 368146 Date: 02/14/2019 19:49											
9056A	240-108064-E-2 MSD	Sulfate	83.6		mg/L	50.0	109	80-120	3	15	
Batch ID: 368146 Date: 02/15/2019 01:11											
9056A	240-107995-A-1 MSD	Sulfate	610		mg/L	500	103	80-120	2	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 368201	Date: 02/14/2019 14:56							
2320B-2011		240-107813-M-1	Alkalinity	98	mg/L			
2320B-2011		240-107813-M-1 DU	Alkalinity	98.6	mg/L	0.4	20	
Batch ID: 367926	Date: 02/13/2019 15:13							
2340C-2011		240-107796-I-4	Hardness as calcium carbonate	76	mg/L			
2340C-2011		240-107796-I-4 DU	Hardness as calcium carbonate	76.0	mg/L	0	20	
Batch ID: 368035	Date: 02/14/2019 09:55							
2540 C-2011		240-107997-B-2	Total Dissolved Solids	910	mg/L			
2540 C-2011		240-107997-B-2 DU	Total Dissolved Solids	973	mg/L	6	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 368201	Date: 02/14/2019 13:54										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-368201/29	Alkalinity	259		mg/L	271	96	86-123			
Batch ID: 367926	Date: 02/13/2019 13:34										
						LCS Source: WCHARDNESS_00031					
2340C-2011	LCS 240-367926/2	Hardness as calcium carbonate	264		mg/L	246	107	90-110			
Batch ID: 368035	Date: 02/14/2019 09:55										
						LCS Source: WCPHENOVSOLID_00039					
2540 C-2011	LCS 240-368035/2	Total Dissolved Solids	214		mg/L	202	106	80-120			
Batch ID: 368146	Date: 02/14/2019 18:48										
						LCS Source: WCICLCS_00696					
9056A	LCS 240-368146/4	Sulfate	54.4		mg/L	50.0	109	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107924-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 367926 Batch Start Date: 02/13/19 13:29 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 02/13/19 16:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCCALCIUMCARB 00018	WCHARDNESS 00031	
MB 240-367926/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-367926/2		2340C-2011		25 mL	25 mL	6.60 mL		25 mL	
240-107760-A-4 MS		2340C-2011	T	5 mL	25 mL	7.10 mL	5 mL		
240-107760-A-4 MSD		2340C-2011	T	5 mL	25 mL	7.15 mL	5 mL		
240-107796-I-4 DU		2340C-2011	T	25 mL	25 mL	1.90 mL			
240-107924-G-2	MRC-MW149B-020819	2340C-2011	T	25 mL	25 mL	2.55 mL			
240-107924-G-3	MRC-MW150B-020819	2340C-2011	T	25 mL	25 mL	1.00 mL			

Batch Notes	
Batch Comment	BEAKERS--4010980
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C9, E3
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 368201 Batch Start Date: 02/14/19 11:41 Batch Analyst: Carson, Monica

Batch Method: 2320B-2011 Batch End Date: 02/15/19 08:57

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-368201/29		2320B-2011		InitialAmount is blank	10 mL				
MB 240-368201/30		2320B-2011		InitialAmount is blank					
240-107813-M-1 DU		2320B-2011	T	InitialAmount is blank					
240-107924-E-2	MRC-MW149B-020819	2320B-2011	T	InitialAmount is blank					
240-107924-E-3	MRC-MW150B-020819	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4- 4005008
pH Buffer 2 ID	7- 4017506
pH Buffer 3 ID	10- 3892955
pH Buffer 4 ID	12- 3891579
Nominal Amount Used	10 mL
pH Meter ID	severus
Probe ID	WCP 137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 368035 Batch Start Date: 02/14/19 09:55 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date: 02/15/19 14:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-368035/1		2540 C-2011			3.2936 g	100 mL	3.2940 g	3.2942 g	0 g
LCS 240-368035/2		2540 C-2011			3.2506 g	100 mL	3.2725 g	3.2720 g	0 g
240-107997-B-2 DU		2540 C-2011	T	1259 umhos/cm	3.3286 g	100 mL	3.4263 g	3.4259 g	0 g
240-107924-H-2	MRC-MW149B-020819	2540 C-2011	T	1241 umhos/cm	3.2334 g	100 mL	3.3048 g	3.3044 g	0 g
240-107924-H-3	MRC-MW150B-020819	2540 C-2011	T	165 umhos/cm	3.2903 g	100 mL	3.3022 g	3.3018 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 240-368035/1		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0004 g	0.0006 g	N/A g
LCS 240-368035/2		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0219 g	0.0214 g	N/A g
240-107997-B-2 DU		2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0977 g	0.0973 g	N/A g
240-107924-H-2	MRC-MW149B-020819	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0714 g	0.071 g	N/A g
240-107924-H-3	MRC-MW150B-020819	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0119 g	0.0115 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00039		
MB 240-368035/1		2540 C-2011		N/A g	100 mL	OK			
LCS 240-368035/2		2540 C-2011		N/A g	100 mL	OK	100 mL		
240-107997-B-2 DU		2540 C-2011	T	N/A g	100 mL	OK			
240-107924-H-2	MRC-MW149B-020819	2540 C-2011	T	N/A g	100 mL	OK			
240-107924-H-3	MRC-MW150B-020819	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 368035 Batch Start Date: 02/14/19 09:55 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date: 02/15/19 14:06

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/15/2019 10:49
Date/Time - Out - CW (WT2)	02/15/2019 11:50
Temperature - Start - CW (WT2) - Correct	182 Celsius
Temperature - End - CW (WT2) - Correct	181 Celsius
Temperature - Start-CW(WT2) -Uncorrected	182 Celsius
Temperature - End-CW(WT2) -Uncorrected	181 Celsius
Temperature - Start - Corrected	105 Celsius
Temperature - End - Corrected	104 Celsius
Date/Time - In	02/14/2019 11:17
Date/Time - Out	02/15/2019 08:20
Filter ID	60020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O06
Pipette/Syringe/Dispenser ID	B3
Thermometer ID - Low Temperature	84922
Thermometer ID	181417084
Temperature - Start - Uncorrected	105 Celsius
Temperature - End - Uncorrected	104 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/15/2019 08:20 No Unit
Weight(WT1) Date/Time Out	02/15/2019 09:51
Weight(WT1) Start Temp	181 Celsius
Weight(WT1) Temp Out	181 Celsius
Uncorrected Weight(WT1) Start Temp	181 Celsius
Uncorrected Weight(WT1) Temp Out	181 Celsius

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 368035 Batch Start Date: 02/14/19 09:55 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date: 02/15/19 14:06

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 339515 Batch Start Date: 08/06/18 12:54 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339515/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339515/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339515/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339515/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339515/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339515/6 IC		300.0		5 mL	2 mL				
STD7 240-339515/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339515/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339515/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 368146 Batch Start Date: 02/14/19 17:48 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107924-H-2	MRC-MW149B-020819	300.0 & 9056A	T	5 mL					
240-107924-H-2	MRC-MW149B-020819	300.0 & 9056A	T	5 mL					
240-107924-H-3	MRC-MW150B-020819	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 339515 Batch Start Date: 08/06/18 12:54 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICLCS 00669				
ICV 240-339515/10		9056A		5 mL	5 mL				
ICB 240-339515/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 368146 Batch Start Date: 02/14/19 17:48 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107924-H-2	MRC-MW149B-020819	300.0 & 9056A	T	5 mL					
240-107924-H-2	MRC-MW149B-020819	300.0 & 9056A	T	5 mL					
240-107924-H-3	MRC-MW150B-020819	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107924-1

SDG No.:

Batch Number: 368146 Batch Start Date: 02/14/19 17:48 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00861	WCICLCS 00696	WCICSOLNA1 00018	WCICSOLNB1 00018	
CCV 240-368146/1		9056A		5 mL	5 mL				
CCB 240-368146/2		9056A		5 mL					
MB 240-368146/3		9056A		5 mL					
LCS 240-368146/4		9056A		5 mL		5 mL			
240-108064-E-2 MS		9056A	T	5 mL			0.1 mL	0.1 mL	
240-108064-E-2 MSD		9056A	T	5 mL			0.1 mL	0.1 mL	
CCV 240-368146/13		9056A		5 mL	5 mL				
CCB 240-368146/14		9056A		5 mL					
240-107995-A-1 MS		9056A	T	5 mL			0.1 mL	0.1 mL	
240-107995-A-1 MSD		9056A	T	5 mL			0.1 mL	0.1 mL	
CCV 240-368146/25		9056A		5 mL	5 mL				
CCB 240-368146/26		9056A		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107924-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575925/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575925/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575925/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575925/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575925/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575925/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575925/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
240-107796-F-3 MS		SM 4500 NO3 F	T	50 mL	50 mL		0.25 mL		8.65
240-107796-F-3 MSD		SM 4500 NO3 F	T	50 mL	50 mL		0.25 mL		8.65
CCV 490-575925/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/21		SM 4500 NO3 F		50 mL	50 mL				
240-107924-F-2	MRC-MW149B-020819	SM 4500 NO3 F	T	50 mL	50 mL				8.32
240-107924-F-3	MRC-MW150B-020819	SM 4500 NO3 F	T	50 mL	50 mL				7.6
CCV 490-575925/32		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/33		SM 4500 NO3 F		50 mL	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

VOC CALCULATION **SAMPLE**

TARGET ANALYTE	TRICHLOROETHENE	
ANALYTE RESPONSE	1661266	
INTERNAL STANDARD	FLUOROBENZENE	
I.S. RESPONSE	1613680	
I.S. CONCENTRATION	10	µg/l
ANALYTE CAL. RF	0.324	
DILUTION FACTOR (DF)	2.5	
INITIAL SAMPLE VOLUME - V1	5	ml
FINAL SAMPLE VOLUME - V2	5	ml
ON COLUMN AMOUNT	31.7743555	µg/l

$$\frac{\text{(ANALYTE RESPONSE) x (I.S. CONCENTRATION) X DF x V2}}{\text{(I.S. RESPONSE) x (CAL. R.F.) x V1}} = \mathbf{79.44}\ \mathbf{\mu g/l}$$

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107924-1

SDG No.:

Client Sample ID: MRC-MW150B-020819 | Lab Sample ID: 240-107924-3

Matrix: Water | Lab File ID: UXC8820.D

Analysis Method: 8260C | Date Collected: 02/08/2019 11:10

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 17:54

Soil Aliquot Vol: | Dilution Factor: 2.5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.50	U	2.5	0.50
156-59-2	cis-1,2-Dichloroethene	47		2.5	0.40
10061-01-5	cis-1,3-Dichloropropene	1.5	U	2.5	1.5
87-68-3	Hexachlorobutadiene	2.1	U	2.5	2.1
74-95-3	Dibromomethane	0.23	U	2.5	0.23
75-27-4	Bromodichloromethane	0.43	U	2.5	0.43
75-71-8	Dichlorodifluoromethane	0.88	U	2.5	0.88
100-41-4	Ethylbenzene	0.28	U	2.5	0.28
106-93-4	1,2-Dibromoethane	0.30	U	2.5	0.30
108-20-3	Diisopropyl ether	0.43	U	25	0.43
91-20-3	Naphthalene	0.80	U	2.5	0.80
104-51-8	n-Butylbenzene	0.35	U	2.5	0.35
98-82-8	Isopropylbenzene	0.23	U	2.5	0.23
103-65-1	N-Propylbenzene	0.38	U	2.5	0.38
78-93-3	2-Butanone (MEK)	2.9	U	25	2.9
108-10-1	4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1
135-98-8	sec-Butylbenzene	0.33	U	2.5	0.33
1634-04-4	Methyl tert-butyl ether	0.18	U	2.5	0.18
994-05-8	Tert-amyl methyl ether	0.28	U	13	0.28
75-09-2	Methylene Chloride	6.6	U	13	6.6
100-42-5	Styrene	0.25	U	2.5	0.25
637-92-3	Ethyl tert-butyl ether	0.38	U	13	0.38
98-06-6	tert-Butylbenzene	0.35	U	2.5	0.35
127-18-4	Tetrachloroethene	0.38	U	2.5	0.38
108-88-3	Toluene	0.35	U	2.5	0.35
156-60-5	trans-1,2-Dichloroethene	0.48	U	2.5	0.48
10061-02-6	trans-1,3-Dichloropropene	1.7	U	2.5	1.7
79-01-6	Trichloroethene	79		2.5	0.25
75-69-4	Trichlorofluoromethane	1.1	U	2.5	1.1
108-05-4	Vinyl acetate	0.48	U	5.0	0.48
75-01-4	Vinyl chloride	1.8	J	2.5	0.50
75-65-0	tert-Butyl alcohol	4.2	U	130	4.2
1330-20-7	Xylenes, Total	0.38	U	5.0	0.38
124-48-1	Chlorodibromomethane	0.98	U	2.5	0.98

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX15\20190213-84450.b\UXC8820.D
Lims ID: 240-107924-B-3
Client ID: MRC-MW150B-020819
Sample Type: Client
Inject. Date: 13-Feb-2019 17:54:30 ALS Bottle#: 15 Worklist Smp#: 42
Purge Vol: 5.000 mL Dil. Factor: 2.5000
Sample Info: 240-0084450-042
Misc. Info.: C90213A,8260LLUX15,,43582
Operator ID: Instrument ID: A3UX15

Method: \\chromna\Canton\ChromData\A3UX15\20190213-84450.b\8260_15.m
Limit Group: MSV 8260C ICAL
Last Update: 14-Feb-2019 09:53:08 Calib Date: 21-Jan-2019 19:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX15\20190121-83824.b\UXC8431.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0301

First Level Reviewer: evansle Date: 14-Feb-2019 09:43:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.196	5.196	0.000	99	1613680	10.0	
* 2 Chlorobenzene-d5	117	7.876	7.876	0.000	84	1377621	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.117	10.117	0.000	93	763754	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.639	4.639	0.000	95	279799	7.33	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.923	4.923	0.000	100	380199	7.75	
$ 6 Toluene-d8 (Surr)	98	6.560	6.560	0.000	93	1137027	6.80	
$ 7 4-Bromofluorobenzene (Surr	95	8.991	8.991	0.000	96	387813	6.48	
9 Dichlorodifluoromethane	85		1.532				ND	
10 Chloromethane	50		1.698				ND	
11 Vinyl chloride	62	1.793	1.793	0.000	97	32672	0.7019	
13 Bromomethane	94		2.065				ND	
14 Chloroethane	64		2.148				ND	
16 Trichlorofluoromethane	101		2.362				ND	
19 1,1-Dichloroethene	96		2.777				ND	
20 1,1,2-Trichloro-1,2,2-trif	151		2.801				ND	
22 Acetone	58		2.824				ND	
24 Carbon disulfide	76	2.990	2.990	0.000	95	19004	0.1521	
28 Methylene Chloride	84		3.180				ND	
29 2-Methyl-2-propanol	59		3.263				ND	
31 Methyl tert-butyl ether	73		3.405				ND	
30 trans-1,2-Dichloroethene	96	3.405	3.417	-0.012	92	6609	0.1465	
34 1,1-Dichloroethane	63		3.761				ND	
36 Vinyl acetate	43		3.785				ND	
35 Isopropyl ether	87		3.797				ND	
38 Tert-butyl ethyl ether	59		4.093				ND	
41 2-Butanone (MEK)	72		4.247				ND	
40 2,2-Dichloropropane	97		4.247				ND	U
39 cis-1,2-Dichloroethene	96	4.247	4.247	0.000	78	933887	18.8	
45 Chlorobromomethane	128		4.449				ND	
47 Chloroform	83		4.496				ND	
48 1,1,1-Trichloroethane	97		4.662				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 1,1-Dichloropropene	75		4.793				ND	
50 Carbon tetrachloride	117		4.805				ND	
53 Benzene	78		4.971				ND	
54 1,2-Dichloroethane	62		4.994				ND	
55 Tert-amyl methyl ether	73		5.042				ND	
58 Trichloroethene	130	5.516	5.516	0.000	95	1661266	31.8	
61 1,2-Dichloropropane	63		5.706				ND	
63 Dibromomethane	93		5.813				ND	
65 Dichlorobromomethane	83		5.931				ND	
67 2-Chloroethyl vinyl ether	63		6.180				ND	
68 cis-1,3-Dichloropropene	75		6.323				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.453				ND	
70 Toluene	91		6.619				ND	
71 trans-1,3-Dichloropropene	75		6.809				ND	
74 Tetrachloroethene	164		7.117				ND	
75 1,3-Dichloropropane	76		7.141				ND	
76 2-Hexanone	43		7.200				ND	
79 Chlorodibromomethane	129		7.342				ND	
80 Ethylene Dibromide	107		7.461				ND	
82 Chlorobenzene	112		7.900				ND	
83 1,1,1,2-Tetrachloroethane	131		7.983				ND	
84 Ethylbenzene	106		7.995				ND	
85 m-Xylene & p-Xylene	91		8.101				ND	
86 o-Xylene	106		8.481				ND	
87 Styrene	104		8.493				ND	
88 Bromoform	173		8.682				ND	
89 Isopropylbenzene	105		8.837				ND	
93 1,1,2,2-Tetrachloroethane	83		9.121				ND	
92 Bromobenzene	156		9.145				ND	
94 1,2,3-Trichloropropane	110		9.169				ND	
96 N-Propylbenzene	120		9.228				ND	
97 2-Chlorotoluene	126		9.323				ND	
99 4-Chlorotoluene	91		9.429				ND	
101 tert-Butylbenzene	119		9.714				ND	
103 1,2,4-Trimethylbenzene	105		9.762				ND	
105 sec-Butylbenzene	105		9.928				ND	
106 1,3-Dichlorobenzene	146		10.046				ND	
107 4-Isopropyltoluene	119		10.070				ND	
108 1,4-Dichlorobenzene	146		10.141				ND	
109 1,2,3-Trimethylbenzene	105		10.176				ND	
111 n-Butylbenzene	91		10.473				ND	
112 1,2-Dichlorobenzene	146		10.509				ND	
113 1,2-Dibromo-3-Chloropropan	157		11.291				ND	
115 1,2,4-Trichlorobenzene	180		12.109				ND	
116 Hexachlorobutadiene	225		12.276				ND	
117 Naphthalene	128		12.359				ND	
118 1,2,3-Trichlorobenzene	180		12.608				ND	
S 129 Xylenes, Total	106		16.530				ND	

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107924-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **APRIL 12, 2019**

FROM: **J. KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **DATA VALIDATION – VOC, PCB, METALS, MISC**
MRC BLOCK E/F MASS DISCHARGE
SAMPLE DELIVERY GROUP (SDG) 240-108064-1

SAMPLES: **3 / Aqueous – VOC, METALS, MISC**

MRC-MW145A-021319 MRC-MW148A-021319 MRC-MW154A-021319

2 / Aqueous – PCB

MRC-MW145A-021319 MRC-MW154A-021319

1 / Aqueous – VOC

TB-021319

Overview

The sample set for MRC Block E/F Mass Discharge, SDG 240-108064-1, consisted of three (3) aqueous samples and one (1) aqueous trip blank sample. The three (3) aqueous samples and the one (1) aqueous trip blank sample were analyzed for volatile organic compounds (VOCs) as listed above. The three (3) aqueous samples were also analyzed for metals and the miscellaneous analyses alkalinity, bromide, hardness as CaCO3, nitrate/nitrite-N, salinity, sulfate, and total suspended solids (TSS), as listed above. Two (2) of the aqueous samples were also analyzed for polychlorinated biphenyls (PCBs) as listed above. No field duplicate sample pairs were included in the sample delivery group (SDG).

The samples were collected by Tetra Tech on February 13, 2019 and analyzed by TestAmerica Laboratories Inc., North Canton, Savannah, Nashville, and Pittsburgh, for all analyses. All analyses were conducted in accordance with EPA SW-846 Methods 8260C for VOCs, 6020A (ICP/MS) for metals, 6010C (ICP) for metals, 9056A for anions, Standard Methods (SM) 2320B for total alkalinity, SM 2340C for total hardness, SM 2540C for total dissolved solids (TSS), SM 2520B for salinity (electrical conductivity), SM 4500 NO3 F for nitrate-N, MCAWW Method 300.0 for anions, and EPA Method 680 for PCBs, analytical and reporting protocols.

The data contained in this SDG was validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, blank results, blank spike/blank spike duplicate results, matrix spike/matrix spike duplicate results, surrogate spike recoveries, internal standard recoveries, chromatographic resolution, ICP interference results, ICP serial dilution results, analyte identification, analyte quantitation, and detection limits. Areas of concern are listed below.

Major Problems

- The laboratory narrative indicated that the samples were acid preserved for the VOC analysis. The VOC analyte 2-chlororethyl vinyl ether is known to rapidly deteriorate under acidic conditions. Both sample non-detected results for 2-chloroethyl vinyl ether were qualified rejected, (UR), due to the laboratory narrative indicating that the samples were acid preserved.

Minor Problems

- Detected results reported below the quantitation limit but above the method detection limit (MDL) were qualified as estimated, (J).

- The VOC continuing calibration verification (CCV) percent differences (%Ds) were greater than the 20% quality control (QC) limit for tert-butyl alcohol, vinyl acetate, 2-butanone, 2-chloroethyl vinyl ether, cis-1,3-dichloropropene, 4-methyl-2-pentanone, trans-1,3-dichloropropene, 2-hexanone, chlorodibromomethane, 1,2-dibromoethane, bromoform, 1,1,2,2-tetrachloroethane, 1,2,3-trichloropropane, tert-butyl benzene, n-butyl benzene, 1,2-dibromo-3-chloropropane, hexachlorobutadiene, naphthalene, ethyl tert-butyl ether, and tert-amyl methyl ether for instrument A3UX15 on 02/20/19 @ 10:45 & @ 11:29 affecting all VOC samples. The sample detected and non-detected results for the aforementioned analytes were qualified estimated, (J) and (UJ), respectively, with the exception of the 2-chloroethyl vinyl ether results which were rejected for the sample preservation issue.

- Nitrate/Nitrite-N was detected at 0.0463 mg/l, which was <RL, in a continuing calibration blank (CCB) @ 13:13 on 02/17/19, affecting all SDG samples analyzed for nitrate/nitrite-N. No action was taken for sample MRC-MW154A-021319 because the nitrate/nitrite-N concentration was >RL. Detections of nitrate/nitrite-N in samples MRC-MW145A-021319 and MRC-MW148A-021319 were <RL and were qualified non-detected, (U), due to blank contamination.

Notes

Non-detected sample analyte results were reported to the Method Detection Limit.

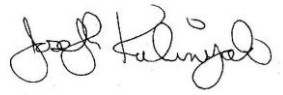
Sample MRC-MW145A-021319 was diluted 2X for the Method 6010C iron analysis.

EXECUTIVE SUMMARY

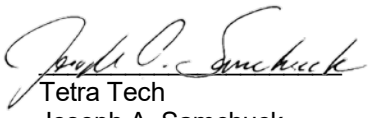
Laboratory Performance Issues: VOC results were qualified for CCV %D QC limit exceedances. Sample nitrate/nitrite-N results were qualified for CCB contamination.

Other Factors Affecting Data Quality: Detected results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J). All sample non-detected VOC 2-chlororethyl vinyl ether results were rejected due to sample acidification as noted in the laboratory narrative.

The data for these analyses were reviewed with reference to the USEPA National Functional Guidelines for Superfund Organic Methods Data Review (January 2017) and USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review (January 2017).



Tetra Tech
Joseph Kalinyak
Data Validator/Environmental Scientist



Tetra Tech
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08784	NSAMPLE	MRC-MW145A-021319			MRC-MW148A-021319			MRC-MW154A-021319			TB-021319		
SDG: 240-108064-1	LAB_ID	240-108064-3			240-108064-4			240-108064-2			240-108064-1		
FRACTION: OV	SAMP_DATE	2/13/2019			2/13/2019			2/13/2019			2/13/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	UJ	C	0.14	UJ	C	0.14	UJ	C	0.14	UJ	C
1,1,1-TRICHLOROETHANE		0.24	U		0.24	U		0.24	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	U		0.13	U		0.13	U		0.13	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U		0.41	U		0.41	U		0.41	U	
1,1-DICHLOROETHANE		0.17	U		0.17	U		0.17	U		0.17	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.14	U		0.14	U		0.14	U		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	U		0.54	U		0.54	U		0.54	U	
1,2,3-TRICHLOROPROPANE		0.24	UJ	C	0.24	UJ	C	0.24	UJ	C	0.24	UJ	C
1,2,3-TRIMETHYLBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
1,2,4-TRICHLOROBENZENE		0.26	U		0.26	U		0.26	U		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U		0.07	U		0.07	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	UJ	C	0.91	UJ	C	0.91	UJ	C	0.91	UJ	C
1,2-DIBROMOETHANE		0.12	UJ	C	0.12	UJ	C	0.12	UJ	C	0.12	UJ	C
1,2-DICHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
1,2-DICHLOROETHANE		0.21	U		0.21	U		0.21	U		0.21	U	
1,2-DICHLOROPROPANE		0.15	U		0.15	U		0.15	U		0.15	U	
1,3-DICHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
1,3-DICHLOROPROPANE		0.21	U		0.21	U		0.21	U		0.21	U	
1,4-DICHLOROBENZENE		0.16	U		0.16	U		0.16	U		0.16	U	
2,2-DICHLOROPROPANE		0.31	U		0.31	U		0.31	U		0.31	U	
2-BUTANONE		2.6	J	CP	1.4	J	CP	1.2	UJ	C	1.2	UJ	C
2-CHLOROETHYL VINYL ETHER		0.26	UR	M	0.26	UR	M	0.26	UR	M	0.26	UR	M
2-CHLOROTOLUENE		0.15	U		0.15	U		0.15	U		0.15	U	
2-HEXANONE		0.54	UJ	C	0.54	UJ	C	0.54	UJ	C	0.54	UJ	C
4-CHLOROTOLUENE		0.09	U		0.09	U		0.09	U		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U		0.13	U		0.13	U		0.13	U	
4-METHYL-2-PENTANONE		0.42	UJ	C	0.42	UJ	C	0.42	UJ	C	0.42	UJ	C
ACETONE		5.4	U		5.4	U		5.4	U		5.4	U	
BENZENE		0.13	U		0.22	J	P	0.13	U		0.13	U	
BROMOBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
BROMOCHLOROMETHANE		0.14	U		0.14	U		0.14	U		0.14	U	
BROMODICHLOROMETHANE		0.17	U		0.17	U		0.17	U		0.17	U	
BROMOFORM		0.76	UJ	C	0.76	UJ	C	0.76	UJ	C	0.76	UJ	C
BROMOMETHANE		0.42	U		0.42	U		0.42	U		0.42	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW145A-021319			MRC-MW148A-021319			MRC-MW154A-021319			TB-021319		
SDG: 240-108064-1	LAB_ID	240-108064-3			240-108064-4			240-108064-2			240-108064-1		
FRACTION: OV	SAMP_DATE	2/13/2019			2/13/2019			2/13/2019			2/13/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.28	U		0.28	U		0.28	U		0.28	U	
CARBON TETRACHLORIDE		0.26	U		0.26	U		0.26	U		0.26	U	
CHLOROBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
CHLORODIBROMOMETHANE		0.39	UJ	C	0.39	UJ	C	0.39	UJ	C	0.39	UJ	C
CHLOROETHANE		0.83	U		0.83	U		0.83	U		0.83	U	
CHLOROFORM		1.9			0.13	U		0.13	U		0.13	U	
CHLOROMETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
CIS-1,2-DICHLOROETHENE		0.38	J	P	0.29	J	P	0.16	U		0.16	U	
CIS-1,3-DICHLOROPROPENE		0.61	UJ	C	0.61	UJ	C	0.61	UJ	C	0.61	UJ	C
DIBROMOMETHANE		0.09	U		0.09	U		0.09	U		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	U		0.35	U		0.35	U		0.35	U	
DIISOPROPYL ETHER		0.17	U		0.17	U		0.17	U		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	UJ	C	0.15	UJ	C	0.15	UJ	C	0.15	UJ	C
ETHYLBENZENE		0.11	U		0.11	U		0.11	U		0.11	U	
HEXACHLOROBUTADIENE		0.83	UJ	C	0.83	UJ	C	0.83	UJ	C	0.83	UJ	C
ISOPROPYLBENZENE		0.09	U		0.09	U		0.09	U		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U		0.07	U		0.07	U		0.07	U	
METHYLENE CHLORIDE		2.6	U		2.6	U		2.6	U		2.6	U	
NAPHTHALENE		0.32	UJ	C	0.32	UJ	C	0.32	UJ	C	0.32	UJ	C
N-BUTYLBENZENE		0.14	UJ	C	0.14	UJ	C	0.14	UJ	C	0.14	UJ	C
N-PROPYLBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
STYRENE		0.1	U		0.1	U		0.1	U		0.1	U	
TERT-AMYL METHYL ETHER		0.11	UJ	C	0.11	UJ	C	0.11	UJ	C	0.11	UJ	C
TERT-BUTYLBENZENE		0.14	UJ	C	0.14	UJ	C	0.14	UJ	C	0.14	UJ	C
TERTIARY-BUTYL ALCOHOL		1.7	UJ	C	1.7	UJ	C	1.7	UJ	C	1.7	UJ	C
TETRACHLOROETHENE		0.15	U		0.15	U		0.15	U		0.15	U	
TOLUENE		0.29	J	P	0.14	U		0.14	U		0.14	U	
TOTAL XYLENES		0.15	U		0.15	U		0.15	U		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.67	UJ	C	0.67	UJ	C	0.67	UJ	C	0.67	UJ	C
TRICHLOROETHENE		3			1.1			0.1	U		0.1	U	
TRICHLOROFLUOROMETHANE		0.45	U		0.45	U		0.45	U		0.45	U	
VINYL ACETATE		0.19	UJ	C	0.19	UJ	C	0.19	UJ	C	0.19	UJ	C
VINYL CHLORIDE		0.2	U		0.2	U		0.2	U		0.2	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW145A-021319			MRC-MW154A-021319		
SDG: 240-108064-1	LAB_ID	240-108064-3			240-108064-2		
FRACTION: PCB	SAMP_DATE	2/13/2019			2/13/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
DICHLOROBIPHENYLS		0.0089	U		0.0052	U	
HEPTACHLOROBIPHENYLS		0.049	U		0.029	U	
HEXACHLOROBIPHENYLS		0.025	U		0.014	U	
MONOCHLOROBIPHENYLS		0.0092	U		0.0054	U	
NONACHLOROBIPHENYLS		0.08	U		0.047	U	
OCTACHLOROBIPHENYLS		0.062	U		0.037	U	
PENTACHLOROBIPHENYLS		0.023	U		0.013	U	
TETRACHLOROBIPHENYLS		0.021	U		0.013	U	
TRICHLOROBIPHENYLS		0.011	U		0.0063	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW145A-021319						MRC-MW148A-021319					
SDG: 240-108064-1	LAB_ID	240-108064-3						240-108064-4					
FRACTION: MISC	SAMP_DATE	2/13/2019						2/13/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		2.6	U					31					
BROMIDE		0.32	J	P				0.3	J	P			
HARDNESS AS CACO3		290						190					
NITRITE/NITRATE-N		0.042	U	A				0.073	U	A			
SALINITY					2	U					2	U	
SULFATE		110						130					
TOTAL DISSOLVED SOLIDS		1400						760					

PROJ_NO: 08784	NSAMPLE	MRC-MW154A-021319					
SDG: 240-108064-1	LAB_ID	240-108064-2					
FRACTION: MISC	SAMP_DATE	2/13/2019					
MEDIA: WATER	QC_TYPE	NM					
	UNITS	MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		81					
BROMIDE		0.094	J	P			
HARDNESS AS CACO3		74					
NITRITE/NITRATE-N		0.26					
SALINITY					2	U	
SULFATE		29					
TOTAL DISSOLVED SOLIDS		250					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: TB-021319 | Lab Sample ID: 240-108064-1

Matrix: Water | Lab File ID: UXC8941.D

Analysis Method: 8260C | Date Collected: 02/13/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 12:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: TB-021319 | Lab Sample ID: 240-108064-1

Matrix: Water | Lab File ID: UXC8941.D

Analysis Method: 8260C | Date Collected: 02/13/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 12:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: TB-021319 | Lab Sample ID: 240-108064-1

Matrix: Water | Lab File ID: UXC8941.D

Analysis Method: 8260C | Date Collected: 02/13/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 12:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		70-121
460-00-4	4-Bromofluorobenzene (Surr)	76		59-120
2037-26-5	Toluene-d8 (Surr)	84		70-123
1868-53-7	Dibromofluoromethane (Surr)	94		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW154A-021319 | Lab Sample ID: 240-108064-2

Matrix: Water | Lab File ID: UXC8942.D

Analysis Method: 8260C | Date Collected: 02/13/2019 10:20

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 13:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW154A-021319 | Lab Sample ID: 240-108064-2

Matrix: Water | Lab File ID: UXC8942.D

Analysis Method: 8260C | Date Collected: 02/13/2019 10:20

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 13:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW154A-021319 | Lab Sample ID: 240-108064-2

Matrix: Water | Lab File ID: UXC8942.D

Analysis Method: 8260C | Date Collected: 02/13/2019 10:20

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 13:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		70-121
460-00-4	4-Bromofluorobenzene (Surr)	72		59-120
2037-26-5	Toluene-d8 (Surr)	78		70-123
1868-53-7	Dibromofluoromethane (Surr)	88		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW145A-021319 | Lab Sample ID: 240-108064-3

Matrix: Water | Lab File ID: UXC8943.D

Analysis Method: 8260C | Date Collected: 02/13/2019 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 13:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	1.9		1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW145A-021319 | Lab Sample ID: 240-108064-3

Matrix: Water | Lab File ID: UXC8943.D

Analysis Method: 8260C | Date Collected: 02/13/2019 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 13:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.38	J	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	2.6	J	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.29	J	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	3.0		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW145A-021319 | Lab Sample ID: 240-108064-3

Matrix: Water | Lab File ID: UXC8943.D

Analysis Method: 8260C | Date Collected: 02/13/2019 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 13:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	88		70-121
460-00-4	4-Bromofluorobenzene (Surr)	69		59-120
2037-26-5	Toluene-d8 (Surr)	76		70-123
1868-53-7	Dibromofluoromethane (Surr)	85		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW148A-021319 | Lab Sample ID: 240-108064-4

Matrix: Water | Lab File ID: UXC8944.D

Analysis Method: 8260C | Date Collected: 02/13/2019 11:15

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 14:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.22	J	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW148A-021319 | Lab Sample ID: 240-108064-4

Matrix: Water | Lab File ID: UXC8944.D

Analysis Method: 8260C | Date Collected: 02/13/2019 11:15

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 14:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.29	J	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.4	J	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	1.1		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW148A-021319 | Lab Sample ID: 240-108064-4

Matrix: Water | Lab File ID: UXC8944.D

Analysis Method: 8260C | Date Collected: 02/13/2019 11:15

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 14:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		70-121
460-00-4	4-Bromofluorobenzene (Surr)	72		59-120
2037-26-5	Toluene-d8 (Surr)	79		70-123
1868-53-7	Dibromofluoromethane (Surr)	88		75-128

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW154A-021319 | Lab Sample ID: 240-108064-2

Matrix: Water | Lab File ID: xb2045.D

Analysis Method: 680 | Date Collected: 02/13/2019 10:20

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1038.1(mL) | Date Analyzed: 02/21/2019 13:52

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.029	U	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.014	U	0.19	0.014
53742-07-7	Nonachlorobiphenyl	0.047	U	0.48	0.047
55722-26-4	Octachlorobiphenyl	0.037	U	0.29	0.037
27323-18-8	Monochlorobiphenyl	0.0054	U	0.096	0.0054
2051-24-3	DCB Decachlorobiphenyl	0.067	U	0.48	0.067
25512-42-9	Dichlorobiphenyl	0.0052	U	0.096	0.0052
25429-29-2	Pentachlorobiphenyl	0.013	U	0.19	0.013
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.19	0.013
25323-68-6	Trichlorobiphenyl	0.0063	U	0.096	0.0063

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	50		25-113

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW145A-021319 | Lab Sample ID: 240-108064-3

Matrix: Water | Lab File ID: xb2046.D

Analysis Method: 680 | Date Collected: 02/13/2019 10:30

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 609.6(mL) | Date Analyzed: 02/21/2019 14:21

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.049	U	0.49	0.049
26601-64-9	Hexachlorobiphenyl	0.025	U	0.33	0.025
53742-07-7	Nonachlorobiphenyl	0.080	U	0.82	0.080
55722-26-4	Octachlorobiphenyl	0.062	U	0.49	0.062
27323-18-8	Monochlorobiphenyl	0.0092	U	0.16	0.0092
2051-24-3	DCB Decachlorobiphenyl	0.11	U	0.82	0.11
25512-42-9	Dichlorobiphenyl	0.0089	U	0.16	0.0089
25429-29-2	Pentachlorobiphenyl	0.023	U	0.33	0.023
26914-33-0	Tetrachlorobiphenyl	0.021	U	0.33	0.021
25323-68-6	Trichlorobiphenyl	0.011	U	0.16	0.011

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	36		25-113

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW154A-021319 Lab Sample ID: 240-108064-2

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:20

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	4400	200	26	ug/L			1	6010C
7439-96-5	Manganese	58	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	1500	50	34	ug/L			1	6020A
7440-38-2	Arsenic	1.3	5.0	0.75	ug/L	J		1	6020A
7440-39-3	Barium	63	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.58	1.0	0.31	ug/L	J		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	9.1	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	7.7	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	17	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	4200	100	47	ug/L			1	6020A
7439-96-5	Manganese	55	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	18	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	1.6	1.0	0.45	ug/L			1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	7.0	5.0	0.82	ug/L			1	6020A
7440-66-6	Zinc	61	20	15	ug/L			1	6020A
7440-70-2	Calcium	17000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	8800	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	4200	1000	200	ug/L			1	6020A
7440-23-5	Sodium	73000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW145A-021319 Lab Sample ID: 240-108064-3

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:30

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	440	400	52	ug/L			2	6010C
7439-96-5	Manganese	440	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.091	1.0	0.053	ug/L	J		1	6020A
7429-90-5	Aluminum	14000	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	87	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	44	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	1.9	1.0	0.21	ug/L			1	6020A
7440-48-4	Cobalt	320	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	24	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	630	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	500	100	47	ug/L			1	6020A
7439-96-5	Manganese	660	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	510	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	2.2	1.0	0.45	ug/L			1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	1200	20	15	ug/L			1	6020A
7440-70-2	Calcium	33000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	5100	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	38000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	410000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW148A-021319 Lab Sample ID: 240-108064-4

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 11:15

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	5100	200	26	ug/L			1	6010C
7439-96-5	Manganese	460	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	1200	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	80	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	5.7	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	1.3	1.0	0.21	ug/L			1	6020A
7440-48-4	Cobalt	79	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.0	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	31	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	5600	100	47	ug/L			1	6020A
7439-96-5	Manganese	510	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	140	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.60	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.84	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	280	20	15	ug/L			1	6020A
7440-70-2	Calcium	32000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	48000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	19000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	180000	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW154A-021319 Lab Sample ID: 240-108064-2

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:20

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	74	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	81	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	250	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.094	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	29	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW145A-021319 Lab Sample ID: 240-108064-3

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:30

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	290	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	2.6	5.0	2.6	mg/L	U		1	2320B-2011
	Total Dissolved Solids	1400	20	16	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.32	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	110	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW148A-021319 Lab Sample ID: 240-108064-4

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 11:15

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	190	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	31	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	760	20	16	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.30	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	130	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW154A-021319 Lab Sample ID: 240-108064-2

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:20

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.26	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW145A-021319 Lab Sample ID: 240-108064-3

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:30

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.042	0.10	0.040	mg/L	J		1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW148A-021319 Lab Sample ID: 240-108064-4

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 11:15

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.073	0.10	0.040	mg/L	J		1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW154A-021319 Lab Sample ID: 240-108064-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:20

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW145A-021319 Lab Sample ID: 240-108064-3

Lab Name: TestAmerica Pittsburgh Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 10:30

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW148A-021319 Lab Sample ID: 240-108064-4

Lab Name: TestAmerica Pittsburgh Job No.: 240-108064-1

SDG ID.:

Matrix: Water Date Sampled: 02/13/2019 11:15

Reporting Basis: WET Date Received: 02/14/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

APPENDIX C

SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass Discharge

Report Number: 240-108064-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The PCB by 680 and NO2/NO3 by SM4500_NO3_F analysis were performed at TestAmerica Savannah Laboratory. The Specific Conductance and Salinity analysis were performed at TestAmerica Pittsburgh Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 2/14/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-021319 (240-108064-1), MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/20/2019.

The continuing calibration verification (CCV) for analytical batch 368748 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TB-021319 (240-108064-1), MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3), MRC-MW148A-021319 (240-108064-4) and (240-108125-B-3)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following samples were received in hydrochloric preserved vials: TB-021319 (240-108064-1), MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples MRC-MW154A-021319 (240-108064-2) and MRC-MW145A-021319 (240-108064-3) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The samples were prepared on 02/19/2019 and analyzed on 02/21/2019.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 680-558728.

The SOP for the 680 Method allows that for soils the CCVIS has a limit of <30%D for each analyte and for liquids <20%D for each analyte . It also allows that the capping CCV for soils has the limit of <30% average %D with no analyte >60%D and for liquids <20% average D with no analyte >40%D. Due to software limitations for this method, the limits are set at <20%D. (CCV 680-559059/21)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/15/2019 and analyzed on 02/19/2019 and 02/20/2019.

Sample MRC-MW145A-021319 (240-108064-3)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 02/15/2019 and analyzed on 02/18/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 02/15/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 02/19/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 02/19/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 02/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for anions in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 02/14/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for Salinity in accordance with SM 2520B. The samples were analyzed on 02/27/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE
Samples MRC-MW154A-021319 (240-108064-2), MRC-MW145A-021319 (240-108064-3) and MRC-MW148A-021319 (240-108064-4) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 02/17/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

GC/MS VOA

Analysis Batch: 368748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-1	TB-021319	Total/NA	Water	8260C	
240-108064-2	MRC-MW154A-021319	Total/NA	Water	8260C	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	8260C	
240-108064-4	MRC-MW148A-021319	Total/NA	Water	8260C	
MB 240-368748/6	Method Blank	Total/NA	Water	8260C	
LCS 240-368748/4	Lab Control Sample	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 558728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	680	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	680	
MB 680-558728/12-A	Method Blank	Total/NA	Water	680	
LCS 680-558728/13-A	Lab Control Sample	Total/NA	Water	680	
LCSD 680-558728/14-A	Lab Control Sample Dup	Total/NA	Water	680	

Analysis Batch: 559059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	680	558728
240-108064-3	MRC-MW145A-021319	Total/NA	Water	680	558728
MB 680-558728/12-A	Method Blank	Total/NA	Water	680	558728
LCS 680-558728/13-A	Lab Control Sample	Total/NA	Water	680	558728
LCSD 680-558728/14-A	Lab Control Sample Dup	Total/NA	Water	680	558728

Metals

Prep Batch: 368213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total Recoverable	Water	3005A	
240-108064-3	MRC-MW145A-021319	Total Recoverable	Water	3005A	
240-108064-4	MRC-MW148A-021319	Total Recoverable	Water	3005A	
MB 240-368213/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-368213/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-368213/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 368515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total Recoverable	Water	6020A	368213
240-108064-3	MRC-MW145A-021319	Total Recoverable	Water	6020A	368213
240-108064-4	MRC-MW148A-021319	Total Recoverable	Water	6020A	368213
MB 240-368213/1-A	Method Blank	Total Recoverable	Water	6020A	368213
LCS 240-368213/3-A	Lab Control Sample	Total Recoverable	Water	6020A	368213

Analysis Batch: 368589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total Recoverable	Water	6010C	368213
240-108064-3	MRC-MW145A-021319	Total Recoverable	Water	6010C	368213
240-108064-4	MRC-MW148A-021319	Total Recoverable	Water	6010C	368213
MB 240-368213/1-A	Method Blank	Total Recoverable	Water	6010C	368213

Metals (Continued)

Analysis Batch: 368589 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-368213/2-A	Lab Control Sample	Total Recoverable	Water	6010C	368213

Analysis Batch: 368873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-3	MRC-MW145A-021319	Total Recoverable	Water	6010C	368213

General Chemistry

Analysis Batch: 271440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	SM 2520B	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	SM 2520B	
240-108064-4	MRC-MW148A-021319	Total/NA	Water	SM 2520B	
MB 180-271440/1	Method Blank	Total/NA	Water	SM 2520B	

Analysis Batch: 368146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	300.0	
240-108064-2	MRC-MW154A-021319	Total/NA	Water	9056A	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	300.0	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	9056A	
240-108064-4	MRC-MW148A-021319	Total/NA	Water	300.0	
240-108064-4	MRC-MW148A-021319	Total/NA	Water	9056A	
MB 240-368146/3	Method Blank	Total/NA	Water	9056A	
LCS 240-368146/4	Lab Control Sample	Total/NA	Water	9056A	
240-108064-2 MS	MRC-MW154A-021319	Total/NA	Water	300.0	
240-108064-2 MS	MRC-MW154A-021319	Total/NA	Water	9056A	
240-108064-2 MSD	MRC-MW154A-021319	Total/NA	Water	300.0	
240-108064-2 MSD	MRC-MW154A-021319	Total/NA	Water	9056A	

Analysis Batch: 368399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	2320B-2011	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	2320B-2011	
240-108064-4	MRC-MW148A-021319	Total/NA	Water	2320B-2011	
MB 240-368399/4	Method Blank	Total/NA	Water	2320B-2011	
LCS 240-368399/3	Lab Control Sample	Total/NA	Water	2320B-2011	

Analysis Batch: 368625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	2540 C-2011	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	2540 C-2011	
240-108064-4	MRC-MW148A-021319	Total/NA	Water	2540 C-2011	
MB 240-368625/1	Method Blank	Total/NA	Water	2540 C-2011	
LCS 240-368625/2	Lab Control Sample	Total/NA	Water	2540 C-2011	

Analysis Batch: 368671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	2340C-2011	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	2340C-2011	

General Chemistry (Continued)

Analysis Batch: 368671 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-4	MRC-MW148A-021319	Total/NA	Water	2340C-2011	
MB 240-368671/1	Method Blank	Total/NA	Water	2340C-2011	
LCS 240-368671/2	Lab Control Sample	Total/NA	Water	2340C-2011	
240-108064-3 DU	MRC-MW145A-021319	Total/NA	Water	2340C-2011	

Analysis Batch: 575925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-108064-2	MRC-MW154A-021319	Total/NA	Water	SM 4500 NO3 F	
240-108064-3	MRC-MW145A-021319	Total/NA	Water	SM 4500 NO3 F	
240-108064-4	MRC-MW148A-021319	Total/NA	Water	SM 4500 NO3 F	
MB 490-575925/6	Method Blank	Total/NA	Water	SM 4500 NO3 F	
LCS 490-575925/7	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	

Client Sample ID: TB-021319
Date Collected: 02/13/19 00:00
Date Received: 02/14/19 09:30

Lab Sample ID: 240-108064-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	368748	02/20/19 12:57	LEE	TAL CAN

Client Sample ID: MRC-MW154A-021319
Date Collected: 02/13/19 10:20
Date Received: 02/14/19 09:30

Lab Sample ID: 240-108064-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	368748	02/20/19 13:18	LEE	TAL CAN
Total/NA	Prep	680			558728	02/19/19 13:42	CEW	TAL SAV
Total/NA	Analysis	680		1	559059	02/21/19 13:52	NED	TAL SAV
Total Recoverable	Prep	3005A			368213	02/15/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6010C		1	368589	02/19/19 19:02	WKD	TAL CAN
Total Recoverable	Prep	3005A			368213	02/15/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6020A		1	368515	02/18/19 19:39	DSH	TAL CAN
Total/NA	Analysis	2320B-2011		1	368399	02/15/19 11:55	JESW	TAL CAN
Total/NA	Analysis	2340C-2011		1	368671	02/19/19 15:33	JMB	TAL CAN
Total/NA	Analysis	2540 C-2011		1	368625	02/19/19 13:51	MAC	TAL CAN
Total/NA	Analysis	300.0		1	368146	02/14/19 19:09	JWW	TAL CAN
Total/NA	Analysis	9056A		1	368146	02/14/19 19:09	JWW	TAL CAN
Total/NA	Analysis	SM 2520B		1	271440	02/27/19 08:00	CLL	TAL PIT
Total/NA	Analysis	SM 4500 NO3 F		1	575925	02/17/19 13:19	MSP	TAL NSH

Client Sample ID: MRC-MW145A-021319
Date Collected: 02/13/19 10:30
Date Received: 02/14/19 09:30

Lab Sample ID: 240-108064-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	368748	02/20/19 13:40	LEE	TAL CAN
Total/NA	Prep	680			558728	02/19/19 13:42	CEW	TAL SAV
Total/NA	Analysis	680		1	559059	02/21/19 14:21	NED	TAL SAV
Total Recoverable	Prep	3005A			368213	02/15/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6010C		1	368589	02/19/19 19:07	WKD	TAL CAN
Total Recoverable	Prep	3005A			368213	02/15/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6010C		2	368873	02/20/19 17:49	WKD	TAL CAN
Total Recoverable	Prep	3005A			368213	02/15/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6020A		1	368515	02/18/19 19:41	DSH	TAL CAN
Total/NA	Analysis	2320B-2011		1	368399	02/15/19 11:58	JESW	TAL CAN
Total/NA	Analysis	2340C-2011		1	368671	02/19/19 15:42	JMB	TAL CAN
Total/NA	Analysis	2540 C-2011		1	368625	02/19/19 13:51	MAC	TAL CAN
Total/NA	Analysis	300.0		1	368146	02/14/19 20:09	JWW	TAL CAN
Total/NA	Analysis	9056A		1	368146	02/14/19 20:09	JWW	TAL CAN

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-108064-1

Client Sample ID: MRC-MW145A-021319

Lab Sample ID: 240-108064-3

Date Collected: 02/13/19 10:30

Matrix: Water

Date Received: 02/14/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2520B		1	271440	02/27/19 08:00	CLL	TAL PIT
Total/NA	Analysis	SM 4500 NO3 F		1	575925	02/17/19 13:20	MSP	TAL NSH

Client Sample ID: MRC-MW148A-021319

Lab Sample ID: 240-108064-4

Date Collected: 02/13/19 11:15

Matrix: Water

Date Received: 02/14/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	368748	02/20/19 14:02	LEE	TAL CAN
Total Recoverable	Prep	3005A			368213	02/15/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6010C		1	368589	02/19/19 19:11	WKD	TAL CAN
Total Recoverable	Prep	3005A			368213	02/15/19 14:00	MBB	TAL CAN
Total Recoverable	Analysis	6020A		1	368515	02/18/19 19:43	DSH	TAL CAN
Total/NA	Analysis	2320B-2011		1	368399	02/15/19 12:02	JESW	TAL CAN
Total/NA	Analysis	2340C-2011		1	368671	02/19/19 15:46	JMB	TAL CAN
Total/NA	Analysis	2540 C-2011		1	368625	02/19/19 13:51	MAC	TAL CAN
Total/NA	Analysis	300.0		1	368146	02/14/19 20:49	JWW	TAL CAN
Total/NA	Analysis	9056A		1	368146	02/14/19 20:49	JWW	TAL CAN
Total/NA	Analysis	SM 2520B		1	271440	02/27/19 08:00	CLL	TAL PIT
Total/NA	Analysis	SM 4500 NO3 F		1	575925	02/17/19 13:21	MSP	TAL NSH

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-108064-1
Project/Site: MRC Block E/F Mass Discharge

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
680	Liquid-Liquid Extraction (Separatory Funnel)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-108064-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-108064-1	TB-021319	Water	02/13/19 00:00	02/14/19 09:30
240-108064-2	MRC-MW154A-021319	Water	02/13/19 10:20	02/14/19 09:30
240-108064-3	MRC-MW145A-021319	Water	02/13/19 10:30	02/14/19 09:30
240-108064-4	MRC-MW148A-021319	Water	02/13/19 11:15	02/14/19 09:30

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab File ID: BFB0220.D BFB Injection Date: 02/20/2019

Instrument ID: A3UX15 BFB Injection Time: 10:19

Analysis Batch No.: 368748

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.0	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	100.9	
175	5.0 - 9.0 % of mass 174	7.3	(7.2) 1
176	95.0 - 101.0 % of mass 174	101.4	(100.5) 1
177	5.0 - 9.0 % of mass 176	6.8	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-368748/2	UXC8935.D	02/20/2019	10:45
	LCS 240-368748/4	UXC8936.D	02/20/2019	11:07
	CCV 240-368748/3	UXC8937.D	02/20/2019	11:29
	MB 240-368748/6	UXC8940.D	02/20/2019	12:35
TB-021319	240-108064-1	UXC8941.D	02/20/2019	12:57
MRC-MW154A-021319	240-108064-2	UXC8942.D	02/20/2019	13:18
MRC-MW145A-021319	240-108064-3	UXC8943.D	02/20/2019	13:40
MRC-MW148A-021319	240-108064-4	UXC8944.D	02/20/2019	14:02

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: CCVIS 240-368748/2 Calibration Date: 02/20/2019 10:45

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8935.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3647	0.1000	0.0119	0.0100	18.7	20.0
Chloromethane	Ave	0.3135	0.3071	0.1000	0.00980	0.0100	-2.0	20.0
Vinyl chloride	Ave	0.2885	0.3167	0.1000	0.0110	0.0100	9.8	20.0
Butadiene	Ave	0.3794	0.3583		0.00944	0.0100	-5.6	20.0
Bromomethane	Ave	0.2308	0.2390	0.0500	0.0104	0.0100	3.6	20.0
Chloroethane	Ave	0.2041	0.2002	0.0500	0.00981	0.0100	-1.9	20.0
Dichlorofluoromethane	Ave	0.5102	0.4787		0.00938	0.0100	-6.2	20.0
Trichlorofluoromethane	Ave	0.4337	0.4865	0.1000	0.0112	0.0100	12.2	20.0
Ethyl ether	Ave	0.2310	0.2096		0.00907	0.0100	-9.3	20.0
Acrolein	Ave	0.0317	0.0347		0.0547	0.0500	9.4	50.0
1,1-Dichloroethene	Ave	0.3005	0.2719	0.1000	0.00905	0.0100	-9.5	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2672	0.0500	0.0108	0.0100	8.3	20.0
Acetone	Lin1		0.0218	0.0100	0.0179	0.0200	-10.7	50.0
Iodomethane	Ave	0.4675	0.5165		0.0110	0.0100	10.5	20.0
Carbon disulfide	Ave	0.7741	0.6560	0.1000	0.00847	0.0100	-15.3	20.0
3-Chloro-1-propene	Ave	0.1698	0.1612		0.00949	0.0100	-5.1	20.0
Methyl acetate	Ave	0.2050	0.1539	0.1000	0.0150	0.0200	-25.0*	20.0
Methylene Chloride	Lin1		0.3431	0.1000	0.0113	0.0100	13.4	50.0
tert-Butyl alcohol	Ave	0.0203	0.0145		0.0716	0.100	-28.4	50.0
Acrylonitrile	Ave	0.0962	0.0827		0.0860	0.100	-14.0	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6265	0.1000	0.00800	0.0100	-20.0	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2961	0.1000	0.0106	0.0100	5.9	20.0
Hexane	Ave	0.0586	0.0547		0.00933	0.0100	-6.7	20.0
1,1-Dichloroethane	Ave	0.4517	0.4678	0.2000	0.0104	0.0100	3.6	20.0
Vinyl acetate	Ave	0.5198	0.3548		0.00683	0.0100	-31.7	50.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3319	0.1000	0.0108	0.0100	7.8	20.0
2,2-Dichloropropane	Ave	0.0624	0.0651		0.0104	0.0100	4.4	20.0
2-Butanone (MEK)	Ave	0.0333	0.0262	0.0100	0.0158	0.0200	-21.1*	20.0
Bromochloromethane	Ave	0.1531	0.1619		0.0106	0.0100	5.7	20.0
Tetrahydrofuran	Ave	0.0828	0.0571		0.0138	0.0200	-31.1*	20.0
Chloroform	Ave	0.4606	0.4938	0.2000	0.0107	0.0100	7.2	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3883	0.1000	0.0109	0.0100	9.5	20.0
Cyclohexane	Ave	0.3993	0.3919	0.1000	0.00982	0.0100	-1.8	20.0
1,1-Dichloropropene	Ave	0.3748	0.3820		0.0102	0.0100	1.9	20.0
Carbon tetrachloride	Ave	0.3441	0.3304	0.1000	0.00960	0.0100	-4.0	20.0
Isobutyl alcohol	Ave	0.0077	0.0055		0.179	0.250	-28.4*	20.0
Benzene	Ave	1.116	1.173	0.5000	0.0105	0.0100	5.1	20.0
1,2-Dichloroethane	Ave	0.3820	0.3850	0.1000	0.0101	0.0100	0.8	20.0
n-Heptane	Ave	0.0532	0.0447		0.00840	0.0100	-16.0	20.0
Trichloroethene	Ave	0.3240	0.3384	0.1500	0.0104	0.0100	4.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: CCVIS 240-368748/2 Calibration Date: 02/20/2019 10:45

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8935.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3400	0.1000	0.00965	0.0100	-3.5	20.0
1,2-Dichloropropane	Ave	0.2590	0.2491	0.1000	0.00962	0.0100	-3.8	20.0
1,4-Dioxane	Ave	0.0020	0.0024		0.240	0.200	20.0	50.0
Dibromomethane	Ave	0.1717	0.1588		0.00925	0.0100	-7.5	20.0
Bromodichloromethane	Ave	0.3410	0.2988	0.1500	0.00876	0.0100	-12.4	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1160		0.0133	0.0200	-33.6*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3113	0.1500	0.00789	0.0100	-21.1*	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.1782	0.0500	0.0133	0.0200	-33.5*	20.0
Toluene	Ave	1.476	1.379	0.4000	0.00934	0.0100	-6.6	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.2893	0.1000	0.00623	0.0100	-37.7*	20.0
Ethyl methacrylate	Ave	0.4442	0.2682		0.00604	0.0100	-39.6*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2543	0.1000	0.00853	0.0100	-14.7	20.0
Tetrachloroethene	Ave	0.3268	0.3265	0.1500	0.00999	0.0100	-0.0	20.0
1,3-Dichloropropane	Ave	0.5243	0.4326		0.00825	0.0100	-17.5	20.0
2-Hexanone	Ave	0.2283	0.1385	0.0500	0.0121	0.0200	-39.3*	20.0
Chlorodibromomethane	Ave	0.3116	0.2341		0.00751	0.0100	-24.9*	20.0
1,2-Dibromoethane	Ave	0.3191	0.2477		0.00776	0.0100	-22.4*	20.0
Chlorobenzene	Ave	0.9777	0.9328	0.3000	0.00954	0.0100	-4.6	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3007		0.00872	0.0100	-12.8	20.0
Ethylbenzene	Ave	0.5145	0.4781		0.00929	0.0100	-7.1	20.0
m-Xylene & p-Xylene	Ave	1.221	1.120		0.00917	0.0100	-8.3	20.0
o-Xylene	Ave	0.6189	0.5909		0.00955	0.0100	-4.5	20.0
Styrene	Ave	1.036	0.9696	0.3000	0.00936	0.0100	-6.4	20.0
Bromoform	Lin1		0.1360	0.1000	0.00598	0.0100	-40.2*	20.0
Isopropylbenzene	Ave	1.463	1.382	0.1000	0.00944	0.0100	-5.6	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.4983	0.3000	0.00703	0.0100	-29.7*	20.0
Bromobenzene	Ave	0.8274	0.7070		0.00855	0.0100	-14.5	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.1807		0.00732	0.0100	-26.8*	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0493		0.00487	0.0100	-51.3*	20.0
N-Propylbenzene	Ave	0.7286	0.6056		0.00831	0.0100	-16.9	20.0
2-Chlorotoluene	Ave	0.6821	0.5852		0.00858	0.0100	-14.2	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.793		0.00846	0.0100	-15.4	20.0
4-Chlorotoluene	Ave	2.205	1.823		0.00827	0.0100	-17.3	20.0
tert-Butylbenzene	Ave	1.897	1.512		0.00797	0.0100	-20.3*	20.0
1,2,4-Trimethylbenzene	Ave	2.227	1.923		0.00863	0.0100	-13.7	20.0
sec-Butylbenzene	Ave	2.327	1.896		0.00815	0.0100	-18.5	20.0
1,3-Dichlorobenzene	Ave	1.425	1.255	0.6000	0.00881	0.0100	-11.9	20.0
4-Isopropyltoluene	Ave	2.083	1.760		0.00845	0.0100	-15.5	20.0
1,4-Dichlorobenzene	Ave	1.477	1.303	0.5000	0.00882	0.0100	-11.8	20.0
n-Butylbenzene	Ave	1.649	1.294		0.00785	0.0100	-21.5*	20.0
1,2-Dichlorobenzene	Ave	1.387	1.266	0.4000	0.00913	0.0100	-8.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: CCVIS 240-368748/2 Calibration Date: 02/20/2019 10:45

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8935.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0815	0.0500	0.00506	0.0100	-49.4	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7201	0.2000	0.00820	0.0100	-18.0	50.0
Hexachlorobutadiene	Ave	0.4386	0.3389		0.00773	0.0100	-22.7*	20.0
Naphthalene	Ave	2.209	1.474		0.00667	0.0100	-33.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6780		0.00858	0.0100	-14.2	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2230		0.00751	0.00797	-5.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2665		0.00698	0.00797	-12.4	20.0
Toluene-d8 (Surr)	Ave	1.214	1.023		0.00672	0.00797	-15.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3612		0.00663	0.00797	-16.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: CCV 240-368748/3 Calibration Date: 02/20/2019 11:29

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8937.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0250		0.108	0.100	8.0	20.0
Diisopropyl ether	Ave	0.2405	0.2260		0.00939	0.0100	-6.1	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3718		0.00878	0.0100	-12.2	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.5683		0.00729	0.0100	-27.1*	20.0
Ethyl acetate	Ave	0.2538	0.1595		0.0126	0.0200	-37.2	50.0
Propionitrile	Ave	0.0357	0.0299		0.0838	0.100	-16.2	20.0
Methacrylonitrile	Ave	0.1733	0.1301		0.0751	0.100	-24.9*	20.0
Tert-amyl methyl ether	Ave	0.7765	0.4762		0.00613	0.0100	-38.7*	20.0
n-Butanol	Ave	0.0061	0.0032		0.132	0.250	-47.3*	20.0
Ethyl acrylate	Ave	0.3330	0.1811		0.00544	0.0100	-45.6*	20.0
Methyl methacrylate	Ave	0.2430	0.1525		0.0125	0.0200	-37.3*	20.0
2-Nitropropane	Ave	0.0745	0.0197		0.00530	0.0200	-73.5*	20.0
n-Butyl acetate	Ave	0.3918	0.2076		0.00530	0.0100	-47.0*	20.0
1-Chlorohexane	Ave	0.3968	0.2694		0.00679	0.0100	-32.1*	20.0
Cyclohexanone	Lin1		0.0098		0.0587	0.100	-41.3*	20.0
Pentachloroethane	Ave	0.2034	0.1526		0.0150	0.0200	-25.0*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.025		0.00881	0.0100	-11.9	20.0
Benzyl chloride	Ave	0.2963	0.0851		0.00287	0.0100	-71.3*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8549		0.00903	0.0100	-9.7	20.0
2-Methylnaphthalene	Ave	1.076	0.5670		0.0105	0.0200	-47.3*	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab File ID: UXC8940.D Lab Sample ID: MB 240-368748/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/20/2019 12:35

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-368748/4	UXC8936.D	02/20/2019 11:07
TB-021319	240-108064-1	UXC8941.D	02/20/2019 12:57
MRC-MW154A-021319	240-108064-2	UXC8942.D	02/20/2019 13:18
MRC-MW145A-021319	240-108064-3	UXC8943.D	02/20/2019 13:40
MRC-MW148A-021319	240-108064-4	UXC8944.D	02/20/2019 14:02

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-368748/6

Matrix: Water | Lab File ID: UXC8940.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 12:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-368748/6

Matrix: Water | Lab File ID: UXC8940.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 12:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-368748/6

Matrix: Water | Lab File ID: UXC8940.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 12:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		70-121
460-00-4	4-Bromofluorobenzene (Surr)	71		59-120
2037-26-5	Toluene-d8 (Surr)	79		70-123
1868-53-7	Dibromofluoromethane (Surr)	87		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8936.D

Lab ID: LCS 240-368748/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.30	93	80-124	
1,1,1-Trichloroethane	10.0	11.6	116	69-134	
1,1,2,2-Tetrachloroethane	10.0	7.78	78	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	11.6	116	50-156	
1,1-Dichloroethane	10.0	11.0	110	75-133	
1,1-Dichloroethene	10.0	9.64	96	65-139	
1,1-Dichloropropene	10.0	10.9	109	78-126	
1,2,3-Trichlorobenzene	10.0	9.05	91	39-138	
1,2,3-Trichloropropane	10.0	8.21	82	66-139	
1,2,4-Trichlorobenzene	10.0	8.84	88	42-133	
1,2,4-Trimethylbenzene	10.0	9.37	94	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.51	55	46-132	
1,2-Dichlorobenzene	10.0	9.84	98	78-120	
1,2-Dichloroethane	10.0	10.7	107	71-135	
1,2-Dichloropropane	10.0	10.7	107	78-133	
1,3-Dichlorobenzene	10.0	9.60	96	78-120	
1,3-Dichloropropane	10.0	9.15	92	72-134	
1,4-Dichlorobenzene	10.0	9.69	97	78-120	
2,2-Dichloropropane	10.0	10.5	105	42-150	
2-Chloroethyl vinyl ether	10.0	7.00 J	70	55-137	
2-Chlorotoluene	10.0	9.42	94	78-123	
2-Hexanone	20.0	13.9	70	43-148	
Bromobenzene	10.0	9.35	93	74-129	
Bromochloromethane	10.0	11.2	112	74-130	
4-Chlorotoluene	10.0	9.21	92	77-125	
4-Isopropyltoluene	10.0	9.58	96	69-122	
Acetone	20.0	20.0	100	21-162	
Benzene	10.0	11.3	113	80-123	
Bromoform	10.0	6.29	63	49-141	
Bromomethane	10.0	8.42	84	41-175	
Carbon disulfide	10.0	8.39	84	60-138	
Carbon tetrachloride	10.0	10.2	102	63-140	
Chlorobenzene	10.0	10.2	102	80-121	
Chloroethane	10.0	9.07	91	33-173	
Chloroform	10.0	11.4	114	79-127	
Chloromethane	10.0	9.26	93	54-143	
cis-1,2-Dichloroethene	10.0	11.2	112	76-128	
cis-1,3-Dichloropropene	10.0	8.87	89	64-132	
Hexachlorobutadiene	10.0	8.74	87	38-136	
Dibromomethane	10.0	9.97	100	74-124	
Bromodichloromethane	10.0	9.45	95	77-125	
Dichlorodifluoromethane	10.0	11.2	112	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8936.D

Lab ID: LCS 240-368748/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.92	99	80-120	
1,2-Dibromoethane	10.0	8.53	85	77-123	
Naphthalene	10.0	7.23	72	28-141	
m-Xylene & p-Xylene	10.0	9.81	98	80-120	
n-Butylbenzene	10.0	8.82	88	57-126	
Isopropylbenzene	10.0	10.2	102	74-120	
N-Propylbenzene	10.0	9.28	93	77-123	
2-Butanone (MEK)	20.0	17.3	87	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	15.1	76	49-143	
sec-Butylbenzene	10.0	9.30	93	68-123	
Methyl tert-butyl ether	10.0	8.36	84	51-133	
Methylene Chloride	10.0	11.1	111	70-134	
o-Xylene	10.0	10.2	102	80-120	
Styrene	10.0	9.60	96	79-120	
tert-Butylbenzene	10.0	9.00	90	70-121	
Tetrachloroethene	10.0	10.9	109	74-130	
Toluene	10.0	10.3	103	78-129	
trans-1,2-Dichloroethene	10.0	11.6	116	78-133	
trans-1,3-Dichloropropene	10.0	6.76	68	55-128	
Trichloroethene	10.0	11.3	113	76-125	
Trichlorofluoromethane	10.0	10.7	107	51-164	
Vinyl acetate	10.0	7.94	79	45-151	
Vinyl chloride	10.0	9.79	98	58-143	
tert-Butyl alcohol	100	72.6	73	10-161	
Xylenes, Total	20.0	20.0	100	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-021319	240-108064-1	94	95	84	76
MRC-MW154A-021319	240-108064-2	88	91	78	72
MRC-MW145A-021319	240-108064-3	85	88	76	69
MRC-MW148A-021319	240-108064-4	88	89	79	72
	MB 240-368748/6	87	89	79	71
	LCS 240-368748/4	91	87	83	83

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-368748/2		1705396	5.20	1445534	7.88	905323	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Sample No.: CCVIS 240-368748/2 Date Analyzed: 02/20/2019 10:45

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8935.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1705396	5.20	1445534	7.88	905323	10.12
UPPER LIMIT		3410792	5.70	2891068	8.38	1810646	10.62
LOWER LIMIT		852698	4.70	722767	7.38	452662	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-368748/4		1742803	5.20	1500304	7.88	923418	10.12
CCV 240-368748/3		1590437	5.20	1346487	7.88	744324	10.12
MB 240-368748/6		1601145	5.20	1356098	7.88	758690	10.12
240-108064-1	TB-021319	1248895	5.20	1016671	7.88	601597	10.12
240-108064-2	MRC-MW154A-021319	1540481	5.20	1371599	7.88	768024	10.12
240-108064-3	MRC-MW145A-021319	1619628	5.20	1426042	7.88	787541	10.12
240-108064-4	MRC-MW148A-021319	1490789	5.20	1280309	7.88	731455	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00281	vmbfb 00021
BFB 240-364786/1		8260C		5 mL	5 mL				1 uL
STD8260 240-364786/2 IC		8260C		5 mL	5 mL	1 uL	32 uL	32 uL	
STD8260 240-364786/3 IC		8260C		5 mL	5 mL	1 uL	16 uL	16 uL	
STD8260 240-364786/4 ICIS		8260C		5 mL	5 mL	1 uL	8 uL	8 uL	
STD8260 240-364786/5 IC		8260C		5 mL	5 mL	1 uL	4 uL	4 uL	
STD8260 240-364786/6 IC		8260C		5 mL	5 mL	1 uL	1.6 uL	1.6 uL	
STD8260 240-364786/7 IC		8260C		5 mL	5 mL	1 uL	0.8 uL	0.8 uL	
STD 240-364786/8 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/9 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/10 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/11 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/12 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/13 IC		8260C		5 mL	5 mL	1 uL			
ICV 240-364786/14		8260C		5 mL	5 mL	1 uL	0.797 uL		
ICV 240-364786/15		8260C		5 mL	5 mL	1 uL	0.797 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C							32 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
STD8260 240-364786/3 IC		8260C							16 uL
STD8260 240-364786/4 ICIS		8260C							8 uL
STD8260 240-364786/5 IC		8260C							4 uL
STD8260 240-364786/6 IC		8260C							1.6 uL
STD8260 240-364786/7 IC		8260C							0.8 uL
STD 240-364786/8 IC		8260C						32 uL	
STD 240-364786/9 IC		8260C						16 uL	
STD 240-364786/10 IC		8260C						8 uL	
STD 240-364786/11 IC		8260C						4 uL	
STD 240-364786/12 IC		8260C						1.6 uL	
STD 240-364786/13 IC		8260C						0.8 uL	
ICV 240-364786/14		8260C			8 uL	8 uL	8 uL		
ICV 240-364786/15		8260C		8 uL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C		32 uL					
STD8260 240-364786/3 IC		8260C		16 uL					
STD8260 240-364786/4 ICIS		8260C		8 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
STD8260 240-364786/5 IC		8260C		4 uL					
STD8260 240-364786/6 IC		8260C		1.6 uL					
STD8260 240-364786/7 IC		8260C		0.8 uL					
STD 240-364786/8 IC		8260C							
STD 240-364786/9 IC		8260C							
STD 240-364786/10 IC		8260C							
STD 240-364786/11 IC		8260C							
STD 240-364786/12 IC		8260C							
STD 240-364786/13 IC		8260C							
ICV 240-364786/14		8260C							
ICV 240-364786/15		8260C							

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368748 Batch Start Date: 02/20/19 10:19 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00285
BFB 240-368748/1		8260C		5 mL	5 mL				
CCVIS 240-368748/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-368748/3		8260C		5 mL	5 mL		1 uL		
LCS 240-368748/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-368748/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-108064-B-1	TB-021319	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-108064-B-2	MRC-MW154A-021319	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-108064-B-3	MRC-MW145A-021319	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-108064-B-4	MRC-MW148A-021319	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00268	VMFASGW 00297	VMFASPW 00289	VMRA9W 00285	VMRGAS 00282
BFB 240-368748/1		8260C		1 uL					
CCVIS 240-368748/2		8260C							8 uL
CCV 240-368748/3		8260C						8 uL	
LCS 240-368748/4		8260C			8 uL	8 uL	8 uL		
MB 240-368748/6		8260C							
240-108064-B-1	TB-021319	8260C	T						
240-108064-B-2	MRC-MW154A-021319	8260C	T						
240-108064-B-3	MRC-MW145A-021319	8260C	T						
240-108064-B-4	MRC-MW148A-021319	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00322					
BFB 240-368748/1		8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368748 Batch Start Date: 02/20/19 10:19 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00322					
CCVIS 240-368748/2		8260C		8 uL					
CCV 240-368748/3		8260C							
LCS 240-368748/4		8260C							
MB 240-368748/6		8260C							
240-108064-B-1	TB-021319	8260C	T						
240-108064-B-2	MRC-MW154A-021319	8260C	T						
240-108064-B-3	MRC-MW145A-021319	8260C	T						
240-108064-B-4	MRC-MW148A-021319	8260C	T						

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 680

Polychlorinated Biphenyls (PCBs) (GC/MS) by Method 680

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Lab File ID: xa0805.D DFTPP Injection Date: 01/08/2019

Instrument ID: CMSX DFTPP Injection Time: 14:10

Analysis Batch No.: 554469

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.9
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	25.1
365	Greater than 1% of mass 198	3.8
441	Present but less than mass 443	13.7 (87.5) 2
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	15.6 (18.3) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-554469/3	xa0807.D	01/08/2019	15:11
	IC 680-554469/5	xa0809.D	01/08/2019	16:08
	IC 680-554469/6	xa0810.D	01/08/2019	16:37
	IC 680-554469/27	xa0850.D	01/08/2019	17:05
	IC 680-554469/7	xa0811.D	01/08/2019	17:34
	IC 680-554469/8	xa0812.D	01/08/2019	18:02
	ICV 680-554469/9	xa0813.D	01/08/2019	18:31

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-108064-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 240-108064-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Monochlorobiphenyl	CRY	Ave	8242 813481	15382	70279	157619	299489	0.0500 5.00	0.100	0.500	1.00	2.00
Dichlorobiphenyl	CRY	Ave	5634 599778	10649	48537	112170	214973	0.0500 5.00	0.100	0.500	1.00	2.00
Trichlorobiphenyl	CRY	Ave	3987 441580	7502	35031	81047	154555	0.0500 5.00	0.100	0.500	1.00	2.00
Tetrachlorobiphenyl	CRY	Ave	5574 615833	10606	50081	113059	216849	0.100 10.0	0.200	1.00	2.00	4.00
Pentachlorobiphenyl	CRY	Ave	4430 525344	8255	40050	94602	179296	0.100 10.0	0.200	1.00	2.00	4.00
Hexachlorobiphenyl	CRY	Ave	4409 515192	8063	39570	95892	180616	0.100 10.0	0.200	1.00	2.00	4.00
Heptachlorobiphenyl	CRY	Ave	8087 711849	13173	54642	129695	247124	0.150 15.0	0.300	1.50	3.00	6.00
Octachlorobiphenyl	CRY	Ave	5679 662783	10462	52287	120191	235791	0.150 15.0	0.300	1.50	3.00	6.00
Nonachlorobiphenyl	CRY	Ave				55196					5.00	
DCB Decachlorobiphenyl	CRY	Ave	1830 243534	3384	17538	42007	81970	0.250 25.0	0.500	2.50	5.00	10.0
Decachlorobiphenyl-13C12	CRY	Ave	2369 234805	4106	24902	55313	103476	0.250 20.0	0.500	2.50	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICV 680-554469/9 Calibration Date: 01/08/2019 18:31

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xa0813.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8517		1.03	1.00	2.6	20.0
Dichlorobiphenyl	Ave	0.5847	0.5801		0.992	1.00	-0.8	20.0
Trichlorobiphenyl	Ave	0.4198	0.4573		1.09	1.00	8.9	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.3118		2.11	2.00	5.6	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2531		2.11	2.00	5.5	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2508		2.10	2.00	5.2	20.0
Heptachlorobiphenyl	Ave	0.2376	0.2274		2.87	3.00	-4.3	20.0
Octachlorobiphenyl	Ave	0.2054	0.2183		3.19	3.00	6.3	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0419		5.00	5.00	-0.0	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0577		5.35	5.00	7.1	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Lab File ID: xb2028.D DFTPP Injection Date: 02/21/2019

Instrument ID: CMSX DFTPP Injection Time: 05:43

Analysis Batch No.: 559059

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	59.5
197	Less than 1 % of mass 198	0.9
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	28.0
365	Greater than 1% of mass 198	3.5
441	Present but less than mass 443	15.1 (86.3) 2
442	Greater than 40% of mass 198	96.2
443	17 - 23% of mass 442	17.5 (18.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559059/2	xb2029.D	02/21/2019	06:14
	CCVIS 680-559059/3	xb2030.D	02/21/2019	06:44
	MB 680-558728/12-A	xb2031.D	02/21/2019	07:13
	LCS 680-558728/13-A	xb2032.D	02/21/2019	07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019	08:10
MRC-MW154A-021319	240-108064-2	xb2045.D	02/21/2019	13:52
MRC-MW145A-021319	240-108064-3	xb2046.D	02/21/2019	14:21
	CCV 680-559059/21	xb2051.D	02/21/2019	16:43

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Lab Sample ID: CCVIS 680-559059/3 Calibration Date: 02/21/2019 06:44

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2030.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.7268		0.875	1.00	-12.5	20.0
Dichlorobiphenyl	Ave	0.5847	0.5079		0.869	1.00	-13.1	20.0
Trichlorobiphenyl	Ave	0.4198	0.3597		0.857	1.00	-14.3	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2563		1.74	2.00	-13.2	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2131		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2136		1.79	2.00	-10.4	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1920		2.42	3.00	-19.2	20.0
Octachlorobiphenyl	Ave	0.2054	0.1725		2.52	3.00	-16.0	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0343		4.08	5.00	-18.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0462		4.29	5.00	-14.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Lab Sample ID: CCV 680-559059/21 Calibration Date: 02/21/2019 16:43

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2051.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8070		0.972	1.00	-2.8	20.0
Dichlorobiphenyl	Ave	0.5847	0.5601		0.958	1.00	-4.2	20.0
Trichlorobiphenyl	Ave	0.4198	0.4000		0.953	1.00	-4.7	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2879		1.95	2.00	-2.4	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2300		1.92	2.00	-4.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2246		1.88	2.00	-5.8	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1938		2.45	3.00	-18.4	20.0
Octachlorobiphenyl	Ave	0.2054	0.1765		2.58	3.00	-14.1	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0315		3.75	5.00	-25.0*	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0422		3.92	5.00	-21.6*	20.0

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Lab File ID: xb2031.D Lab Sample ID: MB 680-558728/12-A

Matrix: Water Date Extracted: 02/19/2019 13:42

Instrument ID: CMSX Date Analyzed: 02/21/2019 07:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-558728/13-A	xb2032.D	02/21/2019 07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019 08:10
MRC-MW154A-021319	240-108064-2	xb2045.D	02/21/2019 13:52
MRC-MW145A-021319	240-108064-3	xb2046.D	02/21/2019 14:21

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-108064-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-558728/12-A

Matrix: Water | Lab File ID: xb2031.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2032.D

Lab ID: LCS 680-558728/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.67	78	62-130	
Hexachlorobiphenyl	4.00	3.37	84	62-130	
Nonachlorobiphenyl	10.0	14.6	146	70-195	
Octachlorobiphenyl	6.00	5.09	85	64-130	
Monochlorobiphenyl	2.00	1.08	54	42-130	
DCB Decachlorobiphenyl	10.0	7.81	78	59-130	
Dichlorobiphenyl	2.00	1.32	66	49-130	
Pentachlorobiphenyl	4.00	3.47	87	63-130	
Tetrachlorobiphenyl	4.00	2.93	73	54-130	
Trichlorobiphenyl	2.00	1.47	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2033.D

Lab ID: LCSD 680-558728/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.45	74	5	40	62-130	
Hexachlorobiphenyl	4.00	3.21	80	5	40	62-130	
Nonachlorobiphenyl	10.0	13.2	132	10	40	70-195	
Octachlorobiphenyl	6.00	4.75	79	7	40	64-130	
Monochlorobiphenyl	2.00	1.36	68	23	40	42-130	
DCB Decachlorobiphenyl	10.0	7.14	71	9	40	59-130	
Dichlorobiphenyl	2.00	1.47	73	11	40	49-130	
Pentachlorobiphenyl	4.00	3.33	83	4	40	63-130	
Tetrachlorobiphenyl	4.00	3.04	76	4	40	54-130	
Trichlorobiphenyl	2.00	1.52	76	3	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13CDCB #
MRC-MW154A-021319	240-108064-2	50
MRC-MW145A-021319	240-108064-3	36
	MB 680-558728/12-A	71
	LCS 680-558728/13-A	75
	LCSD 680-558728/14-A	68

	QC LIMITS
13CDCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Sample No.: CCVIS 680-559059/3 Date Analyzed: 02/21/2019 06:44

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2030.D Heated Purge: (Y/N) N

Calibration ID: 63054

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		170892	12.41	169663	18.67		
UPPER LIMIT		222160	12.91	220562	19.17		
LOWER LIMIT		119624	11.91	118764	18.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-558728/12-A		143915	12.41	132159	18.67		
LCS 680-558728/13-A		164188	12.41	171582	18.67		
LCSD 680-558728/14-A		179669	12.41	188862	18.67		
240-108064-2	MRC-MW154A-021319	193556	12.41	200280	18.67		
240-108064-3	MRC-MW145A-021319	186406	12.41	180173	18.67		
CCV 680-559059/21		159076	12.41	142687	18.67		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Batch Number: 558728 Batch Start Date: 02/19/19 13:42 Batch Analyst: Wilson, Charles E

Batch Method: 680 Batch End Date: 02/20/19 07:53

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ResidualChloCheck	ReceivedpH
240-108064-J-2	MRC-MW154A-021319	680, 680	T	1544.9 g	506.8 g	1038.1 mL	1 mL	N	7 SU
240-108064-J-3	MRC-MW145A-021319	680, 680	T	1114.9 g	505.3 g	609.6 mL	1 mL	N	6 SU
MB 680-558728/12		680, 680				1000 mL	1 mL	N	7 SU
LCS 680-558728/13		680, 680				1000 mL	1 mL	N	7 SU
LCSD 680-558728/14		680, 680				1000 mL	1 mL	N	7 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	680wkSPIKE 00120	680wkSURR-NEW 00035				
240-108064-J-2	MRC-MW154A-021319	680, 680	T		1 mL				
240-108064-J-3	MRC-MW145A-021319	680, 680	T		1 mL				
MB 680-558728/12		680, 680			1 mL				
LCS 680-558728/13		680, 680		1 mL	1 mL				
LCSD 680-558728/14		680, 680		1 mL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-108064-1

SDG No.:

Batch Number: 558728 Batch Start Date: 02/19/19 13:42 Batch Analyst: Wilson, Charles E

Batch Method: 680 Batch End Date: 02/20/19 07:53

Batch Notes	
Balance ID	23
Batch Comment	680 box 125
Boiling Chips ID	901800
Concentration 1 Thermometer ID	50
Analyst ID - Concentration	jc
Exchange Solvent ID	5859923
Analyst ID - Extraction	CEW/CMJ
Extraction 1 End Time	02/20/2019 07:53
Extraction 1 Start Time	02/19/2019 13:42
Method/Fraction	680
pH Indicator ID	5904645
Pipette/Syringe/Dispenser ID	AA06G
Prep Solvent ID	5904693
Residual Chlorine Indicator ID	5775443
Analyst ID - Spike Analyst	CEW
Analyst ID - Spike Witness Analyst	CMJ
Sufficient Volume for Batch QC	NO

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW154A-021319	240-108064-2
MRC-MW145A-021319	240-108064-3
MRC-MW148A-021319	240-108064-4

Comments:

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/19/2019 08:35 End Date: 02/20/2019 07:31

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ICIS 240-368589/1	1		08:35	X	X																							
CALSTD 240-368589/2 IC			08:40	X	X																							
CALSTD 240-368589/3 IC			08:44	X	X																							
ICV 240-368589/4	1		08:49	X	X																							
ICB 240-368589/5	1		08:53	X	X																							
ICVL 240-368589/6	1		08:58	X	X																							
ZZZZZZ			09:03																									
ICSA 240-368589/8	1		09:07	X	X																							
ICSAB 240-368589/9	1		09:12	X	X																							
CCV 240-368589/10			09:17																									
CCB 240-368589/11			09:21																									
ZZZZZZ			09:26																									
ZZZZZZ			09:30																									
ZZZZZZ			09:35																									
ZZZZZZ			09:40																									
ZZZZZZ			09:45																									
ZZZZZZ			09:49																									
CCV 240-368589/18			09:54																									
CCB 240-368589/19			09:58																									
ZZZZZZ			10:03																									
ZZZZZZ			10:08																									
ZZZZZZ			10:13																									
ZZZZZZ			10:17																									
ZZZZZZ			10:21																									
ZZZZZZ			10:26																									
ZZZZZZ			10:31																									
ZZZZZZ			10:35																									
ZZZZZZ			10:39																									
ZZZZZZ			10:43																									
CCV 240-368589/30			10:48																									
CCB 240-368589/31			10:53																									
ZZZZZZ			11:00																									
ZZZZZZ			11:33																									
ZZZZZZ			11:38																									
ZZZZZZ			11:42																									
ZZZZZZ			11:51																									
ZZZZZZ			11:56																									
CCV 240-368589/38			12:00																									
CCB 240-368589/39			12:05																									
ZZZZZZ			12:09																									
ZZZZZZ			12:14																									
ZZZZZZ			12:19																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/19/2019 08:35 End Date: 02/20/2019 07:31

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			16:00																										
ZZZZZZ			16:05																										
ZZZZZZ			16:09																										
ZZZZZZ			16:13																										
ZZZZZZ			16:17																										
ZZZZZZ			16:22																										
ZZZZZZ			16:27																										
ZZZZZZ			16:31																										
ZZZZZZ			16:36																										
ZZZZZZ			16:41																										
CCV 240-368589/95			16:46																										
CCB 240-368589/96			16:50																										
ZZZZZZ			16:55																										
ZZZZZZ			17:00																										
ZZZZZZ			17:04																										
ZZZZZZ			17:09																										
ZZZZZZ			17:14																										
ZZZZZZ			17:19																										
ZZZZZZ			17:24																										
ZZZZZZ			17:29																										
ZZZZZZ			17:34																										
ZZZZZZ			17:38																										
CCV 240-368589/107	1		17:43	X	X																								
CCB 240-368589/108	1		17:48	X	X																								
ZZZZZZ			17:52																										
ZZZZZZ			17:57																										
ZZZZZZ			18:02																										
ZZZZZZ			18:07																										
ZZZZZZ			18:12																										
MB 240-368213/1-A	1	R	18:17	X	X																								
LCS 240-368213/2-A	1	R	18:21	X	X																								
ZZZZZZ			18:26																										
ZZZZZZ			18:30																										
ZZZZZZ			18:35																										
CCV 240-368589/119	1		18:39	X	X																								
CCB 240-368589/120	1		18:44	X	X																								
ZZZZZZ			18:48																										
ZZZZZZ			18:53																										
ZZZZZZ			18:57																										
240-108064-2	1	R	19:02	X	X																								
240-108064-3	1	R	19:07		X																								
240-108064-4	1	R	19:11	X	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/19/2019 08:35 End Date: 02/20/2019 07:31

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			19:16																									
ZZZZZZ			19:21																									
ZZZZZZ			19:25																									
ZZZZZZ			19:30																									
CCV 240-368589/131	1		19:35	X	X																							
CCB 240-368589/132	1		19:39	X	X																							
ZZZZZZ			19:44																									
ZZZZZZ			19:48																									
ZZZZZZ			19:53																									
ZZZZZZ			19:58																									
ZZZZZZ			20:02																									
ZZZZZZ			20:07																									
ZZZZZZ			20:12																									
ZZZZZZ			20:16																									
ZZZZZZ			20:21																									
ZZZZZZ			20:26																									
CCV 240-368589/143			20:30																									
CCB 240-368589/144			20:34																									
ZZZZZZ			20:39																									
ZZZZZZ			20:43																									
ZZZZZZ			20:48																									
ZZZZZZ			20:52																									
ZZZZZZ			20:57																									
ZZZZZZ			21:02																									
ZZZZZZ			21:07																									
ZZZZZZ			21:11																									
ZZZZZZ			21:16																									
ZZZZZZ			21:21																									
CCV 240-368589/155			21:25																									
CCB 240-368589/156			21:30																									
ZZZZZZ			21:34																									
ZZZZZZ			21:39																									
ZZZZZZ			21:44																									
ZZZZZZ			21:49																									
ZZZZZZ			21:53																									
ZZZZZZ			21:58																									
ZZZZZZ			22:02																									
ZZZZZZ			22:07																									
ZZZZZZ			22:12																									
ZZZZZZ			22:17																									
CCV 240-368589/167			22:21																									
CCB 240-368589/168			22:26																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/19/2019 08:35 End Date: 02/20/2019 07:31

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			22:30																									
ZZZZZZ			22:35																									
ZZZZZZ			22:40																									
ZZZZZZ			22:44																									
ZZZZZZ			22:49																									
ZZZZZZ			22:53																									
ZZZZZZ			22:58																									
ZZZZZZ			23:03																									
ZZZZZZ			23:07																									
ZZZZZZ			23:12																									
CCV 240-368589/179			23:16																									
CCB 240-368589/180			23:20																									
ZZZZZZ			23:25																									
ZZZZZZ			23:30																									
ZZZZZZ			23:34																									
ZZZZZZ			23:39																									
ZZZZZZ			23:44																									
ZZZZZZ			23:48																									
ZZZZZZ			23:53																									
ZZZZZZ			23:58																									
ZZZZZZ			00:02																									
ZZZZZZ			00:07																									
CCV 240-368589/191			00:12																									
CCB 240-368589/192			00:16																									
CCVL 240-368589/193	1		00:21	X	X																							
ZZZZZZ			00:25																									
ZZZZZZ			00:30																									
ZZZZZZ			00:35																									
ZZZZZZ			00:40																									
ZZZZZZ			00:45																									
ZZZZZZ			00:49																									
ZZZZZZ			00:54																									
ZZZZZZ			00:59																									
ZZZZZZ			01:03																									
CCV 240-368589/203			01:08																									
CCB 240-368589/204			01:12																									
ZZZZZZ			01:17																									
ZZZZZZ			01:21																									
ZZZZZZ			01:26																									
ZZZZZZ			01:30																									
ZZZZZZ			01:35																									
ZZZZZZ			01:39																									

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-368589/4 02/19/2019 08:49				CCV 240-368589/107 02/19/2019 17:43				CCV 240-368589/119 02/19/2019 18:39			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	13100		12500	105	25900		25000	104	25300		25000	101
Manganese	1550		1500	103	2080		2000	104	2060		2000	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	CCV 240-368589/131 02/19/2019 19:35											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	25500		25000	102								
Manganese	2060		2000	103								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-368589/6 02/19/2019 08:58				CCVL 240-368589/193 02/20/2019 00:21							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	207		200	103	195	J	200	98				
Manganese	14.9	J	15.0	99	14.4	J	15.0	96				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-368589/5 02/19/2019 08:53		CCB 240-368589/108 02/19/2019 17:48		CCB 240-368589/120 02/19/2019 18:44		CCB 240-368589/132 02/19/2019 19:39	
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U	26	U
Manganese	15	2.1	U	2.1	U	2.1	U	2.1	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-368213/1-A

Instrument Code: I12 Batch No.: 368589

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	26	U		6010C
7439-96-5	Manganese	2.1	U		6010C

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICSA 240-368589/8 Instrument ID: I12

Lab File ID: I12021919A.asc ICS Source: MTTRICSAW_00045

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**200580**	**100**
Manganese		**0.662**	
Aluminum	*500000*	*534400*	*107*
Antimony		*-4.30*	
Arsenic		*-1.69*	
Barium		*0.179*	
Beryllium		*0.576*	
Boron		*5.15*	
Cadmium		*0.742*	
Calcium	*500000*	*502540*	*101*
Chromium		*2.94*	
Cobalt		*-5.75*	
Copper		*-3.66*	
Lead		*0.0953*	
Lithium		*24.8*	
Magnesium	*500000*	*531480*	*106*
Molybdenum		*-0.949*	
Nickel		*3.68*	
Potassium		*34.8*	
Selenium		*7.60*	
Silicon		*13.2*	
Silver		*-2.93*	
Sodium		*25.5*	
Strontium		*14.8*	
Thallium		*-0.776*	
Tin		*-0.504*	
Titanium		*-2.08*	
Vanadium		*6.51*	
Zinc		*-1.16*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICSAB 240-368589/9 Instrument ID: I12

Lab File ID: I12021919A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Iron	**200000**	**195480**	**98**
Manganese	**500**	**505**	**101**
Aluminum	*500000*	*517820*	*104*
Antimony	*1000*	*1025*	*103*
Arsenic	*1000*	*994*	*99*
Barium	*500*	*503*	*101*
Beryllium	*500*	*491*	*98*
Boron	*500*	*524*	*105*
Cadmium	*1000*	*1036*	*104*
Calcium	*500000*	*483120*	*97*
Chromium	*500*	*498*	*100*
Cobalt	*500*	*520*	*104*
Copper	*500*	*542*	*108*
Lead	*1000*	*887*	*89*
Lithium	*500*	*549*	*110*
Magnesium	*500000*	*513460*	*103*
Molybdenum	*1000*	*985*	*98*
Nickel	*1000*	*1029*	*103*
Potassium	*10000*	*10582*	*106*
Selenium	*1000*	*1007*	*101*
Silicon	*10000*	*10203*	*102*
Silver	*1000*	*1108*	*111*
Sodium	*10000*	*10555*	*106*
Strontium	*1500*	*1456*	*97*
Thallium	*1000*	*937*	*94*
Tin	*500*	*524*	*105*
Titanium	*500*	*511*	*102*
Vanadium	*500*	*499*	*100*
Zinc	*1000*	*1035*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-368213/2-A

Lab Name: TestAmerica Canton Job No.: 240-108064-1

Sample Matrix: Water LCS Source: MTICP1_00082

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	1050		105	80	120		6010C
Manganese	500	514		103	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-108064-1

SDG No.:

Instrument ID: I12 Date: 01/28/2019 12:19

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		15000	6010C

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/20/2019 13:24 End Date: 02/21/2019 00:18

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe																								
ICIS 240-368873/1	1		13:24	X																								
CALSTD 240-368873/2 IC			13:29	X																								
CALSTD 240-368873/3 IC			13:34	X																								
ICV 240-368873/4	1		13:38	X																								
ICB 240-368873/5	1		13:43	X																								
ICVL 240-368873/6	1		13:47	X																								
ZZZZZZ			13:52																									
ICSA 240-368873/8	1		13:57	X																								
ICSAB 240-368873/9	1		14:02	X																								
CCV 240-368873/10			14:06																									
CCB 240-368873/11			14:10																									
ZZZZZZ			14:15																									
ZZZZZZ			14:20																									
ZZZZZZ			14:25																									
ZZZZZZ			14:29																									
ZZZZZZ			14:34																									
ZZZZZZ			14:39																									
CCV 240-368873/18			14:43																									
CCB 240-368873/19			14:48																									
ZZZZZZ			14:57																									
ZZZZZZ			15:01																									
ZZZZZZ			15:06																									
ZZZZZZ			15:11																									
ZZZZZZ			15:16																									
ZZZZZZ			15:20																									
ZZZZZZ			15:25																									
ZZZZZZ			15:30																									
ZZZZZZ			15:34																									
ZZZZZZ			15:39																									
CCV 240-368873/30			15:44																									
CCB 240-368873/31			15:48																									
ZZZZZZ			15:53																									
ZZZZZZ			15:58																									
ZZZZZZ			16:03																									
ZZZZZZ			16:07																									
ZZZZZZ			16:12																									
ZZZZZZ			16:17																									
ZZZZZZ			16:22																									
ZZZZZZ			16:27																									
ZZZZZZ			16:31																									
ZZZZZZ			16:36																									
CCV 240-368873/42			16:41																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/20/2019 13:24 End Date: 02/21/2019 00:18

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe																								
CCB 240-368873/43			16:45																									
ZZZZZZ			16:50																									
ZZZZZZ			16:54																									
ZZZZZZ			16:59																									
ZZZZZZ			17:04																									
ZZZZZZ			17:09																									
ZZZZZZ			17:13																									
ZZZZZZ			17:18																									
ZZZZZZ			17:22																									
ZZZZZZ			17:27																									
ZZZZZZ			17:32																									
CCV 240-368873/54	1		17:36	X																								
CCB 240-368873/55	1		17:40	X																								
ZZZZZZ			17:45																									
240-108064-3	2	R	17:49	X																								
ZZZZZZ			17:54																									
ZZZZZZ			17:59																									
ZZZZZZ			18:04																									
ZZZZZZ			18:08																									
ZZZZZZ			18:13																									
ZZZZZZ			18:18																									
ZZZZZZ			18:22																									
ZZZZZZ			18:27																									
CCV 240-368873/66	1		18:32	X																								
CCB 240-368873/67	1		18:36	X																								
CCVL 240-368873/68	1		18:41	X																								
ZZZZZZ			18:46																									
ZZZZZZ			18:50																									
ZZZZZZ			18:55																									
ZZZZZZ			19:00																									
ZZZZZZ			19:04																									
ZZZZZZ			19:09																									
ZZZZZZ			19:14																									
ZZZZZZ			19:18																									
ZZZZZZ			19:23																									
CCV 240-368873/78			19:27																									
CCB 240-368873/79			19:32																									
ZZZZZZ			19:36																									
ZZZZZZ			19:41																									
ZZZZZZ			19:45																									
ZZZZZZ			19:50																									
ZZZZZZ			19:54																									

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-368873/4 02/20/2019 13:38				CCV 240-368873/54 02/20/2019 17:36				CCV 240-368873/66 02/20/2019 18:32			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	13000		12500	104	26400		25000	105	26100		25000	105
Manganese	1550		1500	103	2110		2000	106	2110		2000	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-368873/6 02/20/2019 13:47				CCVL 240-368873/68 02/20/2019 18:41							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	201		200	101	207		200	104				
Manganese	14.8	J	15.0	99	15.7		15.0	105				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-368873/5 02/20/2019 13:43		CCB 240-368873/55 02/20/2019 17:40		CCB 240-368873/67 02/20/2019 18:36			
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U		
Manganese	15	2.1	U	2.1	U	2.1	U		

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICSA 240-368873/8 Instrument ID: I12

Lab File ID: I12022019B.asc ICS Source: MTTRICSAW_00045

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**191130**	**96**
Aluminum	*500000*	*515240*	*103*
Antimony		*1.89*	
Arsenic		*-6.80*	
Barium		*-0.0558*	
Beryllium		*0.203*	
Boron		*-3.60*	
Cadmium		*0.829*	
Calcium	*500000*	*478180*	*96*
Chromium		*2.71*	
Cobalt		*-4.98*	
Copper		*-1.48*	
Lead		*2.84*	
Lithium		*21.6*	
Magnesium	*500000*	*511090*	*102*
Manganese		*0.627*	
Molybdenum		*-0.666*	
Nickel		*2.80*	
Potassium		*-6.22*	
Selenium		*-9.91*	
Silicon		*6.03*	
Silver		*-1.95*	
Sodium		*48.2*	
Strontium		*6.48*	
Thallium		*-2.22*	
Tin		*0.380*	
Titanium		*-1.77*	
Vanadium		*-0.505*	
Zinc		*-0.637*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICSAB 240-368873/9 Instrument ID: I12

Lab File ID: I12022019B.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Iron	**200000**	**185800**	**93**
Aluminum	*500000*	*498570*	*100*
Antimony	*1000*	*1002*	*100*
Arsenic	*1000*	*964*	*96*
Barium	*500*	*482*	*96*
Beryllium	*500*	*485*	*97*
Boron	*500*	*492*	*98*
Cadmium	*1000*	*1008*	*101*
Calcium	*500000*	*464730*	*93*
Chromium	*500*	*477*	*95*
Cobalt	*500*	*502*	*100*
Copper	*500*	*531*	*106*
Lead	*1000*	*858*	*86*
Lithium	*500*	*524*	*105*
Magnesium	*500000*	*492380*	*98*
Manganese	*500*	*487*	*97*
Molybdenum	*1000*	*942*	*94*
Nickel	*1000*	*988*	*99*
Potassium	*10000*	*10025*	*100*
Selenium	*1000*	*960*	*96*
Silicon	*10000*	*9740*	*97*
Silver	*1000*	*1067*	*107*
Sodium	*10000*	*10044*	*100*
Strontium	*1500*	*1375*	*92*
Thallium	*1000*	*880*	*88*
Tin	*500*	*508*	*102*
Titanium	*500*	*500*	*100*
Vanadium	*500*	*466*	*93*
Zinc	*1000*	*989*	*99*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/18/2019 13:55 End Date: 02/18/2019 20:23

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn							
RINSE 240-368515/1			13:55																												
ICIS 240-368515/2			13:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD1 240-368515/3 IC	1		13:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD2 240-368515/4 IC	1		14:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD3 240-368515/5 IC	1		14:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD4 240-368515/6 IC	1		14:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICV 240-368515/7	1		14:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICB 240-368515/8	1		14:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICVL 240-368515/9	1		14:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICSA 240-368515/10	1		14:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICSAB 240-368515/11	1		14:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCV 240-368515/12			14:21																												
CCB 240-368515/13			14:23																												
ZZZZZZ			14:25																												
ZZZZZZ			14:30																												
ZZZZZZ			14:32																												
ZZZZZZ			14:34																												
ZZZZZZ			14:36																												
ZZZZZZ			14:39																												
ZZZZZZ			14:41																												
ZZZZZZ			14:43																												
ZZZZZZ			14:46																												
ZZZZZZ			14:48																												
CCV 240-368515/24			14:50																												
CCB 240-368515/25			14:53																												
CCV 240-368515/26			14:55																												
CCB 240-368515/27			14:57																												
ZZZZZZ			15:00																												
ZZZZZZ			15:02																												
ZZZZZZ			15:04																												
ZZZZZZ			15:07																												
ZZZZZZ			15:09																												
ZZZZZZ			15:12																												
ZZZZZZ			15:14																												
ZZZZZZ			15:16																												
ZZZZZZ			15:19																												
ZZZZZZ			15:21																												
CCV 240-368515/38			15:23																												
CCB 240-368515/39			15:26																												
ZZZZZZ			15:28																												
ZZZZZZ			15:30																												
ZZZZZZ			15:33																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/18/2019 13:55 End Date: 02/18/2019 20:23

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			17:13																												
CCV 240-368515/86			17:15																												
CCB 240-368515/87			17:17																												
ZZZZZZ			17:20																												
ZZZZZZ			17:22																												
ZZZZZZ			17:24																												
ZZZZZZ			17:26																												
ZZZZZZ			17:29																												
ZZZZZZ			17:31																												
ZZZZZZ			17:34																												
ZZZZZZ			17:36																												
ZZZZZZ			17:38																												
ZZZZZZ			17:41																												
CCV 240-368515/98			17:43																												
CCB 240-368515/99			17:45																												
ZZZZZZ			17:48																												
ZZZZZZ			17:50																												
ZZZZZZ			17:52																												
ZZZZZZ			17:55																												
ZZZZZZ			17:57																												
ZZZZZZ			17:59																												
ZZZZZZ			18:02																												
ZZZZZZ			18:04																												
ZZZZZZ			18:07																												
ZZZZZZ			18:09																												
CCV 240-368515/110			18:11																												
CCB 240-368515/111			18:14																												
ZZZZZZ			18:16																												
ZZZZZZ			18:18																												
ZZZZZZ			18:21																												
ZZZZZZ			18:23																												
ZZZZZZ			18:26																												
ZZZZZZ			18:28																												
ZZZZZZ			18:30																												
ZZZZZZ			18:32																												
ZZZZZZ			18:35																												
ZZZZZZ			18:37																												
CCV 240-368515/122	1		18:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368515/123	1		18:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			18:44																												
ZZZZZZ			18:46																												
ZZZZZZ			18:48																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/18/2019 13:55 End Date: 02/18/2019 20:23

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			18:51																												
ZZZZZZ			18:53																												
ZZZZZZ			18:55																												
ZZZZZZ			18:58																												
ZZZZZZ			19:00																												
MB 240-368213/1-A	1	R	19:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
LCS 240-368213/3-A	1	R	19:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-368515/134	1		19:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368515/135	1		19:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			19:11																												
ZZZZZZ			19:14																												
ZZZZZZ			19:16																												
ZZZZZZ			19:18																												
ZZZZZZ			19:20																												
ZZZZZZ			19:22																												
ZZZZZZ			19:25																												
ZZZZZZ			19:27																												
ZZZZZZ			19:29																												
ZZZZZZ			19:31																												
CCV 240-368515/146	1		19:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368515/147	1		19:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-108064-2	1	R	19:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-108064-3	1	R	19:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-108064-4	1	R	19:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			19:46																												
ZZZZZZ			19:48																												
ZZZZZZ			19:50																												
ZZZZZZ			19:53																												
ZZZZZZ			19:55																												
ZZZZZZ			19:57																												
ZZZZZZ			19:59																												
CCV 240-368515/158	1		20:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-368515/159	1		20:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			20:06																												
ZZZZZZ			20:09																												
ZZZZZZ			20:11																												
CCV 240-368515/163			20:14																												
CCB 240-368515/164			20:16																												
CCVL 240-368515/165	1		20:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-368515/166			20:21																												
CCB 240-368515/167			20:23																												

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00230

Analyte	ICV 240-368515/7 02/18/2019 14:09				CCV 240-368515/122 02/18/2019 18:39				CCV 240-368515/134 02/18/2019 19:07			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	197		200	98	256		250	102	254		250	101
Antimony	39.3		40.0	98	50.5		50.0	101	50.6		50.0	101
Arsenic	38.7		40.0	97	50.6		50.0	101	50.7		50.0	101
Barium	37.7		40.0	94	49.2		50.0	98	49.6		50.0	99
Beryllium	39.4		40.0	98	48.5		50.0	97	47.4		50.0	95
Cadmium	37.7		40.0	94	47.8		50.0	96	48.9		50.0	98
Calcium	20000		20000	100	26100		25000	104	25800		25000	103
Chromium	39.9		40.0	100	50.3		50.0	101	50.5		50.0	101
Cobalt	38.9		40.0	97	49.3		50.0	99	49.4		50.0	99
Copper	39.2		40.0	98	49.7		50.0	99	50.0		50.0	100
Iron	9590		10000	96	12500		12500	100	12600		12500	101
Lead	39.4		40.0	99	50.4		50.0	101	49.0		50.0	98
Magnesium	19400		20000	97	25300		25000	101	25300		25000	101
Manganese	190		200	95	247		250	99	247		250	99
Nickel	39.5		40.0	99	48.9		50.0	98	49.7		50.0	99
Potassium	19600		20000	98	25300		25000	101	25400		25000	102
Selenium	38.9		40.0	97	50.5		50.0	101	50.4		50.0	101
Silver	40.4		40.0	101	49.5		50.0	99	49.4		50.0	99
Sodium	19600		20000	98	25100		25000	100	25000		25000	100
Thallium	38.5		40.0	96	50.4		50.0	101	48.4		50.0	97
Vanadium	39.5		40.0	99	50.0		50.0	100	50.1		50.0	100
Zinc	39.5		40.0	99	49.9		50.0	100	50.5		50.0	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00230

Analyte	CCV 240-368515/146 02/18/2019 19:34				CCV 240-368515/158 02/18/2019 20:02							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	261		250	104	256		250	103				
Antimony	51.4		50.0	103	51.4		50.0	103				
Arsenic	50.5		50.0	101	51.0		50.0	102				
Barium	49.7		50.0	99	49.9		50.0	100				
Beryllium	47.2		50.0	94	47.3		50.0	95				
Cadmium	49.1		50.0	98	49.2		50.0	98				
Calcium	26000		25000	104	26300		25000	105				
Chromium	50.8		50.0	102	50.9		50.0	102				
Cobalt	48.8		50.0	98	48.9		50.0	98				
Copper	48.8		50.0	98	50.0		50.0	100				
Iron	12400		12500	99	12500		12500	100				
Lead	50.0		50.0	100	50.5		50.0	101				
Magnesium	25400		25000	102	26000		25000	104				
Manganese	250		250	100	249		250	100				
Nickel	49.0		50.0	98	49.2		50.0	98				
Potassium	25800		25000	103	25700		25000	103				
Selenium	51.3		50.0	103	49.8		50.0	100				
Silver	49.6		50.0	99	49.8		50.0	100				
Sodium	25300		25000	101	25500		25000	102				
Thallium	49.7		50.0	99	50.5		50.0	101				
Vanadium	50.0		50.0	100	50.7		50.0	101				
Zinc	50.1		50.0	100	50.4		50.0	101				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICV Source: MTMSCRI6020AW_00079 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00079

Analyte	ICVL 240-368515/9 02/18/2019 14:13				CCVL 240-368515/165 02/18/2019 20:18							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	50.8		50.0	102	54.1		50.0	108				
Antimony	1.98	J	2.00	99	2.00		2.00	100				
Arsenic	4.65	J	5.00	93	4.74	J	5.00	95				
Barium	5.11		5.00	102	5.10		5.00	102				
Beryllium	0.983	J	1.00	98	0.981	J	1.00	98				
Cadmium	1.00		1.00	100	1.01		1.00	101				
Calcium	1050		1000	105	1070		1000	107				
Chromium	2.03		2.00	102	2.07		2.00	103				
Cobalt	1.02		1.00	102	0.992	J	1.00	99				
Copper	2.05		2.00	102	2.11		2.00	106				
Iron	103		100	103	104		100	104				
Lead	1.03		1.00	103	1.04		1.00	104				
Magnesium	1010		1000	101	1040		1000	104				
Manganese	4.82	J	5.00	96	5.11		5.00	102				
Nickel	1.97	J	2.00	98	1.84	J	2.00	92				
Potassium	1060		1000	106	1090		1000	109				
Selenium	4.87	J	5.00	97	4.98	J	5.00	100				
Silver	1.02		1.00	102	1.03		1.00	103				
Sodium	1010		1000	101	1100		1000	110				
Thallium	1.04		1.00	104	1.01		1.00	101				
Vanadium	4.74	J	5.00	95	4.93	J	5.00	99				
Zinc	19.4	J	20.0	97	19.6	J	20.0	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-368515/8 02/18/2019 14:11		CCB 240-368515/123 02/18/2019 18:41		CCB 240-368515/135 02/18/2019 19:09		CCB 240-368515/147 02/18/2019 19:36	
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-368515/159 02/18/2019 20:04							
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U						
Antimony	2.0	0.57	U						
Arsenic	5.0	0.75	U						
Barium	5.0	2.2	U						
Beryllium	1.0	0.31	U						
Cadmium	1.0	0.21	U						
Calcium	1000	580	U						
Chromium	2.0	0.98	U						
Cobalt	1.0	0.19	U						
Copper	2.0	1.7	U						
Iron	100	47	U						
Lead	1.0	0.45	U						
Magnesium	1000	200	U						
Manganese	5.0	2.1	U						
Nickel	2.0	1.5	U						
Potassium	1000	220	U						
Selenium	5.0	0.89	U						
Silver	1.0	0.053	U						
Sodium	1000	330	U						
Thallium	1.0	0.20	U						
Vanadium	5.0	0.82	U						
Zinc	20	15	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-368213/1-A

Instrument Code: I14 Batch No.: 368515

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	1.7	U		6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	2.1	U		6020A
7440-02-0	Nickel	1.5	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICSA 240-368515/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**48140**	**96**
Antimony		**0.0300**	
Arsenic		**0.0840**	
Barium		**0.0320**	
Beryllium		**0.0130**	
Cadmium		**0.201**	
Calcium	**50000**	**49950**	**100**
Chromium		**0.140**	
Cobalt		**0.0080**	
Copper		**0.179**	
Iron	**50000**	**47713**	**95**
Lead		**-0.0030**	
Magnesium	**50000**	**48517**	**97**
Manganese		**0.0870**	
Nickel		**0.125**	
Potassium	**50000**	**48398**	**97**
Selenium		**0.0660**	
Silver		**0.0110**	
Sodium	**50000**	**48908**	**98**
Thallium		**0.0020**	
Vanadium		**-0.120**	
Zinc		**0.0850**	
Boron		*3.49*	
Lithium		*0.758*	
Molybdenum	*1000*	*1055*	*106*
Strontium		*0.453*	
Tin		*0.309*	
Titanium	*1000*	*970*	*97*
Tungsten		*0.122*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Lab Sample ID: ICSAB 240-368515/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Aluminum	**50000**	**47452**	**95**
Antimony	**100**	**99.8**	**100**
Arsenic	**100**	**96.6**	**97**
Barium	**100**	**95.7**	**96**
Beryllium	**100**	**95.9**	**96**
Cadmium	**100**	**95.7**	**96**
Calcium	**50000**	**49295**	**99**
Chromium	**100**	**96.9**	**97**
Cobalt	**100**	**95.5**	**95**
Copper	**100**	**95.2**	**95**
Iron	**50000**	**47505**	**95**
Lead	**100**	**97.7**	**98**
Magnesium	**50000**	**48221**	**96**
Manganese	**100**	**95.3**	**95**
Nickel	**100**	**96.5**	**97**
Potassium	**50000**	**47187**	**94**
Selenium	**100**	**95.1**	**95**
Silver	**100**	**101**	**101**
Sodium	**50000**	**48096**	**96**
Thallium	**100**	**95.8**	**96**
Vanadium	**100**	**96.7**	**97**
Zinc	**100**	**96.6**	**97**
Boron	*100*	*99.4*	*99*
Lithium	*100*	*96.2*	*96*
Molybdenum	*1100*	*1151*	*105*
Strontium	*100*	*95.2*	*95*
Tin	*100*	*101*	*101*
Titanium	*1100*	*1075*	*98*
Tungsten	*100*	*102*	*102*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-368213/3-A

Lab Name: TestAmerica Canton Job No.: 240-108064-1

Sample Matrix: Water LCS Source: MTICPMSB_00039

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	103		103	80	120		6020A
Aluminum	10000	10800		108	80	120		6020A
Arsenic	1000	1100		110	80	120		6020A
Barium	1000	1180		118	80	120		6020A
Beryllium	1000	1090		109	80	120		6020A
Cadmium	1000	1160		116	80	120		6020A
Cobalt	1000	1110		111	80	120		6020A
Chromium	1000	1150		115	80	120		6020A
Copper	1000	1090		109	80	120		6020A
Iron	10000	10200		102	80	120		6020A
Manganese	1000	1160		116	80	120		6020A
Nickel	1000	1150		115	80	120		6020A
Lead	1000	1170		117	80	120		6020A
Antimony	100	107		107	80	120		6020A
Selenium	1000	1120		112	80	120		6020A
Thallium	250	289		115	80	120		6020A
Vanadium	1000	1150		115	80	120		6020A
Zinc	1000	1110		111	80	120		6020A
Calcium	10000	11000		110	80	120		6020A
Potassium	10000	10600		106	80	120		6020A
Magnesium	10000	10500		105	80	120		6020A
Sodium	10000	10500		105	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-108064-1

SDG No.:

Instrument ID: I14 Date: 10/02/2018 11:17

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICP Instrument ID: I12 Start Date: 02/19/2019 End Date: 02/20/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-368589/1	08:35										
ICV 240-368589/4	08:49	90		98		97		99			
ICB 240-368589/5	08:53	99		100		100		99			
ICVL 240-368589/6	08:58	97		99		99		101			
ICSA 240-368589/8	09:07	74		89		86		96			
ICSAB 240-368589/9	09:12	72		87		85		96			
CCV 240-368589/107	17:43	83		94		93		96			
CCB 240-368589/108	17:48	99		99		100		98			
MB 240-368213/1-A	18:17	102		101		102		103			
LCS 240-368213/2-A	18:21	87		95		95		99			
CCV 240-368589/119	18:39	85		95		94		98			
CCB 240-368589/120	18:44	100		99		100		99			
240-108064-2	19:02	94		100		100		103			
240-108064-3	19:07	82				149					
240-108064-4	19:11	86		111		110		116			
CCV 240-368589/131	19:35	86		96		96		100			
CCB 240-368589/132	19:39	101		100		102		102			
CCVL 240-368589/193	00:21	110		106		116		131			

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICP Instrument ID: I12 Start Date: 02/20/2019 End Date: 02/20/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-368873/1	13:24										
ICV 240-368873/4	13:38	89		98		97		99			
ICB 240-368873/5	13:43	100		99		100		100			
ICVL 240-368873/6	13:47	97		98		98		99			
ICSA 240-368873/8	13:57	74		89		85		97			
ICSAB 240-368873/9	14:02	73		87		85		97			
CCV 240-368873/54	17:36	81		91		89		90			
CCB 240-368873/55	17:40	95		95		94		91			
240-108064-3	17:49	82		122		117		120			
CCV 240-368873/66	18:32	80		90		88		88			
CCB 240-368873/67	18:36	93		93		92		89			
CCVL 240-368873/68	18:41	91		92		91		88			

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/18/2019 End Date: 02/18/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-368515/3 IC	13:59	80		82		86		86		76	
STD2 240-368515/4 IC	14:02	79		82		87		86		75	
STD3 240-368515/5 IC	14:04	77		80		88		86		74	
STD4 240-368515/6 IC	14:06	80		85		91		89		80	
ICV 240-368515/7	14:09	79		83		89		89		76	
ICB 240-368515/8	14:11	98		101		105		104		103	
ICVL 240-368515/9	14:13	82		85		91		89		81	
ICSA 240-368515/10	14:16	75		80		86		82		71	
ICSAB 240-368515/11	14:18	73		79		85		84		71	
CCV 240-368515/122	18:39	83		86		90		87		81	
CCB 240-368515/123	18:41	86		91		96		92		90	
MB 240-368213/1-A	19:02	81		88		93		90		85	
LCS 240-368213/3-A	19:05	80		90		95		90		83	
CCV 240-368515/134	19:07	78		87		92		90		82	
CCB 240-368515/135	19:09	84		94		101		96		95	
CCV 240-368515/146	19:34	78		86		89		84		80	
CCB 240-368515/147	19:36	83		92		97		91		89	
240-108064-2	19:39	80		89		91		86		79	
240-108064-3	19:41	75		86		88		85		74	
240-108064-4	19:43	79		88		89		85		77	
CCV 240-368515/158	20:02	82		90		93		88		81	
CCB 240-368515/159	20:04	89		97		98		94		90	
CCVL 240-368515/165	20:18	89		95		98		91		87	

FORM XV - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/18/2019 End Date: 02/18/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-368515/3 IC	13:59	92		90		89		95		94	
STD2 240-368515/4 IC	14:02	90		90		87		94		94	
STD3 240-368515/5 IC	14:04	90		89		85		93		93	
STD4 240-368515/6 IC	14:06	97		95		91		99		97	
ICV 240-368515/7	14:09	94		93		91		97		97	
ICB 240-368515/8	14:11	105		105		102		105		102	
ICVL 240-368515/9	14:13	96		95		92		98		96	
ICSA 240-368515/10	14:16	89		88		86		95		94	
ICSAB 240-368515/11	14:18	89		90		86		95		96	
CCV 240-368515/122	18:39	93		91		92		99		98	
CCB 240-368515/123	18:41	101		99		99		104		104	
MB 240-368213/1-A	19:02	101		99		97		104		102	
LCS 240-368213/3-A	19:05	98		98		93		102		102	
CCV 240-368515/134	19:07	96		95		93		100		100	
CCB 240-368515/135	19:09	104		103		101		104		101	
CCV 240-368515/146	19:34	92		92		89		99		97	
CCB 240-368515/147	19:36	102		102		99		105		103	
240-108064-2	19:39	94		95		94		103		102	
240-108064-3	19:41	87		89		87		106		107	
240-108064-4	19:43	90		91		88		100		99	
CCV 240-368515/158	20:02	95		96		92		100		99	
CCB 240-368515/159	20:04	102		102		100		105		104	
CCVL 240-368515/165	20:18	101		100		97		102		102	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/18/2019 End Date: 02/18/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-368515/3 IC	13:59	97									
STD2 240-368515/4 IC	14:02	94									
STD3 240-368515/5 IC	14:04	92									
STD4 240-368515/6 IC	14:06	98									
ICV 240-368515/7	14:09	97									
ICB 240-368515/8	14:11	102									
ICVL 240-368515/9	14:13	97									
ICSA 240-368515/10	14:16	93									
ICSAB 240-368515/11	14:18	96									
CCV 240-368515/122	18:39	101									
CCB 240-368515/123	18:41	104									
MB 240-368213/1-A	19:02	105									
LCS 240-368213/3-A	19:05	103									
CCV 240-368515/134	19:07	99									
CCB 240-368515/135	19:09	101									
CCV 240-368515/146	19:34	97									
CCB 240-368515/147	19:36	105									
240-108064-2	19:39	101									
240-108064-3	19:41	94									
240-108064-4	19:43	96									
CCV 240-368515/158	20:02	100									
CCB 240-368515/159	20:04	105									
CCVL 240-368515/165	20:18	103									

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-368213/1-A	02/15/2019 14:00	368213		50	50
LCS 240-368213/2-A	02/15/2019 14:00	368213		50	50
240-108064-2	02/15/2019 14:00	368213		50	50
240-108064-3	02/15/2019 14:00	368213		50	50
240-108064-4	02/15/2019 14:00	368213		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-368213/1-A	02/15/2019 14:00	368213		50	50
LCS 240-368213/3-A	02/15/2019 14:00	368213		50	50
240-108064-2	02/15/2019 14:00	368213		50	50
240-108064-3	02/15/2019 14:00	368213		50	50
240-108064-4	02/15/2019 14:00	368213		50	50

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368213 Batch Start Date: 02/15/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/15/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00082	MTICP2A 00090	MTTMHCL 00235
MB 240-368213/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-368213/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-108064-I-2	MRC-MW154A-021319	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-108064-I-3	MRC-MW145A-021319	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-108064-I-4	MRC-MW148A-021319	3005A, 6010C	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180
MB 240-368213/1		3005A, 6010C		1 mL
LCS 240-368213/2		3005A, 6010C		1 mL
240-108064-I-2	MRC-MW154A-021319	3005A, 6010C	R	1 mL
240-108064-I-3	MRC-MW145A-021319	3005A, 6010C	R	1 mL
240-108064-I-4	MRC-MW148A-021319	3005A, 6010C	R	1 mL

Batch Notes	
Batch Comment	filter paper: 80327101
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb3
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368213 Batch Start Date: 02/15/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/15/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00038	MTICPMSB 00039	MTTMHCL 00235
MB 240-368213/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-368213/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-108064-I-2	MRC-MW154A-021319	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-108064-I-3	MRC-MW145A-021319	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-108064-I-4	MRC-MW148A-021319	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-368213/1		3005A, 6020A		1 mL					
LCS 240-368213/3		3005A, 6020A		1 mL					
240-108064-I-2	MRC-MW154A-021319	3005A, 6020A	R	1 mL					
240-108064-I-3	MRC-MW145A-021319	3005A, 6020A	R	1 mL					
240-108064-I-4	MRC-MW148A-021319	3005A, 6020A	R	1 mL					

Batch Notes	
Batch Comment	filter paper: 80327101
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb3
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW154A-021319	240-108064-2
MRC-MW145A-021319	240-108064-3
MRC-MW148A-021319	240-108064-4

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-108064-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW154A-021319	240-108064-2
MRC-MW145A-021319	240-108064-3
MRC-MW148A-021319	240-108064-4

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-108064-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW154A-021319	240-108064-2
MRC-MW145A-021319	240-108064-3
MRC-MW148A-021319	240-108064-4

Comments:

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 02/19/2019 14:05 End Date: 02/19/2019 16:07

Lab Sample Id	D/F	Type	Time	Analytes
				HardCC
MB 240-368671/1	1	T	14:05	X
LCS 240-368671/2	1	T	14:09	X
ZZZZZZ			14:13	
ZZZZZZ			14:17	
ZZZZZZ			14:21	
ZZZZZZ			14:26	
ZZZZZZ			14:30	
ZZZZZZ			14:34	
ZZZZZZ			14:38	
ZZZZZZ			14:43	
ZZZZZZ			14:47	
ZZZZZZ			14:51	
ZZZZZZ			14:55	
ZZZZZZ			15:00	
ZZZZZZ			15:04	
ZZZZZZ			15:08	
ZZZZZZ			15:12	
ZZZZZZ			15:16	
ZZZZZZ			15:21	
ZZZZZZ			15:25	
ZZZZZZ			15:29	
240-108064-2	1	T	15:33	X
240-108064-3 DU	1	T	15:38	X
240-108064-3	1	T	15:42	X
240-108064-4	1	T	15:46	X
ZZZZZZ			15:50	
ZZZZZZ			15:55	
ZZZZZZ			15:59	
ZZZZZZ			16:03	
ZZZZZZ			16:07	

Prep Types:
T = Total/NA

FORM XIII-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 368671 Date: 02/19/2019 15:38								
2340C-2011	MRC-MW145A-021319	240-108064-3	Hardness as calcium carbonate	290	mg/L			
2340C-2011	MRC-MW145A-021319	240-108064-3 DU	Hardness as calcium carbonate	288	mg/L	0.7	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/15/2019 10:24 End Date: 02/15/2019 12:08

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			10:24																									
ZZZZZZ			10:36																									
LCS 240-368399/3	1	T	10:41	X																								
MB 240-368399/4	1	T	10:44	X																								
ZZZZZZ			10:49																									
ZZZZZZ			10:54																									
ZZZZZZ			10:58																									
ZZZZZZ			11:03																									
ZZZZZZ			11:07																									
ZZZZZZ			11:12																									
ZZZZZZ			11:17																									
ZZZZZZ			11:21																									
ZZZZZZ			11:23																									
ZZZZZZ			11:28																									
ZZZZZZ			11:32																									
ZZZZZZ			11:36																									
ZZZZZZ			11:41																									
ZZZZZZ			11:47																									
ZZZZZZ			11:51																									
240-108064-2	1	T	11:55	X																								
240-108064-3	1	T	11:58	X																								
240-108064-4	1	T	12:02	X																								
ZZZZZZ			12:07																									
ZZZZZZ			12:08																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 02/19/2019 13:51 End Date: 02/19/2019 13:51

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-368625/1	1	T	13:51	X																								
LCS 240-368625/2	1	T	13:51	X																								
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
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ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
240-108064-2	1	T	13:51	X																								
240-108064-3	1	T	13:51	X																								
240-108064-4	1	T	13:51	X																								
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									
ZZZZZZ			13:51																									

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: VERONICA Analysis Method: 9056A

Start Date: 08/06/2018 12:54 End Date: 08/06/2018 16:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339515/1 IC	1		12:54	X																								
STD2 240-339515/2 IC	1		13:14	X																								
STD3 240-339515/3 IC	1		13:34	X																								
STD4 240-339515/4 IC	1		13:54	X																								
STD5 240-339515/5 ICRT	1		14:14	X																								
STD6 240-339515/6 IC	1		14:34	X																								
STD7 240-339515/7 IC	1		14:54	X																								
STD8 240-339515/8 IC	1		15:15	X																								
STD9 240-339515/9 IC	1		15:35	X																								
ICV 240-339515/10	1		15:55	X																								
ICB 240-339515/11	1		16:15	X																								

Prep Types:
=

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Instrument ID: VERONICA Analysis Method: 9056A

Start Date: 02/14/2019 17:48 End Date: 02/15/2019 04:52

Lab Sample Id	D/F	Type	Time	Analytes																								
				Br	SO4																							
CCV 240-368146/1	1		17:48		X																							
CCB 240-368146/2	1		18:08		X																							
MB 240-368146/3	1	T	18:28		X																							
LCS 240-368146/4	1	T	18:48		X																							
240-108064-2	1	T	19:09	X	X																							
240-108064-2 MS	1	T	19:29	X	X																							
240-108064-2 MSD	1	T	19:49	X	X																							
240-108064-3	1	T	20:09	X	X																							
ZZZZZZ			20:29																									
240-108064-4	1	T	20:49	X	X																							
ZZZZZZ			21:09																									
ZZZZZZ			21:29																									
CCV 240-368146/13	1		21:49		X																							
CCB 240-368146/14	1		22:10		X																							
ZZZZZZ			22:30																									
ZZZZZZ			22:50																									
ZZZZZZ			23:10																									
ZZZZZZ			23:30																									
ZZZZZZ			23:50																									
ZZZZZZ			00:10																									
ZZZZZZ			00:30																									
ZZZZZZ			00:50																									
ZZZZZZ			01:11																									
ZZZZZZ			01:31																									
CCV 240-368146/25			01:51																									
CCB 240-368146/26			02:11																									
ZZZZZZ			02:31																									
ZZZZZZ			02:52																									
ZZZZZZ			03:12																									
ZZZZZZ			03:32																									
ZZZZZZ			03:52																									
ZZZZZZ			04:12																									
CCV 240-368146/33			04:32																									
CCB 240-368146/34			04:52																									

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Analyst: LKG Batch Start Date: 08/06/2018

Reporting Units: mg/L Analytical Batch No.: 339515

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:55	Sulfate	52.4	50.0	105	90-110		WCICLCS_00669
11	ICB	16:15	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Analyst: JWW Batch Start Date: 02/14/2019

Reporting Units: mg/L Analytical Batch No.: 368146

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	17:48	Sulfate	48.1	50.0	96	90-110		WCICCCV_00861
2	CCB	18:08	Sulfate	0.35				U	
13	CCV	21:49	Sulfate	48.0	50.0	96	90-110		WCICCCV_00861
14	CCB	22:10	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 368146 Date: 02/14/2019 19:29											
300.0	240-108064-2	Bromide	0.094	J	mg/L						
300.0	240-108064-2 MS	Bromide	10.7		mg/L	10.0	106	80-120			
Batch ID: 368146 Date: 02/14/2019 19:29											
9056A	240-108064-2	Sulfate	29		mg/L						
9056A	240-108064-2 MS	Sulfate	80.8		mg/L	50.0	104	80-120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 368146 Date: 02/14/2019 19:49											
300.0	240-108064-2 MSD	Bromide	11.3		mg/L	10.0	112	80-120	5	15	
Batch ID: 368146 Date: 02/14/2019 19:49											
9056A	240-108064-2 MSD	Sulfate	83.6		mg/L	50.0	109	80-120	3	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/17/2019 12:50 End Date: 02/17/2019 13:27

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575925/1	1		12:50	X																								
ICB 490-575925/2	1		12:51	X																								
CCV 490-575925/3	1		12:52	X																								
CCV 490-575925/4	1		12:53	X																								
CCB 490-575925/5	1		12:54	X																								
MB 490-575925/6	1	T	12:55	X																								
LCS 490-575925/7	1	T	12:57	X																								
ZZZZZZ			12:58																									
ZZZZZZ			12:59																									
ZZZZZZ			13:00																									
ZZZZZZ			13:01																									
ZZZZZZ			13:02																									
ZZZZZZ			13:04																									
ZZZZZZ			13:05																									
ZZZZZZ			13:06																									
ZZZZZZ			13:07																									
ZZZZZZ			13:08																									
ZZZZZZ			13:10																									
ZZZZZZ			13:11																									
CCV 490-575925/20	1		13:12	X																								
CCB 490-575925/21	1		13:13	X																								
ZZZZZZ			13:14																									
ZZZZZZ			13:15																									
ZZZZZZ			13:17																									
ZZZZZZ			13:18																									
240-108064-2	1	T	13:19	X																								
240-108064-3	1	T	13:20	X																								
240-108064-4	1	T	13:21	X																								
ZZZZZZ			13:23																									
ZZZZZZ			13:24																									
ZZZZZZ			13:25																									
CCV 490-575925/32	1		13:26	X																								
CCB 490-575925/33	1		13:27	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG No.:

Analyst: MSP Batch Start Date: 02/17/2019

Reporting Units: mg/L Analytical Batch No.: 575925

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:50	Nitrate Nitrite as N	3.26	3.00	109	90-110		W_ICAl_00027
2	ICB	12:51	Nitrate Nitrite as N	0.040				U	
3	CCV	12:52	Nitrate Nitrite as N	4.88	5.00	98	90-110		W_Nitrate_00020
4	CCV	12:53	Nitrate Nitrite as N	4.93	5.00	99	90-110		IC Primary_00012
5	CCB	12:54	Nitrate Nitrite as N	0.040				U	
20	CCV	13:12	Nitrate Nitrite as N	4.76	5.00	95	90-110		W_Nitrate_00020
21	CCB	13:13	Nitrate Nitrite as N	0.0463				J	
32	CCV	13:26	Nitrate Nitrite as N	4.62	5.00	92	90-110		W_Nitrate_00020
33	CCB	13:27	Nitrate Nitrite as N	0.040				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575925 Date: 02/17/2019 12:55							
SM 4500 NO3 F	MB 490-575925/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925	Date: 02/17/2019 12:57										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575925/7	Nitrate Nitrite as N	3.23		mg/L	3.00	108	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-108064-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/27/2019 08:00 End Date: 02/27/2019 08:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-271440/1	1	T	08:00	X																								
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
ZZZZZZ			08:00																									
240-108064-2	1	T	08:00	X																								
240-108064-3	1	T	08:00	X																								
240-108064-4	1	T	08:00	X																								

Prep Types:
T = Total/NA

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-108064-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 271440 Date: 02/27/2019 08:00							
SM 2520B	MB 180-271440/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 368399 Date: 02/15/2019 10:44							
2320B-2011	MB 240-368399/4	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 368671 Date: 02/19/2019 14:05							
2340C-2011	MB 240-368671/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 368625 Date: 02/19/2019 13:51							
2540 C-2011	MB 240-368625/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 368146 Date: 02/14/2019 18:28							
9056A	MB 240-368146/3	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-368146/3	Sulfate	0.35	U	mg/L	1.0	1

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 368399	Date: 02/15/2019 10:41										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-368399/3	Alkalinity	262		mg/L	271	97	86-123			
Batch ID: 368671	Date: 02/19/2019 14:09										
						LCS Source: WCHARDNESS_00031					
2340C-2011	LCS 240-368671/2	Hardness as calcium carbonate	254		mg/L	246	103	90-110			
Batch ID: 368625	Date: 02/19/2019 13:51										
						LCS Source: WCPHENOVSOLID_00039					
2540 C-2011	LCS 240-368625/2	Total Dissolved Solids	208		mg/L	202	103	80-120			
Batch ID: 368146	Date: 02/14/2019 18:48										
						LCS Source: WCICLCS_00696					
9056A	LCS 240-368146/4	Sulfate	54.4		mg/L	50.0	109	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-108064-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368671 Batch Start Date: 02/19/19 14:05 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 02/19/19 16:12

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCHARDNESS 00031		
MB 240-368671/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-368671/2		2340C-2011		25 mL	25 mL	6.35 mL	25 mL		
240-108064-G-2	MRC-MW154A-021319	2340C-2011	T	25 mL	25 mL	1.85 mL			
240-108064-G-3 DU	MRC-MW145A-021319	2340C-2011	T	25 mL	25 mL	7.20 mL			
240-108064-G-3	MRC-MW145A-021319	2340C-2011	T	25 mL	25 mL	7.15 mL			
240-108064-G-4	MRC-MW148A-021319	2340C-2011	T	25 mL	25 mL	4.70 mL			

Batch Notes	
Batch Comment	BEAKERS--4010979
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C9
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368399 Batch Start Date: 02/15/19 10:24 Batch Analyst: Weisend, Joseph

Batch Method: 2320B-2011 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-368399/3		2320B-2011		InitialAmount is blank	10 mL				
MB 240-368399/4		2320B-2011		InitialAmount is blank					
240-108064-H-2	MRC-MW154A-021319	2320B-2011	T	InitialAmount is blank					
240-108064-H-3	MRC-MW145A-021319	2320B-2011	T	InitialAmount is blank					
240-108064-H-4	MRC-MW148A-021319	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4-4005008
pH Buffer 2 ID	7-4017506
pH Buffer 3 ID	10-3892955
pH Buffer 4 ID	12-3891579
Nominal Amount Used	10 mL
Probe ID	WCP-137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368625 Batch Start Date: 02/19/19 13:51 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-368625/1		2540 C-2011			3.2766 g	100 mL	3.2765 g	3.2766 g	0 g
LCS 240-368625/2		2540 C-2011			3.2623 g	100 mL	3.2827 g	3.2831 g	0 g
240-108064-E-2	MRC-MW154A-021319	2540 C-2011	T	431 umhos/cm	3.6458 g	100 mL	3.6710 g	3.6711 g	0 g
240-108064-E-3	MRC-MW145A-021319	2540 C-2011	T	2759 umhos/cm	3.7421 g	50 mL	3.8128 g	3.8126 g	0 g
240-108064-E-4	MRC-MW148A-021319	2540 C-2011	T	1512 umhos/cm	3.6982 g	50 mL	3.7366 g	3.7362 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 240-368625/1		2540 C-2011		Pass No Unit	N/A No Unit	N/A	-0.0001 g	0 g	N/A g
LCS 240-368625/2		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0204 g	0.0208 g	N/A g
240-108064-E-2	MRC-MW154A-021319	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0252 g	0.0253 g	N/A g
240-108064-E-3	MRC-MW145A-021319	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0707 g	0.0705 g	N/A g
240-108064-E-4	MRC-MW148A-021319	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0384 g	0.038 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID00039		
MB 240-368625/1		2540 C-2011		N/A g	100 mL	OK			
LCS 240-368625/2		2540 C-2011		N/A g	100 mL	OK	100 mL		
240-108064-E-2	MRC-MW154A-021319	2540 C-2011	T	N/A g	100 mL	OK			
240-108064-E-3	MRC-MW145A-021319	2540 C-2011	T	N/A g	100 mL	OK			
240-108064-E-4	MRC-MW148A-021319	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368625 Batch Start Date: 02/19/19 13:51 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date:

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/21/2019 15:42
Date/Time - Out - CW (WT2)	02/21/2019 16:42
Temperature - Start - CW (WT2) - Correct	181 Celsius
Temperature - End - CW (WT2) - Correct	180 Celsius
Temperature - Start-CW(WT2) -Uncorrected	181 Celsius
Temperature - End-CW(WT2) -Uncorrected	180 Celsius
Temperature - Start - Corrected	105 Celsius
Temperature - End - Corrected	104 Celsius
Date/Time - In	02/19/2019 15:09
Date/Time - Out	02/20/2019 15:45
Filter ID	600020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O02
Thermometer ID - Low Temperature	84922
Thermometer ID	NIST
Temperature - Start - Uncorrected	105 Celsius
Temperature - End - Uncorrected	104 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/20/2019 15:45 No Unit
Weight(WT1) Date/Time Out	02/21/2019 14:53
Weight(WT1) Start Temp	181.1 Celsius
Weight(WT1) Temp Out	180 Celsius
Uncorrected Weight(WT1) Start Temp	181.1 Celsius
Uncorrected Weight(WT1) Temp Out	180 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 339515 Batch Start Date: 08/06/18 12:54 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339515/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339515/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339515/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339515/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339515/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339515/6 IC		300.0		5 mL	2 mL				
STD7 240-339515/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339515/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339515/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368146 Batch Start Date: 02/14/19 17:48 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICSOLNA1 00018	WCICSOLNB1 00018			
240-108064-E-2	MRC-MW154A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-2 MS	MRC-MW154A-021319	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-108064-E-2 MSD	MRC-MW154A-021319	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-108064-E-3	MRC-MW145A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-3	MRC-MW145A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-4	MRC-MW148A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-4	MRC-MW148A-021319	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 339515 Batch Start Date: 08/06/18 12:54 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICLCS 00669				
ICV 240-339515/10		9056A		5 mL	5 mL				
ICB 240-339515/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368146 Batch Start Date: 02/14/19 17:48 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICSOLNA1 00018	WCICSOLNB1 00018			
240-108064-E-2	MRC-MW154A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-2 MS	MRC-MW154A-021319	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-108064-E-2 MSD	MRC-MW154A-021319	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-108064-E-3	MRC-MW145A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-3	MRC-MW145A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-4	MRC-MW148A-021319	300.0 & 9056A	T	5 mL					
240-108064-E-4	MRC-MW148A-021319	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-108064-1

SDG No.:

Batch Number: 368146 Batch Start Date: 02/14/19 17:48 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00861	WCICLCS 00696			
CCV 240-368146/1		9056A		5 mL	5 mL				
CCB 240-368146/2		9056A		5 mL					
MB 240-368146/3		9056A		5 mL					
LCS 240-368146/4		9056A		5 mL		5 mL			
CCV 240-368146/13		9056A		5 mL	5 mL				
CCB 240-368146/14		9056A		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575925/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575925/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575925/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575925/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575925/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575925/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575925/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
CCV 490-575925/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/21		SM 4500 NO3 F		50 mL	50 mL				
240-108064-F-2	MRC-MW154A-021319	SM 4500 NO3 F	T	50 mL	50 mL				8.79
240-108064-F-3	MRC-MW145A-021319	SM 4500 NO3 F	T	50 mL	50 mL				8.77
240-108064-F-4	MRC-MW148A-021319	SM 4500 NO3 F	T	50 mL	50 mL				5.6
CCV 490-575925/32		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/33		SM 4500 NO3 F		50 mL	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-108064-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Batch Notes	
Acid used for pH adjustment	4547067
Base used for pH adjustment	4273883
Batch Comment	cent tubes 809161; pH probe VVZ10915; pH meter AB92340683
Buffer Reagent ID	4832283
Carrier Identification	DI water
Color Reagent ID	4832299
Filter ID	180611314
Pipette/Syringe/Dispenser ID	26061004, 26121028

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

VOC CALCULATION	SAMPLE		
	MRC-MW145A-021319		
TARGET ANALYTE	TRICHLOROETHENE		
ANALYTE RESPONSE	157503		
INTERNAL STANDARD	FLUOROBENZENE		
I.S. RESPONSE	1619628		
I.S. CONCENTRATION	10	µg/l	
ANALYTE CAL. RF	0.324		
DILUTION FACTOR (DF)	1		
INITIAL SAMPLE VOLUME - V1	5	ml	
FINAL SAMPLE VOLUME - V2	5	ml	
ON COLUMN AMOUNT	3.001432245	µg/l	

$$\frac{\text{(ANALYTE RESPONSE) x (I.S. CONCENTRATION) X DF x V2}}{\text{(I.S. RESPONSE) x (CAL. R.F.) x V1}} = \textbf{3.00}\ \textbf{µg/l}$$

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-108064-1

SDG No.:

Client Sample ID: MRC-MW145A-021319 | Lab Sample ID: 240-108064-3

Matrix: Water | Lab File ID: UXC8943.D

Analysis Method: 8260C | Date Collected: 02/13/2019 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 02/20/2019 13:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 368748 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.38	J	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	2.6	J	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.29	J	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	3.0		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

Report Date: 21-Feb-2019 09:19:47 Chrom Revision: 2.3 11-Feb-2019 16:31:10

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX15\20190220-84612.b\UXC8943.D
Lims ID: 240-108064-B-3
Client ID: MRC-MW145A-021319
Sample Type: Client
Inject. Date: 20-Feb-2019 13:40:30 ALS Bottle#: 9 Worklist Smp#: 34
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0084612-034
Misc. Info.: C90220A,8260LLUX15,,43582
Operator ID: Instrument ID: A3UX15

Method: \\chromna\Canton\ChromData\A3UX15\20190220-84612.b\8260_15.m
Limit Group: MSV 8260C ICAL
Last Update: 21-Feb-2019 09:19:30 Calib Date: 21-Jan-2019 19:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX15\20190121-83824.b\UXC8431.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0321

First Level Reviewer: evansle Date: 21-Feb-2019 08:49:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.196	5.196	0.000	99	1619628	10.0	
* 2 Chlorobenzene-d5	117	7.876	7.876	0.000	84	1426042	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.117	10.117	0.000	93	787541	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.639	4.639	0.000	95	259800	6.78	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.923	4.923	0.000	100	345021	7.00	
$ 6 Toluene-d8 (Surr)	98	6.560	6.560	0.000	93	1041812	6.02	
$ 7 4-Bromofluorobenzene (Surr	95	8.991	8.979	0.012	96	341081	5.51	
9 Dichlorodifluoromethane	85		1.532				ND	
10 Chloromethane	50		1.674				ND	
11 Vinyl chloride	62		1.769				ND	
13 Bromomethane	94		2.053				ND	
14 Chloroethane	64		2.136				ND	
16 Trichlorofluoromethane	101		2.350				ND	
19 1,1-Dichloroethene	96		2.777				ND	
20 1,1,2-Trichloro-1,2,2-trif	151		2.789				ND	
22 Acetone	58	2.824	2.812	0.012	98	17972	2.74	
24 Carbon disulfide	76		2.967				ND	
28 Methylene Chloride	84		3.180				ND	
29 2-Methyl-2-propanol	59		3.263				ND	
31 Methyl tert-butyl ether	73		3.405				ND	
30 trans-1,2-Dichloroethene	96		3.405				ND	
34 1,1-Dichloroethane	63		3.761				ND	
36 Vinyl acetate	43		3.785				ND	
35 Isopropyl ether	87		3.797				ND	
38 Tert-butyl ethyl ether	59		4.093				ND	
39 cis-1,2-Dichloroethene	96	4.247	4.235	0.012	78	18735	0.3758	
41 2-Butanone (MEK)	72	4.247	4.247	0.000	100	13798	2.56	
40 2,2-Dichloropropane	97		4.247				ND	
45 Chlorobromomethane	128		4.449				ND	
47 Chloroform	83	4.496	4.496	0.000	93	144736	1.94	
48 1,1,1-Trichloroethane	97		4.662				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 1,1-Dichloropropene	75		4.793				ND	
50 Carbon tetrachloride	117		4.805				ND	
53 Benzene	78		4.971				ND	
54 1,2-Dichloroethane	62		4.982				ND	
55 Tert-amyl methyl ether	73		5.042				ND	
58 Trichloroethene	130	5.504	5.504	0.000	94	157503	3.00	
61 1,2-Dichloropropane	63		5.706				ND	
63 Dibromomethane	93		5.813				ND	
65 Dichlorobromomethane	83		5.931				ND	
67 2-Chloroethyl vinyl ether	63		6.180				ND	
68 cis-1,3-Dichloropropene	75		6.322				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.453				ND	
70 Toluene	91	6.619	6.619	0.000	97	60881	0.2892	
71 trans-1,3-Dichloropropene	75		6.809				ND	
74 Tetrachloroethene	164		7.117				ND	
75 1,3-Dichloropropane	76		7.129				ND	
76 2-Hexanone	43		7.188				ND	U
79 Chlorodibromomethane	129		7.342				ND	
80 Ethylene Dibromide	107		7.461				ND	
82 Chlorobenzene	112		7.900				ND	
83 1,1,1,2-Tetrachloroethane	131		7.971				ND	
84 Ethylbenzene	106		7.995				ND	
85 m-Xylene & p-Xylene	91		8.101				ND	
86 o-Xylene	106		8.481				ND	
87 Styrene	104		8.493				ND	
88 Bromoform	173		8.682				ND	
89 Isopropylbenzene	105		8.825				ND	
93 1,1,2,2-Tetrachloroethane	83		9.121				ND	
92 Bromobenzene	156		9.145				ND	
94 1,2,3-Trichloropropane	110		9.169				ND	
96 N-Propylbenzene	120		9.228				ND	
97 2-Chlorotoluene	126		9.323				ND	
99 4-Chlorotoluene	91		9.418				ND	
101 tert-Butylbenzene	119		9.714				ND	
103 1,2,4-Trimethylbenzene	105		9.761				ND	
105 sec-Butylbenzene	105		9.927				ND	
106 1,3-Dichlorobenzene	146		10.046				ND	
107 4-Isopropyltoluene	119		10.070				ND	
108 1,4-Dichlorobenzene	146		10.141				ND	
109 1,2,3-Trimethylbenzene	105		10.177				ND	
111 n-Butylbenzene	91		10.473				ND	
112 1,2-Dichlorobenzene	146		10.509				ND	
113 1,2-Dibromo-3-Chloropropan	157		11.291				ND	
115 1,2,4-Trichlorobenzene	180		12.109				ND	
116 Hexachlorobutadiene	225		12.275				ND	
117 Naphthalene	128		12.358				ND	
118 1,2,3-Trichlorobenzene	180		12.608				ND	
S 129 Xylenes, Total	106		16.530				ND	

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-108064-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

TETRA TECH INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **APRIL 18, 2019**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION – VOC / PCB HOMOLOGS / METALS / MISCELLANEOUS PARAMETERS**
LM MRC BLOCK F – FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) 240-107486-1

SAMPLES: 5 / Water / VOC

MRC-MW137A-012919	MRC-MW140A-012919	MRC-MW143A-012919
MRC-MW152B-012919	TB-012919	

4 / Water / Metals / Miscellaneous

MRC-MW137A-012919	MRC-MW140A-012919	MRC-MW143A-012919
MRC-MW152B-012919		

2 / Water / PCB

MRC-MW140A-012919	MRC-MW152B-012919

OVERVIEW

The sample set for LM MRC Block F, SDG 240-107486-1, consists of four (4) water environmental samples and one (1) trip blank. Samples were analyzed for volatile organic compounds (VOC), polychlorinated biphenyl homologs (PCBH), metals, and miscellaneous parameters (alkalinity, bromide, hardness as CaCO3, nitrite/nitrate-N, salinity, sulfate, and total dissolved solids [TDS]). No field duplicate pairs are included in this SDG.

The samples were collected by Tetra Tech on January 29, 2019 and analyzed by Test America. Analyses were conducted in accordance with EPA SW-846 Methods 8260C (VOC), 6010C/6020A (metals), and 9056A (anions) as well as EPA Method 680 (PCBH), MCAWW Method 300.0 (bromide), and Standard Methods 2320B-2011 (alkalinity), 2340C-2011 (hardness), 4500 NO3 F (nitrite/nitrate-N), 2520B (salinity), and 2540C-2011 (TDS) analytical and reporting protocols. Iron and manganese were analyzed by both Methods 6010C and 6020A - remaining metals were analyzed by Method 6020A only.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, initial/continuing calibrations, laboratory method blank/trip blank results, laboratory control sample/laboratory control sample duplicate results, matrix spike/matrix spike duplicate results, surrogate spike recoveries, interference check sample results, compound identification, analyte quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

MAJOR PROBLEMS

- The laboratory case narrative report states that 2-chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample, all VOC samples were preserved in hydrochloric acid. Non-detected results for 2-chloroethyl vinyl ether were rejected (UR) in water samples.

MINOR PROBLEMS

- The VOC continuing calibration verification (CCV) performed on 02/01/19 at 10:52 on instrument A3UX15 had percent differences (%Ds) that were greater than the 20% quality control limit for bromomethane, chloroethane, carbon disulfide, vinyl acetate, 4-methyl-2-pentanone, 2-hexanone, bromoform, 1,2-dibromo-3-chloropropane, hexachlorobutadiene, naphthalene, and 1,2,3-trichlorobenzene. All VOC samples were affected. Detected and non-detected results for the aforementioned analytes were qualified as estimated (J and UJ, respectively) in the affected samples.

- The PCBH CCV performed on 02/21/19 at 16:43 on instrument CMSX had a %D that was greater than the 20% quality control limit for decachlorobiphenyl. Samples MRC-MW152B-012919 and MRC-MW140A-012919 were affected. The non-detected results for decachlorobiphenyl and nonachlorobiphenyls were qualified as estimated (UJ) in the affected samples.

- Detected results reported below the reporting limit (RL) but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Non-detected results were reported to the MDL.

The chain of custody included a sample identification of MRC-MW151A-012919 and did not include MRC-MW152B-012919. As noted in the laboratory case narrative, the laboratory report was revised per client request to change the sample identification for MRC-MW151A-012919. In the database, the sample identification for MRC-MW151A-012919 for iron and manganese by Method 6010C was changed to MRC-MW152B-012919 by the data reviewer.

VOC sample MRC-MW143A-012919 was analyzed at a dilution factor of 166.67.

The following VOC was detected in the trip blank at the following concentration:

Analyte	Maximum Concentration	< or > RL
Trichloroethene	0.14 ug/L(1)	< RL

1 - Detected in trip blank TB-012919 affecting all samples.

No qualification was necessary because trichloroethene results in the environmental samples were greater than the RL.

No qualifications were necessary for matrix spike (MS)/matrix spike duplicate (MSD) percent recoveries (%Rs) that were outside of quality control limits when the sample result was greater than four times the spike amount.

Sulfate in sample MRC-MW137A-012919 was analyzed at a dilution factor of 5. Sulfate in samples MRC-MW140A-012919 and MRC-MW143A-012919 were analyzed at a dilution factor of 10.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Some VOC PCBH results were qualified due to calibration noncompliance.

Other Factors Affecting Data Quality: Results for 2-chloroethyl vinyl ether in water samples were rejected due to sample preservation noncompliance. Detected results reported below the RL but above the MDL

were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017) and the "National Functional Guidelines for Inorganic Superfund Methods Data Review" (January 2017). The text of this report has been formulated to address only those problem areas affecting data quality.

Leigh A. Ciofani

Tetra Tech
Leigh Ciofani
Environmental Scientist/Data Validator

Joseph A. Samchuck

Tetra Tech
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08784	NSAMPLE	MRC-MW137A-012919			MRC-MW140A-012919			MRC-MW143A-012919			MRC-MW152B-012919		
SDG: 240-107486-1	LAB_ID	240-107486-3			240-107486-4			240-107486-5			240-107486-2		
FRACTION: OV	SAMP_DATE	1/29/2019			1/29/2019			1/29/2019			1/29/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U		0.14	U		23	U		0.14	U	
1,1,1-TRICHLOROETHANE		0.24	U		0.24	U		40	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	U		0.13	U		22	U		0.13	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U		0.41	U		68	U		0.41	U	
1,1-DICHLOROETHANE		0.17	U		0.17	U		28	U		0.2	J	P
1,1-DICHLOROETHENE		0.19	U		0.19	U		32	U		0.19	U	
1,1-DICHLOROPROPENE		0.14	U		0.14	U		23	U		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	UJ	C	0.54	UJ	C	90	UJ	C	0.54	UJ	C
1,2,3-TRICHLOROPROPANE		0.24	U		0.24	U		40	U		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	U		0.14	U		23	U		0.14	U	
1,2,4-TRICHLOROBENZENE		0.27	J	P	0.26	U		43	U		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U		0.07	U		12	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	UJ	C	0.91	UJ	C	150	UJ	C	0.91	UJ	C
1,2-DIBROMOETHANE		0.12	U		0.12	U		20	U		0.12	U	
1,2-DICHLOROBENZENE		0.15	U		0.15	U		25	U		0.15	U	
1,2-DICHLOROETHANE		0.21	U		0.21	U		35	U		0.21	U	
1,2-DICHLOROPROPANE		0.15	U		0.15	U		25	U		0.15	U	
1,3-DICHLOROBENZENE		0.15	J	P	0.15	U		25	U		0.15	U	
1,3-DICHLOROPROPANE		0.21	U		0.21	U		35	U		0.21	U	
1,4-DICHLOROBENZENE		0.19	J	P	0.16	U		27	U		0.16	U	
2,2-DICHLOROPROPANE		0.31	U		0.31	U		52	U		0.31	U	
2-BUTANONE		1.2	U		1.2	U		190	U		1.2	U	
2-CHLOROETHYL VINYL ETHER		0.26	UR	M	0.26	UR	M	43	UR	M	0.26	UR	M
2-CHLOROTOLUENE		0.15	U		0.15	U		25	U		0.15	U	
2-HEXANONE		0.54	UJ	C	0.54	UJ	C	90	UJ	C	0.54	UJ	C
4-CHLOROTOLUENE		0.09	U		0.09	U		15	U		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U		0.13	U		22	U		0.13	U	
4-METHYL-2-PENTANONE		0.42	UJ	C	0.42	UJ	C	70	UJ	C	0.42	UJ	C
ACETONE		8.5	J	P	5.4	U		900	U		5.4	U	
BENZENE		0.13	U		0.13	U		22	U		0.13	U	
BROMOBENZENE		0.12	U		0.12	U		20	U		0.12	U	
BROMOCHLOROMETHANE		0.14	U		0.14	U		23	U		0.14	U	
BROMODICHLOROMETHANE		0.17	U		0.17	U		28	U		0.17	U	
BROMOFORM		0.76	UJ	C	0.76	UJ	C	130	UJ	C	0.76	UJ	C
BROMOMETHANE		0.42	UJ	C	0.42	UJ	C	70	UJ	C	0.42	UJ	C

PROJ_NO: 08784	NSAMPLE	TB-012919		
SDG: 240-107486-1	LAB_ID	240-107486-1		
FRACTION: OV	SAMP_DATE	1/29/2019		
MEDIA: WATER	QC_TYPE	TB		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U	
1,1,1-TRICHLOROETHANE		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U	
1,1-DICHLOROETHANE		0.17	U	
1,1-DICHLOROETHENE		0.19	U	
1,1-DICHLOROPROPENE		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	UJ	C
1,2,3-TRICHLOROPROPANE		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	U	
1,2,4-TRICHLOROBENZENE		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	UJ	C
1,2-DIBROMOETHANE		0.12	U	
1,2-DICHLOROBENZENE		0.15	U	
1,2-DICHLOROETHANE		0.21	U	
1,2-DICHLOROPROPANE		0.15	U	
1,3-DICHLOROBENZENE		0.15	U	
1,3-DICHLOROPROPANE		0.21	U	
1,4-DICHLOROBENZENE		0.16	U	
2,2-DICHLOROPROPANE		0.31	U	
2-BUTANONE		1.2	U	
2-CHLOROETHYL VINYL ETHER		0.26	UR	M
2-CHLOROTOLUENE		0.15	U	
2-HEXANONE		0.54	UJ	C
4-CHLOROTOLUENE		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U	
4-METHYL-2-PENTANONE		0.42	UJ	C
ACETONE		5.4	U	
BENZENE		0.13	U	
BROMOBENZENE		0.12	U	
BROMOCHLOROMETHANE		0.14	U	
BROMODICHLOROMETHANE		0.17	U	
BROMOFORM		0.76	UJ	C
BROMOMETHANE		0.42	UJ	C

PROJ_NO: 08784	NSAMPLE	MRC-MW137A-012919			MRC-MW140A-012919			MRC-MW143A-012919			MRC-MW152B-012919		
SDG: 240-107486-1	LAB_ID	240-107486-3			240-107486-4			240-107486-5			240-107486-2		
FRACTION: OV	SAMP_DATE	1/29/2019			1/29/2019			1/29/2019			1/29/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.31	J	CP	0.28	UJ	C	47	UJ	C	0.33	J	CP
CARBON TETRACHLORIDE		0.26	U		0.26	U		43	U		0.55	J	P
CHLOROBENZENE		1.2			0.14	U		23	U		1.5		
CHLORODIBROMOMETHANE		0.39	U		0.39	U		65	U		0.39	U	
CHLOROETHANE		0.83	UJ	C	0.83	UJ	C	140	UJ	C	0.83	UJ	C
CHLOROFORM		0.17	J	P	0.13	U		22	U		0.52	J	P
CHLOROMETHANE		0.2	U		0.2	U		33	U		0.2	U	
CIS-1,2-DICHLOROETHENE		0.82	J	P	0.4	J	P	47	J	P	18		
CIS-1,3-DICHLOROPROPENE		0.61	U		0.61	U		100	U		0.61	U	
DIBROMOMETHANE		0.09	U		0.09	U		15	U		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	U		0.35	U		58	U		0.35	U	
DIISOPROPYL ETHER		0.17	U		0.17	U		28	U		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	U		0.15	U		25	U		0.15	U	
ETHYLBENZENE		0.11	U		0.11	U		18	U		0.11	U	
HEXACHLOROBUTADIENE		0.83	UJ	C	0.83	UJ	C	140	UJ	C	0.83	UJ	C
ISOPROPYLBENZENE		0.09	U		0.09	U		15	U		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U		0.07	U		12	U		2.9		
METHYLENE CHLORIDE		2.6	U		2.6	U		440	U		2.6	U	
NAPHTHALENE		0.32	UJ	C	0.32	UJ	C	53	UJ	C	0.32	UJ	C
N-BUTYLBENZENE		0.14	U		0.14	U		23	U		0.14	U	
N-PROPYLBENZENE		0.15	U		0.15	U		25	U		0.15	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		22	U		0.13	U	
STYRENE		0.1	U		0.1	U		17	U		0.1	U	
TERT-AMYL METHYL ETHER		0.11	U		0.11	U		18	U		0.11	U	
TERT-BUTYLBENZENE		0.14	U		0.14	U		23	U		0.14	U	
TERTIARY-BUTYL ALCOHOL		1.7	U		1.7	U		280	U		1.7	U	
TETRACHLOROETHENE		0.15	U		0.15	U		25	U		0.15	U	
TOLUENE		0.14	U		0.14	U		23	U		0.14	U	
TOTAL XYLENES		0.15	U		0.15	U		25	U		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		32	U		0.37	J	P
TRANS-1,3-DICHLOROPROPENE		0.67	U		0.67	U		110	U		0.67	U	
TRICHLOROETHENE		38			21			3000			13		
TRICHLOROFLUOROMETHANE		0.45	U		0.45	U		75	U		0.45	U	
VINYL ACETATE		0.19	UJ	C	0.19	UJ	C	32	UJ	C	0.19	UJ	C
VINYL CHLORIDE		0.2	U		0.2	U		33	U		0.2	U	

PROJ_NO: 08784	NSAMPLE	TB-012919		
SDG: 240-107486-1	LAB_ID	240-107486-1		
FRACTION: OV	SAMP_DATE	1/29/2019		
MEDIA: WATER	QC_TYPE	TB		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
CARBON DISULFIDE		0.28	UJ	C
CARBON TETRACHLORIDE		0.26	U	
CHLOROBENZENE		0.14	U	
CHLORODIBROMOMETHANE		0.39	U	
CHLOROETHANE		0.83	UJ	C
CHLOROFORM		0.13	U	
CHLOROMETHANE		0.2	U	
CIS-1,2-DICHLOROETHENE		0.16	U	
CIS-1,3-DICHLOROPROPENE		0.61	U	
DIBROMOMETHANE		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	U	
DIISOPROPYL ETHER		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	U	
ETHYLBENZENE		0.11	U	
HEXACHLOROBUTADIENE		0.83	UJ	C
ISOPROPYLBENZENE		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U	
METHYLENE CHLORIDE		2.6	U	
NAPHTHALENE		0.32	UJ	C
N-BUTYLBENZENE		0.14	U	
N-PROPYLBENZENE		0.15	U	
SEC-BUTYLBENZENE		0.13	U	
STYRENE		0.1	U	
TERT-AMYL METHYL ETHER		0.11	U	
TERT-BUTYLBENZENE		0.14	U	
TERTIARY-BUTYL ALCOHOL		1.7	U	
TETRACHLOROETHENE		0.15	U	
TOLUENE		0.14	U	
TOTAL XYLENES		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.67	U	
TRICHLOROETHENE		0.14	J	P
TRICHLOROFLUOROMETHANE		0.45	U	
VINYL ACETATE		0.19	UJ	C
VINYL CHLORIDE		0.2	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW140A-012919			MRC-MW152B-012919		
SDG: 240-107486-1	LAB_ID	240-107486-4			240-107486-2		
FRACTION: PCB	SAMP_DATE	1/29/2019			1/29/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.089	UJ	C	0.068	UJ	C
DICHLOROBIPHENYLS		0.0069	U		0.0052	U	
HEPTACHLOROBIPHENYLS		0.038	U		0.029	U	
HEXACHLOROBIPHENYLS		0.019	U		0.015	U	
MONOCHLOROBIPHENYLS		0.0071	U		0.0054	U	
NONACHLOROBIPHENYLS		0.062	UJ	C	0.048	UJ	C
OCTACHLOROBIPHENYLS		0.048	U		0.037	U	
PENTACHLOROBIPHENYLS		0.018	U		0.014	U	
TETRACHLOROBIPHENYLS		0.017	U		0.013	U	
TRICHLOROBIPHENYLS		0.0083	U		0.0063	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW137A-012919			MRC-MW140A-012919			MRC-MW143A-012919			MRC-MW152B-012919		
SDG: 240-107486-1	LAB_ID	240-107486-3			240-107486-4			240-107486-5			240-107486-2		
FRACTION: M	SAMP_DATE	1/29/2019			1/29/2019			1/29/2019			1/29/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		1000			4100			3000			52		
ANTIMONY		0.82	J	P	0.72	J	P	0.57	U		0.57	U	
ARSENIC		0.75	U		0.75	U		0.75	U		0.75	U	
BARIUM		100			42			130			48		
BERYLLIUM		5.5			8			17			0.51	J	P
CADMIUM		0.9	J	P	1			1.2			0.58	J	P
CALCIUM		42000			73000			37000			9700		
CHROMIUM		2.3			6.1			2.8			0.98	U	
COBALT		79			54			210			44		
COPPER		23			32			31			1.7	U	
IRON		250			2900			1500			11000		
LEAD		0.45	U		2.2			1.6			0.45	U	
MAGNESIUM		20000			40000			32000			3500		
MANGANESE		200			200			270			600		
NICKEL		160			72			340			59		
POTASSIUM		24000			1500			13000			3300		
SELENIUM		3.5	J	P	17			10			0.89	U	
SILVER		0.053	U		0.053	U		0.053	U		0.053	U	
SODIUM		160000			250000			270000			23000		
THALLIUM		0.2	U		0.2	U		0.2	U		0.2	U	
VANADIUM		1.5	J	P	2.1	J	P	0.82	U		0.82	U	
ZINC		200			200			460			64		

PROJ_NO: 08784	NSAMPLE	MRC-MW137A-012919						MRC-MW140A-012919					
SDG: 240-107486-1	LAB_ID	240-107486-3						240-107486-4					
FRACTION: MISC	SAMP_DATE	1/29/2019						1/29/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		37						2.6	U				
BROMIDE		0.55						0.71					
HARDNESS AS CACO3		210						430					
NITRITE/NITRATE-N		0.14						0.049	J	P			
SALINITY					2	U					2	U	
SULFATE		69						390					
TOTAL DISSOLVED SOLIDS		700						1200					

PROJ_NO: 08784	NSAMPLE	MRC-MW143A-012919						MRC-MW152B-012919					
SDG: 240-107486-1	LAB_ID	240-107486-5						240-107486-2					
FRACTION: MISC	SAMP_DATE	1/29/2019						1/29/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		12						44					
BROMIDE		0.46	J	P				0.044	U				
HARDNESS AS CACO3		250						64					
NITRITE/NITRATE-N		0.58						0.32					
SALINITY					2	U					2	U	
SULFATE		93						20					
TOTAL DISSOLVED SOLIDS		990						150					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW137A-012919 | Lab Sample ID: 240-107486-3

Matrix: Water | Lab File ID: UXC8656.D

Analysis Method: 8260C | Date Collected: 01/29/2019 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.27	J	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	J	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.19	J	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	8.5	J	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.31	J	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	1.2		1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.17	J	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW137A-012919 | Lab Sample ID: 240-107486-3

Matrix: Water | Lab File ID: UXC8656.D

Analysis Method: 8260C | Date Collected: 01/29/2019 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.82	J	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	38		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW137A-012919 | Lab Sample ID: 240-107486-3

Matrix: Water | Lab File ID: UXC8656.D

Analysis Method: 8260C | Date Collected: 01/29/2019 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	81		70-121
460-00-4	4-Bromofluorobenzene (Surr)	77		59-120
2037-26-5	Toluene-d8 (Surr)	79		70-123
1868-53-7	Dibromofluoromethane (Surr)	78		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW140A-012919 | Lab Sample ID: 240-107486-4

Matrix: Water | Lab File ID: UXC8657.D

Analysis Method: 8260C | Date Collected: 01/29/2019 13:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW140A-012919 | Lab Sample ID: 240-107486-4

Matrix: Water | Lab File ID: UXC8657.D

Analysis Method: 8260C | Date Collected: 01/29/2019 13:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.40	J	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	21		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW140A-012919 | Lab Sample ID: 240-107486-4

Matrix: Water | Lab File ID: UXC8657.D

Analysis Method: 8260C | Date Collected: 01/29/2019 13:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	87		70-123
1868-53-7	Dibromofluoromethane (Surr)	87		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW143A-012919 | Lab Sample ID: 240-107486-5

Matrix: Water | Lab File ID: UXC8658.D

Analysis Method: 8260C | Date Collected: 01/29/2019 14:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:47

Soil Aliquot Vol: | Dilution Factor: 166.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	23	U	170	23
71-55-6	1,1,1-Trichloroethane	40	U	170	40
79-34-5	1,1,2,2-Tetrachloroethane	22	U	170	22
76-13-1	1,1,2-Trichlorotrifluoroethane	68	U	170	68
75-34-3	1,1-Dichloroethane	28	U	170	28
75-35-4	1,1-Dichloroethene	32	U	170	32
563-58-6	1,1-Dichloropropene	23	U	170	23
87-61-6	1,2,3-Trichlorobenzene	90	U	170	90
96-18-4	1,2,3-Trichloropropane	40	U	170	40
526-73-8	1,2,3-Trimethylbenzene	23	U	830	23
120-82-1	1,2,4-Trichlorobenzene	43	U	170	43
95-63-6	1,2,4-Trimethylbenzene	12	U	170	12
96-12-8	1,2-Dibromo-3-Chloropropane	150	U	330	150
95-50-1	1,2-Dichlorobenzene	25	U	170	25
107-06-2	1,2-Dichloroethane	35	U	170	35
78-87-5	1,2-Dichloropropane	25	U	170	25
541-73-1	1,3-Dichlorobenzene	25	U	170	25
142-28-9	1,3-Dichloropropane	35	U	170	35
106-46-7	1,4-Dichlorobenzene	27	U	170	27
594-20-7	2,2-Dichloropropane	52	U	170	52
110-75-8	2-Chloroethyl vinyl ether	43	U	1700	43
95-49-8	2-Chlorotoluene	25	U	170	25
591-78-6	2-Hexanone	90	U	1700	90
108-86-1	Bromobenzene	20	U	170	20
74-97-5	Bromochloromethane	23	U	170	23
106-43-4	4-Chlorotoluene	15	U	170	15
99-87-6	4-Isopropyltoluene	22	U	170	22
67-64-1	Acetone	900	U	1700	900
71-43-2	Benzene	22	U	170	22
75-25-2	Bromoform	130	U	170	130
74-83-9	Bromomethane	70	U	170	70
75-15-0	Carbon disulfide	47	U	170	47
56-23-5	Carbon tetrachloride	43	U	170	43
108-90-7	Chlorobenzene	23	U	170	23
75-00-3	Chloroethane	140	U	170	140
67-66-3	Chloroform	22	U	170	22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW143A-012919 | Lab Sample ID: 240-107486-5

Matrix: Water | Lab File ID: UXC8658.D

Analysis Method: 8260C | Date Collected: 01/29/2019 14:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:47

Soil Aliquot Vol: | Dilution Factor: 166.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	33	U	170	33
156-59-2	cis-1,2-Dichloroethene	47	J	170	27
10061-01-5	cis-1,3-Dichloropropene	100	U	170	100
87-68-3	Hexachlorobutadiene	140	U	170	140
74-95-3	Dibromomethane	15	U	170	15
75-27-4	Bromodichloromethane	28	U	170	28
75-71-8	Dichlorodifluoromethane	58	U	170	58
100-41-4	Ethylbenzene	18	U	170	18
106-93-4	1,2-Dibromoethane	20	U	170	20
108-20-3	Diisopropyl ether	28	U	1700	28
91-20-3	Naphthalene	53	U	170	53
104-51-8	n-Butylbenzene	23	U	170	23
98-82-8	Isopropylbenzene	15	U	170	15
103-65-1	N-Propylbenzene	25	U	170	25
78-93-3	2-Butanone (MEK)	190	U	1700	190
108-10-1	4-Methyl-2-pentanone (MIBK)	70	U	1700	70
135-98-8	sec-Butylbenzene	22	U	170	22
1634-04-4	Methyl tert-butyl ether	12	U	170	12
994-05-8	Tert-amyl methyl ether	18	U	830	18
75-09-2	Methylene Chloride	440	U	830	440
100-42-5	Styrene	17	U	170	17
637-92-3	Ethyl tert-butyl ether	25	U	830	25
98-06-6	tert-Butylbenzene	23	U	170	23
127-18-4	Tetrachloroethene	25	U	170	25
108-88-3	Toluene	23	U	170	23
156-60-5	trans-1,2-Dichloroethene	32	U	170	32
10061-02-6	trans-1,3-Dichloropropene	110	U	170	110
79-01-6	Trichloroethene	3000		170	17
75-69-4	Trichlorofluoromethane	75	U	170	75
108-05-4	Vinyl acetate	32	U	330	32
75-01-4	Vinyl chloride	33	U	170	33
75-65-0	tert-Butyl alcohol	280	U	8300	280
1330-20-7	Xylenes, Total	25	U	330	25
124-48-1	Chlorodibromomethane	65	U	170	65

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW143A-012919 | Lab Sample ID: 240-107486-5

Matrix: Water | Lab File ID: UXC8658.D

Analysis Method: 8260C | Date Collected: 01/29/2019 14:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 14:47

Soil Aliquot Vol: | Dilution Factor: 166.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	82		70-121
460-00-4	4-Bromofluorobenzene (Surr)	79		59-120
2037-26-5	Toluene-d8 (Surr)	82		70-123
1868-53-7	Dibromofluoromethane (Surr)	80		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW152B-012919 | Lab Sample ID: 240-107486-2

Matrix: Water | Lab File ID: UXC8655.D

Analysis Method: 8260C | Date Collected: 01/29/2019 10:43

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.20	J	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.33	J	1.0	0.28
56-23-5	Carbon tetrachloride	0.55	J	1.0	0.26
108-90-7	Chlorobenzene	1.5		1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.52	J	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW152B-012919 | Lab Sample ID: 240-107486-2

Matrix: Water | Lab File ID: UXC8655.D

Analysis Method: 8260C | Date Collected: 01/29/2019 10:43

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	18		1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	2.9		1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.37	J	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	13		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW152B-012919 | Lab Sample ID: 240-107486-2

Matrix: Water | Lab File ID: UXC8655.D

Analysis Method: 8260C | Date Collected: 01/29/2019 10:43

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	78		70-121
460-00-4	4-Bromofluorobenzene (Surr)	77		59-120
2037-26-5	Toluene-d8 (Surr)	79		70-123
1868-53-7	Dibromofluoromethane (Surr)	76		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: TB-012919 | Lab Sample ID: 240-107486-1

Matrix: Water | Lab File ID: UXC8654.D

Analysis Method: 8260C | Date Collected: 01/29/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: TB-012919 | Lab Sample ID: 240-107486-1

Matrix: Water | Lab File ID: UXC8654.D

Analysis Method: 8260C | Date Collected: 01/29/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.14	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: TB-012919 | Lab Sample ID: 240-107486-1

Matrix: Water | Lab File ID: UXC8654.D

Analysis Method: 8260C | Date Collected: 01/29/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	78		70-121
460-00-4	4-Bromofluorobenzene (Surr)	78		59-120
2037-26-5	Toluene-d8 (Surr)	80		70-123
1868-53-7	Dibromofluoromethane (Surr)	77		75-128

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW140A-012919 | Lab Sample ID: 240-107486-4

Matrix: Water | Lab File ID: xb2037.D

Analysis Method: 680 | Date Collected: 01/29/2019 13:45

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 784.4(mL) | Date Analyzed: 02/21/2019 10:04

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.038	U	0.38	0.038
26601-64-9	Hexachlorobiphenyl	0.019	U	0.25	0.019
53742-07-7	Nonachlorobiphenyl	0.062	U	0.64	0.062
55722-26-4	Octachlorobiphenyl	0.048	U	0.38	0.048
27323-18-8	Monochlorobiphenyl	0.0071	U	0.13	0.0071
2051-24-3	DCB Decachlorobiphenyl	0.089	U	0.64	0.089
25512-42-9	Dichlorobiphenyl	0.0069	U	0.13	0.0069
25429-29-2	Pentachlorobiphenyl	0.018	U	0.25	0.018
26914-33-0	Tetrachlorobiphenyl	0.017	U	0.25	0.017
25323-68-6	Trichlorobiphenyl	0.0083	U	0.13	0.0083

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	48		25-113

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW152B-012919 | Lab Sample ID: 240-107486-2

Matrix: Water | Lab File ID: xb2036.D

Analysis Method: 680 | Date Collected: 01/29/2019 10:43

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1031.3(mL) | Date Analyzed: 02/21/2019 09:35

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.029	U	0.29	0.029
26601-64-9	Hexachlorobiphenyl	0.015	U	0.19	0.015
53742-07-7	Nonachlorobiphenyl	0.048	U	0.48	0.048
55722-26-4	Octachlorobiphenyl	0.037	U	0.29	0.037
27323-18-8	Monochlorobiphenyl	0.0054	U	0.097	0.0054
2051-24-3	DCB Decachlorobiphenyl	0.068	U	0.48	0.068
25512-42-9	Dichlorobiphenyl	0.0052	U	0.097	0.0052
25429-29-2	Pentachlorobiphenyl	0.014	U	0.19	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.19	0.013
25323-68-6	Trichlorobiphenyl	0.0063	U	0.097	0.0063

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	57		25-113

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW137A-012919 Lab Sample ID: 240-107486-3

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:00

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	320	200	26	ug/L			1	6010C
7439-96-5	Manganese	210	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	1000	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	100	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	5.5	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.90	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	79	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.3	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	23	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	250	100	47	ug/L			1	6020A
7439-96-5	Manganese	200	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	160	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.82	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	3.5	5.0	0.89	ug/L	J		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	1.5	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	200	20	15	ug/L			1	6020A
7440-70-2	Calcium	42000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	24000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	20000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	160000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW140A-012919 Lab Sample ID: 240-107486-4

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	3000	200	26	ug/L			1	6010C
7439-96-5	Manganese	200	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	4100	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	42	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	8.0	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	1.0	1.0	0.21	ug/L			1	6020A
7440-48-4	Cobalt	54	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	6.1	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	32	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	2900	100	47	ug/L			1	6020A
7439-96-5	Manganese	200	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	72	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	2.2	1.0	0.45	ug/L			1	6020A
7440-36-0	Antimony	0.72	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	17	5.0	0.89	ug/L			1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	2.1	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	200	20	15	ug/L			1	6020A
7440-70-2	Calcium	73000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	1500	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	40000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	250000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW143A-012919 Lab Sample ID: 240-107486-5

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 14:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	1500	200	26	ug/L			1	6010C
7439-96-5	Manganese	250	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	3000	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	130	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	17	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	1.2	1.0	0.21	ug/L			1	6020A
7440-48-4	Cobalt	210	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.8	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	31	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	1500	100	47	ug/L			1	6020A
7439-96-5	Manganese	270	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	340	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	1.6	1.0	0.45	ug/L			1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	10	5.0	0.89	ug/L			1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	460	20	15	ug/L			1	6020A
7440-70-2	Calcium	37000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	13000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	32000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	270000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW152B-012919 Lab Sample ID: 240-107486-2

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 10:43

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	13000	200	26	ug/L			1	6010C
7439-96-5	Manganese	670	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	52	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	48	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.51	1.0	0.31	ug/L	J		1	6020A
7440-43-9	Cadmium	0.58	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	44	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	0.98	2.0	0.98	ug/L	U		1	6020A
7440-50-8	Copper	1.7	2.0	1.7	ug/L	U		1	6020A
7439-89-6	Iron	11000	100	47	ug/L			1	6020A
7439-96-5	Manganese	600	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	59	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	64	20	15	ug/L			1	6020A
7440-70-2	Calcium	9700	1000	580	ug/L			1	6020A
7440-09-7	Potassium	3300	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	3500	1000	200	ug/L			1	6020A
7440-23-5	Sodium	23000	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW137A-012919 Lab Sample ID: 240-107486-3

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:00

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	210	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	37	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	700	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.55	0.50	0.044	mg/L			1	300.0
14808-79-8	Sulfate	69	5.0	1.7	mg/L			5	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW137A-012919 Lab Sample ID: 240-107486-3

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:00

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.14	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW137A-012919 Lab Sample ID: 240-107486-3

Lab Name: TestAmerica Pittsburgh Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:00

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW140A-012919 Lab Sample ID: 240-107486-4

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	430	25	12	mg/L			1	2340C-2011
	Alkalinity	2.6	5.0	2.6	mg/L	U		1	2320B-2011
	Total Dissolved Solids	1200	20	16	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.71	0.50	0.044	mg/L			1	300.0
14808-79-8	Sulfate	390	10	3.5	mg/L			10	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW140A-012919 Lab Sample ID: 240-107486-4

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.049	0.10	0.040	mg/L	J		1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW140A-012919 Lab Sample ID: 240-107486-4

Lab Name: TestAmerica Pittsburgh Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW143A-012919 Lab Sample ID: 240-107486-5

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 14:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	250	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	12	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	990	20	16	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.46	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	93	10	3.5	mg/L			10	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW143A-012919 Lab Sample ID: 240-107486-5

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 14:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.58	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW143A-012919 Lab Sample ID: 240-107486-5

Lab Name: TestAmerica Pittsburgh Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 14:45

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW152B-012919 Lab Sample ID: 240-107486-2

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 10:43

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	64	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	44	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	150	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	20	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW152B-012919 Lab Sample ID: 240-107486-2

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 10:43

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.32	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW152B-012919 Lab Sample ID: 240-107486-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 10:43

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

APPENDIX C

SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: LM MRC Block F

Report Number: 240-107486-1
Revised

Revised 3/20/2019. Per client request sample MRC-MW151A-012919 is being changed to MRC-MW152B-012919.

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The 680 Polychlorinated Biphenyls analysis was performed at the TestAmerica Savannah laboratory. The 4500NO3-F Nitrate Nitrite as N analysis was performed at the TestAmerica Nashville laboratory. The 9050A Specific Conductance and the 2520-B Salinity analyses were performed at the TestAmerica Pittsburgh laboratory.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 1/30/2019 10:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-012919 (240-107486-1), MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/01/2019.

Sample MRC-MW143A-012919 (240-107486-5)[166.67X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 366440 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TB-012919 (240-107486-1), MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following samples were received in hydrochloric acid preserved vials: TB-012919 (240-107486-1), MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples MRC-MW152B-012919 (240-107486-2) and MRC-MW140A-012919 (240-107486-4) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The samples were prepared on 02/19/2019 and analyzed on 02/21/2019.

The internal standard response for the following sample(s) was outside of acceptance limits when compared to the area of the CCVIS(continuing calibration verification internal standard). The 680 method allows that the sample also be compared to the average internal standard area of the calibration (ICISAV). Due to limitations in the software, when the areas of the sample are out of control for either the CCVIS or the ICISAV both are flagged. Although a * flag appears on the data, the sample is within the area range for the average internal standard area of the calibration (ICISAV).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 680-558728.

The SOP for the 680 Method allows that for soils the CCVIS has a limit of <30%D for each analyte and for liquids <20%D for each analyte . It also allows that the capping CCV for soils has the limit of <30% average %D with no analyte >60%D and for liquids <20% average D with no analyte >40%D. Due to software limitations for this method, the limits are set at <20%D.

(CCV 680-559059/21)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/01/2019 and analyzed on 02/04/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 01/31/2019 and analyzed on 02/01/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 01/30/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 01/31/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 01/31/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 01/31/2019 and 02/01/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for anions in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 01/31/2019.

Samples MRC-MW137A-012919 (240-107486-3)[5X], MRC-MW140A-012919 (240-107486-4)[10X] and MRC-MW143A-012919 (240-107486-5)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for Salinity in accordance with SM 2520B. The samples were analyzed on 02/07/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE
Samples MRC-MW152B-012919 (240-107486-2), MRC-MW137A-012919 (240-107486-3), MRC-MW140A-012919 (240-107486-4) and MRC-MW143A-012919 (240-107486-5) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 02/16/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: LM MRC Block F

TestAmerica Job ID: 240-107486-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
680	Liquid-Liquid Extraction (Separatory Funnel)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: LM MRC Block F

TestAmerica Job ID: 240-107486-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107486-1	TB-012919	Water	01/29/19 00:00	01/30/19 10:45
240-107486-2	MRC-MW152B-012919	Water	01/29/19 10:43	01/30/19 10:45
240-107486-3	MRC-MW137A-012919	Water	01/29/19 13:00	01/30/19 10:45
240-107486-4	MRC-MW140A-012919	Water	01/29/19 13:45	01/30/19 10:45
240-107486-5	MRC-MW143A-012919	Water	01/29/19 14:45	01/30/19 10:45

North CANTON TESTAMERICA

Chain of Custody Record

2.21C2.2

282259

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Tony Aparicio	Site Contact: Walt Payer	Date: 1/29/19	COC No:
Company Name: Tetra Tech INC	Tel/Fax: 301 528-3021	Lab Contact: Jokel McFadden	Carrier: Fed Ex	1 of 1 COCs
Address: 20251 Century Blvd. Ste 200	Analysis Turnaround Time			Sampler:
City/State/Zip: Germantown, MD 20874	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 301 528-3021	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day — Standard			Lab Sampling:
Project Name: Middle River Center				Job / SDG No.:
Site: MRC Block E/F Groundwater				
PO# 1122C09784				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	VOCs (8260C)	TAL metals (6020A)	Alkalinity (2320A)	PCBs (8082)	Salinity (SM2520B)	Sulfate, nitrates, TDS	Local method (353.2)	Local method (2340C)	Sample Specific Notes:
TB-012919	1/29/19	—	G	QC	2			2	-	-	-	-	-	-	-	
MRC-MW151A-012919		1043		GW	11			3	1	1	2	1	1	1	1	
MRC-MW137A-012919		1300			9			3	1	1	-	1	1	-	-	
MRC-MW140A-012919		1345			11			3	1	1	2	1	1	1	1	
MRC-MW143A-012919		1445			9			3	1	1	-	1	1	1	1	

240-107486 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____ — 2 4 1 1 1 1 3 4

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☒ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Payer	TT INC	1/29/19 1900		JTA	1/30/19 1045
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 107486**
Canton Facility

Client Tetra Tech Site Name _____ Cooler unpacked by:

Cooler Received on 1/30/19 Opened on 1/30/19

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 1A Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam (Plastic Bag) None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 2.2 °C Corrected Cooler Temp. 2.2 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes (No)
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. (Yes) (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # N/A (Yes) No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: Ryan

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW151A-012919	240-107486-F-2	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW151A-012919	240-107486-G-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW151A-012919	240-107486-I-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW151A-012919	240-107486-F-3	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW151A-012919	240-107486-G-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW151A-012919	240-107486-I-3	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW140A-012919	240-107486-F-4	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW140A-012919	240-107486-G-4	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW140A-012919	240-107486-I-4	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW143A-012919	240-107486-F-5	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW143A-012919	240-107486-G-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW143A-012919	240-107486-I-5	Plastic 500ml - with Nitric Acid	<2	_____	_____

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-012919	240-107486-1	77	78	80	78
MRC-MW152B-012919	240-107486-2	76	78	79	77
MRC-MW137A-012919	240-107486-3	78	81	79	77
MRC-MW140A-012919	240-107486-4	87	87	87	83
MRC-MW143A-012919	240-107486-5	80	82	82	79
	MB 240-366440/6	81	83	85	83
	LCS 240-366440/4	88	84	87	88

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab File ID: UXC8653.D Lab Sample ID: MB 240-366440/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/01/2019 12:42

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-366440/4	UXC8649.D	02/01/2019 11:14
TB-012919	240-107486-1	UXC8654.D	02/01/2019 13:20
MRC-MW152B-012919	240-107486-2	UXC8655.D	02/01/2019 13:42
MRC-MW137A-012919	240-107486-3	UXC8656.D	02/01/2019 14:04
MRC-MW140A-012919	240-107486-4	UXC8657.D	02/01/2019 14:25
MRC-MW143A-012919	240-107486-5	UXC8658.D	02/01/2019 14:47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-366440/6

Matrix: Water | Lab File ID: UXC8653.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-366440/6

Matrix: Water | Lab File ID: UXC8653.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-366440/6

Matrix: Water Lab File ID: UXC8653.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 02/01/2019 12:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 366440 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	83		70-121
460-00-4	4-Bromofluorobenzene (Surr)	83		59-120
2037-26-5	Toluene-d8 (Surr)	85		70-123
1868-53-7	Dibromofluoromethane (Surr)	81		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8649.D

Lab ID: LCS 240-366440/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.75	88	80-124	
1,1,1-Trichloroethane	10.0	9.38	94	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.99	90	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.72	97	50-156	
1,1-Dichloroethane	10.0	9.82	98	75-133	
1,1-Dichloroethene	10.0	9.11	91	65-139	
1,1-Dichloropropene	10.0	9.42	94	78-126	
1,2,3-Trichlorobenzene	10.0	9.28	93	39-138	
1,2,3-Trichloropropane	10.0	9.31	93	66-139	
1,2,4-Trichlorobenzene	10.0	9.02	90	42-133	
1,2,4-Trimethylbenzene	10.0	9.32	93	74-120	
1,2-Dibromo-3-Chloropropane	10.0	6.95	70	46-132	
1,2-Dichlorobenzene	10.0	9.58	96	78-120	
1,2-Dichloroethane	10.0	9.77	98	71-135	
1,2-Dichloropropane	10.0	10.1	101	78-133	
1,3-Dichlorobenzene	10.0	9.41	94	78-120	
1,3-Dichloropropane	10.0	9.53	95	72-134	
1,4-Dichlorobenzene	10.0	9.46	95	78-120	
2,2-Dichloropropane	10.0	9.01	90	42-150	
2-Chloroethyl vinyl ether	10.0	8.57 J	86	55-137	
2-Chlorotoluene	10.0	9.46	95	78-123	
2-Hexanone	20.0	17.5	88	43-148	
Bromobenzene	10.0	9.63	96	74-129	
Bromochloromethane	10.0	9.87	99	74-130	
4-Chlorotoluene	10.0	9.43	94	77-125	
4-Isopropyltoluene	10.0	9.17	92	69-122	
Acetone	20.0	20.1	100	21-162	
Benzene	10.0	9.86	99	80-123	
Bromoform	10.0	6.45	64	49-141	
Bromomethane	10.0	8.21	82	41-175	
Carbon disulfide	10.0	7.78	78	60-138	
Carbon tetrachloride	10.0	8.86	89	63-140	
Chlorobenzene	10.0	9.64	96	80-121	
Chloroethane	10.0	8.65	87	33-173	
Chloroform	10.0	9.69	97	79-127	
Chloromethane	10.0	9.77	98	54-143	
cis-1,2-Dichloroethene	10.0	9.92	99	76-128	
cis-1,3-Dichloropropene	10.0	9.01	90	64-132	
Hexachlorobutadiene	10.0	8.12	81	38-136	
Dibromomethane	10.0	9.28	93	74-124	
Bromodichloromethane	10.0	8.63	86	77-125	
Dichlorodifluoromethane	10.0	8.94	89	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8649.D

Lab ID: LCS 240-366440/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.38	94	80-120	
1,2-Dibromoethane	10.0	8.86	89	77-123	
Naphthalene	10.0	8.63	86	28-141	
m-Xylene & p-Xylene	10.0	9.25	92	80-120	
n-Butylbenzene	10.0	8.75	88	57-126	
Isopropylbenzene	10.0	9.39	94	74-120	
N-Propylbenzene	10.0	9.41	94	77-123	
2-Butanone (MEK)	20.0	19.4	97	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	17.8	89	49-143	
sec-Butylbenzene	10.0	9.14	91	68-123	
Methyl tert-butyl ether	10.0	8.90	89	51-133	
Methylene Chloride	10.0	8.66	87	70-134	
o-Xylene	10.0	9.46	95	80-120	
Styrene	10.0	9.01	90	79-120	
tert-Butylbenzene	10.0	8.83	88	70-121	
Tetrachloroethene	10.0	9.57	96	74-130	
Toluene	10.0	9.56	96	78-129	
trans-1,2-Dichloroethene	10.0	9.82	98	78-133	
trans-1,3-Dichloropropene	10.0	7.96	80	55-128	
Trichloroethene	10.0	9.64	96	76-125	
Trichlorofluoromethane	10.0	9.50	95	51-164	
Vinyl acetate	10.0	8.74	87	45-151	
Vinyl chloride	10.0	9.02	90	58-143	
tert-Butyl alcohol	100	84.0	84	10-161	
Xylenes, Total	20.0	18.7	94	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	47729 2392918	112693	296202	593761	1222220	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	58046 2319242	119628	276149	585358	1207742	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	57558 2025909	104647	261470	574312	1027051	1.00 40.0	2.00	5.00	10.0	20.0
Butadiene	FB	Ave	71088 2665435	148568	361713	698736	1378009	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	47411 1506749	100403	198900	423055	791041	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	40558 1406432	82718	182320	372694	733356	1.00 40.0	2.00	5.00	10.0	20.0
Dichlorofluoromethane	FB	Ave	103682 3477509	201291	471934	910063	1834172	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	68568 3407867	157640	408598	855986	1703371	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	44605 1653914	87432	212667	419544	869536	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	32229 1148055	55282	144856	290454	603583	5.00 200	10.0	25.0	50.0	100
1,1-Dichloroethene	FB	Ave	57094 2182381	120279	277159	516876	1125076	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichlorotrifluoroethane	FB	Ave	42550 1880984	91700	228498	462285	967763	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Lin1	17181 332724	23252	50751	89168	190030	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	93588 3255913	156089	446819	909454	1760595	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	160687 5174431	283969	742305	1445567	2744114	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	27003 1418141	58477	154763	317161	716236	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	79740 3067156	150240	380996	723073	1550490	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	154915 2032773	198393	338417	580808	1097865	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	36240 1508945	82343	184510	328142	832907	10.0 400	20.0	50.0	100	200
Acrylonitrile	FB	Ave	175156 7643188	352291	868795	1699336	3768272	10.0 400	20.0	50.0	100	200
Methyl tert-butyl ether	FB	Ave	139955 6078083	285516	714788	1439491	3075308	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,2-Dichloroethene	FB	Ave	54736 2072831	103155	251570	500088	1069131	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	10725 455555	22194	51427	104918	230317	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	81126 3448011	166930	409730	832192	1773410	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	88027 4206187	177639	476538	992089	2098831	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	57035 2264494	116480	278759	565374	1189038	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	11684 445323	21907	58586	120845	241048	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone (MEK)	FB	Ave	12505 511818	24387	59681	120010	256717	2.00 80.0	4.00	10.0	20.0	40.0
Bromochloromethane	FB	Ave	28543 1150919	56716	140018	275468	595090	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	31985 1272086	62314	150812	279158	634219	2.00 80.0	4.00	10.0	20.0	40.0
Chloroform	FB	Ave	83929 3460990	169874	422474	847597	1793716	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	63803 2533663	130349	334136	689229	1356966	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	68915 3105972	144320	368473	742256	1592895	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	66437 2816568	140972	343617	688186	1474449	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	56945 2706723	124489	318843	648774	1385341	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	31904 1496664	73133	177736	322275	821992	25.0 1000	50.0	125	250	500
Benzene	FB	Ave	207184 8390558	412777	1016161	2024145	4352726	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	68031 2877185	142414	350758	707702	1492475	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	8801 415529	19095	48491	101813	218160	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	59121 2403531	120531	296310	593061	1274454	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	60130 2723193	127322	326169	654672	1428283	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	43707 1981074	97800	239856	483376	1020861	1.00 40.0	2.00	5.00	10.0	20.0
Dibromomethane	FB	Ave	31111 1256838	65366	157375	317664	664429	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Ave	5185 326819	14227	39232	71764	183906	20.0 800	40.0	100	200	400
Bromodichloromethane	FB	Ave	57382 2704273	121869	306036	637533	1409597	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	61442 2796269	123378	319533	640886	1383920	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Ave	62099 3274371	138202	356486	746312	1652896	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	98299 4186633	187250	495239	970866	2114735	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBNZ d5	Ave	209687 9034071	428381	1080197	2172974	4691174	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	57707 3169409	125256	333930	706531	1578892	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBNZ d5	Ave	61421 2869285	129112	316654	647349	1421429	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBNZ d5	Ave	41853 1840913	87521	218933	437245	940456	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBNZ d5	Ave	44889 1992562	95990	241473	482895	1049416	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBNZ d5	Ave	72217 3294456	153833	378264	779324	1663194	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBNZ d5	Ave	58616 2937075	135481	337296	666112	1487023	2.00 80.0	4.00	10.0	20.0	40.0
Chlorodibromomethane	CBNZ d5	Ave	36977 2200067	82891	222991	469828	1084488	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBNZ d5	Ave	45295 1979685	91132	237763	469490	999728	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBNZ d5	Ave	138107 6035718	286159	714138	1441533	3072375	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	46702 2220799	95060	253355	522591	1113186	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBNZ d5	Ave	73699 3208633	146696	374569	758362	1624425	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBNZ d5	Ave	168049 7830315	351787	872988	1818169	3890600	1.00 40.0	2.00	5.00	10.0	20.0
o-Xylene	CBNZ d5	Ave	88147 3825283	176986	449671	918350	1968397	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBNZ d5	Ave	137740 6714209	289260	754758	1550959	3394736	1.00 40.0	2.00	5.00	10.0	20.0
Bromoform	CBNZ d5	Lin1	19867 1639155	51580	138461	306750	770158	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBNZ d5	Ave	198841 9246149	416807	1070139	2200366	4695119	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	54865 2441270	112833	283791	577712	1238040	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCBd 4	Ave	63640 2849353	131876	330598	678570	1450127	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCBd 4	Ave	18846 848462	40526	99350	201010	423192	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	3277 574750	16039	23872	66363	276245	1.00 40.0	2.00	5.00	10.0	20.0
N-Propylbenzene	DCBd 4	Ave	54874 2529942	117423	290505	601438	1274023	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCBd 4	Ave	53702 2322347	107735	275264	555062	1188057	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	160683 7300680	332591	840604	1766210	3784392	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCBd 4	Ave	170473 7526400	356628	881245	1798133	3844885	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCBd 4	Ave	141080 6973779	300630	749194	1551899	3285832	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	169136 7660047	359918	876431	1848645	3917785	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCBd 4	Ave	173094 7876504	373619	937713	1935865	4155710	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	113176 4738373	229119	572540	1168047	2462678	1.00 40.0	2.00	5.00	10.0	20.0
4-Isopropyltoluene	DCBd 4	Ave	154318 7046098	334169	830781	1751242	3739399	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCBd 4	Ave	119243 4936571	241629	582208	1199185	2527274	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
n-Butylbenzene	DCBd 4	Ave	127428 5435677	263153	659506	1384405	2918965	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCBd 4	Ave	109056 4571601	224899	556492	1159176	2381785	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	10572 585195	24334	65389	138143	306515	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	73453 2553990	145803	356465	739836	1510157	1.00 40.0	2.00	5.00	10.0	20.0
Hexachlorobutadiene	DCBd 4	Ave	41867 1091039	78276	175613	359850	696597	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCBd 4	Ave	172653 6820199	348942	926474	1891386	3879317	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	65430 2286670	131338	324635	663704	1364016	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	41840 1806247	80448	225163	447792	947952	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	55383 2257190	106482	288691	573781	1190875	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBNZ d5	Ave	174193 7359833	333303	912990	1816996	3883966	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	60446 2700470	120695	328418	649263	1374232	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Acetone	5.5						50					
Methylene Chloride	5.1						50					
Bromoform	19.5						50					

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Ave	43776 1719436	78140	216790	375778	846508	10.0 400	20.0	50.0	100	200
Diisopropyl ether	FB	Ave	43843 1750827	82274	218424	423417	889067	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloro-1,3-butadiene	FB	Ave	78005 3085189	151016	379041	729996	1534644	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl tert-butyl ether	FB	Ave	140382 5753247	273366	703226	1363608	2849689	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl acetate	FB	Ave	90776 3822356	173055	465746	871063	1885113	2.00 80.0	4.00	10.0	20.0	40.0
Propionitrile	FB	Ave	60838 2683433	120712	346296	618722	1307620	10.0 400	20.0	50.0	100	200
Methacrylonitrile	FB	Ave	299007 13192364	589937	1557675	3048167	6587251	10.0 400	20.0	50.0	100	200
Tert-amyl methyl ether	FB	Ave	139226 5803487	265089	690261	1376169	2893429	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Ave	27517 1141061	53519	142999	252385	538091	25.0 1000	50.0	125	250	500
Ethyl acrylate	FB	Ave	55889 2595809	111797	311313	570379	1269397	1.00 40.0	2.00	5.00	10.0	20.0
Methyl methacrylate	FB	Ave	82902 3746376	164974	443947	839432	1854426	2.00 80.0	4.00	10.0	20.0	40.0
2-Nitropropane	FB	Ave	24091 1187179	51098	135714	254301	578091	2.00 80.0	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Ave	62560 3081411	130855	371884	688240	1496211	1.00 40.0	2.00	5.00	10.0	20.0
1-Chlorohexane	CBNZ d5	Ave	56623 2299838	112915	287030	522245	1142204	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexanone	DCBd 4	Lin1	18061 496922	26838	72655	115834	240064	10.0 400	20.0	50.0	100	200
Pentachloroethane	CBNZ d5	Ave	49671 2629484	105733	282130	577976	1287207	2.00 80.0	4.00	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCBd 4	Ave	159891 7509792	343441	887789	1750222	3743187	1.00 40.0	2.00	5.00	10.0	20.0
Benzyl chloride	DCBd 4	Ave	18125 1117019	36545	113409	234360	534799	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	70436 2856330	145613	362674	730581	1512196	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCBd 4	Ave	146578 6396329	332448	834898	1722729	3597249	2.00 80.0	4.00	10.0	20.0	40.0
1-Chloro-1-fluoroethane TIC	FB	None	38810 1466901	1184	184959	389588	796152	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
None = No Calib Curve

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Cyclohexanone	4.9						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab File ID: BFB0201.D BFB Injection Date: 02/01/2019

Instrument ID: A3UX15 BFB Injection Time: 10:25

Analysis Batch No.: 366440

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.0	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	101.2	
175	5.0 - 9.0 % of mass 174	7.3	(7.2) 1
176	95.0 - 101.0 % of mass 174	98.4	(97.3) 1
177	5.0 - 9.0 % of mass 176	6.7	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-366440/2	UXC8648.D	02/01/2019	10:52
	LCS 240-366440/4	UXC8649.D	02/01/2019	11:14
	CCV 240-366440/3	UXC8650.D	02/01/2019	11:36
	MB 240-366440/6	UXC8653.D	02/01/2019	12:42
TB-012919	240-107486-1	UXC8654.D	02/01/2019	13:20
MRC-MW152B-012919	240-107486-2	UXC8655.D	02/01/2019	13:42
MRC-MW137A-012919	240-107486-3	UXC8656.D	02/01/2019	14:04
MRC-MW140A-012919	240-107486-4	UXC8657.D	02/01/2019	14:25
MRC-MW143A-012919	240-107486-5	UXC8658.D	02/01/2019	14:47

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: CCVIS 240-366440/2 Calibration Date: 02/01/2019 10:52

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8648.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3149	0.1000	0.0103	0.0100	2.5	20.0
Chloromethane	Ave	0.3135	0.2812	0.1000	0.00897	0.0100	-10.3	20.0
Vinyl chloride	Ave	0.2885	0.2655	0.1000	0.00920	0.0100	-8.0	20.0
Butadiene	Ave	0.3794	0.3330		0.00878	0.0100	-12.2	20.0
Bromomethane	Ave	0.2308	0.1814	0.0500	0.00786	0.0100	-21.4*	20.0
Chloroethane	Ave	0.2041	0.1614	0.0500	0.00791	0.0100	-20.9*	20.0
Dichlorofluoromethane	Ave	0.5102	0.4016		0.00787	0.0100	-21.3*	20.0
Trichlorofluoromethane	Ave	0.4337	0.4194	0.1000	0.00967	0.0100	-3.3	20.0
Ethyl ether	Ave	0.2310	0.2124		0.00919	0.0100	-8.1	20.0
Acrolein	Ave	0.0317	0.0401		0.0632	0.0500	26.5	50.0
1,1-Dichloroethene	Ave	0.3005	0.2585	0.1000	0.00860	0.0100	-14.0	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2186	0.0500	0.00886	0.0100	-11.4	20.0
Acetone	Lin1		0.0234	0.0100	0.0193	0.0200	-3.6	50.0
Iodomethane	Ave	0.4675	0.4361		0.00933	0.0100	-6.7	20.0
Carbon disulfide	Ave	0.7741	0.6113	0.1000	0.00790	0.0100	-21.0*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1497		0.00881	0.0100	-11.9	20.0
Methyl acetate	Ave	0.2050	0.1848	0.1000	0.0180	0.0200	-9.9	20.0
Methylene Chloride	Lin1		0.2754	0.1000	0.00861	0.0100	-13.9	50.0
tert-Butyl alcohol	Ave	0.0203	0.0174		0.0859	0.100	-14.1	50.0
Acrylonitrile	Ave	0.0962	0.0866		0.0900	0.100	-10.0	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6882	0.1000	0.00878	0.0100	-12.2	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2630	0.1000	0.00941	0.0100	-5.9	20.0
Hexane	Ave	0.0586	0.0535		0.00912	0.0100	-8.8	20.0
1,1-Dichloroethane	Ave	0.4517	0.4367	0.2000	0.00967	0.0100	-3.3	20.0
Vinyl acetate	Ave	0.5198	0.3965		0.00763	0.0100	-23.7	50.0
2,2-Dichloropropane	Ave	0.0624	0.0620		0.00994	0.0100	-0.6	20.0
2-Butanone (MEK)	Ave	0.0333	0.0285	0.0100	0.0171	0.0200	-14.3	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.2978	0.1000	0.00967	0.0100	-3.3	20.0
Bromochloromethane	Ave	0.1531	0.1440		0.00940	0.0100	-6.0	20.0
Tetrahydrofuran	Ave	0.0828	0.0704		0.0170	0.0200	-15.0	20.0
Chloroform	Ave	0.4606	0.4386	0.2000	0.00952	0.0100	-4.8	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3380	0.1000	0.00953	0.0100	-4.7	20.0
Cyclohexane	Ave	0.3993	0.3724	0.1000	0.00933	0.0100	-6.7	20.0
1,1-Dichloropropene	Ave	0.3748	0.3482		0.00929	0.0100	-7.1	20.0
Carbon tetrachloride	Ave	0.3441	0.3113	0.1000	0.00905	0.0100	-9.5	20.0
Isobutyl alcohol	Ave	0.0077	0.0069		0.223	0.250	-10.8	20.0
Benzene	Ave	1.116	1.075	0.5000	0.00963	0.0100	-3.7	20.0
1,2-Dichloroethane	Ave	0.3820	0.3545	0.1000	0.00928	0.0100	-7.2	20.0
n-Heptane	Ave	0.0532	0.0476		0.00894	0.0100	-10.6	20.0
Trichloroethene	Ave	0.3240	0.3156	0.1500	0.00974	0.0100	-2.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: CCVIS 240-366440/2 Calibration Date: 02/01/2019 10:52

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8648.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3257	0.1000	0.00924	0.0100	-7.6	20.0
1,2-Dichloropropane	Ave	0.2590	0.2446	0.1000	0.00944	0.0100	-5.6	20.0
1,4-Dioxane	Ave	0.0020	0.0019		0.194	0.200	-3.0	50.0
Dibromomethane	Ave	0.1717	0.1541		0.00897	0.0100	-10.3	20.0
Bromodichloromethane	Ave	0.3410	0.2978	0.1500	0.00873	0.0100	-12.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1448		0.0166	0.0200	-17.0	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3466	0.1500	0.00879	0.0100	-12.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2126	0.0500	0.0159	0.0200	-20.6*	20.0
Toluene	Ave	1.476	1.392	0.4000	0.00943	0.0100	-5.7	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3753	0.1000	0.00808	0.0100	-19.2	20.0
Ethyl methacrylate	Ave	0.4442	0.3559		0.00801	0.0100	-19.9	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2756	0.1000	0.00924	0.0100	-7.6	20.0
Tetrachloroethene	Ave	0.3268	0.3126	0.1500	0.00957	0.0100	-4.3	20.0
1,3-Dichloropropane	Ave	0.5243	0.4772		0.00910	0.0100	-9.0	20.0
2-Hexanone	Ave	0.2283	0.1811	0.0500	0.0159	0.0200	-20.7*	20.0
Chlorodibromomethane	Ave	0.3116	0.2551		0.00819	0.0100	-18.1	20.0
1,2-Dibromoethane	Ave	0.3191	0.2711		0.00850	0.0100	-15.0	20.0
Chlorobenzene	Ave	0.9777	0.9183	0.3000	0.00939	0.0100	-6.1	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3046		0.00883	0.0100	-11.7	20.0
Ethylbenzene	Ave	0.5145	0.4755		0.00924	0.0100	-7.6	20.0
m-Xylene & p-Xylene	Ave	1.221	1.143		0.00936	0.0100	-6.4	20.0
o-Xylene	Ave	0.6189	0.5756		0.00930	0.0100	-7.0	20.0
Styrene	Ave	1.036	0.9635	0.3000	0.00930	0.0100	-7.0	20.0
Bromoform	Lin1		0.1499	0.1000	0.00652	0.0100	-34.8*	20.0
Isopropylbenzene	Ave	1.463	1.336	0.1000	0.00913	0.0100	-8.7	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.6042	0.3000	0.00853	0.0100	-14.7	20.0
Bromobenzene	Ave	0.8274	0.7662		0.00926	0.0100	-7.4	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2082		0.00843	0.0100	-15.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0746		0.00736	0.0100	-26.4*	20.0
N-Propylbenzene	Ave	0.7286	0.6554		0.00900	0.0100	-10.0	20.0
2-Chlorotoluene	Ave	0.6821	0.6326		0.00927	0.0100	-7.3	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.908		0.00900	0.0100	-10.0	20.0
4-Chlorotoluene	Ave	2.205	2.001		0.00907	0.0100	-9.3	20.0
tert-Butylbenzene	Ave	1.897	1.636		0.00862	0.0100	-13.8	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.030		0.00911	0.0100	-8.9	20.0
sec-Butylbenzene	Ave	2.327	2.038		0.00876	0.0100	-12.4	20.0
1,3-Dichlorobenzene	Ave	1.425	1.299	0.6000	0.00912	0.0100	-8.8	20.0
4-Isopropyltoluene	Ave	2.083	1.856		0.00891	0.0100	-10.9	20.0
1,4-Dichlorobenzene	Ave	1.477	1.341	0.5000	0.00908	0.0100	-9.2	20.0
n-Butylbenzene	Ave	1.649	1.394		0.00846	0.0100	-15.4	20.0
1,2-Dichlorobenzene	Ave	1.387	1.252	0.4000	0.00903	0.0100	-9.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: CCVIS 240-366440/2 Calibration Date: 02/01/2019 10:52

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8648.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1008	0.0500	0.00626	0.0100	-37.4	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7037	0.2000	0.00801	0.0100	-19.9	50.0
Hexachlorobutadiene	Ave	0.4386	0.3173		0.00723	0.0100	-27.7*	20.0
Naphthalene	Ave	2.209	1.591		0.00720	0.0100	-28.0	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6281		0.00795	0.0100	-20.5*	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.1955		0.00658	0.00797	-17.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2400		0.00629	0.00797	-21.1*	20.0
Toluene-d8 (Surr)	Ave	1.214	1.030		0.00676	0.00797	-15.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3697		0.00679	0.00797	-14.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: CCV 240-366440/3 Calibration Date: 02/01/2019 11:36

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8650.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0274		0.118	0.100	18.3	20.0
Diisopropyl ether	Ave	0.2405	0.2359		0.00981	0.0100	-1.9	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3886		0.00918	0.0100	-8.2	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6769		0.00868	0.0100	-13.2	20.0
Ethyl acetate	Ave	0.2538	0.2364		0.0186	0.0200	-6.9	50.0
Propionitrile	Ave	0.0357	0.0368		0.103	0.100	3.1	20.0
Methacrylonitrile	Ave	0.1733	0.1652		0.0953	0.100	-4.7	20.0
Tert-amyl methyl ether	Ave	0.7765	0.6264		0.00807	0.0100	-19.3	20.0
n-Butanol	Ave	0.0061	0.0051		0.209	0.250	-16.5	20.0
Ethyl acrylate	Ave	0.3330	0.2965		0.00890	0.0100	-11.0	20.0
Methyl methacrylate	Ave	0.2430	0.2193		0.0180	0.0200	-9.8	20.0
2-Nitropropane	Ave	0.0745	0.0425		0.0114	0.0200	-42.9*	20.0
n-Butyl acetate	Ave	0.3918	0.3330		0.00850	0.0100	-15.0	20.0
1-Chlorohexane	Ave	0.3968	0.3306		0.00833	0.0100	-16.7	20.0
Cyclohexanone	Lin1		0.0134		0.0828	0.100	-17.2	20.0
Pentachloroethane	Ave	0.2034	0.1619		0.0159	0.0200	-20.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.075		0.00903	0.0100	-9.7	20.0
Benzyl chloride	Ave	0.2963	0.1707		0.00576	0.0100	-42.4*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8496		0.00898	0.0100	-10.2	20.0
2-Methylnaphthalene	Ave	1.076	0.7595		0.0141	0.0200	-29.4*	20.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-366440/2		1979475	5.20	1581449	7.88	881893	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Sample No.: CCVIS 240-366440/2 Date Analyzed: 02/01/2019 10:52

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8648.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1979475	5.20	1581449	7.88	881893	10.12
UPPER LIMIT		3958950	5.70	3162898	8.38	1763786	10.62
LOWER LIMIT		989738	4.70	790725	7.38	440947	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-366440/4		1830351	5.20	1496132	7.88	829219	10.12
CCV 240-366440/3		1779588	5.20	1467709	7.88	796864	10.12
MB 240-366440/6		1772288	5.20	1412729	7.88	770701	10.12
240-107486-1	TB-012919	1780216	5.20	1430449	7.88	770829	10.12
240-107486-2	MRC-MW152B-012919	1795132	5.20	1440875	7.88	795226	10.12
240-107486-3	MRC-MW137A-012919	1770669	5.20	1442887	7.88	773855	10.12
240-107486-4	MRC-MW140A-012919	1586491	5.20	1201917	7.88	664877	10.12
240-107486-5	MRC-MW143A-012919	1682601	5.20	1354824	7.88	735487	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

SAMPLE IDENTIFICATION	MRC-MW152B-012919	
COMPOUND	Trichloroethene	
COMPOUND AREA	737109	
INTERNAL STANDARD AMOUNT (ug)	10	
DILUTION FACTOR	1	
INTERNAL STANDARD AREA	1795132	
AVERAGE RRF	0.324	
737109 x 10 / 1795132 x 0.324	12.6733	ug/L
12.6733174929631 x 1	12.67	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW152B-012919 | Lab Sample ID: 240-107486-2

Matrix: Water | Lab File ID: UXC8655.D

Analysis Method: 8260C | Date Collected: 01/29/2019 10:43

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.20	J	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.33	J	1.0	0.28
56-23-5	Carbon tetrachloride	0.55	J	1.0	0.26
108-90-7	Chlorobenzene	1.5		1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.52	J	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107486-1

SDG No.:

Client Sample ID: MRC-MW152B-012919 | Lab Sample ID: 240-107486-2

Matrix: Water | Lab File ID: UXC8655.D

Analysis Method: 8260C | Date Collected: 01/29/2019 10:43

Sample wt/vol: 5(mL) | Date Analyzed: 02/01/2019 13:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366440 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	18		1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	2.9		1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.37	J	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	13		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX15\20190201-84169.b\UXC8655.D
Lims ID: 240-107486-B-2
Client ID: MRC-MW151A-012919
Sample Type: Client
Inject. Date: 01-Feb-2019 13:42:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0084169-009
Misc. Info.: C90201A,8260LLUX15,,43582
Operator ID: Instrument ID: A3UX15

Method: \\chromna\Canton\ChromData\A3UX15\20190201-84169.b\8260_15.m
Limit Group: MSV 8260C ICAL
Last Update: 04-Feb-2019 10:19:56 Calib Date: 21-Jan-2019 19:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX15\20190121-83824.b\UXC8431.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0326

First Level Reviewer: evansle Date: 01-Feb-2019 13:59:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.196	5.196	0.000	99	1795132	10.0	
* 2 Chlorobenzene-d5	117	7.876	7.876	0.000	85	1440875	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.117	10.117	0.000	93	795226	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.639	4.638	0.001	95	258705	6.09	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.923	4.923	0.000	100	338295	6.20	
$ 6 Toluene-d8 (Surr)	98	6.560	6.560	0.000	93	1107497	6.33	
$ 7 4-Bromofluorobenzene (Surr	95	8.991	8.991	0.000	96	381957	6.11	
9 Dichlorodifluoromethane	85		1.532				ND	
10 Chloromethane	50		1.686				ND	
11 Vinyl chloride	62		1.781				ND	
13 Bromomethane	94		2.065				ND	
14 Chloroethane	64		2.148				ND	
16 Trichlorofluoromethane	101		2.362				ND	
19 1,1-Dichloroethene	96		2.777				ND	
20 1,1,2-Trichloro-1,2,2-trif	151		2.800				ND	
22 Acetone	58	2.812	2.812	0.000	98	15046	1.48	
24 Carbon disulfide	76	2.990	2.978	0.012	99	45441	0.3270	
28 Methylene Chloride	84		3.180				ND	
29 2-Methyl-2-propanol	59		3.263				ND	
30 trans-1,2-Dichloroethene	96	3.405	3.405	0.000	93	18677	0.3722	
31 Methyl tert-butyl ether	73	3.405	3.405	0.000	97	413147	2.94	
34 1,1-Dichloroethane	63	3.761	3.761	0.000	94	16234	0.2002	
36 Vinyl acetate	43		3.785				ND	
35 Isopropyl ether	87		3.797				ND	
38 Tert-butyl ethyl ether	59		4.093				ND	
41 2-Butanone (MEK)	72		4.247				ND	
39 cis-1,2-Dichloroethene	96	4.247	4.247	0.000	81	1013126	18.3	
40 2,2-Dichloropropane	97		4.247				ND	U
45 Chlorobromomethane	128		4.449				ND	
47 Chloroform	83	4.496	4.496	0.000	94	43308	0.5238	
48 1,1,1-Trichloroethane	97		4.662				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 1,1-Dichloropropene	75		4.793				ND	
50 Carbon tetrachloride	117	4.805	4.805	0.001	96	33939	0.5495	
53 Benzene	78	4.971	4.971	0.000	91	23201	0.1158	
54 1,2-Dichloroethane	62		4.982				ND	
55 Tert-amyl methyl ether	73		5.042				ND	
58 Trichloroethene	130	5.504	5.504	0.000	96	737109	12.7	
61 1,2-Dichloropropane	63		5.706				ND	
63 Dibromomethane	93		5.812				ND	
65 Dichlorobromomethane	83		5.931				ND	
67 2-Chloroethyl vinyl ether	63		6.180				ND	
68 cis-1,3-Dichloropropene	75		6.322				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.453				ND	
70 Toluene	91		6.619				ND	
71 trans-1,3-Dichloropropene	75		6.809				ND	
74 Tetrachloroethene	164		7.117				ND	
75 1,3-Dichloropropane	76		7.129				ND	
76 2-Hexanone	43		7.188				ND	
79 Chlorodibromomethane	129		7.342				ND	
80 Ethylene Dibromide	107		7.461				ND	
82 Chlorobenzene	112	7.900	7.900	0.000	97	207638	1.47	
83 1,1,1,2-Tetrachloroethane	131		7.983				ND	
84 Ethylbenzene	106		7.994				ND	
85 m-Xylene & p-Xylene	91		8.101				ND	
86 o-Xylene	106		8.481				ND	
87 Styrene	104		8.492				ND	
88 Bromoform	173		8.682				ND	
89 Isopropylbenzene	105		8.825				ND	
93 1,1,2,2-Tetrachloroethane	83		9.121				ND	
92 Bromobenzene	156		9.145				ND	
94 1,2,3-Trichloropropane	110		9.168				ND	
96 N-Propylbenzene	120		9.228				ND	
97 2-Chlorotoluene	126		9.323				ND	
99 4-Chlorotoluene	91		9.429				ND	
101 tert-Butylbenzene	119		9.714				ND	
103 1,2,4-Trimethylbenzene	105		9.761				ND	
105 sec-Butylbenzene	105		9.927				ND	
106 1,3-Dichlorobenzene	146	10.046	10.046	0.000	95	16341	0.1442	
107 4-Isopropyltoluene	119		10.070				ND	
108 1,4-Dichlorobenzene	146	10.141	10.141	0.000	92	17030	0.1450	
109 1,2,3-Trimethylbenzene	105		10.176				ND	
111 n-Butylbenzene	91		10.473				ND	
112 1,2-Dichlorobenzene	146		10.508				ND	
113 1,2-Dibromo-3-Chloropropan	157		11.291				ND	
115 1,2,4-Trichlorobenzene	180	12.109	12.109	0.000	91	10928	0.1564	
116 Hexachlorobutadiene	225		12.275				ND	
117 Naphthalene	128		12.358				ND	
118 1,2,3-Trichlorobenzene	180		12.607				ND	
S 129 Xylenes, Total	106		16.530				ND	

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107486-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

Method 680

Polychlorinated Biphenyls (PCBs) (GC/MS) by Method 680

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13CDCB #
MRC-MW152B-012919	240-107486-2	57
MRC-MW140A-012919	240-107486-4	48
	MB 680-558728/12-A	71
	LCS 680-558728/13-A	75
	LCSD 680-558728/14-A	68

	QC LIMITS
13CDCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Lab File ID: xb2031.D Lab Sample ID: MB 680-558728/12-A

Matrix: Water Date Extracted: 02/19/2019 13:42

Instrument ID: CMSX Date Analyzed: 02/21/2019 07:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-558728/13-A	xb2032.D	02/21/2019 07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019 08:10
MRC-MW152B-012919	240-107486-2	xb2036.D	02/21/2019 09:35
MRC-MW140A-012919	240-107486-4	xb2037.D	02/21/2019 10:04

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107486-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-558728/12-A

Matrix: Water | Lab File ID: xb2031.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2032.D

Lab ID: LCS 680-558728/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.67	78	62-130	
Hexachlorobiphenyl	4.00	3.37	84	62-130	
Nonachlorobiphenyl	10.0	14.6	146	70-195	
Octachlorobiphenyl	6.00	5.09	85	64-130	
Monochlorobiphenyl	2.00	1.08	54	42-130	
DCB Decachlorobiphenyl	10.0	7.81	78	59-130	
Dichlorobiphenyl	2.00	1.32	66	49-130	
Pentachlorobiphenyl	4.00	3.47	87	63-130	
Tetrachlorobiphenyl	4.00	2.93	73	54-130	
Trichlorobiphenyl	2.00	1.47	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2033.D

Lab ID: LCSD 680-558728/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.45	74	5	40	62-130	
Hexachlorobiphenyl	4.00	3.21	80	5	40	62-130	
Nonachlorobiphenyl	10.0	13.2	132	10	40	70-195	
Octachlorobiphenyl	6.00	4.75	79	7	40	64-130	
Monochlorobiphenyl	2.00	1.36	68	23	40	42-130	
DCB Decachlorobiphenyl	10.0	7.14	71	9	40	59-130	
Dichlorobiphenyl	2.00	1.47	73	11	40	49-130	
Pentachlorobiphenyl	4.00	3.33	83	4	40	63-130	
Tetrachlorobiphenyl	4.00	3.04	76	4	40	54-130	
Trichlorobiphenyl	2.00	1.52	76	3	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Lab File ID: xa0805.D DFTPP Injection Date: 01/08/2019

Instrument ID: CMSX DFTPP Injection Time: 14:10

Analysis Batch No.: 554469

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.9
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	25.1
365	Greater than 1% of mass 198	3.8
441	Present but less than mass 443	13.7 (87.5) 2
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	15.6 (18.3) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-554469/3	xa0807.D	01/08/2019	15:11
	IC 680-554469/5	xa0809.D	01/08/2019	16:08
	IC 680-554469/6	xa0810.D	01/08/2019	16:37
	IC 680-554469/27	xa0850.D	01/08/2019	17:05
	IC 680-554469/7	xa0811.D	01/08/2019	17:34
	IC 680-554469/8	xa0812.D	01/08/2019	18:02
	ICV 680-554469/9	xa0813.D	01/08/2019	18:31

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107486-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 240-107486-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Monochlorobiphenyl	CRY	Ave	8242 813481	15382	70279	157619	299489	0.0500 5.00	0.100	0.500	1.00	2.00
Dichlorobiphenyl	CRY	Ave	5634 599778	10649	48537	112170	214973	0.0500 5.00	0.100	0.500	1.00	2.00
Trichlorobiphenyl	CRY	Ave	3987 441580	7502	35031	81047	154555	0.0500 5.00	0.100	0.500	1.00	2.00
Tetrachlorobiphenyl	CRY	Ave	5574 615833	10606	50081	113059	216849	0.100 10.0	0.200	1.00	2.00	4.00
Pentachlorobiphenyl	CRY	Ave	4430 525344	8255	40050	94602	179296	0.100 10.0	0.200	1.00	2.00	4.00
Hexachlorobiphenyl	CRY	Ave	4409 515192	8063	39570	95892	180616	0.100 10.0	0.200	1.00	2.00	4.00
Heptachlorobiphenyl	CRY	Ave	8087 711849	13173	54642	129695	247124	0.150 15.0	0.300	1.50	3.00	6.00
Octachlorobiphenyl	CRY	Ave	5679 662783	10462	52287	120191	235791	0.150 15.0	0.300	1.50	3.00	6.00
Nonachlorobiphenyl	CRY	Ave				55196					5.00	
DCB Decachlorobiphenyl	CRY	Ave	1830 243534	3384	17538	42007	81970	0.250 25.0	0.500	2.50	5.00	10.0
Decachlorobiphenyl-13C12	CRY	Ave	2369 234805	4106	24902	55313	103476	0.250 20.0	0.500	2.50	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICV 680-554469/9 Calibration Date: 01/08/2019 18:31

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xa0813.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8517		1.03	1.00	2.6	20.0
Dichlorobiphenyl	Ave	0.5847	0.5801		0.992	1.00	-0.8	20.0
Trichlorobiphenyl	Ave	0.4198	0.4573		1.09	1.00	8.9	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.3118		2.11	2.00	5.6	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2531		2.11	2.00	5.5	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2508		2.10	2.00	5.2	20.0
Heptachlorobiphenyl	Ave	0.2376	0.2274		2.87	3.00	-4.3	20.0
Octachlorobiphenyl	Ave	0.2054	0.2183		3.19	3.00	6.3	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0419		5.00	5.00	-0.0	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0577		5.35	5.00	7.1	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Lab File ID: xb2028.D DFTPP Injection Date: 02/21/2019

Instrument ID: CMSX DFTPP Injection Time: 05:43

Analysis Batch No.: 559059

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	59.5
197	Less than 1 % of mass 198	0.9
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	28.0
365	Greater than 1% of mass 198	3.5
441	Present but less than mass 443	15.1 (86.3) 2
442	Greater than 40% of mass 198	96.2
443	17 - 23% of mass 442	17.5 (18.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559059/2	xb2029.D	02/21/2019	06:14
	CCVIS 680-559059/3	xb2030.D	02/21/2019	06:44
	MB 680-558728/12-A	xb2031.D	02/21/2019	07:13
	LCS 680-558728/13-A	xb2032.D	02/21/2019	07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019	08:10
MRC-MW152B-012919	240-107486-2	xb2036.D	02/21/2019	09:35
MRC-MW140A-012919	240-107486-4	xb2037.D	02/21/2019	10:04
	CCV 680-559059/21	xb2051.D	02/21/2019	16:43

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Lab Sample ID: CCVIS 680-559059/3 Calibration Date: 02/21/2019 06:44

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2030.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.7268		0.875	1.00	-12.5	20.0
Dichlorobiphenyl	Ave	0.5847	0.5079		0.869	1.00	-13.1	20.0
Trichlorobiphenyl	Ave	0.4198	0.3597		0.857	1.00	-14.3	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2563		1.74	2.00	-13.2	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2131		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2136		1.79	2.00	-10.4	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1920		2.42	3.00	-19.2	20.0
Octachlorobiphenyl	Ave	0.2054	0.1725		2.52	3.00	-16.0	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0343		4.08	5.00	-18.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0462		4.29	5.00	-14.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Lab Sample ID: CCV 680-559059/21 Calibration Date: 02/21/2019 16:43

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2051.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8070		0.972	1.00	-2.8	20.0
Dichlorobiphenyl	Ave	0.5847	0.5601		0.958	1.00	-4.2	20.0
Trichlorobiphenyl	Ave	0.4198	0.4000		0.953	1.00	-4.7	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2879		1.95	2.00	-2.4	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2300		1.92	2.00	-4.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2246		1.88	2.00	-5.8	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1938		2.45	3.00	-18.4	20.0
Octachlorobiphenyl	Ave	0.2054	0.1765		2.58	3.00	-14.1	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0315		3.75	5.00	-25.0*	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0422		3.92	5.00	-21.6*	20.0

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107486-1

SDG No.:

Sample No.: CCVIS 680-559059/3 Date Analyzed: 02/21/2019 06:44

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2030.D Heated Purge: (Y/N) N

Calibration ID: 63054

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		170892	12.41	169663	18.67		
UPPER LIMIT		222160	12.91	220562	19.17		
LOWER LIMIT		119624	11.91	118764	18.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-558728/12-A		143915	12.41	132159	18.67		
LCS 680-558728/13-A		164188	12.41	171582	18.67		
LCSD 680-558728/14-A		179669	12.41	188862	18.67		
240-107486-2	MRC-MW152B-012919	187166	12.41	187824	18.67		
240-107486-4	MRC-MW140A-012919	206034	12.41	211293	18.67		
CCV 680-559059/21		159076	12.41	142687	18.67		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

SAMPLE IDENTIFICATION	LCS 680-558728/13-A
COMPOUND	Monochlorobiphenyl
COMPOUND AREA	205079
INTERNAL STANDARD AMOUNT (ng)	0.75
DILUTION FACTOR	1
INTERNAL STANDARD AREA	171582
AVERAGE RRF	0.8305

205079 x 0.75 x 1 / 171582 x 0.8305 = 1.0794 ng/ml

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107486-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 680-558728/13-A

Matrix: Water | Lab File ID: xb2032.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:41

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	4.67		0.30	0.030
26601-64-9	Hexachlorobiphenyl	3.37		0.20	0.015
53742-07-7	Nonachlorobiphenyl	14.6		0.50	0.049
55722-26-4	Octachlorobiphenyl	5.09		0.30	0.038
27323-18-8	Monochlorobiphenyl	1.08		0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	7.81		0.50	0.070
25512-42-9	Dichlorobiphenyl	1.32		0.10	0.0054
25429-29-2	Pentachlorobiphenyl	3.47		0.20	0.014
26914-33-0	Tetrachlorobiphenyl	2.93		0.20	0.013
25323-68-6	Trichlorobiphenyl	1.47		0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	75		25-113

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\xb2032.D
Lims ID: LCS 680-558728/13-A
Client ID:
Sample Type: LCS
Inject. Date: 21-Feb-2019 07:41:30 ALS Bottle#: 26 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: LCS 680-558728/13-A
Misc. Info.: 680-0053932-005
Operator ID: Instrument ID: CMSX

Method: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\680_CMSX.m
Limit Group: 680
Last Update: 22-Feb-2019 09:37:47 Calib Date: 08-Jan-2019 18:02:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Savannah\ChromData\CMSX\20190108-53107.b\xa0812.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: CTX0319

First Level Reviewer: davisn Date: 22-Feb-2019 09:37:47

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/ml	Flags
A 23 Total Monochlorobiphenyls	188	9.762	9.265 - 10.260		0	205079	1.08	
A 24 Total Dichlorobiphenyls	222	11.569	10.603 - 12.535		0	176787	1.32	
* 5 Phenanthrene-d10	188	12.409	12.409	0.0	100	164188	0.7500	
A 25 Total Trichlorobiphenyls	256	13.255	11.910 - 14.600		0	141116	1.47	
A 26 Total Tetrachlorobiphenyls	292	14.773	13.047 - 16.499		0	197767	2.93	
A 27 Total Pentachlorobiphenyls	326	16.192	14.339 - 18.045		0	190369	3.47	
A 28 Total Hexachlorobiphenyls	360	17.480	15.502 - 19.457		0	183545	3.37	
* 15 Chrysene-d12	240	18.669	18.668	0.001	100	171582	0.7500	a
A 29 Total Heptachlorobiphenyls	394	18.749	17.146 - 20.353		0	253613	4.67	
A 30 Total Octachlorobiphenyls	430	19.718	18.642 - 20.795		0	238961	5.09	
A 31 Total Nonachlorobiphenyls	464	20.250	18.500 - 22.000		0	139953	14.6	
19 PCB-208	464	20.286	20.286	0.0	96	140097	0	
$ 22 Decachlorobiphenyl-13C12	510	21.797	21.796	0.001	77	23217	1.88	a
32 DCB Decachlorobiphenyl	498	21.797	21.796	0.001	77	74989	7.81	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

WorkSheet Quantitation Report

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 23 Total Monochlorobiphenyls									
188	9.328	9.265 -	10.260	22	205079	1.08			
190	9.328				66572		2.5- 3.5	3.1	
152	9.328				115591		50.7- 50.7	0.6	
153	9.328				48419		23.2- 23.2	1.4	
A 24 Total Dichlorobiphenyls									
222	11.569	10.603 -	12.535	23	176787	1.32			
224	11.569				113344		1.3- 1.7	1.6	
152	11.554				139546		31.7- 111.7	0.8	
153	11.554				17682		0.0- 49.1	6.4	
186	11.554				16961		0.0- 48.9	6.7	
188	11.569				6120		0.0- 43.3	18.5	
* 5 Phenanthrene-d10									
188	12.409	12.409	0.0	100	164188	0.7500			
189	12.409	12.409	0.0		24329		5.9- 7.5	6.7	
A 25 Total Trichlorobiphenyls									
256	13.087	11.910 -	14.600	95	141116	1.47			
258	13.087				135077		0.8- 1.2	1.0	
186	13.087				95422		26.5- 106.5	1.4	
188	13.087				30921		0.0- 61.5	4.4	
A 26 Total Tetrachlorobiphenyls									
292	13.367	13.047 -	16.499	0	197767	2.93			
290	13.367				154086		1.1- 1.5	1.3	
220	13.353				193028		58.1- 138.1	0.8	
222	13.353				123321		22.9- 102.9	1.2	
A 27 Total Pentachlorobiphenyls									
326	16.249	14.339 -	18.045	91	190369	3.47			
324	16.249				119339		1.4- 1.8	1.6	
254	16.231				142739		41.9- 121.9	0.8	
256	16.249				136737		38.2- 118.2	0.9	
258	16.249				44114		0.0- 65.4	2.7	
A 28 Total Hexachlorobiphenyls									
360	16.439	15.502 -	19.457	59	183545	3.37			
362	16.439				145798		1.0- 1.4	1.3	
288	16.439				111244		61.3- 61.3	1.3	
290	16.439				141842		220.6- 220.6	1.0	
292	16.439				67177		0.0- 0.0	2.2	
* 15 Chrysene-d12									a
240	18.669	18.668	0.001	100	171582	0.7500			a
241	18.669	18.668	0.001		33019		4.3- 5.9	5.2	
A 29 Total Heptachlorobiphenyls									
394	17.217	17.146 -	20.353	97	253613	4.67			
396	17.217				240228		0.8- 1.2	1.1	
322	17.199				110283		48.3- 48.3	2.2	
324	17.199				176673		77.4- 77.4	1.4	

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 30 Total Octachlorobiphenyls									
430	18.859	18.642	-20.795	96	238961	5.09			
428	18.859				217376		0.9- 1.3	1.1	
356	18.842				88632		39.6- 39.6	2.5	
358	18.842				166788		75.2- 75.2	1.3	
360	18.842				132602		59.6- 59.6	1.6	
A 31 Total Nonachlorobiphenyls									
464	20.286	18.500	-22.000	66	139953	14.6			
466	20.286				101255		1.1- 1.5	1.4	
390	20.286				70728		0.0- 0.0	1.4	
392	20.286				152776		0.0- 0.0	0.7	
394	20.286				142469		0.0- 0.0	0.7	
$ 22 Decachlorobiphenyl-13C12									a
510	21.797	21.796	0.001	77	23217	1.88			a
512	21.797	21.796	0.001		17660		0.9- 1.3	1.3	
32 DCB Decachlorobiphenyl									
498	21.797	21.796	0.001	77	74989	7.81			
500	21.797	21.796	0.001		60499		0.9- 1.3	1.2	
424	21.797	21.796	0.001		35328		0.0- 0.0	1.0	
426	21.797	21.796	0.001		86957		0.0- 0.0	1.0	
428	21.797	21.796	0.001		93723		0.0- 0.0	1.0	
430	21.797	21.796	0.001		58374		0.0- 0.0	1.0	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107486-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW152B-012919	240-107486-2
MRC-MW137A-012919	240-107486-3
MRC-MW140A-012919	240-107486-4
MRC-MW143A-012919	240-107486-5

Comments:

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00146

Analyte	ICV 240-366620/4 02/04/2019 08:20				CCV 240-366620/111 02/04/2019 17:10				CCV 240-366620/123 02/04/2019 18:06			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	12800		12500	103	26700		25000	107	27100		25000	108
Manganese	1530		1500	102	2090		2000	105	2120		2000	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00146

Analyte	CCV 240-366620/135 02/04/2019 19:01				CCV 240-366620/147 02/04/2019 19:58							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	27000		25000	108	27600		25000	110				
Manganese	2120		2000	106	2160		2000	108				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-366620/6 02/04/2019 08:29				CCVL 240-366620/166 02/04/2019 21:27							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	205		200	103	224		200	112				
Manganese	15.5		15.0	103	16.3		15.0	109				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICV Source: MTMSICVW_00088 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-366619/7 02/01/2019 13:50				CCV 240-366619/18 02/01/2019 15:00				CCV 240-366619/30 02/01/2019 15:53			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	204		200	102	251		250	100	240		250	96
Antimony	40.0		40.0	100	52.2		50.0	104	49.7		50.0	99
Arsenic	41.5		40.0	104	51.7		50.0	103	50.9		50.0	102
Barium	40.0		40.0	100	52.1		50.0	104	49.2		50.0	98
Beryllium	39.0		40.0	98	48.9		50.0	98	47.8		50.0	96
Cadmium	40.5		40.0	101	52.7		50.0	105	50.3		50.0	101
Calcium	20400		20000	102	25700		25000	103	24900		25000	99
Chromium	40.5		40.0	101	50.2		50.0	100	49.5		50.0	99
Cobalt	40.8		40.0	102	51.2		50.0	102	50.3		50.0	101
Copper	42.2		40.0	106	53.0		50.0	106	51.9		50.0	104
Iron	10100		10000	101	12900		12500	103	12600		12500	101
Lead	40.8		40.0	102	52.2		50.0	104	48.8		50.0	98
Magnesium	20400		20000	102	25600		25000	103	24700		25000	99
Manganese	206		200	103	259		250	103	251		250	100
Nickel	42.1		40.0	105	52.4		50.0	105	51.6		50.0	103
Potassium	20300		20000	101	25200		25000	101	25100		25000	100
Selenium	42.0		40.0	105	52.5		50.0	105	50.3		50.0	101
Silver	39.7		40.0	99	50.1		50.0	100	47.7		50.0	95
Sodium	20200		20000	101	25800		25000	103	25700		25000	103
Thallium	39.8		40.0	99	53.2		50.0	106	49.7		50.0	99
Vanadium	39.6		40.0	99	49.3		50.0	99	49.0		50.0	98
Zinc	43.1		40.0	108	52.6		50.0	105	51.8		50.0	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICV Source: MTMSICVW_00088 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	CCV 240-366619/42 02/01/2019 16:47											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	243		250	97								
Antimony	50.8		50.0	102								
Arsenic	52.1		50.0	104								
Barium	50.4		50.0	101								
Beryllium	47.1		50.0	94								
Cadmium	51.4		50.0	103								
Calcium	25100		25000	101								
Chromium	50.7		50.0	101								
Cobalt	51.7		50.0	103								
Copper	53.1		50.0	106								
Iron	12800		12500	103								
Lead	49.4		50.0	99								
Magnesium	25100		25000	100								
Manganese	256		250	102								
Nickel	52.6		50.0	105								
Potassium	25000		25000	100								
Selenium	51.1		50.0	102								
Silver	49.1		50.0	98								
Sodium	26000		25000	104								
Thallium	50.7		50.0	101								
Vanadium	49.6		50.0	99								
Zinc	53.5		50.0	107								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICV Source: MTMSCRI6020AW_00077 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00078

Analyte	ICVL 240-366619/9 02/01/2019 13:59				CCVL 240-366619/58 02/01/2019 17:58							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	53.5		50.0	107	47.9	J	50.0	96				
Antimony	2.07		2.00	104	2.02		2.00	101				
Arsenic	5.48		5.00	110	5.39		5.00	108				
Barium	5.32		5.00	106	5.11		5.00	102				
Beryllium	0.911	J	1.00	91	0.975	J	1.00	98				
Cadmium	1.19		1.00	119	1.11		1.00	111				
Calcium	1070		1000	107	992	J	1000	99				
Chromium	1.95	J	2.00	97	1.84	J	2.00	92				
Cobalt	1.12		1.00	112	1.09		1.00	109				
Copper	2.22		2.00	111	2.22		2.00	111				
Iron	114		100	114	111		100	111				
Lead	1.10		1.00	110	1.03		1.00	103				
Magnesium	1120		1000	112	1090		1000	109				
Manganese	5.50		5.00	110	5.24		5.00	105				
Nickel	2.37		2.00	118	2.25		2.00	113				
Potassium	1100		1000	110	1040		1000	104				
Selenium	5.73		5.00	115	5.41		5.00	108				
Silver	1.08		1.00	108	1.04		1.00	104				
Sodium	1070		1000	107	1070		1000	107				
Thallium	1.06		1.00	106	0.981	J	1.00	98				
Vanadium	5.11		5.00	102	5.01		5.00	100				
Zinc	23.1		20.0	115	23.2		20.0	116				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-366620/5 02/04/2019 08:24		CCB 240-366620/112 02/04/2019 17:14		CCB 240-366620/124 02/04/2019 18:10		CCB 240-366620/136 02/04/2019 19:05	
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U	26	U
Manganese	15	2.1	U	2.1	U	2.1	U	2.1	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-366620/148 02/04/2019 20:02							
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U						
Manganese	15	2.1	U						

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-366619/8 02/01/2019 13:55		CCB 240-366619/19 02/01/2019 15:04		CCB 240-366619/31 02/01/2019 15:58		CCB 240-366619/43 02/01/2019 16:51	
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-366460/1-A

Instrument Code: I12 Batch No.: 366620

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	26	U		6010C
7439-96-5	Manganese	2.1	U		6010C

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-366250/1-A

Instrument Code: I10 Batch No.: 366619

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	1.7	U		6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	2.1	U		6020A
7440-02-0	Nickel	1.5	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICSA 240-366620/8 Instrument ID: I12

Lab File ID: I12020419A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**183840**	**92**
Manganese		**0.636**	
Aluminum	*500000*	*496670*	*99*
Antimony		*-2.40*	
Arsenic		*-2.51*	
Barium		*0.206*	
Beryllium		*0.188*	
Boron		*2.32*	
Cadmium		*0.916*	
Calcium	*500000*	*462690*	*93*
Chromium		*2.75*	
Cobalt		*-4.68*	
Copper		*0.184*	
Lead		*4.35*	
Lithium		*26.4*	
Magnesium	*500000*	*495310*	*99*
Molybdenum		*0.0460*	
Nickel		*2.65*	
Potassium		*7.30*	
Selenium		*-3.67*	
Silicon		*13.7*	
Silver		*-1.46*	
Sodium		*39.3*	
Strontium		*9.00*	
Thallium		*-3.33*	
Tin		*-0.0598*	
Titanium		*-1.67*	
Vanadium		*0.153*	
Zinc		*-3.82*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICSAB 240-366620/9 Instrument ID: I12

Lab File ID: I12020419A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Iron	**200000**	**183140**	**92**
Manganese	**500**	**481**	**96**
Aluminum	*500000*	*496330*	*99*
Antimony	*1000*	*968*	*97*
Arsenic	*1000*	*958*	*96*
Barium	*500*	*486*	*97*
Beryllium	*500*	*480*	*96*
Boron	*500*	*495*	*99*
Cadmium	*1000*	*988*	*99*
Calcium	*500000*	*464660*	*93*
Chromium	*500*	*480*	*96*
Cobalt	*500*	*482*	*96*
Copper	*500*	*531*	*106*
Lead	*1000*	*842*	*84*
Lithium	*500*	*538*	*108*
Magnesium	*500000*	*492480*	*98*
Molybdenum	*1000*	*922*	*92*
Nickel	*1000*	*954*	*95*
Potassium	*10000*	*10063*	*101*
Selenium	*1000*	*952*	*95*
Silicon	*10000*	*9748*	*97*
Silver	*1000*	*1081*	*108*
Sodium	*10000*	*10025*	*100*
Strontium	*1500*	*1387*	*92*
Thallium	*1000*	*895*	*89*
Tin	*500*	*493*	*99*
Titanium	*500*	*497*	*99*
Vanadium	*500*	*473*	*95*
Zinc	*1000*	*958*	*96*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICSA 240-366619/10 Instrument ID: I10

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**48586**	**97**
Antimony		**0.0140**	
Arsenic		**0.0890**	
Barium		**0.0300**	
Beryllium		**0.0000**	
Cadmium		**0.354**	
Calcium	**50000**	**48548**	**97**
Chromium		**-0.0770**	
Cobalt		**-0.0010**	
Copper		**0.0290**	
Iron	**50000**	**48554**	**97**
Lead		**-0.0050**	
Magnesium	**50000**	**49936**	**100**
Manganese		**0.190**	
Nickel		**0.111**	
Potassium	**50000**	**49777**	**100**
Selenium		**-0.0070**	
Silver		**0.0120**	
Sodium	**50000**	**51245**	**102**
Thallium		**-0.0370**	
Vanadium		**-0.0540**	
Zinc		**0.631**	
Boron		*1.14*	
Lithium		*-0.262*	
Molybdenum	*1000*	*1020*	*102*
Strontium		*0.433*	
Tin		*-0.353*	
Titanium	*1000*	*977*	*98*
Tungsten		*0.145*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Lab Sample ID: ICSAB 240-366619/11 Instrument ID: I10

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Aluminum	**50000**	**50219**	**100**
Antimony	**100**	**102**	**102**
Arsenic	**100**	**107**	**107**
Barium	**100**	**101**	**101**
Beryllium	**100**	**104**	**104**
Cadmium	**100**	**101**	**101**
Calcium	**50000**	**50246**	**100**
Chromium	**100**	**105**	**105**
Cobalt	**100**	**106**	**106**
Copper	**100**	**106**	**106**
Iron	**50000**	**51637**	**103**
Lead	**100**	**106**	**106**
Magnesium	**50000**	**52758**	**106**
Manganese	**100**	**104**	**104**
Nickel	**100**	**107**	**107**
Potassium	**50000**	**51892**	**104**
Selenium	**100**	**107**	**107**
Silver	**100**	**97.2**	**97**
Sodium	**50000**	**53880**	**108**
Thallium	**100**	**102**	**102**
Vanadium	**100**	**103**	**103**
Zinc	**100**	**105**	**105**
Boron	*100*	*92.4*	*92*
Lithium	*100*	*89.9*	*90*
Molybdenum	*1100*	*1127*	*102*
Strontium	*100*	*93.3*	*93*
Tin	*100*	*102*	*102*
Titanium	*1100*	*1105*	*100*
Tungsten	*100*	*107*	*107*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW137A-012919 MS
Lab ID: 240-107486-3 MS
Lab Name: TestAmerica Canton
Job No.: 240-107486-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Silver	95.3		0.053	U	100	95	75-125		6020A
Aluminum	10300		1000		10000	92	75-125		6020A
Arsenic	977		0.75	U	1000	98	75-125		6020A
Barium	1080		100		1000	98	75-125		6020A
Beryllium	1110		5.5		1000	110	75-125		6020A
Cadmium	962		0.90	J	1000	96	75-125		6020A
Cobalt	1030		79		1000	95	75-125		6020A
Chromium	935		2.3		1000	93	75-125		6020A
Copper	986		23		1000	96	75-125		6020A
Iron	9890		250		10000	96	75-125		6020A
Manganese	1150		200		1000	95	75-125		6020A
Nickel	1130		160		1000	97	75-125		6020A
Lead	942		0.45	U	1000	94	75-125		6020A
Antimony	96.7		0.82	J	100	96	75-125		6020A
Selenium	926		3.5	J	1000	92	75-125		6020A
Thallium	228		0.20	U	250	91	75-125		6020A
Vanadium	926		1.5	J	1000	92	75-125		6020A
Zinc	1140		200		1000	95	75-125		6020A
Calcium	51200		42000		10000	90	75-125	4	6020A
Potassium	33500		24000		10000	99	75-125		6020A
Magnesium	29800		20000		10000	100	75-125		6020A
Sodium	165000		160000		10000	58	75-125	4	6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW137A-012919 MSD
Lab ID: 240-107486-3 MSD
Lab Name: TestAmerica Canton
Job No.: 240-107486-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Silver	90.3		100	90	75-125	5	20		6020A
Aluminum	10100		10000	91	75-125	2	20		6020A
Arsenic	954		1000	95	75-125	2	20		6020A
Barium	1070		1000	97	75-125	1	20		6020A
Beryllium	1090		1000	109	75-125	1	20		6020A
Cadmium	950		1000	95	75-125	1	20		6020A
Cobalt	1020		1000	94	75-125	2	20		6020A
Chromium	933		1000	93	75-125	0	20		6020A
Copper	963		1000	94	75-125	2	20		6020A
Iron	9660		10000	94	75-125	2	20		6020A
Manganese	1100		1000	91	75-125	4	20		6020A
Nickel	1110		1000	95	75-125	2	20		6020A
Lead	937		1000	94	75-125	1	20		6020A
Antimony	96.2		100	95	75-125	1	20		6020A
Selenium	916		1000	91	75-125	1	20		6020A
Thallium	230		250	92	75-125	1	20		6020A
Vanadium	909		1000	91	75-125	2	20		6020A
Zinc	1130		1000	93	75-125	1	20		6020A
Calcium	51100		10000	89	75-125	0	20	4	6020A
Potassium	33300		10000	97	75-125	1	20		6020A
Magnesium	29400		10000	96	75-125	1	20		6020A
Sodium	165000		10000	59	75-125	0	20	4	6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW143A-012919 MS
Lab ID: 240-107486-5 MS
Lab Name: TestAmerica Canton
Job No.: 240-107486-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Silver	92.3		0.053	U	100	92	75-125		6020A
Aluminum	12100		3000		10000	91	75-125		6020A
Arsenic	950		0.75	U	1000	95	75-125		6020A
Barium	1100		130		1000	97	75-125		6020A
Beryllium	1100		17		1000	108	75-125		6020A
Cadmium	925		1.2		1000	92	75-125		6020A
Cobalt	1150		210		1000	93	75-125		6020A
Chromium	927		2.8		1000	92	75-125		6020A
Copper	947		31		1000	92	75-125		6020A
Iron	10800		1500		10000	93	75-125		6020A
Manganese	1200		270		1000	93	75-125		6020A
Nickel	1260		340		1000	92	75-125		6020A
Lead	895		1.6		1000	89	75-125		6020A
Antimony	95.1		0.57	U	100	95	75-125		6020A
Selenium	912		10		1000	90	75-125		6020A
Thallium	217		0.20	U	250	87	75-125		6020A
Vanadium	905		0.82	U	1000	90	75-125		6020A
Zinc	1380		460		1000	93	75-125		6020A
Calcium	46800		37000		10000	95	75-125		6020A
Potassium	21600		13000		10000	91	75-125		6020A
Magnesium	42700		32000		10000	106	75-125		6020A
Sodium	282000		270000		10000	142	75-125	4	6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW143A-012919 MSD
Lab ID: 240-107486-5 MSD
Lab Name: TestAmerica Canton
Job No.: 240-107486-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Silver	95.8		100	96	75-125	4	20		6020A
Aluminum	12300		10000	93	75-125	2	20		6020A
Arsenic	971		1000	97	75-125	2	20		6020A
Barium	1130		1000	100	75-125	2	20		6020A
Beryllium	1110		1000	109	75-125	1	20		6020A
Cadmium	941		1000	94	75-125	2	20		6020A
Cobalt	1170		1000	95	75-125	2	20		6020A
Chromium	947		1000	94	75-125	2	20		6020A
Copper	974		1000	94	75-125	3	20		6020A
Iron	10800		10000	93	75-125	0	20		6020A
Manganese	1180		1000	90	75-125	2	20		6020A
Nickel	1280		1000	94	75-125	2	20		6020A
Lead	927		1000	93	75-125	4	20		6020A
Antimony	96.7		100	97	75-125	2	20		6020A
Selenium	918		1000	91	75-125	1	20		6020A
Thallium	225		250	90	75-125	3	20		6020A
Vanadium	935		1000	93	75-125	3	20		6020A
Zinc	1400		1000	94	75-125	1	20		6020A
Calcium	46500		10000	92	75-125	1	20		6020A
Potassium	22000		10000	94	75-125	2	20		6020A
Magnesium	41800		10000	97	75-125	2	20		6020A
Sodium	284000		10000	160	75-125	1	20	4	6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-366460/2-A

Lab Name: TestAmerica Canton Job No.: 240-107486-1

Sample Matrix: Water LCS Source: MTICP1_00079

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	1100		110	80	120		6010C
Manganese	500	533		107	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-366250/2-A

Lab Name: TestAmerica Canton Job No.: 240-107486-1

Sample Matrix: Water LCS Source: MTICPMSB_00037

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	96.5		97	80	120		6020A
Aluminum	10000	9530		95	80	120		6020A
Arsenic	1000	1050		105	80	120		6020A
Barium	1000	985		99	80	120		6020A
Beryllium	1000	1040		104	80	120		6020A
Cadmium	1000	1020		102	80	120		6020A
Cobalt	1000	1010		101	80	120		6020A
Chromium	1000	973		97	80	120		6020A
Copper	1000	1060		106	80	120		6020A
Iron	10000	10100		101	80	120		6020A
Manganese	1000	1010		101	80	120		6020A
Nickel	1000	1040		104	80	120		6020A
Lead	1000	1010		101	80	120		6020A
Antimony	100	97.4		97	80	120		6020A
Selenium	1000	1040		104	80	120		6020A
Thallium	250	244		98	80	120		6020A
Vanadium	1000	921		92	80	120		6020A
Zinc	1000	1080		108	80	120		6020A
Calcium	10000	9490		95	80	120		6020A
Potassium	10000	9650		97	80	120		6020A
Magnesium	10000	9990		100	80	120		6020A
Sodium	10000	9880		99	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107486-3

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107486-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Silver	0.053	U	4.53	J	NC		6020A
Aluminum	1000		1480		NC		6020A
Arsenic	0.75	U	53.6		NC		6020A
Barium	100		152		NC		6020A
Beryllium	5.5		49.8		NC		6020A
Cadmium	0.90	J	52.3		NC		6020A
Cobalt	79		136		NC		6020A
Chromium	2.3		48.7		NC		6020A
Copper	23		79.1		NC		6020A
Iron	250		720		NC		6020A
Manganese	200		260		NC		6020A
Nickel	160		230		NC		6020A
Lead	0.45	U	54.0		NC		6020A
Antimony	0.82	J	4.99	J	NC		6020A
Selenium	3.5	J	61.7		NC		6020A
Thallium	0.20	U	14.9		NC		6020A
Vanadium	1.5	J	49.4		NC		6020A
Zinc	200		271		NC		6020A
Calcium	42000		44000		NC		6020A
Potassium	24000		24900		NC		6020A
Magnesium	20000		21100		NC		6020A
Sodium	160000		159000		0.19		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107486-5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107486-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Silver	0.053	U	0.27	U	NC		6020A
Aluminum	3000		2860		NC		6020A
Arsenic	0.75	U	3.8	U	NC		6020A
Barium	130		132		NC		6020A
Beryllium	17		15.8		NC		6020A
Cadmium	1.2		1.26	J	NC		6020A
Cobalt	210		220		4.1		6020A
Chromium	2.8		4.9	U	NC		6020A
Copper	31		32.2		NC		6020A
Iron	1500		1570		NC		6020A
Manganese	270		277		NC		6020A
Nickel	340		359		4.7		6020A
Lead	1.6		2.3	U	NC		6020A
Antimony	0.57	U	2.9	U	NC		6020A
Selenium	10		11.6	J	NC		6020A
Thallium	0.20	U	1.0	U	NC		6020A
Vanadium	0.82	U	4.1	U	NC		6020A
Zinc	460		503		NC		6020A
Calcium	37000		37500		NC		6020A
Potassium	13000		12800		NC		6020A
Magnesium	32000		33300		NC		6020A
Sodium	270000		270000		0.87		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: I10

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: I10

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG No.:

ICP-AES Instrument ID: I12 Date: 12/21/2018

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	V	
Aluminum										0.034040				0.056989	
Antimony		-0.00006			-0.000422			-0.000035						0.002232	
Arsenic		0.000009			-0.000202	0.00931			-0.0003555	0.00123617					
Beryllium														0.000235	
Cadmium			0.012308					0.000004							
Chromium									0.000415						
Cobalt													0.002128		
Copper				0.000018	0.000361			-0.000032					-0.003157		
Lead		-0.000091					0.00057707	0.000048			0.000131	0.000025			
Lithium				0.000011											
Nickel					0.000518			0.000059							
Selenium		-0.000032							0.000338						
Thallium		0.000034			0.003802			-0.000025	-0.0006202 3					0.001371	
Vanadium								0.000064							
Zinc						-0.001092									

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107486-1

SDG No.:

Instrument ID: I12 Date: 01/28/2019 12:19

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		15000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107486-1

SDG No.:

Instrument ID: I10 Date: 10/24/2018 15:39

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		5000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-366460/1-A	02/01/2019 14:00	366460		50	50
LCS 240-366460/2-A	02/01/2019 14:00	366460		50	50
240-107486-2	02/01/2019 14:00	366460		50	50
240-107486-3	02/01/2019 14:00	366460		50	50
240-107486-4	02/01/2019 14:00	366460		50	50
240-107486-5	02/01/2019 14:00	366460		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-366250/1-A	01/31/2019 14:00	366250		50	50
LCS 240-366250/2-A	01/31/2019 14:00	366250		50	50
240-107486-5	01/31/2019 14:00	366250		50	50
240-107486-5 MS	01/31/2019 14:00	366250		50	50
240-107486-5 MSD	01/31/2019 14:00	366250		50	50
240-107486-3	01/31/2019 14:00	366250		50	50
240-107486-3 MS	01/31/2019 14:00	366250		50	50
240-107486-3 MSD	01/31/2019 14:00	366250		50	50
240-107486-2	01/31/2019 14:00	366250		50	50
240-107486-4	01/31/2019 14:00	366250		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/04/2019 08:05 End Date: 02/05/2019 01:06

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ICIS 240-366620/1	1		08:05	X	X																							
CALSTD 240-366620/2 IC			08:10	X	X																							
CALSTD 240-366620/3 IC			08:15	X	X																							
ICV 240-366620/4	1		08:20	X	X																							
ICB 240-366620/5	1		08:24	X	X																							
ICVL 240-366620/6	1		08:29	X	X																							
ZZZZZZ			08:33																									
ICSA 240-366620/8	1		08:38	X	X																							
ICSAB 240-366620/9	1		08:43	X	X																							
CCV 240-366620/10			08:47																									
CCB 240-366620/11			08:52																									
ZZZZZZ			08:56																									
ZZZZZZ			09:01																									
ZZZZZZ			09:06																									
ZZZZZZ			09:10																									
ZZZZZZ			09:15																									
ZZZZZZ			09:20																									
CCV 240-366620/18			09:25																									
CCB 240-366620/19			09:29																									
ZZZZZZ			09:34																									
ZZZZZZ			09:39																									
ZZZZZZ			09:43																									
ZZZZZZ			09:47																									
CCV 240-366620/24			09:52																									
CCB 240-366620/25			09:56																									
ZZZZZZ			10:18																									
CCV 240-366620/27			10:23																									
CCB 240-366620/28			10:27																									
ZZZZZZ			10:48																									
ZZZZZZ			10:53																									
ZZZZZZ			10:57																									
ZZZZZZ			11:02																									
ZZZZZZ			11:06																									
ZZZZZZ			11:11																									
ZZZZZZ			11:15																									
ZZZZZZ			11:20																									
ZZZZZZ			11:24																									
ZZZZZZ			11:29																									
CCV 240-366620/39			11:33																									
CCB 240-366620/40			11:38																									
ZZZZZZ			11:42																									
ZZZZZZ			11:47																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/04/2019 08:05 End Date: 02/05/2019 01:06

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			11:52																									
ZZZZZZ			11:56																									
ZZZZZZ			12:01																									
ZZZZZZ			12:05																									
ZZZZZZ			12:10																									
ZZZZZZ			12:15																									
ZZZZZZ			12:20																									
ZZZZZZ			12:24																									
CCV 240-366620/51			12:29																									
CCB 240-366620/52			12:33																									
ZZZZZZ			12:38																									
ZZZZZZ			12:42																									
ZZZZZZ			12:47																									
ZZZZZZ			12:51																									
ZZZZZZ			12:56																									
ZZZZZZ			13:01																									
ZZZZZZ			13:05																									
ZZZZZZ			13:10																									
ZZZZZZ			13:15																									
ZZZZZZ			13:19																									
CCV 240-366620/63			13:24																									
CCB 240-366620/64			13:28																									
ZZZZZZ			13:33																									
ZZZZZZ			13:38																									
ZZZZZZ			13:43																									
ZZZZZZ			13:47																									
ZZZZZZ			13:52																									
ZZZZZZ			13:57																									
ZZZZZZ			14:01																									
ZZZZZZ			14:06																									
ZZZZZZ			14:11																									
ZZZZZZ			14:15																									
CCV 240-366620/75			14:20																									
CCB 240-366620/76			14:24																									
ZZZZZZ			14:29																									
ZZZZZZ			14:34																									
ZZZZZZ			14:38																									
ZZZZZZ			14:43																									
ZZZZZZ			14:47																									
ZZZZZZ			14:52																									
ZZZZZZ			14:57																									
ZZZZZZ			15:01																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/04/2019 08:05 End Date: 02/05/2019 01:06

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			15:06																										
ZZZZZZ			15:11																										
CCV 240-366620/87			15:16																										
CCB 240-366620/88			15:20																										
ZZZZZZ			15:25																										
ZZZZZZ			15:30																										
ZZZZZZ			15:34																										
ZZZZZZ			15:39																										
ZZZZZZ			15:44																										
ZZZZZZ			15:48																										
ZZZZZZ			15:53																										
ZZZZZZ			15:58																										
ZZZZZZ			16:03																										
ZZZZZZ			16:07																										
CCV 240-366620/99			16:12																										
CCB 240-366620/100			16:16																										
ZZZZZZ			16:21																										
ZZZZZZ			16:26																										
ZZZZZZ			16:31																										
ZZZZZZ			16:36																										
ZZZZZZ			16:41																										
ZZZZZZ			16:46																										
ZZZZZZ			16:50																										
ZZZZZZ			16:55																										
ZZZZZZ			17:00																										
ZZZZZZ			17:05																										
CCV 240-366620/111	1		17:10	X	X																								
CCB 240-366620/112	1		17:14	X	X																								
ZZZZZZ			17:19																										
ZZZZZZ			17:23																										
ZZZZZZ			17:28																										
ZZZZZZ			17:32																										
ZZZZZZ			17:37																										
ZZZZZZ			17:42																										
ZZZZZZ			17:46																										
ZZZZZZ			17:51																										
ZZZZZZ			17:56																										
MB 240-366460/1-A	1	R	18:01	X	X																								
CCV 240-366620/123	1		18:06	X	X																								
CCB 240-366620/124	1		18:10	X	X																								
CCVL 240-366620/125			18:15																										
LCS 240-366460/2-A	1	R	18:19	X	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/04/2019 08:05 End Date: 02/05/2019 01:06

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			18:24																										
ZZZZZZ			18:28																										
ZZZZZZ			18:33																										
ZZZZZZ			18:38																										
ZZZZZZ			18:42																										
ZZZZZZ			18:47																										
ZZZZZZ			18:51																										
ZZZZZZ			18:56																										
CCV 240-366620/135	1		19:01	X	X																								
CCB 240-366620/136	1		19:05	X	X																								
ZZZZZZ			19:10																										
ZZZZZZ			19:15																										
240-107486-2	1	R	19:19	X	X																								
240-107486-3	1	R	19:24	X	X																								
240-107486-4	1	R	19:29	X	X																								
240-107486-5	1	R	19:33	X	X																								
ZZZZZZ			19:38																										
ZZZZZZ			19:43																										
ZZZZZZ			19:48																										
ZZZZZZ			19:53																										
CCV 240-366620/147	1		19:58	X	X																								
CCB 240-366620/148	1		20:02	X	X																								
ZZZZZZ			20:07																										
ZZZZZZ			20:12																										
ZZZZZZ			20:17																										
ZZZZZZ			20:21																										
ZZZZZZ			20:26																										
ZZZZZZ			20:31																										
ZZZZZZ			20:35																										
ZZZZZZ			20:40																										
ZZZZZZ			20:45																										
ZZZZZZ			20:50																										
CCV 240-366620/159			20:54																										
CCB 240-366620/160			20:59																										
ZZZZZZ			21:03																										
ZZZZZZ			21:08																										
ZZZZZZ			21:13																										
ZZZZZZ			21:18																										
ZZZZZZ			21:23																										
CCVL 240-366620/166	1		21:27	X	X																								
ZZZZZZ			21:32																										
ZZZZZZ			21:36																										

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/04/2019 08:05 End Date: 02/05/2019 01:06

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			21:41																									
ZZZZZZ			21:45																									
CCV 240-366620/171			21:50																									
CCB 240-366620/172			21:54																									
ZZZZZZ			21:59																									
ZZZZZZ			22:03																									
ZZZZZZ			22:08																									
ZZZZZZ			22:13																									
ZZZZZZ			22:17																									
ZZZZZZ			22:22																									
ZZZZZZ			22:26																									
ZZZZZZ			22:31																									
ZZZZZZ			22:36																									
ZZZZZZ			22:41																									
CCV 240-366620/183			22:45																									
CCB 240-366620/184			22:50																									
ZZZZZZ			22:55																									
ZZZZZZ			22:59																									
ZZZZZZ			23:04																									
ZZZZZZ			23:09																									
ZZZZZZ			23:14																									
ZZZZZZ			23:19																									
ZZZZZZ			23:23																									
ZZZZZZ			23:28																									
ZZZZZZ			23:33																									
ZZZZZZ			23:37																									
CCV 240-366620/195			23:42																									
CCB 240-366620/196			23:46																									
ZZZZZZ			23:51																									
ZZZZZZ			23:56																									
ZZZZZZ			00:01																									
ZZZZZZ			00:05																									
ZZZZZZ			00:10																									
ZZZZZZ			00:15																									
ZZZZZZ			00:20																									
ZZZZZZ			00:25																									
ZZZZZZ			00:29																									
ZZZZZZ			00:34																									
CCV 240-366620/207			00:39																									
CCB 240-366620/208			00:43																									
ZZZZZZ			00:48																									
ZZZZZZ			00:52																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/04/2019 08:05 End Date: 02/05/2019 01:06

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			00:57																									
CCV 240-366620/212			01:02																									
CCB 240-366620/213			01:06																									

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 02/01/2019 13:24 End Date: 02/01/2019 23:01

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn						
ZZZZZZ			13:24																												
ICIS 240-366619/2			13:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD1 240-366619/3 IC	1		13:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD2 240-366619/4 IC	1		13:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD3 240-366619/5 IC	1		13:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD4 240-366619/6 IC	1		13:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICV 240-366619/7	1		13:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICB 240-366619/8	1		13:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICVL 240-366619/9	1		13:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSA 240-366619/10	1		14:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSAB 240-366619/11	1		14:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-366619/12			14:13																												
CCB 240-366619/13			14:17																												
ZZZZZZ			14:42																												
ZZZZZZ			14:46																												
ZZZZZZ			14:51																												
ZZZZZZ			14:55																												
CCV 240-366619/18	1		15:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-366619/19	1		15:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
MB 240-366250/1-A	1	R	15:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
LCS 240-366250/2-A	1	R	15:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-5	1	R	15:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-5 SD	5	R	15:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			15:26																												
240-107486-5 MS	1	R	15:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-5 MSD	1	R	15:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-3	1	R	15:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-3 SD	5	R	15:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			15:49																												
CCV 240-366619/30	1		15:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-366619/31	1		15:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-3 MS	1	R	16:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-3 MSD	1	R	16:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-2	1	R	16:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107486-4	1	R	16:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			16:20																												
ZZZZZZ			16:24																												
ZZZZZZ			16:29																												
ZZZZZZ			16:33																												
ZZZZZZ			16:38																												
ZZZZZZ			16:42																												
CCV 240-366619/42	1		16:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 02/01/2019 13:24 End Date: 02/01/2019 23:01

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn							
CCB 240-366619/43	1		16:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ZZZZZZ			16:56																												
ZZZZZZ			17:00																												
ZZZZZZ			17:04																												
ZZZZZZ			17:09																												
ZZZZZZ			17:13																												
ZZZZZZ			17:18																												
ZZZZZZ			17:22																												
ZZZZZZ			17:27																												
ZZZZZZ			17:31																												
ZZZZZZ			17:36																												
CCV 240-366619/54			17:40																												
CCB 240-366619/55			17:44																												
CCV 240-366619/56			17:49																												
CCB 240-366619/57			17:53																												
CCVL 240-366619/58	1		17:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ZZZZZZ			18:02																												
ZZZZZZ			18:07																												
ZZZZZZ			18:11																												
ZZZZZZ			18:16																												
ZZZZZZ			18:20																												
ZZZZZZ			18:25																												
ZZZZZZ			18:29																												
ZZZZZZ			18:34																												
ZZZZZZ			18:38																												
CCV 240-366619/68			18:43																												
CCB 240-366619/69			18:47																												
ZZZZZZ			18:51																												
ZZZZZZ			18:56																												
ZZZZZZ			19:00																												
ZZZZZZ			19:05																												
ZZZZZZ			19:09																												
CCV 240-366619/75			19:14																												
CCB 240-366619/76			19:18																												
CCVL 240-366619/77			19:23																												
ZZZZZZ			19:27																												
ZZZZZZ			19:32																												
ZZZZZZ			19:36																												
ZZZZZZ			19:41																												
ZZZZZZ			19:45																												
ZZZZZZ			19:49																												
ZZZZZZ			19:54																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 02/01/2019 13:24 End Date: 02/01/2019 23:01

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			19:58																												
ZZZZZZ			20:03																												
CCV 240-366619/87			20:07																												
CCB 240-366619/88			20:12																												
ZZZZZZ			20:16																												
ZZZZZZ			20:21																												
ZZZZZZ			20:25																												
ZZZZZZ			20:30																												
ZZZZZZ			20:34																												
ZZZZZZ			20:38																												
ZZZZZZ			20:43																												
ZZZZZZ			20:47																												
ZZZZZZ			20:52																												
ZZZZZZ			20:56																												
CCV 240-366619/99			21:01																												
CCB 240-366619/100			21:05																												
ZZZZZZ			21:10																												
ZZZZZZ			21:14																												
ZZZZZZ			21:18																												
CCV 240-366619/104			21:23																												
CCB 240-366619/105			21:27																												
CCVL 240-366619/106			21:32																												
ZZZZZZ			21:36																												
ZZZZZZ			21:41																												
ZZZZZZ			21:45																												
ZZZZZZ			21:50																												
ZZZZZZ			21:54																												
ZZZZZZ			21:59																												
ZZZZZZ			22:03																												
ZZZZZZ			22:08																												
ZZZZZZ			22:12																												
CCV 240-366619/116			22:16																												
CCB 240-366619/117			22:21																												
ZZZZZZ			22:25																												
ZZZZZZ			22:30																												
ZZZZZZ			22:34																												
ZZZZZZ			22:39																												
CCV 240-366619/122			22:43																												
CCB 240-366619/123			22:48																												
CCVL 240-366619/124			22:52																												
CCV 240-366619/125			22:57																												
CCB 240-366619/126			23:01																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: I10 Analysis Method: 6020A

Start Date: 02/01/2019 13:24 End Date: 02/01/2019 23:01

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				

Prep Types:
R = Total Recoverable

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICP Instrument ID: I12 Start Date: 02/04/2019 End Date: 02/04/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-366620/1	08:05										
ICV 240-366620/4	08:20	90		97		98		101			
ICB 240-366620/5	08:24	99		99		100		100			
ICVL 240-366620/6	08:29	97		98		99		100			
ICSA 240-366620/8	08:38	73		87		85		97			
ICSAB 240-366620/9	08:43	73		87		85		97			
CCV 240-366620/111	17:10	86		95		95		102			
CCB 240-366620/112	17:14	101		99		100		102			
MB 240-366460/1-A	18:01	100		99		99		101			
CCV 240-366620/123	18:06	85		94		93		98			
CCB 240-366620/124	18:10	99		98		99		100			
LCS 240-366460/2-A	18:19	88		94		94		100			
CCV 240-366620/135	19:01	86		95		94		102			
CCB 240-366620/136	19:05	101		99		100		103			
240-107486-2	19:19	97		99		99		104			
240-107486-3	19:24	88		100		99		108			
240-107486-4	19:29	84		117		117		128			
240-107486-5	19:33	85		114		113		125			
CCV 240-366620/147	19:58	84		94		92		97			
CCB 240-366620/148	20:02	99		98		98		98			
CCVL 240-366620/166	21:27	97		98		97		98			

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICP-MS Instrument ID: I10 Start Date: 02/01/2019 End Date: 02/01/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Rh	Q	Element In	Q
STD1 240-366619/3 IC	13:33	103		94		102		96		96	
STD2 240-366619/4 IC	13:37	93		88		96		88		88	
STD3 240-366619/5 IC	13:42	91		87		96		84		85	
STD4 240-366619/6 IC	13:46	106		92		103		100		96	
ICV 240-366619/7	13:50	95		88		100		90		89	
ICB 240-366619/8	13:55	106		92		103		99		98	
ICVL 240-366619/9	13:59	113		92		103		97		95	
ICSA 240-366619/10	14:04	77		80		80		81		82	
ICSAB 240-366619/11	14:08	67		79		77		83		81	
CCV 240-366619/18	15:00	92		85		92		87		84	
CCB 240-366619/19	15:04	101		93		100		100		95	
MB 240-366250/1-A	15:09	105		88		100		95		95	
LCS 240-366250/2-A	15:13	91		78		86		85		82	
240-107486-5	15:17	80		84		90		79		82	
240-107486-5 SD	15:22	100		92		99		92		94	
240-107486-5 MS	15:31	66		78		78		77		77	
240-107486-5 MSD	15:35	64		79		77		77		78	
240-107486-3	15:40	79		92		87		90		89	
240-107486-3 SD	15:44	90		93		95		100		97	
CCV 240-366619/30	15:53	85		91		89		96		92	
CCB 240-366619/31	15:58	94		98		96		105		100	
240-107486-3 MS	16:02	68		81		80		82		81	
240-107486-3 MSD	16:07	63		82		76		85		82	
240-107486-2	16:11	86		94		91		100		96	
240-107486-4	16:15	70		88		84		85		83	
CCV 240-366619/42	16:47	91		86		93		93		89	
CCB 240-366619/43	16:51	91		92		90		103		98	
CCVL 240-366619/58	17:58	66		92		74		104		98	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

ICP-MS Instrument ID: I10 Start Date: 02/01/2019 End Date: 02/01/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD1 240-366619/3 IC	13:33	100		101		97					
STD2 240-366619/4 IC	13:37	92		93		87					
STD3 240-366619/5 IC	13:42	89		92		82					
STD4 240-366619/6 IC	13:46	101		102		98					
ICV 240-366619/7	13:50	94		96		90					
ICB 240-366619/8	13:55	101		102		98					
ICVL 240-366619/9	13:59	102		102		99					
ICSA 240-366619/10	14:04	83		84		82					
ICSAB 240-366619/11	14:08	85		87		83					
CCV 240-366619/18	15:00	92		92		87					
CCB 240-366619/19	15:04	102		102		99					
MB 240-366250/1-A	15:09	100		103		101					
LCS 240-366250/2-A	15:13	89		93		89					
240-107486-5	15:17	91		92		78					
240-107486-5 SD	15:22	100		101		92					
240-107486-5 MS	15:31	87		88		75					
240-107486-5 MSD	15:35	88		88		75					
240-107486-3	15:40	97		98		86					
240-107486-3 SD	15:44	104		104		98					
CCV 240-366619/30	15:53	100		100		93					
CCB 240-366619/31	15:58	106		107		105					
240-107486-3 MS	16:02	89		92		80					
240-107486-3 MSD	16:07	91		92		81					
240-107486-2	16:11	105		105		99					
240-107486-4	16:15	97		96		81					
CCV 240-366619/42	16:47	100		101		93					
CCB 240-366619/43	16:51	105		103		103					
CCVL 240-366619/58	17:58	109		110		107					

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366460 Batch Start Date: 02/01/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/01/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00079	MTICP2A 00090	MTTMHCL 00234
MB 240-366460/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-366460/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107486-I-2	MRC-MW152B-012919	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107486-I-3	MRC-MW137A-012919	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107486-I-4	MRC-MW140A-012919	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107486-I-5	MRC-MW143A-012919	3005A, 6010C	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180
MB 240-366460/1		3005A, 6010C		1 mL
LCS 240-366460/2		3005A, 6010C		1 mL
240-107486-I-2	MRC-MW152B-012919	3005A, 6010C	R	1 mL
240-107486-I-3	MRC-MW137A-012919	3005A, 6010C	R	1 mL
240-107486-I-4	MRC-MW140A-012919	3005A, 6010C	R	1 mL
240-107486-I-5	MRC-MW143A-012919	3005A, 6010C	R	1 mL

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb4
Pipette/Syringe/Dispenser ID	mp1
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366460 Batch Start Date: 02/01/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/01/19 22:00

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366250 Batch Start Date: 01/31/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 01/31/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00037	MTICPMSB 00037	MTTMHCL 00234
MB 240-366250/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-366250/2		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107486-I-5	MRC-MW143A-012919	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107486-I-5 MS	MRC-MW143A-012919	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107486-I-5 MSD	MRC-MW143A-012919	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107486-I-3	MRC-MW137A-012919	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107486-I-3 MS	MRC-MW137A-012919	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107486-I-3 MSD	MRC-MW137A-012919	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107486-I-2	MRC-MW152B-012919	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107486-I-4	MRC-MW140A-012919	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-366250/1		3005A, 6020A		1 mL					
LCS 240-366250/2		3005A, 6020A		1 mL					
240-107486-I-5	MRC-MW143A-012919	3005A, 6020A	R	1 mL					
240-107486-I-5 MS	MRC-MW143A-012919	3005A, 6020A	R	1 mL					
240-107486-I-5 MSD	MRC-MW143A-012919	3005A, 6020A	R	1 mL					
240-107486-I-3	MRC-MW137A-012919	3005A, 6020A	R	1 mL					
240-107486-I-3 MS	MRC-MW137A-012919	3005A, 6020A	R	1 mL					
240-107486-I-3 MSD	MRC-MW137A-012919	3005A, 6020A	R	1 mL					
240-107486-I-2	MRC-MW152B-012919	3005A, 6020A	R	1 mL					
240-107486-I-4	MRC-MW140A-012919	3005A, 6020A	R	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366250 Batch Start Date: 01/31/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 01/31/19 22:00

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb3
Pipette/Syringe/Dispenser ID	mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Sample Calculation - 1

Client Sample ID: MRC-MW137A-012919 Lab Sample ID: 240-107486-3

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG ID.:

Matrix: Water Date Sampled: 01/29/2019 13:00

Reporting Basis: WET Date Received: 01/30/2019 10:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	320	200	26	ug/L			1	6010C
7439-96-5	Manganese	210	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	1000	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	100	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	5.5	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.90	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	79	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.3	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	23	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	250	100	47	ug/L			1	6020A
7439-96-5	Manganese	200	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	160	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.82	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	3.5	5.0	0.89	ug/L	J		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	1.5	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	200	20	15	ug/L			1	6020A
7440-70-2	Calcium	42000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	24000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	20000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	160000	1000	330	ug/L			1	6020A

Sample Report

Sample Table

Sample Name	240-107486-i-3-a
Data File Name	027SMPL.d
Data Path Name	D:\Analytical Runs\I10020119A.b
Acq Date Time	2019-02-01T15:40:19-05:00
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Li	7	45	2	NoGas	3.937	3.937	4.44	365015	0.00	10000	
Be	9	6	2	NoGas	5.493	5.493	3.76	37093	0.01	2000	
B	11	45	2	NoGas	28.928	28.928	1.41	186122	0.02	300	
Na	23	45	1	He	159011.985	159011.985	2.25	438672073	0.04	500000	
Mg	24	45	1	He	19850.239	19850.239	0.94	28519141	0.07	500000	
Al	27	45	1	He	1034.818	1034.818	0.46	708390	0.15	200000	
K	39	45	1	He	23630.937	23630.937	1.22	40665887	0.06	500000	
Ca	44	45	1	He	42273.112	42273.112	0.63	1811419	2.33	500000	
Ti	47	45	1	He	3.064	3.064	14.71	1723	0.18	2500	
V	51	45	1	He	1.473	1.473	1.31	20592	0.01	10000	
Cr	52	45	1	He	2.275	2.275	1.10	46132	0.00	10000	
Mn	55	45	1	He	195.745	195.745	1.93	2258295	0.01	10000	
Fe	56	45	1	He	248.793	248.793	1.38	3476752	0.01	200000	
Co	59	45	1	He	78.761	78.761	0.77	1925322	0.00	5000	
Ni	60	45	1	He	158.911	158.911	0.65	960466	0.02	10000	
Cu	63	45	1	He	22.648	22.648	0.54	348574	0.01	10000	
Zn	66	45	1	He	196.511	196.511	1.10	542560	0.04	10000	
As	75	45	1	He	0.185	0.185	174.93	404	0.05	10000	
Se	78	45	1	He	3.539	3.539	2.39	933	0.38	10000	
Sr	88	103	1	He	132.455	132.455	1.57	1941358	0.01	10000	
Mo	95	103	1	He	4.389	4.389	1.00	33237	0.01	2000	
Ag	107	103	1	He	0.031	0.031	6.41	744	0.00	100	
Cd	111	115	1	He	0.898	0.898	1.52	3537	0.03	4000	
Sn	118	115	1	He	2.924	2.924	7.78	32089	0.01	2000	
Sb	123	115	1	He	0.815	0.815	4.23	6934	0.01	200	
Ba	137	115	1	He	103.222	103.222	1.31	432209	0.02	10000	
W	182	159	1	He	0.417	0.417	0.62	7885	0.01	2500	
Tl	205	165	1	He	0.182	0.182	2.98	9717	0.00	2000	
Pb	208	165	1	He	0.444	0.444	5.70	28872	0.00	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li	6	2	NoGas	4052484	2.80	5163179	78.49	60	120	
Sc	45	1	He	1690086	0.67	1839605	91.87	60	120	
Sc	45	2	NoGas	9472275	2.14	10933011	86.64	60	120	
Rh	103	1	He	6347426	0.71	7063826	89.86	60	120	
In	115	1	He	3849534	1.13	4323288	89.04	60	120	
Tb	159	1	He	8617710	1.05	8921982	96.59	60	120	
Ho	165	1	He	8613997	1.11	8802922	97.85	60	120	
Bi	209	1	He	5083000	0.55	5887158	86.34	60	120	

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW152B-012919	240-107486-2
MRC-MW137A-012919	240-107486-3
MRC-MW140A-012919	240-107486-4
MRC-MW143A-012919	240-107486-5

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107486-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW152B-012919	240-107486-2
MRC-MW137A-012919	240-107486-3
MRC-MW140A-012919	240-107486-4
MRC-MW143A-012919	240-107486-5

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107486-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW152B-012919	240-107486-2
MRC-MW137A-012919	240-107486-3
MRC-MW140A-012919	240-107486-4
MRC-MW143A-012919	240-107486-5

Comments:

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Analyst: JWW Batch Start Date: 02/01/2019

Reporting Units: mg/L Analytical Batch No.: 366493

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	14:45	Bromide	10.5	10.0	105	90-110		WCICCCV_00858
2	CCB	15:06	Bromide	0.044				U	
13	CCV	18:54	Bromide	10.5	10.0	105	90-110		WCICCCV_00858
14	CCB	19:14	Bromide	0.044				U	
20	CCV	21:18	Bromide	10.5	10.0	105	90-110		WCICCCV_00858
21	CCB	21:39	Bromide	0.044				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Analyst: LKG Batch Start Date: 08/07/2018

Reporting Units: mg/L Analytical Batch No.: 339523

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:20	Sulfate	52.9	50.0	106	90-110		WCICLCS_00669
11	ICB	15:41	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Analyst: JWW Batch Start Date: 01/30/2019

Reporting Units: mg/L Analytical Batch No.: 366140

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	CCV	17:52	Sulfate	52.4	50.0	105	90-110		WCICCCV_00858
14	CCB	18:12	Sulfate	0.35				U	
25	CCV	22:00	Sulfate	52.9	50.0	106	90-110		WCICCCV_00858
26	CCB	22:21	Sulfate	0.35				U	
36	CCV	01:48	Sulfate	52.6	50.0	105	90-110		WCICCCV_00858
37	CCB	02:08	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Analyst: MSP Batch Start Date: 02/16/2019

Reporting Units: mg/L Analytical Batch No.: 575923

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:45	Nitrate Nitrite as N	3.22	3.00	107	90-110		W_ICAl_00027
2	ICB	12:46	Nitrate Nitrite as N	0.040				U	
3	CCV	12:47	Nitrate Nitrite as N	5.48	5.00	110	90-110		W_Nitrate_00020
4	CCV	12:48	Nitrate Nitrite as N	5.10	5.00	102	90-110		IC Primary_00012
5	CCB	12:49	Nitrate Nitrite as N	0.040				U	
20	CCV	13:06	Nitrate Nitrite as N	5.31	5.00	106	90-110		W_Nitrate_00020
21	CCB	13:08	Nitrate Nitrite as N	0.040				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 366338 Date: 01/30/2019 18:16							
2320B-2011	MB 240-366338/4	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 366295 Date: 01/31/2019 11:10							
2340C-2011	MB 240-366295/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 366318 Date: 01/31/2019 13:50							
2540 C-2011	MB 240-366318/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 366493 Date: 02/01/2019 15:26							
300.0	MB 240-366493/3	Bromide	0.044	U	mg/L	0.50	1
Batch ID: 366140 Date: 01/30/2019 18:33							
9056A	MB 240-366140/15	Sulfate	0.35	U	mg/L	1.0	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575923 Date: 02/16/2019 12:50							
SM 4500 NO3 F	MB 490-575923/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107486-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 269673 Date: 02/07/2019 10:25							
SM 2520B	MB 180-269673/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 366493 Date: 02/01/2019 18:33											
300.0	240-107486-3	Bromide	0.55		mg/L						
300.0	240-107486-3 MS	Bromide	11.2		mg/L	10.0	107	80-120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 366493 Date: 02/01/2019 19:35											
300.0	240-107486-3 MSD	Bromide	11.3		mg/L	10.0	108	80-120	1	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575923 Date: 02/16/2019 12:57											
SM 4500 NO3 F	240-107486-5	Nitrate Nitrite as N	0.58		mg/L						
SM 4500 NO3 F	240-107486-5 MS	Nitrate Nitrite as N	3.55		mg/L	3.00	99	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575923 Date: 02/16/2019 12:58											
SM 4500 NO3 F	240-107486-5 MSD	Nitrate Nitrite as N	3.86		mg/L	3.00	109	90-110	8	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 366338 Date: 01/30/2019 18:27								
2320B-2011	MRC-MW137A-012919	240-107486-3	Alkalinity	37	mg/L			
2320B-2011	MRC-MW137A-012919	240-107486-3 DU	Alkalinity	38.3	mg/L	2	20	
Batch ID: 366295 Date: 01/31/2019 13:29								
2340C-2011	MRC-MW143A-012919	240-107486-5	Hardness as calcium carbonate	250	mg/L			
2340C-2011	MRC-MW143A-012919	240-107486-5 DU	Hardness as calcium carbonate	256	mg/L	2	20	
Batch ID: 366318 Date: 01/31/2019 13:50								
2540 C-2011	MRC-MW152B-012919	240-107486-2	Total Dissolved Solids	150	mg/L			
2540 C-2011	MRC-MW152B-012919	240-107486-2 DU	Total Dissolved Solids	156	mg/L	1	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 269673 Date: 02/07/2019 10:25								
SM 2520B	MRC-MW152B-012919	240-107486-2	Salinity	2.0	No Unit			U
SM 2520B	MRC-MW152B-012919	240-107486-2 DU	Salinity	2.0	No Unit	NC	20	U

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 366338	Date: 01/30/2019 18:12										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-366338/3	Alkalinity	260		mg/L	271	96	86-123			
Batch ID: 366295	Date: 01/31/2019 11:17										
						LCS Source: WCHARDNESS_00030					
2340C-2011	LCS 240-366295/2	Hardness as calcium carbonate	268		mg/L	271	99	90-110			
Batch ID: 366318	Date: 01/31/2019 13:50										
						LCS Source: WCPHENOVSOLID_00038					
2540 C-2011	LCS 240-366318/2	Total Dissolved Solids	198		mg/L	204	97	80-120			
Batch ID: 366493	Date: 02/01/2019 15:47										
						LCS Source: WCICLCS_00693					
300.0	LCS 240-366493/4	Bromide	10.1		mg/L	10.0	101	90-110			
Batch ID: 366140	Date: 01/30/2019 18:54										
						LCS Source: WCICLCS_00693					
9056A	LCS 240-366140/16	Sulfate	51.9		mg/L	50.0	104	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575923	Date: 02/16/2019 12:51										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575923/7	Nitrate Nitrite as N	3.22		mg/L	3.00	107	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107486-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 01/31/2019 11:10 End Date: 01/31/2019 13:29

Lab Sample Id	D/F	Type	Time	Analytes																								
				HardCC																								
MB 240-366295/1	1	T	11:10	X																								
LCS 240-366295/2	1	T	11:17	X																								
ZZZZZZ			11:25																									
ZZZZZZ			11:33																									
ZZZZZZ			11:40																									
ZZZZZZ			11:48																									
ZZZZZZ			11:56																									
ZZZZZZ			12:04																									
ZZZZZZ			12:11																									
ZZZZZZ			12:19																									
ZZZZZZ			12:27																									
ZZZZZZ			12:35																									
ZZZZZZ			12:42																									
ZZZZZZ			12:50																									
240-107486-2	1	T	12:58	X																								
240-107486-3	1	T	13:06	X																								
240-107486-4	1	T	13:13	X																								
240-107486-5	1	T	13:21	X																								
240-107486-5 DU	1	T	13:29	X																								

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 01/30/2019 17:56 End Date: 01/30/2019 18:37

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			17:56																									
ZZZZZZ			18:07																									
LCS 240-366338/3	1	T	18:12	X																								
MB 240-366338/4	1	T	18:16	X																								
240-107486-2	1	T	18:20	X																								
240-107486-3	1	T	18:24	X																								
240-107486-3 DU	1	T	18:27	X																								
240-107486-4	1	T	18:31	X																								
240-107486-5	1	T	18:35	X																								
ZZZZZZ			18:37																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 01/31/2019 13:50 End Date: 01/31/2019 13:50

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-366318/1	1	T	13:50	X																								
LCS 240-366318/2	1	T	13:50	X																								
ZZZZZZ			13:50																									
ZZZZZZ			13:50																									
ZZZZZZ			13:50																									
240-107486-2 DU	1	T	13:50	X																								
240-107486-2	1	T	13:50	X																								
240-107486-3	1	T	13:50	X																								
240-107486-4	1	T	13:50	X																								
240-107486-5	1	T	13:50	X																								
ZZZZZZ			13:50																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: THOR Analysis Method: 300.0

Start Date: 02/01/2019 14:45 End Date: 02/01/2019 21:39

Lab Sample Id	D/F	Type	Time	Analytes																								
				Br																								
CCV 240-366493/1	1		14:45	X																								
CCB 240-366493/2	1		15:06	X																								
MB 240-366493/3	1	T	15:26	X																								
LCS 240-366493/4	1	T	15:47	X																								
ZZZZZZ			16:08																									
ZZZZZZ			16:29																									
ZZZZZZ			16:49																									
ZZZZZZ			17:10																									
ZZZZZZ			17:31																									
ZZZZZZ			17:51																									
240-107486-3	1	T	18:12	X																								
240-107486-3 MS	1	T	18:33	X																								
CCV 240-366493/13	1		18:54	X																								
CCB 240-366493/14	1		19:14	X																								
240-107486-3 MSD	1	T	19:35	X																								
240-107486-4	1	T	19:56	X																								
240-107486-5	1	T	20:16	X																								
ZZZZZZ			20:37																									
ZZZZZZ			20:58																									
CCV 240-366493/20	1		21:18	X																								
CCB 240-366493/21	1		21:39	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 08/07/2018 12:13 End Date: 08/07/2018 15:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339523/1 IC	1		12:13	X																								
STD2 240-339523/2 IC	1		12:34	X																								
STD3 240-339523/3 IC	1		12:55	X																								
STD4 240-339523/4 IC	1		13:16	X																								
STD5 240-339523/5 ICRT	1		13:36	X																								
STD6 240-339523/6 IC	1		13:57	X																								
STD7 240-339523/7 IC	1		14:18	X																								
STD8 240-339523/8 IC	1		14:39	X																								
STD9 240-339523/9 IC	1		14:59	X																								
ICV 240-339523/10	1		15:20	X																								
ICB 240-339523/11	1		15:41	X																								

Prep Types:
=

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 01/30/2019 13:43 End Date: 01/31/2019 02:08

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
CCV 240-366140/1			13:43																										
CCB 240-366140/2			14:04																										
ZZZZZZ			14:25																										
ZZZZZZ			14:45																										
ZZZZZZ			15:06																										
ZZZZZZ			15:27																										
ZZZZZZ			15:47																										
ZZZZZZ			16:08																										
ZZZZZZ			16:29																										
ZZZZZZ			16:50																										
ZZZZZZ			17:10																										
ZZZZZZ			17:31																										
CCV 240-366140/13	1		17:52		X																								
CCB 240-366140/14	1		18:12		X																								
MB 240-366140/15	1	T	18:33		X																								
LCS 240-366140/16	1	T	18:54		X																								
ZZZZZZ			19:15																										
ZZZZZZ			19:35																										
ZZZZZZ			19:56																										
ZZZZZZ			20:17																										
ZZZZZZ			20:37																										
ZZZZZZ			20:58																										
ZZZZZZ			21:19																										
ZZZZZZ			21:39																										
CCV 240-366140/25	1		22:00		X																								
CCB 240-366140/26	1		22:21		X																								
ZZZZZZ			22:41																										
ZZZZZZ			23:02																										
ZZZZZZ			23:23																										
ZZZZZZ			23:44																										
ZZZZZZ			00:04																										
240-107486-2	1	T	00:25	X	X																								
240-107486-3	5	T	00:46		X																								
240-107486-4	10	T	01:06		X																								
240-107486-5	10	T	01:27		X																								
CCV 240-366140/36	1		01:48		X																								
CCB 240-366140/37	1		02:08		X																								

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/16/2019 12:45 End Date: 02/16/2019 13:21

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575923/1	1		12:45	X																								
ICB 490-575923/2	1		12:46	X																								
CCV 490-575923/3	1		12:47	X																								
CCV 490-575923/4	1		12:48	X																								
CCB 490-575923/5	1		12:49	X																								
MB 490-575923/6	1	T	12:50	X																								
LCS 490-575923/7	1	T	12:51	X																								
240-107486-2	1	T	12:53	X																								
240-107486-3	1	T	12:54	X																								
240-107486-4	1	T	12:55	X																								
240-107486-5	1	T	12:56	X																								
240-107486-5 MS	1	T	12:57	X																								
240-107486-5 MSD	1	T	12:58	X																								
ZZZZZZ			12:59																									
ZZZZZZ			13:01																									
ZZZZZZ			13:02																									
ZZZZZZ			13:03																									
ZZZZZZ			13:04																									
ZZZZZZ			13:05																									
CCV 490-575923/20	1		13:06	X																								
CCB 490-575923/21	1		13:08	X																								
ZZZZZZ			13:09																									
ZZZZZZ			13:10																									
ZZZZZZ			13:11																									
ZZZZZZ			13:12																									
ZZZZZZ			13:13																									
ZZZZZZ			13:14																									
ZZZZZZ			13:16																									
ZZZZZZ			13:17																									
ZZZZZZ			13:18																									
ZZZZZZ			13:19																									
CCV 490-575923/32			13:20																									
CCB 490-575923/33			13:21																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107486-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/07/2019 10:25 End Date: 02/07/2019 10:25

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-269673/1	1	T	10:25	X																								
240-107486-2	1	T	10:25	X																								
240-107486-2 DU	1	T	10:25	X																								
240-107486-3	1	T	10:25	X																								
240-107486-4	1	T	10:25	X																								
240-107486-5	1	T	10:25	X																								
ZZZZZZ			10:25																									
ZZZZZZ			10:25																									

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366295 Batch Start Date: 01/31/19 11:10 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 01/31/19 13:37

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCHARDNESS 00030		
MB 240-366295/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-366295/2		2340C-2011		25 mL	25 mL	6.70 mL	25 mL		
240-107486-G-2	MRC-MW152B-012919	2340C-2011	T	25 mL	25 mL	1.60 mL			
240-107486-G-3	MRC-MW137A-012919	2340C-2011	T	25 mL	25 mL	5.30 mL			
240-107486-G-4	MRC-MW140A-012919	2340C-2011	T	5 mL	25 mL	2.15 mL			
240-107486-G-5	MRC-MW143A-012919	2340C-2011	T	25 mL	25 mL	6.30 mL			
240-107486-G-5 DU	MRC-MW143A-012919	2340C-2011	T	25 mL	25 mL	6.40 mL			

Batch Notes	
Batch Comment	BEAKERS--4010979
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C7
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366338 Batch Start Date: 01/30/19 17:56 Batch Analyst: Carson, Monica

Batch Method: 2320B-2011 Batch End Date: 01/31/19 14:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-366338/3		2320B-2011		InitialAmount is blank	10 mL				
MB 240-366338/4		2320B-2011		InitialAmount is blank					
240-107486-E-2	MRC-MW152B-012919	2320B-2011	T	InitialAmount is blank					
240-107486-E-3	MRC-MW137A-012919	2320B-2011	T	InitialAmount is blank					
240-107486-E-3 DU	MRC-MW137A-012919	2320B-2011	T	InitialAmount is blank					
240-107486-E-4	MRC-MW140A-012919	2320B-2011	T	InitialAmount is blank					
240-107486-E-5	MRC-MW143A-012919	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4- 4005008
pH Buffer 2 ID	7- 4017506
pH Buffer 3 ID	10- 3892955
pH Buffer 4 ID	12- 3891579
Nominal Amount Used	10 mL
pH Meter ID	severus
Probe ID	WCP 137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366318 Batch Start Date: 01/31/19 13:50 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date: 02/01/19 11:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-366318/1		2540 C-2011			3.6747 g	100 mL	3.6747 g	3.6748 g	0 g
LCS 240-366318/2		2540 C-2011			3.6651 g	100 mL	3.6847 g	3.6849 g	0 g
240-107486-H-2 DU	MRC-MW152B-012919	2540 C-2011	T	251 umhos/cm	3.7034 g	100 mL	3.7189 g	3.7190 g	0 g
240-107486-H-2	MRC-MW152B-012919	2540 C-2011	T	251 umhos/cm	3.6945 g	100 mL	3.7104 g	3.7099 g	0 g
240-107486-H-3	MRC-MW137A-012919	2540 C-2011	T	1154 umhos/cm	3.7040 g	100 mL	3.7746 g	3.7742 g	0 g
240-107486-H-4	MRC-MW140A-012919	2540 C-2011	T	1950 umhos/cm	3.6636 g	50 mL	3.7218 g	3.7218 g	0 g
240-107486-H-5	MRC-MW143A-012919	2540 C-2011	T	1860 umhos/cm	3.7107 g	50 mL	3.7605 g	3.7600 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Weight4	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2
MB 240-366318/1		2540 C-2011		0 g	Pass No Unit	N/A No Unit	N/A	0 g	0.0001 g
LCS 240-366318/2		2540 C-2011		0 g	Pass No Unit	N/A No Unit	N/A	0.0196 g	0.0198 g
240-107486-H-2 DU	MRC-MW152B-012919	2540 C-2011	T	0 g	Pass No Unit	N/A No Unit	N/A	0.0155 g	0.0156 g
240-107486-H-2	MRC-MW152B-012919	2540 C-2011	T	0 g	Pass No Unit	N/A No Unit	N/A	0.0159 g	0.0154 g
240-107486-H-3	MRC-MW137A-012919	2540 C-2011	T	0 g	Pass No Unit	N/A No Unit	N/A	0.0706 g	0.0702 g
240-107486-H-4	MRC-MW140A-012919	2540 C-2011	T	0 g	Pass No Unit	N/A No Unit	N/A	0.0582 g	0.0582 g
240-107486-H-5	MRC-MW143A-012919	2540 C-2011	T	0 g	Pass No Unit	N/A No Unit	N/A	0.0498 g	0.0493 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue3	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00038	
MB 240-366318/1		2540 C-2011		N/A g	N/A g	100 mL	OK		
LCS 240-366318/2		2540 C-2011		N/A g	N/A g	100 mL	OK	100 mL	
240-107486-H-2 DU	MRC-MW152B-012919	2540 C-2011	T	N/A g	N/A g	100 mL	OK		
240-107486-H-2	MRC-MW152B-012919	2540 C-2011	T	N/A g	N/A g	100 mL	OK		
240-107486-H-3	MRC-MW137A-012919	2540 C-2011	T	N/A g	N/A g	100 mL	OK		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366318 Batch Start Date: 01/31/19 13:50 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date: 02/01/19 11:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue3	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00038	
240-107486-H-4	MRC-MW140A-012919	2540 C-2011	T	N/A g	N/A g	100 mL	OK		
240-107486-H-5	MRC-MW143A-012919	2540 C-2011	T	N/A g	N/A g	100 mL	OK		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366318 Batch Start Date: 01/31/19 13:50 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date: 02/01/19 11:50

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/01/2019 10:20
Date/Time - Out - CW (WT2)	02/01/2019 11:20
Temperature - Start - CW (WT2) - Correct	183 Celsius
Temperature - End - CW (WT2) - Correct	183 Celsius
Temperature - Start-CW(WT2) -Uncorrected	183 Celsius
Temperature - End-CW(WT2) -Uncorrected	183 Celsius
Temperature - Start - Corrected	105 Celsius
Temperature - End - Corrected	105 Celsius
Date/Time - In	01/31/2019 14:22
Date/Time - Out	02/01/2019 08:33
Filter ID	60020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O06
Thermometer ID - Low Temperature	84922
Thermometer ID	181417084
Temperature - Start - Uncorrected	105 Celsius
Temperature - End - Uncorrected	105 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/01/2019 08:33 No Unit
Weight(WT1) Date/Time Out	02/01/2019 09:57
Weight(WT1) Start Temp	183 Celsius
Weight(WT1) Temp Out	183 Celsius
Uncorrected Weight(WT1) Start Temp	183 Celsius
Uncorrected Weight(WT1) Temp Out	183 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339523/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339523/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339523/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339523/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339523/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339523/6 IC		300.0		5 mL	2 mL				
STD7 240-339523/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339523/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339523/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366140 Batch Start Date: 01/30/19 13:43 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount				
240-107486-E-2	MRC-MW151A-012919	300.0 & 9056A	T	5 mL	1.0 mL				
240-107486-E-3	MRC-MW137A-012919	300.0 & 9056A	T	5 mL	1.0 mL				
240-107486-E-4	MRC-MW140A-012919	300.0 & 9056A	T	5 mL	1.0 mL				
240-107486-E-5	MRC-MW143A-012919	300.0 & 9056A	T	5 mL	1.0 mL				

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366493 Batch Start Date: 02/01/19 14:45 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00858	WCICLCS 00693	WCICSOLNA1 00018	WCICSOLNB1 00018	
CCV 240-366493/1		300.0		5 mL	5 mL				
CCB 240-366493/2		300.0		5 mL					
MB 240-366493/3		300.0		5 mL					
LCS 240-366493/4		300.0		5 mL		5 mL			
240-107486-E-3	MRC-MW137A-012919	300.0	T	5 mL					
240-107486-E-3 MS	MRC-MW137A-012919	300.0	T	5 mL			0.1 mL	0.1 mL	
CCV 240-366493/13		300.0		5 mL	5 mL				
CCB 240-366493/14		300.0		5 mL					
240-107486-E-3 MSD	MRC-MW137A-012919	300.0	T	5 mL			0.1 mL	0.1 mL	
240-107486-E-4	MRC-MW140A-012919	300.0	T	5 mL					
240-107486-E-5	MRC-MW143A-012919	300.0	T	5 mL					
CCV 240-366493/20		300.0		5 mL	5 mL				
CCB 240-366493/21		300.0		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICLCS 00669			
ICV 240-339523/10		9056A		5 mL	1.0 mL	5 mL			
ICB 240-339523/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366140 Batch Start Date: 01/30/19 13:43 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount				
240-107486-E-2	MRC-MW151A-012919	300.0 & 9056A	T	5 mL	1.0 mL				
240-107486-E-3	MRC-MW137A-012919	300.0 & 9056A	T	5 mL	1.0 mL				
240-107486-E-4	MRC-MW140A-012919	300.0 & 9056A	T	5 mL	1.0 mL				
240-107486-E-5	MRC-MW143A-012919	300.0 & 9056A	T	5 mL	1.0 mL				

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107486-1

SDG No.:

Batch Number: 366140 Batch Start Date: 01/30/19 13:43 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00858	WCICLCS 00693			
CCV 240-366140/13		9056A		5 mL	5 mL				
CCB 240-366140/14		9056A		5 mL					
MB 240-366140/15		9056A		5 mL					
LCS 240-366140/16		9056A		5 mL		5 mL			
CCV 240-366140/25		9056A		5 mL	5 mL				
CCB 240-366140/26		9056A		5 mL					
CCV 240-366140/36		9056A		5 mL	5 mL				
CCB 240-366140/37		9056A		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Batch Number: 575923 Batch Start Date: 02/16/19 12:45 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/16/19 13:23

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575923/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575923/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575923/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575923/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575923/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575923/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575923/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
240-107486-F-2	MRC-MW152B-012919	SM 4500 NO3 F	T	50 mL	50 mL				7.06
240-107486-F-3	MRC-MW137A-012919	SM 4500 NO3 F	T	50 mL	50 mL				5.84
240-107486-F-4	MRC-MW140A-012919	SM 4500 NO3 F	T	50 mL	50 mL				6.39
240-107486-F-5	MRC-MW143A-012919	SM 4500 NO3 F	T	50 mL	50 mL				8.35
240-107486-F-5 MS	MRC-MW143A-012919	SM 4500 NO3 F	T	50 mL	50 mL		0.25 mL		8.35
240-107486-F-5 MSD	MRC-MW143A-012919	SM 4500 NO3 F	T	50 mL	50 mL		0.25 mL		8.35
CCV 490-575923/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575923/21		SM 4500 NO3 F		50 mL	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107486-1

SDG No.:

Batch Number: 575923 Batch Start Date: 02/16/19 12:45 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/16/19 13:23

Batch Notes	
Acid used for pH adjustment	4547067
Base used for pH adjustment	4273883
Batch Comment	cent tubes 809161; pH probe VVZ10915; pH meter AB92340683
Buffer Reagent ID	4832283
Carrier Identification	DI water
Color Reagent ID	4832299
Filter ID	180611314
Pipette/Syringe/Dispenser ID	26061004, 26121028

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TETRA TECH INTERNAL CORRESPONDENCE

TO: **M. MARTIN** **DATE:** **APRIL 18, 2019**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION – VOC / PCB HOMOLOGS / METALS / MISCELLANEOUS PARAMETERS**
LM MRC BLOCK F – FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) 240-107535-1

SAMPLES: 3 / Water / VOC

MRC-MW139B-013019 MRC-MW153A-013019 TRIP BLANK-013019

2 / Water / Metals / Miscellaneous

MRC-MW139B-013019 MRC-MW153A-013019

1 / Water / PCB

MRC-MW153A-013019

OVERVIEW

The sample set for LM MRC Block F, SDG 240-107535-1, consists of two (2) water environmental samples and one (1) trip blank. Samples were analyzed for volatile organic compounds (VOC), polychlorinated biphenyl homologs (PCBH), metals, and miscellaneous parameters (alkalinity, bromide, hardness as CaCO3, nitrite/nitrate-N, salinity, sulfate, and total dissolved solids (TDS). No field duplicate pairs are included in this SDG.

The samples were collected by Tetra Tech on January 30, 2019 and analyzed by Test America. Analyses were conducted in accordance with EPA SW-846 Methods 8260C (VOC), 6010C/6020A (metals), and 9056A (anions) as well as EPA Method 680 (PCBH), MCAWW Method 300.0 (bromide), and Standard Methods 2320B-2011 (alkalinity), 2340C-2011 (hardness), 4500 NO3 F (nitrite/nitrate-N), 2520B (salinity), and 2540C-2011 (TDS) analytical and reporting protocols. Iron and manganese were analyzed by both Methods 6010C and 6020A - remaining metals were analyzed by Method 6020A only.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, initial/continuing calibrations, laboratory method blank/trip blank results, laboratory control sample/laboratory control sample duplicate results, matrix spike/matrix spike duplicate results, surrogate spike recoveries, interference check sample results, compound identification, analyte quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

MAJOR PROBLEMS

- The laboratory case narrative report states that 2-chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample, all samples were preserved in hydrochloric acid. Non-detected results for 2-chloroethyl vinyl ether were rejected (UR) in water samples.

- The VOC matrix spike (MS)/matrix spike duplicate (MSD) analysis performed on sample MRC-MW139B-013019 had MS and MSD percent recoveries (%Rs) that were less than the laboratory quality control limits and less than 10% for 2-chloroethyl vinyl ether. The non-detected result for this

analyte was rejected (UR) in sample MRC-MW139B-013019.

MINOR PROBLEMS

- The VOC continuing calibration verification (CCV) performed on 02/04/19 at 12:19 on instrument A3UX15 had percent differences (%Ds) that were greater than the 20% quality control limit for dichlorodifluoromethane, vinyl chloride, 2-chloroethyl vinyl ether, 4-methyl-2-pentanone, 2-hexanone, bromoform, and 1,2-dibromo-3-chloropropane. Samples TRIP BLANK-013019, MRC-MW153A-013019, and MRC-MW139B-013019 were affected. Non-detected results for the aforementioned analytes were qualified as estimated (UJ) in the affected samples.

- The VOC MS/MSD analysis performed on sample MRC-MW139B-013019 had an MS %R for tertiary-butyl alcohol that was less than the laboratory quality control limits (but greater than 10%). The MSD %R for this analyte was compliant. The non-detected result for tertiary-butyl alcohol in sample MRC-MW139B-013019 was qualified as estimated (UJ).

- The following VOCs were detected in the trip blanks at the following concentrations:

Analyte	Maximum Concentration	< or > Reporting Limit (RL)
Tertiary-butyl alcohol	180 ug/L(1)	> RL
Trichloroethene	0.16 ug/L(1)	< RL

1 - Detected in trip blank TB-013019 affecting all samples.

Trichloroethene results in samples MRC-MW139B-013019 and MRC-MW153A-013019 were less than the RL and were qualified as non-detected (U). No qualification was necessary for tertiary-butyl alcohol because results for this analyte were non-detected in samples MRC-MW139B-013019 and MRC-MW153A-013019.

- Detected results reported below the RL but above the method detection limit (MDL) were qualified as estimated (J).

- The PCBH CCV performed on 02/21/19 at 16:43 on instrument CMSX had a %D that was greater than the 20% quality control limit for decachlorobiphenyl. Sample MRC-MW153A-013019 was affected. The non-detected results for decachlorobiphenyl and nonachlorobiphenyls were qualified as estimated (UJ) in the affected sample.

NOTES

Non-detected results were reported to the MDL.

VOC sample MRC-MW139B-013019 was analyzed at a dilution factor of 20.

The VOC MS/MSD analysis performed on sample MRC-MW139B-013019 had a relative percent difference (RPD) for 1,1,2-trichlorotrifluoroethane that was greater than the laboratory quality control limit. No qualification was necessary because the result for 1,1,2-trichlorotrifluoroethane was non-detected in sample MRC-MW139B-013019.

Sulfate in sample MRC-MW153A-013019 was analyzed at a dilution factor of 5.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Some VOC and PCBH results were qualified due to calibration noncompliance.

Other Factors Affecting Data Quality: Results for 2-chloroethyl vinyl ether in water samples were rejected due to sample preservation noncompliance, and one of these 2-chloroethyl vinyl ether results was also rejected due to MS/MSD noncompliance. One tertiary-butyl alcohol result was qualified due to MS/MSD noncompliance. Some VOC results were qualified as non-detected due to trip blank contamination. Detected results reported below the RL but above the MDL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017) and the "National Functional Guidelines for Inorganic Superfund Methods Data Review" (January 2017). The text of this report has been formulated to address only those problem areas affecting data quality.

Leigh A. Ciofani

Tetra Tech
Leigh Ciofani
Environmental Scientist/Data Validator

Joseph A. Samchuck

Tetra Tech
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08784	NSAMPLE	MRC-MW139B-013019			MRC-MW153A-013019			TRIP BLANK-013019		
SDG: 240-107535-1	LAB_ID	240-107535-3			240-107535-2			240-107535-1		
FRACTION: OV	SAMP_DATE	1/30/2019			1/30/2019			1/30/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		2.8	U		0.14	U		0.14	U	
1,1,1-TRICHLOROETHANE		4.8	U		0.24	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		2.6	U		0.13	U		0.13	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		8.2	U		0.41	U		0.41	U	
1,1-DICHLOROETHANE		3.4	U		0.17	U		0.17	U	
1,1-DICHLOROETHENE		3.8	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		2.8	U		0.14	U		0.14	U	
1,2,3-TRICHLOROBENZENE		59			0.54	U		0.54	U	
1,2,3-TRICHLOROPROPANE		4.8	U		0.24	U		0.24	U	
1,2,3-TRIMETHYLBENZENE		2.8	U		0.14	U		0.14	U	
1,2,4-TRICHLOROBENZENE		290			0.26	U		0.26	U	
1,2,4-TRIMETHYLBENZENE		1.4	U		0.07	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		18	UJ	C	0.91	UJ	C	0.91	UJ	C
1,2-DIBROMOETHANE		2.4	U		0.12	U		0.12	U	
1,2-DICHLOROBENZENE		11	J	P	0.15	U		0.15	U	
1,2-DICHLOROETHANE		4.2	U		0.21	U		0.21	U	
1,2-DICHLOROPROPANE		3	U		0.15	U		0.15	U	
1,3-DICHLOROBENZENE		65			0.15	U		0.15	U	
1,3-DICHLOROPROPANE		4.2	U		0.21	U		0.21	U	
1,4-DICHLOROBENZENE		42			0.16	U		0.16	U	
2,2-DICHLOROPROPANE		6.2	U		0.31	U		0.31	U	
2-BUTANONE		23	U		1.2	U		1.2	U	
2-CHLOROETHYL VINYL ETHER		5.2	UR	DM	0.26	UR	M	0.26	UR	M
2-CHLOROTOLUENE		3	U		0.15	U		0.15	U	
2-HEXANONE		11	UJ	C	0.54	UJ	C	0.54	UJ	C
4-CHLOROTOLUENE		1.8	U		0.09	U		0.09	U	
4-ISOPROPYLTOLUENE		2.6	U		0.13	U		0.13	U	
4-METHYL-2-PENTANONE		8.4	UJ	C	0.42	UJ	C	0.42	UJ	C
ACETONE		110	U		5.4	U		5.4	U	
BENZENE		2.6	U		0.13	U		0.13	U	
BROMOBENZENE		2.4	U		0.12	U		0.12	U	
BROMOCHLOROMETHANE		2.8	U		0.14	U		0.14	U	
BROMODICHLOROMETHANE		3.4	U		0.17	U		0.17	U	
BROMOFORM		15	UJ	C	0.76	UJ	C	0.76	UJ	C
BROMOMETHANE		8.4	U		0.42	U		0.42	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW139B-013019			MRC-MW153A-013019			TRIP BLANK-013019		
SDG: 240-107535-1	LAB_ID	240-107535-3			240-107535-2			240-107535-1		
FRACTION: OV	SAMP_DATE	1/30/2019			1/30/2019			1/30/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		5.6	U		0.28	U		0.28	U	
CARBON TETRACHLORIDE		5.2	U		0.26	U		0.26	U	
CHLOROBENZENE		68			0.14	U		0.14	U	
CHLORODIBROMOMETHANE		7.8	U		0.39	U		0.39	U	
CHLOROETHANE		17	U		0.83	U		0.83	U	
CHLOROFORM		2.6	U		0.13	U		0.13	U	
CHLOROMETHANE		4	U		0.2	U		0.2	U	
CIS-1,2-DICHLOROETHENE		3.2	U		0.16	U		0.16	U	
CIS-1,3-DICHLOROPROPENE		12	U		0.61	U		0.61	U	
DIBROMOMETHANE		1.8	U		0.09	U		0.09	U	
DICHLORODIFLUOROMETHANE		7	UJ	C	0.35	UJ	C	0.35	UJ	C
DIISOPROPYL ETHER		3.4	U		0.17	U		0.17	U	
ETHYL TERT-BUTYL ETHER		3	U		0.15	U		0.15	U	
ETHYLBENZENE		2.2	U		0.11	U		0.11	U	
HEXACHLOROBUTADIENE		17	U		0.83	U		0.83	U	
ISOPROPYLBENZENE		1.8	U		0.09	U		0.09	U	
METHYL TERT-BUTYL ETHER		1.4	U		0.07	U		0.07	U	
METHYLENE CHLORIDE		52	U		2.6	U		2.6	U	
NAPHTHALENE		6.4	U		0.32	U		0.32	U	
N-BUTYLBENZENE		2.8	U		0.14	U		0.14	U	
N-PROPYLBENZENE		3	U		0.15	U		0.15	U	
SEC-BUTYLBENZENE		2.6	U		0.13	U		0.13	U	
STYRENE		2	U		0.1	U		0.1	U	
TERT-AMYL METHYL ETHER		2.2	U		0.11	U		0.11	U	
TERT-BUTYLBENZENE		2.8	U		0.14	U		0.14	U	
TERTIARY-BUTYL ALCOHOL		34	UJ	D	1.7	U		180		
TETRACHLOROETHENE		3	U		0.15	U		0.15	U	
TOLUENE		2.8	U		0.14	U		0.14	U	
TOTAL XYLENES		3	U		0.15	U		0.15	U	
TRANS-1,2-DICHLOROETHENE		3.8	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		13	U		0.67	U		0.67	U	
TRICHLOROETHENE		10	U	B	0.38	U	B	0.16	J	P
TRICHLOROFLUOROMETHANE		9	U		0.45	U		0.45	U	
VINYL ACETATE		3.8	U		0.19	U		0.19	U	
VINYL CHLORIDE		4	UJ	C	0.2	UJ	C	0.2	UJ	C

PROJ_NO: 08784	NSAMPLE	MRC-MW153A-013019		
SDG: 240-107535-1	LAB_ID	240-107535-2		
FRACTION: PCB	SAMP_DATE	1/30/2019		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.078	UJ	C
DICHLOROBIPHENYLS		0.006	U	
HEPTACHLOROBIPHENYLS		0.033	U	
HEXACHLOROBIPHENYLS		0.017	U	
MONOCHLOROBIPHENYLS		0.0062	U	
NONACHLOROBIPHENYLS		0.054	UJ	C
OCTACHLOROBIPHENYLS		0.042	U	
PENTACHLOROBIPHENYLS		0.016	U	
TETRACHLOROBIPHENYLS		0.014	U	
TRICHLOROBIPHENYLS		0.0072	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW139B-013019			MRC-MW153A-013019		
SDG: 240-107535-1	LAB_ID	240-107535-3			240-107535-2		
FRACTION: M	SAMP_DATE	1/30/2019			1/30/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		280			3600		
ANTIMONY		0.57	J	P	0.57	U	
ARSENIC		0.75	U		0.75	U	
BARIUM		37			28		
BERYLLIUM		1.5			14		
CADMIUM		0.21	U		0.99	J	P
CALCIUM		13000			74000		
CHROMIUM		1.4	J	P	2.6		
COBALT		20			190		
COPPER		20			110		
IRON		1900			680		
LEAD		1.1			0.63	J	P
MAGNESIUM		2600			35000		
MANGANESE		120			600		
NICKEL		37			190		
POTASSIUM		22000			5300		
SELENIUM		0.89	U		0.89	U	
SILVER		0.11	J	P	0.053	U	
SODIUM		34000			10000		
THALLIUM		0.2	U		0.2	U	
VANADIUM		2.6	J	P	0.82	U	
ZINC		82			300		

PROJ_NO: 08784	NSAMPLE	MRC-MW139B-013019						MRC-MW153A-013019					
SDG: 240-107535-1	LAB_ID	240-107535-3						240-107535-2					
FRACTION: MISC	SAMP_DATE	1/30/2019						1/30/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY	43						2.6	U				
BROMIDE	0.044	U					0.044	U				
HARDNESS AS CACO3	58						400					
NITRITE/NITRATE-N	0.17						0.11					
SALINITY				2	U					2	U	
SULFATE	15						370					
TOTAL DISSOLVED SOLIDS	210						570					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW139B-013019 | Lab Sample ID: 240-107535-3

Matrix: Water | Lab File ID: UXC8687.D

Analysis Method: 8260C | Date Collected: 01/30/2019 13:56

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 18:09

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	2.8	U	20	2.8
71-55-6	1,1,1-Trichloroethane	4.8	U	20	4.8
79-34-5	1,1,2,2-Tetrachloroethane	2.6	U	20	2.6
76-13-1	1,1,2-Trichlorotrifluoroethane	8.2	U F2	20	8.2
75-34-3	1,1-Dichloroethane	3.4	U	20	3.4
75-35-4	1,1-Dichloroethene	3.8	U	20	3.8
563-58-6	1,1-Dichloropropene	2.8	U	20	2.8
87-61-6	1,2,3-Trichlorobenzene	59		20	11
96-18-4	1,2,3-Trichloropropane	4.8	U	20	4.8
526-73-8	1,2,3-Trimethylbenzene	2.8	U	100	2.8
120-82-1	1,2,4-Trichlorobenzene	290		20	5.2
95-63-6	1,2,4-Trimethylbenzene	1.4	U	20	1.4
96-12-8	1,2-Dibromo-3-Chloropropane	18	U	40	18
95-50-1	1,2-Dichlorobenzene	11	J	20	3.0
107-06-2	1,2-Dichloroethane	4.2	U	20	4.2
78-87-5	1,2-Dichloropropane	3.0	U	20	3.0
541-73-1	1,3-Dichlorobenzene	65		20	3.0
142-28-9	1,3-Dichloropropane	4.2	U	20	4.2
106-46-7	1,4-Dichlorobenzene	42		20	3.2
594-20-7	2,2-Dichloropropane	6.2	U	20	6.2
110-75-8	2-Chloroethyl vinyl ether	5.2	U F1	200	5.2
95-49-8	2-Chlorotoluene	3.0	U	20	3.0
591-78-6	2-Hexanone	11	U	200	11
108-86-1	Bromobenzene	2.4	U	20	2.4
74-97-5	Bromochloromethane	2.8	U	20	2.8
106-43-4	4-Chlorotoluene	1.8	U	20	1.8
99-87-6	4-Isopropyltoluene	2.6	U	20	2.6
67-64-1	Acetone	110	U	200	110
71-43-2	Benzene	2.6	U	20	2.6
75-25-2	Bromoform	15	U	20	15
74-83-9	Bromomethane	8.4	U	20	8.4
75-15-0	Carbon disulfide	5.6	U	20	5.6
56-23-5	Carbon tetrachloride	5.2	U	20	5.2
108-90-7	Chlorobenzene	68		20	2.8
75-00-3	Chloroethane	17	U	20	17
67-66-3	Chloroform	2.6	U	20	2.6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW139B-013019 | Lab Sample ID: 240-107535-3

Matrix: Water | Lab File ID: UXC8687.D

Analysis Method: 8260C | Date Collected: 01/30/2019 13:56

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 18:09

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	4.0	U	20	4.0
156-59-2	cis-1,2-Dichloroethene	3.2	U	20	3.2
10061-01-5	cis-1,3-Dichloropropene	12	U	20	12
87-68-3	Hexachlorobutadiene	17	U	20	17
74-95-3	Dibromomethane	1.8	U	20	1.8
75-27-4	Bromodichloromethane	3.4	U	20	3.4
75-71-8	Dichlorodifluoromethane	7.0	U	20	7.0
100-41-4	Ethylbenzene	2.2	U	20	2.2
106-93-4	1,2-Dibromoethane	2.4	U	20	2.4
108-20-3	Diisopropyl ether	3.4	U	200	3.4
91-20-3	Naphthalene	6.4	U	20	6.4
104-51-8	n-Butylbenzene	2.8	U	20	2.8
98-82-8	Isopropylbenzene	1.8	U	20	1.8
103-65-1	N-Propylbenzene	3.0	U	20	3.0
78-93-3	2-Butanone (MEK)	23	U	200	23
108-10-1	4-Methyl-2-pentanone (MIBK)	8.4	U	200	8.4
135-98-8	sec-Butylbenzene	2.6	U	20	2.6
1634-04-4	Methyl tert-butyl ether	1.4	U	20	1.4
994-05-8	Tert-amyl methyl ether	2.2	U	100	2.2
75-09-2	Methylene Chloride	52	U	100	52
100-42-5	Styrene	2.0	U	20	2.0
637-92-3	Ethyl tert-butyl ether	3.0	U	100	3.0
98-06-6	tert-Butylbenzene	2.8	U	20	2.8
127-18-4	Tetrachloroethene	3.0	U	20	3.0
108-88-3	Toluene	2.8	U	20	2.8
156-60-5	trans-1,2-Dichloroethene	3.8	U	20	3.8
10061-02-6	trans-1,3-Dichloropropene	13	U	20	13
79-01-6	Trichloroethene	10	J	20	2.0
75-69-4	Trichlorofluoromethane	9.0	U	20	9.0
108-05-4	Vinyl acetate	3.8	U	40	3.8
75-01-4	Vinyl chloride	4.0	U	20	4.0
75-65-0	tert-Butyl alcohol	34	U F1	1000	34
1330-20-7	Xylenes, Total	3.0	U	40	3.0
124-48-1	Chlorodibromomethane	7.8	U	20	7.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW139B-013019 | Lab Sample ID: 240-107535-3

Matrix: Water | Lab File ID: UXC8687.D

Analysis Method: 8260C | Date Collected: 01/30/2019 13:56

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 18:09

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	83		70-121
460-00-4	4-Bromofluorobenzene (Surr)	85		59-120
2037-26-5	Toluene-d8 (Surr)	85		70-123
1868-53-7	Dibromofluoromethane (Surr)	81		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW153A-013019 | Lab Sample ID: 240-107535-2

Matrix: Water | Lab File ID: UXC8686.D

Analysis Method: 8260C | Date Collected: 01/30/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW153A-013019 | Lab Sample ID: 240-107535-2

Matrix: Water | Lab File ID: UXC8686.D

Analysis Method: 8260C | Date Collected: 01/30/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.38	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW153A-013019 | Lab Sample ID: 240-107535-2

Matrix: Water | Lab File ID: UXC8686.D

Analysis Method: 8260C | Date Collected: 01/30/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	84		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	85		70-123
1868-53-7	Dibromofluoromethane (Surr)	81		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: TRIP BLANK-013019 | Lab Sample ID: 240-107535-1

Matrix: Water | Lab File ID: UXC8685.D

Analysis Method: 8260C | Date Collected: 01/30/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: TRIP BLANK-013019 | Lab Sample ID: 240-107535-1

Matrix: Water | Lab File ID: UXC8685.D

Analysis Method: 8260C | Date Collected: 01/30/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.16	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	180		50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: TRIP BLANK-013019 | Lab Sample ID: 240-107535-1

Matrix: Water | Lab File ID: UXC8685.D

Analysis Method: 8260C | Date Collected: 01/30/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	85		70-121
460-00-4	4-Bromofluorobenzene (Surr)	84		59-120
2037-26-5	Toluene-d8 (Surr)	87		70-123
1868-53-7	Dibromofluoromethane (Surr)	82		75-128

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW153A-013019 | Lab Sample ID: 240-107535-2

Matrix: Water | Lab File ID: xb2038.D

Analysis Method: 680 | Date Collected: 01/30/2019 11:00

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 902(mL) | Date Analyzed: 02/21/2019 10:32

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.033	U	0.33	0.033
26601-64-9	Hexachlorobiphenyl	0.017	U	0.22	0.017
53742-07-7	Nonachlorobiphenyl	0.054	U	0.55	0.054
55722-26-4	Octachlorobiphenyl	0.042	U	0.33	0.042
27323-18-8	Monochlorobiphenyl	0.0062	U	0.11	0.0062
2051-24-3	DCB Decachlorobiphenyl	0.078	U	0.55	0.078
25512-42-9	Dichlorobiphenyl	0.0060	U	0.11	0.0060
25429-29-2	Pentachlorobiphenyl	0.016	U	0.22	0.016
26914-33-0	Tetrachlorobiphenyl	0.014	U	0.22	0.014
25323-68-6	Trichlorobiphenyl	0.0072	U	0.11	0.0072

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	25		25-113

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW139B-013019 Lab Sample ID: 240-107535-3

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 13:56

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	1900	200	26	ug/L			1	6010C
7439-96-5	Manganese	130	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.11	1.0	0.053	ug/L	J		1	6020A
7429-90-5	Aluminum	280	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	37	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.5	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	20	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	1.4	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	20	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	1900	100	47	ug/L			1	6020A
7439-96-5	Manganese	120	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	37	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	1.1	1.0	0.45	ug/L			1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	2.6	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	82	20	15	ug/L			1	6020A
7440-70-2	Calcium	13000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	22000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	2600	1000	200	ug/L			1	6020A
7440-23-5	Sodium	34000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW153A-013019 Lab Sample ID: 240-107535-2

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 11:00

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	520	200	26	ug/L			1	6010C
7439-96-5	Manganese	450	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	3600	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	28	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	14	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.99	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	190	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.6	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	110	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	680	100	47	ug/L			1	6020A
7439-96-5	Manganese	600	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	190	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.63	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	300	20	15	ug/L			1	6020A
7440-70-2	Calcium	74000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	5300	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	35000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	10000	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW139B-013019 Lab Sample ID: 240-107535-3

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 13:56

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	58	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	43	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	210	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	15	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW139B-013019 Lab Sample ID: 240-107535-3

Lab Name: TestAmerica Nashville Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 13:56

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.17	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW139B-013019 Lab Sample ID: 240-107535-3

Lab Name: TestAmerica Pittsburgh Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 13:56

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW153A-013019 Lab Sample ID: 240-107535-2

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 11:00

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	400	25	12	mg/L			1	2340C-2011
	Alkalinity	2.6	5.0	2.6	mg/L	U		1	2320B-2011
	Total Dissolved Solids	570	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	370	5.0	1.7	mg/L			5	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW153A-013019 Lab Sample ID: 240-107535-2

Lab Name: TestAmerica Nashville Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 11:00

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.11	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW153A-013019 Lab Sample ID: 240-107535-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 11:00

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

APPENDIX C

SUPPORT DOCUMENTATION

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: LM MRC Block F

Report Number: 240-107535-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The 680 Polychlorinated Biphenyls analysis was performed at the TestAmerica Savannah laboratory. The 4500NO3-F Nitrate Nitrite as N analysis was performed at the TestAmerica Nashville laboratory. The 9050A Specific Conductance and the 2520-B Salinity analyses were performed at the TestAmerica Pittsburgh laboratory.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 1/31/2019 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TRIP BLANK-013019 (240-107535-1), MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/04/2019.

Sample MRC-MW139B-013019 (240-107535-3)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 366634 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TRIP BLANK-013019 (240-107535-1), MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following samples were received in hydrochloric preserved vials: TRIP BLANK-013019 (240-107535-1), MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample MRC-MW153A-013019 (240-107535-2) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The sample was prepared on 02/19/2019 and analyzed on 02/21/2019.

The internal standard response for the following sample(s) was outside of acceptance limits when compared to the area of the CCVIS(continuing calibration verification internal standard). The 680 method allows that the sample also be compared to the average internal standard area of the calibration (ICISAV). Due to limitations in the software, when the areas of the sample are out of control for

either the CCVIS or the ICISAV both are flagged. Although a * flag appears on the data, the sample is within the area range for the average internal standard area of the calibration (ICISAV).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 680-558728.

The SOP for the 680 Method allows that for soils the CCVIS has a limit of <30%D for each analyte and for liquids <20%D for each analyte . It also allows that the capping CCV for soils has the limit of <30% average %D with no analyte >60%D and for liquids <20% average D with no analyte >40%D. Due to software limitations for this method, the limits are set at <20%D. (CCV 680-559059/21)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/04/2019 and analyzed on 02/05/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 02/04/2019 and analyzed on 02/05/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 02/05/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 02/01/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 01/31/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for anions in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 01/31/2019.

Sample MRC-MW153A-013019 (240-107535-2)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for Salinity in accordance with SM 2520B. The samples were analyzed on 02/07/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE
Samples MRC-MW153A-013019 (240-107535-2) and MRC-MW139B-013019 (240-107535-3) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 02/16/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Method Summary

Client: Tetra Tech, Inc.
Project/Site: LM MRC Block F

TestAmerica Job ID: 240-107535-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
680	Liquid-Liquid Extraction (Separatory Funnel)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: LM MRC Block F

TestAmerica Job ID: 240-107535-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107535-1	TRIP BLANK-013019	Water	01/30/19 00:00	01/31/19 10:15
240-107535-2	MRC-MW153A-013019	Water	01/30/19 11:00	01/31/19 10:15
240-107535-3	MRC-MW139B-013019	Water	01/30/19 13:56	01/31/19 10:15

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

2.4 | C2.4

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Walt Pyron	Lab PM: McFadden, John	Carrier Tracking No(s):	COC No: 240-56232-24222.1
Client Contact: ~~Mr. Stuart Cameron~~ Tony Aparnavage	Phone: 301 991-3914	E-Mail: john.mcfadden@testamericainc.com		Page: Page 1 of 1
Company: Tetra Tech, Inc.				Job #:
Address: 20251 Century Blvd Suite 200	Due Date Requested:			
City: Germantown	TAT Requested (days): standard			
State, Zip: MD, 20874				
Phone: 301-233-8230(Tel)	PO #: ~~4104370~~			
Email: ~~Stuart.Cameron@TetraTech.com~~	WO #: ~~112IC08784~~			
Project Name: ~~MSA Surface Water~~ Middle River Center	Project #: ~~24006132~~ 112IC08784			
Site: MRC Block E/F GW Sampling	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B (MOD) Project VOCs (8260C)	TAL metals (6020A/6010C)	Sulfate, nitrate, TDS (9056A)	Alkalinity (2320B)	Salinity (2520B)	Local method (353.2)	Local method (2340C)	PCBs (680)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A									
TRIP BLANK - 013019	1/30/19	—	G	Water			2	1	1	1	1	1	1	1		
MRC-MW153A-013019	↓	1100	↓	↓			3	1	1	1	1	1	1	2		
MRC-MW139B-013019	↓	1356	↓	↓			3	1	1	1	1	1	1	1		

240-107535 Chain of Custody

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Walt Pyron	1/30/19 1900	ATINC		1-31-19 1015	TAC
2						
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 08/04/2016

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** 107535
Canton Facility

Client Tetra Tech Site Name _____ Cooler unpacked by:

Cooler Received on 1-31-19 Opened on 1-31-19

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 17 Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 2.4 °C Corrected Cooler Temp. 2.4 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: MS

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW153A-013019	240-107535-F-2	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW153A-013019	240-107535-G-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW153A-013019	240-107535-I-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW139B-013019	240-107535-F-3	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW139B-013019	240-107535-G-3	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW139B-013019	240-107535-I-3	Plastic 500ml - with Nitric Acid	<2	_____	_____

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TRIP BLANK-013019	240-107535-1	82	85	87	84
MRC-MW153A-013019	240-107535-2	81	84	85	81
MRC-MW139B-013019	240-107535-3	81	83	85	85
	MB 240-366634/6	86	84	87	86
	LCS 240-366634/4	91	85	90	91
MRC-MW139B-013019 MS	240-107535-3 MS	86	83	86	89
MRC-MW139B-013019 MSD	240-107535-3 MSD	89	85	89	90

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab File ID: UXC8676.D Lab Sample ID: MB 240-366634/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/04/2019 14:09

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-366634/4	UXC8672.D	02/04/2019 12:41
TRIP BLANK-013019	240-107535-1	UXC8685.D	02/04/2019 17:26
MRC-MW153A-013019	240-107535-2	UXC8686.D	02/04/2019 17:48
MRC-MW139B-013019	240-107535-3	UXC8687.D	02/04/2019 18:09
MRC-MW139B-013019 MS	240-107535-3 MS	UXC8688.D	02/04/2019 18:31
MRC-MW139B-013019 MSD	240-107535-3 MSD	UXC8689.D	02/04/2019 18:53

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-366634/6

Matrix: Water | Lab File ID: UXC8676.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 14:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-366634/6

Matrix: Water | Lab File ID: UXC8676.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 14:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-366634/6

Matrix: Water | Lab File ID: UXC8676.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 14:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	84		70-121
460-00-4	4-Bromofluorobenzene (Surr)	86		59-120
2037-26-5	Toluene-d8 (Surr)	87		70-123
1868-53-7	Dibromofluoromethane (Surr)	86		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8672.D

Lab ID: LCS 240-366634/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.73	97	80-124	
1,1,1-Trichloroethane	10.0	11.3	113	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.75	87	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	10.3	103	50-156	
1,1-Dichloroethane	10.0	10.7	107	75-133	
1,1-Dichloroethene	10.0	9.50	95	65-139	
1,1-Dichloropropene	10.0	10.2	102	78-126	
1,2,3-Trichlorobenzene	10.0	9.63	96	39-138	
1,2,3-Trichloropropane	10.0	8.89	89	66-139	
1,2,4-Trichlorobenzene	10.0	9.80	98	42-133	
1,2,4-Trimethylbenzene	10.0	9.80	98	74-120	
1,2-Dibromo-3-Chloropropane	10.0	6.67	67	46-132	
1,2-Dichlorobenzene	10.0	9.94	99	78-120	
1,2-Dichloroethane	10.0	10.0	100	71-135	
1,2-Dichloropropane	10.0	10.3	103	78-133	
1,3-Dichlorobenzene	10.0	9.71	97	78-120	
1,3-Dichloropropane	10.0	9.27	93	72-134	
1,4-Dichlorobenzene	10.0	9.62	96	78-120	
2,2-Dichloropropane	10.0	11.6	116	42-150	
2-Chloroethyl vinyl ether	10.0	7.90 J	79	55-137	
2-Chlorotoluene	10.0	9.83	98	78-123	
2-Hexanone	20.0	15.3	77	43-148	
Bromobenzene	10.0	9.69	97	74-129	
Bromochloromethane	10.0	10.5	105	74-130	
4-Chlorotoluene	10.0	9.60	96	77-125	
4-Isopropyltoluene	10.0	9.99	100	69-122	
Acetone	20.0	17.0	85	21-162	
Benzene	10.0	10.4	104	80-123	
Bromoform	10.0	6.20	62	49-141	
Bromomethane	10.0	9.40	94	41-175	
Carbon disulfide	10.0	9.20	92	60-138	
Carbon tetrachloride	10.0	9.89	99	63-140	
Chlorobenzene	10.0	9.95	99	80-121	
Chloroethane	10.0	9.30	93	33-173	
Chloroform	10.0	10.4	104	79-127	
Chloromethane	10.0	8.60	86	54-143	
cis-1,2-Dichloroethene	10.0	10.5	105	76-128	
cis-1,3-Dichloropropene	10.0	9.22	92	64-132	
Hexachlorobutadiene	10.0	9.27	93	38-136	
Dibromomethane	10.0	9.30	93	74-124	
Bromodichloromethane	10.0	9.10	91	77-125	
Dichlorodifluoromethane	10.0	8.26	83	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8672.D

Lab ID: LCS 240-366634/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.81	98	80-120	
1,2-Dibromoethane	10.0	8.92	89	77-123	
Naphthalene	10.0	8.42	84	28-141	
m-Xylene & p-Xylene	10.0	9.95	100	80-120	
n-Butylbenzene	10.0	9.45	95	57-126	
Isopropylbenzene	10.0	10.2	102	74-120	
N-Propylbenzene	10.0	9.89	99	77-123	
2-Butanone (MEK)	20.0	17.4	87	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.2	81	49-143	
sec-Butylbenzene	10.0	9.83	98	68-123	
Methyl tert-butyl ether	10.0	9.39	94	51-133	
Methylene Chloride	10.0	9.46	95	70-134	
o-Xylene	10.0	10.1	101	80-120	
Styrene	10.0	9.32	93	79-120	
tert-Butylbenzene	10.0	9.63	96	70-121	
Tetrachloroethene	10.0	10.3	103	74-130	
Toluene	10.0	10.2	102	78-129	
trans-1,2-Dichloroethene	10.0	10.8	108	78-133	
trans-1,3-Dichloropropene	10.0	8.00	80	55-128	
Trichloroethene	10.0	10.3	103	76-125	
Trichlorofluoromethane	10.0	10.3	103	51-164	
Vinyl acetate	10.0	9.36	94	45-151	
Vinyl chloride	10.0	10.2	102	58-143	
tert-Butyl alcohol	100	82.4	82	10-161	
Xylenes, Total	20.0	20.1	100	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8688.D

Lab ID: 240-107535-3 MS Client ID: MRC-MW139B-013019 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	200	2.8 U	175	88	67-123	
1,1,1-Trichloroethane	200	4.8 U	186	93	51-138	
1,1,2,2-Tetrachloroethane	200	2.6 U	169	85	60-137	
1,1,2-Trichlorotrifluoroethane	200	8.2 U	114	57	31-156	
1,1-Dichloroethane	200	3.4 U	204	102	63-136	
1,1-Dichloroethene	200	3.8 U	173	86	53-140	
1,1-Dichloropropene	200	2.8 U	183	91	62-127	
1,2,3-Trichlorobenzene	200	59	236	89	34-123	
1,2,3-Trichloropropane	200	4.8 U	173	86	61-143	
1,2,4-Trichlorobenzene	200	290	466	87	30-126	
1,2,4-Trimethylbenzene	200	1.4 U	180	90	62-120	
1,2-Dibromo-3-Chloropropane	200	18 U	106	53	38-124	
1,2-Dichlorobenzene	200	11 J	205	97	64-120	
1,2-Dichloroethane	200	4.2 U	199	100	65-135	
1,2-Dichloropropane	200	3.0 U	203	101	70-132	
1,3-Dichlorobenzene	200	65	254	95	62-120	
1,3-Dichloropropane	200	4.2 U	190	95	68-135	
1,4-Dichlorobenzene	200	42	229	93	63-120	
2,2-Dichloropropane	200	6.2 U	173	86	27-132	
2-Chloroethyl vinyl ether	200	5.2 U	11.0 J	6	10-120	F1
2-Chlorotoluene	200	3.0 U	185	92	64-123	
2-Hexanone	400	11 U	305	76	42-150	
Bromobenzene	200	2.4 U	193	97	66-127	
Bromochloromethane	200	2.8 U	207	103	73-120	
4-Chlorotoluene	200	1.8 U	182	91	63-126	
4-Isopropyltoluene	200	2.6 U	162	81	59-120	
Acetone	400	110 U	362	90	10-168	
Benzene	200	2.6 U	205	103	71-122	
Bromoform	200	15 U	106	53	44-129	
Bromomethane	200	8.4 U	144	72	19-187	
Carbon disulfide	200	5.6 U	133	66	43-144	
Carbon tetrachloride	200	5.2 U	154	77	41-143	
Chlorobenzene	200	68	262	97	70-123	
Chloroethane	200	17 U	162	81	11-189	
Chloroform	200	2.6 U	205	103	68-130	
Chloromethane	200	4.0 U	182	91	31-154	
cis-1,2-Dichloroethene	200	3.2 U	206	103	64-130	
cis-1,3-Dichloropropene	200	12 U	164	82	48-127	
Hexachlorobutadiene	200	17 U	123	61	32-128	
Dibromomethane	200	1.8 U	186	93	71-120	
Bromodichloromethane	200	3.4 U	166	83	64-125	
Dichlorodifluoromethane	200	7.0 U	133	66	28-136	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8688.D

Lab ID: 240-107535-3 MS Client ID: MRC-MW139B-013019 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethylbenzene	200	2.2 U	182	91	66-120	
1,2-Dibromoethane	200	2.4 U	174	87	71-123	
Naphthalene	200	6.4 U	152	76	31-142	
m-Xylene & p-Xylene	200	1.6 U	181	91	63-121	
n-Butylbenzene	200	2.8 U	147	73	51-120	
Isopropylbenzene	200	1.8 U	178	89	59-120	
N-Propylbenzene	200	3.0 U	168	84	61-123	
2-Butanone (MEK)	400	23 U	351	88	37-156	
4-Methyl-2-pentanone (MIBK)	400	8.4 U	309	77	44-143	
sec-Butylbenzene	200	2.6 U	155	78	60-120	
Methyl tert-butyl ether	200	1.4 U	168	84	41-136	
Methylene Chloride	200	52 U	167	84	61-130	
o-Xylene	200	1.8 U	193	97	69-120	
Styrene	200	2.0 U	183	92	68-120	
tert-Butylbenzene	200	2.8 U	163	82	61-120	
Tetrachloroethene	200	3.0 U	176	88	51-136	
Toluene	200	2.8 U	195	98	62-132	
trans-1,2-Dichloroethene	200	3.8 U	206	103	68-133	
trans-1,3-Dichloropropene	200	13 U	139	69	40-125	
Trichloroethene	200	10 J	203	96	55-131	
Trichlorofluoromethane	200	9.0 U	167	84	37-174	
Vinyl acetate	200	3.8 U	173	87	37-148	
Vinyl chloride	200	4.0 U	159	80	43-154	
tert-Butyl alcohol	2000	34 U	1180	59	70-130	F1
Xylenes, Total	400	3.0 U	374	94	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8689.D

Lab ID: 240-107535-3 MSD Client ID: MRC-MW139B-013019 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	200	178	89	2	13	67-123	
1,1,1-Trichloroethane	200	206	103	10	27	51-138	
1,1,2,2-Tetrachloroethane	200	175	87	3	31	60-137	
1,1,2-Trichlorotrifluoroethane	200	207	104	58	35	31-156	F2
1,1-Dichloroethane	200	209	104	2	23	63-136	
1,1-Dichloroethene	200	191	96	10	35	53-140	
1,1-Dichloropropene	200	197	99	8	20	62-127	
1,2,3-Trichlorobenzene	200	248	95	5	35	34-123	
1,2,3-Trichloropropane	200	177	88	2	22	61-143	
1,2,4-Trichlorobenzene	200	479	93	3	35	30-126	
1,2,4-Trimethylbenzene	200	183	91	1	27	62-120	
1,2-Dibromo-3-Chloropropane	200	119	59	11	35	38-124	
1,2-Dichlorobenzene	200	204	96	1	30	64-120	
1,2-Dichloroethane	200	208	104	4	24	65-135	
1,2-Dichloropropane	200	208	104	3	26	70-132	
1,3-Dichlorobenzene	200	249	92	2	31	62-120	
1,3-Dichloropropane	200	191	96	1	15	68-135	
1,4-Dichlorobenzene	200	225	92	1	28	63-120	
2,2-Dichloropropane	200	185	92	7	18	27-132	
2-Chloroethyl vinyl ether	200	9.57 J	5	14	35	10-120	F1
2-Chlorotoluene	200	187	93	1	20	64-123	
2-Hexanone	400	321	80	5	35	42-150	
Bromobenzene	200	190	95	2	19	66-127	
Bromochloromethane	200	210	105	2	15	73-120	
4-Chlorotoluene	200	182	91	0	20	63-126	
4-Isopropyltoluene	200	183	91	12	24	59-120	
Acetone	400	409	102	12	35	10-168	
Benzene	200	208	104	1	22	71-122	
Bromoform	200	103	52	3	28	44-129	
Bromomethane	200	182	91	23	35	19-187	
Carbon disulfide	200	156	78	16	33	43-144	
Carbon tetrachloride	200	184	92	17	30	41-143	
Chlorobenzene	200	262	97	0	23	70-123	
Chloroethane	200	183	91	12	35	11-189	
Chloroform	200	209	105	2	23	68-130	
Chloromethane	200	179	89	2	35	31-154	
cis-1,2-Dichloroethene	200	213	107	4	21	64-130	
cis-1,3-Dichloropropene	200	169	85	3	30	48-127	
Hexachlorobutadiene	200	167	83	31	35	32-128	
Dibromomethane	200	191	95	2	16	71-120	
Bromodichloromethane	200	174	87	4	27	64-125	
Dichlorodifluoromethane	200	166	83	22	35	28-136	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8689.D

Lab ID: 240-107535-3 MSD Client ID: MRC-MW139B-013019 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	200	190	95	5	24	66-120	
1,2-Dibromoethane	200	182	91	4	27	71-123	
Naphthalene	200	166	83	9	35	31-142	
m-Xylene & p-Xylene	200	186	93	3	25	63-121	
n-Butylbenzene	200	173	86	16	27	51-120	
Isopropylbenzene	200	191	96	7	31	59-120	
N-Propylbenzene	200	181	91	7	20	61-123	
2-Butanone (MEK)	400	366	92	4	35	37-156	
4-Methyl-2-pentanone (MIBK)	400	328	82	6	35	44-143	
sec-Butylbenzene	200	180	90	15	24	60-120	
Methyl tert-butyl ether	200	179	90	6	29	41-136	
Methylene Chloride	200	180	90	7	29	61-130	
o-Xylene	200	195	97	1	25	69-120	
Styrene	200	181	91	1	26	68-120	
tert-Butylbenzene	200	175	88	7	20	61-120	
Tetrachloroethene	200	199	99	12	23	51-136	
Toluene	200	197	98	1	23	62-132	
trans-1,2-Dichloroethene	200	212	106	3	24	68-133	
trans-1,3-Dichloropropene	200	140	70	1	27	40-125	
Trichloroethene	200	209	99	3	23	55-131	
Trichlorofluoromethane	200	206	103	21	35	37-174	
Vinyl acetate	200	187	94	8	18	37-148	
Vinyl chloride	200	192	96	19	29	43-154	
tert-Butyl alcohol	2000	1490	74	23	35	70-130	
Xylenes, Total	400	381	95	2	25	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	47729 2392918	112693	296202	593761	1222220	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	58046 2319242	119628	276149	585358	1207742	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	57558 2025909	104647	261470	574312	1027051	1.00 40.0	2.00	5.00	10.0	20.0
Butadiene	FB	Ave	71088 2665435	148568	361713	698736	1378009	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	47411 1506749	100403	198900	423055	791041	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	40558 1406432	82718	182320	372694	733356	1.00 40.0	2.00	5.00	10.0	20.0
Dichlorofluoromethane	FB	Ave	103682 3477509	201291	471934	910063	1834172	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	68568 3407867	157640	408598	855986	1703371	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	44605 1653914	87432	212667	419544	869536	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	32229 1148055	55282	144856	290454	603583	5.00 200	10.0	25.0	50.0	100
1,1-Dichloroethene	FB	Ave	57094 2182381	120279	277159	516876	1125076	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichlorotrifluoroethane	FB	Ave	42550 1880984	91700	228498	462285	967763	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Lin1	17181 332724	23252	50751	89168	190030	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	93588 3255913	156089	446819	909454	1760595	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	160687 5174431	283969	742305	1445567	2744114	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	27003 1418141	58477	154763	317161	716236	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Methyl acetate	FB	Ave	79740 3067156	150240	380996	723073	1550490	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	154915 2032773	198393	338417	580808	1097865	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	36240 1508945	82343	184510	328142	832907	10.0 400	20.0	50.0	100	200
Acrylonitrile	FB	Ave	175156 7643188	352291	868795	1699336	3768272	10.0 400	20.0	50.0	100	200
Methyl tert-butyl ether	FB	Ave	139955 6078083	285516	714788	1439491	3075308	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,2-Dichloroethene	FB	Ave	54736 2072831	103155	251570	500088	1069131	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	10725 455555	22194	51427	104918	230317	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	81126 3448011	166930	409730	832192	1773410	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	88027 4206187	177639	476538	992089	2098831	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	57035 2264494	116480	278759	565374	1189038	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	11684 445323	21907	58586	120845	241048	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone (MEK)	FB	Ave	12505 511818	24387	59681	120010	256717	2.00 80.0	4.00	10.0	20.0	40.0
Bromochloromethane	FB	Ave	28543 1150919	56716	140018	275468	595090	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	31985 1272086	62314	150812	279158	634219	2.00 80.0	4.00	10.0	20.0	40.0
Chloroform	FB	Ave	83929 3460990	169874	422474	847597	1793716	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	63803 2533663	130349	334136	689229	1356966	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	68915 3105972	144320	368473	742256	1592895	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	66437 2816568	140972	343617	688186	1474449	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	56945 2706723	124489	318843	648774	1385341	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	31904 1496664	73133	177736	322275	821992	25.0 1000	50.0	125	250	500
Benzene	FB	Ave	207184 8390558	412777	1016161	2024145	4352726	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	68031 2877185	142414	350758	707702	1492475	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	8801 415529	19095	48491	101813	218160	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	59121 2403531	120531	296310	593061	1274454	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	60130 2723193	127322	326169	654672	1428283	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	43707 1981074	97800	239856	483376	1020861	1.00 40.0	2.00	5.00	10.0	20.0
Dibromomethane	FB	Ave	31111 1256838	65366	157375	317664	664429	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Ave	5185 326819	14227	39232	71764	183906	20.0 800	40.0	100	200	400
Bromodichloromethane	FB	Ave	57382 2704273	121869	306036	637533	1409597	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	61442 2796269	123378	319533	640886	1383920	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Ave	62099 3274371	138202	356486	746312	1652896	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	98299 4186633	187250	495239	970866	2114735	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBNZ d5	Ave	209687 9034071	428381	1080197	2172974	4691174	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBNZ d5	Ave	57707 3169409	125256	333930	706531	1578892	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBNZ d5	Ave	61421 2869285	129112	316654	647349	1421429	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBNZ d5	Ave	41853 1840913	87521	218933	437245	940456	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBNZ d5	Ave	44889 1992562	95990	241473	482895	1049416	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBNZ d5	Ave	72217 3294456	153833	378264	779324	1663194	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBNZ d5	Ave	58616 2937075	135481	337296	666112	1487023	2.00 80.0	4.00	10.0	20.0	40.0
Chlorodibromomethane	CBNZ d5	Ave	36977 2200067	82891	222991	469828	1084488	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBNZ d5	Ave	45295 1979685	91132	237763	469490	999728	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBNZ d5	Ave	138107 6035718	286159	714138	1441533	3072375	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	46702 2220799	95060	253355	522591	1113186	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBNZ d5	Ave	73699 3208633	146696	374569	758362	1624425	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBNZ d5	Ave	168049 7830315	351787	872988	1818169	3890600	1.00 40.0	2.00	5.00	10.0	20.0
o-Xylene	CBNZ d5	Ave	88147 3825283	176986	449671	918350	1968397	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBNZ d5	Ave	137740 6714209	289260	754758	1550959	3394736	1.00 40.0	2.00	5.00	10.0	20.0
Bromoform	CBNZ d5	Lin1	19867 1639155	51580	138461	306750	770158	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBNZ d5	Ave	198841 9246149	416807	1070139	2200366	4695119	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	54865 2441270	112833	283791	577712	1238040	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCBd 4	Ave	63640 2849353	131876	330598	678570	1450127	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCBd 4	Ave	18846 848462	40526	99350	201010	423192	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	3277 574750	16039	23872	66363	276245	1.00 40.0	2.00	5.00	10.0	20.0
N-Propylbenzene	DCBd 4	Ave	54874 2529942	117423	290505	601438	1274023	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCBd 4	Ave	53702 2322347	107735	275264	555062	1188057	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	160683 7300680	332591	840604	1766210	3784392	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCBd 4	Ave	170473 7526400	356628	881245	1798133	3844885	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCBd 4	Ave	141080 6973779	300630	749194	1551899	3285832	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	169136 7660047	359918	876431	1848645	3917785	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCBd 4	Ave	173094 7876504	373619	937713	1935865	4155710	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCBd 4	Ave	113176 4738373	229119	572540	1168047	2462678	1.00 40.0	2.00	5.00	10.0	20.0
4-Isopropyltoluene	DCBd 4	Ave	154318 7046098	334169	830781	1751242	3739399	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCBd 4	Ave	119243 4936571	241629	582208	1199185	2527274	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
n-Butylbenzene	DCBd 4	Ave	127428 5435677	263153	659506	1384405	2918965	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCBd 4	Ave	109056 4571601	224899	556492	1159176	2381785	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	10572 585195	24334	65389	138143	306515	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	73453 2553990	145803	356465	739836	1510157	1.00 40.0	2.00	5.00	10.0	20.0
Hexachlorobutadiene	DCBd 4	Ave	41867 1091039	78276	175613	359850	696597	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCBd 4	Ave	172653 6820199	348942	926474	1891386	3879317	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	65430 2286670	131338	324635	663704	1364016	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	41840 1806247	80448	225163	447792	947952	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	55383 2257190	106482	288691	573781	1190875	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBNZ d5	Ave	174193 7359833	333303	912990	1816996	3883966	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	60446 2700470	120695	328418	649263	1374232	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Acetone	5.5						50					
Methylene Chloride	5.1						50					
Bromoform	19.5						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acetonitrile	FB	Ave	43776 1719436	78140	216790	375778	846508	10.0 400	20.0	50.0	100	200
Diisopropyl ether	FB	Ave	43843 1750827	82274	218424	423417	889067	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloro-1,3-butadiene	FB	Ave	78005 3085189	151016	379041	729996	1534644	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl tert-butyl ether	FB	Ave	140382 5753247	273366	703226	1363608	2849689	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl acetate	FB	Ave	90776 3822356	173055	465746	871063	1885113	2.00 80.0	4.00	10.0	20.0	40.0
Propionitrile	FB	Ave	60838 2683433	120712	346296	618722	1307620	10.0 400	20.0	50.0	100	200
Methacrylonitrile	FB	Ave	299007 13192364	589937	1557675	3048167	6587251	10.0 400	20.0	50.0	100	200
Tert-amyl methyl ether	FB	Ave	139226 5803487	265089	690261	1376169	2893429	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Ave	27517 1141061	53519	142999	252385	538091	25.0 1000	50.0	125	250	500
Ethyl acrylate	FB	Ave	55889 2595809	111797	311313	570379	1269397	1.00 40.0	2.00	5.00	10.0	20.0
Methyl methacrylate	FB	Ave	82902 3746376	164974	443947	839432	1854426	2.00 80.0	4.00	10.0	20.0	40.0
2-Nitropropane	FB	Ave	24091 1187179	51098	135714	254301	578091	2.00 80.0	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Ave	62560 3081411	130855	371884	688240	1496211	1.00 40.0	2.00	5.00	10.0	20.0
1-Chlorohexane	CBNZ d5	Ave	56623 2299838	112915	287030	522245	1142204	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexanone	DCBd 4	Lin1	18061 496922	26838	72655	115834	240064	10.0 400	20.0	50.0	100	200
Pentachloroethane	CBNZ d5	Ave	49671 2629484	105733	282130	577976	1287207	2.00 80.0	4.00	10.0	20.0	40.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCBd 4	Ave	159891 7509792	343441	887789	1750222	3743187	1.00 40.0	2.00	5.00	10.0	20.0
Benzyl chloride	DCBd 4	Ave	18125 1117019	36545	113409	234360	534799	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCBd 4	Ave	70436 2856330	145613	362674	730581	1512196	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCBd 4	Ave	146578 6396329	332448	834898	1722729	3597249	2.00 80.0	4.00	10.0	20.0	40.0
1-Chloro-1-fluoroethane TIC	FB	None	38810 1466901	1184	184959	389588	796152	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
None = No Calib Curve

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Cyclohexanone	4.9						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab File ID: BFB0204.D BFB Injection Date: 02/04/2019

Instrument ID: A3UX15 BFB Injection Time: 11:27

Analysis Batch No.: 366634

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.3	
75	30.0 - 60.0 % of mass 95	50.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	100.7	
175	5.0 - 9.0 % of mass 174	7.2	(7.2) 1
176	95.0 - 101.0 % of mass 174	100.0	(99.3) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-366634/2	UXC8671.D	02/04/2019	12:19
	LCS 240-366634/4	UXC8672.D	02/04/2019	12:41
	CCV 240-366634/3	UXC8673.D	02/04/2019	13:03
	MB 240-366634/6	UXC8676.D	02/04/2019	14:09
TRIP BLANK-013019	240-107535-1	UXC8685.D	02/04/2019	17:26
MRC-MW153A-013019	240-107535-2	UXC8686.D	02/04/2019	17:48
MRC-MW139B-013019	240-107535-3	UXC8687.D	02/04/2019	18:09
MRC-MW139B-013019 MS	240-107535-3 MS	UXC8688.D	02/04/2019	18:31
MRC-MW139B-013019 MSD	240-107535-3 MSD	UXC8689.D	02/04/2019	18:53

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: CCVIS 240-366634/2 Calibration Date: 02/04/2019 12:19

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8671.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3907	0.1000	0.0127	0.0100	27.2*	20.0
Chloromethane	Ave	0.3135	0.3250	0.1000	0.0104	0.0100	3.6	20.0
Vinyl chloride	Ave	0.2885	0.3565	0.1000	0.0124	0.0100	23.6*	20.0
Butadiene	Ave	0.3794	0.3943		0.0104	0.0100	3.9	20.0
Bromomethane	Ave	0.2308	0.2561	0.0500	0.0111	0.0100	11.0	20.0
Chloroethane	Ave	0.2041	0.2169	0.0500	0.0106	0.0100	6.3	20.0
Dichlorofluoromethane	Ave	0.5102	0.5039		0.00988	0.0100	-1.2	20.0
Trichlorofluoromethane	Ave	0.4337	0.5121	0.1000	0.0118	0.0100	18.1	20.0
Ethyl ether	Ave	0.2310	0.2237		0.00969	0.0100	-3.1	20.0
Acrolein	Ave	0.0317	0.0429		0.0677	0.0500	35.3	50.0
1,1-Dichloroethene	Ave	0.3005	0.2911	0.1000	0.00969	0.0100	-3.1	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2740	0.0500	0.0111	0.0100	11.0	20.0
Acetone	Lin1		0.0245	0.0100	0.0203	0.0200	1.4	50.0
Iodomethane	Ave	0.4675	0.5536		0.0118	0.0100	18.4	20.0
Carbon disulfide	Ave	0.7741	0.7469	0.1000	0.00965	0.0100	-3.5	20.0
3-Chloro-1-propene	Ave	0.1698	0.1842		0.0108	0.0100	8.5	20.0
Methyl acetate	Ave	0.2050	0.1830	0.1000	0.0178	0.0200	-10.8	20.0
Methylene Chloride	Lin1		0.3098	0.1000	0.0100	0.0100	0.0	50.0
tert-Butyl alcohol	Ave	0.0203	0.0201		0.0991	0.100	-0.9	50.0
Acrylonitrile	Ave	0.0962	0.0925		0.0961	0.100	-3.9	20.0
Methyl tert-butyl ether	Ave	0.7834	0.7688	0.1000	0.00981	0.0100	-1.9	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.3040	0.1000	0.0109	0.0100	8.7	20.0
Hexane	Ave	0.0586	0.0566		0.00965	0.0100	-3.5	20.0
1,1-Dichloroethane	Ave	0.4517	0.4973	0.2000	0.0110	0.0100	10.1	20.0
Vinyl acetate	Ave	0.5198	0.4430		0.00852	0.0100	-14.8	50.0
2,2-Dichloropropane	Ave	0.0624	0.0728		0.0117	0.0100	16.8	20.0
2-Butanone (MEK)	Ave	0.0333	0.0268	0.0100	0.0161	0.0200	-19.3	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3329	0.1000	0.0108	0.0100	8.1	20.0
Bromochloromethane	Ave	0.1531	0.1625		0.0106	0.0100	6.1	20.0
Tetrahydrofuran	Ave	0.0828	0.0696		0.0168	0.0200	-15.9	20.0
Chloroform	Ave	0.4606	0.4866	0.2000	0.0106	0.0100	5.6	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.4129	0.1000	0.0116	0.0100	16.4	20.0
Cyclohexane	Ave	0.3993	0.4400	0.1000	0.0110	0.0100	10.2	20.0
1,1-Dichloropropene	Ave	0.3748	0.3867		0.0103	0.0100	3.2	20.0
Carbon tetrachloride	Ave	0.3441	0.3647	0.1000	0.0106	0.0100	6.0	20.0
Isobutyl alcohol	Ave	0.0077	0.0073		0.237	0.250	-5.1	20.0
Benzene	Ave	1.116	1.169	0.5000	0.0105	0.0100	4.7	20.0
1,2-Dichloroethane	Ave	0.3820	0.3816	0.1000	0.00999	0.0100	-0.1	20.0
n-Heptane	Ave	0.0532	0.0478		0.00899	0.0100	-10.1	20.0
Trichloroethene	Ave	0.3240	0.3359	0.1500	0.0104	0.0100	3.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: CCVIS 240-366634/2 Calibration Date: 02/04/2019 12:19

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8671.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3811	0.1000	0.0108	0.0100	8.1	20.0
1,2-Dichloropropane	Ave	0.2590	0.2530	0.1000	0.00977	0.0100	-2.3	20.0
1,4-Dioxane	Ave	0.0020	0.0020		0.197	0.200	-1.4	50.0
Dibromomethane	Ave	0.1717	0.1615		0.00941	0.0100	-5.9	20.0
Bromodichloromethane	Ave	0.3410	0.3193	0.1500	0.00937	0.0100	-6.3	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1255		0.0144	0.0200	-28.1*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3463	0.1500	0.00878	0.0100	-12.2	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2053	0.0500	0.0153	0.0200	-23.3*	20.0
Toluene	Ave	1.476	1.487	0.4000	0.0101	0.0100	0.7	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3731	0.1000	0.00803	0.0100	-19.7	20.0
Ethyl methacrylate	Ave	0.4442	0.3371		0.00759	0.0100	-24.1*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2696	0.1000	0.00904	0.0100	-9.6	20.0
Tetrachloroethene	Ave	0.3268	0.3287	0.1500	0.0101	0.0100	0.6	20.0
1,3-Dichloropropane	Ave	0.5243	0.4694		0.00895	0.0100	-10.5	20.0
2-Hexanone	Ave	0.2283	0.1666	0.0500	0.0146	0.0200	-27.0*	20.0
Chlorodibromomethane	Ave	0.3116	0.2702		0.00867	0.0100	-13.3	20.0
1,2-Dibromoethane	Ave	0.3191	0.2679		0.00840	0.0100	-16.0	20.0
Chlorobenzene	Ave	0.9777	0.9400	0.3000	0.00961	0.0100	-3.9	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3514		0.0102	0.0100	1.8	20.0
Ethylbenzene	Ave	0.5145	0.4983		0.00969	0.0100	-3.1	20.0
m-Xylene & p-Xylene	Ave	1.221	1.161		0.00951	0.0100	-4.9	20.0
o-Xylene	Ave	0.6189	0.6373		0.0103	0.0100	3.0	20.0
Styrene	Ave	1.036	0.9786	0.3000	0.00945	0.0100	-5.5	20.0
Bromoform	Lin1		0.1619	0.1000	0.00700	0.0100	-30.0*	20.0
Isopropylbenzene	Ave	1.463	1.518	0.1000	0.0104	0.0100	3.7	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5850	0.3000	0.00826	0.0100	-17.4	20.0
Bromobenzene	Ave	0.8274	0.7552		0.00913	0.0100	-8.7	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2008		0.00813	0.0100	-18.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0717		0.00708	0.0100	-29.2*	20.0
N-Propylbenzene	Ave	0.7286	0.6763		0.00928	0.0100	-7.2	20.0
2-Chlorotoluene	Ave	0.6821	0.6487		0.00951	0.0100	-4.9	20.0
1,3,5-Trimethylbenzene	Ave	2.119	2.074		0.00979	0.0100	-2.1	20.0
4-Chlorotoluene	Ave	2.205	1.983		0.00899	0.0100	-10.1	20.0
tert-Butylbenzene	Ave	1.897	1.794		0.00946	0.0100	-5.4	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.179		0.00978	0.0100	-2.2	20.0
sec-Butylbenzene	Ave	2.327	2.245		0.00965	0.0100	-3.5	20.0
1,3-Dichlorobenzene	Ave	1.425	1.305	0.6000	0.00916	0.0100	-8.4	20.0
4-Isopropyltoluene	Ave	2.083	2.037		0.00978	0.0100	-2.2	20.0
1,4-Dichlorobenzene	Ave	1.477	1.364	0.5000	0.00923	0.0100	-7.7	20.0
n-Butylbenzene	Ave	1.649	1.539		0.00934	0.0100	-6.6	20.0
1,2-Dichlorobenzene	Ave	1.387	1.365	0.4000	0.00984	0.0100	-1.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: CCVIS 240-366634/2 Calibration Date: 02/04/2019 12:19

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8671.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1171	0.0500	0.00727	0.0100	-27.3	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8854	0.2000	0.0101	0.0100	0.8	50.0
Hexachlorobutadiene	Ave	0.4386	0.4022		0.00917	0.0100	-8.3	20.0
Naphthalene	Ave	2.209	1.984		0.00898	0.0100	-10.2	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7939		0.0100	0.0100	0.5	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2111		0.00711	0.00797	-10.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2501		0.00655	0.00797	-17.8	20.0
Toluene-d8 (Surr)	Ave	1.214	1.028		0.00675	0.00797	-15.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3675		0.00675	0.00797	-15.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: CCV 240-366634/3 Calibration Date: 02/04/2019 13:03

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8673.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0245		0.106	0.100	6.1	20.0
Diisopropyl ether	Ave	0.2405	0.2362		0.00982	0.0100	-1.8	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3955		0.00934	0.0100	-6.6	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6875		0.00882	0.0100	-11.8	20.0
Ethyl acetate	Ave	0.2538	0.2015		0.0159	0.0200	-20.6	50.0
Propionitrile	Ave	0.0357	0.0315		0.0883	0.100	-11.7	20.0
Methacrylonitrile	Ave	0.1733	0.1439		0.0830	0.100	-17.0	20.0
Tert-amyl methyl ether	Ave	0.7765	0.6251		0.00805	0.0100	-19.5	20.0
n-Butanol	Ave	0.0061	0.0042		0.172	0.250	-31.1*	20.0
Ethyl acrylate	Ave	0.3330	0.2402		0.00721	0.0100	-27.9*	20.0
Methyl methacrylate	Ave	0.2430	0.1867		0.0154	0.0200	-23.2*	20.0
2-Nitropropane	Ave	0.0745	0.0359		0.00965	0.0200	-51.8*	20.0
n-Butyl acetate	Ave	0.3918	0.2846		0.00726	0.0100	-27.4*	20.0
1-Chlorohexane	Ave	0.3968	0.3232		0.00815	0.0100	-18.5	20.0
Cyclohexanone	Lin1		0.0117		0.0711	0.100	-28.9*	20.0
Pentachloroethane	Ave	0.2034	0.1698		0.0167	0.0200	-16.5	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.099		0.00914	0.0100	-8.6	20.0
Benzyl chloride	Ave	0.2963	0.1590		0.00537	0.0100	-46.3*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8587		0.00907	0.0100	-9.3	20.0
2-Methylnaphthalene	Ave	1.076	0.7167		0.0133	0.0200	-33.4*	20.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-366634/2		1752505	5.20	1341216	7.88	787926	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Sample No.: CCVIS 240-366634/2 Date Analyzed: 02/04/2019 12:19

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8671.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1752505	5.20	1341216	7.88	787926	10.12
UPPER LIMIT		3505010	5.70	2682432	8.38	1575852	10.62
LOWER LIMIT		876253	4.70	670608	7.38	393963	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-366634/4		1875200	5.20	1491517	7.88	841185	10.12
CCV 240-366634/3		1891949	5.20	1490411	7.88	820426	10.12
MB 240-366634/6		1756677	5.20	1383207	7.88	768470	10.12
240-107535-1	TRIP BLANK-013019	1753486	5.20	1380243	7.88	750816	10.12
240-107535-2	MRC-MW153A-013019	1742838	5.20	1372508	7.88	762545	10.12
240-107535-3	MRC-MW139B-013019	1725869	5.20	1373896	7.88	770315	10.12
240-107535-3 MS	MRC-MW139B-013019 MS	1778117	5.20	1441321	7.88	811607	10.12
240-107535-3 MSD	MRC-MW139B-013019 MSD	1766558	5.20	1442822	7.88	829966	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

SAMPLE IDENTIFICATION	MRC-MW153A-013019	
COMPOUND	Trichloroethene	
COMPOUND AREA	21550	
INTERNAL STANDARD AMOUNT (ug)	10	
DILUTION FACTOR	1	
INTERNAL STANDARD AREA	1742838	
AVERAGE RRF	0.324	
21550 x 10 / 1742838 x 0.324	0.3816	ug/L
0.381632404612548 x 1	0.38	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW153A-013019 | Lab Sample ID: 240-107535-2

Matrix: Water | Lab File ID: UXC8686.D

Analysis Method: 8260C | Date Collected: 01/30/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107535-1

SDG No.:

Client Sample ID: MRC-MW153A-013019 | Lab Sample ID: 240-107535-2

Matrix: Water | Lab File ID: UXC8686.D

Analysis Method: 8260C | Date Collected: 01/30/2019 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/04/2019 17:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 366634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.38	J ✓	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX15\20190204-84209.b\UXC8686.D
Lims ID: 240-107535-B-2
Client ID: MRC-MW153A-013019
Sample Type: Client
Inject. Date: 04-Feb-2019 17:48:30 ALS Bottle#: 16 Worklist Smp#: 44
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 240-0084209-044
Misc. Info.: C90204A,8260LLUX15,,43582
Operator ID: Instrument ID: A3UX15

Method: \\chromna\Canton\ChromData\A3UX15\20190204-84209.b\8260_15.m
Limit Group: MSV 8260C ICAL
Last Update: 05-Feb-2019 08:08:15 Calib Date: 21-Jan-2019 19:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX15\20190121-83824.b\UXC8431.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0322

First Level Reviewer: evansle Date: 05-Feb-2019 08:03:48

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
*	1 Fluorobenzene	96	5.196	5.196	0.000	99	1742838	10.0	
*	2 Chlorobenzene-d5	117	7.876	7.876	0.000	84	1372508	10.0	
*	3 1,4-Dichlorobenzene-d4	152	10.117	10.117	0.000	93	762545	10.0	
$	4 Dibromofluoromethane (Surr	113	4.638	4.639	-0.001	95	265479	6.44	
$	5 1,2-Dichloroethane-d4 (Sur	65	4.923	4.923	0.000	100	353297	6.66	
$	6 Toluene-d8 (Surr)	98	6.560	6.560	0.000	93	1128761	6.78	
$	7 4-Bromofluorobenzene (Surr	95	8.991	8.991	0.000	96	385240	6.47	
	9 Dichlorodifluoromethane	85		1.532				ND	
	10 Chloromethane	50		1.686				ND	
	11 Vinyl chloride	62		1.781				ND	
	13 Bromomethane	94		2.054				ND	
	14 Chloroethane	64		2.137				ND	
	16 Trichlorofluoromethane	101		2.350				ND	
	19 1,1-Dichloroethene	96		2.777				ND	
	20 1,1,2-Trichloro-1,2,2-trif	151		2.789				ND	
	22 Acetone	58	2.824	2.824	0.000	98	13345	1.15	
	24 Carbon disulfide	76	2.966	2.979	-0.012	97	15703	0.1164	
	28 Methylene Chloride	84		3.180				ND	
	29 2-Methyl-2-propanol	59	3.251	3.263	-0.012	90	5140	1.45	
	30 trans-1,2-Dichloroethene	96		3.405				ND	
	31 Methyl tert-butyl ether	73		3.405				ND	
	34 1,1-Dichloroethane	63		3.761				ND	
	36 Vinyl acetate	43		3.785				ND	
	35 Isopropyl ether	87		3.797				ND	
	38 Tert-butyl ethyl ether	59		4.093				ND	
	39 cis-1,2-Dichloroethene	96	4.247	4.247	0.000	63	7449	0.1388	
	41 2-Butanone (MEK)	72		4.247				ND	
	40 2,2-Dichloropropane	97		4.247				ND	
	45 Chlorobromomethane	128		4.449				ND	
	47 Chloroform	83		4.496				ND	
	48 1,1,1-Trichloroethane	97		4.662				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 1,1-Dichloropropene	75		4.793				ND	
50 Carbon tetrachloride	117		4.805				ND	
53 Benzene	78		4.971				ND	
54 1,2-Dichloroethane	62		4.983				ND	
55 Tert-amyl methyl ether	73		5.042				ND	
58 Trichloroethene	130	5.516	5.504	0.012	94	21550	0.3817	√
61 1,2-Dichloropropane	63		5.706				ND	
63 Dibromomethane	93		5.813				ND	
65 Dichlorobromomethane	83		5.931				ND	
67 2-Chloroethyl vinyl ether	63		6.180				ND	
68 cis-1,3-Dichloropropene	75		6.323				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.453				ND	
70 Toluene	91		6.619				ND	
71 trans-1,3-Dichloropropene	75		6.809				ND	
74 Tetrachloroethene	164		7.117				ND	
75 1,3-Dichloropropane	76		7.129				ND	
76 2-Hexanone	43		7.188				ND	
79 Chlorodibromomethane	129		7.342				ND	
80 Ethylene Dibromide	107		7.461				ND	
82 Chlorobenzene	112		7.900				ND	
83 1,1,1,2-Tetrachloroethane	131		7.971				ND	
84 Ethylbenzene	106		7.995				ND	
85 m-Xylene & p-Xylene	91		8.101				ND	
86 o-Xylene	106		8.481				ND	
87 Styrene	104		8.493				ND	
88 Bromoform	173		8.682				ND	
89 Isopropylbenzene	105		8.825				ND	
93 1,1,2,2-Tetrachloroethane	83		9.121				ND	
92 Bromobenzene	156		9.145				ND	
94 1,2,3-Trichloropropane	110		9.169				ND	
96 N-Propylbenzene	120		9.228				ND	
97 2-Chlorotoluene	126		9.323				ND	
99 4-Chlorotoluene	91		9.418				ND	
101 tert-Butylbenzene	119		9.714				ND	
103 1,2,4-Trimethylbenzene	105		9.762				ND	
105 sec-Butylbenzene	105		9.928				ND	
106 1,3-Dichlorobenzene	146		10.046				ND	
107 4-Isopropyltoluene	119		10.070				ND	
108 1,4-Dichlorobenzene	146		10.141				ND	
109 1,2,3-Trimethylbenzene	105		10.177				ND	
111 n-Butylbenzene	91		10.473				ND	
112 1,2-Dichlorobenzene	146		10.509				ND	
113 1,2-Dibromo-3-Chloropropan	157		11.291				ND	
115 1,2,4-Trichlorobenzene	180		12.110				ND	
116 Hexachlorobutadiene	225		12.276				ND	
117 Naphthalene	128		12.359				ND	
118 1,2,3-Trichlorobenzene	180		12.608				ND	
S 129 Xylenes, Total	106		16.530				ND	

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107535-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

Method 680

Polychlorinated Biphenyls (PCBs) (GC/MS) by Method 680

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13CDCB #
MRC-MW153A-013019	240-107535-2	25
	MB 680-558728/12-A	71
	LCS 680-558728/13-A	75
	LCSD 680-558728/14-A	68

	QC LIMITS
13CDCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Lab File ID: xb2031.D Lab Sample ID: MB 680-558728/12-A

Matrix: Water Date Extracted: 02/19/2019 13:42

Instrument ID: CMSX Date Analyzed: 02/21/2019 07:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-558728/13-A	xb2032.D	02/21/2019 07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019 08:10
MRC-MW153A-013019	240-107535-2	xb2038.D	02/21/2019 10:32

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107535-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-558728/12-A

Matrix: Water | Lab File ID: xb2031.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2032.D

Lab ID: LCS 680-558728/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.67	78	62-130	
Hexachlorobiphenyl	4.00	3.37	84	62-130	
Nonachlorobiphenyl	10.0	14.6	146	70-195	
Octachlorobiphenyl	6.00	5.09	85	64-130	
Monochlorobiphenyl	2.00	1.08	54	42-130	
DCB Decachlorobiphenyl	10.0	7.81	78	59-130	
Dichlorobiphenyl	2.00	1.32	66	49-130	
Pentachlorobiphenyl	4.00	3.47	87	63-130	
Tetrachlorobiphenyl	4.00	2.93	73	54-130	
Trichlorobiphenyl	2.00	1.47	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2033.D

Lab ID: LCSD 680-558728/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.45	74	5	40	62-130	
Hexachlorobiphenyl	4.00	3.21	80	5	40	62-130	
Nonachlorobiphenyl	10.0	13.2	132	10	40	70-195	
Octachlorobiphenyl	6.00	4.75	79	7	40	64-130	
Monochlorobiphenyl	2.00	1.36	68	23	40	42-130	
DCB Decachlorobiphenyl	10.0	7.14	71	9	40	59-130	
Dichlorobiphenyl	2.00	1.47	73	11	40	49-130	
Pentachlorobiphenyl	4.00	3.33	83	4	40	63-130	
Tetrachlorobiphenyl	4.00	3.04	76	4	40	54-130	
Trichlorobiphenyl	2.00	1.52	76	3	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Lab File ID: xa0805.D DFTPP Injection Date: 01/08/2019

Instrument ID: CMSX DFTPP Injection Time: 14:10

Analysis Batch No.: 554469

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.9
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	25.1
365	Greater than 1% of mass 198	3.8
441	Present but less than mass 443	13.7 (87.5) 2
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	15.6 (18.3) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-554469/3	xa0807.D	01/08/2019	15:11
	IC 680-554469/5	xa0809.D	01/08/2019	16:08
	IC 680-554469/6	xa0810.D	01/08/2019	16:37
	IC 680-554469/27	xa0850.D	01/08/2019	17:05
	IC 680-554469/7	xa0811.D	01/08/2019	17:34
	IC 680-554469/8	xa0812.D	01/08/2019	18:02
	ICV 680-554469/9	xa0813.D	01/08/2019	18:31

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107535-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Savannah Job No.: 240-107535-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Monochlorobiphenyl	CRY	Ave	8242 813481	15382	70279	157619	299489	0.0500 5.00	0.100	0.500	1.00	2.00
Dichlorobiphenyl	CRY	Ave	5634 599778	10649	48537	112170	214973	0.0500 5.00	0.100	0.500	1.00	2.00
Trichlorobiphenyl	CRY	Ave	3987 441580	7502	35031	81047	154555	0.0500 5.00	0.100	0.500	1.00	2.00
Tetrachlorobiphenyl	CRY	Ave	5574 615833	10606	50081	113059	216849	0.100 10.0	0.200	1.00	2.00	4.00
Pentachlorobiphenyl	CRY	Ave	4430 525344	8255	40050	94602	179296	0.100 10.0	0.200	1.00	2.00	4.00
Hexachlorobiphenyl	CRY	Ave	4409 515192	8063	39570	95892	180616	0.100 10.0	0.200	1.00	2.00	4.00
Heptachlorobiphenyl	CRY	Ave	8087 711849	13173	54642	129695	247124	0.150 15.0	0.300	1.50	3.00	6.00
Octachlorobiphenyl	CRY	Ave	5679 662783	10462	52287	120191	235791	0.150 15.0	0.300	1.50	3.00	6.00
Nonachlorobiphenyl	CRY	Ave				55196					5.00	
DCB Decachlorobiphenyl	CRY	Ave	1830 243534	3384	17538	42007	81970	0.250 25.0	0.500	2.50	5.00	10.0
Decachlorobiphenyl-13C12	CRY	Ave	2369 234805	4106	24902	55313	103476	0.250 20.0	0.500	2.50	5.00	10.0

Curve Type Legend:
Ave = Average ISTD

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICV 680-554469/9 Calibration Date: 01/08/2019 18:31

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xa0813.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8517		1.03	1.00	2.6	20.0
Dichlorobiphenyl	Ave	0.5847	0.5801		0.992	1.00	-0.8	20.0
Trichlorobiphenyl	Ave	0.4198	0.4573		1.09	1.00	8.9	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.3118		2.11	2.00	5.6	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2531		2.11	2.00	5.5	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2508		2.10	2.00	5.2	20.0
Heptachlorobiphenyl	Ave	0.2376	0.2274		2.87	3.00	-4.3	20.0
Octachlorobiphenyl	Ave	0.2054	0.2183		3.19	3.00	6.3	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0419		5.00	5.00	-0.0	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0577		5.35	5.00	7.1	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Lab File ID: xb2028.D DFTPP Injection Date: 02/21/2019

Instrument ID: CMSX DFTPP Injection Time: 05:43

Analysis Batch No.: 559059

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	59.5
197	Less than 1 % of mass 198	0.9
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	28.0
365	Greater than 1% of mass 198	3.5
441	Present but less than mass 443	15.1 (86.3) 2
442	Greater than 40% of mass 198	96.2
443	17 - 23% of mass 442	17.5 (18.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559059/2	xb2029.D	02/21/2019	06:14
	CCVIS 680-559059/3	xb2030.D	02/21/2019	06:44
	MB 680-558728/12-A	xb2031.D	02/21/2019	07:13
	LCS 680-558728/13-A	xb2032.D	02/21/2019	07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019	08:10
MRC-MW153A-013019	240-107535-2	xb2038.D	02/21/2019	10:32
	CCV 680-559059/21	xb2051.D	02/21/2019	16:43

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Lab Sample ID: CCVIS 680-559059/3 Calibration Date: 02/21/2019 06:44

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2030.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.7268		0.875	1.00	-12.5	20.0
Dichlorobiphenyl	Ave	0.5847	0.5079		0.869	1.00	-13.1	20.0
Trichlorobiphenyl	Ave	0.4198	0.3597		0.857	1.00	-14.3	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2563		1.74	2.00	-13.2	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2131		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2136		1.79	2.00	-10.4	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1920		2.42	3.00	-19.2	20.0
Octachlorobiphenyl	Ave	0.2054	0.1725		2.52	3.00	-16.0	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0343		4.08	5.00	-18.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0462		4.29	5.00	-14.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Lab Sample ID: CCV 680-559059/21 Calibration Date: 02/21/2019 16:43

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2051.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8070		0.972	1.00	-2.8	20.0
Dichlorobiphenyl	Ave	0.5847	0.5601		0.958	1.00	-4.2	20.0
Trichlorobiphenyl	Ave	0.4198	0.4000		0.953	1.00	-4.7	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2879		1.95	2.00	-2.4	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2300		1.92	2.00	-4.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2246		1.88	2.00	-5.8	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1938		2.45	3.00	-18.4	20.0
Octachlorobiphenyl	Ave	0.2054	0.1765		2.58	3.00	-14.1	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0315		3.75	5.00	-25.0*	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0422		3.92	5.00	-21.6*	20.0

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107535-1

SDG No.:

Sample No.: CCVIS 680-559059/3 Date Analyzed: 02/21/2019 06:44

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2030.D Heated Purge: (Y/N) N

Calibration ID: 63054

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		170892	12.41	169663	18.67		
UPPER LIMIT		222160	12.91	220562	19.17		
LOWER LIMIT		119624	11.91	118764	18.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-558728/12-A		143915	12.41	132159	18.67		
LCS 680-558728/13-A		164188	12.41	171582	18.67		
LCSD 680-558728/14-A		179669	12.41	188862	18.67		
240-107535-2	MRC-MW153A-013019	163747	12.41	157880	18.67		
CCV 680-559059/21		159076	12.41	142687	18.67		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

SAMPLE IDENTIFICATION	LCS 680-558728/13-A
COMPOUND	Monochlorobiphenyl
COMPOUND AREA	205079
INTERNAL STANDARD AMOUNT (ng)	0.75
DILUTION FACTOR	1
INTERNAL STANDARD AREA	171582
AVERAGE RRF	0.8305

205079 x 0.75 x 1 / 171582 x 0.8305 = 1.0794 ng/ml

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107535-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 680-558728/13-A

Matrix: Water | Lab File ID: xb2032.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:41

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	4.67		0.30	0.030
26601-64-9	Hexachlorobiphenyl	3.37		0.20	0.015
53742-07-7	Nonachlorobiphenyl	14.6		0.50	0.049
55722-26-4	Octachlorobiphenyl	5.09		0.30	0.038
27323-18-8	Monochlorobiphenyl	1.08		0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	7.81		0.50	0.070
25512-42-9	Dichlorobiphenyl	1.32		0.10	0.0054
25429-29-2	Pentachlorobiphenyl	3.47		0.20	0.014
26914-33-0	Tetrachlorobiphenyl	2.93		0.20	0.013
25323-68-6	Trichlorobiphenyl	1.47		0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	75		25-113

TestAmerica Savannah
Target Compound Quantitation Report

Data File: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\xb2032.D
Lims ID: LCS 680-558728/13-A
Client ID:
Sample Type: LCS
Inject. Date: 21-Feb-2019 07:41:30 ALS Bottle#: 26 Worklist Smp#: 5
Injection Vol: 2.0 ul Dil. Factor: 1.0000
Sample Info: LCS 680-558728/13-A
Misc. Info.: 680-0053932-005
Operator ID: Instrument ID: CMSX

Method: \\chromna\Savannah\ChromData\CMSX\20190220-53932.b\680_CMSX.m
Limit Group: 680
Last Update: 22-Feb-2019 09:37:47 Calib Date: 08-Jan-2019 18:02:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Savannah\ChromData\CMSX\20190108-53107.b\xa0812.D

Column 1 : HP-5MS (0.25 mm) Det: MS SCAN
Process Host: CTX0319

First Level Reviewer: davisn Date: 22-Feb-2019 09:37:47

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/ml	Flags
A 23 Total Monochlorobiphenyls	188	9.762	9.265 - 10.260		0	205079	1.08	
A 24 Total Dichlorobiphenyls	222	11.569	10.603 - 12.535		0	176787	1.32	
* 5 Phenanthrene-d10	188	12.409	12.409	0.0	100	164188	0.7500	
A 25 Total Trichlorobiphenyls	256	13.255	11.910 - 14.600		0	141116	1.47	
A 26 Total Tetrachlorobiphenyls	292	14.773	13.047 - 16.499		0	197767	2.93	
A 27 Total Pentachlorobiphenyls	326	16.192	14.339 - 18.045		0	190369	3.47	
A 28 Total Hexachlorobiphenyls	360	17.480	15.502 - 19.457		0	183545	3.37	
* 15 Chrysene-d12	240	18.669	18.668	0.001	100	171582	0.7500	a
A 29 Total Heptachlorobiphenyls	394	18.749	17.146 - 20.353		0	253613	4.67	
A 30 Total Octachlorobiphenyls	430	19.718	18.642 - 20.795		0	238961	5.09	
A 31 Total Nonachlorobiphenyls	464	20.250	18.500 - 22.000		0	139953	14.6	
19 PCB-208	464	20.286	20.286	0.0	96	140097	0	
$ 22 Decachlorobiphenyl-13C12	510	21.797	21.796	0.001	77	23217	1.88	a
32 DCB Decachlorobiphenyl	498	21.797	21.796	0.001	77	74989	7.81	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

WorkSheet Quantitation Report

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 23 Total Monochlorobiphenyls									
188	9.328	9.265 -	10.260	22	205079	1.08			
190	9.328				66572		2.5- 3.5	3.1	
152	9.328				115591		50.7- 50.7	0.6	
153	9.328				48419		23.2- 23.2	1.4	
A 24 Total Dichlorobiphenyls									
222	11.569	10.603 -	12.535	23	176787	1.32			
224	11.569				113344		1.3- 1.7	1.6	
152	11.554				139546		31.7- 111.7	0.8	
153	11.554				17682		0.0- 49.1	6.4	
186	11.554				16961		0.0- 48.9	6.7	
188	11.569				6120		0.0- 43.3	18.5	
* 5 Phenanthrene-d10									
188	12.409	12.409	0.0	100	164188	0.7500			
189	12.409	12.409	0.0		24329		5.9- 7.5	6.7	
A 25 Total Trichlorobiphenyls									
256	13.087	11.910 -	14.600	95	141116	1.47			
258	13.087				135077		0.8- 1.2	1.0	
186	13.087				95422		26.5- 106.5	1.4	
188	13.087				30921		0.0- 61.5	4.4	
A 26 Total Tetrachlorobiphenyls									
292	13.367	13.047 -	16.499	0	197767	2.93			
290	13.367				154086		1.1- 1.5	1.3	
220	13.353				193028		58.1- 138.1	0.8	
222	13.353				123321		22.9- 102.9	1.2	
A 27 Total Pentachlorobiphenyls									
326	16.249	14.339 -	18.045	91	190369	3.47			
324	16.249				119339		1.4- 1.8	1.6	
254	16.231				142739		41.9- 121.9	0.8	
256	16.249				136737		38.2- 118.2	0.9	
258	16.249				44114		0.0- 65.4	2.7	
A 28 Total Hexachlorobiphenyls									
360	16.439	15.502 -	19.457	59	183545	3.37			
362	16.439				145798		1.0- 1.4	1.3	
288	16.439				111244		61.3- 61.3	1.3	
290	16.439				141842		220.6- 220.6	1.0	
292	16.439				67177		0.0- 0.0	2.2	
* 15 Chrysene-d12									a
240	18.669	18.668	0.001	100	171582	0.7500			a
241	18.669	18.668	0.001		33019		4.3- 5.9	5.2	
A 29 Total Heptachlorobiphenyls									
394	17.217	17.146 -	20.353	97	253613	4.67			
396	17.217				240228		0.8- 1.2	1.1	
322	17.199				110283		48.3- 48.3	2.2	
324	17.199				176673		77.4- 77.4	1.4	

Sig	RT	Lower RT	Upper RT	Q	Response	On-Col Amt ug/ml	Ratio Range	Ratio	Flags
A 30 Total Octachlorobiphenyls									
430	18.859	18.642	-20.795	96	238961	5.09			
428	18.859				217376		0.9- 1.3	1.1	
356	18.842				88632		39.6- 39.6	2.5	
358	18.842				166788		75.2- 75.2	1.3	
360	18.842				132602		59.6- 59.6	1.6	
A 31 Total Nonachlorobiphenyls									
464	20.286	18.500	-22.000	66	139953	14.6			
466	20.286				101255		1.1- 1.5	1.4	
390	20.286				70728		0.0- 0.0	1.4	
392	20.286				152776		0.0- 0.0	0.7	
394	20.286				142469		0.0- 0.0	0.7	
$ 22 Decachlorobiphenyl-13C12									a
510	21.797	21.796	0.001	77	23217	1.88			a
512	21.797	21.796	0.001		17660		0.9- 1.3	1.3	
32 DCB Decachlorobiphenyl									
498	21.797	21.796	0.001	77	74989	7.81			
500	21.797	21.796	0.001		60499		0.9- 1.3	1.2	
424	21.797	21.796	0.001		35328		0.0- 0.0	1.0	
426	21.797	21.796	0.001		86957		0.0- 0.0	1.0	
428	21.797	21.796	0.001		93723		0.0- 0.0	1.0	
430	21.797	21.796	0.001		58374		0.0- 0.0	1.0	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SM-680istd_00045 Amount Added: 30.00 Units: uL Run Reagent

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107535-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW153A-013019	240-107535-2
MRC-MW139B-013019	240-107535-3

Comments:

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-366872/4 02/05/2019 10:25				CCV 240-366872/42 02/05/2019 13:21				CCV 240-366872/54 02/05/2019 14:17			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	12800		12500	102	24900		25000	100	25200		25000	101
Manganese	1530		1500	102	2000		2000	100	2020		2000	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	CCV 240-366872/60 02/05/2019 14:44											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	24400		25000	98								
Manganese	1960		2000	98								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-366872/6 02/05/2019 10:34				CCVL 240-366872/62 02/05/2019 14:53							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	203		200	101	197	J	200	98				
Manganese	14.9	J	15.0	100	14.7	J	15.0	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICV Source: MTMSICVW_00088 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-366866/7 02/05/2019 10:47				CCV 240-366866/43 02/05/2019 12:13				CCV 240-366866/55 02/05/2019 12:40			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	195		200	98	236		250	94	245		250	98
Antimony	39.6		40.0	99	51.0		50.0	102	50.3		50.0	101
Arsenic	40.7		40.0	102	49.2		50.0	98	49.2		50.0	98
Barium	39.1		40.0	98	50.0		50.0	100	49.5		50.0	99
Beryllium	38.8		40.0	97	54.4		50.0	109	54.3		50.0	109
Cadmium	39.3		40.0	98	50.4		50.0	101	49.9		50.0	100
Calcium	19800		20000	99	25200		25000	101	25400		25000	102
Chromium	40.1		40.0	100	51.9		50.0	104	51.3		50.0	103
Cobalt	40.2		40.0	101	49.2		50.0	98	49.2		50.0	98
Copper	40.6		40.0	102	49.3		50.0	99	49.4		50.0	99
Iron	9980		10000	100	12100		12500	97	12300		12500	98
Lead	40.7		40.0	102	50.1		50.0	100	49.9		50.0	100
Magnesium	19400		20000	97	24100		25000	96	24700		25000	99
Manganese	194		200	97	253		250	101	253		250	101
Nickel	40.9		40.0	102	48.7		50.0	97	49.2		50.0	98
Potassium	19600		20000	98	24600		25000	99	25200		25000	101
Selenium	39.1		40.0	98	53.4		50.0	107	53.2		50.0	106
Silver	40.2		40.0	100	50.0		50.0	100	49.5		50.0	99
Sodium	19600		20000	98	23900		25000	96	24400		25000	97
Thallium	39.8		40.0	99	49.7		50.0	99	49.5		50.0	99
Vanadium	39.5		40.0	99	51.9		50.0	104	51.3		50.0	103
Zinc	37.9		40.0	95	46.1		50.0	92	45.6		50.0	91

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICV Source: MTMSICVW_00088 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	CCV 240-366866/67 02/05/2019 13:08											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	254		250	102								
Antimony	50.4		50.0	101								
Arsenic	50.2		50.0	100								
Barium	49.3		50.0	99								
Beryllium	50.2		50.0	100								
Cadmium	49.3		50.0	99								
Calcium	25700		25000	103								
Chromium	50.7		50.0	101								
Cobalt	49.9		50.0	100								
Copper	49.6		50.0	99								
Iron	12500		12500	100								
Lead	49.4		50.0	99								
Magnesium	25600		25000	103								
Manganese	247		250	99								
Nickel	49.1		50.0	98								
Potassium	25900		25000	104								
Selenium	48.3		50.0	97								
Silver	49.5		50.0	99								
Sodium	25400		25000	101								
Thallium	49.3		50.0	99								
Vanadium	50.6		50.0	101								
Zinc	46.0		50.0	92								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICV Source: MTMSCRI6020AW_00077 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00077

Analyte	ICVL 240-366866/9 02/05/2019 10:52				CCVL 240-366866/71 02/05/2019 13:18							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	48.8	J	50.0	98	51.3		50.0	103				
Antimony	2.00		2.00	100	2.03		2.00	102				
Arsenic	5.06		5.00	101	5.29		5.00	106				
Barium	4.94	J	5.00	99	5.00		5.00	100				
Beryllium	0.975	J	1.00	98	0.985	J	1.00	99				
Cadmium	0.974	J	1.00	97	1.01		1.00	101				
Calcium	929	J	1000	93	938	J	1000	94				
Chromium	1.99	J	2.00	100	1.98	J	2.00	99				
Cobalt	1.02		1.00	102	1.02		1.00	102				
Copper	2.03		2.00	102	2.04		2.00	102				
Iron	103		100	103	105		100	105				
Lead	1.05		1.00	105	1.05		1.00	105				
Magnesium	1030		1000	103	1030		1000	103				
Manganese	4.18	J	5.00	84	4.16	J	5.00	83				
Nickel	1.74	J	2.00	87	1.62	J	2.00	81				
Potassium	1050		1000	105	1070		1000	107				
Selenium	4.93	J	5.00	99	4.99	J	5.00	100				
Silver	1.02		1.00	102	0.999	J	1.00	100				
Sodium	1010		1000	101	1040		1000	104				
Thallium	1.04		1.00	104	1.02		1.00	102				
Vanadium	5.26		5.00	105	5.10		5.00	102				
Zinc	15	U	20.0	74	15	U	20.0	73				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-366872/5 02/05/2019 10:29		CCB 240-366872/43 02/05/2019 13:26		CCB 240-366872/55 02/05/2019 14:22		CCB 240-366872/61 02/05/2019 14:48	
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U	26	U
Manganese	15	2.1	U	2.1	U	2.1	U	2.1	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-366866/8 02/05/2019 10:50		CCB 240-366866/44 02/05/2019 12:15		CCB 240-366866/56 02/05/2019 12:43		CCB 240-366866/68 02/05/2019 13:11	
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-366596/1-A

Instrument Code: I12 Batch No.: 366872

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	26	U		6010C
7439-96-5	Manganese	2.1	U		6010C

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-366596/1-A

Instrument Code: I14 Batch No.: 366866

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	1.7	U		6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	2.1	U		6020A
7440-02-0	Nickel	1.5	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICSA 240-366872/8 Instrument ID: I12

Lab File ID: I12020519A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**180150**	**90**
Manganese		**0.660**	
Aluminum	*500000*	*490820*	*98*
Antimony		*0.794*	
Arsenic		*-4.69*	
Barium		*0.149*	
Beryllium		*0.188*	
Boron		*2.74*	
Cadmium		*1.14*	
Calcium	*500000*	*451760*	*90*
Chromium		*2.58*	
Cobalt		*-4.50*	
Copper		*-0.318*	
Lead		*0.423*	
Lithium		*24.2*	
Magnesium	*500000*	*485320*	*97*
Molybdenum		*-1.08*	
Nickel		*3.01*	
Potassium		*-4.32*	
Selenium		*3.05*	
Silicon		*4.12*	
Silver		*-1.64*	
Sodium		*30.3*	
Strontium		*8.63*	
Thallium		*0.101*	
Tin		*1.25*	
Titanium		*-1.67*	
Vanadium		*3.42*	
Zinc		*-3.14*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICSAB 240-366872/9 Instrument ID: I12

Lab File ID: I12020519A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Iron	**200000**	**182680**	**91**
Manganese	**500**	**478**	**96**
Aluminum	*500000*	*493530*	*99*
Antimony	*1000*	*983*	*98*
Arsenic	*1000*	*973*	*97*
Barium	*500*	*475*	*95*
Beryllium	*500*	*473*	*95*
Boron	*500*	*506*	*101*
Cadmium	*1000*	*996*	*100*
Calcium	*500000*	*456260*	*91*
Chromium	*500*	*476*	*95*
Cobalt	*500*	*488*	*98*
Copper	*500*	*523*	*105*
Lead	*1000*	*846*	*85*
Lithium	*500*	*522*	*104*
Magnesium	*500000*	*490690*	*98*
Molybdenum	*1000*	*933*	*93*
Nickel	*1000*	*965*	*96*
Potassium	*10000*	*9924*	*99*
Selenium	*1000*	*969*	*97*
Silicon	*10000*	*9608*	*96*
Silver	*1000*	*1064*	*106*
Sodium	*10000*	*9918*	*99*
Strontium	*1500*	*1361*	*91*
Thallium	*1000*	*920*	*92*
Tin	*500*	*499*	*100*
Titanium	*500*	*493*	*99*
Vanadium	*500*	*467*	*93*
Zinc	*1000*	*977*	*98*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICSA 240-366866/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**47321**	**95**
Antimony		**0.0250**	
Arsenic		**0.0260**	
Barium		**0.0030**	
Beryllium		**-0.0260**	
Cadmium		**0.237**	
Calcium	**50000**	**48732**	**97**
Chromium		**0.0560**	
Cobalt		**0.0000**	
Copper		**0.116**	
Iron	**50000**	**48977**	**98**
Lead		**0.0120**	
Magnesium	**50000**	**47590**	**95**
Manganese		**-0.823**	
Nickel		**-0.195**	
Potassium	**50000**	**47643**	**95**
Selenium		**0.0420**	
Silver		**0.0070**	
Sodium	**50000**	**47401**	**95**
Thallium		**0.0010**	
Vanadium		**0.108**	
Zinc		**-7.22**	
Boron		*1.13*	
Lithium		*0.0020*	
Molybdenum	*1000*	*1062*	*106*
Strontium		*0.424*	
Tin		*-1.07*	
Titanium	*1000*	*984*	*98*
Tungsten		*0.104*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Lab Sample ID: ICSAB 240-366866/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Aluminum	**50000**	**46598**	**93**
Antimony	**100**	**101**	**101**
Arsenic	**100**	**98.4**	**98**
Barium	**100**	**97.7**	**98**
Beryllium	**100**	**103**	**103**
Cadmium	**100**	**97.9**	**98**
Calcium	**50000**	**48360**	**97**
Chromium	**100**	**96.7**	**97**
Cobalt	**100**	**95.5**	**95**
Copper	**100**	**95.9**	**96**
Iron	**50000**	**46963**	**94**
Lead	**100**	**99.8**	**100**
Magnesium	**50000**	**46918**	**94**
Manganese	**100**	**96.0**	**96**
Nickel	**100**	**96.9**	**97**
Potassium	**50000**	**47281**	**95**
Selenium	**100**	**101**	**101**
Silver	**100**	**97.2**	**97**
Sodium	**50000**	**46380**	**93**
Thallium	**100**	**97.4**	**97**
Vanadium	**100**	**96.8**	**97**
Zinc	**100**	**98.5**	**99**
Boron	*100*	*106*	*106*
Lithium	*100*	*101*	*101*
Molybdenum	*1100*	*1139*	*104*
Strontium	*100*	*97.3*	*97*
Tin	*100*	*102*	*102*
Titanium	*1100*	*1083*	*98*
Tungsten	*100*	*98.6*	*99*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW139B-013019 MS
Lab ID: 240-107535-3 MS
Lab Name: TestAmerica Canton
Job No.: 240-107535-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Iron	2970		1900		1000	104	75-125		6010C
Manganese	623		130		500	99	75-125		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW139B-013019 MSD
Lab ID: 240-107535-3 MSD
Lab Name: TestAmerica Canton
Job No.: 240-107535-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Iron	2970		1000	103	75-125	0	20		6010C
Manganese	630		500	100	75-125	1	20		6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-366596/2-A

Lab Name: TestAmerica Canton Job No.: 240-107535-1

Sample Matrix: Water LCS Source: MTICP1_00079

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	1030		103	80	120		6010C
Manganese	500	504		101	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-366596/3-A

Lab Name: TestAmerica Canton Job No.: 240-107535-1

Sample Matrix: Water LCS Source: MTICPMSB_00037

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	98.6		99	80	120		6020A
Aluminum	10000	9440		94	80	120		6020A
Arsenic	1000	959		96	80	120		6020A
Barium	1000	1010		101	80	120		6020A
Beryllium	1000	1080		108	80	120		6020A
Cadmium	1000	992		99	80	120		6020A
Cobalt	1000	953		95	80	120		6020A
Chromium	1000	998		100	80	120		6020A
Copper	1000	962		96	80	120		6020A
Iron	10000	9250		92	80	120		6020A
Manganese	1000	987		99	80	120		6020A
Nickel	1000	980		98	80	120		6020A
Lead	1000	1030		103	80	120		6020A
Antimony	100	100		100	80	120		6020A
Selenium	1000	1030		103	80	120		6020A
Thallium	250	256		102	80	120		6020A
Vanadium	1000	996		100	80	120		6020A
Zinc	1000	1040		104	80	120		6020A
Calcium	10000	9110		91	80	120		6020A
Potassium	10000	9540		95	80	120		6020A
Magnesium	10000	9670		97	80	120		6020A
Sodium	10000	9440		94	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107535-3

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107535-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Iron	1900		1960		1.4		6010C
Manganese	130		131		1.4		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG No.:

ICP-AES Instrument ID: I12 Date: 12/21/2018

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	V	
Aluminum										0.034040				0.056989	
Antimony		-0.00006			-0.000422			-0.000035						0.002232	
Arsenic		0.000009			-0.000202	0.00931			-0.0003555	0.00123617					
Beryllium														0.000235	
Cadmium			0.012308					0.000004							
Chromium									0.000415						
Cobalt													0.002128		
Copper				0.000018	0.000361			-0.000032					-0.003157		
Lead		-0.000091					0.00057707	0.000048			0.000131	0.000025			
Lithium				0.000011											
Nickel					0.000518			0.000059							
Selenium		-0.000032							0.000338						
Thallium		0.000034			0.003802			-0.000025	-0.0006202 3					0.001371	
Vanadium								0.000064							
Zinc						-0.001092									

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107535-1

SDG No.:

Instrument ID: I12 Date: 01/28/2019 12:19

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		15000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107535-1

SDG No.:

Instrument ID: I14 Date: 10/02/2018 11:17

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-366596/1-A	02/04/2019 14:00	366596		50	50
LCS 240-366596/2-A	02/04/2019 14:00	366596		50	50
240-107535-2	02/04/2019 14:00	366596		50	50
240-107535-3	02/04/2019 14:00	366596		50	50
240-107535-3 MS	02/04/2019 14:00	366596		50	50
240-107535-3 MSD	02/04/2019 14:00	366596		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-366596/1-A	02/04/2019 14:00	366596		50	50
LCS 240-366596/3-A	02/04/2019 14:00	366596		50	50
240-107535-2	02/04/2019 14:00	366596		50	50
240-107535-3	02/04/2019 14:00	366596		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/05/2019 10:11 End Date: 02/05/2019 20:29

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ICIS 240-366872/1	1		10:11	X	X																								
CALSTD 240-366872/2 IC			10:15	X	X																								
CALSTD 240-366872/3 IC			10:20	X	X																								
ICV 240-366872/4	1		10:25	X	X																								
ICB 240-366872/5	1		10:29	X	X																								
ICVL 240-366872/6	1		10:34	X	X																								
ZZZZZZ			10:38																										
ICSA 240-366872/8	1		10:43	X	X																								
ICSAB 240-366872/9	1		10:48	X	X																								
CCV 240-366872/10			10:52																										
CCB 240-366872/11			10:57																										
ZZZZZZ			11:01																										
ZZZZZZ			11:06																										
ZZZZZZ			11:11																										
ZZZZZZ			11:16																										
ZZZZZZ			11:20																										
ZZZZZZ			11:25																										
CCV 240-366872/18			11:30																										
CCB 240-366872/19			11:34																										
ZZZZZZ			11:39																										
ZZZZZZ			11:44																										
ZZZZZZ			11:49																										
ZZZZZZ			11:53																										
ZZZZZZ			11:58																										
ZZZZZZ			12:03																										
ZZZZZZ			12:08																										
ZZZZZZ			12:12																										
ZZZZZZ			12:17																										
ZZZZZZ			12:21																										
CCV 240-366872/30			12:26																										
CCB 240-366872/31			12:30																										
ZZZZZZ			12:35																										
ZZZZZZ			12:39																										
ZZZZZZ			12:44																										
ZZZZZZ			12:48																										
ZZZZZZ			12:53																										
ZZZZZZ			12:57																										
ZZZZZZ			13:02																										
ZZZZZZ			13:07																										
ZZZZZZ			13:12																										
ZZZZZZ			13:16																										
CCV 240-366872/42	1		13:21	X	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/05/2019 10:11 End Date: 02/05/2019 20:29

Lab Sample Id	D/F	Type	Time	Analytes																										
				Fe	Mn																									
CCB 240-366872/43	1		13:26	X	X																									
ZZZZZZ			13:30																											
ZZZZZZ			13:35																											
ZZZZZZ			13:40																											
ZZZZZZ			13:45																											
MB 240-366596/1-A	1	R	13:49	X	X																									
LCS 240-366596/2-A	1	R	13:54	X	X																									
ZZZZZZ			13:59																											
ZZZZZZ			14:03																											
240-107535-2	1	R	14:08	X	X																									
240-107535-3	1	R	14:13	X	X																									
CCV 240-366872/54	1		14:17	X	X																									
CCB 240-366872/55	1		14:22	X	X																									
240-107535-3 SD	5	R	14:26	X	X																									
ZZZZZZ			14:31																											
240-107535-3 MS	1	R	14:35	X	X																									
240-107535-3 MSD	1	R	14:40	X	X																									
CCV 240-366872/60	1		14:44	X	X																									
CCB 240-366872/61	1		14:48	X	X																									
CCVL 240-366872/62	1		14:53	X	X																									
ZZZZZZ			14:58																											
ZZZZZZ			15:02																											
ZZZZZZ			15:07																											
CCV 240-366872/66			15:11																											
CCB 240-366872/67			15:16																											
ZZZZZZ			15:20																											
ZZZZZZ			15:25																											
ZZZZZZ			15:30																											
ZZZZZZ			15:34																											
ZZZZZZ			15:39																											
ZZZZZZ			15:43																											
ZZZZZZ			15:48																											
ZZZZZZ			15:52																											
ZZZZZZ			15:57																											
ZZZZZZ			16:01																											
CCV 240-366872/78			16:06																											
CCB 240-366872/79			16:10																											
ZZZZZZ			16:15																											
ZZZZZZ			16:19																											
ZZZZZZ			16:23																											
ZZZZZZ			16:28																											
ZZZZZZ			16:33																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/05/2019 10:11 End Date: 02/05/2019 20:29

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			16:38																									
ZZZZZZ			16:42																									
ZZZZZZ			16:47																									
ZZZZZZ			16:52																									
ZZZZZZ			16:56																									
CCV 240-366872/90			17:01																									
CCB 240-366872/91			17:05																									
ZZZZZZ			17:10																									
ZZZZZZ			17:15																									
ZZZZZZ			17:19																									
ZZZZZZ			17:24																									
ZZZZZZ			17:29																									
ZZZZZZ			17:34																									
ZZZZZZ			17:38																									
ZZZZZZ			17:43																									
ZZZZZZ			17:48																									
ZZZZZZ			17:52																									
CCV 240-366872/102			17:56																									
CCB 240-366872/103			18:01																									
ZZZZZZ			18:06																									
ZZZZZZ			18:10																									
ZZZZZZ			18:15																									
ZZZZZZ			18:19																									
ZZZZZZ			18:24																									
ZZZZZZ			18:28																									
ZZZZZZ			18:32																									
ZZZZZZ			18:37																									
ZZZZZZ			18:42																									
ZZZZZZ			18:46																									
CCV 240-366872/114			18:51																									
CCB 240-366872/115			18:55																									
ZZZZZZ			19:00																									
ZZZZZZ			19:05																									
ZZZZZZ			19:09																									
ZZZZZZ			19:14																									
ZZZZZZ			19:19																									
ZZZZZZ			19:23																									
ZZZZZZ			19:28																									
ZZZZZZ			19:33																									
ZZZZZZ			19:37																									
ZZZZZZ			19:42																									
CCV 240-366872/126			19:47																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/05/2019 10:11 End Date: 02/05/2019 20:29

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
CCB 240-366872/127			19:51																									
ZZZZZZ			19:56																									
ZZZZZZ			20:01																									
ZZZZZZ			20:06																									
ZZZZZZ			20:11																									
ZZZZZZ			20:16																									
ZZZZZZ			20:20																									
CCV 240-366872/134			20:25																									
CCB 240-366872/135			20:29																									

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/05/2019 10:33 End Date: 02/05/2019 13:47

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn						
RINSE 240-366866/1			10:33																												
ICIS 240-366866/2			10:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD1 240-366866/3 IC	1		10:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD2 240-366866/4 IC	1		10:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD3 240-366866/5 IC	1		10:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD4 240-366866/6 IC	1		10:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICV 240-366866/7	1		10:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICB 240-366866/8	1		10:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICVL 240-366866/9	1		10:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSA 240-366866/10	1		10:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSAB 240-366866/11	1		10:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-366866/12			10:59																												
CCB 240-366866/13			11:01																												
CCV 240-366866/14			11:04																												
CCB 240-366866/15			11:07																												
ZZZZZZ			11:09																												
ZZZZZZ			11:11																												
ZZZZZZ			11:15																												
ZZZZZZ			11:17																												
CCV 240-366866/20			11:20																												
CCB 240-366866/21			11:22																												
CCVL 240-366866/22			11:25																												
ZZZZZZ			11:27																												
ZZZZZZ			11:29																												
ZZZZZZ			11:31																												
CCV 240-366866/26			11:33																												
CCB 240-366866/27			11:36																												
CCVL 240-366866/28			11:38																												
ZZZZZZ			11:40																												
ZZZZZZ			11:43																												
ZZZZZZ			11:45																												
ZZZZZZ			11:47																												
ZZZZZZ			11:49																												
ZZZZZZ			11:52																												
ZZZZZZ			11:54																												
ZZZZZZ			11:56																												
ZZZZZZ			11:59																												
CCV 240-366866/38			12:01																												
CCB 240-366866/39			12:03																												
ZZZZZZ			12:06																												
ZZZZZZ			12:08																												
ZZZZZZ			12:10																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/05/2019 10:33 End Date: 02/05/2019 13:47

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn							
CCV 240-366866/43	1		12:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCB 240-366866/44	1		12:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCVL 240-366866/45			12:18																													
MB 240-366596/1-A	1	R	12:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
LCS 240-366596/3-A	1	R	12:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ZZZZZZ			12:24																													
ZZZZZZ			12:27																													
ZZZZZZ			12:29																													
ZZZZZZ			12:31																													
ZZZZZZ			12:34																													
ZZZZZZ			12:36																													
ZZZZZZ			12:38																													
CCV 240-366866/55	1		12:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCB 240-366866/56	1		12:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ZZZZZZ			12:45																													
ZZZZZZ			12:47																													
ZZZZZZ			12:50																													
ZZZZZZ			12:52																													
240-107535-2	1	R	12:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
240-107535-3	1	R	12:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ZZZZZZ			12:59																													
ZZZZZZ			13:01																													
ZZZZZZ			13:04																													
ZZZZZZ			13:06																													
CCV 240-366866/67	1		13:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCB 240-366866/68	1		13:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCV 240-366866/69			13:13																													
CCB 240-366866/70			13:15																													
CCVL 240-366866/71	1		13:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCVL 240-366866/72			13:20																													
ZZZZZZ			13:28																													
ZZZZZZ			13:31																													
ZZZZZZ			13:33																													
ZZZZZZ			13:35																													
ZZZZZZ			13:42																													
CCV 240-366866/78			13:44																													
CCB 240-366866/79			13:47																													

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICP Instrument ID: I12 Start Date: 02/05/2019 End Date: 02/05/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-366872/1	10:11										
ICV 240-366872/4	10:25	91		99		98		100			
ICB 240-366872/5	10:29	101		101		101		101			
ICVL 240-366872/6	10:34	99		101		101		102			
ICSA 240-366872/8	10:43	75		89		86		99			
ICSAB 240-366872/9	10:48	74		89		86		98			
CCV 240-366872/42	13:21	87		97		95		100			
CCB 240-366872/43	13:26	101		101		101		101			
MB 240-366596/1-A	13:49	102		102		101		102			
LCS 240-366596/2-A	13:54	89		97		96		100			
240-107535-2	14:08	93		130		129		134			
240-107535-3	14:13	95		100		98		102			
CCV 240-366872/54	14:17	86		97		95		100			
CCB 240-366872/55	14:22	101		101		100		101			
240-107535-3 SD	14:26	99		101		100		101			
240-107535-3 MS	14:35	87		97		95		101			
240-107535-3 MSD	14:40	86		96		95		101			
CCV 240-366872/60	14:44	86		97		95		100			
CCB 240-366872/61	14:48	102		102		101		101			
CCVL 240-366872/62	14:53	97		100		99		101			

FORM XV - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/05/2019 End Date: 02/05/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-366866/3 IC	10:38	98		99		98		98		97	
STD2 240-366866/4 IC	10:40	93		95		96		94		92	
STD3 240-366866/5 IC	10:43	89		93		95		94		90	
STD4 240-366866/6 IC	10:45	91		93		96		96		96	
ICV 240-366866/7	10:47	93		96		98		97		94	
ICB 240-366866/8	10:50	94		99		102		98		100	
ICVL 240-366866/9	10:52	97		101		102		100		99	
ICSA 240-366866/10	10:55	88		94		95		93		88	
ICSAB 240-366866/11	10:57	77		90		94		90		87	
CCV 240-366866/43	12:13	70		97		103		97		99	
CCB 240-366866/44	12:15	77		98		105		98		101	
MB 240-366596/1-A	12:20	79		100		107		98		103	
LCS 240-366596/3-A	12:22	75		96		102		96		99	
CCV 240-366866/55	12:40	73		95		100		94		94	
CCB 240-366866/56	12:43	84		103		102		96		99	
240-107535-2	12:54	94		110		105		97		100	
240-107535-3	12:57	92		108		105		97		100	
CCV 240-366866/67	13:08	91		106		102		95		98	
CCB 240-366866/68	13:11	95		107		102		96		102	
CCVL 240-366866/71	13:18	98		111		105		100		103	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/05/2019 End Date: 02/05/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-366866/3 IC	10:38	96		98		97		99		98	
STD2 240-366866/4 IC	10:40	93		96		94		97		97	
STD3 240-366866/5 IC	10:43	92		95		92		97		96	
STD4 240-366866/6 IC	10:45	97		97		98		98		97	
ICV 240-366866/7	10:47	94		98		96		98		97	
ICB 240-366866/8	10:50	99		101		99		100		101	
ICVL 240-366866/9	10:52	100		101		101		101		100	
ICSA 240-366866/10	10:55	91		96		95		99		99	
ICSAB 240-366866/11	10:57	91		94		92		97		96	
CCV 240-366866/43	12:13	103		108		103		107		107	
CCB 240-366866/44	12:15	106		108		107		108		108	
MB 240-366596/1-A	12:20	106		110		106		107		107	
LCS 240-366596/3-A	12:22	102		109		100		105		104	
CCV 240-366866/55	12:40	99		102		99		101		101	
CCB 240-366866/56	12:43	102		104		102		101		102	
240-107535-2	12:54	97		102		101		108		106	
240-107535-3	12:57	97		104		100		98		97	
CCV 240-366866/67	13:08	95		99		96		96		97	
CCB 240-366866/68	13:11	100		101		98		98		97	
CCVL 240-366866/71	13:18	100		105		102		100		99	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/05/2019 End Date: 02/05/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-366866/3 IC	10:38	100									
STD2 240-366866/4 IC	10:40	96									
STD3 240-366866/5 IC	10:43	93									
STD4 240-366866/6 IC	10:45	98									
ICV 240-366866/7	10:47	95									
ICB 240-366866/8	10:50	100									
ICVL 240-366866/9	10:52	102									
ICSA 240-366866/10	10:55	96									
ICSAB 240-366866/11	10:57	96									
CCV 240-366866/43	12:13	104									
CCB 240-366866/44	12:15	105									
MB 240-366596/1-A	12:20	108									
LCS 240-366596/3-A	12:22	104									
CCV 240-366866/55	12:40	97									
CCB 240-366866/56	12:43	102									
240-107535-2	12:54	99									
240-107535-3	12:57	98									
CCV 240-366866/67	13:08	93									
CCB 240-366866/68	13:11	96									
CCVL 240-366866/71	13:18	98									

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366596 Batch Start Date: 02/04/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/04/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00079	MTICP2A 00090	MTTMHCL 00234
MB 240-366596/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-366596/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107535-I-2	MRC-MW153A-013019	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107535-I-3	MRC-MW139B-013019	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107535-I-3 MS	MRC-MW139B-013019	3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107535-I-3 MSD	MRC-MW139B-013019	3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-366596/1		3005A, 6010C		1 mL					
LCS 240-366596/2		3005A, 6010C		1 mL					
240-107535-I-2	MRC-MW153A-013019	3005A, 6010C	R	1 mL					
240-107535-I-3	MRC-MW139B-013019	3005A, 6010C	R	1 mL					
240-107535-I-3 MS	MRC-MW139B-013019	3005A, 6010C	R	1 mL					
240-107535-I-3 MSD	MRC-MW139B-013019	3005A, 6010C	R	1 mL					

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb3
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366596 Batch Start Date: 02/04/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/04/19 22:00

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366596 Batch Start Date: 02/04/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/04/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00037	MTICPMSB 00037	MTTMHCL 00234
MB 240-366596/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-366596/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107535-I-2	MRC-MW153A-013019	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107535-I-3	MRC-MW139B-013019	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-366596/1		3005A, 6020A		1 mL					
LCS 240-366596/3		3005A, 6020A		1 mL					
240-107535-I-2	MRC-MW153A-013019	3005A, 6020A	R	1 mL					
240-107535-I-3	MRC-MW139B-013019	3005A, 6020A	R	1 mL					

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb3
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW153A-013019 Lab Sample ID: 240-107535-2

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG ID.:

Matrix: Water Date Sampled: 01/30/2019 11:00

Reporting Basis: WET Date Received: 01/31/2019 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	520	200	26	ug/L			1	6010C
7439-96-5	Manganese	450	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	3600	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	28	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	14	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.99	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	190	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.6	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	110	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	680	100	47	ug/L			1	6020A
7439-96-5	Manganese	600	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	190	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.63	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	300	20	15	ug/L			1	6020A
7440-70-2	Calcium	74000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	5300	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	35000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	10000	1000	330	ug/L			1	6020A

Sample Report

Sample Name	240-107535-I-2-A
File Name	061SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\I14020519B.b
Acq Time	2019-02-05 12:54:53
Sample Type	Sample
Total Dilution	1.0000
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	5.788	ug/l	1.8	63495.83	10000	
Be	9	6	No Gas	13.944	ug/l	4.1	15834.23	2000	
B	11	6	No Gas	54.755	ug/l	3.4	37781.00	300	
Na	23	45	He	10499.806	ug/l	1.3	5576420.89	500000	
Mg	24	45	He	34805.717	ug/l	2.4	10077123.21	500000	
Al	27	45	He	3556.319	ug/l	2.1	501061.66	200000	
K	39	45	He	5323.454	ug/l	2.2	1885871.59	500000	
Ca	44	45	He	74080.103	ug/l	2.6	627144.39	500000	
Ti	47	45	He	2.019	ug/l	12.3	210.00	2500	
V	51	45	He	0.058	ug/l	274.5	-388.47	10000	
Cr	52	45	He	2.554	ug/l	1.7	9089.67	10000	
Mn	55	45	He	599.534	ug/l	2.2	1404217.62	10000	
Fe	56	103	He	679.867	ug/l	0.2	1973989.85	200000	
Co	59	103	He	185.719	ug/l	0.4	863239.31	5000	
Ni	60	103	He	191.626	ug/l	0.6	225675.36	10000	
Cu	63	103	He	106.648	ug/l	0.6	332854.46	10000	
Zn	66	103	He	304.575	ug/l	0.5	203209.70	10000	
As	75	103	He	-1.204	ug/l	N/A	-635.58	10000	
Se	78	103	H2	0.638	ug/l	5.2	117.67	10000	
Sr	88	103	He	220.717	ug/l	0.6	801888.01	10000	
Mo	95	103	He	0.111	ug/l	25.0	211.11	2000	
Ag	107	103	He	0.010	ug/l	26.2	73.33	100	
Cd	111	115	He	0.987	ug/l	4.1	1038.93	4000	
Sn	118	115	He	-0.459	ug/l	N/A	2847.00	2000	
Sb	123	115	He	0.214	ug/l	7.0	640.02	200	
Ba	137	115	He	28.356	ug/l	0.9	35634.99	10000	
W	182	159	He	0.046	ug/l	6.9	467.79	2500	
Tl	205	165	He	0.132	ug/l	5.6	1323.42	2000	
Pb	208	165	He	0.633	ug/l	0.2	9065.81	4000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li6	6	No Gas	762145.31	1.5	812134.5	93.84	59.5	120.4	
Sc	45	No Gas	2884450.30	1.2	2628455.73	109.74	59.5	120.4	
Sc	45	H2	2221524.67	3.5	2107242.92	105.42	59.5	120.4	
Sc	45	He	580912.96	0.5	596612.84	97.37	59.5	120.4	
Rh	103	H2	356240.02	3.9	357430.74	99.67	59.5	120.4	

Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Rh	103	He	1888637.91	0.6	1939891.8	97.36	59.5	120.4	
In	115	H2	2214858.92	2.8	2163228.25	102.39	59.5	120.4	
In	115	He	1343330.55	1.6	1328713.38	101.1	59.5	120.4	
Tb	159	He	2821893.57	1.7	2617555.24	107.81	59.5	120.4	
Ho	165	He	2674392.95	1.5	2524114.76	105.95	59.5	120.4	
Bi	209	He	1618240.84	0.4	1631617.4	99.18	59.5	120.4	

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW153A-013019	240-107535-2
MRC-MW139B-013019	240-107535-3

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107535-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW153A-013019	240-107535-2
MRC-MW139B-013019	240-107535-3

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107535-1

SDG No.:

Project: LM MRC Block F

Client Sample ID	Lab Sample ID
MRC-MW153A-013019	240-107535-2
MRC-MW139B-013019	240-107535-3

Comments:

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Analyst: LKG Batch Start Date: 08/07/2018

Reporting Units: mg/L Analytical Batch No.: 339523

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:20	Sulfate	52.9	50.0	106	90-110		WCICLCS_00669
11	ICB	15:41	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Analyst: JWW Batch Start Date: 01/31/2019

Reporting Units: mg/L Analytical Batch No.: 366306

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	CCV	17:20	Sulfate	52.2	50.0	104	90-110		WCICCCV_00858
14	CCB	17:40	Sulfate	0.35				U	
24	CCV	21:08	Sulfate	52.2	50.0	104	90-110		WCICCCV_00858
25	CCB	21:28	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107535-1

SDG No.:

Analyst: MSP Batch Start Date: 02/16/2019

Reporting Units: mg/L Analytical Batch No.: 575923

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:45	Nitrate Nitrite as N	3.22	3.00	107	90-110		W_ICAl_00027
2	ICB	12:46	Nitrate Nitrite as N	0.040				U	
3	CCV	12:47	Nitrate Nitrite as N	5.48	5.00	110	90-110		W_Nitrate_00020
4	CCV	12:48	Nitrate Nitrite as N	5.10	5.00	102	90-110		IC Primary_00012
5	CCB	12:49	Nitrate Nitrite as N	0.040				U	
20	CCV	13:06	Nitrate Nitrite as N	5.31	5.00	106	90-110		W_Nitrate_00020
21	CCB	13:08	Nitrate Nitrite as N	0.040				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 366819 Date: 02/05/2019 09:54							
2320B-2011	MB 240-366819/4	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 367926 Date: 02/13/2019 13:29							
2340C-2011	MB 240-367926/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 366480 Date: 02/01/2019 12:55							
2540 C-2011	MB 240-366480/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 366306 Date: 01/31/2019 18:01							
9056A	MB 240-366306/15	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-366306/15	Sulfate	0.35	U	mg/L	1.0	1

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107535-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575923 Date: 02/16/2019 12:50							
SM 4500 NO3 F	MB 490-575923/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107535-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 269673 Date: 02/07/2019 10:25							
SM 2520B	MB 180-269673/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 366306 Date: 01/31/2019 20:26											
300.0	240-107535-3	Bromide	0.044	U	mg/L						
300.0	240-107535-3 MS	Bromide	11.3		mg/L	10.0	113	80-120			
Batch ID: 366306 Date: 01/31/2019 20:26											
9056A	240-107535-3	Sulfate	15		mg/L						
9056A	240-107535-3 MS	Sulfate	69.2		mg/L	50.0	109	80-120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 366306 Date: 01/31/2019 20:47											
300.0	240-107535-3 MSD	Bromide	11.5		mg/L	10.0	115	80-120	1	15	
Batch ID: 366306 Date: 01/31/2019 20:47											
9056A	240-107535-3 MSD	Sulfate	69.9		mg/L	50.0	110	80-120	1	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 367926 Date: 02/13/2019 13:44								
2340C-2011	MRC-MW153A-013019	240-107535-2	Hardness as calcium carbonate	400	mg/L			
2340C-2011	MRC-MW153A-013019	240-107535-2 DU	Hardness as calcium carbonate	380	mg/L	5	20	
Batch ID: 366480 Date: 02/01/2019 12:55								
2540 C-2011	MRC-MW139B-013019	240-107535-3	Total Dissolved Solids	210	mg/L			
2540 C-2011	MRC-MW139B-013019	240-107535-3 DU	Total Dissolved Solids	202	mg/L	3	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 366819	Date: 02/05/2019 09:51										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-366819/3	Alkalinity	257		mg/L	271	95	86-123			
Batch ID: 367926	Date: 02/13/2019 13:34										
						LCS Source: WCHARDNESS_00031					
2340C-2011	LCS 240-367926/2	Hardness as calcium carbonate	264		mg/L	246	107	90-110			
Batch ID: 366480	Date: 02/01/2019 12:55										
						LCS Source: WCPHENOVSOLID_00038					
2540 C-2011	LCS 240-366480/2	Total Dissolved Solids	202		mg/L	204	99	80-120			
Batch ID: 366306	Date: 01/31/2019 18:22										
						LCS Source: WCICLCS_00693					
9056A	LCS 240-366306/16	Sulfate	52.2		mg/L	50.0	104	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107535-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575923	Date: 02/16/2019 12:51										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575923/7	Nitrate Nitrite as N	3.22		mg/L	3.00	107	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107535-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 02/13/2019 13:29 End Date: 02/13/2019 16:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				HardCC																								
MB 240-367926/1	1	T	13:29	X																								
LCS 240-367926/2	1	T	13:34	X																								
240-107535-2	1	T	13:39	X																								
240-107535-2 DU	1	T	13:44	X																								
240-107535-3	1	T	13:49	X																								
ZZZZZZ			13:55																									
ZZZZZZ			14:00																									
ZZZZZZ			14:05																									
ZZZZZZ			14:10																									
ZZZZZZ			14:16																									
ZZZZZZ			14:21																									
ZZZZZZ			14:26																									
ZZZZZZ			14:31																									
ZZZZZZ			14:37																									
ZZZZZZ			14:42																									
ZZZZZZ			14:47																									
ZZZZZZ			14:52																									
ZZZZZZ			14:57																									
ZZZZZZ			15:03																									
ZZZZZZ			15:08																									
ZZZZZZ			15:13																									
ZZZZZZ			15:18																									
ZZZZZZ			15:24																									
ZZZZZZ			15:29																									
ZZZZZZ			15:34																									
ZZZZZZ			15:39																									
ZZZZZZ			15:45																									
ZZZZZZ			15:50																									
ZZZZZZ			15:55																									
ZZZZZZ			16:00																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/05/2019 09:35 End Date: 02/05/2019 10:54

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			09:35																									
ZZZZZZ			09:46																									
LCS 240-366819/3	1	T	09:51	X																								
MB 240-366819/4	1	T	09:54	X																								
ZZZZZZ			10:00																									
ZZZZZZ			10:06																									
ZZZZZZ			10:11																									
ZZZZZZ			10:16																									
ZZZZZZ			10:20																									
ZZZZZZ			10:25																									
ZZZZZZ			10:30																									
240-107535-2	1	T	10:34	X																								
ZZZZZZ			10:35																									
240-107535-3	1	T	10:39	X																								
ZZZZZZ			10:44																									
ZZZZZZ			10:52																									
ZZZZZZ			10:54																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 02/01/2019 12:55 End Date: 02/01/2019 12:55

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-366480/1	1	T	12:55	X																								
LCS 240-366480/2	1	T	12:55	X																								
240-107535-2	1	T	12:55	X																								
240-107535-3 DU	1	T	12:55	X																								
240-107535-3	1	T	12:55	X																								
ZZZZZZ			12:55																									
ZZZZZZ			12:55																									
ZZZZZZ			12:55																									
ZZZZZZ			12:55																									
ZZZZZZ			12:55																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 08/07/2018 12:13 End Date: 08/07/2018 15:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339523/1 IC	1		12:13	X																								
STD2 240-339523/2 IC	1		12:34	X																								
STD3 240-339523/3 IC	1		12:55	X																								
STD4 240-339523/4 IC	1		13:16	X																								
STD5 240-339523/5 ICRT	1		13:36	X																								
STD6 240-339523/6 IC	1		13:57	X																								
STD7 240-339523/7 IC	1		14:18	X																								
STD8 240-339523/8 IC	1		14:39	X																								
STD9 240-339523/9 IC	1		14:59	X																								
ICV 240-339523/10	1		15:20	X																								
ICB 240-339523/11	1		15:41	X																								

Prep Types:
=

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 01/31/2019 13:11 End Date: 01/31/2019 21:28

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
CCV 240-366306/1			13:11																										
CCB 240-366306/2			13:32																										
ZZZZZZ			13:53																										
ZZZZZZ			14:13																										
ZZZZZZ			14:34																										
ZZZZZZ			14:55																										
ZZZZZZ			15:15																										
ZZZZZZ			15:36																										
ZZZZZZ			15:57																										
ZZZZZZ			16:17																										
CCV 240-366306/13	1		17:20		X																								
CCB 240-366306/14	1		17:40		X																								
MB 240-366306/15	1	T	18:01		X																								
LCS 240-366306/16	1	T	18:22		X																								
240-107535-2	1	T	19:24	X																									
240-107535-2	5	T	19:45		X																								
240-107535-3	1	T	20:05	X	X																								
240-107535-3 MS	1	T	20:26	X	X																								
240-107535-3 MSD	1	T	20:47	X	X																								
CCV 240-366306/24	1		21:08		X																								
CCB 240-366306/25	1		21:28		X																								

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107535-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/16/2019 12:45 End Date: 02/16/2019 13:21

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575923/1	1		12:45	X																								
ICB 490-575923/2	1		12:46	X																								
CCV 490-575923/3	1		12:47	X																								
CCV 490-575923/4	1		12:48	X																								
CCB 490-575923/5	1		12:49	X																								
MB 490-575923/6	1	T	12:50	X																								
LCS 490-575923/7	1	T	12:51	X																								
ZZZZZZ			12:53																									
ZZZZZZ			12:54																									
ZZZZZZ			12:55																									
ZZZZZZ			12:56																									
ZZZZZZ			12:57																									
ZZZZZZ			12:58																									
240-107535-2	1	T	12:59	X																								
240-107535-3	1	T	13:01	X																								
ZZZZZZ			13:02																									
ZZZZZZ			13:03																									
ZZZZZZ			13:04																									
ZZZZZZ			13:05																									
CCV 490-575923/20	1		13:06	X																								
CCB 490-575923/21	1		13:08	X																								
ZZZZZZ			13:09																									
ZZZZZZ			13:10																									
ZZZZZZ			13:11																									
ZZZZZZ			13:12																									
ZZZZZZ			13:13																									
ZZZZZZ			13:14																									
ZZZZZZ			13:16																									
ZZZZZZ			13:17																									
ZZZZZZ			13:18																									
ZZZZZZ			13:19																									
CCV 490-575923/32			13:20																									
CCB 490-575923/33			13:21																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107535-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/07/2019 10:25 End Date: 02/07/2019 10:25

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-269673/1	1	T	10:25	X																								
ZZZZZZ			10:25																									
ZZZZZZ			10:25																									
ZZZZZZ			10:25																									
ZZZZZZ			10:25																									
ZZZZZZ			10:25																									
240-107535-2	1	T	10:25	X																								
240-107535-3	1	T	10:25	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 367926 Batch Start Date: 02/13/19 13:29 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 02/13/19 16:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCHARDNESS 00031		
MB 240-367926/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-367926/2		2340C-2011		25 mL	25 mL	6.60 mL	25 mL		
240-107535-G-2	MRC-MW153A-013019	2340C-2011	T	5 mL	25 mL	2.00 mL			
240-107535-G-2 DU	MRC-MW153A-013019	2340C-2011	T	5 mL	25 mL	1.90 mL			
240-107535-G-3	MRC-MW139B-013019	2340C-2011	T	25 mL	25 mL	1.45 mL			

Batch Notes	
Batch Comment	BEAKERS--4010980
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C9, E3
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366819 Batch Start Date: 02/05/19 09:35 Batch Analyst: Carson, Monica

Batch Method: 2320B-2011 Batch End Date: 02/05/19 11:35

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-366819/3		2320B-2011		InitialAmount is blank	10 mL				
MB 240-366819/4		2320B-2011		InitialAmount is blank					
240-107535-H-2	MRC-MW153A-013019	2320B-2011	T	InitialAmount is blank					
240-107535-H-3	MRC-MW139B-013019	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4- 4005008
pH Buffer 2 ID	7- 4017506
pH Buffer 3 ID	10- 3892955
pH Buffer 4 ID	12- 3891579
Nominal Amount Used	10 mL
pH Meter ID	SEVERUS
Probe ID	WCP 137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366480 Batch Start Date: 02/01/19 12:55 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date: 02/04/19 17:07

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-366480/1		2540 C-2011			3.7076 g	100 mL	3.7078 g	3.7078 g	0 g
LCS 240-366480/2		2540 C-2011			3.7648 g	100 mL	3.7847 g	3.7850 g	0 g
240-107535-H-2	MRC-MW153A-013019	2540 C-2011	T	723 umhos/cm	3.2737 g	100 mL	3.3307 g	3.3308 g	0 g
240-107535-H-3 DU	MRC-MW139B-013019	2540 C-2011	T	340 umhos/cm	3.6437 g	100 mL	3.6640 g	3.6639 g	0 g
240-107535-H-3	MRC-MW139B-013019	2540 C-2011	T	340 umhos/cm	3.7466 g	100 mL	3.7672 g	3.7674 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 240-366480/1		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0002 g	0.0002 g	N/A g
LCS 240-366480/2		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0199 g	0.0202 g	N/A g
240-107535-H-2	MRC-MW153A-013019	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.057 g	0.0571 g	N/A g
240-107535-H-3 DU	MRC-MW139B-013019	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0203 g	0.0202 g	N/A g
240-107535-H-3	MRC-MW139B-013019	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0206 g	0.0208 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00038		
MB 240-366480/1		2540 C-2011		N/A g	100 mL	OK			
LCS 240-366480/2		2540 C-2011		N/A g	100 mL	OK	100 mL		
240-107535-H-2	MRC-MW153A-013019	2540 C-2011	T	N/A g	100 mL	OK			
240-107535-H-3 DU	MRC-MW139B-013019	2540 C-2011	T	N/A g	100 mL	OK			
240-107535-H-3	MRC-MW139B-013019	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366480 Batch Start Date: 02/01/19 12:55 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date: 02/04/19 17:07

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/04/2019 13:33
Date/Time - Out - CW (WT2)	02/04/2019 14:53
Temperature - Start - CW (WT2) - Correct	180 Celsius
Temperature - End - CW (WT2) - Correct	181 Celsius
Temperature - Start-CW(WT2) -Uncorrected	180 Celsius
Temperature - End-CW(WT2) -Uncorrected	181 Celsius
Temperature - Start - Corrected	105 Celsius
Temperature - End - Corrected	105 Celsius
Date/Time - In	02/01/2019 13:21
Date/Time - Out	02/04/2019 09:43
Filter ID	60020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O06
Thermometer ID - Low Temperature	84922
Thermometer ID	181417084
Temperature - Start - Uncorrected	105 Celsius
Temperature - End - Uncorrected	105 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/04/2019 09:44 No Unit
Weight(WT1) Date/Time Out	02/04/2019 11:37
Weight(WT1) Start Temp	182 Celsius
Weight(WT1) Temp Out	181 Celsius
Uncorrected Weight(WT1) Start Temp	182 Celsius
Uncorrected Weight(WT1) Temp Out	181 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339523/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339523/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339523/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339523/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339523/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339523/6 IC		300.0		5 mL	2 mL				
STD7 240-339523/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339523/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339523/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366306 Batch Start Date: 01/31/19 13:11 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICSOLNA1 00018	WCICSOLNB1 00018			
240-107535-E-2	MRC-MW153A-013019	300.0 & 9056A	T	5 mL					
240-107535-E-2	MRC-MW153A-013019	300.0 & 9056A	T	5 mL					
240-107535-E-3	MRC-MW139B-013019	300.0 & 9056A	T	5 mL					
240-107535-E-3 MS	MRC-MW139B-013019	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-107535-E-3 MSD	MRC-MW139B-013019	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICLCS 00669			
ICV 240-339523/10		9056A		5 mL	1.0 mL	5 mL			
ICB 240-339523/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366306 Batch Start Date: 01/31/19 13:11 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICSOLNA1 00018	WCICSOLNB1 00018			
240-107535-E-2	MRC-MW153A-013019	300.0 & 9056A	T	5 mL					
240-107535-E-2	MRC-MW153A-013019	300.0 & 9056A	T	5 mL					
240-107535-E-3	MRC-MW139B-013019	300.0 & 9056A	T	5 mL					
240-107535-E-3 MS	MRC-MW139B-013019	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-107535-E-3 MSD	MRC-MW139B-013019	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107535-1

SDG No.:

Batch Number: 366306 Batch Start Date: 01/31/19 13:11 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00858	WCICLCS 00693			
CCV 240-366306/13		9056A		5 mL	5 mL				
CCB 240-366306/14		9056A		5 mL					
MB 240-366306/15		9056A		5 mL					
LCS 240-366306/16		9056A		5 mL		5 mL			
CCV 240-366306/24		9056A		5 mL	5 mL				
CCB 240-366306/25		9056A		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107535-1

SDG No.:

Batch Number: 575923 Batch Start Date: 02/16/19 12:45 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/16/19 13:23

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575923/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575923/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575923/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575923/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575923/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575923/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575923/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
240-107535-F-2	MRC-MW153A-013019	SM 4500 NO3 F	T	50 mL	50 mL				7.44
240-107535-F-3	MRC-MW139B-013019	SM 4500 NO3 F	T	50 mL	50 mL				8.6
CCV 490-575923/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575923/21		SM 4500 NO3 F		50 mL	50 mL				

Batch Notes	
Acid used for pH adjustment	4547067
Base used for pH adjustment	4273883
Batch Comment	cent tubes 809161; pH probe VVZ10915; pH meter AB92340683
Buffer Reagent ID	4832283
Carrier Identification	DI water
Color Reagent ID	4832299
Filter ID	180611314
Pipette/Syringe/Dispenser ID	26061004, 26121028

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

TETRA TECH **INTERNAL CORRESPONDENCE**

TO: **M. MARTIN** **DATE:** **MAY 2, 2019**

FROM: **MICHELLE L. WOEBER** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC & INORGANIC DATA VALIDATION – VOC/PCB HOMOLOGS/METALS/ MISCELLANEOUS**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
BLOCK E/F WASTE
SDGs 240-107638-1 & 240-107796-1

SAMPLES: SDG 240-107638-1

2/Aqueous/VOC

MRC-MW151A-020419 TB-020419

1/Aqueous/PCB Homologs/Metals/Miscellaneous

MRC-MW151A-020419

SDG 240-107796-1

6/Aqueous/VOC

MRC-DUP01-020619	MRC-MW138B-020619	MRC-MW141B-020619
MRC-MW142B-020619	MRC-MW158A-020619	TB-020619

1/Aqueous/PCB Homologs

MRC-MW158A-020619

5/Aqueous/Metals/Miscellaneous

MRC-DUP01-020619	MRC-MW138B-020619	MRC-MW141B-020619
MRC-MW142B-020619	MRC-MW158A-020619	

Overview

The sample set for LMC-MRC, Block E/F Waste, SDGs 240-107638-1 & 240-107796-1 consisted of six (6) aqueous environmental samples and two (2) trip blanks. The six (6) aqueous samples were analyzed for Volatile Organic Compounds (VOC), metals, and miscellaneous parameters (alkalinity, bromide, hardness, nitrate/nitrite, salinity, sulfate, and Total Dissolved Solids (TDS). The trip blanks were analyzed for VOC only. One field duplicate sample pair was included in this SDG: MRC-DUP01-020619/MRC-MW142B-020619.

The samples were collected by Tetra Tech, Inc. on February 2 & 4, 2019 and analyzed by TestAmerica, Inc. All analyses were conducted in accordance with SW-846 Methods 8260C, 6020A, and 9056A, EPA Methods 680 and 300.0, and Standard Methods 2320B-2011, 2340C-2011, SM 2520B, 2540C-2011 and SM 4500 NO3 F analytical and reporting protocols.

The data contained in this SDG were validated with regard to for the following parameters: data completeness, holding times and sample preservation, GC/MS tuning, initial/continuing calibrations, ICP interference check sample results, laboratory preparation/method/trip blank results, surrogate spike recoveries, laboratory control sample/laboratory control sample duplicate results, internal standard areas

and recoveries, laboratory duplicate precision, and detection limits. Areas of concern are listed below.

Major

- As stated in the laboratory case narrative, 2-chloroethyl vinyl ether cannot be reliably recovered in an acid preserved samples. All samples in these SDGs were acid preserved. The non-detected results reported for 2-chloroethyl vinyl ether were qualified as rejected, (UR).

Minor

- The VOC continuing calibration performed on instrument A3UX15 on 02/07/2019 @ 09:17 had a Percent Difference (%D) for hexachlorobutadiene and a Percent Drift (%Drift) for bromoform which exceeded the 20% quality control limit. The non-detected results reported for these compounds in the affected sample, TB-020419, were qualified as estimated, (UJ).

- The VOC continuing calibrations performed on instrument A3UX15 on 02/08/2019 @ 12:55 and 13:39 had %Ds for vinyl acetate, 2-chloroethyl vinyl ether, 4-methyl-2-pentanone, trans-1,3-dichloropropene, 2-hexanone, 1,1,2,2-tetrachloroethane, 1,2-dibromo-3-chloropropane, naphthalene, and tert-amyl methyl ether, and a %Drift for bromoform which exceeded the 20% quality control limit. The non-detected results reported for these compounds in the affected sample, MRC-MW151A-020419, were qualified as estimated, (UJ).

- The VOC continuing calibrations performed on instrument A3UX15 on 02/11/2019 @ 10:51 and 11:35 had %Ds for carbon disulfide, tert-butyl alcohol, vinyl acetate, 2-chloroethyl vinyl ether, cis-1,3-dichloropropene, 4-methyl-2-pentanone, trans-1,3-dichloropropene, 2-hexanone, chlorodibromomethane, 1,1,2,2-tetrachloroethane, 1,2-dibromo-3-chloropropane, and tert-amyl methyl ether, and a %Drift for bromoform which exceeded the 20% quality control limit. The non-detected results reported for these compounds in the affected sample, TB-020619, were qualified as estimated, (UJ).

- The VOC continuing calibrations performed on instrument A3UX15 on 02/12/2019 @ 10:48 and 11:32 had %Ds for carbon disulfide, vinyl acetate, 2-chloroethyl vinyl ether, trans-1,3-dichloropropene, 2-hexanone, chlorodibromomethane, 1,1,2,2-tetrachloroethane, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, ethyl tert-butyl ether, and tert-amyl methyl ether, and a %Drift for bromoform which exceeded the 20% quality control limit. The non-detected results reported for these compounds in the affected samples, MRC-MW138B-020619, MRC-MW141B-020619, and MRC-MW142B-020619, were qualified as estimated, (UJ).

- The VOC continuing calibrations performed on instrument A3UX15 on 02/13/2019 @ 11:48 and 12:32 had %Ds for carbon disulfide, methylene chloride, 2-chloroethyl vinyl ether, trans-1,3-dichloropropene, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, 1,2,3-trichlorobenzene, ethyl tert-butyl ether, and tert-amyl methyl ether, and a %Drift for bromoform which exceeded the 20% quality control limit. The non-detected results reported for these compounds in the affected samples, MRC-DUP01-020619 and MRC-MW158A-020619 were qualified as estimated, (UJ).

- The PCB homolog closing continuing calibration performed on instrument CMSX on 02/21/2019 @ 16:43 had a %D for decachlorobiphenyl above the 20% quality control criterion. The non-detected results reported for decachlorobiphenyl and nonachlorobiphenyls in the affected samples, MRC-MW151A-020419 and MRC-MW158A-020619, were qualified as estimated, (UJ).

- Trichloroethene was detected in the trip blank, TB-020419, below the Reporting Limit (RL). The detected result reported for trichloroethene below the RL in the associated sample, MRC-MW151A-020419, was qualified as non-detected, (U).

- Nitrate/nitrite was detected in the closing Continuing Calibration Blank (CCB) below the RL. All samples were affected. The detected result reported for this parameter below the RL in sample MRC-MW158A-020619 was qualified as non-detected, (U).

- The Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses performed on sample MRC-MW141B-020619 had Percent Recoveries (%Rs) for tert-butyl alcohol, chlorodibromomethane, and bromoform below the lower quality control limits. In addition, several Relative Percent Differences (RPDs) were outside the quality control criteria. No action was taken for the noncompliant RPDs because the MS/MSD %Rs were acceptable. The non-detected results reported for tert-butyl alcohol, chlorodibromomethane, and bromoform were qualified as estimated, (UJ), in the parent sample.

- Detected results reported below the RL but above the Method Detection Limit (MDL) were qualified as estimated, (J).

Notes

The laboratory reported results for iron and manganese via SW-846 6010C. These results were not used in the data validation because these analytes were reported via SW-846 6020A and were removed from the database.

The following samples were analyzed at dilutions:

Sample	Fraction/Parameter	Dilution
MRC-DUP01-020619	VOC	5X
MRC-MW138B-020619	VOC	25X
MRC-MW141B-020619	VOC	1000X
MRC-MW142B-020619	VOC	4X
MRC-MW158A-020619	Sulfate	5X

The RLs of the non-detected results were elevated in the VOC fraction.

Non-detected results were reported to the MDL.

Executive Summary

Laboratory Performance: VOC continuing calibration %Ds and %Drifts exceeded 20%. A PCB homolog continuing calibration %D exceeded 20%. Nitrate/nitrite was detected in a CCB.

Other Factors Affecting Data Quality: 2-Chloroethylvinyl ether results were rejected due to sample preservation. Trichloroethene was detected in a trip blank. MS/MSD %Rs were low for three compounds. Some samples were analyzed at dilutions. Results below the RL were estimated.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Review" (January 2017) and the "National Functional Guidelines for Inorganic Review" (August 2017). The text of this report has been formulated to address only those areas affecting data quality.

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Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08784	NSAMPLE	MRC-MW151A-020419			TB-020419		
SDG: 240-107638-1	LAB_ID	240-107638-2			240-107638-1		
FRACTION: OV	SAMP_DATE	2/4/2019			2/4/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U		0.14	U	
1,1,1-TRICHLOROETHANE		0.24	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	UJ	C	0.13	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U		0.41	U	
1,1-DICHLOROETHANE		0.17	U		0.17	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.14	U		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	U		0.54	U	
1,2,3-TRICHLOROPROPANE		0.24	U		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	U		0.14	U	
1,2,4-TRICHLOROBENZENE		0.26	U		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	UJ	C	0.91	U	
1,2-DIBROMOETHANE		0.12	U		0.12	U	
1,2-DICHLOROBENZENE		0.15	U		0.15	U	
1,2-DICHLOROETHANE		0.21	U		0.21	U	
1,2-DICHLOROPROPANE		0.15	U		0.15	U	
1,3-DICHLOROBENZENE		0.15	U		0.15	U	
1,3-DICHLOROPROPANE		0.21	U		0.21	U	
1,4-DICHLOROBENZENE		0.16	U		0.16	U	
2,2-DICHLOROPROPANE		0.31	U		0.31	U	
2-BUTANONE		1.2	U		1.2	U	
2-CHLOROETHYL VINYL ETHER		0.26	UR	M	0.26	UR	M
2-CHLOROTOLUENE		0.15	U		0.15	U	
2-HEXANONE		0.54	UJ	C	0.54	U	
4-CHLOROTOLUENE		0.09	U		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U		0.13	U	
4-METHYL-2-PENTANONE		0.42	UJ	C	0.42	U	
ACETONE		5.4	U		5.4	U	
BENZENE		0.13	U		0.13	U	
BROMOBENZENE		0.12	U		0.12	U	
BROMOCHLOROMETHANE		0.14	U		0.14	U	
BROMODICHLOROMETHANE		0.17	U		0.17	U	
BROMOFORM		0.76	UJ	C	0.76	UJ	C
BROMOMETHANE		0.42	U		0.42	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW151A-020419			TB-020419		
SDG: 240-107638-1	LAB_ID	240-107638-2			240-107638-1		
FRACTION: OV	SAMP_DATE	2/4/2019			2/4/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.28	U		0.28	U	
CARBON TETRACHLORIDE		0.26	U		0.26	U	
CHLOROBENZENE		0.14	U		0.14	U	
CHLORODIBROMOMETHANE		0.39	U		0.39	U	
CHLOROETHANE		0.83	U		0.83	U	
CHLOROFORM		0.13	U		0.13	U	
CHLOROMETHANE		0.2	U		0.2	U	
CIS-1,2-DICHLOROETHENE		0.16	U		0.16	U	
CIS-1,3-DICHLOROPROPENE		0.61	U		0.61	U	
DIBROMOMETHANE		0.09	U		0.09	U	
DICHLORODIFLUOROMETHANE		0.35	U		0.35	U	
DIISOPROPYL ETHER		0.17	U		0.17	U	
ETHYL TERT-BUTYL ETHER		0.15	U		0.15	U	
ETHYLBENZENE		0.11	U		0.11	U	
HEXACHLOROBUTADIENE		0.83	U		0.83	UJ	C
ISOPROPYLBENZENE		0.09	U		0.09	U	
METHYL TERT-BUTYL ETHER		0.07	U		0.07	U	
METHYLENE CHLORIDE		2.6	U		2.6	U	
NAPHTHALENE		0.32	U		0.32	U	
N-BUTYLBENZENE		0.14	U		0.14	U	
N-PROPYLBENZENE		0.15	U		0.15	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U	
STYRENE		0.1	U		0.1	U	
TERT-AMYL METHYL ETHER		0.11	UJ	C	0.11	U	
TERT-BUTYLBENZENE		0.14	U		0.14	U	
TERTIARY-BUTYL ALCOHOL		1.7	U		1.7	U	
TETRACHLOROETHENE		0.15	U		0.15	U	
TOLUENE		0.14	U		0.14	U	
TOTAL XYLENES		0.15	U		0.15	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.67	UJ	C	0.67	U	
TRICHLOROETHENE		0.28	U	B	0.1	J	P
TRICHLOROFLUOROMETHANE		0.45	U		0.45	U	
VINYL ACETATE		0.19	UJ	C	0.19	U	
VINYL CHLORIDE		0.2	U		0.2	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW151A-020419		
SDG: 240-107638-1	LAB_ID	240-107638-2		
FRACTION: PCB	SAMP_DATE	2/4/2019		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.069	UJ	C
DICHLOROBIPHENYLS		0.0054	U	
HEPTACHLOROBIPHENYLS		0.03	U	
HEXACHLOROBIPHENYLS		0.015	U	
MONOCHLOROBIPHENYLS		0.0055	U	
NONACHLOROBIPHENYLS		0.049	UJ	C
OCTACHLOROBIPHENYLS		0.038	U	
PENTACHLOROBIPHENYLS		0.014	U	
TETRACHLOROBIPHENYLS		0.013	U	
TRICHLOROBIPHENYLS		0.0064	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW151A-020419		
SDG: 240-107638-1	LAB_ID	240-107638-2		
FRACTION: M	SAMP_DATE	2/4/2019		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ALUMINUM		57		
ANTIMONY		0.66	J	P
ARSENIC		0.75	U	
BARIUM		57		
BERYLLIUM		1.7		
CADMIUM		0.22	J	P
CALCIUM		13000		
CHROMIUM		0.98	U	
COBALT		24		
COPPER		170		
IRON		47	U	
LEAD		0.45	U	
MAGNESIUM		3500		
MANGANESE		75		
NICKEL		34		
POTASSIUM		3900		
SELENIUM		0.89	U	
SILVER		0.053	U	
SODIUM		38000		
THALLIUM		0.2	U	
VANADIUM		0.82	U	
ZINC		98		

PROJ_NO: 08784	NSAMPLE	MRC-MW151A-020419					
SDG: 240-107638-1	LAB_ID	240-107638-2					
FRACTION: MISC	SAMP_DATE	2/4/2019					
MEDIA: WATER	QC_TYPE	NM					
	UNITS	MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		22					
BROMIDE		0.044	U				
HARDNESS AS CACO3		52					
NITRITE/NITRATE-N		0.32					
SALINITY					2	U	
SULFATE		57					
TOTAL DISSOLVED SOLIDS		200					

PROJ_NO: 08784	NSAMPLE	MRC-DUP01-020619			MRC-MW138B-020619			MRC-MW141B-020619			MRC-MW142B-020619		
SDG: 240-107796-1	LAB_ID	240-107796-6			240-107796-2			240-107796-3			240-107796-4		
FRACTION: OV	SAMP_DATE	2/6/2019			2/6/2019			2/6/2019			2/6/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	MRC-MW142B-020619											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.7	U		3.5	U		140	U		0.56	U	
1,1,1-TRICHLOROETHANE		1.2	U		6	U		240	U		0.96	U	
1,1,2,2-TETRACHLOROETHANE		0.65	U		3.3	UJ	C	130	UJ	C	0.52	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		2.1	U		10	U		410	U		1.6	U	
1,1-DICHLOROETHANE		0.85	U		4.3	U		170	U		0.68	U	
1,1-DICHLOROETHENE		0.95	U		4.8	U		190	U		0.76	U	
1,1-DICHLOROPROPENE		0.7	U		3.5	U		140	U		0.56	U	
1,2,3-TRICHLOROBENZENE		2.7	UJ	C	14	U		540	U		2.2	U	
1,2,3-TRICHLOROPROPANE		1.2	U		6	U		240	U		0.96	U	
1,2,3-TRIMETHYLBENZENE		0.7	U		3.5	U		140	U		0.56	U	
1,2,4-TRICHLOROBENZENE		1.3	U		6.5	UJ	C	260	UJ	C	1	UJ	C
1,2,4-TRIMETHYLBENZENE		0.35	U		1.8	U		70	U		0.28	U	
1,2-DIBROMO-3-CHLOROPROPANE		4.6	U		23	UJ	C	910	UJ	C	3.6	UJ	C
1,2-DIBROMOETHANE		0.6	U		3	U		120	U		0.48	U	
1,2-DICHLOROBENZENE		0.75	U		3.8	U		150	U		0.6	U	
1,2-DICHLOROETHANE		1.1	U		5.3	U		210	U		0.84	U	
1,2-DICHLOROPROPANE		0.75	U		3.8	U		150	U		0.6	U	
1,3-DICHLOROBENZENE		0.75	U		3.8	U		150	U		0.6	U	
1,3-DICHLOROPROPANE		1.1	U		5.3	U		210	U		0.84	U	
1,4-DICHLOROBENZENE		0.8	U		4	U		160	U		0.64	U	
2,2-DICHLOROPROPANE		1.6	U		7.8	U		310	U		1.2	U	
2-BUTANONE		5.8	U		29	U		1200	U		4.6	U	
2-CHLOROETHYL VINYL ETHER		1.3	UR	M	6.5	UR	M	260	UR	M	1	UR	M
2-CHLOROTOLUENE		0.75	U		3.8	U		150	U		0.6	U	
2-HEXANONE		2.7	U		14	UJ	C	540	UJ	C	2.2	UJ	C
4-CHLOROTOLUENE		0.45	U		2.3	U		90	U		0.36	U	
4-ISOPROPYLTOLUENE		0.65	U		3.3	U		130	U		0.52	U	
4-METHYL-2-PENTANONE		2.1	U		11	U		420	U		1.7	U	
ACETONE		27	U		140	U		5400	U		22	U	
BENZENE		0.65	U		3.3	U		130	U		0.52	U	
BROMOBENZENE		0.6	U		3	U		120	U		0.48	U	
BROMOCHLOROMETHANE		0.7	U		3.5	U		140	U		0.56	U	
BROMODICHLOROMETHANE		0.85	U		4.3	U		170	U		0.68	U	
BROMOFORM		3.8	UJ	C	19	UJ	C	760	UJ	CD	3	UJ	C
BROMOMETHANE		2.1	U		11	U		420	U		1.7	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW158A-020619			TB-020619		
SDG: 240-107796-1	LAB_ID	240-107796-5			240-107796-1		
FRACTION: OV	SAMP_DATE	2/6/2019			2/6/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.14	U		0.14	U	
1,1,1-TRICHLOROETHANE		0.24	U		0.24	U	
1,1,2,2-TETRACHLOROETHANE		0.13	U		0.13	UJ	C
1,1,2-TRICHLOROTRIFLUOROETHANE		0.41	U		0.41	U	
1,1-DICHLOROETHANE		0.17	U		0.17	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.14	U		0.14	U	
1,2,3-TRICHLOROBENZENE		0.54	UJ	C	0.54	U	
1,2,3-TRICHLOROPROPANE		0.24	U		0.24	U	
1,2,3-TRIMETHYLBENZENE		0.14	U		0.14	U	
1,2,4-TRICHLOROBENZENE		0.26	U		0.26	U	
1,2,4-TRIMETHYLBENZENE		0.07	U		0.07	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.91	U		0.91	UJ	C
1,2-DIBROMOETHANE		0.12	U		0.12	U	
1,2-DICHLOROBENZENE		0.15	U		0.15	U	
1,2-DICHLOROETHANE		0.21	U		0.21	U	
1,2-DICHLOROPROPANE		0.15	U		0.15	U	
1,3-DICHLOROBENZENE		0.15	U		0.15	U	
1,3-DICHLOROPROPANE		0.21	U		0.21	U	
1,4-DICHLOROBENZENE		0.16	U		0.16	U	
2,2-DICHLOROPROPANE		0.31	U		0.31	U	
2-BUTANONE		1.2	U		1.2	U	
2-CHLOROETHYL VINYL ETHER		0.26	UR	M	0.26	UR	M
2-CHLOROTOLUENE		0.15	U		0.15	U	
2-HEXANONE		0.54	U		0.54	UJ	C
4-CHLOROTOLUENE		0.09	U		0.09	U	
4-ISOPROPYLTOLUENE		0.13	U		0.13	U	
4-METHYL-2-PENTANONE		0.42	U		0.42	UJ	C
ACETONE		5.4	U		5.4	U	
BENZENE		0.13	U		0.13	U	
BROMOBENZENE		0.12	U		0.12	U	
BROMOCHLOROMETHANE		0.14	U		0.14	U	
BROMODICHLOROMETHANE		0.17	U		0.17	U	
BROMOFORM		0.76	UJ	C	0.76	UJ	C
BROMOMETHANE		0.42	U		0.42	U	

PROJ_NO: 08784	NSAMPLE	MRC-DUP01-020619			MRC-MW138B-020619			MRC-MW141B-020619			MRC-MW142B-020619		
SDG: 240-107796-1	LAB_ID	240-107796-6			240-107796-2			240-107796-3			240-107796-4		
FRACTION: OV	SAMP_DATE	2/6/2019			2/6/2019			2/6/2019			2/6/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	MRC-MW142B-020619											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		1.4	UJ	C	7	UJ	C	280	UJ	C	1.1	UJ	C
CARBON TETRACHLORIDE		1.3	U		6.5	U		260	U		1	U	
CHLOROBENZENE		0.7	U		3.5	U		140	U		0.56	U	
CHLORODIBROMOMETHANE		2	U		9.8	UJ	C	390	UJ	CD	1.6	UJ	C
CHLOROETHANE		4.2	U		21	U		830	U		3.3	U	
CHLOROFORM		0.71	J	P	3.3	U		130	U		0.68	J	P
CHLOROMETHANE		1	U		5	U		200	U		0.8	U	
CIS-1,2-DICHLOROETHENE		7.3			4	U		180	J	P	7.7		
CIS-1,3-DICHLOROPROPENE		3.1	U		15	U		610	U		2.4	U	
DIBROMOMETHANE		0.45	U		2.3	U		90	U		0.36	U	
DICHLORODIFLUOROMETHANE		1.8	U		8.8	U		350	U		1.4	U	
DIISOPROPYL ETHER		0.85	U		4.3	U		170	U		0.68	U	
ETHYL TERT-BUTYL ETHER		0.75	UJ	C	3.8	UJ	C	150	UJ	C	0.6	UJ	C
ETHYLBENZENE		0.55	U		2.8	U		110	U		0.44	U	
HEXACHLOROBUTADIENE		4.2	UJ	C	21	UJ	C	830	UJ	C	3.3	UJ	C
ISOPROPYLBENZENE		0.45	U		2.3	U		90	U		0.36	U	
METHYL TERT-BUTYL ETHER		3.5	J	P	1.8	U		70	U		3.7	J	P
METHYLENE CHLORIDE		13	UJ	C	66	U		2600	U		10	U	
NAPHTHALENE		1.6	UJ	C	8	UJ	C	320	UJ	C	1.3	UJ	C
N-BUTYLBENZENE		0.7	U		3.5	U		140	U		0.56	U	
N-PROPYLBENZENE		0.75	U		3.8	U		150	U		0.6	U	
SEC-BUTYLBENZENE		0.65	U		3.3	U		130	U		0.52	U	
STYRENE		0.5	U		2.5	U		100	U		0.4	U	
TERT-AMYL METHYL ETHER		0.55	UJ	C	2.8	UJ	C	110	UJ	C	0.44	UJ	C
TERT-BUTYLBENZENE		0.7	U		3.5	U		140	U		0.56	U	
TERTIARY-BUTYL ALCOHOL		8.5	U		42	U		1700	UJ	D	6.8	U	
TETRACHLOROETHENE		0.75	U		3.8	U		150	U		0.6	U	
TOLUENE		0.7	U		3.5	U		140	U		0.56	U	
TOTAL XYLENES		0.75	U		3.8	U		150	U		0.6	U	
TRANS-1,2-DICHLOROETHENE		0.95	U		4.8	U		190	U		0.76	U	
TRANS-1,3-DICHLOROPROPENE		3.4	UJ	C	17	UJ	C	670	UJ	C	2.7	UJ	C
TRICHLOROETHENE		90			540			21000			86		
TRICHLOROFLUOROMETHANE		2.3	U		11	U		450	U		1.8	U	
VINYL ACETATE		0.95	U		4.8	UJ	C	190	UJ	C	0.76	UJ	C
VINYL CHLORIDE		1	U		5	U		200	U		0.8	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW158A-020619			TB-020619		
SDG: 240-107796-1	LAB_ID	240-107796-5			240-107796-1		
FRACTION: OV	SAMP_DATE	2/6/2019			2/6/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE	0.28	UJ	C	0.28	U	
CARBON TETRACHLORIDE	0.26	U		0.26	UJ	C
CHLOROBENZENE	0.14	U		0.14	U	
CHLORODIBROMOMETHANE	0.39	U		0.39	UJ	C
CHLOROETHANE	0.83	U		0.83	U	
CHLOROFORM	0.13	U		0.13	U	
CHLOROMETHANE	0.2	U		0.2	U	
CIS-1,2-DICHLOROETHENE	0.31	J	P	0.16	U	
CIS-1,3-DICHLOROPROPENE	0.61	U		0.61	UJ	C
DIBROMOMETHANE	0.09	U		0.09	U	
DICHLORODIFLUOROMETHANE	0.35	U		0.35	U	
DIISOPROPYL ETHER	0.17	U		0.17	U	
ETHYL TERT-BUTYL ETHER	0.15	UJ	C	0.15	U	
ETHYLBENZENE	0.11	U		0.11	U	
HEXACHLOROBUTADIENE	0.83	UJ	C	0.83	U	
ISOPROPYLBENZENE	0.09	U		0.09	U	
METHYL TERT-BUTYL ETHER	0.07	U		0.07	U	
METHYLENE CHLORIDE	2.6	UJ	C	2.6	U	
NAPHTHALENE	0.32	UJ	C	0.32	U	
N-BUTYLBENZENE	0.14	U		0.14	U	
N-PROPYLBENZENE	0.15	U		0.15	U	
SEC-BUTYLBENZENE	0.13	U		0.13	U	
STYRENE	0.1	U		0.1	U	
TERT-AMYL METHYL ETHER	0.11	UJ	C	0.11	UJ	C
TERT-BUTYLBENZENE	0.14	U		0.14	U	
TERTIARY-BUTYL ALCOHOL	1.7	U		1.7	UJ	C
TETRACHLOROETHENE	0.15	U		0.15	U	
TOLUENE	0.14	U		0.14	U	
TOTAL XYLENES	0.15	U		0.15	U	
TRANS-1,2-DICHLOROETHENE	0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE	0.67	UJ	C	0.67	UJ	C
TRICHLOROETHENE	1.3			0.1	U	
TRICHLOROFLUOROMETHANE	0.45	U		0.45	U	
VINYL ACETATE	0.19	U		0.19	UJ	C
VINYL CHLORIDE	0.2	U		0.2	U	

PROJ_NO: 08784	NSAMPLE	MRC-MW158A-020619		
SDG: 240-107796-1	LAB_ID	240-107796-5		
FRACTION: PCB	SAMP_DATE	2/6/2019		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
DECACHLOROBIPHENYL		0.07	UJ	C
DICHLOROBIPHENYLS		0.0054	U	
HEPTACHLOROBIPHENYLS		0.03	U	
HEXACHLOROBIPHENYLS		0.015	U	
MONOCHLOROBIPHENYLS		0.0056	U	
NONACHLOROBIPHENYLS		0.049	UJ	C
OCTACHLOROBIPHENYLS		0.038	U	
PENTACHLOROBIPHENYLS		0.014	U	
TETRACHLOROBIPHENYLS		0.013	U	
TRICHLOROBIPHENYLS		0.0065	U	

PROJ_NO: 08784	NSAMPLE	MRC-DUP01-020619			MRC-DUP01-020619-RE			MRC-MW138B-020619			MRC-MW138B-020619-RE		
SDG: 240-107796-1	LAB_ID	240-107796-6			240-107796-6			240-107796-2			240-107796-2		
FRACTION: M	SAMP_DATE	2/6/2019			2/6/2019			2/6/2019			2/6/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	MRC-MW142B-020619											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		140						420					
ANTIMONY		0.57	U					0.84	J	P			
ARSENIC		0.75	U					0.75	U				
BARIUM		70						86					
BERYLLIUM		1.6						1.5					
CADMIUM		0.21	U					0.21	J	P			
CALCIUM		19000						31000					
CHROMIUM		1.3	J	P				2.5					
COBALT		30						32					
COPPER		19						7.8					
IRON					2700						1700		
LEAD		0.66	J	P				1.1					
MAGNESIUM		2700						8900					
MANGANESE					160						120		
NICKEL		45						57					
POTASSIUM		22000						21000					
SELENIUM		0.89	U					0.89	U				
SILVER		0.073	J	P				0.053	U				
SODIUM		27000						94000					
THALLIUM		0.2	U					0.2	U				
VANADIUM		2.8	J	P				3.3	J	P			
ZINC		75						85					

PROJ_NO: 08784	NSAMPLE	MRC-MW141B-020619			MRC-MW141B-020619-RE			MRC-MW142B-020619			MRC-MW142B-020619-RE		
SDG: 240-107796-1	LAB_ID	240-107796-3			240-107796-3			240-107796-4			240-107796-4		
FRACTION: M	SAMP_DATE	2/6/2019			2/6/2019			2/6/2019			2/6/2019		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		140						130					
ANTIMONY		0.57	U					0.57	U				
ARSENIC		0.75	U					0.75	U				
BARIUM		68						52					
BERYLLIUM		3.1						1.6					
CADMIUM		0.21	U					0.21	U				
CALCIUM		11000						19000					
CHROMIUM		0.98	U					1.4	J	P			
COBALT		48						30					
COPPER		15						20					
IRON					260						2700		
LEAD		0.45	U					0.63	J	P			
MAGNESIUM		4900						2700					
MANGANESE					94						160		
NICKEL		82						43					
POTASSIUM		17000						21000					
SELENIUM		0.89	U					0.89	U				
SILVER		0.053	U					0.056	J	P			
SODIUM		35000						26000					
THALLIUM		0.2	U					0.2	U				
VANADIUM		0.86	J	P				3	J	P			
ZINC		120						76					

PROJ_NO: 08784	NSAMPLE	MRC-MW158A-020619			MRC-MW158A-020619-RE		
SDG: 240-107796-1	LAB_ID	240-107796-5			240-107796-5		
FRACTION: M	SAMP_DATE	2/6/2019			2/6/2019		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALUMINUM		380					
ANTIMONY		0.66	J	P			
ARSENIC		0.75	U				
BARIUM		77					
BERYLLIUM		0.31	U				
CADMIUM		0.21	U				
CALCIUM		180000					
CHROMIUM		2					
COBALT		1.6					
COPPER		13					
IRON					550		
LEAD		0.45	U				
MAGNESIUM		41000					
MANGANESE					120		
NICKEL		5.1					
POTASSIUM		18000					
SELENIUM		0.89	U				
SILVER		0.053	U				
SODIUM		52000					
THALLIUM		0.2	U				
VANADIUM		1.4	J	P			
ZINC		15	U				

PROJ_NO: 08784	NSAMPLE	MRC-DUP01-020619						MRC-MW138B-020619					
SDG: 240-107796-1	LAB_ID	240-107796-6						240-107796-2					
FRACTION: MISC	SAMP_DATE	2/6/2019						2/6/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	MRC-MW142B-020619			MRC-MW142B-020619								
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		61						69					
BROMIDE		0.044	U					0.24	J	P			
HARDNESS AS CACO3		76						120					
NITRITE/NITRATE-N		0.31						0.22					
SALINITY					2	U					2	U	
SULFATE		11						22					
TOTAL DISSOLVED SOLIDS		200						400					

PROJ_NO: 08784	NSAMPLE	MRC-MW141B-020619						MRC-MW142B-020619					
SDG: 240-107796-1	LAB_ID	240-107796-3						240-107796-4					
FRACTION: MISC	SAMP_DATE	2/6/2019						2/6/2019					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			UNITLESS			MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY	29						60					
BROMIDE	0.37	J	P				0.044	U				
HARDNESS AS CACO3	56						76					
NITRITE/NITRATE-N	0.86						0.3					
SALINITY				2	U					2	U	
SULFATE	17						12					
TOTAL DISSOLVED SOLIDS	190						190					

PROJ_NO: 08784	NSAMPLE	MRC-MW158A-020619					
SDG: 240-107796-1	LAB_ID	240-107796-5					
FRACTION: MISC	SAMP_DATE	2/6/2019					
MEDIA: WATER	QC_TYPE	NM					
	UNITS	MG/L			UNITLESS		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		290					
BROMIDE		0.044	U				
HARDNESS AS CACO3		720					
NITRITE/NITRATE-N		0.093	U	A			
SALINITY					2	U	
SULFATE		380					
TOTAL DISSOLVED SOLIDS		980					

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: TB-020419 | Lab Sample ID: 240-107638-1

Matrix: Water | Lab File ID: UXC8729.D

Analysis Method: 8260C | Date Collected: 02/04/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/07/2019 19:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367131 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: TB-020419 | Lab Sample ID: 240-107638-1

Matrix: Water | Lab File ID: UXC8729.D

Analysis Method: 8260C | Date Collected: 02/04/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/07/2019 19:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367131 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: TB-020419 | Lab Sample ID: 240-107638-1

Matrix: Water | Lab File ID: UXC8729.D

Analysis Method: 8260C | Date Collected: 02/04/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/07/2019 19:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367131 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	86		70-123
1868-53-7	Dibromofluoromethane (Surr)	85		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: MRC-MW151A-020419 | Lab Sample ID: 240-107638-2

Matrix: Water | Lab File ID: UXC8742.D

Analysis Method: 8260C | Date Collected: 02/04/2019 14:20

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 15:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: MRC-MW151A-020419 | Lab Sample ID: 240-107638-2

Matrix: Water | Lab File ID: UXC8742.D

Analysis Method: 8260C | Date Collected: 02/04/2019 14:20

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 15:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.28	J	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: MRC-MW151A-020419 | Lab Sample ID: 240-107638-2

Matrix: Water | Lab File ID: UXC8742.D

Analysis Method: 8260C | Date Collected: 02/04/2019 14:20

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 15:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		70-121
460-00-4	4-Bromofluorobenzene (Surr)	84		59-120
2037-26-5	Toluene-d8 (Surr)	90		70-123
1868-53-7	Dibromofluoromethane (Surr)	89		75-128

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107638-1

SDG No.:

Client Sample ID: MRC-MW151A-020419 | Lab Sample ID: 240-107638-2

Matrix: Water | Lab File ID: xb2039.D

Analysis Method: 680 | Date Collected: 02/04/2019 14:20

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1009.1(mL) | Date Analyzed: 02/21/2019 11:01

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0055	U	0.099	0.0055
2051-24-3	DCB Decachlorobiphenyl	0.069	U	0.50	0.069
25512-42-9	Dichlorobiphenyl	0.0054	U	0.099	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0064	U	0.099	0.0064

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	56		25-113

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW151A-020419 Lab Sample ID: 240-107638-2

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG ID.:

Matrix: Water Date Sampled: 02/04/2019 14:20

Reporting Basis: WET Date Received: 02/05/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	26	200	26	ug/L	U		1	6010C
7439-96-5	Manganese	73	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	57	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	57	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.7	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.22	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	24	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	0.98	2.0	0.98	ug/L	U		1	6020A
7440-50-8	Copper	170	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	47	100	47	ug/L	U		1	6020A
7439-96-5	Manganese	75	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	34	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.66	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.82	5.0	0.82	ug/L	U		1	6020A
7440-66-6	Zinc	98	20	15	ug/L			1	6020A
7440-70-2	Calcium	13000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	3900	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	3500	1000	200	ug/L			1	6020A
7440-23-5	Sodium	38000	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW151A-020419 Lab Sample ID: 240-107638-2

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG ID.:

Matrix: Water Date Sampled: 02/04/2019 14:20

Reporting Basis: WET Date Received: 02/05/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	52	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	22	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	200	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	57	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW151A-020419 Lab Sample ID: 240-107638-2

Lab Name: TestAmerica Nashville Job No.: 240-107638-1

SDG ID.:

Matrix: Water Date Sampled: 02/04/2019 14:20

Reporting Basis: WET Date Received: 02/05/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.32	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW151A-020419 Lab Sample ID: 240-107638-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-107638-1

SDG ID.:

Matrix: Water Date Sampled: 02/04/2019 14:20

Reporting Basis: WET Date Received: 02/05/2019 09:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: TB-020619 | Lab Sample ID: 240-107796-1

Matrix: Water | Lab File ID: UXC8786.D

Analysis Method: 8260C | Date Collected: 02/06/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 19:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: TB-020619 | Lab Sample ID: 240-107796-1

Matrix: Water | Lab File ID: UXC8786.D

Analysis Method: 8260C | Date Collected: 02/06/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 19:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: TB-020619 | Lab Sample ID: 240-107796-1

Matrix: Water | Lab File ID: UXC8786.D

Analysis Method: 8260C | Date Collected: 02/06/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 19:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-121
460-00-4	4-Bromofluorobenzene (Surr)	82		59-120
2037-26-5	Toluene-d8 (Surr)	88		70-123
1868-53-7	Dibromofluoromethane (Surr)	92		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW138B-020619 | Lab Sample ID: 240-107796-2

Matrix: Water | Lab File ID: UXC8796.D

Analysis Method: 8260C | Date Collected: 02/06/2019 10:19

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 13:43

Soil Aliquot Vol: | Dilution Factor: 25

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	3.5	U	25	3.5
71-55-6	1,1,1-Trichloroethane	6.0	U	25	6.0
79-34-5	1,1,2,2-Tetrachloroethane	3.3	U	25	3.3
76-13-1	1,1,2-Trichlorotrifluoroethane	10	U	25	10
75-34-3	1,1-Dichloroethane	4.3	U	25	4.3
75-35-4	1,1-Dichloroethene	4.8	U	25	4.8
563-58-6	1,1-Dichloropropene	3.5	U	25	3.5
87-61-6	1,2,3-Trichlorobenzene	14	U	25	14
96-18-4	1,2,3-Trichloropropane	6.0	U	25	6.0
526-73-8	1,2,3-Trimethylbenzene	3.5	U	130	3.5
120-82-1	1,2,4-Trichlorobenzene	6.5	U	25	6.5
95-63-6	1,2,4-Trimethylbenzene	1.8	U	25	1.8
96-12-8	1,2-Dibromo-3-Chloropropane	23	U	50	23
95-50-1	1,2-Dichlorobenzene	3.8	U	25	3.8
107-06-2	1,2-Dichloroethane	5.3	U	25	5.3
78-87-5	1,2-Dichloropropane	3.8	U	25	3.8
541-73-1	1,3-Dichlorobenzene	3.8	U	25	3.8
142-28-9	1,3-Dichloropropane	5.3	U	25	5.3
106-46-7	1,4-Dichlorobenzene	4.0	U	25	4.0
594-20-7	2,2-Dichloropropane	7.8	U	25	7.8
110-75-8	2-Chloroethyl vinyl ether	6.5	U	250	6.5
95-49-8	2-Chlorotoluene	3.8	U	25	3.8
591-78-6	2-Hexanone	14	U	250	14
108-86-1	Bromobenzene	3.0	U	25	3.0
74-97-5	Bromochloromethane	3.5	U	25	3.5
106-43-4	4-Chlorotoluene	2.3	U	25	2.3
99-87-6	4-Isopropyltoluene	3.3	U	25	3.3
67-64-1	Acetone	140	U	250	140
71-43-2	Benzene	3.3	U	25	3.3
75-25-2	Bromoform	19	U	25	19
74-83-9	Bromomethane	11	U	25	11
75-15-0	Carbon disulfide	7.0	U	25	7.0
56-23-5	Carbon tetrachloride	6.5	U	25	6.5
108-90-7	Chlorobenzene	3.5	U	25	3.5
75-00-3	Chloroethane	21	U	25	21
67-66-3	Chloroform	3.3	U	25	3.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW138B-020619 | Lab Sample ID: 240-107796-2

Matrix: Water | Lab File ID: UXC8796.D

Analysis Method: 8260C | Date Collected: 02/06/2019 10:19

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 13:43

Soil Aliquot Vol: | Dilution Factor: 25

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	5.0	U	25	5.0
156-59-2	cis-1,2-Dichloroethene	4.0	U	25	4.0
10061-01-5	cis-1,3-Dichloropropene	15	U	25	15
87-68-3	Hexachlorobutadiene	21	U	25	21
74-95-3	Dibromomethane	2.3	U	25	2.3
75-27-4	Bromodichloromethane	4.3	U	25	4.3
75-71-8	Dichlorodifluoromethane	8.8	U	25	8.8
100-41-4	Ethylbenzene	2.8	U	25	2.8
106-93-4	1,2-Dibromoethane	3.0	U	25	3.0
108-20-3	Diisopropyl ether	4.3	U	250	4.3
91-20-3	Naphthalene	8.0	U	25	8.0
104-51-8	n-Butylbenzene	3.5	U	25	3.5
98-82-8	Isopropylbenzene	2.3	U	25	2.3
103-65-1	N-Propylbenzene	3.8	U	25	3.8
78-93-3	2-Butanone (MEK)	29	U	250	29
108-10-1	4-Methyl-2-pentanone (MIBK)	11	U	250	11
135-98-8	sec-Butylbenzene	3.3	U	25	3.3
1634-04-4	Methyl tert-butyl ether	1.8	U	25	1.8
994-05-8	Tert-amyl methyl ether	2.8	U	130	2.8
75-09-2	Methylene Chloride	66	U	130	66
100-42-5	Styrene	2.5	U	25	2.5
637-92-3	Ethyl tert-butyl ether	3.8	U	130	3.8
98-06-6	tert-Butylbenzene	3.5	U	25	3.5
127-18-4	Tetrachloroethene	3.8	U	25	3.8
108-88-3	Toluene	3.5	U	25	3.5
156-60-5	trans-1,2-Dichloroethene	4.8	U	25	4.8
10061-02-6	trans-1,3-Dichloropropene	17	U	25	17
79-01-6	Trichloroethene	540		25	2.5
75-69-4	Trichlorofluoromethane	11	U	25	11
108-05-4	Vinyl acetate	4.8	U	50	4.8
75-01-4	Vinyl chloride	5.0	U	25	5.0
75-65-0	tert-Butyl alcohol	42	U	1300	42
1330-20-7	Xylenes, Total	3.8	U	50	3.8
124-48-1	Chlorodibromomethane	9.8	U	25	9.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW138B-020619 | Lab Sample ID: 240-107796-2

Matrix: Water | Lab File ID: UXC8796.D

Analysis Method: 8260C | Date Collected: 02/06/2019 10:19

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 13:43

Soil Aliquot Vol: | Dilution Factor: 25

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	79		59-120
2037-26-5	Toluene-d8 (Surr)	84		70-123
1868-53-7	Dibromofluoromethane (Surr)	87		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW141B-020619 | Lab Sample ID: 240-107796-3

Matrix: Water | Lab File ID: UXC8797.D

Analysis Method: 8260C | Date Collected: 02/06/2019 11:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 14:05

Soil Aliquot Vol: | Dilution Factor: 1000

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	140	U F2	1000	140
71-55-6	1,1,1-Trichloroethane	240	U	1000	240
79-34-5	1,1,2,2-Tetrachloroethane	130	U	1000	130
76-13-1	1,1,2-Trichlorotrifluoroethane	410	U F2	1000	410
75-34-3	1,1-Dichloroethane	170	U	1000	170
75-35-4	1,1-Dichloroethene	190	U	1000	190
563-58-6	1,1-Dichloropropene	140	U	1000	140
87-61-6	1,2,3-Trichlorobenzene	540	U	1000	540
96-18-4	1,2,3-Trichloropropane	240	U	1000	240
526-73-8	1,2,3-Trimethylbenzene	140	U	5000	140
120-82-1	1,2,4-Trichlorobenzene	260	U	1000	260
95-63-6	1,2,4-Trimethylbenzene	70	U	1000	70
96-12-8	1,2-Dibromo-3-Chloropropane	910	U	2000	910
95-50-1	1,2-Dichlorobenzene	150	U	1000	150
107-06-2	1,2-Dichloroethane	210	U	1000	210
78-87-5	1,2-Dichloropropane	150	U	1000	150
541-73-1	1,3-Dichlorobenzene	150	U	1000	150
142-28-9	1,3-Dichloropropane	210	U F2	1000	210
106-46-7	1,4-Dichlorobenzene	160	U	1000	160
594-20-7	2,2-Dichloropropane	310	U	1000	310
110-75-8	2-Chloroethyl vinyl ether	260	U	10000	260
95-49-8	2-Chlorotoluene	150	U F2	1000	150
591-78-6	2-Hexanone	540	U	10000	540
108-86-1	Bromobenzene	120	U	1000	120
74-97-5	Bromochloromethane	140	U F2	1000	140
106-43-4	4-Chlorotoluene	90	U	1000	90
99-87-6	4-Isopropyltoluene	130	U	1000	130
67-64-1	Acetone	5400	U	10000	5400
71-43-2	Benzene	130	U	1000	130
75-25-2	Bromoform	760	U F1	1000	760
74-83-9	Bromomethane	420	U	1000	420
75-15-0	Carbon disulfide	280	U	1000	280
56-23-5	Carbon tetrachloride	260	U	1000	260
108-90-7	Chlorobenzene	140	U	1000	140
75-00-3	Chloroethane	830	U	1000	830
67-66-3	Chloroform	130	U	1000	130

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW141B-020619 | Lab Sample ID: 240-107796-3

Matrix: Water | Lab File ID: UXC8797.D

Analysis Method: 8260C | Date Collected: 02/06/2019 11:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 14:05

Soil Aliquot Vol: | Dilution Factor: 1000

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	200	U	1000	200
156-59-2	cis-1,2-Dichloroethene	180	J	1000	160
10061-01-5	cis-1,3-Dichloropropene	610	U	1000	610
87-68-3	Hexachlorobutadiene	830	U	1000	830
74-95-3	Dibromomethane	90	U F2	1000	90
75-27-4	Bromodichloromethane	170	U	1000	170
75-71-8	Dichlorodifluoromethane	350	U F2	1000	350
100-41-4	Ethylbenzene	110	U	1000	110
106-93-4	1,2-Dibromoethane	120	U	1000	120
108-20-3	Diisopropyl ether	170	U	10000	170
91-20-3	Naphthalene	320	U	1000	320
104-51-8	n-Butylbenzene	140	U	1000	140
98-82-8	Isopropylbenzene	90	U	1000	90
103-65-1	N-Propylbenzene	150	U F2	1000	150
78-93-3	2-Butanone (MEK)	1200	U	10000	1200
108-10-1	4-Methyl-2-pentanone (MIBK)	420	U	10000	420
135-98-8	sec-Butylbenzene	130	U	1000	130
1634-04-4	Methyl tert-butyl ether	70	U	1000	70
994-05-8	Tert-amyl methyl ether	110	U	5000	110
75-09-2	Methylene Chloride	2600	U	5000	2600
100-42-5	Styrene	100	U	1000	100
637-92-3	Ethyl tert-butyl ether	150	U	5000	150
98-06-6	tert-Butylbenzene	140	U	1000	140
127-18-4	Tetrachloroethene	150	U	1000	150
108-88-3	Toluene	140	U	1000	140
156-60-5	trans-1,2-Dichloroethene	190	U	1000	190
10061-02-6	trans-1,3-Dichloropropene	670	U	1000	670
79-01-6	Trichloroethene	21000		1000	100
75-69-4	Trichlorofluoromethane	450	U F2	1000	450
108-05-4	Vinyl acetate	190	U	2000	190
75-01-4	Vinyl chloride	200	U	1000	200
75-65-0	tert-Butyl alcohol	1700	U F1	50000	1700
1330-20-7	Xylenes, Total	150	U	2000	150
124-48-1	Chlorodibromomethane	390	U F1	1000	390

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW141B-020619 | Lab Sample ID: 240-107796-3

Matrix: Water | Lab File ID: UXC8797.D

Analysis Method: 8260C | Date Collected: 02/06/2019 11:45

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 14:05

Soil Aliquot Vol: | Dilution Factor: 1000

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		70-121
460-00-4	4-Bromofluorobenzene (Surr)	77		59-120
2037-26-5	Toluene-d8 (Surr)	82		70-123
1868-53-7	Dibromofluoromethane (Surr)	84		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW142B-020619 | Lab Sample ID: 240-107796-4

Matrix: Water | Lab File ID: UXC8804.D

Analysis Method: 8260C | Date Collected: 02/06/2019 13:18

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 16:38

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.56	U	4.0	0.56
71-55-6	1,1,1-Trichloroethane	0.96	U	4.0	0.96
79-34-5	1,1,2,2-Tetrachloroethane	0.52	U	4.0	0.52
76-13-1	1,1,2-Trichlorotrifluoroethane	1.6	U	4.0	1.6
75-34-3	1,1-Dichloroethane	0.68	U	4.0	0.68
75-35-4	1,1-Dichloroethene	0.76	U	4.0	0.76
563-58-6	1,1-Dichloropropene	0.56	U	4.0	0.56
87-61-6	1,2,3-Trichlorobenzene	2.2	U	4.0	2.2
96-18-4	1,2,3-Trichloropropane	0.96	U	4.0	0.96
526-73-8	1,2,3-Trimethylbenzene	0.56	U	20	0.56
120-82-1	1,2,4-Trichlorobenzene	1.0	U	4.0	1.0
95-63-6	1,2,4-Trimethylbenzene	0.28	U	4.0	0.28
96-12-8	1,2-Dibromo-3-Chloropropane	3.6	U	8.0	3.6
95-50-1	1,2-Dichlorobenzene	0.60	U	4.0	0.60
107-06-2	1,2-Dichloroethane	0.84	U	4.0	0.84
78-87-5	1,2-Dichloropropane	0.60	U	4.0	0.60
541-73-1	1,3-Dichlorobenzene	0.60	U	4.0	0.60
142-28-9	1,3-Dichloropropane	0.84	U	4.0	0.84
106-46-7	1,4-Dichlorobenzene	0.64	U	4.0	0.64
594-20-7	2,2-Dichloropropane	1.2	U	4.0	1.2
110-75-8	2-Chloroethyl vinyl ether	1.0	U	40	1.0
95-49-8	2-Chlorotoluene	0.60	U	4.0	0.60
591-78-6	2-Hexanone	2.2	U	40	2.2
108-86-1	Bromobenzene	0.48	U	4.0	0.48
74-97-5	Bromochloromethane	0.56	U	4.0	0.56
106-43-4	4-Chlorotoluene	0.36	U	4.0	0.36
99-87-6	4-Isopropyltoluene	0.52	U	4.0	0.52
67-64-1	Acetone	22	U	40	22
71-43-2	Benzene	0.52	U	4.0	0.52
75-25-2	Bromoform	3.0	U	4.0	3.0
74-83-9	Bromomethane	1.7	U	4.0	1.7
75-15-0	Carbon disulfide	1.1	U	4.0	1.1
56-23-5	Carbon tetrachloride	1.0	U	4.0	1.0
108-90-7	Chlorobenzene	0.56	U	4.0	0.56
75-00-3	Chloroethane	3.3	U	4.0	3.3
67-66-3	Chloroform	0.68	J	4.0	0.52

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW142B-020619 | Lab Sample ID: 240-107796-4

Matrix: Water | Lab File ID: UXC8804.D

Analysis Method: 8260C | Date Collected: 02/06/2019 13:18

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 16:38

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.80	U	4.0	0.80
156-59-2	cis-1,2-Dichloroethene	7.7		4.0	0.64
10061-01-5	cis-1,3-Dichloropropene	2.4	U	4.0	2.4
87-68-3	Hexachlorobutadiene	3.3	U	4.0	3.3
74-95-3	Dibromomethane	0.36	U	4.0	0.36
75-27-4	Bromodichloromethane	0.68	U	4.0	0.68
75-71-8	Dichlorodifluoromethane	1.4	U	4.0	1.4
100-41-4	Ethylbenzene	0.44	U	4.0	0.44
106-93-4	1,2-Dibromoethane	0.48	U	4.0	0.48
108-20-3	Diisopropyl ether	0.68	U	40	0.68
91-20-3	Naphthalene	1.3	U	4.0	1.3
104-51-8	n-Butylbenzene	0.56	U	4.0	0.56
98-82-8	Isopropylbenzene	0.36	U	4.0	0.36
103-65-1	N-Propylbenzene	0.60	U	4.0	0.60
78-93-3	2-Butanone (MEK)	4.6	U	40	4.6
108-10-1	4-Methyl-2-pentanone (MIBK)	1.7	U	40	1.7
135-98-8	sec-Butylbenzene	0.52	U	4.0	0.52
1634-04-4	Methyl tert-butyl ether	3.7	J	4.0	0.28
994-05-8	Tert-amyl methyl ether	0.44	U	20	0.44
75-09-2	Methylene Chloride	10	U	20	10
100-42-5	Styrene	0.40	U	4.0	0.40
637-92-3	Ethyl tert-butyl ether	0.60	U	20	0.60
98-06-6	tert-Butylbenzene	0.56	U	4.0	0.56
127-18-4	Tetrachloroethene	0.60	U	4.0	0.60
108-88-3	Toluene	0.56	U	4.0	0.56
156-60-5	trans-1,2-Dichloroethene	0.76	U	4.0	0.76
10061-02-6	trans-1,3-Dichloropropene	2.7	U	4.0	2.7
79-01-6	Trichloroethene	86		4.0	0.40
75-69-4	Trichlorofluoromethane	1.8	U	4.0	1.8
108-05-4	Vinyl acetate	0.76	U	8.0	0.76
75-01-4	Vinyl chloride	0.80	U	4.0	0.80
75-65-0	tert-Butyl alcohol	6.8	U	200	6.8
1330-20-7	Xylenes, Total	0.60	U	8.0	0.60
124-48-1	Chlorodibromomethane	1.6	U	4.0	1.6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW142B-020619 | Lab Sample ID: 240-107796-4

Matrix: Water | Lab File ID: UXC8804.D

Analysis Method: 8260C | Date Collected: 02/06/2019 13:18

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 16:38

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	89		70-123
1868-53-7	Dibromofluoromethane (Surr)	92		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW158A-020619 | Lab Sample ID: 240-107796-5

Matrix: Water | Lab File ID: UXC8814.D

Analysis Method: 8260C | Date Collected: 02/06/2019 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 14:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW158A-020619 | Lab Sample ID: 240-107796-5

Matrix: Water | Lab File ID: UXC8814.D

Analysis Method: 8260C | Date Collected: 02/06/2019 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 14:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.31	J	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	1.3		1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW158A-020619 | Lab Sample ID: 240-107796-5

Matrix: Water | Lab File ID: UXC8814.D

Analysis Method: 8260C | Date Collected: 02/06/2019 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 14:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	85		70-123
1868-53-7	Dibromofluoromethane (Surr)	88		75-128

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-DUP01-020619 | Lab Sample ID: 240-107796-6

Matrix: Water | Lab File ID: UXC8815.D

Analysis Method: 8260C | Date Collected: 02/06/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:05

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.70	U	5.0	0.70
71-55-6	1,1,1-Trichloroethane	1.2	U	5.0	1.2
79-34-5	1,1,2,2-Tetrachloroethane	0.65	U	5.0	0.65
76-13-1	1,1,2-Trichlorotrifluoroethane	2.1	U	5.0	2.1
75-34-3	1,1-Dichloroethane	0.85	U	5.0	0.85
75-35-4	1,1-Dichloroethene	0.95	U	5.0	0.95
563-58-6	1,1-Dichloropropene	0.70	U	5.0	0.70
87-61-6	1,2,3-Trichlorobenzene	2.7	U	5.0	2.7
96-18-4	1,2,3-Trichloropropane	1.2	U	5.0	1.2
526-73-8	1,2,3-Trimethylbenzene	0.70	U	25	0.70
120-82-1	1,2,4-Trichlorobenzene	1.3	U	5.0	1.3
95-63-6	1,2,4-Trimethylbenzene	0.35	U	5.0	0.35
96-12-8	1,2-Dibromo-3-Chloropropane	4.6	U	10	4.6
95-50-1	1,2-Dichlorobenzene	0.75	U	5.0	0.75
107-06-2	1,2-Dichloroethane	1.1	U	5.0	1.1
78-87-5	1,2-Dichloropropane	0.75	U	5.0	0.75
541-73-1	1,3-Dichlorobenzene	0.75	U	5.0	0.75
142-28-9	1,3-Dichloropropane	1.1	U	5.0	1.1
106-46-7	1,4-Dichlorobenzene	0.80	U	5.0	0.80
594-20-7	2,2-Dichloropropane	1.6	U	5.0	1.6
110-75-8	2-Chloroethyl vinyl ether	1.3	U	50	1.3
95-49-8	2-Chlorotoluene	0.75	U	5.0	0.75
591-78-6	2-Hexanone	2.7	U	50	2.7
108-86-1	Bromobenzene	0.60	U	5.0	0.60
74-97-5	Bromochloromethane	0.70	U	5.0	0.70
106-43-4	4-Chlorotoluene	0.45	U	5.0	0.45
99-87-6	4-Isopropyltoluene	0.65	U	5.0	0.65
67-64-1	Acetone	27	U	50	27
71-43-2	Benzene	0.65	U	5.0	0.65
75-25-2	Bromoform	3.8	U	5.0	3.8
74-83-9	Bromomethane	2.1	U	5.0	2.1
75-15-0	Carbon disulfide	1.4	U	5.0	1.4
56-23-5	Carbon tetrachloride	1.3	U	5.0	1.3
108-90-7	Chlorobenzene	0.70	U	5.0	0.70
75-00-3	Chloroethane	4.2	U	5.0	4.2
67-66-3	Chloroform	0.71	J	5.0	0.65

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-DUP01-020619 | Lab Sample ID: 240-107796-6

Matrix: Water | Lab File ID: UXC8815.D

Analysis Method: 8260C | Date Collected: 02/06/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:05

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	5.0	1.0
156-59-2	cis-1,2-Dichloroethene	7.3		5.0	0.80
10061-01-5	cis-1,3-Dichloropropene	3.1	U	5.0	3.1
87-68-3	Hexachlorobutadiene	4.2	U	5.0	4.2
74-95-3	Dibromomethane	0.45	U	5.0	0.45
75-27-4	Bromodichloromethane	0.85	U	5.0	0.85
75-71-8	Dichlorodifluoromethane	1.8	U	5.0	1.8
100-41-4	Ethylbenzene	0.55	U	5.0	0.55
106-93-4	1,2-Dibromoethane	0.60	U	5.0	0.60
108-20-3	Diisopropyl ether	0.85	U	50	0.85
91-20-3	Naphthalene	1.6	U	5.0	1.6
104-51-8	n-Butylbenzene	0.70	U	5.0	0.70
98-82-8	Isopropylbenzene	0.45	U	5.0	0.45
103-65-1	N-Propylbenzene	0.75	U	5.0	0.75
78-93-3	2-Butanone (MEK)	5.8	U	50	5.8
108-10-1	4-Methyl-2-pentanone (MIBK)	2.1	U	50	2.1
135-98-8	sec-Butylbenzene	0.65	U	5.0	0.65
1634-04-4	Methyl tert-butyl ether	3.5	J	5.0	0.35
994-05-8	Tert-amyl methyl ether	0.55	U	25	0.55
75-09-2	Methylene Chloride	13	U	25	13
100-42-5	Styrene	0.50	U	5.0	0.50
637-92-3	Ethyl tert-butyl ether	0.75	U	25	0.75
98-06-6	tert-Butylbenzene	0.70	U	5.0	0.70
127-18-4	Tetrachloroethene	0.75	U	5.0	0.75
108-88-3	Toluene	0.70	U	5.0	0.70
156-60-5	trans-1,2-Dichloroethene	0.95	U	5.0	0.95
10061-02-6	trans-1,3-Dichloropropene	3.4	U	5.0	3.4
79-01-6	Trichloroethene	90		5.0	0.50
75-69-4	Trichlorofluoromethane	2.3	U	5.0	2.3
108-05-4	Vinyl acetate	0.95	U	10	0.95
75-01-4	Vinyl chloride	1.0	U	5.0	1.0
75-65-0	tert-Butyl alcohol	8.5	U	250	8.5
1330-20-7	Xylenes, Total	0.75	U	10	0.75
124-48-1	Chlorodibromomethane	2.0	U	5.0	2.0

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-DUP01-020619 | Lab Sample ID: 240-107796-6

Matrix: Water | Lab File ID: UXC8815.D

Analysis Method: 8260C | Date Collected: 02/06/2019 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 16:05

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		70-121
460-00-4	4-Bromofluorobenzene (Surr)	75		59-120
2037-26-5	Toluene-d8 (Surr)	79		70-123
1868-53-7	Dibromofluoromethane (Surr)	83		75-128

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107796-1

SDG No.:

Client Sample ID: MRC-MW158A-020619 | Lab Sample ID: 240-107796-5

Matrix: Water | Lab File ID: xb2043.D

Analysis Method: 680 | Date Collected: 02/06/2019 14:30

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 993.1(mL) | Date Analyzed: 02/21/2019 12:55

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	49		25-113

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW138B-020619 Lab Sample ID: 240-107796-2

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 10:19

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	1800	200	26	ug/L		B	1	6010C
7439-96-5	Manganese	120	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	420	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	86	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.5	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	J		1	6020A
7440-48-4	Cobalt	32	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.5	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	7.8	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	1700	100	47	ug/L			1	6020A
7439-96-5	Manganese	120	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	57	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	1.1	1.0	0.45	ug/L			1	6020A
7440-36-0	Antimony	0.84	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	3.3	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	85	20	15	ug/L			1	6020A
7440-70-2	Calcium	31000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	21000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	8900	1000	200	ug/L			1	6020A
7440-23-5	Sodium	94000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW141B-020619 Lab Sample ID: 240-107796-3

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 11:45

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	260	200	26	ug/L		B	1	6010C
7439-96-5	Manganese	94	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	140	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	68	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	3.1	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	48	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	0.98	2.0	0.98	ug/L	U		1	6020A
7440-50-8	Copper	15	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	260	100	47	ug/L			1	6020A
7439-96-5	Manganese	94	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	82	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	0.86	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	120	20	15	ug/L			1	6020A
7440-70-2	Calcium	11000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	17000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	4900	1000	200	ug/L			1	6020A
7440-23-5	Sodium	35000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW142B-020619 Lab Sample ID: 240-107796-4

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 13:18

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	2900	200	26	ug/L		B	1	6010C
7439-96-5	Manganese	160	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.056	1.0	0.053	ug/L	J		1	6020A
7429-90-5	Aluminum	130	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	52	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.6	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	30	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	1.4	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	20	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	2700	100	47	ug/L			1	6020A
7439-96-5	Manganese	160	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	43	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.63	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	3.0	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	76	20	15	ug/L			1	6020A
7440-70-2	Calcium	19000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	21000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	2700	1000	200	ug/L			1	6020A
7440-23-5	Sodium	26000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW158A-020619 Lab Sample ID: 240-107796-5

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 14:30

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	580	200	26	ug/L		B	1	6010C
7439-96-5	Manganese	130	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.053	1.0	0.053	ug/L	U		1	6020A
7429-90-5	Aluminum	380	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	77	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	0.31	1.0	0.31	ug/L	U		1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	1.6	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	2.0	2.0	0.98	ug/L			1	6020A
7440-50-8	Copper	13	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	550	100	47	ug/L			1	6020A
7439-96-5	Manganese	120	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	5.1	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.45	1.0	0.45	ug/L	U		1	6020A
7440-36-0	Antimony	0.66	2.0	0.57	ug/L	J		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	1.4	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	15	20	15	ug/L	U		1	6020A
7440-70-2	Calcium	180000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	18000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	41000	1000	200	ug/L			1	6020A
7440-23-5	Sodium	52000	1000	330	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-DUP01-020619 Lab Sample ID: 240-107796-6

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 00:00

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron	3000	200	26	ug/L		B	1	6010C
7439-96-5	Manganese	160	15	2.1	ug/L			1	6010C
7440-22-4	Silver	0.073	1.0	0.053	ug/L	J		1	6020A
7429-90-5	Aluminum	140	50	34	ug/L			1	6020A
7440-38-2	Arsenic	0.75	5.0	0.75	ug/L	U		1	6020A
7440-39-3	Barium	70	5.0	2.2	ug/L			1	6020A
7440-41-7	Beryllium	1.6	1.0	0.31	ug/L			1	6020A
7440-43-9	Cadmium	0.21	1.0	0.21	ug/L	U		1	6020A
7440-48-4	Cobalt	30	1.0	0.19	ug/L			1	6020A
7440-47-3	Chromium	1.3	2.0	0.98	ug/L	J		1	6020A
7440-50-8	Copper	19	2.0	1.7	ug/L			1	6020A
7439-89-6	Iron	2700	100	47	ug/L			1	6020A
7439-96-5	Manganese	160	5.0	2.1	ug/L			1	6020A
7440-02-0	Nickel	45	2.0	1.5	ug/L			1	6020A
7439-92-1	Lead	0.66	1.0	0.45	ug/L	J		1	6020A
7440-36-0	Antimony	0.57	2.0	0.57	ug/L	U		1	6020A
7782-49-2	Selenium	0.89	5.0	0.89	ug/L	U		1	6020A
7440-28-0	Thallium	0.20	1.0	0.20	ug/L	U		1	6020A
7440-62-2	Vanadium	2.8	5.0	0.82	ug/L	J		1	6020A
7440-66-6	Zinc	75	20	15	ug/L			1	6020A
7440-70-2	Calcium	19000	1000	580	ug/L			1	6020A
7440-09-7	Potassium	22000	1000	220	ug/L			1	6020A
7439-95-4	Magnesium	2700	1000	200	ug/L			1	6020A
7440-23-5	Sodium	27000	1000	330	ug/L			1	6020A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW138B-020619 Lab Sample ID: 240-107796-2

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 10:19

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	120	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	69	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	400	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.24	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	22	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW141B-020619 Lab Sample ID: 240-107796-3

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 11:45

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	56	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	29	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	190	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.37	0.50	0.044	mg/L	J		1	300.0
14808-79-8	Sulfate	17	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW142B-020619 Lab Sample ID: 240-107796-4

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 13:18

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	76	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	60	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	190	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	12	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW158A-020619 Lab Sample ID: 240-107796-5

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 14:30

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	720	25	12	mg/L			1	2340C-2011
	Alkalinity	290	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	980	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	380	5.0	1.7	mg/L			5	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-DUP01-020619 Lab Sample ID: 240-107796-6

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 00:00

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Hardness as calcium carbonate	76	5.0	2.4	mg/L			1	2340C-2011
	Alkalinity	61	5.0	2.6	mg/L			1	2320B-2011
	Total Dissolved Solids	200	10	7.8	mg/L			1	2540 C-2011
24959-67-9	Bromide	0.044	0.50	0.044	mg/L	U		1	300.0
14808-79-8	Sulfate	11	1.0	0.35	mg/L			1	9056A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW138B-020619 Lab Sample ID: 240-107796-2

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 10:19

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.22	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW141B-020619 Lab Sample ID: 240-107796-3

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 11:45

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.86	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW142B-020619 Lab Sample ID: 240-107796-4

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 13:18

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.30	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW158A-020619 Lab Sample ID: 240-107796-5

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 14:30

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.093	0.10	0.040	mg/L	J		1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-DUP01-020619 Lab Sample ID: 240-107796-6

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 00:00

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Nitrate Nitrite as N	0.31	0.10	0.040	mg/L			1	SM 4500 NO3 F

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW138B-020619 Lab Sample ID: 240-107796-2

Lab Name: TestAmerica Pittsburgh Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 10:19

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW141B-020619 Lab Sample ID: 240-107796-3

Lab Name: TestAmerica Pittsburgh Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 11:45

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW142B-020619 Lab Sample ID: 240-107796-4

Lab Name: TestAmerica Pittsburgh Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 13:18

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW158A-020619 Lab Sample ID: 240-107796-5

Lab Name: TestAmerica Pittsburgh Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 14:30

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-DUP01-020619 Lab Sample ID: 240-107796-6

Lab Name: TestAmerica Pittsburgh Job No.: 240-107796-1

SDG ID.:

Matrix: Water Date Sampled: 02/06/2019 00:00

Reporting Basis: WET Date Received: 02/07/2019 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Salinity	2.0	2.0	2.0	No Unit	U		1	SM 2520B

Appendix C

Support Documentation

MRC -BLOCK E/F WASTE
SDG 240-107796-1

SAMPLE IDENTIFICATION	MRC-MW141B-020619
COMPOUND	TRICHLOROETHENE
COMPOUND AREA	1174590
INTERNAL STANDARD AMOUNT (ng)	50
VOLUME WATER PURGED (ml)	5
DILUTION FACTOR	1000
INTERNAL STANDARD AREA	1693055
AVERAGE RRF	0.324
ml to µl	1000
ng to µg	1000

= 21412.64 µg/L

1174590 x 50 ng x 1000 x 1000ml x 1µg /(1693055 x 0.324 x 5ml x 1L x 1000ng)

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\chromna\Canton\ChromData\A3UX15\20190212-84405.b\UXC8797.D
Lims ID: 240-107796-B-3
Client ID: MRC-MW141B-020619
Sample Type: Client
Inject. Date: 12-Feb-2019 14:05:30 ALS Bottle#: 10 Worklist Smp#: 37
Purge Vol: 5.000 mL Dil. Factor: 1000.0000
Sample Info: 240-0084405-037
Misc. Info.: C90212A,8260LLUX15,,43582
Operator ID: Instrument ID: A3UX15

Method: \\chromna\Canton\ChromData\A3UX15\20190212-84405.b\8260_15.m
Limit Group: MSV 8260C ICAL
Last Update: 13-Feb-2019 10:30:48 Calib Date: 21-Jan-2019 19:15:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Canton\ChromData\A3UX15\20190121-83824.b\UXC8431.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: evansle Date: 12-Feb-2019 14:49:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 1 Fluorobenzene	96	5.196	5.196	0.000	99	1693055	10.0	
* 2 Chlorobenzene-d5	117	7.876	7.876	0.000	84	1418830	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.117	10.117	0.000	93	792712	10.0	
$ 4 Dibromofluoromethane (Surr	113	4.639	4.639	0.000	95	269170	6.72	
$ 5 1,2-Dichloroethane-d4 (Sur	65	4.923	4.923	0.000	100	369079	7.17	
$ 6 Toluene-d8 (Surr)	98	6.560	6.560	0.000	93	1126574	6.54	
$ 7 4-Bromofluorobenzene (Surr	95	8.991	8.991	0.000	96	377248	6.13	
9 Dichlorodifluoromethane	85		1.532				ND	
10 Chloromethane	50		1.686				ND	
11 Vinyl chloride	62		1.781				ND	
13 Bromomethane	94		2.065				ND	
14 Chloroethane	64		2.136				ND	
16 Trichlorofluoromethane	101		2.362				ND	
19 1,1-Dichloroethene	96		2.777				ND	
20 1,1,2-Trichloro-1,2,2-trif	151		2.789				ND	
22 Acetone	58		2.812				ND	
24 Carbon disulfide	76		2.978				ND	
28 Methylene Chloride	84		3.180				ND	
29 2-Methyl-2-propanol	59		3.263				ND	
31 Methyl tert-butyl ether	73		3.405				ND	
30 trans-1,2-Dichloroethene	96		3.405				ND	
34 1,1-Dichloroethane	63		3.761				ND	
36 Vinyl acetate	43		3.785				ND	
35 Isopropyl ether	87		3.797				ND	
38 Tert-butyl ethyl ether	59		4.093				ND	
41 2-Butanone (MEK)	72		4.247				ND	
40 2,2-Dichloropropane	97		4.247				ND	
39 cis-1,2-Dichloroethene	96	4.235	4.247	-0.012	83	9421	0.1808	
45 Chlorobromomethane	128		4.449				ND	
47 Chloroform	83		4.496				ND	
48 1,1,1-Trichloroethane	97		4.662				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
51 1,1-Dichloropropene	75		4.793				ND	
50 Carbon tetrachloride	117		4.805				ND	
53 Benzene	78		4.971				ND	
54 1,2-Dichloroethane	62		4.982				ND	
55 Tert-amyl methyl ether	73		5.042				ND	
58 Trichloroethene	130	5.504	5.504	0.000	95	1174590	21.4	
61 1,2-Dichloropropane	63		5.706				ND	
63 Dibromomethane	93		5.813				ND	
65 Dichlorobromomethane	83		5.931				ND	
67 2-Chloroethyl vinyl ether	63		6.180				ND	
68 cis-1,3-Dichloropropene	75		6.322				ND	
69 4-Methyl-2-pentanone (MIBK	43		6.453				ND	
70 Toluene	91		6.619				ND	
71 trans-1,3-Dichloropropene	75		6.809				ND	
74 Tetrachloroethene	164		7.117				ND	
75 1,3-Dichloropropane	76		7.129				ND	
76 2-Hexanone	43		7.188				ND	
79 Chlorodibromomethane	129		7.342				ND	
80 Ethylene Dibromide	107		7.461				ND	
82 Chlorobenzene	112		7.900				ND	
83 1,1,1,2-Tetrachloroethane	131		7.971				ND	
84 Ethylbenzene	106		7.995				ND	
85 m-Xylene & p-Xylene	91		8.101				ND	
86 o-Xylene	106		8.481				ND	
87 Styrene	104		8.493				ND	
88 Bromoform	173		8.682				ND	
89 Isopropylbenzene	105		8.825				ND	
93 1,1,2,2-Tetrachloroethane	83		9.121				ND	
92 Bromobenzene	156		9.145				ND	
94 1,2,3-Trichloropropane	110		9.169				ND	
96 N-Propylbenzene	120		9.228				ND	
97 2-Chlorotoluene	126		9.323				ND	
99 4-Chlorotoluene	91		9.418				ND	
101 tert-Butylbenzene	119		9.714				ND	
103 1,2,4-Trimethylbenzene	105		9.761				ND	
105 sec-Butylbenzene	105		9.927				ND	
106 1,3-Dichlorobenzene	146		10.046				ND	
107 4-Isopropyltoluene	119		10.070				ND	
108 1,4-Dichlorobenzene	146		10.141				ND	
109 1,2,3-Trimethylbenzene	105		10.176				ND	
111 n-Butylbenzene	91		10.473				ND	
112 1,2-Dichlorobenzene	146		10.509				ND	
113 1,2-Dibromo-3-Chloropropan	157		11.291				ND	
115 1,2,4-Trichlorobenzene	180		12.109				ND	
116 Hexachlorobutadiene	225		12.275				ND	
117 Naphthalene	128		12.358				ND	
118 1,2,3-Trichlorobenzene	180		12.607				ND	
S 129 Xylenes, Total	106		16.530				ND	

Reagents:

vm40ml_vials_00009	Amount Added:	0.00	Units:	Run Reagent
vm50ss_stk_00079	Amount Added:	0.80	Units: uL	Run Reagent
VM50IS_00072	Amount Added:	1.00	Units: uL	Run Reagent
vmDist_H2o_00138	Amount Added:	0.00	Units:	Run Reagent

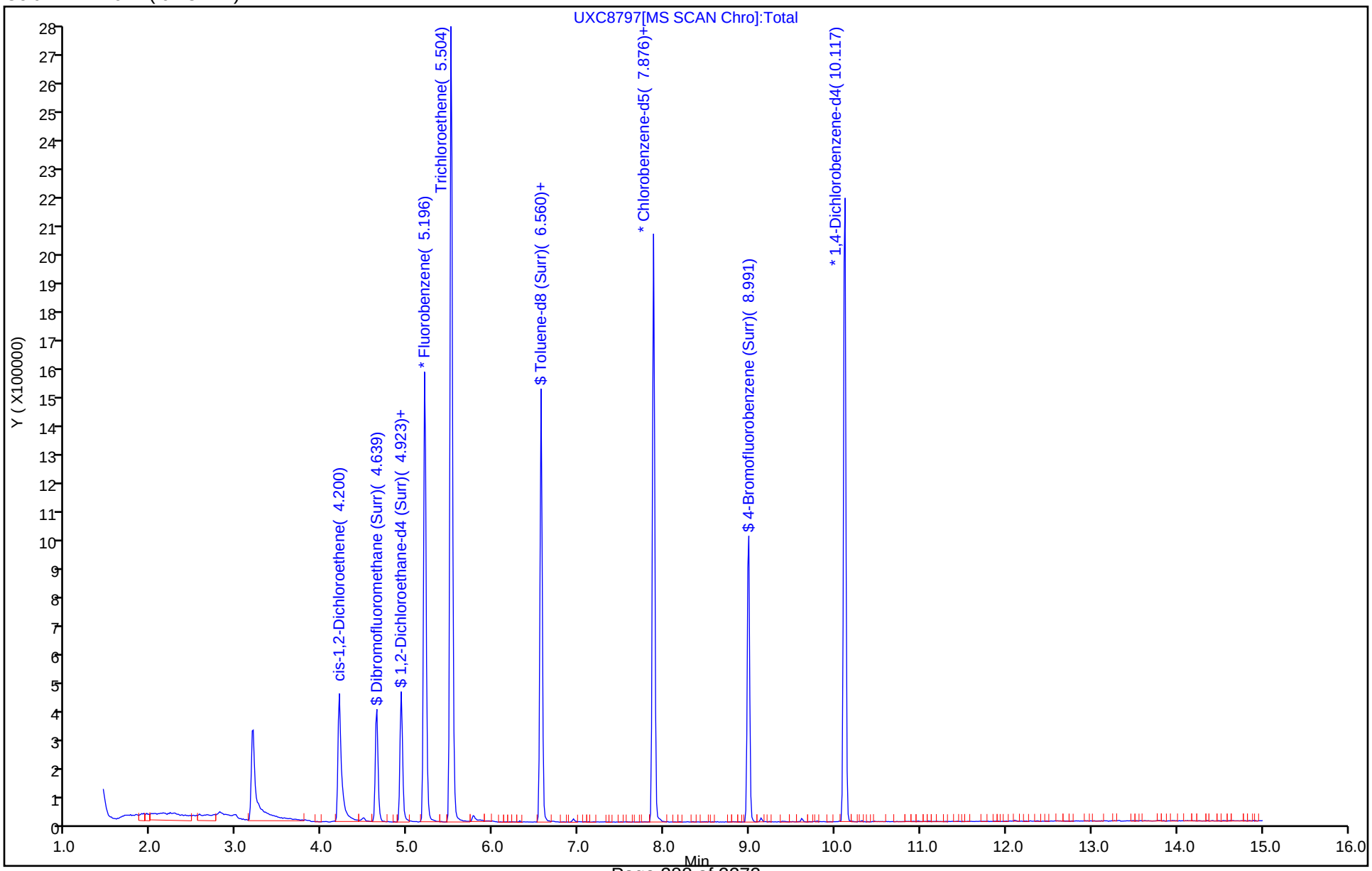
Report Date: 13-Feb-2019 10:31:20 Chrom Revision: 2.3 11-Feb-2019 16:31:10

TestAmerica Canton

Data File: \\chromna\Canton\ChromData\A3UX15\20190212-84405.b\UXC8797.D

Injection Date:	12-Feb-2019 14:05:30	Instrument ID:	A3UX15	Operator ID:	
Lims ID:	240-107796-B-3	Lab Sample ID:	240-107796-3	Worklist Smp#:	37
Client ID:	MRC-MW141B-020619				
Purge Vol:	5.000 mL	Dil. Factor:	1000.0000	ALS Bottle#:	10
Method:	8260_15	Limit Group:	MSV 8260C ICAL		

Column: DB-624 (0.18 mm)



Sample Report

Sample Name	240-107796-G-5-A MRC-MW158A-020619
File Name	209SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\I14021119A.b
Acq Time	2019-02-11 20:12:31
Sample Type	Sample
Total Dilution	1.0000
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
Li	7	6	No Gas	1.053	ug/l	17.1	35761.39	10000	
Be	9	6	No Gas	0.121	ug/l	51.4	217.78	2000	
B	11	45	No Gas	38.486	ug/l	1.2	28222.86	300	
Na	23	45	He	51848.867	ug/l	1.9	23688232.39	500000	
Mg	24	45	He	41425.594	ug/l	1.9	10382063.76	500000	
Al	27	45	He	375.849	ug/l	2.5	45543.90	200000	
K	39	45	He	17921.050	ug/l	1.8	5074700.49	500000	
Ca	44	45	He	183322.711	ug/l	2.2	1324729.99	500000	
Ti	47	45	He	11.352	ug/l	11.2	953.39	2500	
V	51	45	He	1.435	ug/l	9.7	3321.72	10000	
Cr	52	45	He	2.007	ug/l	4.0	6485.98	10000	
Mn	55	45	He	121.652	ug/l	1.5	244765.49	10000	
Fe	56	103	He	553.229	ug/l	2.3	1432096.36	200000	
Co	59	103	He	1.583	ug/l	1.4	6866.18	5000	
Ni	60	103	He	3.955	ug/l	3.8	5903.52	10000	
Cu	63	103	He	13.386	ug/l	3.8	39016.14	10000	
Zn	66	103	He	8.501	ug/l	7.0	6029.14	10000	
As	75	103	He	0.331	ug/l	92.6	275.91	10000	
Se	78	103	H2	0.638	ug/l	5.7	112.33	10000	
Sr	88	103	He	516.440	ug/l	3.0	1698678.58	10000	
Mo	95	103	He	9.268	ug/l	4.1	14862.54	2000	
Ag	107	103	He	0.002	ug/l	157.3	40.00	100	
Cd	111	115	He	0.043	ug/l	27.6	48.96	4000	
Sn	118	115	He	-0.766	ug/l	N/A	1584.55	2000	
Sb	123	115	He	0.660	ug/l	5.8	1723.46	200	
Ba	137	115	He	76.637	ug/l	1.1	90072.97	10000	
W	182	159	He	0.000	ug/l	N/A	248.89	2500	
Tl	205	165	He	0.045	ug/l	7.8	453.35	2000	
Pb	208	165	He	0.358	ug/l	1.4	5164.92	4000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li6	6	No Gas	614023.21	0.6	827295.22	74.22	59.5	120.4	
Sc	45	No Gas	1742429.62	1.4	1770739.44	98.4	59.5	120.4	
Sc	45	H2	1364010.17	1.5	1335565.71	102.13	59.5	120.4	
Sc	45	He	337899.74	1.8	354647.9	95.28	59.5	120.4	
Rh	103	H2	307303.28	2.7	330907.05	92.87	59.5	120.4	

Sample Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Rh	103	He	1834233.47	2.2	1852568.12	99.01	59.5	120.4	
In	115	H2	2225044.25	1.8	2138122.33	104.07	59.5	120.4	
In	115	He	1253179.85	1.3	1244849.96	100.67	59.5	120.4	
Tb	159	He	2653250.80	1.6	2589887.47	102.45	59.5	120.4	
Ho	165	He	2646605.10	1.1	2521978.58	104.94	59.5	120.4	
Bi	209	He	1586041.60	0.9	1617595.04	98.05	59.5	120.4	

ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 30%	ORIGINAL SAMPLE CONC >2XRL	DUPLICATE SAMPLE CONC >2XRL	DIFFERENCE >2RL
METALS								
ALUMINUM	130	140	50	7.41	FALSE	TRUE	TRUE	FALSE
BARIUM	52	70	5	29.51	FALSE	TRUE	TRUE	TRUE
BERYLLIUM	1.6	1.6	1	0.00	FALSE	FALSE	FALSE	FALSE
CALCIUM	19000	19000	1000	0.00	FALSE	TRUE	TRUE	FALSE
CHROMIUM	1.4	1.3	2	7.41	FALSE	FALSE	FALSE	FALSE
COBALT	30	30	1	0.00	FALSE	TRUE	TRUE	FALSE
COPPER	20	19	2	5.13	FALSE	TRUE	TRUE	FALSE
LEAD	0.63	0.66	1	4.65	FALSE	FALSE	FALSE	FALSE
MAGNESIUM	2700	2700	1000	0.00	FALSE	TRUE	TRUE	FALSE
NICKEL	43	45	2	4.55	FALSE	TRUE	TRUE	FALSE
POTASSIUM	21000	22000	1000	4.65	FALSE	TRUE	TRUE	FALSE
SILVER	0.056	0.073	1	26.36	FALSE	FALSE	FALSE	FALSE
SODIUM	26000	27000	1000	3.77	FALSE	TRUE	TRUE	FALSE
VANADIUM	3	2.8	5	6.90	FALSE	FALSE	FALSE	FALSE
ZINC	76	75	20	1.32	FALSE	TRUE	TRUE	FALSE
			5					
MISCELLANEOUS			5					
ALKALINITY	60	61	5	1.65	FALSE	TRUE	TRUE	FALSE
HARDNESS AS CACO3	76	76	5	0.00	FALSE	TRUE	TRUE	FALSE
NITRITE/NITRATE-N	0.3	0.31	0.1	3.28	FALSE	TRUE	TRUE	FALSE
SULFATE	12	11	1	8.70	FALSE	TRUE	TRUE	FALSE
TOTAL DISSOLVED SOLIDS	190	200	10	5.13	FALSE	TRUE	TRUE	FALSE
VOCs								
CHLOROFORM	0.68	0.71	4	4.32	FALSE	FALSE	FALSE	FALSE
CIS-1,2-DICHLOROETHENE	7.7	7.3	4	5.33	FALSE	FALSE	FALSE	FALSE
METHYL TERT-BUTYL ETHER	3.7	3.5	4	5.56	FALSE	FALSE	FALSE	FALSE
TRICHLOROETHENE	86	90	4	4.55	FALSE	TRUE	TRUE	FALSE

SDG 240-107796-1

MRC-DUP01-020619/MRC-MW142B-020619

3.6|3.6

North Canton
4101 Shuffel Street, N. W.

North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

Baltimore #201

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Mike Martin	Site Contact: Walt Pryor	Date: 2/4/19	COC No:
20251 Century Blvd, Suite 200	**Analysis Turnaround Time**			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) _____			
(301) 528-3021 Phone	TAT if different from Below **STANDARD TAT**			SDG No.
(301) 528-3000 FAX	☐ 2 weeks			
Project Name: MRC BLOCK E/F MASS DISCHARGE	☐ 1 week			
Site: MRC BLOCK E	☐ 2 days	standard		
PO # 112IC08784	☐ 1 day			Sampler: Walt Pryor

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (SW0846 8260C)	Total Metals/Hardness (6020A, 2340C)	Sulfate, Nitrates, TDS (9056A, 4500-NO3E, 2540C	Bromide (300)	Iron and Manganese (6010C	Alkalinity (SM 2320B)	Salinity (2520B)	PCBs (680)	Sample Specific Notes:
TB- 020419	2/4/19	—	GRAB	WATER	2		x	–	–	–	–	–	–	–	
MRC-MW151A-020419	↓	1420	↓	↓	11		3	1	1	1	1	1	1	2	
							2	4	6	1	4	1	1	1	

240-107638 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☒ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☒ *Disposal By Lab* ☐ *Archive For _____ Months*

Special Instructions/QC Requirements & Comments: Block E/F Mass discharge well sampling

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pryor	TA INC	2/4/19 1530	[signature]	2/4/19 1530	
[signature]	TA 2/4/19	1700	[signature]	2-5-19 940	AC

Form No. CA-C-WI-002, Rev. 2, dated 03/06/2012

TestAmerica Canton Sample Receipt Form/Narrative **Login # :** _____
Canton Facility

Client Tetra Tech Site Name _____ Cooler unpacked by:

Cooler Received on 2-5-19 Opened on 2-5-19

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam (Plastic Bag) None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 3.6 °C Corrected Cooler Temp. 3.6 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? (Yes) No NA
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels be reconciled with the COC? (Yes) No
9. Were correct bottle(s) used for the test(s) indicated? (Yes) No
10. Sufficient quantity received to perform indicated analyses? (Yes) No
11. Are these work share samples? Yes (No)
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? (Yes) No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes (No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered (Yes) No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW151A-020419	240-107638-F-2	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW151A-020419	240-107638-G-2	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW151A-020419	240-107638-I-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW151A-020419	240-107638-K-2	Amber Glass 1 liter - Sulfuric Acid	____	_____	_____

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass Discharge

Report Number: 240-107638-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The 680 Polychlorinated Biphenyls analysis was performed at the TestAmerica Savannah laboratory. The 4500NO3-F Nitrate Nitrite as N analysis was performed at the TestAmerica Nashville laboratory. The 9050A Specific Conductance and the 2520-B Salinity analyses were performed at the TestAmerica Pittsburgh laboratory.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 2/5/2019 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.6º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-020419 (240-107638-1) and MRC-MW151A-020419 (240-107638-2) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/07/2019 and 02/08/2019.

The continuing calibration verification (CCV) for analytical batch 367131 exceeded control criteria for Bromoform and/ or Hexachlorobutadiene. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TB-020419 (240-107638-1)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following samples were received in hydrochloric preserved vials: TB-020419 (240-107638-1) and MRC-MW151A-020419 (240-107638-2)

The continuing calibration verification (CCV) for analytical batch 367370 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. MRC-MW151A-020419 (240-107638-2)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample MRC-MW151A-020419 (240-107638-2) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The sample was prepared on 02/19/2019 and analyzed on 02/21/2019.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 680-558728.

The SOP for the 680 Method allows that for soils the CCVIS has a limit of <30%D for each analyte and for liquids <20%D for each analyte

. It also allows that the capping CCV for soils has the limit of <30% average %D with no analyte >60%D and for liquids <20% average D with no analyte >40%D. Due to software limitations for this method, the limits are set at <20%D. (CCV 680-559059/21)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The sample was prepared on 02/06/2019 and analyzed on 02/08/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The sample was prepared on 02/06/2019 and analyzed on 02/07/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for alkalinity in accordance with SM 2320B. The sample was analyzed on 02/18/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for hardness in accordance with SM 2340C. The sample was analyzed on 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for total dissolved solids in accordance with SM 2540C. The sample was analyzed on 02/06/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for anions in accordance with EPA Method 300.0. The sample was analyzed on 02/07/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for anions in accordance with EPA SW-846 Method 9056A. The sample was analyzed on 02/07/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for Salinity in accordance with SM 2520B. The sample was analyzed on 02/19/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE
Sample MRC-MW151A-020419 (240-107638-2) was analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The sample was analyzed on 02/16/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107638-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107638-1	TB-020419	Water	02/04/19 00:00	02/05/19 09:40
240-107638-2	MRC-MW151A-020419	Water	02/04/19 14:20	02/05/19 09:40

Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-107638-1
Project/Site: MRC Block E/F Mass Discharge

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
680	Liquid-Liquid Extraction (Separatory Funnel)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-020419	240-107638-1	85	90	86	81
MRC-MW151A-020419	240-107638-2	89	95	90	84
	MB 240-367131/6	93	96	93	88
	MB 240-367370/6	85	89	85	82
	LCS 240-367131/4	97	92	95	100
	LCS 240-367370/4	94	88	89	88

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-367131/2		1902855	5.20	1565296	7.88	915539	10.12
CCVIS 240-367370/2		1771075	5.20	1445689	7.88	859854	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Sample No.: CCVIS 240-367131/2 Date Analyzed: 02/07/2019 09:17

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8703.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1902855	5.20	1565296	7.88	915539	10.12
UPPER LIMIT		3805710	5.70	3130592	8.38	1831078	10.62
LOWER LIMIT		951428	4.70	782648	7.38	457770	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367131/4		1816219	5.20	1489107	7.88	858312	10.12
CCV 240-367131/3		1824445	5.20	1506450	7.88	823766	10.12
MB 240-367131/6		1678964	5.20	1385753	7.88	770212	10.12
240-107638-1	TB-020419	1758075	5.20	1434380	7.88	794961	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Sample No.: CCVIS 240-367370/2 Date Analyzed: 02/08/2019 12:55

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8735.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1771075	5.20	1445689	7.88	859854	10.12
UPPER LIMIT		3542150	5.70	2891378	8.38	1719708	10.62
LOWER LIMIT		885538	4.70	722845	7.38	429927	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367370/4		1859981	5.20	1523524	7.88	880859	10.12
CCV 240-367370/3		1723888	5.20	1390828	7.88	755414	10.12
MB 240-367370/6		1756530	5.20	1437868	7.88	809655	10.12
240-107638-2	MRC-MW151A-020419	1753455	5.20	1431866	7.88	784219	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab File ID: UXC8708.D Lab Sample ID: MB 240-367131/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/07/2019 11:06

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367131/4	UXC8704.D	02/07/2019 09:39
TB-020419	240-107638-1	UXC8729.D	02/07/2019 19:04

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367131/6

Matrix: Water | Lab File ID: UXC8708.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/07/2019 11:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367131 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367131/6

Matrix: Water | Lab File ID: UXC8708.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/07/2019 11:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367131 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367131/6

Matrix: Water | Lab File ID: UXC8708.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/07/2019 11:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367131 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		70-121
460-00-4	4-Bromofluorobenzene (Surr)	88		59-120
2037-26-5	Toluene-d8 (Surr)	93		70-123
1868-53-7	Dibromofluoromethane (Surr)	93		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8704.D

Lab ID: LCS 240-367131/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.63	96	80-124	
1,1,1-Trichloroethane	10.0	11.1	111	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.62	86	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	10.7	107	50-156	
1,1-Dichloroethane	10.0	10.5	105	75-133	
1,1-Dichloroethene	10.0	9.49	95	65-139	
1,1-Dichloropropene	10.0	10.4	104	78-126	
1,2,3-Trichlorobenzene	10.0	9.72	97	39-138	
1,2,3-Trichloropropane	10.0	8.79	88	66-139	
1,2,4-Trichlorobenzene	10.0	9.73	97	42-133	
1,2,4-Trimethylbenzene	10.0	9.61	96	74-120	
1,2-Dibromo-3-Chloropropane	10.0	6.73	67	46-132	
1,2-Dichlorobenzene	10.0	9.96	100	78-120	
1,2-Dichloroethane	10.0	10.2	102	71-135	
1,2-Dichloropropane	10.0	10.5	105	78-133	
1,3-Dichlorobenzene	10.0	9.67	97	78-120	
1,3-Dichloropropane	10.0	9.55	96	72-134	
1,4-Dichlorobenzene	10.0	9.79	98	78-120	
2,2-Dichloropropane	10.0	11.0	110	42-150	
2-Chloroethyl vinyl ether	10.0	7.66 J	77	55-137	
2-Chlorotoluene	10.0	9.81	98	78-123	
2-Hexanone	20.0	17.1	85	43-148	
Bromobenzene	10.0	9.87	99	74-129	
Bromochloromethane	10.0	10.5	105	74-130	
4-Chlorotoluene	10.0	9.59	96	77-125	
4-Isopropyltoluene	10.0	9.79	98	69-122	
Acetone	20.0	19.9	99	21-162	
Benzene	10.0	10.6	106	80-123	
Bromoform	10.0	6.53	65	49-141	
Bromomethane	10.0	9.13	91	41-175	
Carbon disulfide	10.0	8.75	87	60-138	
Carbon tetrachloride	10.0	9.97	100	63-140	
Chlorobenzene	10.0	10.1	101	80-121	
Chloroethane	10.0	9.40	94	33-173	
Chloroform	10.0	10.6	106	79-127	
Chloromethane	10.0	9.40	94	54-143	
cis-1,2-Dichloroethene	10.0	10.6	106	76-128	
cis-1,3-Dichloropropene	10.0	9.65	96	64-132	
Hexachlorobutadiene	10.0	9.23	92	38-136	
Dibromomethane	10.0	9.71	97	74-124	
Bromodichloromethane	10.0	9.27	93	77-125	
Dichlorodifluoromethane	10.0	8.74	87	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8704.D

Lab ID: LCS 240-367131/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.92	99	80-120	
1,2-Dibromoethane	10.0	9.08	91	77-123	
Naphthalene	10.0	8.48	85	28-141	
m-Xylene & p-Xylene	10.0	10.0	100	80-120	
n-Butylbenzene	10.0	9.36	94	57-126	
Isopropylbenzene	10.0	10.2	102	74-120	
N-Propylbenzene	10.0	9.73	97	77-123	
2-Butanone (MEK)	20.0	18.7	94	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	17.1	86	49-143	
sec-Butylbenzene	10.0	9.67	97	68-123	
Methyl tert-butyl ether	10.0	9.33	93	51-133	
Methylene Chloride	10.0	10.8	108	70-134	
o-Xylene	10.0	10.1	101	80-120	
Styrene	10.0	9.59	96	79-120	
tert-Butylbenzene	10.0	9.41	94	70-121	
Tetrachloroethene	10.0	10.3	103	74-130	
Toluene	10.0	10.3	103	78-129	
trans-1,2-Dichloroethene	10.0	10.8	108	78-133	
trans-1,3-Dichloropropene	10.0	8.15	82	55-128	
Trichloroethene	10.0	10.4	104	76-125	
Trichlorofluoromethane	10.0	10.6	106	51-164	
Vinyl acetate	10.0	8.95	89	45-151	
Vinyl chloride	10.0	10.2	102	58-143	
tert-Butyl alcohol	100	94.4	94	10-161	
Xylenes, Total	20.0	20.1	101	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab File ID: UXC8740.D Lab Sample ID: MB 240-367370/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/08/2019 14:45

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367370/4	UXC8736.D	02/08/2019 13:17
MRC-MW151A-020419	240-107638-2	UXC8742.D	02/08/2019 15:28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367370/6

Matrix: Water | Lab File ID: UXC8740.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367370/6

Matrix: Water | Lab File ID: UXC8740.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367370/6

Matrix: Water | Lab File ID: UXC8740.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/08/2019 14:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367370 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		70-121
460-00-4	4-Bromofluorobenzene (Surr)	82		59-120
2037-26-5	Toluene-d8 (Surr)	85		70-123
1868-53-7	Dibromofluoromethane (Surr)	85		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8736.D

Lab ID: LCS 240-367370/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.17	92	80-124	
1,1,1-Trichloroethane	10.0	10.8	108	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.21	82	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	10.2	102	50-156	
1,1-Dichloroethane	10.0	10.5	105	75-133	
1,1-Dichloroethene	10.0	9.19	92	65-139	
1,1-Dichloropropene	10.0	10.1	101	78-126	
1,2,3-Trichlorobenzene	10.0	8.78	88	39-138	
1,2,3-Trichloropropane	10.0	8.35	84	66-139	
1,2,4-Trichlorobenzene	10.0	8.64	86	42-133	
1,2,4-Trimethylbenzene	10.0	9.51	95	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.73	57	46-132	
1,2-Dichlorobenzene	10.0	9.69	97	78-120	
1,2-Dichloroethane	10.0	10.1	101	71-135	
1,2-Dichloropropane	10.0	10.1	101	78-133	
1,3-Dichlorobenzene	10.0	9.51	95	78-120	
1,3-Dichloropropane	10.0	9.13	91	72-134	
1,4-Dichlorobenzene	10.0	9.55	95	78-120	
2,2-Dichloropropane	10.0	10.4	104	42-150	
2-Chloroethyl vinyl ether	10.0	7.38 J	74	55-137	
2-Chlorotoluene	10.0	9.72	97	78-123	
2-Hexanone	20.0	14.3	72	43-148	
Bromobenzene	10.0	9.58	96	74-129	
Bromochloromethane	10.0	10.6	106	74-130	
4-Chlorotoluene	10.0	9.42	94	77-125	
4-Isopropyltoluene	10.0	9.69	97	69-122	
Acetone	20.0	19.0	95	21-162	
Benzene	10.0	10.5	105	80-123	
Bromoform	10.0	6.23	62	49-141	
Bromomethane	10.0	8.36	84	41-175	
Carbon disulfide	10.0	8.25	83	60-138	
Carbon tetrachloride	10.0	9.80	98	63-140	
Chlorobenzene	10.0	9.81	98	80-121	
Chloroethane	10.0	8.53	85	33-173	
Chloroform	10.0	10.4	104	79-127	
Chloromethane	10.0	8.12	81	54-143	
cis-1,2-Dichloroethene	10.0	10.5	105	76-128	
cis-1,3-Dichloropropene	10.0	8.99	90	64-132	
Hexachlorobutadiene	10.0	8.65	86	38-136	
Dibromomethane	10.0	9.44	94	74-124	
Bromodichloromethane	10.0	9.01	90	77-125	
Dichlorodifluoromethane	10.0	7.28	73	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8736.D

Lab ID: LCS 240-367370/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.91	99	80-120	
1,2-Dibromoethane	10.0	8.62	86	77-123	
Naphthalene	10.0	7.16	72	28-141	
m-Xylene & p-Xylene	10.0	9.78	98	80-120	
n-Butylbenzene	10.0	9.13	91	57-126	
Isopropylbenzene	10.0	10.1	101	74-120	
N-Propylbenzene	10.0	9.47	95	77-123	
2-Butanone (MEK)	20.0	17.1	85	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	15.2	76	49-143	
sec-Butylbenzene	10.0	9.51	95	68-123	
Methyl tert-butyl ether	10.0	8.59	86	51-133	
Methylene Chloride	10.0	9.56	96	70-134	
o-Xylene	10.0	10.1	101	80-120	
Styrene	10.0	9.27	93	79-120	
tert-Butylbenzene	10.0	9.14	91	70-121	
Tetrachloroethene	10.0	10.2	102	74-130	
Toluene	10.0	9.99	100	78-129	
trans-1,2-Dichloroethene	10.0	10.8	108	78-133	
trans-1,3-Dichloropropene	10.0	7.58	76	55-128	
Trichloroethene	10.0	10.3	103	76-125	
Trichlorofluoromethane	10.0	9.81	98	51-164	
Vinyl acetate	10.0	8.23	82	45-151	
Vinyl chloride	10.0	9.17	92	58-143	
tert-Butyl alcohol	100	72.4	72	10-161	
Xylenes, Total	20.0	19.9	99	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107638-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107638-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107638-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107638-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107638-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107638-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107638-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab File ID: BFB0207.D BFB Injection Date: 02/07/2019

Instrument ID: A3UX15 BFB Injection Time: 08:46

Analysis Batch No.: 367131

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.4	
75	30.0 - 60.0 % of mass 95	52.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	103.2	
175	5.0 - 9.0 % of mass 174	7.0	(6.8) 1
176	95.0 - 101.0 % of mass 174	101.1	(98.0) 1
177	5.0 - 9.0 % of mass 176	6.6	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367131/2	UXC8703.D	02/07/2019	09:17
	LCS 240-367131/4	UXC8704.D	02/07/2019	09:39
	CCV 240-367131/3	UXC8705.D	02/07/2019	10:01
	MB 240-367131/6	UXC8708.D	02/07/2019	11:06
TB-020419	240-107638-1	UXC8729.D	02/07/2019	19:04

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCVIS 240-367131/2 Calibration Date: 02/07/2019 09:17

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8703.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3417	0.1000	0.0111	0.0100	11.2	20.0
Chloromethane	Ave	0.3135	0.3151	0.1000	0.0100	0.0100	0.5	20.0
Butadiene	Ave	0.3794	0.3432		0.00905	0.0100	-9.5	20.0
Vinyl chloride	Ave	0.2885	0.2593	0.1000	0.00899	0.0100	-10.1	20.0
Bromomethane	Ave	0.2308	0.1947	0.0500	0.00843	0.0100	-15.7	20.0
Chloroethane	Ave	0.2041	0.1827	0.0500	0.00895	0.0100	-10.5	20.0
Dichlorofluoromethane	Ave	0.5102	0.4514		0.00885	0.0100	-11.5	20.0
Trichlorofluoromethane	Ave	0.4337	0.4403	0.1000	0.0102	0.0100	1.5	20.0
Ethyl ether	Ave	0.2310	0.2302		0.00997	0.0100	-0.3	20.0
Acrolein	Ave	0.0317	0.0422		0.0666	0.0500	33.2	50.0
1,1-Dichloroethene	Ave	0.3005	0.2745	0.1000	0.00914	0.0100	-8.6	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2519	0.0500	0.0102	0.0100	2.1	20.0
Acetone	Lin1		0.0254	0.0100	0.0211	0.0200	5.6	50.0
Iodomethane	Ave	0.4675	0.4542		0.00972	0.0100	-2.8	20.0
Carbon disulfide	Ave	0.7741	0.6357	0.1000	0.00821	0.0100	-17.9	20.0
3-Chloro-1-propene	Ave	0.1698	0.1715		0.0101	0.0100	1.0	20.0
Methyl acetate	Ave	0.2050	0.1990	0.1000	0.0194	0.0200	-2.9	20.0
Methylene Chloride	Lin1		0.3273	0.1000	0.0107	0.0100	7.0	50.0
tert-Butyl alcohol	Ave	0.0203	0.0213		0.105	0.100	5.2	50.0
Acrylonitrile	Ave	0.0962	0.0982		0.102	0.100	2.1	20.0
Methyl tert-butyl ether	Ave	0.7834	0.7432	0.1000	0.00949	0.0100	-5.1	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2846	0.1000	0.0102	0.0100	1.8	20.0
Hexane	Ave	0.0586	0.0578		0.00985	0.0100	-1.5	20.0
1,1-Dichloroethane	Ave	0.4517	0.4736	0.2000	0.0105	0.0100	4.8	20.0
Vinyl acetate	Ave	0.5198	0.4496		0.00865	0.0100	-13.5	50.0
2,2-Dichloropropane	Ave	0.0624	0.0630		0.0101	0.0100	0.9	20.0
2-Butanone (MEK)	Ave	0.0333	0.0326	0.0100	0.0196	0.0200	-2.0	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3222	0.1000	0.0105	0.0100	4.7	20.0
Bromochloromethane	Ave	0.1531	0.1593		0.0104	0.0100	4.0	20.0
Tetrahydrofuran	Ave	0.0828	0.0795		0.0192	0.0200	-3.9	20.0
Chloroform	Ave	0.4606	0.4808	0.2000	0.0104	0.0100	4.4	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3710	0.1000	0.0105	0.0100	4.6	20.0
Cyclohexane	Ave	0.3993	0.4145	0.1000	0.0104	0.0100	3.8	20.0
1,1-Dichloropropene	Ave	0.3748	0.3810		0.0102	0.0100	1.7	20.0
Carbon tetrachloride	Ave	0.3441	0.3445	0.1000	0.0100	0.0100	0.1	20.0
Isobutyl alcohol	Ave	0.0077	0.0082		0.265	0.250	6.1	20.0
Benzene	Ave	1.116	1.185	0.5000	0.0106	0.0100	6.2	20.0
1,2-Dichloroethane	Ave	0.3820	0.3919	0.1000	0.0103	0.0100	2.6	20.0
n-Heptane	Ave	0.0532	0.0512		0.00962	0.0100	-3.8	20.0
Trichloroethene	Ave	0.3240	0.3421	0.1500	0.0106	0.0100	5.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCVIS 240-367131/2 Calibration Date: 02/07/2019 09:17

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8703.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3598	0.1000	0.0102	0.0100	2.1	20.0
1,2-Dichloropropane	Ave	0.2590	0.2664	0.1000	0.0103	0.0100	2.9	20.0
1,4-Dioxane	Ave	0.0020	0.0024		0.242	0.200	20.8	50.0
Dibromomethane	Ave	0.1717	0.1688		0.00983	0.0100	-1.7	20.0
Bromodichloromethane	Ave	0.3410	0.3246	0.1500	0.00952	0.0100	-4.8	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1481		0.0170	0.0200	-15.1	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3777	0.1500	0.00958	0.0100	-4.2	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2358	0.0500	0.0176	0.0200	-12.0	20.0
Toluene	Ave	1.476	1.499	0.4000	0.0102	0.0100	1.5	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4030	0.1000	0.00867	0.0100	-13.3	20.0
Ethyl methacrylate	Ave	0.4442	0.3849		0.00866	0.0100	-13.4	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2904	0.1000	0.00974	0.0100	-2.6	20.0
Tetrachloroethene	Ave	0.3268	0.3351	0.1500	0.0103	0.0100	2.6	20.0
1,3-Dichloropropane	Ave	0.5243	0.5082		0.00969	0.0100	-3.1	20.0
2-Hexanone	Ave	0.2283	0.2039	0.0500	0.0179	0.0200	-10.7	20.0
Chlorodibromomethane	Ave	0.3116	0.2722		0.00874	0.0100	-12.6	20.0
1,2-Dibromoethane	Ave	0.3191	0.2972		0.00931	0.0100	-6.9	20.0
Chlorobenzene	Ave	0.9777	0.9792	0.3000	0.0100	0.0100	0.1	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3254		0.00943	0.0100	-5.7	20.0
Ethylbenzene	Ave	0.5145	0.5112		0.00994	0.0100	-0.6	20.0
m-Xylene & p-Xylene	Ave	1.221	1.193		0.00977	0.0100	-2.3	20.0
o-Xylene	Ave	0.6189	0.6194		0.0100	0.0100	0.0	20.0
Styrene	Ave	1.036	1.035	0.3000	0.00999	0.0100	-0.1	20.0
Bromoform	Lin1		0.1684	0.1000	0.00725	0.0100	-27.5*	20.0
Isopropylbenzene	Ave	1.463	1.457	0.1000	0.00996	0.0100	-0.4	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.6212	0.3000	0.00877	0.0100	-12.3	20.0
Bromobenzene	Ave	0.8274	0.7853		0.00949	0.0100	-5.1	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2216		0.00898	0.0100	-10.2	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.1224		0.0121	0.0100	20.8*	20.0
N-Propylbenzene	Ave	0.7286	0.6834		0.00938	0.0100	-6.2	20.0
2-Chlorotoluene	Ave	0.6821	0.6395		0.00938	0.0100	-6.2	20.0
1,3,5-Trimethylbenzene	Ave	2.119	2.004		0.00946	0.0100	-5.4	20.0
4-Chlorotoluene	Ave	2.205	2.068		0.00938	0.0100	-6.2	20.0
tert-Butylbenzene	Ave	1.897	1.719		0.00906	0.0100	-9.4	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.120		0.00952	0.0100	-4.8	20.0
sec-Butylbenzene	Ave	2.327	2.162		0.00929	0.0100	-7.1	20.0
1,3-Dichlorobenzene	Ave	1.425	1.354	0.6000	0.00950	0.0100	-5.0	20.0
4-Isopropyltoluene	Ave	2.083	1.958		0.00940	0.0100	-6.0	20.0
1,4-Dichlorobenzene	Ave	1.477	1.410	0.5000	0.00955	0.0100	-4.5	20.0
n-Butylbenzene	Ave	1.649	1.482		0.00899	0.0100	-10.1	20.0
1,2-Dichlorobenzene	Ave	1.387	1.332	0.4000	0.00960	0.0100	-4.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCVIS 240-367131/2 Calibration Date: 02/07/2019 09:17

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8703.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1150	0.0500	0.00714	0.0100	-28.6	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7656	0.2000	0.00872	0.0100	-12.8	50.0
Hexachlorobutadiene	Ave	0.4386	0.3490		0.00796	0.0100	-20.4*	20.0
Naphthalene	Ave	2.209	1.757		0.00795	0.0100	-20.5	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6941		0.00878	0.0100	-12.2	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2276		0.00767	0.00797	-3.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2813		0.00737	0.00797	-7.5	20.0
Toluene-d8 (Surr)	Ave	1.214	1.144		0.00751	0.00797	-5.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4230		0.00777	0.00797	-2.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCV 240-367131/3 Calibration Date: 02/07/2019 10:01

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8705.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0253		0.110	0.100	9.6	20.0
Diisopropyl ether	Ave	0.2405	0.2470		0.0103	0.0100	2.7	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4163		0.00983	0.0100	-1.7	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6986		0.00896	0.0100	-10.4	20.0
Ethyl acetate	Ave	0.2538	0.2122		0.0167	0.0200	-16.4	50.0
Propionitrile	Ave	0.0357	0.0337		0.0945	0.100	-5.5	20.0
Methacrylonitrile	Ave	0.1733	0.1558		0.0899	0.100	-10.1	20.0
Tert-amyl methyl ether	Ave	0.7765	0.6215		0.00800	0.0100	-20.0	20.0
n-Butanol	Ave	0.0061	0.0047		0.195	0.250	-22.1*	20.0
Ethyl acrylate	Ave	0.3330	0.2716		0.00816	0.0100	-18.4	20.0
Methyl methacrylate	Ave	0.2430	0.2065		0.0170	0.0200	-15.0	20.0
2-Nitropropane	Ave	0.0745	0.0359		0.00963	0.0200	-51.8*	20.0
n-Butyl acetate	Ave	0.3918	0.3138		0.00801	0.0100	-19.9	20.0
1-Chlorohexane	Ave	0.3968	0.3387		0.00854	0.0100	-14.6	20.0
Cyclohexanone	Lin1		0.0122		0.0745	0.100	-25.5*	20.0
Pentachloroethane	Ave	0.2034	0.1829		0.0180	0.0200	-10.1	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.232		0.00972	0.0100	-2.8	20.0
Benzyl chloride	Ave	0.2963	0.1606		0.00542	0.0100	-45.8*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9036		0.00955	0.0100	-4.5	20.0
2-Methylnaphthalene	Ave	1.076	0.6950		0.0129	0.0200	-35.4*	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab File ID: BFB0208.D BFB Injection Date: 02/08/2019

Instrument ID: A3UX15 BFB Injection Time: 12:12

Analysis Batch No.: 367370

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.8	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	100.8	
175	5.0 - 9.0 % of mass 174	6.6	(6.5) 1
176	95.0 - 101.0 % of mass 174	99.3	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.1	(6.1) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367370/2	UXC8735.D	02/08/2019	12:55
	LCS 240-367370/4	UXC8736.D	02/08/2019	13:17
	CCV 240-367370/3	UXC8737.D	02/08/2019	13:39
	MB 240-367370/6	UXC8740.D	02/08/2019	14:45
MRC-MW151A-020419	240-107638-2	UXC8742.D	02/08/2019	15:28

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCVIS 240-367370/2 Calibration Date: 02/08/2019 12:55

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8735.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3194	0.1000	0.0104	0.0100	4.0	20.0
Chloromethane	Ave	0.3135	0.2905	0.1000	0.00927	0.0100	-7.3	20.0
Vinyl chloride	Ave	0.2885	0.3042	0.1000	0.0105	0.0100	5.5	20.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	20.0
Bromomethane	Ave	0.2308	0.2169	0.0500	0.00940	0.0100	-6.0	20.0
Chloroethane	Ave	0.2041	0.1953	0.0500	0.00957	0.0100	-4.3	20.0
Dichlorofluoromethane	Ave	0.5102	0.4818		0.00944	0.0100	-5.6	20.0
Trichlorofluoromethane	Ave	0.4337	0.4764	0.1000	0.0110	0.0100	9.9	20.0
Ethyl ether	Ave	0.2310	0.2244		0.00971	0.0100	-2.9	20.0
Acrolein	Ave	0.0317	0.0364		0.0575	0.0500	14.9	50.0
1,1-Dichloroethene	Ave	0.3005	0.2918	0.1000	0.00971	0.0100	-2.9	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2537	0.0500	0.0103	0.0100	2.8	20.0
Acetone	Lin1		0.0226	0.0100	0.0186	0.0200	-7.1	50.0
Iodomethane	Ave	0.4675	0.4990		0.0107	0.0100	6.7	20.0
Carbon disulfide	Ave	0.7741	0.6903	0.1000	0.00892	0.0100	-10.8	20.0
3-Chloro-1-propene	Ave	0.1698	0.1713		0.0101	0.0100	0.9	20.0
Methyl acetate	Ave	0.2050	0.1764	0.1000	0.0172	0.0200	-14.0	20.0
Methylene Chloride	Lin1		0.3159	0.1000	0.0102	0.0100	2.5	50.0
tert-Butyl alcohol	Ave	0.0203	0.0166		0.0819	0.100	-18.1	50.0
Acrylonitrile	Ave	0.0962	0.0873		0.0907	0.100	-9.3	20.0
Methyl tert-butyl ether	Ave	0.7834	0.7001	0.1000	0.00894	0.0100	-10.6	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.3041	0.1000	0.0109	0.0100	8.8	20.0
Hexane	Ave	0.0586	0.0589		0.0100	0.0100	0.4	20.0
1,1-Dichloroethane	Ave	0.4517	0.4927	0.2000	0.0109	0.0100	9.1	20.0
Vinyl acetate	Ave	0.5198	0.3775		0.00726	0.0100	-27.4	50.0
2,2-Dichloropropane	Ave	0.0624	0.0684		0.0110	0.0100	9.7	20.0
2-Butanone (MEK)	Ave	0.0333	0.0273	0.0100	0.0164	0.0200	-18.0	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3454	0.1000	0.0112	0.0100	12.2	20.0
Bromochloromethane	Ave	0.1531	0.1636		0.0107	0.0100	6.9	20.0
Tetrahydrofuran	Ave	0.0828	0.0671		0.0162	0.0200	-18.9	20.0
Chloroform	Ave	0.4606	0.5082	0.2000	0.0110	0.0100	10.3	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3911	0.1000	0.0110	0.0100	10.3	20.0
Cyclohexane	Ave	0.3993	0.4126	0.1000	0.0103	0.0100	3.3	20.0
1,1-Dichloropropene	Ave	0.3748	0.3983		0.0106	0.0100	6.3	20.0
Carbon tetrachloride	Ave	0.3441	0.3477	0.1000	0.0101	0.0100	1.1	20.0
Isobutyl alcohol	Ave	0.0077	0.0064		0.208	0.250	-16.9	20.0
Benzene	Ave	1.116	1.233	0.5000	0.0110	0.0100	10.5	20.0
1,2-Dichloroethane	Ave	0.3820	0.3936	0.1000	0.0103	0.0100	3.0	20.0
n-Heptane	Ave	0.0532	0.0494		0.00928	0.0100	-7.2	20.0
Trichloroethene	Ave	0.3240	0.3645	0.1500	0.0112	0.0100	12.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCVIS 240-367370/2 Calibration Date: 02/08/2019 12:55

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8735.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3636	0.1000	0.0103	0.0100	3.2	20.0
1,2-Dichloropropane	Ave	0.2590	0.2663	0.1000	0.0103	0.0100	2.8	20.0
1,4-Dioxane	Ave	0.0020	0.0024		0.244	0.200	22.2	50.0
Dibromomethane	Ave	0.1717	0.1647		0.00959	0.0100	-4.1	20.0
Bromodichloromethane	Ave	0.3410	0.3312	0.1500	0.00971	0.0100	-2.9	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1324		0.0152	0.0200	-24.1*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3663	0.1500	0.00929	0.0100	-7.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2024	0.0500	0.0151	0.0200	-24.4*	20.0
Toluene	Ave	1.476	1.516	0.4000	0.0103	0.0100	2.7	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3705	0.1000	0.00798	0.0100	-20.2*	20.0
Ethyl methacrylate	Ave	0.4442	0.3497		0.00787	0.0100	-21.3*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2764	0.1000	0.00927	0.0100	-7.3	20.0
Tetrachloroethene	Ave	0.3268	0.3439	0.1500	0.0105	0.0100	5.2	20.0
1,3-Dichloropropane	Ave	0.5243	0.4843		0.00924	0.0100	-7.6	20.0
2-Hexanone	Ave	0.2283	0.1700	0.0500	0.0149	0.0200	-25.5*	20.0
Chlorodibromomethane	Ave	0.3116	0.2744		0.00881	0.0100	-11.9	20.0
1,2-Dibromoethane	Ave	0.3191	0.2759		0.00865	0.0100	-13.5	20.0
Chlorobenzene	Ave	0.9777	1.001	0.3000	0.0102	0.0100	2.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3362		0.00974	0.0100	-2.6	20.0
Ethylbenzene	Ave	0.5145	0.5207		0.0101	0.0100	1.2	20.0
m-Xylene & p-Xylene	Ave	1.221	1.236		0.0101	0.0100	1.2	20.0
o-Xylene	Ave	0.6189	0.6449		0.0104	0.0100	4.2	20.0
Styrene	Ave	1.036	1.065	0.3000	0.0103	0.0100	2.8	20.0
Bromoform	Lin1		0.1666	0.1000	0.00718	0.0100	-28.2*	20.0
Isopropylbenzene	Ave	1.463	1.541	0.1000	0.0105	0.0100	5.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5642	0.3000	0.00796	0.0100	-20.4*	20.0
Bromobenzene	Ave	0.8274	0.8129		0.00982	0.0100	-1.8	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2011		0.00815	0.0100	-18.5	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.1211		0.0119	0.0100	19.5	20.0
N-Propylbenzene	Ave	0.7286	0.7102		0.00975	0.0100	-2.5	20.0
2-Chlorotoluene	Ave	0.6821	0.6719		0.00985	0.0100	-1.5	20.0
1,3,5-Trimethylbenzene	Ave	2.119	2.073		0.00978	0.0100	-2.2	20.0
4-Chlorotoluene	Ave	2.205	2.114		0.00959	0.0100	-4.1	20.0
tert-Butylbenzene	Ave	1.897	1.770		0.00933	0.0100	-6.7	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.225		0.00999	0.0100	-0.1	20.0
sec-Butylbenzene	Ave	2.327	2.217		0.00953	0.0100	-4.7	20.0
1,3-Dichlorobenzene	Ave	1.425	1.407	0.6000	0.00988	0.0100	-1.2	20.0
4-Isopropyltoluene	Ave	2.083	2.024		0.00972	0.0100	-2.8	20.0
1,4-Dichlorobenzene	Ave	1.477	1.455	0.5000	0.00985	0.0100	-1.5	20.0
n-Butylbenzene	Ave	1.649	1.548		0.00939	0.0100	-6.1	20.0
1,2-Dichlorobenzene	Ave	1.387	1.375	0.4000	0.00992	0.0100	-0.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCVIS 240-367370/2 Calibration Date: 02/08/2019 12:55

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8735.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0938	0.0500	0.00582	0.0100	-41.8	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7725	0.2000	0.00879	0.0100	-12.1	50.0
Hexachlorobutadiene	Ave	0.4386	0.3567		0.00813	0.0100	-18.7	20.0
Naphthalene	Ave	2.209	1.532		0.00694	0.0100	-30.6	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6880		0.00871	0.0100	-12.9	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2260		0.00761	0.00797	-4.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2747		0.00720	0.00797	-9.7	20.0
Toluene-d8 (Surr)	Ave	1.214	1.098		0.00721	0.00797	-9.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3929		0.00721	0.00797	-9.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCV 240-367370/3 Calibration Date: 02/08/2019 13:39

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8737.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0288		0.125	0.100	24.8*	20.0
Diisopropyl ether	Ave	0.2405	0.2487		0.0103	0.0100	3.4	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4165		0.00983	0.0100	-1.7	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6880		0.00882	0.0100	-11.8	20.0
Ethyl acetate	Ave	0.2538	0.2069		0.0163	0.0200	-18.5	50.0
Propionitrile	Ave	0.0357	0.0342		0.0958	0.100	-4.2	20.0
Methacrylonitrile	Ave	0.1733	0.1557		0.0898	0.100	-10.2	20.0
Tert-amyl methyl ether	Ave	0.7765	0.6043		0.00778	0.0100	-22.2*	20.0
n-Butanol	Ave	0.0061	0.0038		0.156	0.250	-37.7*	20.0
Ethyl acrylate	Ave	0.3330	0.2516		0.00755	0.0100	-24.5*	20.0
Methyl methacrylate	Ave	0.2430	0.1957		0.0161	0.0200	-19.5	20.0
2-Nitropropane	Ave	0.0745	0.0303		0.00814	0.0200	-59.3*	20.0
n-Butyl acetate	Ave	0.3918	0.2938		0.00750	0.0100	-25.0*	20.0
1-Chlorohexane	Ave	0.3968	0.3306		0.00833	0.0100	-16.7	20.0
Cyclohexanone	Lin1		0.0113		0.0690	0.100	-31.0*	20.0
Pentachloroethane	Ave	0.2034	0.1799		0.0177	0.0200	-11.6	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.229		0.00970	0.0100	-3.0	20.0
Benzyl chloride	Ave	0.2963	0.1422		0.00480	0.0100	-52.0*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9064		0.00958	0.0100	-4.2	20.0
2-Methylnaphthalene	Ave	1.076	0.7065		0.0131	0.0200	-34.3*	20.0

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00281	vmbfb 00021
BFB 240-364786/1		8260C		5 mL	5 mL				1 uL
STD8260 240-364786/2 IC		8260C		5 mL	5 mL	1 uL	32 uL	32 uL	
STD8260 240-364786/3 IC		8260C		5 mL	5 mL	1 uL	16 uL	16 uL	
STD8260 240-364786/4 ICIS		8260C		5 mL	5 mL	1 uL	8 uL	8 uL	
STD8260 240-364786/5 IC		8260C		5 mL	5 mL	1 uL	4 uL	4 uL	
STD8260 240-364786/6 IC		8260C		5 mL	5 mL	1 uL	1.6 uL	1.6 uL	
STD8260 240-364786/7 IC		8260C		5 mL	5 mL	1 uL	0.8 uL	0.8 uL	
STD 240-364786/8 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/9 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/10 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/11 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/12 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/13 IC		8260C		5 mL	5 mL	1 uL			
ICV 240-364786/14		8260C		5 mL	5 mL	1 uL	0.797 uL		
ICV 240-364786/15		8260C		5 mL	5 mL	1 uL	0.797 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C							32 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
STD8260 240-364786/3 IC		8260C							16 uL
STD8260 240-364786/4 ICIS		8260C							8 uL
STD8260 240-364786/5 IC		8260C							4 uL
STD8260 240-364786/6 IC		8260C							1.6 uL
STD8260 240-364786/7 IC		8260C							0.8 uL
STD 240-364786/8 IC		8260C						32 uL	
STD 240-364786/9 IC		8260C						16 uL	
STD 240-364786/10 IC		8260C						8 uL	
STD 240-364786/11 IC		8260C						4 uL	
STD 240-364786/12 IC		8260C						1.6 uL	
STD 240-364786/13 IC		8260C						0.8 uL	
ICV 240-364786/14		8260C			8 uL	8 uL	8 uL		
ICV 240-364786/15		8260C		8 uL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C		32 uL					
STD8260 240-364786/3 IC		8260C		16 uL					
STD8260 240-364786/4 ICIS		8260C		8 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
STD8260 240-364786/5 IC		8260C		4 uL					
STD8260 240-364786/6 IC		8260C		1.6 uL					
STD8260 240-364786/7 IC		8260C		0.8 uL					
STD 240-364786/8 IC		8260C							
STD 240-364786/9 IC		8260C							
STD 240-364786/10 IC		8260C							
STD 240-364786/11 IC		8260C							
STD 240-364786/12 IC		8260C							
STD 240-364786/13 IC		8260C							
ICV 240-364786/14		8260C							
ICV 240-364786/15		8260C							

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367131 Batch Start Date: 02/07/19 08:46 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00283
BFB 240-367131/1		8260C		5 mL	5 mL				
CCVIS 240-367131/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-367131/3		8260C		5 mL	5 mL		1 uL		
LCS 240-367131/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-367131/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-107638-A-1	TB-020419	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00266	VMFASGW 00295	VMFASPW 00287	VMRA9W 00284	VMRGAS 00281
BFB 240-367131/1		8260C		1 uL					
CCVIS 240-367131/2		8260C							8 uL
CCV 240-367131/3		8260C						8 uL	
LCS 240-367131/4		8260C			8 uL	8 uL	8 uL		
MB 240-367131/6		8260C							
240-107638-A-1	TB-020419	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00320					
BFB 240-367131/1		8260C							
CCVIS 240-367131/2		8260C		8 uL					
CCV 240-367131/3		8260C							
LCS 240-367131/4		8260C							
MB 240-367131/6		8260C							
240-107638-A-1	TB-020419	8260C	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367131 Batch Start Date: 02/07/19 08:46 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Batch Notes	
pH Indicator ID	hc861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367370 Batch Start Date: 02/08/19 12:12 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00283
BFB 240-367370/1		8260C		5 mL	5 mL				
CCVIS 240-367370/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-367370/3		8260C		5 mL	5 mL		1 uL		
LCS 240-367370/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-367370/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-107638-A-2	MRC-MW151A-020419	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00266	VMFASGW 00295	VMFASPW 00287	VMRA9W 00284	VMRGAS 00281
BFB 240-367370/1		8260C		1 uL					
CCVIS 240-367370/2		8260C							8 uL
CCV 240-367370/3		8260C						8 uL	
LCS 240-367370/4		8260C			8 uL	8 uL	8 uL		
MB 240-367370/6		8260C							
240-107638-A-2	MRC-MW151A-020419	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00320					
BFB 240-367370/1		8260C							
CCVIS 240-367370/2		8260C		8 uL					
CCV 240-367370/3		8260C							
LCS 240-367370/4		8260C							
MB 240-367370/6		8260C							
240-107638-A-2	MRC-MW151A-020419	8260C	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367370 Batch Start Date: 02/08/19 12:12 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13CDCB #
MRC-MW151A-020419	240-107638-2	56
	MB 680-558728/12-A	71
	LCS 680-558728/13-A	75
	LCSD 680-558728/14-A	68

	QC LIMITS
13CDCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Sample No.: CCVIS 680-559059/3 Date Analyzed: 02/21/2019 06:44

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2030.D Heated Purge: (Y/N) N

Calibration ID: 63054

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		170892	12.41	169663	18.67		
UPPER LIMIT		222160	12.91	220562	19.17		
LOWER LIMIT		119624	11.91	118764	18.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-558728/12-A		143915	12.41	132159	18.67		
LCS 680-558728/13-A		164188	12.41	171582	18.67		
LCSD 680-558728/14-A		179669	12.41	188862	18.67		
240-107638-2	MRC-MW151A-020419	164587	12.41	164580	18.67		
CCV 680-559059/21		159076	12.41	142687	18.67		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Lab File ID: xb2031.D Lab Sample ID: MB 680-558728/12-A

Matrix: Water Date Extracted: 02/19/2019 13:42

Instrument ID: CMSX Date Analyzed: 02/21/2019 07:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-558728/13-A	xb2032.D	02/21/2019 07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019 08:10
MRC-MW151A-020419	240-107638-2	xb2039.D	02/21/2019 11:01

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107638-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-558728/12-A

Matrix: Water | Lab File ID: xb2031.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2032.D

Lab ID: LCS 680-558728/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.67	78	62-130	
Hexachlorobiphenyl	4.00	3.37	84	62-130	
Nonachlorobiphenyl	10.0	14.6	146	70-195	
Octachlorobiphenyl	6.00	5.09	85	64-130	
Monochlorobiphenyl	2.00	1.08	54	42-130	
DCB Decachlorobiphenyl	10.0	7.81	78	59-130	
Dichlorobiphenyl	2.00	1.32	66	49-130	
Pentachlorobiphenyl	4.00	3.47	87	63-130	
Tetrachlorobiphenyl	4.00	2.93	73	54-130	
Trichlorobiphenyl	2.00	1.47	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2033.D

Lab ID: LCSD 680-558728/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.45	74	5	40	62-130	
Hexachlorobiphenyl	4.00	3.21	80	5	40	62-130	
Nonachlorobiphenyl	10.0	13.2	132	10	40	70-195	
Octachlorobiphenyl	6.00	4.75	79	7	40	64-130	
Monochlorobiphenyl	2.00	1.36	68	23	40	42-130	
DCB Decachlorobiphenyl	10.0	7.14	71	9	40	59-130	
Dichlorobiphenyl	2.00	1.47	73	11	40	49-130	
Pentachlorobiphenyl	4.00	3.33	83	4	40	63-130	
Tetrachlorobiphenyl	4.00	3.04	76	4	40	54-130	
Trichlorobiphenyl	2.00	1.52	76	3	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Lab File ID: xa0805.D DFTPP Injection Date: 01/08/2019

Instrument ID: CMSX DFTPP Injection Time: 14:10

Analysis Batch No.: 554469

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.9
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	25.1
365	Greater than 1% of mass 198	3.8
441	Present but less than mass 443	13.7 (87.5) 2
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	15.6 (18.3) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-554469/3	xa0807.D	01/08/2019	15:11
	IC 680-554469/5	xa0809.D	01/08/2019	16:08
	IC 680-554469/6	xa0810.D	01/08/2019	16:37
	IC 680-554469/27	xa0850.D	01/08/2019	17:05
	IC 680-554469/7	xa0811.D	01/08/2019	17:34
	IC 680-554469/8	xa0812.D	01/08/2019	18:02
	ICV 680-554469/9	xa0813.D	01/08/2019	18:31

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107638-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICV 680-554469/9 Calibration Date: 01/08/2019 18:31

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xa0813.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8517		1.03	1.00	2.6	20.0
Dichlorobiphenyl	Ave	0.5847	0.5801		0.992	1.00	-0.8	20.0
Trichlorobiphenyl	Ave	0.4198	0.4573		1.09	1.00	8.9	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.3118		2.11	2.00	5.6	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2531		2.11	2.00	5.5	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2508		2.10	2.00	5.2	20.0
Heptachlorobiphenyl	Ave	0.2376	0.2274		2.87	3.00	-4.3	20.0
Octachlorobiphenyl	Ave	0.2054	0.2183		3.19	3.00	6.3	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0419		5.00	5.00	-0.0	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0577		5.35	5.00	7.1	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Lab File ID: xb2028.D DFTPP Injection Date: 02/21/2019

Instrument ID: CMSX DFTPP Injection Time: 05:43

Analysis Batch No.: 559059

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	59.5
197	Less than 1 % of mass 198	0.9
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	28.0
365	Greater than 1% of mass 198	3.5
441	Present but less than mass 443	15.1 (86.3) 2
442	Greater than 40% of mass 198	96.2
443	17 - 23% of mass 442	17.5 (18.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559059/2	xb2029.D	02/21/2019	06:14
	CCVIS 680-559059/3	xb2030.D	02/21/2019	06:44
	MB 680-558728/12-A	xb2031.D	02/21/2019	07:13
	LCS 680-558728/13-A	xb2032.D	02/21/2019	07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019	08:10
MRC-MW151A-020419	240-107638-2	xb2039.D	02/21/2019	11:01
	CCV 680-559059/21	xb2051.D	02/21/2019	16:43

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCVIS 680-559059/3 Calibration Date: 02/21/2019 06:44

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2030.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.7268		0.875	1.00	-12.5	20.0
Dichlorobiphenyl	Ave	0.5847	0.5079		0.869	1.00	-13.1	20.0
Trichlorobiphenyl	Ave	0.4198	0.3597		0.857	1.00	-14.3	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2563		1.74	2.00	-13.2	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2131		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2136		1.79	2.00	-10.4	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1920		2.42	3.00	-19.2	20.0
Octachlorobiphenyl	Ave	0.2054	0.1725		2.52	3.00	-16.0	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0343		4.08	5.00	-18.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0462		4.29	5.00	-14.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Lab Sample ID: CCV 680-559059/21 Calibration Date: 02/21/2019 16:43

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2051.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8070		0.972	1.00	-2.8	20.0
Dichlorobiphenyl	Ave	0.5847	0.5601		0.958	1.00	-4.2	20.0
Trichlorobiphenyl	Ave	0.4198	0.4000		0.953	1.00	-4.7	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2879		1.95	2.00	-2.4	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2300		1.92	2.00	-4.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2246		1.88	2.00	-5.8	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1938		2.45	3.00	-18.4	20.0
Octachlorobiphenyl	Ave	0.2054	0.1765		2.58	3.00	-14.1	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0315		3.75	5.00	-25.0*	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0422		3.92	5.00	-21.6*	20.0

NONACHLOROBIPHENYLS AFFECTED BY DCB

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Instrument ID: CMSX Start Date: 01/08/2019 14:10

Analysis Batch Number: 554469 End Date: 01/08/2019 18:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 680-554469/25		01/08/2019 14:10	1	xa0805.D	HP-5MS 0.25(mm)
WDM 680-554469/26		01/08/2019 14:41	1		HP-5MS 0.25(mm)
ICISAV 680-554469/3		01/08/2019 15:11	1	xa0807.D	HP-5MS 0.25(mm)
IC 680-554469/5		01/08/2019 16:08	1	xa0809.D	HP-5MS 0.25(mm)
IC 680-554469/6		01/08/2019 16:37	1	xa0810.D	HP-5MS 0.25(mm)
IC 680-554469/27		01/08/2019 17:05	1	xa0850.D	HP-5MS 0.25(mm)
IC 680-554469/7		01/08/2019 17:34	1	xa0811.D	HP-5MS 0.25(mm)
IC 680-554469/8		01/08/2019 18:02	1	xa0812.D	HP-5MS 0.25(mm)
ICV 680-554469/9		01/08/2019 18:31	1	xa0813.D	HP-5MS 0.25(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Instrument ID: CMSX Start Date: 02/21/2019 05:43

Analysis Batch Number: 559059 End Date: 02/21/2019 16:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 680-559059/1		02/21/2019 05:43	1	xb2028.D	HP-5MS 0.25(mm)
WDM 680-559059/2		02/21/2019 06:14	1	xb2029.D	HP-5MS 0.25(mm)
CCVIS 680-559059/3		02/21/2019 06:44	1	xb2030.D	HP-5MS 0.25(mm)
MB 680-558728/12-A		02/21/2019 07:13	1	xb2031.D	HP-5MS 0.25(mm)
LCS 680-558728/13-A		02/21/2019 07:41	1	xb2032.D	HP-5MS 0.25(mm)
LCSD 680-558728/14-A		02/21/2019 08:10	1	xb2033.D	HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 08:38	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 09:07	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 09:35	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 10:04	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 10:32	1		HP-5MS 0.25(mm)
240-107638-2		02/21/2019 11:01	1	xb2039.D	HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 11:58	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 12:26	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 12:55	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 13:52	1		HP-5MS 0.25(mm)
ZZZZZ		02/21/2019 14:21	1		HP-5MS 0.25(mm)
CCV 680-559059/21		02/21/2019 16:43	1	xb2051.D	HP-5MS 0.25(mm)

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Batch Number: 558728 Batch Start Date: 02/19/19 13:42 Batch Analyst: Wilson, Charles E

Batch Method: 680 Batch End Date: 02/20/19 07:53

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ResidualChloCheck	ReceivedpH
240-107638-K-2	MRC-MW151A-020419	680, 680	T	1513.2 g	504.1 g	1009.1 mL	1 mL	N	7 SU
MB 680-558728/12		680, 680				1000 mL	1 mL	N	7 SU
LCS 680-558728/13		680, 680				1000 mL	1 mL	N	7 SU
LCSD 680-558728/14		680, 680				1000 mL	1 mL	N	7 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	680wkSPIKE 00120	680wkSURR-NEW 00035				
240-107638-K-2	MRC-MW151A-020419	680, 680	T		1 mL				
MB 680-558728/12		680, 680			1 mL				
LCS 680-558728/13		680, 680		1 mL	1 mL				
LCSD 680-558728/14		680, 680		1 mL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-107638-1

SDG No.:

Batch Number: 558728 Batch Start Date: 02/19/19 13:42 Batch Analyst: Wilson, Charles E

Batch Method: 680 Batch End Date: 02/20/19 07:53

Batch Notes	
Balance ID	23
Batch Comment	680 box 125
Boiling Chips ID	901800
Concentration 1 Thermometer ID	50
Analyst ID - Concentration	jc
Exchange Solvent ID	5859923
Analyst ID - Extraction	CEW/CMJ
Extraction 1 End Time	02/20/2019 07:53
Extraction 1 Start Time	02/19/2019 13:42
Method/Fraction	680
pH Indicator ID	5904645
Pipette/Syringe/Dispenser ID	AA06G
Prep Solvent ID	5904693
Residual Chlorine Indicator ID	5775443
Analyst ID - Spike Analyst	CEW
Analyst ID - Spike Witness Analyst	CMJ
Sufficient Volume for Batch QC	NO

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW151A-020419	240-107638-2

Comments:

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: I12

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG No.:

ICP-AES Instrument ID: I12 Date: 12/21/2018

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	V	
Aluminum										0.034040				0.056989	
Antimony		-0.00006			-0.000422			-0.000035						0.002232	
Arsenic		0.000009			-0.000202	0.00931			-0.0003555	0.00123617					
Beryllium														0.000235	
Cadmium			0.012308					0.000004							
Chromium									0.000415						
Cobalt													0.002128		
Copper				0.000018	0.000361			-0.000032					-0.003157		
Lead		-0.000091					0.00057707	0.000048			0.000131	0.000025			
Lithium				0.000011											
Nickel					0.000518			0.000059							
Selenium		-0.000032							0.000338						
Thallium		0.000034			0.003802			-0.000025	-0.0006202 3					0.001371	
Vanadium								0.000064							
Zinc						-0.001092									

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107638-1

SDG No.:

Instrument ID: I12 Date: 01/28/2019 12:19

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		15000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107638-1

SDG No.:

Instrument ID: I14 Date: 10/02/2018 11:17

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/08/2019 09:28 End Date: 02/08/2019 18:33

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ICIS 240-367445/1	1		09:28	X	X																								
CALSTD 240-367445/2 IC			09:33	X	X																								
CALSTD 240-367445/3 IC			09:38	X	X																								
ICV 240-367445/4	1		09:42	X	X																								
ICB 240-367445/5	1		09:47	X	X																								
ICVL 240-367445/6	1		09:52	X	X																								
ZZZZZZ			09:56																										
ICSA 240-367445/8	1		10:01	X	X																								
ICSAB 240-367445/9	1		10:06	X	X																								
CCV 240-367445/10			10:10																										
CCB 240-367445/11			10:15																										
ZZZZZZ			10:19																										
ZZZZZZ			10:24																										
ZZZZZZ			10:29																										
ZZZZZZ			10:33																										
ZZZZZZ			10:38																										
ZZZZZZ			10:43																										
CCV 240-367445/18	1		10:48	X	X																								
CCB 240-367445/19	1		10:52	X	X																								
ZZZZZZ			10:57																										
ZZZZZZ			11:02																										
HIGHSTD 240-367445/22 IC			11:06	X	X																								
ZZZZZZ			11:11																										
MB 240-366966/1-A	1	R	11:16	X	X																								
LCS 240-366966/2-A	1	R	11:20	X	X																								
240-107638-2	1	R	11:25	X	X																								
240-107638-2 SD	5	R	11:29	X	X																								
240-107638-2 MS	1	R	11:34	X	X																								
240-107638-2 MSD	1	R	11:38	X	X																								
CCV 240-367445/30	1		11:43	X	X																								
CCB 240-367445/31	1		11:47	X	X																								
ZZZZZZ			11:52																										
ZZZZZZ			11:56																										
ZZZZZZ			12:01																										
ZZZZZZ			12:06																										
ZZZZZZ			12:10																										
ZZZZZZ			12:15																										
ZZZZZZ			12:20																										
ZZZZZZ			12:25																										
ZZZZZZ			12:29																										
ZZZZZZ			12:34																										
CCV 240-367445/42			12:38																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/08/2019 09:28 End Date: 02/08/2019 18:33

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
CCB 240-367445/43			12:43																									
ZZZZZZ			12:47																									
ZZZZZZ			12:52																									
ZZZZZZ			12:56																									
ZZZZZZ			13:00																									
ZZZZZZ			13:05																									
ZZZZZZ			13:10																									
ZZZZZZ			13:14																									
ZZZZZZ			13:19																									
ZZZZZZ			13:24																									
ZZZZZZ			13:28																									
CCV 240-367445/54			13:33																									
CCB 240-367445/55			13:37																									
CCVL 240-367445/56	1		13:42	X	X																							
ZZZZZZ			13:47																									
ZZZZZZ			13:51																									
ZZZZZZ			13:56																									
ZZZZZZ			14:01																									
ZZZZZZ			14:05																									
ZZZZZZ			14:10																									
ZZZZZZ			14:15																									
ZZZZZZ			14:19																									
ZZZZZZ			14:24																									
CCV 240-367445/66			14:29																									
CCB 240-367445/67			14:33																									
ZZZZZZ			14:38																									
ZZZZZZ			14:42																									
ZZZZZZ			14:47																									
ZZZZZZ			14:51																									
ZZZZZZ			14:56																									
ZZZZZZ			15:00																									
ZZZZZZ			15:05																									
ZZZZZZ			15:10																									
ZZZZZZ			15:14																									
ZZZZZZ			15:18																									
CCV 240-367445/78			15:23																									
CCB 240-367445/79			15:27																									
ZZZZZZ			15:32																									
ZZZZZZ			15:37																									
ZZZZZZ			15:41																									
ZZZZZZ			15:46																									
ZZZZZZ			15:50																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: I12 Analysis Method: 6010C

Start Date: 02/08/2019 09:28 End Date: 02/08/2019 18:33

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			15:55																										
ZZZZZZ			15:59																										
ZZZZZZ			16:04																										
ZZZZZZ			16:08																										
ZZZZZZ			16:13																										
CCV 240-367445/90			16:18																										
CCB 240-367445/91			16:22																										
ZZZZZZ			16:27																										
ZZZZZZ			16:32																										
ZZZZZZ			16:36																										
ZZZZZZ			16:41																										
ZZZZZZ			16:46																										
ZZZZZZ			16:51																										
ZZZZZZ			16:55																										
ZZZZZZ			17:00																										
ZZZZZZ			17:04																										
ZZZZZZ			17:09																										
CCV 240-367445/102			17:14																										
CCB 240-367445/103			17:18																										
ZZZZZZ			17:23																										
ZZZZZZ			17:27																										
ZZZZZZ			17:32																										
ZZZZZZ			17:37																										
ZZZZZZ			17:42																										
ZZZZZZ			17:46																										
ZZZZZZ			17:51																										
ZZZZZZ			17:55																										
ZZZZZZ			18:00																										
ZZZZZZ			18:05																										
CCV 240-367445/114			18:10																										
CCB 240-367445/115			18:14																										
ZZZZZZ			18:19																										
ZZZZZZ			18:24																										
CCV 240-367445/118			18:28																										
CCB 240-367445/119			18:33																										

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICP Instrument ID: I12 Start Date: 02/08/2019 End Date: 02/08/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-367445/1	09:28										
ICV 240-367445/4	09:42	90		97		97		101			
ICB 240-367445/5	09:47	99		99		100		101			
ICVL 240-367445/6	09:52	96		98		99		101			
ICSA 240-367445/8	10:01	73		86		85		98			
ICSAB 240-367445/9	10:06	72		86		84		98			
CCV 240-367445/18	10:48	84		94		94		99			
CCB 240-367445/19	10:52	98		98		99		100			
MB 240-366966/1-A	11:16	99		99		100		102			
LCS 240-366966/2-A	11:20	86		93		94		100			
240-107638-2	11:25	93		97		97		102			
240-107638-2 SD	11:29	97		98		99		101			
240-107638-2 MS	11:34	84		93		94		101			
240-107638-2 MSD	11:38	83		92		93		100			
CCV 240-367445/30	11:43	83		93		94		99			
CCB 240-367445/31	11:47	98		97		99		99			
CCVL 240-367445/56	13:42	96		98		99		101			

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-367445/4 02/08/2019 09:42				CCV 240-367445/18 02/08/2019 10:48				CCV 240-367445/30 02/08/2019 11:43			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	13100		12500	105	24100		25000	96	23900		25000	95
Manganese	1530		1500	102	1900		2000	95	1900		2000	95

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-367445/6 02/08/2019 09:52				CCVL 240-367445/56 02/08/2019 13:42							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	204		200	102	192	J	200	96				
Manganese	12.7	J	15.0	85	12.4	J	15.0	83				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367445/5 02/08/2019 09:47		CCB 240-367445/19 02/08/2019 10:52		CCB 240-367445/31 02/08/2019 11:47			
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U		
Manganese	15	2.1	U	2.1	U	2.1	U		

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICSA 240-367445/8 Instrument ID: I12

Lab File ID: I12020819A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**181740**	**91**
Manganese		**-1.48**	
Aluminum	*500000*	*490620*	*98*
Antimony		*-0.233*	
Arsenic		*-7.18*	
Barium		*0.0948*	
Beryllium		*0.383*	
Boron		*0.286*	
Cadmium		*0.922*	
Calcium	*500000*	*458860*	*92*
Chromium		*3.15*	
Cobalt		*-4.75*	
Copper		*-0.459*	
Lead		*2.49*	
Lithium		*22.6*	
Magnesium	*500000*	*495590*	*99*
Molybdenum		*-1.28*	
Nickel		*3.61*	
Potassium		*-6.25*	
Selenium		*0.650*	
Silicon		*6.55*	
Silver		*-1.26*	
Sodium		*69.4*	
Strontium		*8.16*	
Thallium		*-3.39*	
Tin		*0.678*	
Titanium		*-1.72*	
Vanadium		*0.444*	
Zinc		*-2.40*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICSAB 240-367445/9 Instrument ID: I12

Lab File ID: I12020819A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Iron	**200000**	**181690**	**91**
Manganese	**500**	**469**	**94**
Aluminum	*500000*	*486790*	*97*
Antimony	*1000*	*982*	*98*
Arsenic	*1000*	*986*	*99*
Barium	*500*	*480*	*96*
Beryllium	*500*	*462*	*92*
Boron	*500*	*501*	*100*
Cadmium	*1000*	*994*	*99*
Calcium	*500000*	*465920*	*93*
Chromium	*500*	*464*	*93*
Cobalt	*500*	*495*	*99*
Copper	*500*	*525*	*105*
Lead	*1000*	*864*	*86*
Lithium	*500*	*529*	*106*
Magnesium	*500000*	*498270*	*100*
Molybdenum	*1000*	*950*	*95*
Nickel	*1000*	*984*	*98*
Potassium	*10000*	*10003*	*100*
Selenium	*1000*	*979*	*98*
Silicon	*10000*	*9631*	*96*
Silver	*1000*	*1078*	*108*
Sodium	*10000*	*10023*	*100*
Strontium	*1500*	*1354*	*90*
Thallium	*1000*	*933*	*93*
Tin	*500*	*500*	*100*
Titanium	*500*	*495*	*99*
Vanadium	*500*	*465*	*93*
Zinc	*1000*	*987*	*99*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/07/2019 10:13 End Date: 02/07/2019 16:46

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn							
RINSE 240-367244/1			10:13																												
ICIS 240-367244/2			10:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD1 240-367244/3 IC	1		10:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD2 240-367244/4 IC	1		10:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD3 240-367244/5 IC	1		10:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
STD4 240-367244/6 IC	1		10:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICV 240-367244/7	1		10:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICB 240-367244/8	1		10:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICVL 240-367244/9	1		10:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICSA 240-367244/10	1		10:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
ICSAB 240-367244/11	1		10:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
CCV 240-367244/12			10:39																												
CCB 240-367244/13			10:41																												
ZZZZZZ			10:47																												
CCV 240-367244/15			10:50																												
CCB 240-367244/16			10:52																												
CCVL 240-367244/17			10:55																												
ZZZZZZ			10:57																												
ZZZZZZ			10:59																												
CCV 240-367244/20			11:01																												
CCB 240-367244/21			11:03																												
CCVL 240-367244/22			11:06																												
ZZZZZZ			11:08																												
ZZZZZZ			11:10																												
ZZZZZZ			11:13																												
ZZZZZZ			11:15																												
ZZZZZZ			11:17																												
ZZZZZZ			11:20																												
ZZZZZZ			11:22																												
CCV 240-367244/30			11:24																												
CCB 240-367244/31			11:27																												
CCVL 240-367244/32			11:29																												
ZZZZZZ			11:31																												
ZZZZZZ			11:34																												
ZZZZZZ			11:36																												
ZZZZZZ			11:38																												
ZZZZZZ			11:40																												
ZZZZZZ			11:42																												
ZZZZZZ			11:45																												
ZZZZZZ			11:47																												
ZZZZZZ			11:49																												
CCV 240-367244/42			11:52																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/07/2019 10:13 End Date: 02/07/2019 16:46

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
CCB 240-367244/43			11:54																												
ZZZZZZ			11:56																												
ZZZZZZ			11:59																												
ZZZZZZ			12:01																												
ZZZZZZ			12:03																												
ZZZZZZ			12:05																												
ZZZZZZ			12:07																												
ZZZZZZ			12:09																												
ZZZZZZ			12:12																												
ZZZZZZ			12:14																												
ZZZZZZ			12:17																												
CCV 240-367244/54			12:19																												
CCB 240-367244/55			12:21																												
ZZZZZZ			12:24																												
ZZZZZZ			12:26																												
ZZZZZZ			12:28																												
ZZZZZZ			12:31																												
CCV 240-367244/60	1		12:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-367244/61	1		12:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCVL 240-367244/62			12:38																												
MB 240-366966/1-A	1	R	12:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
LCS 240-366966/3-A	1	R	12:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107638-2	1	R	12:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107638-2 SD	5	R	12:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			12:49																												
240-107638-2 MS	1	R	12:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
240-107638-2 MSD	1	R	12:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			12:56																												
ZZZZZZ			12:58																												
CCV 240-367244/72	1		13:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-367244/73	1		13:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			13:05																												
ZZZZZZ			13:07																												
ZZZZZZ			13:10																												
CCV 240-367244/77			13:12																												
CCB 240-367244/78			13:14																												
CCVL 240-367244/79	1		13:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			13:19																												
ZZZZZZ			13:22																												
ZZZZZZ			13:24																												
ZZZZZZ			13:26																												
ZZZZZZ			13:28																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/07/2019 10:13 End Date: 02/07/2019 16:46

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			13:30																												
ZZZZZZ			13:32																												
ZZZZZZ			13:35																												
ZZZZZZ			13:37																												
CCV 240-367244/89			13:39																												
CCB 240-367244/90			13:41																												
ZZZZZZ			13:44																												
ZZZZZZ			13:46																												
ZZZZZZ			13:49																												
ZZZZZZ			13:51																												
ZZZZZZ			13:53																												
ZZZZZZ			13:56																												
ZZZZZZ			13:58																												
ZZZZZZ			14:00																												
ZZZZZZ			14:03																												
ZZZZZZ			14:05																												
CCV 240-367244/101			14:07																												
CCB 240-367244/102			14:10																												
ZZZZZZ			14:12																												
ZZZZZZ			14:14																												
ZZZZZZ			14:17																												
ZZZZZZ			14:19																												
ZZZZZZ			14:21																												
ZZZZZZ			14:24																												
ZZZZZZ			14:26																												
CCV 240-367244/110			14:28																												
CCB 240-367244/111			14:31																												
CCVL 240-367244/112			14:33																												
ZZZZZZ			14:35																												
ZZZZZZ			14:38																												
ZZZZZZ			14:40																												
ZZZZZZ			14:42																												
ZZZZZZ			14:45																												
ZZZZZZ			14:47																												
ZZZZZZ			14:49																												
ZZZZZZ			14:51																												
ZZZZZZ			14:53																												
CCV 240-367244/122			14:55																												
CCB 240-367244/123			14:58																												
ZZZZZZ			15:00																												
ZZZZZZ			15:03																												
ZZZZZZ			15:05																												

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/07/2019 10:13 End Date: 02/07/2019 16:46

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Ni	Pb	Sb	Se	Tl	V	Zn				
ZZZZZZ			15:07																												
ZZZZZZ			15:10																												
ZZZZZZ			15:12																												
ZZZZZZ			15:14																												
ZZZZZZ			15:16																												
ZZZZZZ			15:19																												
ZZZZZZ			15:21																												
CCV 240-367244/134			15:23																												
CCB 240-367244/135			15:26																												
ZZZZZZ			15:28																												
ZZZZZZ			15:31																												
ZZZZZZ			15:33																												
ZZZZZZ			15:35																												
ZZZZZZ			15:38																												
ZZZZZZ			15:40																												
ZZZZZZ			15:42																												
ZZZZZZ			16:09																												
ZZZZZZ			16:11																												
ZZZZZZ			16:13																												
CCV 240-367244/146			16:15																												
CCB 240-367244/147			16:18																												
ZZZZZZ			16:20																												
ZZZZZZ			16:23																												
ZZZZZZ			16:25																												
ZZZZZZ			16:27																												
ZZZZZZ			16:30																												
ZZZZZZ			16:32																												
ZZZZZZ			16:34																												
CCV 240-367244/155			16:37																												
CCB 240-367244/156			16:39																												
CCVL 240-367244/157			16:41																												
CCV 240-367244/158			16:44																												
CCB 240-367244/159			16:46																												

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/07/2019 End Date: 02/07/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-367244/3 IC	10:18	101		100		101		98		97	
STD2 240-367244/4 IC	10:20	96		96		97		95		94	
STD3 240-367244/5 IC	10:22	90		94		97		95		90	
STD4 240-367244/6 IC	10:25	92		94		98		96		97	
ICV 240-367244/7	10:27	89		96		99		97		95	
ICB 240-367244/8	10:29	91		96		100		98		98	
ICVL 240-367244/9	10:32	92		96		101		97		97	
ICSA 240-367244/10	10:34	83		90		94		92		86	
ICSAB 240-367244/11	10:36	81		91		97		93		89	
CCV 240-367244/60	12:33	91		100		102		98		97	
CCB 240-367244/61	12:35	90		100		103		100		100	
MB 240-366966/1-A	12:40	91		103		107		102		105	
LCS 240-366966/3-A	12:43	88		101		102		96		96	
240-107638-2	12:45	85		97		100		98		95	
240-107638-2 SD	12:47	87		100		105		101		102	
240-107638-2 MS	12:51	81		97		102		95		95	
240-107638-2 MSD	12:54	82		98		102		96		94	
CCV 240-367244/72	13:00	80		97		105		97		99	
CCB 240-367244/73	13:03	85		100		105		99		102	
CCVL 240-367244/79	13:17	85		99		104		97		101	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/07/2019 End Date: 02/07/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-367244/3 IC	10:18	98		100		99		100		101	
STD2 240-367244/4 IC	10:20	93		97		95		98		100	
STD3 240-367244/5 IC	10:22	94		96		93		99		99	
STD4 240-367244/6 IC	10:25	99		99		98		99		100	
ICV 240-367244/7	10:27	97		99		97		99		100	
ICB 240-367244/8	10:29	100		100		98		100		100	
ICVL 240-367244/9	10:32	100		100		100		100		100	
ICSA 240-367244/10	10:34	91		96		92		97		99	
ICSAB 240-367244/11	10:36	93		97		92		100		100	
CCV 240-367244/60	12:33	98		101		99		100		101	
CCB 240-367244/61	12:35	103		102		102		102		103	
MB 240-366966/1-A	12:40	105		106		105		105		105	
LCS 240-366966/3-A	12:43	99		103		97		101		103	
240-107638-2	12:45	100		102		102		104		105	
240-107638-2 SD	12:47	103		107		105		102		103	
240-107638-2 MS	12:51	98		103		97		102		103	
240-107638-2 MSD	12:54	97		103		96		102		103	
CCV 240-367244/72	13:00	99		104		100		103		103	
CCB 240-367244/73	13:03	104		106		104		104		105	
CCVL 240-367244/79	13:17	102		105		101		102		103	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/07/2019 End Date: 02/07/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-367244/3 IC	10:18	100									
STD2 240-367244/4 IC	10:20	97									
STD3 240-367244/5 IC	10:22	95									
STD4 240-367244/6 IC	10:25	100									
ICV 240-367244/7	10:27	99									
ICB 240-367244/8	10:29	99									
ICVL 240-367244/9	10:32	100									
ICSA 240-367244/10	10:34	96									
ICSAB 240-367244/11	10:36	96									
CCV 240-367244/60	12:33	96									
CCB 240-367244/61	12:35	99									
MB 240-366966/1-A	12:40	103									
LCS 240-366966/3-A	12:43	100									
240-107638-2	12:45	100									
240-107638-2 SD	12:47	103									
240-107638-2 MS	12:51	98									
240-107638-2 MSD	12:54	99									
CCV 240-367244/72	13:00	98									
CCB 240-367244/73	13:03	104									
CCVL 240-367244/79	13:17	101									

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-367244/7 02/07/2019 10:27				CCV 240-367244/60 02/07/2019 12:33				CCV 240-367244/72 02/07/2019 13:00			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	198		200	99	256		250	102	251		250	100
Antimony	40.5		40.0	101	51.3		50.0	103	51.3		50.0	103
Arsenic	40.3		40.0	101	51.1		50.0	102	50.6		50.0	101
Barium	38.6		40.0	96	49.6		50.0	99	49.5		50.0	99
Beryllium	41.0		40.0	102	51.6		50.0	103	53.9		50.0	108
Cadmium	39.9		40.0	100	49.2		50.0	98	50.0		50.0	100
Calcium	19600		20000	98	25400		25000	102	25300		25000	101
Chromium	40.0		40.0	100	50.5		50.0	101	51.4		50.0	103
Cobalt	39.8		40.0	99	51.2		50.0	102	50.6		50.0	101
Copper	40.1		40.0	100	51.4		50.0	103	51.2		50.0	102
Iron	9970		10000	100	13000		12500	104	12700		12500	102
Lead	40.7		40.0	102	50.2		50.0	100	51.2		50.0	102
Magnesium	19800		20000	99	25500		25000	102	25300		25000	101
Manganese	197		200	99	253		250	101	254		250	102
Nickel	40.1		40.0	100	51.9		50.0	104	49.8		50.0	100
Potassium	20100		20000	100	26300		25000	105	26100		25000	104
Selenium	38.9		40.0	97	50.4		50.0	101	50.6		50.0	101
Silver	41.2		40.0	103	51.7		50.0	103	51.8		50.0	104
Sodium	19900		20000	100	25500		25000	102	25100		25000	100
Thallium	39.6		40.0	99	50.3		50.0	101	51.0		50.0	102
Vanadium	40.0		40.0	100	50.9		50.0	102	51.7		50.0	103
Zinc	39.2		40.0	98	50.4		50.0	101	49.9		50.0	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

ICV Source: MTMSCRI6020AW_00079 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00079

Analyte	ICVL 240-367244/9 02/07/2019 10:32				CCVL 240-367244/79 02/07/2019 13:17							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	50.9		50.0	102	48.8	J	50.0	98				
Antimony	2.04		2.00	102	2.04		2.00	102				
Arsenic	4.81	J	5.00	96	4.76	J	5.00	95				
Barium	5.18		5.00	104	5.11		5.00	102				
Beryllium	0.975	J	1.00	98	1.03		1.00	103				
Cadmium	0.945	J	1.00	95	1.02		1.00	102				
Calcium	1000		1000	100	974	J	1000	97				
Chromium	2.01		2.00	100	1.89	J	2.00	94				
Cobalt	1.01		1.00	101	0.992	J	1.00	99				
Copper	2.12		2.00	106	2.06		2.00	103				
Iron	104		100	104	101		100	101				
Lead	1.06		1.00	106	1.04		1.00	104				
Magnesium	1050		1000	105	1020		1000	102				
Manganese	4.65	J	5.00	93	4.68	J	5.00	94				
Nickel	1.77	J	2.00	89	1.52	J	2.00	76				
Potassium	1100		1000	110	1090		1000	109				
Selenium	5.00		5.00	100	5.04		5.00	101				
Silver	1.04		1.00	104	1.04		1.00	104				
Sodium	1030		1000	103	1020		1000	102				
Thallium	1.07		1.00	107	1.07		1.00	107				
Vanadium	5.13		5.00	103	5.05		5.00	101				
Zinc	18.0	J	20.0	90	18.1	J	20.0	90				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367244/8 02/07/2019 10:29		CCB 240-367244/61 02/07/2019 12:35		CCB 240-367244/73 02/07/2019 13:03			
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U		
Antimony	2.0	0.57	U	0.57	U	0.57	U		
Arsenic	5.0	0.75	U	0.75	U	0.75	U		
Barium	5.0	2.2	U	2.2	U	2.2	U		
Beryllium	1.0	0.31	U	0.31	U	0.31	U		
Cadmium	1.0	0.21	U	0.21	U	0.21	U		
Calcium	1000	580	U	580	U	580	U		
Chromium	2.0	0.98	U	0.98	U	0.98	U		
Cobalt	1.0	0.19	U	0.19	U	0.19	U		
Copper	2.0	1.7	U	1.7	U	1.7	U		
Iron	100	47	U	47	U	47	U		
Lead	1.0	0.45	U	0.45	U	0.45	U		
Magnesium	1000	200	U	200	U	200	U		
Manganese	5.0	2.1	U	2.1	U	2.1	U		
Nickel	2.0	1.5	U	1.5	U	1.5	U		
Potassium	1000	220	U	220	U	220	U		
Selenium	5.0	0.89	U	0.89	U	0.89	U		
Silver	1.0	0.053	U	0.053	U	0.053	U		
Sodium	1000	330	U	330	U	330	U		
Thallium	1.0	0.20	U	0.20	U	0.20	U		
Vanadium	5.0	0.82	U	0.82	U	0.82	U		
Zinc	20	15	U	15	U	15	U		

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICSA 240-367244/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**48923**	**98**
Antimony		**0.0350**	
Arsenic		**-0.226**	
Barium		**0.0060**	
Beryllium		**-0.0170**	
Cadmium		**0.196**	
Calcium	**50000**	**49704**	**99**
Chromium		**0.138**	
Cobalt		**-0.0090**	
Copper		**0.117**	
Iron	**50000**	**49613**	**99**
Lead		**0.0050**	
Magnesium	**50000**	**49342**	**99**
Manganese		**-0.264**	
Nickel		**-0.177**	
Potassium	**50000**	**49990**	**100**
Selenium		**0.0650**	
Silver		**0.0100**	
Sodium	**50000**	**49589**	**99**
Thallium		**0.0010**	
Vanadium		**0.0660**	
Zinc		**-2.89**	
Boron		*1.62*	
Lithium		*0.229*	
Molybdenum	*1000*	*1073*	*107*
Strontium		*0.416*	
Tin		*-1.07*	
Titanium	*1000*	*1003*	*100*
Tungsten		*0.112*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Lab Sample ID: ICSAB 240-367244/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Aluminum	**50000**	**48155**	**96**
Antimony	**100**	**105**	**105**
Arsenic	**100**	**100**	**100**
Barium	**100**	**100**	**100**
Beryllium	**100**	**101**	**101**
Cadmium	**100**	**99.7**	**100**
Calcium	**50000**	**48762**	**98**
Chromium	**100**	**97.6**	**98**
Cobalt	**100**	**98.6**	**99**
Copper	**100**	**98.2**	**98**
Iron	**50000**	**49417**	**99**
Lead	**100**	**101**	**101**
Magnesium	**50000**	**47958**	**96**
Manganese	**100**	**98.3**	**98**
Nickel	**100**	**97.9**	**98**
Potassium	**50000**	**48784**	**98**
Selenium	**100**	**99.3**	**99**
Silver	**100**	**102**	**102**
Sodium	**50000**	**47749**	**95**
Thallium	**100**	**98.4**	**98**
Vanadium	**100**	**98.2**	**98**
Zinc	**100**	**100**	**100**
Boron	*100*	*94.5*	*95*
Lithium	*100*	*103*	*103*
Molybdenum	*1100*	*1179*	*107*
Strontium	*100*	*99.5*	*99*
Tin	*100*	*105*	*105*
Titanium	*1100*	*1084*	*99*
Tungsten	*100*	*99.9*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-366966/1-A	02/06/2019 14:00	366966		50	50
LCS 240-366966/2-A	02/06/2019 14:00	366966		50	50
240-107638-2	02/06/2019 14:00	366966		50	50
240-107638-2 MS	02/06/2019 14:00	366966		50	50
240-107638-2 MSD	02/06/2019 14:00	366966		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-366966/1-A

Instrument Code: I12 Batch No.: 367445

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	26	U		6010C
7439-96-5	Manganese	2.1	U		6010C

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-366966/2-A

Lab Name: TestAmerica Canton Job No.: 240-107638-1

Sample Matrix: Water LCS Source: MTICP1_00079

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	1000		100	80	120		6010C
Manganese	500	490		98	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-366966/1-A	02/06/2019 14:00	366966		50	50
LCS 240-366966/3-A	02/06/2019 14:00	366966		50	50
240-107638-2	02/06/2019 14:00	366966		50	50
240-107638-2 MS	02/06/2019 14:00	366966		50	50
240-107638-2 MSD	02/06/2019 14:00	366966		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-366966/1-A

Instrument Code: I14 Batch No.: 367244

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	1.7	U		6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	2.1	U		6020A
7440-02-0	Nickel	1.5	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-366966/3-A

Lab Name: TestAmerica Canton Job No.: 240-107638-1

Sample Matrix: Water LCS Source: MTICPMSB_00037

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	101		101	80	120		6020A
Aluminum	10000	10200		102	80	120		6020A
Arsenic	1000	970		97	80	120		6020A
Barium	1000	1020		102	80	120		6020A
Beryllium	1000	1030		103	80	120		6020A
Cadmium	1000	989		99	80	120		6020A
Cobalt	1000	1000		100	80	120		6020A
Chromium	1000	1010		101	80	120		6020A
Copper	1000	993		99	80	120		6020A
Iron	10000	9800		98	80	120		6020A
Manganese	1000	1020		102	80	120		6020A
Nickel	1000	1010		101	80	120		6020A
Lead	1000	1030		103	80	120		6020A
Antimony	100	99.2		99	80	120		6020A
Selenium	1000	980		98	80	120		6020A
Thallium	250	253		101	80	120		6020A
Vanadium	1000	1010		101	80	120		6020A
Zinc	1000	1020		102	80	120		6020A
Calcium	10000	9060		91	80	120		6020A
Potassium	10000	10300		103	80	120		6020A
Magnesium	10000	9980		100	80	120		6020A
Sodium	10000	9900		99	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW151A-020419 MS | Lab ID: 240-107638-2 MS

Lab Name: TestAmerica Canton | Job No.: 240-107638-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Iron	1000		26	U	1000	100	75-125		6010C
Manganese	563		73		500	98	75-125		6010C
Silver	101		0.053	U	100	101	75-125		6020A
Aluminum	10100		57		10000	101	75-125		6020A
Arsenic	984		0.75	U	1000	98	75-125		6020A
Barium	1080		57		1000	102	75-125		6020A
Beryllium	1070		1.7		1000	107	75-125		6020A
Cadmium	982		0.22	J	1000	98	75-125		6020A
Cobalt	1030		24		1000	101	75-125		6020A
Chromium	1010		0.98	U	1000	101	75-125		6020A
Copper	1150		170		1000	98	75-125		6020A
Iron	9790		47	U	10000	98	75-125		6020A
Manganese	1100		75		1000	103	75-125		6020A
Nickel	1030		34		1000	100	75-125		6020A
Lead	1030		0.45	U	1000	103	75-125		6020A
Antimony	101		0.66	J	100	100	75-125		6020A
Selenium	997		0.89	U	1000	100	75-125		6020A
Thallium	254		0.20	U	250	102	75-125		6020A
Vanadium	1020		0.82	U	1000	102	75-125		6020A
Zinc	1120		98		1000	102	75-125		6020A
Calcium	21000		13000		10000	84	75-125		6020A
Potassium	13700		3900		10000	98	75-125		6020A
Magnesium	13100		3500		10000	96	75-125		6020A
Sodium	46000		38000		10000	80	75-125		6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW151A-020419 MSD
Lab ID: 240-107638-2 MSD
Lab Name: TestAmerica Canton
Job No.: 240-107638-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Iron	1010		1000	101	75-125	1	20		6010C
Manganese	562		500	98	75-125	0	20		6010C
Silver	101		100	101	75-125	0	20		6020A
Aluminum	10100		10000	100	75-125	1	20		6020A
Arsenic	984		1000	98	75-125	0	20		6020A
Barium	1080		1000	103	75-125	1	20		6020A
Beryllium	1050		1000	104	75-125	3	20		6020A
Cadmium	993		1000	99	75-125	1	20		6020A
Cobalt	1020		1000	99	75-125	1	20		6020A
Chromium	1010		1000	101	75-125	0	20		6020A
Copper	1170		1000	99	75-125	1	20		6020A
Iron	9700		10000	97	75-125	1	20		6020A
Manganese	1080		1000	100	75-125	2	20		6020A
Nickel	1030		1000	99	75-125	1	20		6020A
Lead	1020		1000	102	75-125	1	20		6020A
Antimony	102		100	101	75-125	1	20		6020A
Selenium	1010		1000	101	75-125	1	20		6020A
Thallium	256		250	103	75-125	1	20		6020A
Vanadium	1020		1000	102	75-125	0	20		6020A
Zinc	1110		1000	102	75-125	0	20		6020A
Calcium	21000		10000	84	75-125	0	20		6020A
Potassium	13500		10000	96	75-125	1	20		6020A
Magnesium	12900		10000	94	75-125	1	20		6020A
Sodium	45600		10000	76	75-125	1	20		6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-107638-2

SDG No:

Lab Name: TestAmerica Canton Job No: 240-107638-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Silver	0.053	U	0.27	U	NC		6020A
Aluminum	57		170	U	NC		6020A
Arsenic	0.75	U	3.8	U	NC		6020A
Barium	57		56.8		NC		6020A
Beryllium	1.7		1.84	J	NC		6020A
Cadmium	0.22	J	1.1	U	NC		6020A
Cobalt	24		23.8		NC		6020A
Chromium	0.98	U	4.9	U	NC		6020A
Copper	170		178		NC		6020A
Iron	47	U	240	U	NC		6020A
Manganese	75		74.6		NC		6020A
Nickel	34		32.7		NC		6020A
Lead	0.45	U	2.3	U	NC		6020A
Antimony	0.66	J	2.9	U	NC		6020A
Selenium	0.89	U	4.5	U	NC		6020A
Thallium	0.20	U	1.0	U	NC		6020A
Vanadium	0.82	U	4.1	U	NC		6020A
Zinc	98		86.3	J	NC		6020A
Calcium	13000		12300		NC		6020A
Potassium	3900		3950	J	NC		6020A
Magnesium	3500		3440	J	NC		6020A
Sodium	38000		38500		NC		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 366966 Batch Start Date: 02/06/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/06/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00079	MTICP2A 00090	MTTMHCL 00235
MB 240-366966/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-366966/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107638-I-2	MRC-MW151A-020419	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107638-I-2 MS	MRC-MW151A-020419	3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107638-I-2 MSD	MRC-MW151A-020419	3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-366966/1		3005A, 6010C		1 mL					
LCS 240-366966/2		3005A, 6010C		1 mL					
240-107638-I-2	MRC-MW151A-020419	3005A, 6010C	R	1 mL					
240-107638-I-2 MS	MRC-MW151A-020419	3005A, 6010C	R	1 mL					
240-107638-I-2 MSD	MRC-MW151A-020419	3005A, 6010C	R	1 mL					

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb2
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 366966 Batch Start Date: 02/06/19 14:00 Batch Analyst: Dillon, Samuel

Batch Method: 3005A Batch End Date: 02/06/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00037	MTICPMSB 00037	MTTMHCL 00235
MB 240-366966/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-366966/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107638-I-2	MRC-MW151A-020419	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107638-I-2 MS	MRC-MW151A-020419	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107638-I-2 MSD	MRC-MW151A-020419	3005A, 6020A	R	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180
MB 240-366966/1		3005A, 6020A		1 mL
LCS 240-366966/3		3005A, 6020A		1 mL
240-107638-I-2	MRC-MW151A-020419	3005A, 6020A	R	1 mL
240-107638-I-2 MS	MRC-MW151A-020419	3005A, 6020A	R	1 mL
240-107638-I-2 MSD	MRC-MW151A-020419	3005A, 6020A	R	1 mL

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb2
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW151A-020419	240-107638-2

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107638-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW151A-020419	240-107638-2

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107638-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW151A-020419	240-107638-2

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107638-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 02/13/2019 13:29 End Date: 02/13/2019 16:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				HardCC																								
MB 240-367926/1	1	T	13:29	X																								
LCS 240-367926/2	1	T	13:34	X																								
ZZZZZZ			13:39																									
ZZZZZZ			13:44																									
ZZZZZZ			13:49																									
240-107638-2	1	T	13:55	X																								
ZZZZZZ			14:00																									
ZZZZZZ			14:05																									
ZZZZZZ			14:10																									
ZZZZZZ			14:16																									
ZZZZZZ			14:21																									
ZZZZZZ			14:26																									
ZZZZZZ			14:31																									
ZZZZZZ			14:37																									
ZZZZZZ			14:42																									
ZZZZZZ			14:47																									
ZZZZZZ			14:52																									
ZZZZZZ			14:57																									
ZZZZZZ			15:03																									
ZZZZZZ			15:08																									
ZZZZZZ			15:13																									
ZZZZZZ			15:18																									
ZZZZZZ			15:24																									
ZZZZZZ			15:29																									
ZZZZZZ			15:34																									
ZZZZZZ			15:39																									
ZZZZZZ			15:45																									
ZZZZZZ			15:50																									
ZZZZZZ			15:55																									
ZZZZZZ			16:00																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/18/2019 16:09 End Date: 02/18/2019 18:20

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			16:09																									
ZZZZZZ			16:21																									
LCS 240-368563/3	1	T	16:26	X																								
MB 240-368563/4	1	T	16:30	X																								
ZZZZZZ			16:34																									
ZZZZZZ			16:39																									
ZZZZZZ			16:44																									
ZZZZZZ			16:49																									
ZZZZZZ			16:54																									
ZZZZZZ			16:59																									
ZZZZZZ			17:04																									
ZZZZZZ			17:09																									
ZZZZZZ			17:10																									
ZZZZZZ			17:15																									
ZZZZZZ			17:19																									
ZZZZZZ			17:24																									
ZZZZZZ			17:29																									
ZZZZZZ			17:34																									
ZZZZZZ			17:38																									
ZZZZZZ			17:43																									
ZZZZZZ			17:47																									
ZZZZZZ			17:52																									
ZZZZZZ			17:57																									
ZZZZZZ			17:59																									
ZZZZZZ			18:03																									
ZZZZZZ			18:08																									
240-107638-2	1	T	18:12	X																								
ZZZZZZ			18:17																									
ZZZZZZ			18:20																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 02/06/2019 13:22 End Date: 02/06/2019 13:22

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-367014/1	1	T	13:22	X																								
LCS 240-367014/2	1	T	13:22	X																								
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
240-107638-2	1	T	13:22	X																								
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									
ZZZZZZ			13:22																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 08/07/2018 12:13 End Date: 08/07/2018 15:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339523/1 IC	1		12:13	X																								
STD2 240-339523/2 IC	1		12:34	X																								
STD3 240-339523/3 IC	1		12:55	X																								
STD4 240-339523/4 IC	1		13:16	X																								
STD5 240-339523/5 ICRT	1		13:36	X																								
STD6 240-339523/6 IC	1		13:57	X																								
STD7 240-339523/7 IC	1		14:18	X																								
STD8 240-339523/8 IC	1		14:39	X																								
STD9 240-339523/9 IC	1		14:59	X																								
ICV 240-339523/10	1		15:20	X																								
ICB 240-339523/11	1		15:41	X																								

Prep Types:
=

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Analyst: LKG Batch Start Date: 08/07/2018

Reporting Units: mg/L Analytical Batch No.: 339523

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:20	Sulfate	52.9	50.0	106	90-110		WCICLCS_00669
11	ICB	15:41	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 02/06/2019 13:46 End Date: 02/07/2019 08:04

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
CCV 240-367005/1	1		13:46		X																								
CCB 240-367005/2	1		14:07		X																								
MB 240-367005/3	1	T	14:28		X																								
LCS 240-367005/4	1	T	14:49		X																								
ZZZZZZ			15:09																										
ZZZZZZ			15:30																										
ZZZZZZ			15:51																										
ZZZZZZ			16:12																										
ZZZZZZ			16:32																										
ZZZZZZ			16:53																										
ZZZZZZ			17:14																										
ZZZZZZ			17:35																										
CCV 240-367005/13	1		17:55		X																								
CCB 240-367005/14	1		18:16		X																								
ZZZZZZ			18:37																										
ZZZZZZ			18:57																										
ZZZZZZ			19:18																										
ZZZZZZ			19:39																										
ZZZZZZ			19:59																										
ZZZZZZ			20:20																										
ZZZZZZ			20:41																										
ZZZZZZ			21:02																										
ZZZZZZ			21:22																										
ZZZZZZ			21:43																										
CCV 240-367005/25	1		22:04		X																								
CCB 240-367005/26	1		22:24		X																								
ZZZZZZ			22:45																										
ZZZZZZ			23:06																										
ZZZZZZ			23:26																										
ZZZZZZ			23:47																										
ZZZZZZ			00:08																										
ZZZZZZ			00:28																										
ZZZZZZ			00:49																										
ZZZZZZ			01:10																										
ZZZZZZ			01:31																										
ZZZZZZ			01:51																										
CCV 240-367005/37	1		02:12		X																								
CCB 240-367005/38	1		02:33		X																								
MB 240-367005/39	1	T	02:53		X																								
LCS 240-367005/40	1	T	03:14		X																								
ZZZZZZ			03:35																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 02/06/2019 13:46 End Date: 02/07/2019 08:04

Lab Sample Id	D/F	Type	Time	Analytes																								
				Br	SO4																							
ZZZZZZ			03:55																									
ZZZZZZ			04:16																									
ZZZZZZ			04:37																									
ZZZZZZ			04:58																									
ZZZZZZ			05:18																									
240-107638-2	1	T	05:39	X	X																							
ZZZZZZ			06:00																									
CCV 240-367005/49	1		06:20		X																							
CCB 240-367005/50	1		06:41		X																							
ZZZZZZ			07:02																									
ZZZZZZ			07:23																									
CCV 240-367005/53			07:43																									
CCB 240-367005/54			08:04																									

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Analyst: JESW Batch Start Date: 02/06/2019

Reporting Units: mg/L Analytical Batch No.: 367005

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	13:46	Sulfate	51.3	50.0	103	90-110		WCICCCV_00860
2	CCB	14:07	Sulfate	0.35				U	
13	CCV	17:55	Sulfate	51.2	50.0	102	90-110		WCICCCV_00860
14	CCB	18:16	Sulfate	0.35				U	
25	CCV	22:04	Sulfate	51.4	50.0	103	90-110		WCICCCV_00860
26	CCB	22:24	Sulfate	0.35				U	
37	CCV	02:12	Sulfate	52.0	50.0	104	90-110		WCICCCV_00860
38	CCB	02:33	Sulfate	0.35				U	
49	CCV	06:20	Sulfate	51.9	50.0	104	90-110		WCICCCV_00860
50	CCB	06:41	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107638-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/16/2019 12:45 End Date: 02/16/2019 13:21

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575923/1	1		12:45	X																								
ICB 490-575923/2	1		12:46	X																								
CCV 490-575923/3	1		12:47	X																								
CCV 490-575923/4	1		12:48	X																								
CCB 490-575923/5	1		12:49	X																								
MB 490-575923/6	1	T	12:50	X																								
LCS 490-575923/7	1	T	12:51	X																								
ZZZZZZ			12:53																									
ZZZZZZ			12:54																									
ZZZZZZ			12:55																									
ZZZZZZ			12:56																									
ZZZZZZ			12:57																									
ZZZZZZ			12:58																									
ZZZZZZ			12:59																									
ZZZZZZ			13:01																									
240-107638-2	1	T	13:02	X																								
ZZZZZZ			13:03																									
ZZZZZZ			13:04																									
ZZZZZZ			13:05																									
CCV 490-575923/20	1		13:06	X																								
CCB 490-575923/21	1		13:08	X																								
ZZZZZZ			13:09																									
ZZZZZZ			13:10																									
ZZZZZZ			13:11																									
ZZZZZZ			13:12																									
ZZZZZZ			13:13																									
ZZZZZZ			13:14																									
ZZZZZZ			13:16																									
ZZZZZZ			13:17																									
ZZZZZZ			13:18																									
ZZZZZZ			13:19																									
CCV 490-575923/32			13:20																									
CCB 490-575923/33			13:21																									

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107638-1

SDG No.:

Analyst: MSP Batch Start Date: 02/16/2019

Reporting Units: mg/L Analytical Batch No.: 575923

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:45	Nitrate Nitrite as N	3.22	3.00	107	90-110		W_ICAl_00027
2	ICB	12:46	Nitrate Nitrite as N	0.040				U	
3	CCV	12:47	Nitrate Nitrite as N	5.48	5.00	110	90-110		W_Nitrate_00020
4	CCV	12:48	Nitrate Nitrite as N	5.10	5.00	102	90-110		IC Primary_00012
5	CCB	12:49	Nitrate Nitrite as N	0.040				U	
20	CCV	13:06	Nitrate Nitrite as N	5.31	5.00	106	90-110		W_Nitrate_00020
21	CCB	13:08	Nitrate Nitrite as N	0.040				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107638-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/19/2019 06:40 End Date: 02/19/2019 06:40

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-270629/1	1	T	06:40	X																								
240-107638-2	1	T	06:40	X																								
240-107638-2 DU	1	T	06:40	X																								
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
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ZZZZZZ			06:40																									
ZZZZZZ			06:40																									

Prep Types:
T = Total/NA

FORM XIII-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 368563 Date: 02/18/2019 16:30							
2320B-2011	MB 240-368563/4	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 367926 Date: 02/13/2019 13:29							
2340C-2011	MB 240-367926/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 367014 Date: 02/06/2019 13:22							
2540 C-2011	MB 240-367014/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 367005 Date: 02/06/2019 14:28							
9056A	MB 240-367005/3	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-367005/3	Sulfate	0.35	U	mg/L	1.0	1
Batch ID: 367005 Date: 02/07/2019 02:53							
9056A	MB 240-367005/39	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-367005/39	Sulfate	0.35	U	mg/L	1.0	1

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107638-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575923 Date: 02/16/2019 12:50							
SM 4500 NO3 F	MB 490-575923/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107638-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 270629 Date: 02/19/2019 06:40							
SM 2520B	MB 180-270629/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 368563	Date: 02/18/2019 16:26										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-368563/3	Alkalinity	260		mg/L	271	96	86-123			
Batch ID: 367926	Date: 02/13/2019 13:34										
						LCS Source: WCHARDNESS_00031					
2340C-2011	LCS 240-367926/2	Hardness as calcium carbonate	264		mg/L	246	107	90-110			
Batch ID: 367014	Date: 02/06/2019 13:22										
						LCS Source: WCPHENOVSOLID_00038					
2540 C-2011	LCS 240-367014/2	Total Dissolved Solids	213		mg/L	204	104	80-120			
Batch ID: 367005	Date: 02/06/2019 14:49										
						LCS Source: WCICLCS_00695					
9056A	LCS 240-367005/4	Sulfate	51.5		mg/L	50.0	103	90-110			
Batch ID: 367005	Date: 02/07/2019 03:14										
						LCS Source: WCICLCS_00695					
9056A	LCS 240-367005/40	Sulfate	51.7		mg/L	50.0	103	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107638-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575923	Date: 02/16/2019 12:51										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575923/7	Nitrate Nitrite as N	3.22		mg/L	3.00	107	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107638-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 270629 Date: 02/19/2019 06:40								
SM 2520B	MRC-MW151A-020419	240-107638-2	Salinity	2.0	No Unit			U
SM 2520B	MRC-MW151A-020419	240-107638-2 DU	Salinity	2.0	No Unit	NC	20	U

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367926 Batch Start Date: 02/13/19 13:29 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 02/13/19 16:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCHARDNESS 00031		
MB 240-367926/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-367926/2		2340C-2011		25 mL	25 mL	6.60 mL	25 mL		
240-107638-G-2	MRC-MW151A-020419	2340C-2011	T	25 mL	25 mL	1.30 mL			

Batch Notes	
Batch Comment	BEAKERS--4010980
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C9, E3
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 368563 Batch Start Date: 02/18/19 16:09 Batch Analyst: Weisend, Joseph

Batch Method: 2320B-2011 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-368563/3		2320B-2011		InitialAmount is blank	10 mL				
MB 240-368563/4		2320B-2011		InitialAmount is blank					
240-107638-D-2	MRC-MW151A-020419	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4-4005008
pH Buffer 2 ID	7-4017506
pH Buffer 3 ID	10-3892955
pH Buffer 4 ID	12-3891579
Nominal Amount Used	10 mL
Probe ID	WCP-137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367014 Batch Start Date: 02/06/19 13:22 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date: 02/07/19 17:18

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-367014/1		2540 C-2011			3.3581 g	100 mL	3.3585 g	3.3584 g	0 g
LCS 240-367014/2		2540 C-2011			3.2202 g	100 mL	3.2415 g	3.2415 g	0 g
240-107638-H-2	MRC-MW151A-020419	2540 C-2011	T	323 umhos/cm	3.4312 g	100 mL	3.4515 g	3.4512 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 240-367014/1		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0004 g	0.0003 g	N/A g
LCS 240-367014/2		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0213 g	0.0213 g	N/A g
240-107638-H-2	MRC-MW151A-020419	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0203 g	0.02 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00038		
MB 240-367014/1		2540 C-2011		N/A g	100 mL	OK			
LCS 240-367014/2		2540 C-2011		N/A g	100 mL	OK	100 mL		
240-107638-H-2	MRC-MW151A-020419	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367014 Batch Start Date: 02/06/19 13:22 Batch Analyst: Carson, Monica

Batch Method: 2540 C-2011 Batch End Date: 02/07/19 17:18

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/07/2019 15:55
Date/Time - Out - CW (WT2)	02/07/2019 16:56
Temperature - Start - CW (WT2) - Correct	181 Celsius
Temperature - End - CW (WT2) - Correct	182 Celsius
Temperature - Start-CW(WT2) -Uncorrected	181 Celsius
Temperature - End-CW(WT2) -Uncorrected	182 Celsius
Temperature - Start - Corrected	105 Celsius
Temperature - End - Corrected	105 Celsius
Date/Time - In	02/06/2019 14:03
Date/Time - Out	02/07/2019 13:35
Filter ID	60020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O06
Thermometer ID - Low Temperature	84922
Thermometer ID	181417084
Temperature - Start - Uncorrected	105 Celsius
Temperature - End - Uncorrected	105 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/07/2019 13:35 No Unit
Weight(WT1) Date/Time Out	02/07/2019 14:37
Weight(WT1) Start Temp	182 Celsius
Weight(WT1) Temp Out	182 Celsius
Uncorrected Weight(WT1) Start Temp	182 Celsius
Uncorrected Weight(WT1) Temp Out	182 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339523/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339523/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339523/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339523/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339523/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339523/6 IC		300.0		5 mL	2 mL				
STD7 240-339523/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339523/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339523/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367005 Batch Start Date: 02/06/19 13:46 Batch Analyst: Weisend, Joseph

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107638-D-2	MRC-MW151A-020419	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICLCS 00669			
ICV 240-339523/10		9056A		5 mL	1.0 mL	5 mL			
ICB 240-339523/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367005 Batch Start Date: 02/06/19 13:46 Batch Analyst: Weisend, Joseph

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107638-D-2	MRC-MW151A-020419	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107638-1

SDG No.:

Batch Number: 367005 Batch Start Date: 02/06/19 13:46 Batch Analyst: Weisend, Joseph

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00860	WCICLCS 00695			
CCV 240-367005/1		9056A		5 mL	5 mL				
CCB 240-367005/2		9056A		5 mL					
MB 240-367005/3		9056A		5 mL					
LCS 240-367005/4		9056A		5 mL		5 mL			
CCV 240-367005/13		9056A		5 mL	5 mL				
CCB 240-367005/14		9056A		5 mL					
CCV 240-367005/25		9056A		5 mL	5 mL				
CCB 240-367005/26		9056A		5 mL					
CCV 240-367005/37		9056A		5 mL	5 mL				
CCB 240-367005/38		9056A		5 mL					
MB 240-367005/39		9056A		5 mL					
LCS 240-367005/40		9056A		5 mL		5 mL			
CCV 240-367005/49		9056A		5 mL	5 mL				
CCB 240-367005/50		9056A		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107638-1

SDG No.:

Batch Number: 575923 Batch Start Date: 02/16/19 12:45 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/16/19 13:23

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575923/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575923/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575923/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575923/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575923/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575923/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575923/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
240-107638-F-2	MRC-MW151A-020419	SM 4500 NO3 F	T	50 mL	50 mL				7.08
CCV 490-575923/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575923/21		SM 4500 NO3 F		50 mL	50 mL				

Batch Notes	
Acid used for pH adjustment	4547067
Base used for pH adjustment	4273883
Batch Comment	cent tubes 809161; pH probe VVZ10915; pH meter AB92340683
Buffer Reagent ID	4832283
Carrier Identification	DI water
Color Reagent ID	4832299
Filter ID	180611314
Pipette/Syringe/Dispenser ID	26061004, 26121028

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

0-8/0-8

North Canton
4101 Shuffel Street, N. W.

North Canton, OH 44720
phone 330.497.9396 fax 330.497.0772

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Mike Martin	Site Contact: Walt Pryor	Date: 2/6/19	COC No:
20251 Century Blvd, Suite 200	Analysis Turnaround Time			Job No.
Germantown, MD 20874	Calendar (C) or Work Days (W) _____			
(301) 528-3021 Phone	TAT if different from Below STANDARD TAT			SDG No.
(301) 528-3000 FAX	☐ 2 weeks			
Project Name: MRC BLOCK E/F MASS DISCHARGE	☐ 1 week			
Site: MRC BLOCK E	☐ 2 days Standard			Sampler: Walt Pryor
PO # 112IC08784	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs (SW0846 8260C)	Total Metals/Hardness (6020A, 2340C)	Sulfate, Nitrates, TDS (9056A, 4500-NO3E, 2540C	Bromide (300)	Iron and Manganese (6010C	Alkalinity (SM 2320B)	Salinity (2520B)	PCBs (680)	Sample Specific Notes:
TB- 020619	2/6/19	—	GRAB	WATER	2		X	1	—	—	—	—	—	—	
MRC-MW138B-020619		1019			9		3	1	1	1	1	1	1	—	
MRC-MW141B-020619		1145			9		3	1	1	1	1	1	1	—	Sample Hot Pid 31500
MRC-MW142B-020619		1318			9		3	1	1	1	1	1	1	—	
MRC-MW158A-020619		1430			11		3	1	1	1	1	1	1	2	
MRC-Dup01-020619		0000			9		3	1	1	1	1	1	1	—	
							2	4	6	1	4	1	1	1	

240-107796 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: Block E/F Mass discharge well sampling

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pr	TT PAR	2/6/19 1730		TAC	2-7-19 930
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 107796**
Canton Facility

Client MRC Block E/F Mass Discharge Site Name _____ Cooler unpacked by:

Cooler Received on 2-7-19 Opened on 2-7-19

FedEx: 1st Grd ~~Exp~~ UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 1A Foam Box Client Cooler Box Other _____

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other _____

COOLANT: ~~Wet Ice~~ Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF **-0.2** °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #36 (CF **+0**°C) Observed Cooler Temp. 0-8 °C Corrected Cooler Temp. 0-8 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
   -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
    If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC854592**
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by:

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW138B-020619	240-107796-F-2	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW138B-020619	240-107796-G-2	Plastic 250ml - with Nitric Acid	<2		
MRC-MW138B-020619	240-107796-I-2	Plastic 500ml - with Nitric Acid	<2		
MRC-MW141B-020619	240-107796-F-3	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW141B-020619	240-107796-G-3	Plastic 250ml - with Nitric Acid	<2		
MRC-MW141B-020619	240-107796-I-3	Plastic 500ml - with Nitric Acid	<2		
MRC-MW142B-020619	240-107796-F-4	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW142B-020619	240-107796-G-4	Plastic 250ml - with Nitric Acid	<2		
MRC-MW142B-020619	240-107796-I-4	Plastic 500ml - with Nitric Acid	<2		
MRC-MW158A-020619	240-107796-F-5	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW158A-020619	240-107796-G-5	Plastic 250ml - with Nitric Acid	<2		
MRC-MW158A-020619	240-107796-I-5	Plastic 500ml - with Nitric Acid	<2		
MRC-DUP01-020619	240-107796-F-6	Plastic 250ml - with Sulfuric Acid	<2		
MRC-DUP01-020619	240-107796-G-6	Plastic 250ml - with Nitric Acid	<2		
MRC-DUP01-020619	240-107796-I-6	Plastic 500ml - with Nitric Acid	<2		

CASE NARRATIVE

Client: Tetra Tech, Inc.

Project: MRC Block E/F Mass Discharge

Report Number: 240-107796-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The PCB by 680 and NO2/NO3 by SM4500_NO3_F analysis were performed at TestAmerica Savannah Laboratory. The Specific Conductance and Salinity analysis were performed at TestAmerica Pittsburgh Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 2/7/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TB-020619 (240-107796-1), MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 02/11/2019, 02/12/2019 and 02/13/2019.

Methylene Chloride was detected in method blank MB 240-367892/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Samples MRC-MW138B-020619 (240-107796-2)[25X], MRC-MW141B-020619 (240-107796-3)[1000X], MRC-MW142B-020619 (240-107796-4)[4X] and MRC-DUP01-020619 (240-107796-6)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 307509 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. TB-020619 (240-107796-1)

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample. The following samples were received in hydrochloric preserved vials: TB-020619 (240-107796-1), MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6)

The continuing calibration verification (CCV) for analytical batch 367672 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3) and MRC-MW142B-020619 (240-107796-4)

The continuing calibration verification (CCV) for analytical batch 367892 exceeded control criteria for multiple compounds. The samples associated with this CCV were non-detects for the affected analytes. In accordance with the laboratory SOP, a low level CCV at the reporting limit (labeled as an MRL) was analyzed and the affected compounds were detected; therefore the data has been reported. No further corrective action was required. MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)
Sample MRC-MW158A-020619 (240-107796-5) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA Method 680. The samples were prepared on 02/19/2019 and analyzed on 02/21/2019.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 680-558728.

The SOP for the 680 Method allows that for soils the CCVIS has a limit of <30%D for each analyte and for liquids <20%D for each analyte . It also allows that the capping CCV for soils has the limit of <30% average %D with no analyte >60%D and for liquids <20% average D with no analyte >40%D. Due to software limitations for this method, the limits are set at <20%D. (CCV 680-559059/21)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)
Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/08/2019 and analyzed on 02/11/2019.

Iron was detected in method blank MB 240-367336/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 02/08/2019 and analyzed on 02/11/2019 and 02/12/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY
Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 02/11/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HARDNESS
Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for hardness in accordance with SM 2340C. The samples were analyzed on 02/13/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 02/12/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 02/12/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS
Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4),

MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for anions in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 02/12/2019.

Sample MRC-MW158A-020619 (240-107796-5)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SALINITY

Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for Salinity in accordance with SM 2520B. The samples were analyzed on 02/19/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGEN-NITRATE

Samples MRC-MW138B-020619 (240-107796-2), MRC-MW141B-020619 (240-107796-3), MRC-MW142B-020619 (240-107796-4), MRC-MW158A-020619 (240-107796-5) and MRC-DUP01-020619 (240-107796-6) were analyzed for Nitrogen-Nitrate in accordance with SM 4500 NO3 F. The samples were analyzed on 02/17/2019.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Block E/F Mass Discharge

TestAmerica Job ID: 240-107796-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-107796-1	TB-020619	Water	02/06/19 00:00	02/07/19 09:30
240-107796-2	MRC-MW138B-020619	Water	02/06/19 10:19	02/07/19 09:30
240-107796-3	MRC-MW141B-020619	Water	02/06/19 11:45	02/07/19 09:30
240-107796-4	MRC-MW142B-020619	Water	02/06/19 13:18	02/07/19 09:30
240-107796-5	MRC-MW158A-020619	Water	02/06/19 14:30	02/07/19 09:30
240-107796-6	MRC-DUP01-020619	Water	02/06/19 00:00	02/07/19 09:30

Method Summary

Client: Tetra Tech, Inc. TestAmerica Job ID: 240-107796-1
Project/Site: MRC Block E/F Mass Discharge

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
680	Polychlorinated Biphenyls (PCBs) (GC/MS)	EPA	TAL SAV
6010C	Metals (ICP)	SW846	TAL CAN
6020A	Metals (ICP/MS)	SW846	TAL CAN
2320B-2011	Alkalinity, Total	SM	TAL CAN
2340C-2011	Hardness, Total	SM	TAL CAN
2540 C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2520B	Salinity, Electrical Conductivity	SM	TAL PIT
SM 4500 NO3 F	Nitrogen, Nitrate	SM	TAL NSH
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN
680	Liquid-Liquid Extraction (Separatory Funnel)	EPA	TAL SAV

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-020619	240-107796-1	92	99	88	82
MRC-MW138B-020619	240-107796-2	87	92	84	79
MRC-MW141B-020619	240-107796-3	84	90	82	77
MRC-MW142B-020619	240-107796-4	92	97	89	81
MRC-MW158A-020619	240-107796-5	88	92	85	81
MRC-DUP01-020619	240-107796-6	83	87	79	75
	MB 240-367509/6	86	92	86	81
	MB 240-367672/6	81	87	81	77
	MB 240-367892/6	91	97	89	85
	LCS 240-367509/4	97	94	94	92
	LCS 240-367672/4	88	86	82	83
	LCS 240-367892/4	90	88	84	84
MRC-MW141B-020619 MS	240-107796-3 MS	89	87	86	83
MRC-MW141B-020619 MSD	240-107796-3 MSD	92	91	88	85

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-367509/2		1607043	5.20	1260395	7.88	745296	10.12
CCVIS 240-367672/2		1813807	5.20	1522602	7.88	926461	10.12
CCVIS 240-367892/2		1803643	5.20	1542696	7.88	927814	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Sample No.: CCVIS 240-367509/2 Date Analyzed: 02/11/2019 10:51

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8765.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1607043	5.20	1260395	7.88	745296	10.12
UPPER LIMIT		3214086	5.70	2520790	8.38	1490592	10.62
LOWER LIMIT		803522	4.70	630198	7.38	372648	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367509/4		1796449	5.20	1507511	7.88	863122	10.12
CCV 240-367509/3		1829504	5.20	1503859	7.88	817203	10.12
MB 240-367509/6		1730580	5.20	1472271	7.88	810355	10.12
240-107796-1	TB-020619	1505298	5.20	1262185	7.88	720503	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Sample No.: CCVIS 240-367672/2 Date Analyzed: 02/12/2019 10:48

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8788.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1813807	5.20	1522602	7.88	926461	10.12
UPPER LIMIT		3627614	5.70	3045204	8.38	1852922	10.62
LOWER LIMIT		906904	4.70	761301	7.38	463231	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367672/4		1787433	5.20	1540504	7.88	895344	10.12
CCV 240-367672/3		1803926	5.20	1522212	7.88	833765	10.12
MB 240-367672/6		1759637	5.21	1514348	7.88	844128	10.12
240-107796-2	MRC-MW138B-020619	1719138	5.20	1476340	7.88	817581	10.12
240-107796-3	MRC-MW141B-020619	1693055	5.20	1418830	7.88	792712	10.12
240-107796-3 MS	MRC-MW141B-020619 MS	1843356	5.21	1579862	7.88	936719	10.12
240-107796-3 MSD	MRC-MW141B-020619 MSD	1769941	5.20	1504965	7.88	872726	10.12
240-107796-4	MRC-MW142B-020619	1640262	5.20	1372048	7.88	765739	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Sample No.: CCVIS 240-367892/2 Date Analyzed: 02/13/2019 11:48

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8806.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1803643	5.20	1542696	7.88	927814	10.12
UPPER LIMIT		3607286	5.70	3085392	8.38	1855628	10.62
LOWER LIMIT		901822	4.70	771348	7.38	463907	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367892/4		1866937	5.20	1555716	7.88	933071	10.12
CCV 240-367892/3		1758419	5.20	1529185	7.88	842177	10.12
MB 240-367892/6		1565514	5.20	1326978	7.88	735680	10.12
240-107796-5	MRC-MW158A-020619	1623378	5.20	1401608	7.88	789394	10.12
240-107796-6	MRC-DUP01-020619	1795194	5.20	1537264	7.88	854668	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: UXC8770.D Lab Sample ID: MB 240-367509/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/11/2019 12:40

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367509/4	UXC8766.D	02/11/2019 11:13
TB-020619	240-107796-1	UXC8786.D	02/11/2019 19:47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367509/6

Matrix: Water | Lab File ID: UXC8770.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/11/2019 12:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367509 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-121
460-00-4	4-Bromofluorobenzene (Surr)	81		59-120
2037-26-5	Toluene-d8 (Surr)	86		70-123
1868-53-7	Dibromofluoromethane (Surr)	86		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.03	90	80-124	
1,1,1-Trichloroethane	10.0	10.5	105	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.69	87	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.62	96	50-156	
1,1-Dichloroethane	10.0	10.5	105	75-133	
1,1-Dichloroethene	10.0	9.12	91	65-139	
1,1-Dichloropropene	10.0	9.95	99	78-126	
1,2,3-Trichlorobenzene	10.0	8.95	90	39-138	
1,2,3-Trichloropropane	10.0	8.85	88	66-139	
1,2,4-Trichlorobenzene	10.0	8.66	87	42-133	
1,2,4-Trimethylbenzene	10.0	9.49	95	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.72	57	46-132	
1,2-Dichlorobenzene	10.0	9.87	99	78-120	
1,2-Dichloroethane	10.0	10.3	103	71-135	
1,2-Dichloropropane	10.0	10.6	106	78-133	
1,3-Dichlorobenzene	10.0	9.58	96	78-120	
1,3-Dichloropropane	10.0	9.50	95	72-134	
1,4-Dichlorobenzene	10.0	9.63	96	78-120	
2,2-Dichloropropane	10.0	10.5	105	42-150	
2-Chloroethyl vinyl ether	10.0	8.08 J	81	55-137	
2-Chlorotoluene	10.0	9.67	97	78-123	
2-Hexanone	20.0	15.5	77	43-148	
Bromobenzene	10.0	9.69	97	74-129	
Bromochloromethane	10.0	10.7	107	74-130	
4-Chlorotoluene	10.0	9.49	95	77-125	
4-Isopropyltoluene	10.0	9.40	94	69-122	
Acetone	20.0	17.4	87	21-162	
Benzene	10.0	10.6	106	80-123	
Bromoform	10.0	5.03	50	49-141	
Bromomethane	10.0	8.44	84	41-175	
Carbon disulfide	10.0	7.88	79	60-138	
Carbon tetrachloride	10.0	9.20	92	63-140	
Chlorobenzene	10.0	10.0	100	80-121	
Chloroethane	10.0	8.43	84	33-173	
Chloroform	10.0	10.5	105	79-127	
Chloromethane	10.0	8.83	88	54-143	
cis-1,2-Dichloroethene	10.0	10.6	106	76-128	
cis-1,3-Dichloropropene	10.0	8.94	89	64-132	
Hexachlorobutadiene	10.0	8.16	82	38-136	
Dibromomethane	10.0	9.67	97	74-124	
Bromodichloromethane	10.0	8.78	88	77-125	
Dichlorodifluoromethane	10.0	7.36	74	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.78	98	80-120	
1,2-Dibromoethane	10.0	8.95	89	77-123	
Naphthalene	10.0	7.76	78	28-141	
m-Xylene & p-Xylene	10.0	9.69	97	80-120	
n-Butylbenzene	10.0	8.82	88	57-126	
Isopropylbenzene	10.0	9.80	98	74-120	
N-Propylbenzene	10.0	9.40	94	77-123	
2-Butanone (MEK)	20.0	17.5	87	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.8	84	49-143	
sec-Butylbenzene	10.0	9.10	91	68-123	
Methyl tert-butyl ether	10.0	8.88	89	51-133	
Methylene Chloride	10.0	9.41	94	70-134	
o-Xylene	10.0	9.98	100	80-120	
Styrene	10.0	9.34	93	79-120	
tert-Butylbenzene	10.0	9.02	90	70-121	
Tetrachloroethene	10.0	9.77	98	74-130	
Toluene	10.0	10.0	100	78-129	
trans-1,2-Dichloroethene	10.0	10.7	107	78-133	
trans-1,3-Dichloropropene	10.0	7.22	72	55-128	
Trichloroethene	10.0	10.3	103	76-125	
Trichlorofluoromethane	10.0	9.69	97	51-164	
Vinyl acetate	10.0	8.28	83	45-151	
Vinyl chloride	10.0	8.69	87	58-143	
tert-Butyl alcohol	100	59.8	60	10-161	
Xylenes, Total	20.0	19.7	98	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: UXC8793.D Lab Sample ID: MB 240-367672/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/12/2019 12:38

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367672/4	UXC8789.D	02/12/2019 11:10
MRC-MW138B-020619	240-107796-2	UXC8796.D	02/12/2019 13:43
MRC-MW141B-020619	240-107796-3	UXC8797.D	02/12/2019 14:05
MRC-MW141B-020619 MS	240-107796-3 MS	UXC8801.D	02/12/2019 15:32
MRC-MW141B-020619 MSD	240-107796-3 MSD	UXC8802.D	02/12/2019 15:54
MRC-MW142B-020619	240-107796-4	UXC8804.D	02/12/2019 16:38

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367672/6

Matrix: Water | Lab File ID: UXC8793.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 12:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367672/6

Matrix: Water | Lab File ID: UXC8793.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/12/2019 12:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367672 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.6	U	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-367672/6

Matrix: Water Lab File ID: UXC8793.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 02/12/2019 12:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367672 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		70-121
460-00-4	4-Bromofluorobenzene (Surr)	77		59-120
2037-26-5	Toluene-d8 (Surr)	81		70-123
1868-53-7	Dibromofluoromethane (Surr)	81		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8789.D

Lab ID: LCS 240-367672/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.46	85	80-124	
1,1,1-Trichloroethane	10.0	9.89	99	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.17	82	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	10.2	102	50-156	
1,1-Dichloroethane	10.0	9.96	100	75-133	
1,1-Dichloroethene	10.0	9.00	90	65-139	
1,1-Dichloropropene	10.0	9.72	97	78-126	
1,2,3-Trichlorobenzene	10.0	8.77	88	39-138	
1,2,3-Trichloropropane	10.0	8.55	86	66-139	
1,2,4-Trichlorobenzene	10.0	8.63	86	42-133	
1,2,4-Trimethylbenzene	10.0	9.17	92	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.64	56	46-132	
1,2-Dichlorobenzene	10.0	9.54	95	78-120	
1,2-Dichloroethane	10.0	10.0	100	71-135	
1,2-Dichloropropane	10.0	10.2	102	78-133	
1,3-Dichlorobenzene	10.0	9.32	93	78-120	
1,3-Dichloropropane	10.0	9.20	92	72-134	
1,4-Dichlorobenzene	10.0	9.38	94	78-120	
2,2-Dichloropropane	10.0	8.80	88	42-150	
2-Chloroethyl vinyl ether	10.0	7.52 J	75	55-137	
2-Chlorotoluene	10.0	9.06	91	78-123	
2-Hexanone	20.0	15.4	77	43-148	
Bromobenzene	10.0	9.50	95	74-129	
Bromochloromethane	10.0	10.3	103	74-130	
4-Chlorotoluene	10.0	9.14	91	77-125	
4-Isopropyltoluene	10.0	9.15	92	69-122	
Acetone	20.0	18.6	93	21-162	
Benzene	10.0	10.2	102	80-123	
Bromoform	10.0	5.52	55	49-141	
Bromomethane	10.0	7.95	79	41-175	
Carbon disulfide	10.0	7.28	73	60-138	
Carbon tetrachloride	10.0	8.91	89	63-140	
Chlorobenzene	10.0	9.57	96	80-121	
Chloroethane	10.0	8.34	83	33-173	
Chloroform	10.0	10.2	102	79-127	
Chloromethane	10.0	8.61	86	54-143	
cis-1,2-Dichloroethene	10.0	10.1	101	76-128	
cis-1,3-Dichloropropene	10.0	8.71	87	64-132	
Hexachlorobutadiene	10.0	8.02	80	38-136	
Dibromomethane	10.0	9.42	94	74-124	
Bromodichloromethane	10.0	8.61	86	77-125	
Dichlorodifluoromethane	10.0	6.73	67	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8789.D

Lab ID: LCS 240-367672/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.28	93	80-120	
1,2-Dibromoethane	10.0	8.58	86	77-123	
Naphthalene	10.0	7.42	74	28-141	
m-Xylene & p-Xylene	10.0	9.37	94	80-120	
n-Butylbenzene	10.0	8.49	85	57-126	
Isopropylbenzene	10.0	9.45	95	74-120	
N-Propylbenzene	10.0	9.02	90	77-123	
2-Butanone (MEK)	20.0	17.8	89	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.0	80	49-143	
sec-Butylbenzene	10.0	8.94	89	68-123	
Methyl tert-butyl ether	10.0	8.28	83	51-133	
Methylene Chloride	10.0	8.95	89	70-134	
o-Xylene	10.0	9.57	96	80-120	
Styrene	10.0	9.11	91	79-120	
tert-Butylbenzene	10.0	8.70	87	70-121	
Tetrachloroethene	10.0	9.60	96	74-130	
Toluene	10.0	9.58	96	78-129	
trans-1,2-Dichloroethene	10.0	10.3	103	78-133	
trans-1,3-Dichloropropene	10.0	7.05	70	55-128	
Trichloroethene	10.0	9.98	100	76-125	
Trichlorofluoromethane	10.0	9.24	92	51-164	
Vinyl acetate	10.0	8.31	83	45-151	
Vinyl chloride	10.0	8.33	83	58-143	
tert-Butyl alcohol	100	75.3	75	10-161	
Xylenes, Total	20.0	18.9	95	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8801.D

Lab ID: 240-107796-3 MS Client ID: MRC-MW141B-020619 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10000	140 U	8060	81	67-123	
1,1,1-Trichloroethane	10000	240 U	8990	90	51-138	
1,1,2,2-Tetrachloroethane	10000	130 U	8020	80	60-137	
1,1,2-Trichlorotrifluoroethane	10000	410 U	5590	56	31-156	
1,1-Dichloroethane	10000	170 U	9730	97	63-136	
1,1-Dichloroethene	10000	190 U	8130	81	53-140	
1,1-Dichloropropene	10000	140 U	8970	90	62-127	
1,2,3-Trichlorobenzene	10000	540 U	7880	79	34-123	
1,2,3-Trichloropropane	10000	240 U	8380	84	61-143	
1,2,4-Trichlorobenzene	10000	260 U	7690	77	30-126	
1,2,4-Trimethylbenzene	10000	70 U	8640	86	62-120	
1,2-Dibromo-3-Chloropropane	10000	910 U	5050	50	38-124	
1,2-Dichlorobenzene	10000	150 U	9260	93	64-120	
1,2-Dichloroethane	10000	210 U	9910	99	65-135	
1,2-Dichloropropane	10000	150 U	9830	98	70-132	
1,3-Dichlorobenzene	10000	150 U	9020	90	62-120	
1,3-Dichloropropane	10000	210 U	9150	91	68-135	
1,4-Dichlorobenzene	10000	160 U	9060	91	63-120	
2,2-Dichloropropane	10000	310 U	7930	79	27-132	
2-Chloroethyl vinyl ether	10000	260 U	6980 J	70	10-120	
2-Chlorotoluene	10000	150 U	8910	89	64-123	
2-Hexanone	20000	540 U	15400	77	42-150	
Bromobenzene	10000	120 U	8960	90	66-127	
Bromochloromethane	10000	140 U	10200	102	73-120	
4-Chlorotoluene	10000	90 U	8760	88	63-126	
4-Isopropyltoluene	10000	130 U	8350	83	59-120	
Acetone	20000	5400 U	19300	97	10-168	
Benzene	10000	130 U	10100	101	71-122	
Bromoform	10000	760 U	4680	47	44-129	
Bromomethane	10000	420 U	7060	71	19-187	
Carbon disulfide	10000	280 U	5820	58	43-144	
Carbon tetrachloride	10000	260 U	7410	74	41-143	
Chlorobenzene	10000	140 U	9540	95	70-123	
Chloroethane	10000	830 U	7740	77	11-189	
Chloroform	10000	130 U	10200	102	68-130	
Chloromethane	10000	200 U	8610	86	31-154	
cis-1,2-Dichloroethene	10000	180 J	10200	100	64-130	
cis-1,3-Dichloropropene	10000	610 U	7940	79	48-127	
Hexachlorobutadiene	10000	830 U	6390	64	32-128	
Dibromomethane	10000	90 U	9230	92	71-120	
Bromodichloromethane	10000	170 U	7920	79	64-125	
Dichlorodifluoromethane	10000	350 U	3770	38	28-136	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8801.D

Lab ID: 240-107796-3 MS Client ID: MRC-MW141B-020619 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethylbenzene	10000	110 U	9210	92	66-120	
1,2-Dibromoethane	10000	120 U	8510	85	71-123	
Naphthalene	10000	320 U	6850	68	31-142	
m-Xylene & p-Xylene	10000	80 U	9190	92	63-121	
n-Butylbenzene	10000	140 U	7400	74	51-120	
Isopropylbenzene	10000	90 U	9020	90	59-120	
N-Propylbenzene	10000	150 U	8440	84	61-123	
2-Butanone (MEK)	20000	1200 U	18700	94	37-156	
4-Methyl-2-pentanone (MIBK)	20000	420 U	16300	81	44-143	
sec-Butylbenzene	10000	130 U	7990	80	60-120	
Methyl tert-butyl ether	10000	70 U	7630	76	41-136	
Methylene Chloride	10000	2600 U	9420	94	61-130	
o-Xylene	10000	90 U	9530	95	69-120	
Styrene	10000	100 U	8890	89	68-120	
tert-Butylbenzene	10000	140 U	8020	80	61-120	
Tetrachloroethene	10000	150 U	9050	90	51-136	
Toluene	10000	140 U	9410	94	62-132	
trans-1,2-Dichloroethene	10000	190 U	10100	101	68-133	
trans-1,3-Dichloropropene	10000	670 U	6230	62	40-125	
Trichloroethene	10000	21000	31300	98	55-131	
Trichlorofluoromethane	10000	450 U	6100	61	37-174	
Vinyl acetate	10000	190 U	7750	77	37-148	
Vinyl chloride	10000	200 U	6990	70	43-154	
tert-Butyl alcohol	100000	1700 U	64600	65	70-130	F1
Xylenes, Total	20000	150 U	18700	94	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8802.D

Lab ID: 240-107796-3 MSD Client ID: MRC-MW141B-020619 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10000	6660	67	19	13	67-123	F2
1,1,1-Trichloroethane	10000	7590	76	17	27	51-138	
1,1,2,2-Tetrachloroethane	10000	6770	68	17	31	60-137	
1,1,2-Trichlorotrifluoroethane	10000	8070	81	36	35	31-156	F2
1,1-Dichloroethane	10000	7830	78	22	23	63-136	
1,1-Dichloroethene	10000	6890	69	17	35	53-140	
1,1-Dichloropropene	10000	7440	74	19	20	62-127	
1,2,3-Trichlorobenzene	10000	7090	71	10	35	34-123	
1,2,3-Trichloropropane	10000	7100	71	16	22	61-143	
1,2,4-Trichlorobenzene	10000	6960	70	10	35	30-126	
1,2,4-Trimethylbenzene	10000	6970	70	21	27	62-120	
1,2-Dibromo-3-Chloropropane	10000	3890	39	26	35	38-124	
1,2-Dichlorobenzene	10000	7710	77	18	30	64-120	
1,2-Dichloroethane	10000	8510	85	15	24	65-135	
1,2-Dichloropropane	10000	8100	81	19	26	70-132	
1,3-Dichlorobenzene	10000	7500	75	18	31	62-120	
1,3-Dichloropropane	10000	7610	76	18	15	68-135	F2
1,4-Dichlorobenzene	10000	7570	76	18	28	63-120	
2,2-Dichloropropane	10000	6890	69	14	18	27-132	
2-Chloroethyl vinyl ether	10000	5940 J	59	16	35	10-120	
2-Chlorotoluene	10000	7230	72	21	20	64-123	F2
2-Hexanone	20000	12200	61	23	35	42-150	
Bromobenzene	10000	7710	77	15	19	66-127	
Bromochloromethane	10000	8460	85	18	15	73-120	F2
4-Chlorotoluene	10000	7190	72	20	20	63-126	
4-Isopropyltoluene	10000	6910	69	19	24	59-120	
Acetone	20000	15900	79	19	35	10-168	
Benzene	10000	8080	81	22	22	71-122	
Bromoform	10000	3540	35	28	28	44-129	F1
Bromomethane	10000	7020	70	1	35	19-187	
Carbon disulfide	10000	5350	53	8	33	43-144	
Carbon tetrachloride	10000	6440	64	14	30	41-143	
Chlorobenzene	10000	7660	77	22	23	70-123	
Chloroethane	10000	7150	71	8	35	11-189	
Chloroform	10000	8200	82	21	23	68-130	
Chloromethane	10000	6590	66	27	35	31-154	
cis-1,2-Dichloroethene	10000	8430	82	19	21	64-130	
cis-1,3-Dichloropropene	10000	6400	64	21	30	48-127	
Hexachlorobutadiene	10000	6290	63	2	35	32-128	
Dibromomethane	10000	7750	78	17	16	71-120	F2
Bromodichloromethane	10000	6470	65	20	27	64-125	
Dichlorodifluoromethane	10000	6060	61	47	35	28-136	F2

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8802.D

Lab ID: 240-107796-3 MSD Client ID: MRC-MW141B-020619 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	10000	7300	73	23	24	66-120	
1,2-Dibromoethane	10000	7100	71	18	27	71-123	
Naphthalene	10000	6000	60	13	35	31-142	
m-Xylene & p-Xylene	10000	7100	71	26	25	63-121	F2
n-Butylbenzene	10000	6320	63	16	27	51-120	
Isopropylbenzene	10000	7170	72	23	31	59-120	
N-Propylbenzene	10000	6850	68	21	20	61-123	F2
2-Butanone (MEK)	20000	14400	72	26	35	37-156	
4-Methyl-2-pentanone (MIBK)	20000	12900	64	24	35	44-143	
sec-Butylbenzene	10000	6710	67	18	24	60-120	
Methyl tert-butyl ether	10000	6490	65	16	29	41-136	
Methylene Chloride	10000	7860	79	18	29	61-130	
o-Xylene	10000	7470	75	24	25	69-120	
Styrene	10000	7180	72	21	26	68-120	
tert-Butylbenzene	10000	6600	66	19	20	61-120	
Tetrachloroethene	10000	7520	75	18	23	51-136	
Toluene	10000	7550	75	22	23	62-132	
trans-1,2-Dichloroethene	10000	8130	81	21	24	68-133	
trans-1,3-Dichloropropene	10000	5040	50	21	27	40-125	
Trichloroethene	10000	30700	93	2	23	55-131	
Trichlorofluoromethane	10000	8760	88	36	35	37-174	F2
Vinyl acetate	10000	6650	66	15	18	37-148	
Vinyl chloride	10000	7500	75	7	29	43-154	
tert-Butyl alcohol	100000	47100 J	47	31	35	70-130	F1
Xylenes, Total	20000	14600	73	25	25	67-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: UXC8811.D Lab Sample ID: MB 240-367892/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/13/2019 13:38

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367892/4	UXC8807.D	02/13/2019 12:10
MRC-MW158A-020619	240-107796-5	UXC8814.D	02/13/2019 14:43
MRC-DUP01-020619	240-107796-6	UXC8815.D	02/13/2019 16:05

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367892/6

Matrix: Water | Lab File ID: UXC8811.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	0.14	U	1.0	0.14
71-55-6	1,1,1-Trichloroethane	0.24	U	1.0	0.24
79-34-5	1,1,2,2-Tetrachloroethane	0.13	U	1.0	0.13
76-13-1	1,1,2-Trichlorotrifluoroethane	0.41	U	1.0	0.41
75-34-3	1,1-Dichloroethane	0.17	U	1.0	0.17
75-35-4	1,1-Dichloroethene	0.19	U	1.0	0.19
563-58-6	1,1-Dichloropropene	0.14	U	1.0	0.14
87-61-6	1,2,3-Trichlorobenzene	0.54	U	1.0	0.54
96-18-4	1,2,3-Trichloropropane	0.24	U	1.0	0.24
526-73-8	1,2,3-Trimethylbenzene	0.14	U	5.0	0.14
120-82-1	1,2,4-Trichlorobenzene	0.26	U	1.0	0.26
95-63-6	1,2,4-Trimethylbenzene	0.070	U	1.0	0.070
96-12-8	1,2-Dibromo-3-Chloropropane	0.91	U	2.0	0.91
95-50-1	1,2-Dichlorobenzene	0.15	U	1.0	0.15
107-06-2	1,2-Dichloroethane	0.21	U	1.0	0.21
78-87-5	1,2-Dichloropropane	0.15	U	1.0	0.15
541-73-1	1,3-Dichlorobenzene	0.15	U	1.0	0.15
142-28-9	1,3-Dichloropropane	0.21	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	0.16	U	1.0	0.16
594-20-7	2,2-Dichloropropane	0.31	U	1.0	0.31
110-75-8	2-Chloroethyl vinyl ether	0.26	U	10	0.26
95-49-8	2-Chlorotoluene	0.15	U	1.0	0.15
591-78-6	2-Hexanone	0.54	U	10	0.54
108-86-1	Bromobenzene	0.12	U	1.0	0.12
74-97-5	Bromochloromethane	0.14	U	1.0	0.14
106-43-4	4-Chlorotoluene	0.090	U	1.0	0.090
99-87-6	4-Isopropyltoluene	0.13	U	1.0	0.13
67-64-1	Acetone	5.4	U	10	5.4
71-43-2	Benzene	0.13	U	1.0	0.13
75-25-2	Bromoform	0.76	U	1.0	0.76
74-83-9	Bromomethane	0.42	U	1.0	0.42
75-15-0	Carbon disulfide	0.28	U	1.0	0.28
56-23-5	Carbon tetrachloride	0.26	U	1.0	0.26
108-90-7	Chlorobenzene	0.14	U	1.0	0.14
75-00-3	Chloroethane	0.83	U	1.0	0.83
67-66-3	Chloroform	0.13	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-367892/6

Matrix: Water | Lab File ID: UXC8811.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 367892 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	0.20	U	1.0	0.20
156-59-2	cis-1,2-Dichloroethene	0.16	U	1.0	0.16
10061-01-5	cis-1,3-Dichloropropene	0.61	U	1.0	0.61
87-68-3	Hexachlorobutadiene	0.83	U	1.0	0.83
74-95-3	Dibromomethane	0.090	U	1.0	0.090
75-27-4	Bromodichloromethane	0.17	U	1.0	0.17
75-71-8	Dichlorodifluoromethane	0.35	U	1.0	0.35
100-41-4	Ethylbenzene	0.11	U	1.0	0.11
106-93-4	1,2-Dibromoethane	0.12	U	1.0	0.12
108-20-3	Diisopropyl ether	0.17	U	10	0.17
91-20-3	Naphthalene	0.32	U	1.0	0.32
104-51-8	n-Butylbenzene	0.14	U	1.0	0.14
98-82-8	Isopropylbenzene	0.090	U	1.0	0.090
103-65-1	N-Propylbenzene	0.15	U	1.0	0.15
78-93-3	2-Butanone (MEK)	1.2	U	10	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	0.42	U	10	0.42
135-98-8	sec-Butylbenzene	0.13	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.070	U	1.0	0.070
994-05-8	Tert-amyl methyl ether	0.11	U	5.0	0.11
75-09-2	Methylene Chloride	2.78	J	5.0	2.6
100-42-5	Styrene	0.10	U	1.0	0.10
637-92-3	Ethyl tert-butyl ether	0.15	U	5.0	0.15
98-06-6	tert-Butylbenzene	0.14	U	1.0	0.14
127-18-4	Tetrachloroethene	0.15	U	1.0	0.15
108-88-3	Toluene	0.14	U	1.0	0.14
156-60-5	trans-1,2-Dichloroethene	0.19	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	0.67	U	1.0	0.67
79-01-6	Trichloroethene	0.10	U	1.0	0.10
75-69-4	Trichlorofluoromethane	0.45	U	1.0	0.45
108-05-4	Vinyl acetate	0.19	U	2.0	0.19
75-01-4	Vinyl chloride	0.20	U	1.0	0.20
75-65-0	tert-Butyl alcohol	1.7	U	50	1.7
1330-20-7	Xylenes, Total	0.15	U	2.0	0.15
124-48-1	Chlorodibromomethane	0.39	U	1.0	0.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-367892/6

Matrix: Water Lab File ID: UXC8811.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 02/13/2019 13:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 367892 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		70-121
460-00-4	4-Bromofluorobenzene (Surr)	85		59-120
2037-26-5	Toluene-d8 (Surr)	89		70-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-128

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.60	86	80-124	
1,1,1-Trichloroethane	10.0	10.1	101	69-134	
1,1,2,2-Tetrachloroethane	10.0	7.96	80	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.94	99	50-156	
1,1-Dichloroethane	10.0	10.0	100	75-133	
1,1-Dichloroethene	10.0	8.97	90	65-139	
1,1-Dichloropropene	10.0	9.59	96	78-126	
1,2,3-Trichlorobenzene	10.0	8.32	83	39-138	
1,2,3-Trichloropropane	10.0	8.35	84	66-139	
1,2,4-Trichlorobenzene	10.0	8.22	82	42-133	
1,2,4-Trimethylbenzene	10.0	8.77	88	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.66	57	46-132	
1,2-Dichlorobenzene	10.0	9.22	92	78-120	
1,2-Dichloroethane	10.0	9.95	99	71-135	
1,2-Dichloropropane	10.0	9.85	99	78-133	
1,3-Dichlorobenzene	10.0	8.91	89	78-120	
1,3-Dichloropropane	10.0	8.96	90	72-134	
1,4-Dichlorobenzene	10.0	8.98	90	78-120	
2,2-Dichloropropane	10.0	9.68	97	42-150	
2-Chloroethyl vinyl ether	10.0	7.11 J	71	55-137	
2-Chlorotoluene	10.0	8.99	90	78-123	
2-Hexanone	20.0	15.3	77	43-148	
Bromobenzene	10.0	9.08	91	74-129	
Bromochloromethane	10.0	10.2	102	74-130	
4-Chlorotoluene	10.0	8.70	87	77-125	
4-Isopropyltoluene	10.0	8.79	88	69-122	
Acetone	20.0	16.3	81	21-162	
Benzene	10.0	10.1	101	80-123	
Bromoform	10.0	5.22	52	49-141	
Bromomethane	10.0	7.90	79	41-175	
Carbon disulfide	10.0	7.70	77	60-138	
Carbon tetrachloride	10.0	8.94	89	63-140	
Chlorobenzene	10.0	9.44	94	80-121	
Chloroethane	10.0	7.96	80	33-173	
Chloroform	10.0	10.1	101	79-127	
Chloromethane	10.0	7.52	75	54-143	
cis-1,2-Dichloroethene	10.0	10.1	101	76-128	
cis-1,3-Dichloropropene	10.0	8.48	85	64-132	
Hexachlorobutadiene	10.0	7.72	77	38-136	
Dibromomethane	10.0	9.26	93	74-124	
Bromodichloromethane	10.0	8.40	84	77-125	
Dichlorodifluoromethane	10.0	5.94	59	29-148	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.29	93	80-120	
1,2-Dibromoethane	10.0	8.51	85	77-123	
Naphthalene	10.0	7.20	72	28-141	
m-Xylene & p-Xylene	10.0	9.41	94	80-120	
n-Butylbenzene	10.0	8.24	82	57-126	
Isopropylbenzene	10.0	9.54	95	74-120	
N-Propylbenzene	10.0	8.77	88	77-123	
2-Butanone (MEK)	20.0	17.0	85	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	15.5	78	49-143	
sec-Butylbenzene	10.0	8.62	86	68-123	
Methyl tert-butyl ether	10.0	8.10	81	51-133	
Methylene Chloride	10.0	13.1	131	70-134	
o-Xylene	10.0	9.59	96	80-120	
Styrene	10.0	9.02	90	79-120	
tert-Butylbenzene	10.0	8.40	84	70-121	
Tetrachloroethene	10.0	9.78	98	74-130	
Toluene	10.0	9.59	96	78-129	
trans-1,2-Dichloroethene	10.0	10.2	102	78-133	
trans-1,3-Dichloropropene	10.0	6.92	69	55-128	
Trichloroethene	10.0	9.91	99	76-125	
Trichlorofluoromethane	10.0	8.99	90	51-164	
Vinyl acetate	10.0	7.96	80	45-151	
Vinyl chloride	10.0	7.98	80	58-143	
tert-Butyl alcohol	100	60.7	61	10-161	
Xylenes, Total	20.0	19.0	95	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-020619	240-107796-1	92	99	88	82
MRC-MW138B-020619	240-107796-2	87	92	84	79
MRC-MW141B-020619	240-107796-3	84	90	82	77
MRC-MW142B-020619	240-107796-4	92	97	89	81
MRC-MW158A-020619	240-107796-5	88	92	85	81
MRC-DUP01-020619	240-107796-6	83	87	79	75
	MB 240-367509/6	86	92	86	81
	MB 240-367672/6	81	87	81	77
	MB 240-367892/6	91	97	89	85
	LCS 240-367509/4	97	94	94	92
	LCS 240-367672/4	88	86	82	83
	LCS 240-367892/4	90	88	84	84
MRC-MW141B-020619 MS	240-107796-3 MS	89	87	86	83
MRC-MW141B-020619 MSD	240-107796-3 MSD	92	91	88	85

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-128
DCA = 1,2-Dichloroethane-d4 (Surr)	70-121
TOL = Toluene-d8 (Surr)	70-123
BFB = 4-Bromofluorobenzene (Surr)	59-120

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.03	90	80-124	
1,1,1-Trichloroethane	10.0	10.5	105	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.69	87	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.62	96	50-156	
1,1-Dichloroethane	10.0	10.5	105	75-133	
1,1-Dichloroethene	10.0	9.12	91	65-139	
1,1-Dichloropropene	10.0	9.95	99	78-126	
1,2,3-Trichlorobenzene	10.0	8.95	90	39-138	
1,2,3-Trichloropropane	10.0	8.85	88	66-139	
1,2,4-Trichlorobenzene	10.0	8.66	87	42-133	
1,2,4-Trimethylbenzene	10.0	9.49	95	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.72	57	46-132	
1,2-Dichlorobenzene	10.0	9.87	99	78-120	
1,2-Dichloroethane	10.0	10.3	103	71-135	
1,2-Dichloropropane	10.0	10.6	106	78-133	
1,3-Dichlorobenzene	10.0	9.58	96	78-120	
1,3-Dichloropropane	10.0	9.50	95	72-134	
1,4-Dichlorobenzene	10.0	9.63	96	78-120	
2,2-Dichloropropane	10.0	10.5	105	42-150	
2-Chloroethyl vinyl ether	10.0	8.08 J	81	55-137	
2-Chlorotoluene	10.0	9.67	97	78-123	
2-Hexanone	20.0	15.5	77	43-148	
Bromobenzene	10.0	9.69	97	74-129	
Bromochloromethane	10.0	10.7	107	74-130	
4-Chlorotoluene	10.0	9.49	95	77-125	
4-Isopropyltoluene	10.0	9.40	94	69-122	
Acetone	20.0	17.4	87	21-162	
Benzene	10.0	10.6	106	80-123	
Bromoform	10.0	5.03	50	49-141	
Bromomethane	10.0	8.44	84	41-175	
Carbon disulfide	10.0	7.88	79	60-138	
Carbon tetrachloride	10.0	9.20	92	63-140	
Chlorobenzene	10.0	10.0	100	80-121	
Chloroethane	10.0	8.43	84	33-173	
Chloroform	10.0	10.5	105	79-127	
Chloromethane	10.0	8.83	88	54-143	
cis-1,2-Dichloroethene	10.0	10.6	106	76-128	
cis-1,3-Dichloropropene	10.0	8.94	89	64-132	
Hexachlorobutadiene	10.0	8.16	82	38-136	
Dibromomethane	10.0	9.67	97	74-124	
Bromodichloromethane	10.0	8.78	88	77-125	
Dichlorodifluoromethane	10.0	7.36	74	29-148	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8766.D

Lab ID: LCS 240-367509/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.78	98	80-120	
1,2-Dibromoethane	10.0	8.95	89	77-123	
Naphthalene	10.0	7.76	78	28-141	
m-Xylene & p-Xylene	10.0	9.69	97	80-120	
n-Butylbenzene	10.0	8.82	88	57-126	
Isopropylbenzene	10.0	9.80	98	74-120	
N-Propylbenzene	10.0	9.40	94	77-123	
2-Butanone (MEK)	20.0	17.5	87	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.8	84	49-143	
sec-Butylbenzene	10.0	9.10	91	68-123	
Methyl tert-butyl ether	10.0	8.88	89	51-133	
Methylene Chloride	10.0	9.41	94	70-134	
o-Xylene	10.0	9.98	100	80-120	
Styrene	10.0	9.34	93	79-120	
tert-Butylbenzene	10.0	9.02	90	70-121	
Tetrachloroethene	10.0	9.77	98	74-130	
Toluene	10.0	10.0	100	78-129	
trans-1,2-Dichloroethene	10.0	10.7	107	78-133	
trans-1,3-Dichloropropene	10.0	7.22	72	55-128	
Trichloroethene	10.0	10.3	103	76-125	
Trichlorofluoromethane	10.0	9.69	97	51-164	
Vinyl acetate	10.0	8.28	83	45-151	
Vinyl chloride	10.0	8.69	87	58-143	
tert-Butyl alcohol	100	59.8	60	10-161	
Xylenes, Total	20.0	19.7	98	80-120	
Chlorodibromomethane	10.0	7.44	74	70-132	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8789.D

Lab ID: LCS 240-367672/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.46	85	80-124	
1,1,1-Trichloroethane	10.0	9.89	99	69-134	
1,1,2,2-Tetrachloroethane	10.0	8.17	82	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	10.2	102	50-156	
1,1-Dichloroethane	10.0	9.96	100	75-133	
1,1-Dichloroethene	10.0	9.00	90	65-139	
1,1-Dichloropropene	10.0	9.72	97	78-126	
1,2,3-Trichlorobenzene	10.0	8.77	88	39-138	
1,2,3-Trichloropropane	10.0	8.55	86	66-139	
1,2,4-Trichlorobenzene	10.0	8.63	86	42-133	
1,2,4-Trimethylbenzene	10.0	9.17	92	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.64	56	46-132	
1,2-Dichlorobenzene	10.0	9.54	95	78-120	
1,2-Dichloroethane	10.0	10.0	100	71-135	
1,2-Dichloropropane	10.0	10.2	102	78-133	
1,3-Dichlorobenzene	10.0	9.32	93	78-120	
1,3-Dichloropropane	10.0	9.20	92	72-134	
1,4-Dichlorobenzene	10.0	9.38	94	78-120	
2,2-Dichloropropane	10.0	8.80	88	42-150	
2-Chloroethyl vinyl ether	10.0	7.52 J	75	55-137	
2-Chlorotoluene	10.0	9.06	91	78-123	
2-Hexanone	20.0	15.4	77	43-148	
Bromobenzene	10.0	9.50	95	74-129	
Bromochloromethane	10.0	10.3	103	74-130	
4-Chlorotoluene	10.0	9.14	91	77-125	
4-Isopropyltoluene	10.0	9.15	92	69-122	
Acetone	20.0	18.6	93	21-162	
Benzene	10.0	10.2	102	80-123	
Bromoform	10.0	5.52	55	49-141	
Bromomethane	10.0	7.95	79	41-175	
Carbon disulfide	10.0	7.28	73	60-138	
Carbon tetrachloride	10.0	8.91	89	63-140	
Chlorobenzene	10.0	9.57	96	80-121	
Chloroethane	10.0	8.34	83	33-173	
Chloroform	10.0	10.2	102	79-127	
Chloromethane	10.0	8.61	86	54-143	
cis-1,2-Dichloroethene	10.0	10.1	101	76-128	
cis-1,3-Dichloropropene	10.0	8.71	87	64-132	
Hexachlorobutadiene	10.0	8.02	80	38-136	
Dibromomethane	10.0	9.42	94	74-124	
Bromodichloromethane	10.0	8.61	86	77-125	
Dichlorodifluoromethane	10.0	6.73	67	29-148	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8789.D

Lab ID: LCS 240-367672/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.28	93	80-120	
1,2-Dibromoethane	10.0	8.58	86	77-123	
Naphthalene	10.0	7.42	74	28-141	
m-Xylene & p-Xylene	10.0	9.37	94	80-120	
n-Butylbenzene	10.0	8.49	85	57-126	
Isopropylbenzene	10.0	9.45	95	74-120	
N-Propylbenzene	10.0	9.02	90	77-123	
2-Butanone (MEK)	20.0	17.8	89	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	16.0	80	49-143	
sec-Butylbenzene	10.0	8.94	89	68-123	
Methyl tert-butyl ether	10.0	8.28	83	51-133	
Methylene Chloride	10.0	8.95	89	70-134	
o-Xylene	10.0	9.57	96	80-120	
Styrene	10.0	9.11	91	79-120	
tert-Butylbenzene	10.0	8.70	87	70-121	
Tetrachloroethene	10.0	9.60	96	74-130	
Toluene	10.0	9.58	96	78-129	
trans-1,2-Dichloroethene	10.0	10.3	103	78-133	
trans-1,3-Dichloropropene	10.0	7.05	70	55-128	
Trichloroethene	10.0	9.98	100	76-125	
Trichlorofluoromethane	10.0	9.24	92	51-164	
Vinyl acetate	10.0	8.31	83	45-151	
Vinyl chloride	10.0	8.33	83	58-143	
tert-Butyl alcohol	100	75.3	75	10-161	
Xylenes, Total	20.0	18.9	95	80-120	
Chlorodibromomethane	10.0	7.41	74	70-132	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	8.60	86	80-124	
1,1,1-Trichloroethane	10.0	10.1	101	69-134	
1,1,2,2-Tetrachloroethane	10.0	7.96	80	65-139	
1,1,2-Trichlorotrifluoroethane	10.0	9.94	99	50-156	
1,1-Dichloroethane	10.0	10.0	100	75-133	
1,1-Dichloroethene	10.0	8.97	90	65-139	
1,1-Dichloropropene	10.0	9.59	96	78-126	
1,2,3-Trichlorobenzene	10.0	8.32	83	39-138	
1,2,3-Trichloropropane	10.0	8.35	84	66-139	
1,2,4-Trichlorobenzene	10.0	8.22	82	42-133	
1,2,4-Trimethylbenzene	10.0	8.77	88	74-120	
1,2-Dibromo-3-Chloropropane	10.0	5.66	57	46-132	
1,2-Dichlorobenzene	10.0	9.22	92	78-120	
1,2-Dichloroethane	10.0	9.95	99	71-135	
1,2-Dichloropropane	10.0	9.85	99	78-133	
1,3-Dichlorobenzene	10.0	8.91	89	78-120	
1,3-Dichloropropane	10.0	8.96	90	72-134	
1,4-Dichlorobenzene	10.0	8.98	90	78-120	
2,2-Dichloropropane	10.0	9.68	97	42-150	
2-Chloroethyl vinyl ether	10.0	7.11 J	71	55-137	
2-Chlorotoluene	10.0	8.99	90	78-123	
2-Hexanone	20.0	15.3	77	43-148	
Bromobenzene	10.0	9.08	91	74-129	
Bromochloromethane	10.0	10.2	102	74-130	
4-Chlorotoluene	10.0	8.70	87	77-125	
4-Isopropyltoluene	10.0	8.79	88	69-122	
Acetone	20.0	16.3	81	21-162	
Benzene	10.0	10.1	101	80-123	
Bromoform	10.0	5.22	52	49-141	
Bromomethane	10.0	7.90	79	41-175	
Carbon disulfide	10.0	7.70	77	60-138	
Carbon tetrachloride	10.0	8.94	89	63-140	
Chlorobenzene	10.0	9.44	94	80-121	
Chloroethane	10.0	7.96	80	33-173	
Chloroform	10.0	10.1	101	79-127	
Chloromethane	10.0	7.52	75	54-143	
cis-1,2-Dichloroethene	10.0	10.1	101	76-128	
cis-1,3-Dichloropropene	10.0	8.48	85	64-132	
Hexachlorobutadiene	10.0	7.72	77	38-136	
Dibromomethane	10.0	9.26	93	74-124	
Bromodichloromethane	10.0	8.40	84	77-125	
Dichlorodifluoromethane	10.0	5.94	59	29-148	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8807.D

Lab ID: LCS 240-367892/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethylbenzene	10.0	9.29	93	80-120	
1,2-Dibromoethane	10.0	8.51	85	77-123	
Naphthalene	10.0	7.20	72	28-141	
m-Xylene & p-Xylene	10.0	9.41	94	80-120	
n-Butylbenzene	10.0	8.24	82	57-126	
Isopropylbenzene	10.0	9.54	95	74-120	
N-Propylbenzene	10.0	8.77	88	77-123	
2-Butanone (MEK)	20.0	17.0	85	39-163	
4-Methyl-2-pentanone (MIBK)	20.0	15.5	78	49-143	
sec-Butylbenzene	10.0	8.62	86	68-123	
Methyl tert-butyl ether	10.0	8.10	81	51-133	
Methylene Chloride	10.0	13.1	131	70-134	
o-Xylene	10.0	9.59	96	80-120	
Styrene	10.0	9.02	90	79-120	
tert-Butylbenzene	10.0	8.40	84	70-121	
Tetrachloroethene	10.0	9.78	98	74-130	
Toluene	10.0	9.59	96	78-129	
trans-1,2-Dichloroethene	10.0	10.2	102	78-133	
trans-1,3-Dichloropropene	10.0	6.92	69	55-128	
Trichloroethene	10.0	9.91	99	76-125	
Trichlorofluoromethane	10.0	8.99	90	51-164	
Vinyl acetate	10.0	7.96	80	45-151	
Vinyl chloride	10.0	7.98	80	58-143	
tert-Butyl alcohol	100	60.7	61	10-161	
Xylenes, Total	20.0	19.0	95	80-120	
Chlorodibromomethane	10.0	7.39	74	70-132	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8801.D

Lab ID: 240-107796-3 MS Client ID: MRC-MW141B-020619 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10000	140 U	8060	81	67-123	
1,1,1-Trichloroethane	10000	240 U	8990	90	51-138	
1,1,2,2-Tetrachloroethane	10000	130 U	8020	80	60-137	
1,1,2-Trichlorotrifluoroethane	10000	410 U	5590	56	31-156	
1,1-Dichloroethane	10000	170 U	9730	97	63-136	
1,1-Dichloroethene	10000	190 U	8130	81	53-140	
1,1-Dichloropropene	10000	140 U	8970	90	62-127	
1,2,3-Trichlorobenzene	10000	540 U	7880	79	34-123	
1,2,3-Trichloropropane	10000	240 U	8380	84	61-143	
1,2,4-Trichlorobenzene	10000	260 U	7690	77	30-126	
1,2,4-Trimethylbenzene	10000	70 U	8640	86	62-120	
1,2-Dibromo-3-Chloropropane	10000	910 U	5050	50	38-124	
1,2-Dichlorobenzene	10000	150 U	9260	93	64-120	
1,2-Dichloroethane	10000	210 U	9910	99	65-135	
1,2-Dichloropropane	10000	150 U	9830	98	70-132	
1,3-Dichlorobenzene	10000	150 U	9020	90	62-120	
1,3-Dichloropropane	10000	210 U	9150	91	68-135	
1,4-Dichlorobenzene	10000	160 U	9060	91	63-120	
2,2-Dichloropropane	10000	310 U	7930	79	27-132	
2-Chloroethyl vinyl ether	10000	260 U	6980 J	70	10-120	
2-Chlorotoluene	10000	150 U	8910	89	64-123	
2-Hexanone	20000	540 U	15400	77	42-150	
Bromobenzene	10000	120 U	8960	90	66-127	
Bromochloromethane	10000	140 U	10200	102	73-120	
4-Chlorotoluene	10000	90 U	8760	88	63-126	
4-Isopropyltoluene	10000	130 U	8350	83	59-120	
Acetone	20000	5400 U	19300	97	10-168	
Benzene	10000	130 U	10100	101	71-122	
Bromoform	10000	760 U	4680	47	44-129	
Bromomethane	10000	420 U	7060	71	19-187	
Carbon disulfide	10000	280 U	5820	58	43-144	
Carbon tetrachloride	10000	260 U	7410	74	41-143	
Chlorobenzene	10000	140 U	9540	95	70-123	
Chloroethane	10000	830 U	7740	77	11-189	
Chloroform	10000	130 U	10200	102	68-130	
Chloromethane	10000	200 U	8610	86	31-154	
cis-1,2-Dichloroethene	10000	180 J	10200	100	64-130	
cis-1,3-Dichloropropene	10000	610 U	7940	79	48-127	
Hexachlorobutadiene	10000	830 U	6390	64	32-128	
Dibromomethane	10000	90 U	9230	92	71-120	
Bromodichloromethane	10000	170 U	7920	79	64-125	
Dichlorodifluoromethane	10000	350 U	3770	38	28-136	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8801.D

Lab ID: 240-107796-3 MS Client ID: MRC-MW141B-020619 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethylbenzene	10000	110 U	9210	92	66-120	
1,2-Dibromoethane	10000	120 U	8510	85	71-123	
Naphthalene	10000	320 U	6850	68	31-142	
m-Xylene & p-Xylene	10000	80 U	9190	92	63-121	
n-Butylbenzene	10000	140 U	7400	74	51-120	
Isopropylbenzene	10000	90 U	9020	90	59-120	
N-Propylbenzene	10000	150 U	8440	84	61-123	
2-Butanone (MEK)	20000	1200 U	18700	94	37-156	
4-Methyl-2-pentanone (MIBK)	20000	420 U	16300	81	44-143	
sec-Butylbenzene	10000	130 U	7990	80	60-120	
Methyl tert-butyl ether	10000	70 U	7630	76	41-136	
Methylene Chloride	10000	2600 U	9420	94	61-130	
o-Xylene	10000	90 U	9530	95	69-120	
Styrene	10000	100 U	8890	89	68-120	
tert-Butylbenzene	10000	140 U	8020	80	61-120	
Tetrachloroethene	10000	150 U	9050	90	51-136	
Toluene	10000	140 U	9410	94	62-132	
trans-1,2-Dichloroethene	10000	190 U	10100	101	68-133	
trans-1,3-Dichloropropene	10000	670 U	6230	62	40-125	
Trichloroethene	10000	21000	31300	98	55-131	
Trichlorofluoromethane	10000	450 U	6100	61	37-174	
Vinyl acetate	10000	190 U	7750	77	37-148	
Vinyl chloride	10000	200 U	6990	70	43-154	
tert-Butyl alcohol	100000	1700 U	64600	65	70-130	F1
Xylenes, Total	20000	150 U	18700	94	67-120	
Chlorodibromomethane	10000	390 U	6540	65	60-129	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8802.D

Lab ID: 240-107796-3 MSD Client ID: MRC-MW141B-020619 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10000	6660	67	19	13	67-123	F2
1,1,1-Trichloroethane	10000	7590	76	17	27	51-138	
1,1,2,2-Tetrachloroethane	10000	6770	68	17	31	60-137	
1,1,2-Trichlorotrifluoroethane	10000	8070	81	36	35	31-156	F2
1,1-Dichloroethane	10000	7830	78	22	23	63-136	
1,1-Dichloroethene	10000	6890	69	17	35	53-140	
1,1-Dichloropropene	10000	7440	74	19	20	62-127	
1,2,3-Trichlorobenzene	10000	7090	71	10	35	34-123	
1,2,3-Trichloropropane	10000	7100	71	16	22	61-143	
1,2,4-Trichlorobenzene	10000	6960	70	10	35	30-126	
1,2,4-Trimethylbenzene	10000	6970	70	21	27	62-120	
1,2-Dibromo-3-Chloropropane	10000	3890	39	26	35	38-124	
1,2-Dichlorobenzene	10000	7710	77	18	30	64-120	
1,2-Dichloroethane	10000	8510	85	15	24	65-135	
1,2-Dichloropropane	10000	8100	81	19	26	70-132	
1,3-Dichlorobenzene	10000	7500	75	18	31	62-120	
1,3-Dichloropropane	10000	7610	76	18	15	68-135	F2
1,4-Dichlorobenzene	10000	7570	76	18	28	63-120	
2,2-Dichloropropane	10000	6890	69	14	18	27-132	
2-Chloroethyl vinyl ether	10000	5940 J	59	16	35	10-120	
2-Chlorotoluene	10000	7230	72	21	20	64-123	F2
2-Hexanone	20000	12200	61	23	35	42-150	
Bromobenzene	10000	7710	77	15	19	66-127	
Bromochloromethane	10000	8460	85	18	15	73-120	F2
4-Chlorotoluene	10000	7190	72	20	20	63-126	
4-Isopropyltoluene	10000	6910	69	19	24	59-120	
Acetone	20000	15900	79	19	35	10-168	
Benzene	10000	8080	81	22	22	71-122	
Bromoform	10000	3540	35	28	28	44-129	F1
Bromomethane	10000	7020	70	1	35	19-187	
Carbon disulfide	10000	5350	53	8	33	43-144	
Carbon tetrachloride	10000	6440	64	14	30	41-143	
Chlorobenzene	10000	7660	77	22	23	70-123	
Chloroethane	10000	7150	71	8	35	11-189	
Chloroform	10000	8200	82	21	23	68-130	
Chloromethane	10000	6590	66	27	35	31-154	
cis-1,2-Dichloroethene	10000	8430	82	19	21	64-130	
cis-1,3-Dichloropropene	10000	6400	64	21	30	48-127	
Hexachlorobutadiene	10000	6290	63	2	35	32-128	
Dibromomethane	10000	7750	78	17	16	71-120	F2
Bromodichloromethane	10000	6470	65	20	27	64-125	
Dichlorodifluoromethane	10000	6060	61	47	35	28-136	F2

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC8802.D

Lab ID: 240-107796-3 MSD Client ID: MRC-MW141B-020619 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethylbenzene	10000	7300	73	23	24	66-120	
1,2-Dibromoethane	10000	7100	71	18	27	71-123	
Naphthalene	10000	6000	60	13	35	31-142	
m-Xylene & p-Xylene	10000	7100	71	26	25	63-121	F2
n-Butylbenzene	10000	6320	63	16	27	51-120	
Isopropylbenzene	10000	7170	72	23	31	59-120	
N-Propylbenzene	10000	6850	68	21	20	61-123	F2
2-Butanone (MEK)	20000	14400	72	26	35	37-156	
4-Methyl-2-pentanone (MIBK)	20000	12900	64	24	35	44-143	
sec-Butylbenzene	10000	6710	67	18	24	60-120	
Methyl tert-butyl ether	10000	6490	65	16	29	41-136	
Methylene Chloride	10000	7860	79	18	29	61-130	
o-Xylene	10000	7470	75	24	25	69-120	
Styrene	10000	7180	72	21	26	68-120	
tert-Butylbenzene	10000	6600	66	19	20	61-120	
Tetrachloroethene	10000	7520	75	18	23	51-136	
Toluene	10000	7550	75	22	23	62-132	
trans-1,2-Dichloroethene	10000	8130	81	21	24	68-133	
trans-1,3-Dichloropropene	10000	5040	50	21	27	40-125	
Trichloroethene	10000	30700	93	2	23	55-131	
Trichlorofluoromethane	10000	8760	88	36	35	37-174	F2
Vinyl acetate	10000	6650	66	15	18	37-148	
Vinyl chloride	10000	7500	75	7	29	43-154	
tert-Butyl alcohol	100000	47100 J	47	31	35	70-130	F1
Xylenes, Total	20000	14600	73	25	25	67-120	
Chlorodibromomethane	10000	5280	53	21	26	60-129	F1

Column to be used to flag recovery and RPD values

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: UXC8770.D Lab Sample ID: MB 240-367509/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/11/2019 12:40

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367509/4	UXC8766.D	02/11/2019 11:13
TB-020619	240-107796-1	UXC8786.D	02/11/2019 19:47

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: UXC8793.D Lab Sample ID: MB 240-367672/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/12/2019 12:38

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367672/4	UXC8789.D	02/12/2019 11:10
MRC-MW138B-020619	240-107796-2	UXC8796.D	02/12/2019 13:43
MRC-MW141B-020619	240-107796-3	UXC8797.D	02/12/2019 14:05
MRC-MW141B-020619 MS	240-107796-3 MS	UXC8801.D	02/12/2019 15:32
MRC-MW141B-020619 MSD	240-107796-3 MSD	UXC8802.D	02/12/2019 15:54
MRC-MW142B-020619	240-107796-4	UXC8804.D	02/12/2019 16:38

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: UXC8811.D Lab Sample ID: MB 240-367892/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 02/13/2019 13:38

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-367892/4	UXC8807.D	02/13/2019 12:10
MRC-MW158A-020619	240-107796-5	UXC8814.D	02/13/2019 14:43
MRC-DUP01-020619	240-107796-6	UXC8815.D	02/13/2019 16:05

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0121.D BFB Injection Date: 01/21/2019

Instrument ID: A3UX15 BFB Injection Time: 10:14

Analysis Batch No.: 364786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	50.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.6) 1
176	95.0 - 101.0 % of mass 174	95.2	(97.0) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-364786/2	UXC8410.D	01/21/2019	11:37
	STD8260 240-364786/3	UXC8411.D	01/21/2019	11:59
	STD8260 240-364786/4	UXC8412.D	01/21/2019	12:21
	STD8260 240-364786/5	UXC8413.D	01/21/2019	12:43
	STD8260 240-364786/6	UXC8414.D	01/21/2019	13:05
	STD8260 240-364786/7	UXC8415.D	01/21/2019	13:26
	ICV 240-364786/14	UXC8416.D	01/21/2019	13:48
	STD 240-364786/8	UXC8417.D	01/21/2019	14:10
	STD 240-364786/9	UXC8418.D	01/21/2019	14:32
	STD 240-364786/10	UXC8419.D	01/21/2019	14:54
	STD 240-364786/11	UXC8420.D	01/21/2019	15:15
	STD 240-364786/12	UXC8421.D	01/21/2019	15:37
	STD 240-364786/13	UXC8422.D	01/21/2019	15:59
	ICV 240-364786/15	UXC8423.D	01/21/2019	16:21

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0211.D BFB Injection Date: 02/11/2019

Instrument ID: A3UX15 BFB Injection Time: 10:27

Analysis Batch No.: 367509

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.1	
75	30.0 - 60.0 % of mass 95	50.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.7	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	101.9	
175	5.0 - 9.0 % of mass 174	6.3	(6.2) 1
176	95.0 - 101.0 % of mass 174	100.4	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367509/2	UXC8765.D	02/11/2019	10:51
	LCS 240-367509/4	UXC8766.D	02/11/2019	11:13
	CCV 240-367509/3	UXC8767.D	02/11/2019	11:35
	MB 240-367509/6	UXC8770.D	02/11/2019	12:40
TB-020619	240-107796-1	UXC8786.D	02/11/2019	19:47

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0212.D BFB Injection Date: 02/12/2019

Instrument ID: A3UX15 BFB Injection Time: 10:19

Analysis Batch No.: 367672

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.1	
75	30.0 - 60.0 % of mass 95	51.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	103.9	
175	5.0 - 9.0 % of mass 174	7.2	(6.9) 1
176	95.0 - 101.0 % of mass 174	99.4	(95.7) 1
177	5.0 - 9.0 % of mass 176	6.6	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367672/2	UXC8788.D	02/12/2019	10:48
	LCS 240-367672/4	UXC8789.D	02/12/2019	11:10
	CCV 240-367672/3	UXC8790.D	02/12/2019	11:32
	MB 240-367672/6	UXC8793.D	02/12/2019	12:38
MRC-MW138B-020619	240-107796-2	UXC8796.D	02/12/2019	13:43
MRC-MW141B-020619	240-107796-3	UXC8797.D	02/12/2019	14:05
MRC-MW141B-020619 MS	240-107796-3 MS	UXC8801.D	02/12/2019	15:32
MRC-MW141B-020619 MSD	240-107796-3 MSD	UXC8802.D	02/12/2019	15:54
MRC-MW142B-020619	240-107796-4	UXC8804.D	02/12/2019	16:38

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0213.D BFB Injection Date: 02/13/2019

Instrument ID: A3UX15 BFB Injection Time: 11:22

Analysis Batch No.: 367892

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.8	
75	30.0 - 60.0 % of mass 95	50.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.6	(0.5) 1
174	50.0 - 120.00 % of mass 95	105.7	
175	5.0 - 9.0 % of mass 174	7.0	(6.6) 1
176	95.0 - 101.0 % of mass 174	101.4	(96.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367892/2	UXC8806.D	02/13/2019	11:48
	LCS 240-367892/4	UXC8807.D	02/13/2019	12:10
	CCV 240-367892/3	UXC8808.D	02/13/2019	12:32
	MB 240-367892/6	UXC8811.D	02/13/2019	13:38
MRC-MW158A-020619	240-107796-5	UXC8814.D	02/13/2019	14:43
MRC-DUP01-020619	240-107796-6	UXC8815.D	02/13/2019	16:05

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Sample No.: STD8260 240-364786/4 Date Analyzed: 01/21/2019 12:21

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8412.D Heated Purge: (Y/N) N

Calibration ID: 49064

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1873821	5.20	1485792	7.88	831741	10.12
UPPER LIMIT		3747642	5.70	2971584	8.38	1663482	10.62
LOWER LIMIT		936911	4.70	742896	7.38	415871	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-364786/14		1793251	5.20	1418410	7.88	796911	10.12
ICV 240-364786/15		1778453	5.20	1420097	7.88	764446	10.12
CCVIS 240-367509/2		1607043	5.20	1260395	7.88	745296	10.12
CCVIS 240-367672/2		1813807	5.20	1522602	7.88	926461	10.12
CCVIS 240-367892/2		1803643	5.20	1542696	7.88	927814	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Sample No.: CCVIS 240-367509/2 Date Analyzed: 02/11/2019 10:51

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8765.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1607043	5.20	1260395	7.88	745296	10.12
UPPER LIMIT		3214086	5.70	2520790	8.38	1490592	10.62
LOWER LIMIT		803522	4.70	630198	7.38	372648	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367509/4		1796449	5.20	1507511	7.88	863122	10.12
CCV 240-367509/3		1829504	5.20	1503859	7.88	817203	10.12
MB 240-367509/6		1730580	5.20	1472271	7.88	810355	10.12
240-107796-1	TB-020619	1505298	5.20	1262185	7.88	720503	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Sample No.: CCVIS 240-367672/2 Date Analyzed: 02/12/2019 10:48

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8788.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1813807	5.20	1522602	7.88	926461	10.12
UPPER LIMIT		3627614	5.70	3045204	8.38	1852922	10.62
LOWER LIMIT		906904	4.70	761301	7.38	463231	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367672/4		1787433	5.20	1540504	7.88	895344	10.12
CCV 240-367672/3		1803926	5.20	1522212	7.88	833765	10.12
MB 240-367672/6		1759637	5.21	1514348	7.88	844128	10.12
240-107796-2	MRC-MW138B-020619	1719138	5.20	1476340	7.88	817581	10.12
240-107796-3	MRC-MW141B-020619	1693055	5.20	1418830	7.88	792712	10.12
240-107796-3 MS	MRC-MW141B-020619 MS	1843356	5.21	1579862	7.88	936719	10.12
240-107796-3 MSD	MRC-MW141B-020619 MSD	1769941	5.20	1504965	7.88	872726	10.12
240-107796-4	MRC-MW142B-020619	1640262	5.20	1372048	7.88	765739	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Canton Job No.: 240-107796-1

SDG No.:

Sample No.: CCVIS 240-367892/2 Date Analyzed: 02/13/2019 11:48

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8806.D Heated Purge: (Y/N) N

Calibration ID: 49068

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1803643	5.20	1542696	7.88	927814	10.12
UPPER LIMIT		3607286	5.70	3085392	8.38	1855628	10.62
LOWER LIMIT		901822	4.70	771348	7.38	463907	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-367892/4		1866937	5.20	1555716	7.88	933071	10.12
CCV 240-367892/3		1758419	5.20	1529185	7.88	842177	10.12
MB 240-367892/6		1565514	5.20	1326978	7.88	735680	10.12
240-107796-5	MRC-MW158A-020619	1623378	5.20	1401608	7.88	789394	10.12
240-107796-6	MRC-DUP01-020619	1795194	5.20	1537264	7.88	854668	10.12

FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107796-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-364786/7	UXC8415.D
Level 2	STD8260 240-364786/6	UXC8414.D
Level 3	STD8260 240-364786/5	UXC8413.D
Level 4	STD8260 240-364786/4	UXC8412.D
Level 5	STD8260 240-364786/3	UXC8411.D
Level 6	STD8260 240-364786/2	UXC8410.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2704 0.3071	0.3084	0.3222	0.3169	0.3182	Ave		0.3072			0.1000	6.2		20.0			
Chloromethane	0.3289 0.2976	0.3274	0.3004	0.3124	0.3145	Ave		0.3135			0.1000	4.2		20.0			
Vinyl chloride	0.3261 0.2600	0.2864	0.2844	0.3065	0.2674	Ave		0.2885			0.1000	8.5		20.0			
Butadiene	0.4028 0.3420	0.4066	0.3934	0.3729	0.3588	Ave		0.3794				6.8		20.0			
Bromomethane	0.2686 0.1933	0.2748	0.2163	0.2258	0.2060	Ave		0.2308			0.0500	14.5		20.0			
Chloroethane	0.2298 0.1805	0.2264	0.1983	0.1989	0.1909	Ave		0.2041			0.0500	9.7		20.0			
Dichlorofluoromethane	0.5874 0.4462	0.5508	0.5133	0.4857	0.4776	Ave		0.5102				10.1		20.0			
Trichlorofluoromethane	0.3885 0.4373	0.4314	0.4444	0.4568	0.4435	Ave		0.4337			0.1000	5.5		20.0			
Ethyl ether	0.2527 0.2122	0.2393	0.2313	0.2239	0.2264	Ave		0.2310				6.0		20.0			
Acrolein	0.0365 0.0295	0.0303	0.0315	0.0310	0.0314	Ave		0.0317				7.8		20.0			
1,1-Dichloroethene	0.3235 0.2800	0.3292	0.3015	0.2758	0.2929	Ave		0.3005			0.1000	7.3		20.0			
1,1,2-Trichlorotrifluoroethane	0.2411 0.2414	0.2509	0.2485	0.2467	0.2520	Ave		0.2468			0.0500	1.9		20.0			
Acetone	0.0487 0.0213	0.0318	0.0276	0.0238	0.0247	Lin1	0.0519	0.0216			0.0100	8.6			0.9960		0.9900
Iodomethane	0.5303 0.4178	0.4271	0.4860	0.4853	0.4584	Ave		0.4675				9.0		20.0			
Carbon disulfide	0.9104 0.6640	0.7771	0.8074	0.7715	0.7145	Ave		0.7741			0.1000	10.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107796-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.1530 0.1820	0.1600	0.1683	0.1693	0.1865	Ave		0.1698				7.5		20.0			
Methyl acetate	0.2259 0.1968	0.2056	0.2072	0.1929	0.2018	Ave		0.2050			0.1000	5.6		20.0			
Methylene Chloride	0.8777 0.2608	0.5429	0.3681	0.3100	0.2858	Lin1	0.6169	0.2481			0.1000	4.1			0.9990		0.9900
tert-Butyl alcohol	0.0205 0.0194	0.0225	0.0201	0.0175	0.0217	Ave		0.0203				8.7		20.0			
Acrylonitrile	0.0992 0.0981	0.0964	0.0945	0.0907	0.0981	Ave		0.0962				3.3		20.0			
Methyl tert-butyl ether	0.7930 0.7799	0.7813	0.7775	0.7682	0.8007	Ave		0.7834			0.1000	1.5		20.0			
trans-1,2-Dichloroethene	0.3101 0.2660	0.2823	0.2736	0.2669	0.2784	Ave		0.2795			0.1000	5.8		20.0			
Hexane	0.0608 0.0585	0.0607	0.0559	0.0560	0.0600	Ave		0.0586				3.8		20.0			
1,1-Dichloroethane	0.4596 0.4425	0.4568	0.4457	0.4441	0.4617	Ave		0.4517			0.2000	1.9		20.0			
Vinyl acetate	0.4987 0.5397	0.4861	0.5183	0.5294	0.5465	Ave		0.5198				4.5		20.0			
cis-1,2-Dichloroethene	0.3231 0.2906	0.3188	0.3032	0.3017	0.3096	Ave		0.3078			0.1000	3.9		20.0			
2,2-Dichloropropane	0.0662 0.0571	0.0600	0.0637	0.0645	0.0628	Ave		0.0624				5.3		20.0			
2-Butanone (MEK)	0.0354 0.0328	0.0334	0.0325	0.0320	0.0334	Ave		0.0333			0.0100	3.6		20.0			
Bromochloromethane	0.1617 0.1477	0.1552	0.1523	0.1470	0.1549	Ave		0.1531				3.6		20.0			
Tetrahydrofuran	0.0906 0.0816	0.0853	0.0820	0.0745	0.0826	Ave		0.0828				6.4		20.0			
Chloroform	0.4755 0.4441	0.4649	0.4595	0.4523	0.4670	Ave		0.4606			0.2000	2.4		20.0			
1,1,1-Trichloroethane	0.3615 0.3251	0.3567	0.3634	0.3678	0.3533	Ave		0.3546			0.1000	4.3		20.0			
Cyclohexane	0.3905 0.3986	0.3949	0.4008	0.3961	0.4147	Ave		0.3993			0.1000	2.1		20.0			
1,1-Dichloropropene	0.3764 0.3614	0.3858	0.3737	0.3673	0.3839	Ave		0.3748				2.5		20.0			
Carbon tetrachloride	0.3226 0.3473	0.3407	0.3468	0.3462	0.3607	Ave		0.3441			0.1000	3.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107796-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Isobutyl alcohol	0.0072 0.0077	0.0080	0.0077	0.0069	0.0086	Ave		0.0077				7.7		20.0			
Benzene	1.1739 1.0767	1.1296	1.1053	1.0802	1.1333	Ave		1.1165			0.5000	3.3		20.0			
1,2-Dichloroethane	0.3855 0.3692	0.3897	0.3815	0.3777	0.3886	Ave		0.3820			0.1000	2.0		20.0			
n-Heptane	0.0499 0.0533	0.0523	0.0527	0.0543	0.0568	Ave		0.0532				4.3		20.0			
Trichloroethene	0.3350 0.3084	0.3298	0.3223	0.3165	0.3318	Ave		0.3240			0.1500	3.1		20.0			
Methylcyclohexane	0.3407 0.3494	0.3484	0.3548	0.3494	0.3719	Ave		0.3524			0.1000	3.0		20.0			
1,2-Dichloropropane	0.2476 0.2542	0.2676	0.2609	0.2580	0.2658	Ave		0.2590			0.1000	2.9		20.0			
Dibromomethane	0.1763 0.1613	0.1789	0.1712	0.1695	0.1730	Ave		0.1717				3.6		20.0			
1,4-Dioxane	0.0015 0.0021	0.0019	0.0021	0.0019	0.0024	Ave		0.0020				15.5		20.0			
Bromodichloromethane	0.3251 0.3470	0.3335	0.3329	0.3402	0.3670	Ave		0.3410			0.1500	4.3		20.0			
2-Chloroethyl vinyl ether	0.1741 0.1794	0.1688	0.1738	0.1710	0.1802	Ave		0.1745				2.6		20.0			
cis-1,3-Dichloropropene	0.3518 0.4202	0.3782	0.3877	0.3983	0.4304	Ave		0.3944			0.1500	7.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.2785 0.2686	0.2562	0.2693	0.2591	0.2753	Ave		0.2678			0.0500	3.3		20.0			
Toluene	1.5012 1.4288	1.4730	1.4635	1.4625	1.5286	Ave		1.4763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4131 0.5013	0.4307	0.4524	0.4755	0.5145	Ave		0.4646			0.1000	8.6		20.0			
Ethyl methacrylate	0.4397 0.4538	0.4440	0.4290	0.4357	0.4632	Ave		0.4442				2.8		20.0			
1,1,2-Trichloroethane	0.2996 0.2912	0.3009	0.2966	0.2943	0.3064	Ave		0.2982			0.1000	1.8		20.0			
Tetrachloroethene	0.3214 0.3151	0.3301	0.3272	0.3250	0.3419	Ave		0.3268			0.1500	2.8		20.0			
1,3-Dichloropropane	0.5170 0.5210	0.5290	0.5125	0.5245	0.5419	Ave		0.5243				2.0		20.0			
2-Hexanone	0.2098 0.2323	0.2329	0.2285	0.2242	0.2423	Ave		0.2283			0.0500	4.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107796-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Chlorodibromomethane	0.2647 0.3480	0.2850	0.3021	0.3162	0.3534	Ave		0.3116				11.2		20.0			
1,2-Dibromoethane	0.3243 0.3131	0.3134	0.3221	0.3160	0.3258	Ave		0.3191				1.8		20.0			
Chlorobenzene	0.9888 0.9546	0.9840	0.9675	0.9702	1.0011	Ave		0.9777			0.3000	1.7		20.0			
1,1,1,2-Tetrachloroethane	0.3344 0.3512	0.3269	0.3433	0.3517	0.3627	Ave		0.3450				3.8		20.0			
Ethylbenzene	0.5276 0.5075	0.5044	0.5075	0.5104	0.5293	Ave		0.5145				2.1		20.0			
m-Xylene & p-Xylene	1.2031 1.2384	1.2096	1.1828	1.2237	1.2677	Ave		1.2209				2.4		20.0			
o-Xylene	0.6311 0.6050	0.6086	0.6092	0.6181	0.6414	Ave		0.6189				2.3		20.0			
Styrene	0.9861 1.0619	0.9946	1.0226	1.0439	1.1061	Ave		1.0359			0.3000	4.3		20.0			
Bromoform	0.1422 0.2592	0.1774	0.1876	0.2065	0.2510	Lin1	-0.162	0.2546			0.1000	13.6			0.9940		0.9900
Isopropylbenzene	1.4236 1.4623	1.4332	1.4499	1.4809	1.5299	Ave		1.4633			0.1000	2.6		20.0			
1,1,2,2-Tetrachloroethane	0.7263 0.6975	0.7108	0.7013	0.6946	0.7209	Ave		0.7086			0.3000	1.8		20.0			
Bromobenzene	0.8425 0.8141	0.8308	0.8169	0.8158	0.8444	Ave		0.8274				1.7		20.0			
1,2,3-Trichloropropane	0.2495 0.2424	0.2553	0.2455	0.2417	0.2464	Ave		0.2468				2.0		20.0			
trans-1,4-Dichloro-2-butene	0.0434 0.1642	0.1010	0.0590	0.0798	0.1609	Ave		0.1014				50.5	*	20.0			
N-Propylbenzene	0.7265 0.7228	0.7398	0.7179	0.7231	0.7419	Ave		0.7286				1.3		20.0			
2-Chlorotoluene	0.7109 0.6635	0.6787	0.6802	0.6673	0.6918	Ave		0.6821				2.5		20.0			
1,3,5-Trimethylbenzene	2.1272 2.0859	2.0953	2.0772	2.1235	2.2036	Ave		2.1188				2.2		20.0			
4-Chlorotoluene	2.2568 2.1504	2.2467	2.1776	2.1619	2.2388	Ave		2.2054				2.1		20.0			
tert-Butylbenzene	1.8677 1.9925	1.8939	1.8513	1.8658	1.9133	Ave		1.8974				2.7		20.0			
1,2,4-Trimethylbenzene	2.2391 2.1885	2.2675	2.1657	2.2226	2.2813	Ave		2.2275				2.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107796-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 11:37 Calibration End Date: 01/21/2019 13:26 Calibration ID: 49064

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	2.2915 2.2504	2.3538	2.3171	2.3275	2.4198	Ave		2.3267				2.5		20.0			
1,3-Dichlorobenzene	1.4983 1.3538	1.4434	1.4148	1.4043	1.4340	Ave		1.4248			0.6000	3.4		20.0			
4-Isopropyltoluene	2.0430 2.0131	2.1052	2.0529	2.1055	2.1774	Ave		2.0829				2.8		20.0			
1,4-Dichlorobenzene	1.5786 1.4104	1.5222	1.4387	1.4418	1.4716	Ave		1.4772			0.5000	4.2		20.0			
n-Butylbenzene	1.6870 1.5530	1.6578	1.6297	1.6645	1.6997	Ave		1.6486				3.2		20.0			
1,2-Dichlorobenzene	1.4437 1.3061	1.4168	1.3751	1.3937	1.3869	Ave		1.3871			0.4000	3.4		20.0			
1,2-Dibromo-3-Chloropropane	0.1400 0.1672	0.1533	0.1616	0.1661	0.1785	Ave		0.1611			0.0500	8.2		20.0			
1,2,4-Trichlorobenzene	0.9724 0.7297	0.9185	0.8808	0.8895	0.8794	Ave		0.8784			0.2000	9.2		20.0			
Hexachlorobutadiene	0.5543 0.3117	0.4931	0.4340	0.4326	0.4056	Ave		0.4386				18.7		20.0			
Naphthalene	2.2857 1.9486	2.1983	2.2894	2.2740	2.2589	Ave		2.2091				6.0		20.0			
1,2,3-Trichlorobenzene	0.8662 0.6533	0.8274	0.8022	0.7980	0.7943	Ave		0.7902				9.1		20.0			
Dibromofluoromethane (Surr)	0.2371 0.2318	0.2202	0.2449	0.2390	0.2468	Ave		0.2366				4.1		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3138 0.2896	0.2914	0.3140	0.3062	0.3101	Ave		0.3042				3.6		20.0			
Toluene-d8 (Surr)	1.2471 1.1640	1.1461	1.2369	1.2229	1.2656	Ave		1.2138				3.9		20.0			
4-Bromofluorobenzene (Surr)	0.4328 0.4271	0.4150	0.4450	0.4370	0.4478	Ave		0.4341				2.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107796-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-364786/13	UXC8422.D
Level 2	STD 240-364786/12	UXC8421.D
Level 3	STD 240-364786/11	UXC8420.D
Level 4	STD 240-364786/10	UXC8419.D
Level 5	STD 240-364786/9	UXC8418.D
Level 6	STD 240-364786/8	UXC8417.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Acetonitrile	0.0252 0.0231	0.0229	0.0244	0.0212	0.0219	Ave		0.0231				6.4		20.0			
Diisopropyl ether	0.2521 0.2347	0.2414	0.2453	0.2392	0.2304	Ave		0.2405				3.2		20.0			
2-Chloro-1,3-butadiene	0.4486 0.4136	0.4430	0.4258	0.4123	0.3977	Ave		0.4235				4.6		20.0			
Ethyl tert-butyl ether	0.8073 0.7713	0.8020	0.7899	0.7702	0.7385	Ave		0.7799				3.3		20.0			
Ethyl acetate	0.2610 0.2562	0.2539	0.2616	0.2460	0.2442	Ave		0.2538				2.9		20.0			
Propionitrile	0.0350 0.0360	0.0354	0.0389	0.0349	0.0339	Ave		0.0357				4.8		20.0			
Methacrylonitrile	0.1720 0.1769	0.1731	0.1750	0.1722	0.1707	Ave		0.1733				1.3		20.0			
Tert-amyl methyl ether	0.8007 0.7780	0.7777	0.7753	0.7773	0.7498	Ave		0.7765				2.1		20.0			
n-Butanol	0.0063 0.0061	0.0063	0.0064	0.0057	0.0056	Ave		0.0061				5.8		20.0			
Ethyl acrylate	0.3214 0.3480	0.3280	0.3497	0.3222	0.3289	Ave		0.3330				3.8		20.0			
Methyl methacrylate	0.2384 0.2511	0.2420	0.2493	0.2371	0.2403	Ave		0.2430				2.4		20.0			
2-Nitropropane	0.0693 0.0796	0.0750	0.0762	0.0718	0.0749	Ave		0.0745				4.8		20.0			
n-Butyl acetate	0.3598 0.4131	0.3839	0.4177	0.3887	0.3877	Ave		0.3918				5.4		20.0			
1-Chlorohexane	0.4156 0.3980	0.4129	0.4019	0.3778	0.3745	Ave		0.3968				4.4		20.0			
Cyclohexanone	0.0248 0.0160	0.0184	0.0189	0.0150	0.0144	Lin1	0.0891	0.0151				9.6			0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-107796-1 Analy Batch No.: 364786

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/21/2019 14:10 Calibration End Date: 01/21/2019 15:59 Calibration ID: 49066

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Pentachloroethane	0.1823 0.2275	0.1933	0.1975	0.2090	0.2110	Ave		0.2034				7.8		20.0			
1,2,3-Trimethylbenzene	2.1928 2.4162	2.3601	2.3053	2.2662	2.2434	Ave		2.2973				3.5		20.0			
Benzyl chloride	0.2486 0.3594	0.2511	0.2945	0.3034	0.3205	Ave		0.2963				14.3		20.0			
1,3,5-Trichlorobenzene	0.9660 0.9190	1.0006	0.9418	0.9459	0.9063	Ave		0.9466				3.6		20.0			
2-Methylnaphthalene	1.0051 1.0290	1.1423	1.0840	1.1153	1.0780	Ave		1.0756				4.8		20.0			
1-Chloro-1-fluoroethane TIC	0.2232 0.1967	0.0035	0.2078	0.2201	0.2063	None											

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3077	0.1000	0.0100	0.0100	0.2	30.0
Chloromethane	Ave	0.3135	0.2939	0.1000	0.00937	0.0100	-6.3	30.0
Vinyl chloride	Ave	0.2885	0.2965	0.1000	0.0103	0.0100	2.8	30.0
Butadiene	Ave	0.3794	0.3439		0.00906	0.0100	-9.4	30.0
Bromomethane	Ave	0.2308	0.2181	0.0500	0.00945	0.0100	-5.5	30.0
Chloroethane	Ave	0.2041	0.1937	0.0500	0.00949	0.0100	-5.1	30.0
Dichlorofluoromethane	Ave	0.5102	0.5038		0.00987	0.0100	-1.3	30.0
Trichlorofluoromethane	Ave	0.4337	0.4655	0.1000	0.0107	0.0100	7.3	30.0
Ethyl ether	Ave	0.2310	0.2499		0.0108	0.0100	8.2	30.0
Acrolein	Ave	0.0317	0.0225		0.0354	0.0500	-29.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2950	0.1000	0.00982	0.0100	-1.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2669	0.0500	0.0108	0.0100	8.1	30.0
Acetone	Lin1		0.0260	0.0100	0.0217	0.0200	8.7	50.0
Iodomethane	Ave	0.4675	0.5088		0.0109	0.0100	8.8	30.0
Carbon disulfide	Ave	0.7741	0.7832	0.1000	0.0101	0.0100	1.2	30.0
3-Chloro-1-propene	Ave	0.1698	0.1835		0.0108	0.0100	8.0	30.0
Methyl acetate	Ave	0.2050	0.2103	0.1000	0.0205	0.0200	2.6	30.0
Methylene Chloride	Lin1		0.3143	0.1000	0.0102	0.0100	1.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0193		0.0952	0.100	-4.8	50.0
Acrylonitrile	Ave	0.0962	0.0979		0.102	0.100	1.8	30.0
Methyl tert-butyl ether	Ave	0.7834	0.8124	0.1000	0.0104	0.0100	3.7	30.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2813	0.1000	0.0101	0.0100	0.6	30.0
Hexane	Ave	0.0586	0.0579		0.00987	0.0100	-1.3	30.0
1,1-Dichloroethane	Ave	0.4517	0.4658	0.2000	0.0103	0.0100	3.1	30.0
Vinyl acetate	Ave	0.5198	0.5720		0.0110	0.0100	10.0	50.0
2,2-Dichloropropane	Ave	0.0624	0.0692		0.0111	0.0100	10.9	30.0
2-Butanone (MEK)	Ave	0.0333	0.0338	0.0100	0.0203	0.0200	1.7	30.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3026	0.1000	0.00983	0.0100	-1.7	30.0
Bromochloromethane	Ave	0.1531	0.1576		0.0103	0.0100	2.9	30.0
Tetrahydrofuran	Ave	0.0828	0.0821		0.0198	0.0200	-0.8	30.0
Chloroform	Ave	0.4606	0.4715	0.2000	0.0102	0.0100	2.4	30.0
1,1,1-Trichloroethane	Ave	0.3546	0.3844	0.1000	0.0108	0.0100	8.4	30.0
Cyclohexane	Ave	0.3993	0.4228	0.1000	0.0106	0.0100	5.9	30.0
1,1-Dichloropropene	Ave	0.3748	0.3803		0.0101	0.0100	1.5	30.0
Carbon tetrachloride	Ave	0.3441	0.3608	0.1000	0.0105	0.0100	4.9	30.0
Isobutyl alcohol	Ave	0.0077	0.0075		0.244	0.250	-2.5	30.0
Benzene	Ave	1.116	1.120	0.5000	0.0100	0.0100	0.4	30.0
1,2-Dichloroethane	Ave	0.3820	0.3923	0.1000	0.0103	0.0100	2.7	30.0
n-Heptane	Ave	0.0532	0.0516		0.00969	0.0100	-3.1	30.0
Trichloroethene	Ave	0.3240	0.3277	0.1500	0.0101	0.0100	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3635	0.1000	0.0103	0.0100	3.1	30.0
1,2-Dichloropropane	Ave	0.2590	0.2693	0.1000	0.0104	0.0100	4.0	30.0
1,4-Dioxane	Ave	0.0020	0.0018		0.185	0.200	-7.7	50.0
Dibromomethane	Ave	0.1717	0.1693		0.00986	0.0100	-1.4	30.0
Bromodichloromethane	Ave	0.3410	0.3425	0.1500	0.0100	0.0100	0.5	30.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1743		0.00998	0.0100	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.3944	0.4210	0.1500	0.0107	0.0100	6.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2819	0.0500	0.0211	0.0200	5.3	30.0
Toluene	Ave	1.476	1.520	0.4000	0.0103	0.0100	3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4646	0.4706	0.1000	0.0101	0.0100	1.3	30.0
Ethyl methacrylate	Ave	0.4442	0.4407		0.00992	0.0100	-0.8	30.0
1,1,2-Trichloroethane	Ave	0.2982	0.3097	0.1000	0.0104	0.0100	3.9	30.0
Tetrachloroethene	Ave	0.3268	0.3359	0.1500	0.0103	0.0100	2.8	30.0
1,3-Dichloropropane	Ave	0.5243	0.5353		0.0102	0.0100	2.1	30.0
2-Hexanone	Ave	0.2283	0.2452	0.0500	0.0215	0.0200	7.4	30.0
Chlorodibromomethane	Ave	0.3116	0.3163		0.0102	0.0100	1.5	30.0
1,2-Dibromoethane	Ave	0.3191	0.3265		0.0102	0.0100	2.3	30.0
Chlorobenzene	Ave	0.9777	0.9870	0.3000	0.0101	0.0100	1.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3654		0.0106	0.0100	5.9	30.0
Ethylbenzene	Ave	0.5145	0.5244		0.0102	0.0100	1.9	30.0
m-Xylene & p-Xylene	Ave	1.221	1.254		0.0103	0.0100	2.7	30.0
o-Xylene	Ave	0.6189	0.6401		0.0103	0.0100	3.4	30.0
Styrene	Ave	1.036	1.018	0.3000	0.00982	0.0100	-1.8	30.0
Bromoform	Lin1		0.1992	0.1000	0.00846	0.0100	-15.4	30.0
Isopropylbenzene	Ave	1.463	1.540	0.1000	0.0105	0.0100	5.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.7292	0.3000	0.0103	0.0100	2.9	30.0
Bromobenzene	Ave	0.8274	0.8332		0.0101	0.0100	0.7	30.0
1,2,3-Trichloropropane	Ave	0.2468	0.2591		0.0105	0.0100	5.0	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0704		0.00695	0.0100	-30.5*	30.0
N-Propylbenzene	Ave	0.7286	0.7393		0.0101	0.0100	1.5	30.0
2-Chlorotoluene	Ave	0.6821	0.6987		0.0102	0.0100	2.4	30.0
1,3,5-Trimethylbenzene	Ave	2.119	2.131		0.0101	0.0100	0.6	30.0
4-Chlorotoluene	Ave	2.205	2.165		0.00982	0.0100	-1.8	30.0
tert-Butylbenzene	Ave	1.897	1.872		0.00987	0.0100	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	2.227	2.255		0.0101	0.0100	1.2	30.0
sec-Butylbenzene	Ave	2.327	2.325		0.00999	0.0100	-0.0	30.0
1,3-Dichlorobenzene	Ave	1.425	1.437	0.6000	0.0101	0.0100	0.9	30.0
4-Isopropyltoluene	Ave	2.083	2.090		0.0100	0.0100	0.3	30.0
1,4-Dichlorobenzene	Ave	1.477	1.484	0.5000	0.0100	0.0100	0.4	30.0
n-Butylbenzene	Ave	1.649	1.603		0.00972	0.0100	-2.8	30.0
1,2-Dichlorobenzene	Ave	1.387	1.408	0.4000	0.0102	0.0100	1.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICV 240-364786/14 Calibration Date: 01/21/2019 13:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8416.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.1660	0.0500	0.0103	0.0100	3.0	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.8494	0.2000	0.00967	0.0100	-3.3	50.0
Hexachlorobutadiene	Ave	0.4386	0.3722		0.00849	0.0100	-15.1	30.0
Naphthalene	Ave	2.209	2.304		0.0104	0.0100	4.3	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7849		0.00993	0.0100	-0.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2714		0.00711	0.00797	-10.8	30.0
Toluene-d8 (Surr)	Ave	1.214	1.116		0.00733	0.00797	-8.1	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4000		0.00734	0.00797	-7.9	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2366	0.2218		0.00747	0.00797	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2777		0.00728	0.00797	-8.7	30.0
Toluene-d8 (Surr)	Ave	1.214	1.132		0.00743	0.00797	-6.7	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.4058		0.00745	0.00797	-6.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICV 240-364786/15 Calibration Date: 01/21/2019 16:21

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0240		0.104	0.100	4.0	30.0
Diisopropyl ether	Ave	0.2405	0.2486		0.0103	0.0100	3.4	30.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.4143		0.00978	0.0100	-2.2	30.0
Ethyl tert-butyl ether	Ave	0.7799	0.7810		0.0100	0.0100	0.1	30.0
Ethyl acetate	Ave	0.2538	0.2637		0.0208	0.0200	3.9	50.0
Propionitrile	Ave	0.0357	0.0381		0.107	0.100	6.8	30.0
Methacrylonitrile	Ave	0.1733	0.1807		0.104	0.100	4.3	30.0
Tert-amyl methyl ether	Ave	0.7765	0.7897		0.0102	0.0100	1.7	30.0
n-Butanol	Ave	0.0061	0.0061		0.250	0.250	-0.1	30.0
Ethyl acrylate	Ave	0.3330	0.3511		0.0105	0.0100	5.4	30.0
Methyl methacrylate	Ave	0.2430	0.2569		0.0211	0.0200	5.7	30.0
2-Nitropropane	Ave	0.0745	0.0765		0.0205	0.0200	2.7	30.0
n-Butyl acetate	Ave	0.3918	0.4142		0.0106	0.0100	5.7	30.0
1-Chlorohexane	Ave	0.3968	0.3883		0.00979	0.0100	-2.1	30.0
Cyclohexanone	Lin1		0.0182		0.115	0.100	14.7	30.0
Pentachloroethane	Ave	0.2034	0.1983		0.0195	0.0200	-2.5	30.0
1,2,3-Trimethylbenzene	Ave	2.297	2.356		0.0103	0.0100	2.5	30.0
Benzyl chloride	Ave	0.2963	0.2978		0.0101	0.0100	0.5	30.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.9057		0.00957	0.0100	-4.3	30.0
2-Methylnaphthalene	Ave	1.076	0.9288		0.0173	0.0200	-13.7	30.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0211.D BFB Injection Date: 02/11/2019

Instrument ID: A3UX15 BFB Injection Time: 10:27

Analysis Batch No.: 367509

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.1	
75	30.0 - 60.0 % of mass 95	50.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.7	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	101.9	
175	5.0 - 9.0 % of mass 174	6.3	(6.2) 1
176	95.0 - 101.0 % of mass 174	100.4	(98.5) 1
177	5.0 - 9.0 % of mass 176	6.4	(6.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367509/2	UXC8765.D	02/11/2019	10:51
	LCS 240-367509/4	UXC8766.D	02/11/2019	11:13
	CCV 240-367509/3	UXC8767.D	02/11/2019	11:35
	MB 240-367509/6	UXC8770.D	02/11/2019	12:40
TB-020619	240-107796-1	UXC8786.D	02/11/2019	19:47

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3306	0.1000	0.0108	0.0100	7.6	20.0
Chloromethane	Ave	0.3135	0.3315	0.1000	0.0106	0.0100	5.7	20.0
Butadiene	Ave	0.3794	0.3395		0.00895	0.0100	-10.5	20.0
Vinyl chloride	Ave	0.2885	0.2932	0.1000	0.0102	0.0100	1.6	20.0
Bromomethane	Ave	0.2308	0.2097	0.0500	0.00908	0.0100	-9.2	20.0
Chloroethane	Ave	0.2041	0.1903	0.0500	0.00932	0.0100	-6.8	20.0
Dichlorofluoromethane	Ave	0.5102	0.4772		0.00935	0.0100	-6.5	20.0
Trichlorofluoromethane	Ave	0.4337	0.4369	0.1000	0.0101	0.0100	0.7	20.0
Ethyl ether	Ave	0.2310	0.2152		0.00932	0.0100	-6.8	20.0
Acrolein	Ave	0.0317	0.0415		0.0654	0.0500	30.8	50.0
1,1-Dichloroethene	Ave	0.3005	0.2630	0.1000	0.00875	0.0100	-12.5	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2317	0.0500	0.00939	0.0100	-6.1	20.0
Acetone	Lin1		0.0215	0.0100	0.0175	0.0200	-12.3	50.0
Iodomethane	Ave	0.4675	0.4437		0.00949	0.0100	-5.1	20.0
Carbon disulfide	Ave	0.7741	0.6041	0.1000	0.00780	0.0100	-22.0*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1568		0.00923	0.0100	-7.7	20.0
Methyl acetate	Ave	0.2050	0.1752	0.1000	0.0171	0.0200	-14.6	20.0
Methylene Chloride	Lin1		0.2911	0.1000	0.00925	0.0100	-7.5	50.0
tert-Butyl alcohol	Ave	0.0203	0.0152		0.0751	0.100	-24.9	50.0
Acrylonitrile	Ave	0.0962	0.0865		0.0899	0.100	-10.1	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6912	0.1000	0.00882	0.0100	-11.8	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2769	0.1000	0.00990	0.0100	-1.0	20.0
Hexane	Ave	0.0586	0.0490		0.00835	0.0100	-16.5	20.0
1,1-Dichloroethane	Ave	0.4517	0.4471	0.2000	0.00990	0.0100	-1.0	20.0
Vinyl acetate	Ave	0.5198	0.3452		0.00664	0.0100	-33.6	50.0
2,2-Dichloropropane	Ave	0.0624	0.0620		0.00994	0.0100	-0.6	20.0
2-Butanone (MEK)	Ave	0.0333	0.0269	0.0100	0.0162	0.0200	-19.0	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3120	0.1000	0.0101	0.0100	1.4	20.0
Bromochloromethane	Ave	0.1531	0.1522		0.00994	0.0100	-0.6	20.0
Tetrahydrofuran	Ave	0.0828	0.0641		0.0155	0.0200	-22.5*	20.0
Chloroform	Ave	0.4606	0.4672	0.2000	0.0101	0.0100	1.4	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3486	0.1000	0.00983	0.0100	-1.7	20.0
Cyclohexane	Ave	0.3993	0.3736	0.1000	0.00936	0.0100	-6.4	20.0
1,1-Dichloropropene	Ave	0.3748	0.3470		0.00926	0.0100	-7.4	20.0
Carbon tetrachloride	Ave	0.3441	0.3064	0.1000	0.00891	0.0100	-10.9	20.0
Isobutyl alcohol	Ave	0.0077	0.0067		0.216	0.250	-13.5	20.0
Benzene	Ave	1.116	1.108	0.5000	0.00992	0.0100	-0.8	20.0
1,2-Dichloroethane	Ave	0.3820	0.3654	0.1000	0.00957	0.0100	-4.3	20.0
n-Heptane	Ave	0.0532	0.0432		0.00811	0.0100	-18.9	20.0
Trichloroethene	Ave	0.3240	0.3113	0.1500	0.00961	0.0100	-3.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3263	0.1000	0.00926	0.0100	-7.4	20.0
1,2-Dichloropropane	Ave	0.2590	0.2427	0.1000	0.00937	0.0100	-6.3	20.0
1,4-Dioxane	Ave	0.0020	0.0017		0.174	0.200	-13.1	50.0
Dibromomethane	Ave	0.1717	0.1548		0.00901	0.0100	-9.9	20.0
Bromodichloromethane	Ave	0.3410	0.2813	0.1500	0.00825	0.0100	-17.5	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1175		0.0135	0.0200	-32.7*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3121	0.1500	0.00791	0.0100	-20.9*	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2001	0.0500	0.0149	0.0200	-25.3*	20.0
Toluene	Ave	1.476	1.394	0.4000	0.00944	0.0100	-5.6	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3270	0.1000	0.00704	0.0100	-29.6*	20.0
Ethyl methacrylate	Ave	0.4442	0.3282		0.00739	0.0100	-26.1*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2666	0.1000	0.00894	0.0100	-10.6	20.0
Tetrachloroethene	Ave	0.3268	0.3095	0.1500	0.00947	0.0100	-5.3	20.0
1,3-Dichloropropane	Ave	0.5243	0.4627		0.00882	0.0100	-11.8	20.0
2-Hexanone	Ave	0.2283	0.1734	0.0500	0.0152	0.0200	-24.1*	20.0
Chlorodibromomethane	Ave	0.3116	0.2276		0.00730	0.0100	-27.0*	20.0
1,2-Dibromoethane	Ave	0.3191	0.2642		0.00828	0.0100	-17.2	20.0
Chlorobenzene	Ave	0.9777	0.9075	0.3000	0.00928	0.0100	-7.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3172		0.00919	0.0100	-8.1	20.0
Ethylbenzene	Ave	0.5145	0.4715		0.00916	0.0100	-8.4	20.0
m-Xylene & p-Xylene	Ave	1.221	1.096		0.00898	0.0100	-10.2	20.0
o-Xylene	Ave	0.6189	0.5994		0.00969	0.0100	-3.1	20.0
Styrene	Ave	1.036	0.9417	0.3000	0.00909	0.0100	-9.1	20.0
Bromoform	Lin1		0.1219	0.1000	0.00542	0.0100	-45.8*	20.0
Isopropylbenzene	Ave	1.463	1.403	0.1000	0.00959	0.0100	-4.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5572	0.3000	0.00786	0.0100	-21.4*	20.0
Bromobenzene	Ave	0.8274	0.7248		0.00876	0.0100	-12.4	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.1984		0.00804	0.0100	-19.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0703		0.00693	0.0100	-30.7*	20.0
N-Propylbenzene	Ave	0.7286	0.6321		0.00867	0.0100	-13.3	20.0
2-Chlorotoluene	Ave	0.6821	0.6150		0.00902	0.0100	-9.8	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.928		0.00910	0.0100	-9.0	20.0
4-Chlorotoluene	Ave	2.205	1.890		0.00857	0.0100	-14.3	20.0
tert-Butylbenzene	Ave	1.897	1.667		0.00878	0.0100	-12.2	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.035		0.00914	0.0100	-8.6	20.0
sec-Butylbenzene	Ave	2.327	2.095		0.00901	0.0100	-9.9	20.0
1,3-Dichlorobenzene	Ave	1.425	1.263	0.6000	0.00887	0.0100	-11.3	20.0
4-Isopropyltoluene	Ave	2.083	1.884		0.00904	0.0100	-9.6	20.0
1,4-Dichlorobenzene	Ave	1.477	1.296	0.5000	0.00877	0.0100	-12.3	20.0
n-Butylbenzene	Ave	1.649	1.400		0.00849	0.0100	-15.1	20.0
1,2-Dichlorobenzene	Ave	1.387	1.288	0.4000	0.00928	0.0100	-7.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367509/2 Calibration Date: 02/11/2019 10:51

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8765.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0961	0.0500	0.00596	0.0100	-40.4	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.7988	0.2000	0.00909	0.0100	-9.1	50.0
Hexachlorobutadiene	Ave	0.4386	0.3511		0.00801	0.0100	-19.9	20.0
Naphthalene	Ave	2.209	1.776		0.00804	0.0100	-19.6	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.7384		0.00934	0.0100	-6.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2183		0.00735	0.00797	-7.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2646		0.00693	0.00797	-13.0	20.0
Toluene-d8 (Surr)	Ave	1.214	1.077		0.00707	0.00797	-11.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3688		0.00677	0.00797	-15.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCV 240-367509/3 Calibration Date: 02/11/2019 11:35

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8767.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0259		0.112	0.100	12.2	20.0
Diisopropyl ether	Ave	0.2405	0.2296		0.00955	0.0100	-4.5	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3804		0.00898	0.0100	-10.2	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.6235		0.00800	0.0100	-20.0	20.0
Ethyl acetate	Ave	0.2538	0.1979		0.0156	0.0200	-22.0	50.0
Propionitrile	Ave	0.0357	0.0334		0.0937	0.100	-6.3	20.0
Methacrylonitrile	Ave	0.1733	0.1482		0.0855	0.100	-14.5	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5715		0.00736	0.0100	-26.4*	20.0
n-Butanol	Ave	0.0061	0.0037		0.154	0.250	-38.5*	20.0
Ethyl acrylate	Ave	0.3330	0.2421		0.00727	0.0100	-27.3*	20.0
Methyl methacrylate	Ave	0.2430	0.1897		0.0156	0.0200	-21.9*	20.0
2-Nitropropane	Ave	0.0745	0.0280		0.00753	0.0200	-62.4*	20.0
n-Butyl acetate	Ave	0.3918	0.2807		0.00716	0.0100	-28.4*	20.0
1-Chlorohexane	Ave	0.3968	0.2920		0.00736	0.0100	-26.4*	20.0
Cyclohexanone	Lin1		0.0104		0.0631	0.100	-36.9*	20.0
Pentachloroethane	Ave	0.2034	0.1517		0.0149	0.0200	-25.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.013		0.00876	0.0100	-12.4	20.0
Benzyl chloride	Ave	0.2963	0.1293		0.00436	0.0100	-56.4*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8316		0.00879	0.0100	-12.1	20.0
2-Methylnaphthalene	Ave	1.076	0.6690		0.0124	0.0200	-37.8*	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0212.D BFB Injection Date: 02/12/2019

Instrument ID: A3UX15 BFB Injection Time: 10:19

Analysis Batch No.: 367672

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.1	
75	30.0 - 60.0 % of mass 95	51.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	103.9	
175	5.0 - 9.0 % of mass 174	7.2	(6.9) 1
176	95.0 - 101.0 % of mass 174	99.4	(95.7) 1
177	5.0 - 9.0 % of mass 176	6.6	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367672/2	UXC8788.D	02/12/2019	10:48
	LCS 240-367672/4	UXC8789.D	02/12/2019	11:10
	CCV 240-367672/3	UXC8790.D	02/12/2019	11:32
	MB 240-367672/6	UXC8793.D	02/12/2019	12:38
MRC-MW138B-020619	240-107796-2	UXC8796.D	02/12/2019	13:43
MRC-MW141B-020619	240-107796-3	UXC8797.D	02/12/2019	14:05
MRC-MW141B-020619 MS	240-107796-3 MS	UXC8801.D	02/12/2019	15:32
MRC-MW141B-020619 MSD	240-107796-3 MSD	UXC8802.D	02/12/2019	15:54
MRC-MW142B-020619	240-107796-4	UXC8804.D	02/12/2019	16:38

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367672/2 Calibration Date: 02/12/2019 10:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8788.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.3009	0.1000	0.00980	0.0100	-2.0	20.0
Chloromethane	Ave	0.3135	0.2731	0.1000	0.00871	0.0100	-12.9	20.0
Vinyl chloride	Ave	0.2885	0.2581	0.1000	0.00895	0.0100	-10.5	20.0
Butadiene	Ave	0.3794	0.3191		0.00841	0.0100	-15.9	20.0
Bromomethane	Ave	0.2308	0.1940	0.0500	0.00841	0.0100	-15.9	20.0
Chloroethane	Ave	0.2041	0.1763	0.0500	0.00864	0.0100	-13.6	20.0
Dichlorofluoromethane	Ave	0.5102	0.4393		0.00861	0.0100	-13.9	20.0
Trichlorofluoromethane	Ave	0.4337	0.4273	0.1000	0.00985	0.0100	-1.5	20.0
Ethyl ether	Ave	0.2310	0.2133		0.00924	0.0100	-7.6	20.0
Acrolein	Ave	0.0317	0.0406		0.0641	0.0500	28.1	50.0
1,1-Dichloroethene	Ave	0.3005	0.2535	0.1000	0.00843	0.0100	-15.7	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2314	0.0500	0.00938	0.0100	-6.2	20.0
Acetone	Lin1		0.0226	0.0100	0.0185	0.0200	-7.3	50.0
Iodomethane	Ave	0.4675	0.4510		0.00965	0.0100	-3.5	20.0
Carbon disulfide	Ave	0.7741	0.5640	0.1000	0.00729	0.0100	-27.1*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1500		0.00883	0.0100	-11.7	20.0
Methyl acetate	Ave	0.2050	0.1773	0.1000	0.0173	0.0200	-13.5	20.0
Methylene Chloride	Lin1		0.2816	0.1000	0.00886	0.0100	-11.4	50.0
tert-Butyl alcohol	Ave	0.0203	0.0176		0.0868	0.100	-13.2	50.0
Acrylonitrile	Ave	0.0962	0.0907		0.0943	0.100	-5.7	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6673	0.1000	0.00852	0.0100	-14.8	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2743	0.1000	0.00981	0.0100	-1.9	20.0
Hexane	Ave	0.0586	0.0525		0.00895	0.0100	-10.5	20.0
1,1-Dichloroethane	Ave	0.4517	0.4534	0.2000	0.0100	0.0100	0.4	20.0
Vinyl acetate	Ave	0.5198	0.4042		0.00778	0.0100	-22.2	50.0
2,2-Dichloropropane	Ave	0.0624	0.0600		0.00962	0.0100	-3.8	20.0
2-Butanone (MEK)	Ave	0.0333	0.0282	0.0100	0.0170	0.0200	-15.2	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3157	0.1000	0.0103	0.0100	2.6	20.0
Bromochloromethane	Ave	0.1531	0.1590		0.0104	0.0100	3.9	20.0
Tetrahydrofuran	Ave	0.0828	0.0713		0.0172	0.0200	-13.9	20.0
Chloroform	Ave	0.4606	0.4722	0.2000	0.0103	0.0100	2.5	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3582	0.1000	0.0101	0.0100	1.0	20.0
Cyclohexane	Ave	0.3993	0.3706	0.1000	0.00928	0.0100	-7.2	20.0
1,1-Dichloropropene	Ave	0.3748	0.3689		0.00984	0.0100	-1.6	20.0
Carbon tetrachloride	Ave	0.3441	0.3086	0.1000	0.00897	0.0100	-10.3	20.0
Isobutyl alcohol	Ave	0.0077	0.0069		0.224	0.250	-10.2	20.0
Benzene	Ave	1.116	1.149	0.5000	0.0103	0.0100	2.9	20.0
1,2-Dichloroethane	Ave	0.3820	0.3901	0.1000	0.0102	0.0100	2.1	20.0
n-Heptane	Ave	0.0532	0.0467		0.00877	0.0100	-12.3	20.0
Trichloroethene	Ave	0.3240	0.3352	0.1500	0.0103	0.0100	3.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367672/2 Calibration Date: 02/12/2019 10:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8788.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3266	0.1000	0.00927	0.0100	-7.3	20.0
1,2-Dichloropropane	Ave	0.2590	0.2577	0.1000	0.00995	0.0100	-0.5	20.0
1,4-Dioxane	Ave	0.0020	0.0025		0.253	0.200	26.7	50.0
Dibromomethane	Ave	0.1717	0.1640		0.00955	0.0100	-4.5	20.0
Bromodichloromethane	Ave	0.3410	0.3079	0.1500	0.00903	0.0100	-9.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1335		0.0153	0.0200	-23.5*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3423	0.1500	0.00868	0.0100	-13.2	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2206	0.0500	0.0165	0.0200	-17.6	20.0
Toluene	Ave	1.476	1.447	0.4000	0.00980	0.0100	-2.0	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3462	0.1000	0.00745	0.0100	-25.5*	20.0
Ethyl methacrylate	Ave	0.4442	0.3466		0.00780	0.0100	-22.0*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2801	0.1000	0.00939	0.0100	-6.1	20.0
Tetrachloroethene	Ave	0.3268	0.3304	0.1500	0.0101	0.0100	1.1	20.0
1,3-Dichloropropane	Ave	0.5243	0.4892		0.00933	0.0100	-6.7	20.0
2-Hexanone	Ave	0.2283	0.1819	0.0500	0.0159	0.0200	-20.3*	20.0
Chlorodibromomethane	Ave	0.3116	0.2439		0.00783	0.0100	-21.7*	20.0
1,2-Dibromoethane	Ave	0.3191	0.2748		0.00861	0.0100	-13.9	20.0
Chlorobenzene	Ave	0.9777	0.9596	0.3000	0.00982	0.0100	-1.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.3019		0.00875	0.0100	-12.5	20.0
Ethylbenzene	Ave	0.5145	0.4878		0.00948	0.0100	-5.2	20.0
m-Xylene & p-Xylene	Ave	1.221	1.173		0.00961	0.0100	-3.9	20.0
o-Xylene	Ave	0.6189	0.6029		0.00974	0.0100	-2.6	20.0
Styrene	Ave	1.036	1.020	0.3000	0.00985	0.0100	-1.5	20.0
Bromoform	Lin1		0.1395	0.1000	0.00611	0.0100	-38.9*	20.0
Isopropylbenzene	Ave	1.463	1.410	0.1000	0.00963	0.0100	-3.7	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5650	0.3000	0.00797	0.0100	-20.3*	20.0
Bromobenzene	Ave	0.8274	0.7646		0.00924	0.0100	-7.6	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2064		0.00836	0.0100	-16.4	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.0946		0.00933	0.0100	-6.7	20.0
N-Propylbenzene	Ave	0.7286	0.6486		0.00890	0.0100	-11.0	20.0
2-Chlorotoluene	Ave	0.6821	0.6130		0.00899	0.0100	-10.1	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.882		0.00888	0.0100	-11.2	20.0
4-Chlorotoluene	Ave	2.205	1.972		0.00894	0.0100	-10.6	20.0
tert-Butylbenzene	Ave	1.897	1.615		0.00851	0.0100	-14.9	20.0
1,2,4-Trimethylbenzene	Ave	2.227	2.015		0.00905	0.0100	-9.5	20.0
sec-Butylbenzene	Ave	2.327	2.019		0.00868	0.0100	-13.2	20.0
1,3-Dichlorobenzene	Ave	1.425	1.306	0.6000	0.00917	0.0100	-8.3	20.0
4-Isopropyltoluene	Ave	2.083	1.828		0.00877	0.0100	-12.3	20.0
1,4-Dichlorobenzene	Ave	1.477	1.357	0.5000	0.00918	0.0100	-8.2	20.0
n-Butylbenzene	Ave	1.649	1.339		0.00812	0.0100	-18.8	20.0
1,2-Dichlorobenzene	Ave	1.387	1.287	0.4000	0.00928	0.0100	-7.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367672/2 Calibration Date: 02/12/2019 10:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8788.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0940	0.0500	0.00583	0.0100	-41.7	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.6986	0.2000	0.00795	0.0100	-20.5	50.0
Hexachlorobutadiene	Ave	0.4386	0.3106		0.00708	0.0100	-29.2*	20.0
Naphthalene	Ave	2.209	1.503		0.00680	0.0100	-32.0	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6350		0.00804	0.0100	-19.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2152		0.00725	0.00797	-9.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2673		0.00700	0.00797	-12.1	20.0
Toluene-d8 (Surr)	Ave	1.214	1.054		0.00692	0.00797	-13.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3773		0.00693	0.00797	-13.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCV 240-367672/3 Calibration Date: 02/12/2019 11:32

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8790.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0268		0.116	0.100	16.0	20.0
Diisopropyl ether	Ave	0.2405	0.2304		0.00958	0.0100	-4.2	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3765		0.00889	0.0100	-11.1	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.5969		0.00765	0.0100	-23.5*	20.0
Ethyl acetate	Ave	0.2538	0.2069		0.0163	0.0200	-18.5	50.0
Propionitrile	Ave	0.0357	0.0330		0.0925	0.100	-7.5	20.0
Methacrylonitrile	Ave	0.1733	0.1495		0.0863	0.100	-13.7	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5238		0.00675	0.0100	-32.5*	20.0
n-Butanol	Ave	0.0061	0.0034		0.140	0.250	-44.2*	20.0
Ethyl acrylate	Ave	0.3330	0.2550		0.00766	0.0100	-23.4*	20.0
Methyl methacrylate	Ave	0.2430	0.1977		0.0163	0.0200	-18.6	20.0
2-Nitropropane	Ave	0.0745	0.0254		0.00682	0.0200	-65.9*	20.0
n-Butyl acetate	Ave	0.3918	0.2791		0.00712	0.0100	-28.8*	20.0
1-Chlorohexane	Ave	0.3968	0.3138		0.00791	0.0100	-20.9*	20.0
Cyclohexanone	Lin1		0.0106		0.0642	0.100	-35.8*	20.0
Pentachloroethane	Ave	0.2034	0.1486		0.0146	0.0200	-27.0*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.063		0.00898	0.0100	-10.2	20.0
Benzyl chloride	Ave	0.2963	0.1175		0.00397	0.0100	-60.3*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8269		0.00873	0.0100	-12.7	20.0
2-Methylnaphthalene	Ave	1.076	0.5934		0.0110	0.0200	-44.8*	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab File ID: BFB0213.D BFB Injection Date: 02/13/2019

Instrument ID: A3UX15 BFB Injection Time: 11:22

Analysis Batch No.: 367892

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.8	
75	30.0 - 60.0 % of mass 95	50.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.6	(0.5) 1
174	50.0 - 120.00 % of mass 95	105.7	
175	5.0 - 9.0 % of mass 174	7.0	(6.6) 1
176	95.0 - 101.0 % of mass 174	101.4	(96.0) 1
177	5.0 - 9.0 % of mass 176	6.5	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-367892/2	UXC8806.D	02/13/2019	11:48
	LCS 240-367892/4	UXC8807.D	02/13/2019	12:10
	CCV 240-367892/3	UXC8808.D	02/13/2019	12:32
	MB 240-367892/6	UXC8811.D	02/13/2019	13:38
MRC-MW158A-020619	240-107796-5	UXC8814.D	02/13/2019	14:43
MRC-DUP01-020619	240-107796-6	UXC8815.D	02/13/2019	16:05

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3072	0.2644	0.1000	0.00861	0.0100	-13.9	20.0
Chloromethane	Ave	0.3135	0.2740	0.1000	0.00874	0.0100	-12.6	20.0
Butadiene	Ave	0.3794	0.2948		0.00777	0.0100	-22.3*	20.0
Vinyl chloride	Ave	0.2885	0.2406	0.1000	0.00834	0.0100	-16.6	20.0
Bromomethane	Ave	0.2308	0.1961	0.0500	0.00850	0.0100	-15.0	20.0
Chloroethane	Ave	0.2041	0.1732	0.0500	0.00848	0.0100	-15.2	20.0
Dichlorofluoromethane	Ave	0.5102	0.4461		0.00874	0.0100	-12.6	20.0
Trichlorofluoromethane	Ave	0.4337	0.4175	0.1000	0.00963	0.0100	-3.7	20.0
Ethyl ether	Ave	0.2310	0.2280		0.00987	0.0100	-1.3	20.0
Acrolein	Ave	0.0317	0.0400		0.0631	0.0500	26.2	50.0
1,1-Dichloroethene	Ave	0.3005	0.2646	0.1000	0.00881	0.0100	-11.9	20.0
1,1,2-Trichlorotrifluoroethane	Ave	0.2468	0.2394	0.0500	0.00970	0.0100	-3.0	20.0
Acetone	Lin1		0.0240	0.0100	0.0198	0.0200	-0.9	50.0
Iodomethane	Ave	0.4675	0.4375		0.00936	0.0100	-6.4	20.0
Carbon disulfide	Ave	0.7741	0.5971	0.1000	0.00771	0.0100	-22.9*	20.0
3-Chloro-1-propene	Ave	0.1698	0.1633		0.00962	0.0100	-3.8	20.0
Methyl acetate	Ave	0.2050	0.1768	0.1000	0.0172	0.0200	-13.8	20.0
Methylene Chloride	Lin1		0.4011	0.1000	0.0137	0.0100	36.8	50.0
tert-Butyl alcohol	Ave	0.0203	0.0163		0.0803	0.100	-19.7	50.0
Acrylonitrile	Ave	0.0962	0.0916		0.0952	0.100	-4.8	20.0
Methyl tert-butyl ether	Ave	0.7834	0.6712	0.1000	0.00857	0.0100	-14.3	20.0
trans-1,2-Dichloroethene	Ave	0.2795	0.2866	0.1000	0.0103	0.0100	2.5	20.0
Hexane	Ave	0.0586	0.0527		0.00899	0.0100	-10.1	20.0
1,1-Dichloroethane	Ave	0.4517	0.4693	0.2000	0.0104	0.0100	3.9	20.0
Vinyl acetate	Ave	0.5198	0.4189		0.00806	0.0100	-19.4	50.0
2,2-Dichloropropane	Ave	0.0624	0.0587		0.00942	0.0100	-5.8	20.0
2-Butanone (MEK)	Ave	0.0333	0.0305	0.0100	0.0184	0.0200	-8.2	20.0
cis-1,2-Dichloroethene	Ave	0.3078	0.3242	0.1000	0.0105	0.0100	5.3	20.0
Bromochloromethane	Ave	0.1531	0.1616		0.0106	0.0100	5.5	20.0
Tetrahydrofuran	Ave	0.0828	0.0686		0.0166	0.0200	-17.1	20.0
Chloroform	Ave	0.4606	0.4880	0.2000	0.0106	0.0100	6.0	20.0
1,1,1-Trichloroethane	Ave	0.3546	0.3575	0.1000	0.0101	0.0100	0.8	20.0
Cyclohexane	Ave	0.3993	0.3773	0.1000	0.00945	0.0100	-5.5	20.0
1,1-Dichloropropene	Ave	0.3748	0.3719		0.00992	0.0100	-0.8	20.0
Carbon tetrachloride	Ave	0.3441	0.3171	0.1000	0.00922	0.0100	-7.8	20.0
Isobutyl alcohol	Ave	0.0077	0.0070		0.227	0.250	-9.4	20.0
Benzene	Ave	1.116	1.180	0.5000	0.0106	0.0100	5.7	20.0
1,2-Dichloroethane	Ave	0.3820	0.3993	0.1000	0.0105	0.0100	4.5	20.0
n-Heptane	Ave	0.0532	0.0463		0.00870	0.0100	-13.0	20.0
Trichloroethene	Ave	0.3240	0.3428	0.1500	0.0106	0.0100	5.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.3524	0.3350	0.1000	0.00950	0.0100	-5.0	20.0
1,2-Dichloropropane	Ave	0.2590	0.2611	0.1000	0.0101	0.0100	0.8	20.0
1,4-Dioxane	Ave	0.0020	0.0026		0.260	0.200	30.1	50.0
Dibromomethane	Ave	0.1717	0.1669		0.00972	0.0100	-2.8	20.0
Bromodichloromethane	Ave	0.3410	0.3135	0.1500	0.00919	0.0100	-8.1	20.0
2-Chloroethyl vinyl ether	Ave	0.1745	0.1388		0.0159	0.0200	-20.5*	20.0
cis-1,3-Dichloropropene	Ave	0.3944	0.3525	0.1500	0.00894	0.0100	-10.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.2678	0.2257	0.0500	0.0169	0.0200	-15.7	20.0
Toluene	Ave	1.476	1.435	0.4000	0.00972	0.0100	-2.8	20.0
trans-1,3-Dichloropropene	Ave	0.4646	0.3495	0.1000	0.00752	0.0100	-24.8*	20.0
Ethyl methacrylate	Ave	0.4442	0.3465		0.00780	0.0100	-22.0*	20.0
1,1,2-Trichloroethane	Ave	0.2982	0.2780	0.1000	0.00932	0.0100	-6.8	20.0
Tetrachloroethene	Ave	0.3268	0.3212	0.1500	0.00983	0.0100	-1.7	20.0
1,3-Dichloropropane	Ave	0.5243	0.4898		0.00934	0.0100	-6.6	20.0
2-Hexanone	Ave	0.2283	0.1843	0.0500	0.0161	0.0200	-19.3	20.0
Chlorodibromomethane	Ave	0.3116	0.2594		0.00833	0.0100	-16.7	20.0
1,2-Dibromoethane	Ave	0.3191	0.2750		0.00862	0.0100	-13.8	20.0
Chlorobenzene	Ave	0.9777	0.9502	0.3000	0.00972	0.0100	-2.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3450	0.2977		0.00863	0.0100	-13.7	20.0
Ethylbenzene	Ave	0.5145	0.4912		0.00955	0.0100	-4.5	20.0
m-Xylene & p-Xylene	Ave	1.221	1.165		0.00955	0.0100	-4.5	20.0
o-Xylene	Ave	0.6189	0.5935		0.00959	0.0100	-4.1	20.0
Styrene	Ave	1.036	1.012	0.3000	0.00977	0.0100	-2.3	20.0
Bromoform	Lin1		0.1557	0.1000	0.00675	0.0100	-32.5*	20.0
Isopropylbenzene	Ave	1.463	1.374	0.1000	0.00939	0.0100	-6.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.7086	0.5684	0.3000	0.00802	0.0100	-19.8	20.0
Bromobenzene	Ave	0.8274	0.7586		0.00917	0.0100	-8.3	20.0
1,2,3-Trichloropropane	Ave	0.2468	0.2002		0.00811	0.0100	-18.9	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1014	0.1131		0.0112	0.0100	11.5	20.0
N-Propylbenzene	Ave	0.7286	0.6484		0.00890	0.0100	-11.0	20.0
2-Chlorotoluene	Ave	0.6821	0.6162		0.00903	0.0100	-9.7	20.0
1,3,5-Trimethylbenzene	Ave	2.119	1.868		0.00882	0.0100	-11.8	20.0
4-Chlorotoluene	Ave	2.205	1.951		0.00885	0.0100	-11.5	20.0
tert-Butylbenzene	Ave	1.897	1.591		0.00839	0.0100	-16.1	20.0
1,2,4-Trimethylbenzene	Ave	2.227	1.990		0.00894	0.0100	-10.6	20.0
sec-Butylbenzene	Ave	2.327	1.997		0.00858	0.0100	-14.2	20.0
1,3-Dichlorobenzene	Ave	1.425	1.317	0.6000	0.00924	0.0100	-7.6	20.0
4-Isopropyltoluene	Ave	2.083	1.821		0.00874	0.0100	-12.6	20.0
1,4-Dichlorobenzene	Ave	1.477	1.350	0.5000	0.00914	0.0100	-8.6	20.0
n-Butylbenzene	Ave	1.649	1.338		0.00812	0.0100	-18.8	20.0
1,2-Dichlorobenzene	Ave	1.387	1.278	0.4000	0.00921	0.0100	-7.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 240-367892/2 Calibration Date: 02/13/2019 11:48

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 11:37

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 13:26

Lab File ID: UXC8806.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dibromo-3-Chloropropane	Ave	0.1611	0.0952	0.0500	0.00591	0.0100	-40.9	50.0
1,2,4-Trichlorobenzene	Ave	0.8784	0.6817	0.2000	0.00776	0.0100	-22.4	50.0
Hexachlorobutadiene	Ave	0.4386	0.3104		0.00708	0.0100	-29.2*	20.0
Naphthalene	Ave	2.209	1.476		0.00668	0.0100	-33.2	50.0
1,2,3-Trichlorobenzene	Ave	0.7902	0.6052		0.00766	0.0100	-23.4*	20.0
Dibromofluoromethane (Surr)	Ave	0.2366	0.2175		0.00732	0.00797	-8.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3042	0.2720		0.00713	0.00797	-10.6	20.0
Toluene-d8 (Surr)	Ave	1.214	1.047		0.00687	0.00797	-13.8	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4341	0.3760		0.00690	0.00797	-13.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCV 240-367892/3 Calibration Date: 02/13/2019 12:32

Instrument ID: A3UX15 Calib Start Date: 01/21/2019 14:10

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 01/21/2019 15:59

Lab File ID: UXC8808.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetonitrile	Ave	0.0231	0.0282		0.122	0.100	22.1*	20.0
Diisopropyl ether	Ave	0.2405	0.2294		0.00954	0.0100	-4.6	20.0
2-Chloro-1,3-butadiene	Ave	0.4235	0.3741		0.00883	0.0100	-11.7	20.0
Ethyl tert-butyl ether	Ave	0.7799	0.5945		0.00762	0.0100	-23.8*	20.0
Ethyl acetate	Ave	0.2538	0.2228		0.0176	0.0200	-12.2	50.0
Propionitrile	Ave	0.0357	0.0361		0.101	0.100	1.1	20.0
Methacrylonitrile	Ave	0.1733	0.1604		0.0925	0.100	-7.5	20.0
Tert-amyl methyl ether	Ave	0.7765	0.5323		0.00686	0.0100	-31.4*	20.0
n-Butanol	Ave	0.0061	0.0040		0.163	0.250	-34.7*	20.0
Ethyl acrylate	Ave	0.3330	0.2775		0.00833	0.0100	-16.7	20.0
Methyl methacrylate	Ave	0.2430	0.2131		0.0175	0.0200	-12.3	20.0
2-Nitropropane	Ave	0.0745	0.0279		0.00750	0.0200	-62.5*	20.0
n-Butyl acetate	Ave	0.3918	0.3008		0.00768	0.0100	-23.2*	20.0
1-Chlorohexane	Ave	0.3968	0.3067		0.00773	0.0100	-22.7*	20.0
Cyclohexanone	Lin1		0.0109		0.0663	0.100	-33.7*	20.0
Pentachloroethane	Ave	0.2034	0.1499		0.0147	0.0200	-26.3*	20.0
1,2,3-Trimethylbenzene	Ave	2.297	2.035		0.00886	0.0100	-11.4	20.0
Benzyl chloride	Ave	0.2963	0.1196		0.00404	0.0100	-59.6*	20.0
1,3,5-Trichlorobenzene	Ave	0.9466	0.8253		0.00872	0.0100	-12.8	20.0
2-Methylnaphthalene	Ave	1.076	0.6682		0.0124	0.0200	-37.9*	20.0

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00281	vmbfb 00021
BFB 240-364786/1		8260C		5 mL	5 mL				1 uL
STD8260 240-364786/2 IC		8260C		5 mL	5 mL	1 uL	32 uL	32 uL	
STD8260 240-364786/3 IC		8260C		5 mL	5 mL	1 uL	16 uL	16 uL	
STD8260 240-364786/4 ICIS		8260C		5 mL	5 mL	1 uL	8 uL	8 uL	
STD8260 240-364786/5 IC		8260C		5 mL	5 mL	1 uL	4 uL	4 uL	
STD8260 240-364786/6 IC		8260C		5 mL	5 mL	1 uL	1.6 uL	1.6 uL	
STD8260 240-364786/7 IC		8260C		5 mL	5 mL	1 uL	0.8 uL	0.8 uL	
STD 240-364786/8 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/9 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/10 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/11 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/12 IC		8260C		5 mL	5 mL	1 uL			
STD 240-364786/13 IC		8260C		5 mL	5 mL	1 uL			
ICV 240-364786/14		8260C		5 mL	5 mL	1 uL	0.797 uL		
ICV 240-364786/15		8260C		5 mL	5 mL	1 uL	0.797 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C							32 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMFASA9W 00216	VMFASAW 00264	VMFASGW 00293	VMFASPW 00285	VMRA9W 00282	VMRGAS 00278
STD8260 240-364786/3 IC		8260C							16 uL
STD8260 240-364786/4 ICIS		8260C							8 uL
STD8260 240-364786/5 IC		8260C							4 uL
STD8260 240-364786/6 IC		8260C							1.6 uL
STD8260 240-364786/7 IC		8260C							0.8 uL
STD 240-364786/8 IC		8260C						32 uL	
STD 240-364786/9 IC		8260C						16 uL	
STD 240-364786/10 IC		8260C						8 uL	
STD 240-364786/11 IC		8260C						4 uL	
STD 240-364786/12 IC		8260C						1.6 uL	
STD 240-364786/13 IC		8260C						0.8 uL	
ICV 240-364786/14		8260C			8 uL	8 uL	8 uL		
ICV 240-364786/15		8260C		8 uL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
BFB 240-364786/1		8260C							
STD8260 240-364786/2 IC		8260C		32 uL					
STD8260 240-364786/3 IC		8260C		16 uL					
STD8260 240-364786/4 ICIS		8260C		8 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 364786 Batch Start Date: 01/21/19 10:14 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00318					
STD8260 240-364786/5 IC		8260C		4 uL					
STD8260 240-364786/6 IC		8260C		1.6 uL					
STD8260 240-364786/7 IC		8260C		0.8 uL					
STD 240-364786/8 IC		8260C							
STD 240-364786/9 IC		8260C							
STD 240-364786/10 IC		8260C							
STD 240-364786/11 IC		8260C							
STD 240-364786/12 IC		8260C							
STD 240-364786/13 IC		8260C							
ICV 240-364786/14		8260C							
ICV 240-364786/15		8260C							

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367509 Batch Start Date: 02/11/19 10:27 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00284
BFB 240-367509/1		8260C		5 mL	5 mL				
CCVIS 240-367509/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-367509/3		8260C		5 mL	5 mL		1 uL		
LCS 240-367509/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-367509/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-107796-A-1	TB-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00267	VMFASGW 00295	VMFASPW 00287	VMRA9W 00284	VMRGAS 00281
BFB 240-367509/1		8260C		1 uL					
CCVIS 240-367509/2		8260C							8 uL
CCV 240-367509/3		8260C						8 uL	
LCS 240-367509/4		8260C			8 uL	8 uL	8 uL		
MB 240-367509/6		8260C							
240-107796-A-1	TB-020619	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00320					
BFB 240-367509/1		8260C							
CCVIS 240-367509/2		8260C		8 uL					
CCV 240-367509/3		8260C							
LCS 240-367509/4		8260C							
MB 240-367509/6		8260C							
240-107796-A-1	TB-020619	8260C	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367509 Batch Start Date: 02/11/19 10:27 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367672 Batch Start Date: 02/12/19 10:19 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00284
BFB 240-367672/1		8260C		5 mL	5 mL				
CCVIS 240-367672/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-367672/3		8260C		5 mL	5 mL		1 uL		
LCS 240-367672/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-367672/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-107796-B-2	MRC-MW138B-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107796-B-3	MRC-MW141B-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107796-B-3 MS	MRC-MW141B-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107796-B-3 MSD	MRC-MW141B-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107796-B-4	MRC-MW142B-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00267	VMFASGW 00296	VMFASPW 00288	VMRA9W 00284	VMRGAS 00281
BFB 240-367672/1		8260C		1 uL					
CCVIS 240-367672/2		8260C							8 uL
CCV 240-367672/3		8260C						8 uL	
LCS 240-367672/4		8260C			8 uL	8 uL	8 uL		
MB 240-367672/6		8260C							
240-107796-B-2	MRC-MW138B-020619	8260C	T						
240-107796-B-3	MRC-MW141B-020619	8260C	T						
240-107796-B-3 MS	MRC-MW141B-020619	8260C	T		8 uL	8 uL	8 uL		
240-107796-B-3 MSD	MRC-MW141B-020619	8260C	T		8 uL	8 uL	8 uL		
240-107796-B-4	MRC-MW142B-020619	8260C	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367672 Batch Start Date: 02/12/19 10:19 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00321					
BFB 240-367672/1		8260C							
CCVIS 240-367672/2		8260C		8 uL					
CCV 240-367672/3		8260C							
LCS 240-367672/4		8260C							
MB 240-367672/6		8260C							
240-107796-B-2	MRC-MW138B-020619	8260C	T						
240-107796-B-3	MRC-MW141B-020619	8260C	T						
240-107796-B-3 MS	MRC-MW141B-020619	8260C	T						
240-107796-B-3 MSD	MRC-MW141B-020619	8260C	T						
240-107796-B-4	MRC-MW142B-020619	8260C	T						

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367892 Batch Start Date: 02/13/19 11:22 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VM50IS 00072	vm50ss_stk 00079	VMAROLISTDW 00284
BFB 240-367892/1		8260C		5 mL	5 mL				
CCVIS 240-367892/2		8260C		5 mL	5 mL		1 uL	0.797 uL	8 uL
CCV 240-367892/3		8260C		5 mL	5 mL		1 uL		
LCS 240-367892/4		8260C		5 mL	5 mL		1 uL	0.797 uL	
MB 240-367892/6		8260C		5 mL	5 mL		1 uL	0.797 uL	
240-107796-B-5	MRC-MW158A-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	
240-107796-C-6	MRC-DUP01-020619	8260C	T	5 mL	5 mL	<2 SU	1 uL	0.797 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	vmbfb 00021	VMFASAW 00267	VMFASGW 00296	VMFASPW 00288	VMRA9W 00285	VMRGAS 00281
BFB 240-367892/1		8260C		1 uL					
CCVIS 240-367892/2		8260C							8 uL
CCV 240-367892/3		8260C						8 uL	
LCS 240-367892/4		8260C			8 uL	8 uL	8 uL		
MB 240-367892/6		8260C							
240-107796-B-5	MRC-MW158A-020619	8260C	T						
240-107796-C-6	MRC-DUP01-020619	8260C	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00321					
BFB 240-367892/1		8260C							
CCVIS 240-367892/2		8260C		8 uL					
CCV 240-367892/3		8260C							
LCS 240-367892/4		8260C							
MB 240-367892/6		8260C							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367892 Batch Start Date: 02/13/19 11:22 Batch Analyst: Evans, Laura

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VMRPRIMW 00321					
240-107796-B-5	MRC-MW158A-020619	8260C	T						
240-107796-C-6	MRC-DUP01-020619	8260C	T						

Batch Notes	
pH Indicator ID	HC861525

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): HP-5MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	13CDCB #
MRC-MW158A-020619	240-107796-5	49
	MB 680-558728/12-A	71
	LCS 680-558728/13-A	75
	LCSD 680-558728/14-A	68

	QC LIMITS
13CDCB = Decachlorobiphenyl-13C12	25-113

Column to be used to flag recovery values

FORM II 680

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Sample No.: CCVIS 680-559059/3 Date Analyzed: 02/21/2019 06:44

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm)

Lab File ID (Standard): xb2030.D Heated Purge: (Y/N) N

Calibration ID: 63054

		PHN		CRY			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		170892	12.41	169663	18.67		
UPPER LIMIT		222160	12.91	220562	19.17		
LOWER LIMIT		119624	11.91	118764	18.17		
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-558728/12-A		143915	12.41	132159	18.67		
LCS 680-558728/13-A		164188	12.41	171582	18.67		
LCSD 680-558728/14-A		179669	12.41	188862	18.67		
240-107796-5	MRC-MW158A-020619	179584	12.41	179028	18.67		
CCV 680-559059/21		159076	12.41	142687	18.67		

PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 70%-130% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 680

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Lab File ID: xb2031.D Lab Sample ID: MB 680-558728/12-A

Matrix: Water Date Extracted: 02/19/2019 13:42

Instrument ID: CMSX Date Analyzed: 02/21/2019 07:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 680-558728/13-A	xb2032.D	02/21/2019 07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019 08:10
MRC-MW158A-020619	240-107796-5	xb2043.D	02/21/2019 12:55

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-107796-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-558728/12-A

Matrix: Water | Lab File ID: xb2031.D

Analysis Method: 680 | Date Collected:

Extract. Method: 680 | Date Extracted: 02/19/2019 13:42

Sample wt/vol: 1000(mL) | Date Analyzed: 02/21/2019 07:13

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 2(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 559059 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
28655-71-2	Heptachlorobiphenyl	0.030	U	0.30	0.030
26601-64-9	Hexachlorobiphenyl	0.015	U	0.20	0.015
53742-07-7	Nonachlorobiphenyl	0.049	U	0.50	0.049
55722-26-4	Octachlorobiphenyl	0.038	U	0.30	0.038
27323-18-8	Monochlorobiphenyl	0.0056	U	0.10	0.0056
2051-24-3	DCB Decachlorobiphenyl	0.070	U	0.50	0.070
25512-42-9	Dichlorobiphenyl	0.0054	U	0.10	0.0054
25429-29-2	Pentachlorobiphenyl	0.014	U	0.20	0.014
26914-33-0	Tetrachlorobiphenyl	0.013	U	0.20	0.013
25323-68-6	Trichlorobiphenyl	0.0065	U	0.10	0.0065

CAS NO.	SURROGATE	%REC	Q	LIMITS
STL00281	Decachlorobiphenyl-13C12	71		25-113

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2032.D

Lab ID: LCS 680-558728/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.67	78	62-130	
Hexachlorobiphenyl	4.00	3.37	84	62-130	
Nonachlorobiphenyl	10.0	14.6	146	70-195	
Octachlorobiphenyl	6.00	5.09	85	64-130	
Monochlorobiphenyl	2.00	1.08	54	42-130	
DCB Decachlorobiphenyl	10.0	7.81	78	59-130	
Dichlorobiphenyl	2.00	1.32	66	49-130	
Pentachlorobiphenyl	4.00	3.47	87	63-130	
Tetrachlorobiphenyl	4.00	2.93	73	54-130	
Trichlorobiphenyl	2.00	1.47	73	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Matrix: Water Level: Low Lab File ID: xb2033.D

Lab ID: LCSD 680-558728/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Heptachlorobiphenyl	6.00	4.45	74	5	40	62-130	
Hexachlorobiphenyl	4.00	3.21	80	5	40	62-130	
Nonachlorobiphenyl	10.0	13.2	132	10	40	70-195	
Octachlorobiphenyl	6.00	4.75	79	7	40	64-130	
Monochlorobiphenyl	2.00	1.36	68	23	40	42-130	
DCB Decachlorobiphenyl	10.0	7.14	71	9	40	59-130	
Dichlorobiphenyl	2.00	1.47	73	11	40	49-130	
Pentachlorobiphenyl	4.00	3.33	83	4	40	63-130	
Tetrachlorobiphenyl	4.00	3.04	76	4	40	54-130	
Trichlorobiphenyl	2.00	1.52	76	3	40	51-130	

Column to be used to flag recovery and RPD values

FORM III 680

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Lab File ID: xa0805.D DFTPP Injection Date: 01/08/2019

Instrument ID: CMSX DFTPP Injection Time: 14:10

Analysis Batch No.: 554469

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	55.9
197	Less than 1 % of mass 198	1.0
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.5
275	10 - 30% of mass 198	25.1
365	Greater than 1% of mass 198	3.8
441	Present but less than mass 443	13.7 (87.5) 2
442	Greater than 40% of mass 198	85.3
443	17 - 23% of mass 442	15.6 (18.3) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICISAV 680-554469/3	xa0807.D	01/08/2019	15:11
	IC 680-554469/5	xa0809.D	01/08/2019	16:08
	IC 680-554469/6	xa0810.D	01/08/2019	16:37
	IC 680-554469/27	xa0850.D	01/08/2019	17:05
	IC 680-554469/7	xa0811.D	01/08/2019	17:34
	IC 680-554469/8	xa0812.D	01/08/2019	18:02
	ICV 680-554469/9	xa0813.D	01/08/2019	18:31

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-107796-1 Analy Batch No.: 554469

SDG No.:

Instrument ID: CMSX GC Column: HP-5MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/08/2019 15:11 Calibration End Date: 01/08/2019 18:02 Calibration ID: 63054

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-554469/8	xa0812.D
Level 2	IC 680-554469/7	xa0811.D
Level 3	IC 680-554469/6	xa0810.D
Level 4	ICISAV 680-554469/3	xa0807.D
Level 5	IC 680-554469/5	xa0809.D
Level 6	IC 680-554469/27	xa0850.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochlorobiphenyl	0.8996 0.7328	0.9591	0.8421	0.7511	0.7982	Ave		0.8305				10.5		20.0			
Dichlorobiphenyl	0.6149 0.5403	0.6640	0.5816	0.5345	0.5729	Ave		0.5847				8.3		20.0			
Trichlorobiphenyl	0.4352 0.3978	0.4678	0.4198	0.3862	0.4119	Ave		0.4198				6.9		20.0			
Tetrachlorobiphenyl	0.3042 0.2774	0.3307	0.3000	0.2694	0.2890	Ave		0.2951				7.4		20.0			
Pentachlorobiphenyl	0.2418 0.2366	0.2574	0.2399	0.2254	0.2389	Ave		0.2400				4.3		20.0			
Hexachlorobiphenyl	0.2406 0.2321	0.2514	0.2371	0.2285	0.2407	Ave		0.2384				3.3		20.0			
Heptachlorobiphenyl	0.2942 0.2138	0.2738	0.2182	0.2060	0.2195	Ave		0.2376				15.5		20.0			
Octachlorobiphenyl	0.2066 0.1990	0.2174	0.2088	0.1909	0.2095	Ave		0.2054				4.5		20.0			
Nonachlorobiphenyl				0.0526		Ave		0.0420				4.1		20.0			
DCB Decachlorobiphenyl	0.0399 0.0439	0.0422	0.0420	0.0400	0.0437	Ave		0.0420				4.1		20.0			
Decachlorobiphenyl-13C12	0.0517 0.0529	0.0512	0.0597	0.0527	0.0552	Ave		0.0539				5.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICV 680-554469/9 Calibration Date: 01/08/2019 18:31

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xa0813.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8517		1.03	1.00	2.6	20.0
Dichlorobiphenyl	Ave	0.5847	0.5801		0.992	1.00	-0.8	20.0
Trichlorobiphenyl	Ave	0.4198	0.4573		1.09	1.00	8.9	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.3118		2.11	2.00	5.6	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2531		2.11	2.00	5.5	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2508		2.10	2.00	5.2	20.0
Heptachlorobiphenyl	Ave	0.2376	0.2274		2.87	3.00	-4.3	20.0
Octachlorobiphenyl	Ave	0.2054	0.2183		3.19	3.00	6.3	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0419		5.00	5.00	-0.0	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0577		5.35	5.00	7.1	20.0

FORM V
PCBS INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Lab File ID: xb2028.D DFTPP Injection Date: 02/21/2019

Instrument ID: CMSX DFTPP Injection Time: 05:43

Analysis Batch No.: 559059

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
127	40 - 60 % of mass 198	59.5
197	Less than 1 % of mass 198	0.9
198	Base peak, 100 % Relative abundance	100.0
199	5 - 9 % of mass 198	6.2
275	10 - 30% of mass 198	28.0
365	Greater than 1% of mass 198	3.5
441	Present but less than mass 443	15.1 (86.3) 2
442	Greater than 40% of mass 198	96.2
443	17 - 23% of mass 442	17.5 (18.2) 1

1-Value is % mass 442 2-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	WDM 680-559059/2	xb2029.D	02/21/2019	06:14
	CCVIS 680-559059/3	xb2030.D	02/21/2019	06:44
	MB 680-558728/12-A	xb2031.D	02/21/2019	07:13
	LCS 680-558728/13-A	xb2032.D	02/21/2019	07:41
	LCSD 680-558728/14-A	xb2033.D	02/21/2019	08:10
MRC-MW158A-020619	240-107796-5	xb2043.D	02/21/2019	12:55
	CCV 680-559059/21	xb2051.D	02/21/2019	16:43

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCVIS 680-559059/3 Calibration Date: 02/21/2019 06:44

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2030.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.7268		0.875	1.00	-12.5	20.0
Dichlorobiphenyl	Ave	0.5847	0.5079		0.869	1.00	-13.1	20.0
Trichlorobiphenyl	Ave	0.4198	0.3597		0.857	1.00	-14.3	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2563		1.74	2.00	-13.2	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2131		1.78	2.00	-11.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2136		1.79	2.00	-10.4	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1920		2.42	3.00	-19.2	20.0
Octachlorobiphenyl	Ave	0.2054	0.1725		2.52	3.00	-16.0	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0343		4.08	5.00	-18.4	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0462		4.29	5.00	-14.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Lab Sample ID: CCV 680-559059/21 Calibration Date: 02/21/2019 16:43

Instrument ID: CMSX Calib Start Date: 01/08/2019 15:11

GC Column: HP-5MS ID: 0.25(mm) Calib End Date: 01/08/2019 18:02

Lab File ID: xb2051.D Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochlorobiphenyl	Ave	0.8305	0.8070		0.972	1.00	-2.8	20.0
Dichlorobiphenyl	Ave	0.5847	0.5601		0.958	1.00	-4.2	20.0
Trichlorobiphenyl	Ave	0.4198	0.4000		0.953	1.00	-4.7	20.0
Tetrachlorobiphenyl	Ave	0.2951	0.2879		1.95	2.00	-2.4	20.0
Pentachlorobiphenyl	Ave	0.2400	0.2300		1.92	2.00	-4.2	20.0
Hexachlorobiphenyl	Ave	0.2384	0.2246		1.88	2.00	-5.8	20.0
Heptachlorobiphenyl	Ave	0.2376	0.1938		2.45	3.00	-18.4	20.0
Octachlorobiphenyl	Ave	0.2054	0.1765		2.58	3.00	-14.1	20.0
DCB Decachlorobiphenyl	Ave	0.0420	0.0315		3.75	5.00	-25.0*	20.0
Decachlorobiphenyl-13C12	Ave	0.0539	0.0422		3.92	5.00	-21.6*	20.0

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Batch Number: 558728 Batch Start Date: 02/19/19 13:42 Batch Analyst: Wilson, Charles E

Batch Method: 680 Batch End Date: 02/20/19 07:53

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ResidualChloCheck	ReceivedpH
240-107796-K-5	MRC-MW158A-020619	680, 680	T	1494.3 g	501.2 g	993.1 mL	1 mL	N	7 SU
MB 680-558728/12		680, 680				1000 mL	1 mL	N	7 SU
LCS 680-558728/13		680, 680				1000 mL	1 mL	N	7 SU
LCSD 680-558728/14		680, 680				1000 mL	1 mL	N	7 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	680wkSPIKE 00120	680wkSURR-NEW 00035				
240-107796-K-5	MRC-MW158A-020619	680, 680	T		1 mL				
MB 680-558728/12		680, 680			1 mL				
LCS 680-558728/13		680, 680		1 mL	1 mL				
LCSD 680-558728/14		680, 680		1 mL	1 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-107796-1

SDG No.:

Batch Number: 558728 Batch Start Date: 02/19/19 13:42 Batch Analyst: Wilson, Charles E

Batch Method: 680 Batch End Date: 02/20/19 07:53

Batch Notes	
Balance ID	23
Batch Comment	680 box 125
Boiling Chips ID	901800
Concentration 1 Thermometer ID	50
Analyst ID - Concentration	jc
Exchange Solvent ID	5859923
Analyst ID - Extraction	CEW/CMJ
Extraction 1 End Time	02/20/2019 07:53
Extraction 1 Start Time	02/19/2019 13:42
Method/Fraction	680
pH Indicator ID	5904645
Pipette/Syringe/Dispenser ID	AA06G
Prep Solvent ID	5904693
Residual Chlorine Indicator ID	5775443
Analyst ID - Spike Analyst	CEW
Analyst ID - Spike Witness Analyst	CMJ
Sufficient Volume for Batch QC	NO

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW138B-020619	240-107796-2
MRC-MW141B-020619	240-107796-3
MRC-MW142B-020619	240-107796-4
MRC-MW158A-020619	240-107796-5
MRC-DUP01-020619	240-107796-6

Comments:

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 12/15/2017 12:49

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 12/15/2017 12:49

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Iron	271.441	200	25.958
Manganese	257.610	15	2.119

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A MDL Date: 04/27/2017 13:23

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: I14

Method: 6020A XMDL Date: 04/27/2017 13:25

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum	27.00	50	34
Antimony	121.00	2	0.57
Arsenic	75.00	5	0.75
Barium	137.00	5	2.23
Beryllium	9.00	1	0.305
Cadmium	111.00	1	0.212
Calcium	43.00	1000	583
Chromium	52.00	2	0.98
Cobalt	59.00	1	0.19
Copper	65.00	2	1.7
Iron	56.00	100	47
Lead	208.00	1	0.45
Magnesium	25.00	1000	199
Manganese	55.00	5	2.06
Nickel	60.00	2	1.47
Potassium	39.00	1000	216
Selenium	78.00	5	0.89
Silver	107.00	1	0.053
Sodium	23.00	1000	329
Thallium	205.00	1	0.2
Vanadium	51.00	5	0.82
Zinc	66.00	20	15

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG No.:

ICP-AES Instrument ID: I9 Date: 01/25/2019

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	Tl	V
Aluminum										0.01401160					0.026101
Antimony		-0.000056			-0.000451			-0.000015							0.002940
Arsenic		0.000005			-0.000198	0.00022072			-0.000355	0.00045569					
Barium															
Beryllium															0.000086
Boron															
Cadmium			0.008775					-0.00001							
Calcium															
Chromium															
Cobalt													0.001923		
Copper				0.000018	0.000453			-0.000018					-0.000463		
Iron															
Lead		-0.000129					0.00001699	0.000043			0.000260	0.000066831			
Lithium															
Magnesium															
Manganese															
Molybdenum															
Nickel					0.000799			0.000054							
Potassium															
Selenium		-0.000049							0.000231						
Silver															
Sodium															
Strontium															
Thallium		-0.000010			0.003994			0.000007	0.00168520				-0.000498		-0.000210
Tin															
Titanium															
Vanadium								0.000027							
Zinc						-0.000286									

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107796-1

SDG No.:

Instrument ID: I9 Date: 01/28/2019 12:15

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Iron		500000	6010C
Manganese		10000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-107796-1

SDG No.:

Instrument ID: I14 Date: 10/02/2018 11:17

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Silver		300	6020A
Aluminum		200000	6020A
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		2000	6020A
Cadmium		4000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Iron		200000	6020A
Manganese		10000	6020A
Nickel		10000	6020A
Lead		4000	6020A
Antimony		200	6020A
Selenium		10000	6020A
Thallium		2000	6020A
Vanadium		10000	6020A
Zinc		10000	6020A
Calcium		500000	6020A
Potassium		500000	6020A
Magnesium		500000	6020A
Sodium		500000	6020A

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/11/2019 09:36 End Date: 02/12/2019 01:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ICIS 240-367531/1	1		09:36	X	X																							
CALSTD 240-367531/2 IC			09:40	X	X																							
CALSTD 240-367531/3 IC			09:44	X	X																							
ICV 240-367531/4	1		09:49	X	X																							
ICB 240-367531/5	1		09:53	X	X																							
ICVL 240-367531/6	1		09:57	X	X																							
ZZZZZZ			10:02																									
ICSA 240-367531/8	1		10:06	X	X																							
ICSAB 240-367531/9	1		10:10	X	X																							
CCV 240-367531/10			10:15																									
CCB 240-367531/11			10:19																									
ZZZZZZ			10:23																									
ZZZZZZ			10:27																									
ZZZZZZ			10:32																									
ZZZZZZ			10:36																									
ZZZZZZ			10:41																									
ZZZZZZ			10:45																									
CCV 240-367531/18			10:50																									
CCB 240-367531/19			10:54																									
ZZZZZZ			11:05																									
ZZZZZZ			11:09																									
ZZZZZZ			11:14																									
ZZZZZZ			11:18																									
ZZZZZZ			11:23																									
ZZZZZZ			11:27																									
ZZZZZZ			11:32																									
CCV 240-367531/27			11:36																									
CCB 240-367531/28			11:40																									
ZZZZZZ			11:56																									
ZZZZZZ			12:01																									
ZZZZZZ			12:05																									
ZZZZZZ			12:09																									
ZZZZZZ			12:14																									
ZZZZZZ			12:18																									
ZZZZZZ			12:22																									
ZZZZZZ			12:26																									
ZZZZZZ			12:30																									
ZZZZZZ			12:35																									
CCV 240-367531/39			12:39																									
CCB 240-367531/40			12:43																									
ZZZZZZ			12:48																									
ZZZZZZ			12:52																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/11/2019 09:36 End Date: 02/12/2019 01:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			12:56																									
CCV 240-367531/44			13:01																									
CCB 240-367531/45			13:05																									
ZZZZZZ			13:09																									
ZZZZZZ			13:14																									
ZZZZZZ			13:18																									
ZZZZZZ			13:22																									
ZZZZZZ			13:27																									
CCV 240-367531/51			13:32																									
CCB 240-367531/52			13:36																									
ZZZZZZ			13:40																									
ZZZZZZ			13:44																									
ZZZZZZ			13:49																									
ZZZZZZ			13:53																									
ZZZZZZ			13:58																									
ZZZZZZ			14:03																									
ZZZZZZ			14:07																									
ZZZZZZ			14:12																									
ZZZZZZ			14:16																									
ZZZZZZ			14:21																									
CCV 240-367531/63			14:25																									
CCB 240-367531/64			14:29																									
ZZZZZZ			14:34																									
ZZZZZZ			14:38																									
ZZZZZZ			14:43																									
ZZZZZZ			14:47																									
ZZZZZZ			14:51																									
ZZZZZZ			14:56																									
ZZZZZZ			15:01																									
ZZZZZZ			15:05																									
ZZZZZZ			15:10																									
ZZZZZZ			15:14																									
CCV 240-367531/75			15:18																									
CCB 240-367531/76			15:22																									
CCVL 240-367531/77			15:27																									
ZZZZZZ			15:31																									
ZZZZZZ			15:35																									
ZZZZZZ			15:39																									
ZZZZZZ			15:43																									
ZZZZZZ			15:48																									
ZZZZZZ			15:52																									
ZZZZZZ			15:56																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/11/2019 09:36 End Date: 02/12/2019 01:26

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			16:00																										
ZZZZZZ			16:05																										
CCV 240-367531/87	1		16:09	X	X																								
CCB 240-367531/88	1		16:13	X	X																								
ZZZZZZ			16:17																										
ZZZZZZ			16:22																										
ZZZZZZ			16:26																										
ZZZZZZ			16:30																										
ZZZZZZ			16:35																										
ZZZZZZ			16:39																										
ZZZZZZ			16:44																										
ZZZZZZ			16:48																										
ZZZZZZ			16:52																										
MB 240-367336/1-A	1	R	16:57	X	X																								
CCV 240-367531/99	1		17:02	X	X																								
CCB 240-367531/100	1		17:06	X	X																								
LCS 240-367336/2-A	1	R	17:10	X	X																								
ZZZZZZ			17:14																										
ZZZZZZ			17:19																										
ZZZZZZ			17:23																										
ZZZZZZ			17:27																										
ZZZZZZ			17:31																										
ZZZZZZ			17:36																										
ZZZZZZ			17:40																										
ZZZZZZ			17:45																										
ZZZZZZ			17:49																										
CCV 240-367531/111	1		17:53	X	X																								
CCB 240-367531/112	1		17:58	X	X																								
240-107796-2	1	R	18:02	X	X																								
240-107796-3	1	R	18:06	X	X																								
240-107796-4	1	R	18:11	X	X																								
240-107796-5	1	R	18:15	X	X																								
240-107796-6	1	R	18:19	X	X																								
ZZZZZZ			18:24																										
ZZZZZZ			18:28																										
ZZZZZZ			18:32																										
ZZZZZZ			18:37																										
ZZZZZZ			18:41																										
CCV 240-367531/123	1		18:46	X	X																								
CCB 240-367531/124	1		18:50	X	X																								
CCVL 240-367531/125	1		18:54	X	X																								
ZZZZZZ			18:58																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/11/2019 09:36 End Date: 02/12/2019 01:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			19:03																									
ZZZZZZ			19:07																									
ZZZZZZ			19:12																									
ZZZZZZ			19:16																									
ZZZZZZ			19:21																									
ZZZZZZ			19:25																									
ZZZZZZ			19:29																									
ZZZZZZ			19:34																									
CCV 240-367531/135			19:38																									
CCB 240-367531/136			19:42																									
ZZZZZZ			19:47																									
ZZZZZZ			19:51																									
ZZZZZZ			19:56																									
ZZZZZZ			20:00																									
ZZZZZZ			20:05																									
ZZZZZZ			20:09																									
ZZZZZZ			20:13																									
ZZZZZZ			20:18																									
ZZZZZZ			20:22																									
ZZZZZZ			20:26																									
CCV 240-367531/147			20:31																									
CCB 240-367531/148			20:35																									
ZZZZZZ			20:39																									
ZZZZZZ			20:43																									
ZZZZZZ			20:48																									
ZZZZZZ			20:52																									
ZZZZZZ			20:56																									
ZZZZZZ			21:01																									
ZZZZZZ			21:05																									
ZZZZZZ			21:10																									
ZZZZZZ			21:14																									
ZZZZZZ			21:18																									
CCV 240-367531/159			21:23																									
CCB 240-367531/160			21:27																									
ZZZZZZ			21:31																									
ZZZZZZ			21:36																									
ZZZZZZ			21:40																									
ZZZZZZ			21:45																									
ZZZZZZ			21:49																									
ZZZZZZ			21:53																									
ZZZZZZ			21:58																									
ZZZZZZ			22:02																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/11/2019 09:36 End Date: 02/12/2019 01:26

Lab Sample Id	D/F	Type	Time	Analytes																								
				Fe	Mn																							
ZZZZZZ			22:07																									
ZZZZZZ			22:11																									
CCV 240-367531/171			22:16																									
CCB 240-367531/172			22:20																									
ZZZZZZ			22:24																									
ZZZZZZ			22:28																									
ZZZZZZ			22:33																									
ZZZZZZ			22:37																									
ZZZZZZ			22:41																									
ZZZZZZ			22:45																									
ZZZZZZ			22:50																									
ZZZZZZ			22:54																									
ZZZZZZ			22:58																									
ZZZZZZ			23:02																									
CCV 240-367531/183			23:06																									
CCB 240-367531/184			23:10																									
ZZZZZZ			23:15																									
ZZZZZZ			23:19																									
ZZZZZZ			23:24																									
ZZZZZZ			23:28																									
ZZZZZZ			23:33																									
ZZZZZZ			23:37																									
ZZZZZZ			23:42																									
ZZZZZZ			23:46																									
ZZZZZZ			23:50																									
ZZZZZZ			23:55																									
CCV 240-367531/195			23:59																									
CCB 240-367531/196			00:03																									
ZZZZZZ			00:08																									
ZZZZZZ			00:12																									
ZZZZZZ			00:16																									
ZZZZZZ			00:21																									
ZZZZZZ			00:25																									
ZZZZZZ			00:30																									
ZZZZZZ			00:34																									
ZZZZZZ			00:38																									
ZZZZZZ			00:43																									
ZZZZZZ			00:47																									
CCV 240-367531/207			00:51																									
CCB 240-367531/208			00:55																									
ZZZZZZ			01:00																									
ZZZZZZ			01:04																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 02/11/2019 09:36 End Date: 02/12/2019 01:26

Lab Sample Id	D/F	Type	Time	Analytes																									
				Fe	Mn																								
ZZZZZZ			01:09																										
ZZZZZZ			01:13																										
ZZZZZZ			01:17																										
CCV 240-367531/214			01:22																										
CCB 240-367531/215			01:26																										

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICP Instrument ID: I9 Start Date: 02/11/2019 End Date: 02/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element In 230.606	Q	Element Y 224.306	Q	Element Y 360.073	Q	Element Y 371.030	Q	Element	Q
ICIS 240-367531/1	09:36										
ICV 240-367531/4	09:49	100		98		99		98			
ICB 240-367531/5	09:53	99		99		100		99			
ICVL 240-367531/6	09:57	100		98		100		99			
ICSA 240-367531/8	10:06	92		90		94		94			
ICSAB 240-367531/9	10:10	92		91		93		94			
CCV 240-367531/87	16:09	109		106		111		113			
CCB 240-367531/88	16:13	111		109		111		114			
MB 240-367336/1-A	16:57	111		110		113		115			
CCV 240-367531/99	17:02	108		106		111		113			
CCB 240-367531/100	17:06	109		108		111		114			
LCS 240-367336/2-A	17:10	112		110		114		115			
CCV 240-367531/111	17:53	116		114		119		125			
CCB 240-367531/112	17:58	118		116		119		126			
240-107796-2	18:02	123		118		122		127			
240-107796-3	18:06	122		117		122		127			
240-107796-4	18:11	122		117		123		129			
240-107796-5	18:15	117		113		120		123			
240-107796-6	18:19	121		116		120		126			
CCV 240-367531/123	18:46	119		114		123		125			
CCB 240-367531/124	18:50	120		117		123		127			
CCVL 240-367531/125	18:54	122		118		124		127			

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	ICV 240-367531/4 02/11/2019 09:49				CCV 240-367531/87 02/11/2019 16:09				CCV 240-367531/99 02/11/2019 17:02			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	12900		12500	103	26100		25000	104	25900		25000	103
Manganese	1530		1500	102	2050		2000	103	2060		2000	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MT6500ICV_00052 Concentration Units: ug/L

CCV Source: MTICPCCV_00147

Analyte	CCV 240-367531/111 02/11/2019 17:53				CCV 240-367531/123 02/11/2019 18:46							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	25400		25000	102	25000		25000	100				
Manganese	2010		2000	100	1980		2000	99				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTTRCRIC_00067 Concentration Units: ug/L

CCV Source: MTTRCRIC_00067

Analyte	ICVL 240-367531/6 02/11/2019 09:57				CCVL 240-367531/125 02/11/2019 18:54							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Iron	201		200	100	200		200	100				
Manganese	15.1		15.0	101	14.4	J	15.0	96				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367531/5 02/11/2019 09:53		CCB 240-367531/88 02/11/2019 16:13		CCB 240-367531/100 02/11/2019 17:06		CCB 240-367531/112 02/11/2019 17:58	
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U	26	U	26	U	26	U
Manganese	15	2.1	U	3.33	J	3.16	J	3.31	J

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-367531/124 02/11/2019 18:50							
		Found	C	Found	C	Found	C	Found	C
Iron	200	26	U						
Manganese	15	3.37	J						

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICSA 240-367531/8 Instrument ID: I9

Lab File ID: I9021119A.asc ICS Source: MTTRICSAW_00044

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Iron	**200000**	**192380**	**96**
Manganese		**1.13**	
Aluminum	*500000*	*513950*	*103*
Antimony		*4.64*	
Arsenic		*-6.04*	
Barium		*0.922*	
Beryllium		*-0.0438*	
Boron		*-5.57*	
Cadmium		*1.12*	
Calcium	*500000*	*487520*	*98*
Chromium		*4.32*	
Cobalt		*-0.429*	
Copper		*0.578*	
Lead		*4.52*	
Lithium		*18.3*	
Magnesium	*500000*	*500350*	*100*
Molybdenum		*-0.150*	
Nickel		*4.08*	
Potassium		*95.5*	
Selenium		*0.909*	
Silicon		*10.9*	
Silver		*0.612*	
Sodium		*96.7*	
Strontium		*14.5*	
Thallium		*-7.54*	
Tin		*2.55*	
Titanium		*0.205*	
Vanadium		*-6.15*	
Zinc		*0.0864*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICSAB 240-367531/9 Instrument ID: I9

Lab File ID: I9021119A.asc ICS Source: MTICPICSABW_00020

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Iron	**200000**	**191830**	**96**
Manganese	**500**	**498**	**100**
Aluminum	*500000*	*507090*	*101*
Antimony	*1000*	*1032*	*103*
Arsenic	*1000*	*995*	*99*
Barium	*500*	*502*	*100*
Beryllium	*500*	*503*	*101*
Boron	*500*	*520*	*104*
Cadmium	*1000*	*1045*	*105*
Calcium	*500000*	*483770*	*97*
Chromium	*500*	*500*	*100*
Cobalt	*500*	*492*	*98*
Copper	*500*	*566*	*113*
Lead	*1000*	*995*	*100*
Lithium	*500*	*557*	*111*
Magnesium	*500000*	*496160*	*99*
Molybdenum	*1000*	*1037*	*104*
Nickel	*1000*	*973*	*97*
Potassium	*10000*	*10522*	*105*
Selenium	*1000*	*978*	*98*
Silicon	*10000*	*10079*	*101*
Silver	*1000*	*1092*	*109*
Sodium	*10000*	*10533*	*105*
Strontium	*1500*	*1464*	*98*
Thallium	*1000*	*1008*	*101*
Tin	*500*	*507*	*101*
Titanium	*500*	*523*	*105*
Vanadium	*500*	*493*	*99*
Zinc	*1000*	*934*	*93*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/11/2019 12:05 End Date: 02/11/2019 21:18

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Pb	Sb	Se	Tl	V	Zn						
RINSE 240-367649/1			12:05																											
ICIS 240-367649/2			12:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD1 240-367649/3 IC	1		12:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD2 240-367649/4 IC	1		12:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD3 240-367649/5 IC	1		12:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
STD4 240-367649/6 IC	1		12:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICV 240-367649/7	1		12:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICB 240-367649/8	1		12:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICVL 240-367649/9	1		12:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSA 240-367649/10	1		12:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ICSAB 240-367649/11	1		12:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCV 240-367649/12			12:31																											
CCB 240-367649/13			12:34																											
ZZZZZZ			12:37																											
ZZZZZZ			12:40																											
ZZZZZZ			12:42																											
ZZZZZZ			12:45																											
ZZZZZZ			12:47																											
ZZZZZZ			12:49																											
ZZZZZZ			12:52																											
ZZZZZZ			12:54																											
ZZZZZZ			12:56																											
ZZZZZZ			12:58																											
CCV 240-367649/24			13:01																											
CCB 240-367649/25			13:03																											
ZZZZZZ			13:05																											
ZZZZZZ			13:08																											
ZZZZZZ			13:10																											
ZZZZZZ			13:12																											
ZZZZZZ			13:15																											
ZZZZZZ			13:17																											
ZZZZZZ			13:19																											
ZZZZZZ			13:21																											
ZZZZZZ			13:23																											
ZZZZZZ			13:26																											
CCV 240-367649/36			13:28																											
CCB 240-367649/37			13:30																											
ZZZZZZ			13:33																											
ZZZZZZ			13:35																											
ZZZZZZ			13:37																											
ZZZZZZ			13:40																											
ZZZZZZ			13:42																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/11/2019 12:05 End Date: 02/11/2019 21:18

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Pb	Sb	Se	Tl	V	Zn						
ZZZZZZ			13:45																											
ZZZZZZ			13:47																											
ZZZZZZ			13:49																											
ZZZZZZ			13:52																											
ZZZZZZ			13:54																											
CCV 240-367649/48			13:57																											
CCB 240-367649/49			13:59																											
ZZZZZZ			14:01																											
ZZZZZZ			14:04																											
ZZZZZZ			14:06																											
ZZZZZZ			14:08																											
ZZZZZZ			14:11																											
ZZZZZZ			14:13																											
ZZZZZZ			14:16																											
CCV 240-367649/57			14:18																											
CCB 240-367649/58			14:20																											
CCVL 240-367649/59			14:23																											
ZZZZZZ			14:25																											
ZZZZZZ			14:28																											
ZZZZZZ			14:30																											
ZZZZZZ			14:32																											
ZZZZZZ			14:34																											
ZZZZZZ			14:36																											
ZZZZZZ			14:39																											
ZZZZZZ			14:41																											
ZZZZZZ			14:43																											
CCV 240-367649/69			14:45																											
CCB 240-367649/70			14:48																											
ZZZZZZ			14:50																											
ZZZZZZ			14:53																											
ZZZZZZ			14:55																											
ZZZZZZ			14:57																											
ZZZZZZ			14:59																											
ZZZZZZ			15:02																											
ZZZZZZ			15:04																											
CCV 240-367649/78			15:07																											
CCB 240-367649/79			15:09																											
CCVL 240-367649/80			15:11																											
ZZZZZZ			15:14																											
ZZZZZZ			15:16																											
ZZZZZZ			15:18																											
ZZZZZZ			15:21																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/11/2019 12:05 End Date: 02/11/2019 21:18

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Pb	Sb	Se	Tl	V	Zn						
ZZZZZZ			15:23																											
ZZZZZZ			15:25																											
ZZZZZZ			15:27																											
ZZZZZZ			15:29																											
ZZZZZZ			15:32																											
CCV 240-367649/90			15:34																											
CCB 240-367649/91			15:36																											
ZZZZZZ			15:39																											
ZZZZZZ			15:41																											
ZZZZZZ			15:43																											
ZZZZZZ			15:46																											
ZZZZZZ			15:48																											
ZZZZZZ			15:50																											
ZZZZZZ			15:53																											
ZZZZZZ			15:55																											
ZZZZZZ			15:58																											
ZZZZZZ			16:00																											
CCV 240-367649/102			16:02																											
CCB 240-367649/103			16:05																											
ZZZZZZ			16:07																											
ZZZZZZ			16:10																											
ZZZZZZ			16:12																											
ZZZZZZ			16:14																											
ZZZZZZ			16:17																											
ZZZZZZ			16:19																											
ZZZZZZ			16:21																											
ZZZZZZ			16:24																											
ZZZZZZ			16:26																											
ZZZZZZ			16:28																											
CCV 240-367649/114			16:30																											
CCB 240-367649/115			16:33																											
ZZZZZZ			16:35																											
ZZZZZZ			16:37																											
ZZZZZZ			16:39																											
ZZZZZZ			16:42																											
ZZZZZZ			16:44																											
ZZZZZZ			16:46																											
ZZZZZZ			16:49																											
ZZZZZZ			16:51																											
ZZZZZZ			16:53																											
ZZZZZZ			16:56																											
CCV 240-367649/126			16:58																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/11/2019 12:05 End Date: 02/11/2019 21:18

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Pb	Sb	Se	Tl	V	Zn						
CCB 240-367649/127			17:00																											
ZZZZZZ			17:03																											
ZZZZZZ			17:05																											
ZZZZZZ			17:07																											
ZZZZZZ			17:09																											
ZZZZZZ			17:12																											
ZZZZZZ			17:14																											
ZZZZZZ			17:16																											
ZZZZZZ			17:19																											
ZZZZZZ			17:21																											
CCV 240-367649/137			17:23																											
CCB 240-367649/138			17:26																											
CCVL 240-367649/139			17:28																											
ZZZZZZ			17:30																											
ZZZZZZ			17:33																											
ZZZZZZ			17:35																											
ZZZZZZ			17:37																											
ZZZZZZ			17:40																											
ZZZZZZ			17:42																											
ZZZZZZ			17:44																											
ZZZZZZ			17:46																											
ZZZZZZ			17:48																											
CCV 240-367649/149			17:51																											
CCB 240-367649/150			17:53																											
ZZZZZZ			17:56																											
ZZZZZZ			17:58																											
ZZZZZZ			18:00																											
ZZZZZZ			18:03																											
ZZZZZZ			18:05																											
ZZZZZZ			18:07																											
ZZZZZZ			18:10																											
ZZZZZZ			18:12																											
ZZZZZZ			18:15																											
ZZZZZZ			18:17																											
CCV 240-367649/161			18:19																											
CCB 240-367649/162			18:22																											
ZZZZZZ			18:24																											
ZZZZZZ			18:26																											
ZZZZZZ			18:29																											
ZZZZZZ			18:31																											
ZZZZZZ			18:34																											
ZZZZZZ			18:36																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/11/2019 12:05 End Date: 02/11/2019 21:18

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Pb	Sb	Se	Tl	V	Zn					
ZZZZZZ			18:38																									
CCV 240-367649/170			18:41																									
CCB 240-367649/171			18:43																									
CCVL 240-367649/172			18:45																									
ZZZZZZ			18:48																									
ZZZZZZ			18:50																									
ZZZZZZ			18:52																									
ZZZZZZ			18:55																									
ZZZZZZ			18:57																									
ZZZZZZ			18:59																									
ZZZZZZ			19:02																									
ZZZZZZ			19:04																									
ZZZZZZ			19:06																									
CCV 240-367649/182	1		19:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCB 240-367649/183	1		19:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ZZZZZZ			19:13																									
ZZZZZZ			19:16																									
ZZZZZZ			19:18																									
ZZZZZZ			19:21																									
ZZZZZZ			19:23																									
ZZZZZZ			19:25																									
ZZZZZZ			19:28																									
MB 240-367336/1-A	1	R	19:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
LCS 240-367336/3-A	1	R	19:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ZZZZZZ			19:35																									
CCV 240-367649/194	1		19:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCB 240-367649/195	1		19:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ZZZZZZ			19:42																									
ZZZZZZ			19:44																									
ZZZZZZ			19:46																									
ZZZZZZ			19:49																									
ZZZZZZ			19:51																									
ZZZZZZ			19:53																									
ZZZZZZ			19:55																									
ZZZZZZ			19:58																									
240-107796-2	1	R	20:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-107796-3	1	R	20:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCV 240-367649/206	1		20:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCB 240-367649/207	1		20:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-107796-4	1	R	20:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-107796-5	1	R	20:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-107796-6	1	R	20:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/11/2019 12:05 End Date: 02/11/2019 21:18

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Na	Pb	Sb	Se	Tl	V	Zn						
CCV 240-367649/211	1		20:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCB 240-367649/212	1		20:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
CCVL 240-367649/213	1		20:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
ZZZZZZ			20:24																											
ZZZZZZ			20:26																											
ZZZZZZ			20:29																											
ZZZZZZ			20:31																											
ZZZZZZ			20:33																											
ZZZZZZ			20:35																											
ZZZZZZ			20:38																											
ZZZZZZ			20:40																											
ZZZZZZ			20:42																											
CCV 240-367649/223			20:44																											
CCB 240-367649/224			20:47																											
ZZZZZZ			20:49																											
ZZZZZZ			20:52																											
ZZZZZZ			20:54																											
ZZZZZZ			20:56																											
ZZZZZZ			20:59																											
ZZZZZZ			21:01																											
ZZZZZZ			21:04																											
ZZZZZZ			21:06																											
CCV 240-367649/233			21:08																											
CCB 240-367649/234			21:11																											
CCVL 240-367649/235			21:13																											
CCV 240-367649/236			21:16																											
CCB 240-367649/237			21:18																											

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/11/2019 End Date: 02/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-367649/3 IC	12:10	96		98		98		99		97	
STD2 240-367649/4 IC	12:13	93		98		95		97		93	
STD3 240-367649/5 IC	12:15	90		96		96		97		90	
STD4 240-367649/6 IC	12:17	93		98		98		99		97	
ICV 240-367649/7	12:20	92		99		100		101		95	
ICB 240-367649/8	12:22	95		102		103		102		99	
ICVL 240-367649/9	12:24	95		102		102		103		99	
ICSA 240-367649/10	12:27	86		94		95		94		86	
ICSAB 240-367649/11	12:29	78		92		95		94		89	
CCV 240-367649/182	19:09	70		94		97		91		91	
CCB 240-367649/183	19:11	70		96		98		90		94	
MB 240-367336/1-A	19:30	80		102		107		96		103	
LCS 240-367336/3-A	19:33	75		96		98		91		93	
CCV 240-367649/194	19:37	59		85		93		87		88	
CCB 240-367649/195	19:40	63		88		95		87		92	
240-107796-2	20:00	73		98		99		93		92	
240-107796-3	20:03	74		98		102		96		97	
CCV 240-367649/206	20:05	74		100		102		95		98	
CCB 240-367649/207	20:07	76		99		102		96		99	
240-107796-4	20:10	77		102		103		96		94	
240-107796-5	20:12	74		98		102		95		93	
240-107796-6	20:14	77		99		102		96		96	
CCV 240-367649/211	20:17	75		100		101		94		96	
CCB 240-367649/212	20:19	80		100		104		95		99	
CCVL 240-367649/213	20:21	80		100		102		95		98	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/11/2019 End Date: 02/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-367649/3 IC	12:10	99		100		98		99		99	
STD2 240-367649/4 IC	12:13	97		98		97		100		101	
STD3 240-367649/5 IC	12:15	97		98		95		99		101	
STD4 240-367649/6 IC	12:17	103		102		102		104		104	
ICV 240-367649/7	12:20	101		101		101		104		104	
ICB 240-367649/8	12:22	106		105		103		104		105	
ICVL 240-367649/9	12:24	104		106		105		105		106	
ICSA 240-367649/10	12:27	96		98		94		103		103	
ICSAB 240-367649/11	12:29	95		99		96		104		104	
CCV 240-367649/182	19:09	96		101		95		99		100	
CCB 240-367649/183	19:11	101		104		98		100		101	
MB 240-367336/1-A	19:30	103		107		103		100		102	
LCS 240-367336/3-A	19:33	95		102		94		96		97	
CCV 240-367649/194	19:37	93		99		91		96		96	
CCB 240-367649/195	19:40	98		102		96		96		99	
240-107796-2	20:00	95		102		98		100		100	
240-107796-3	20:03	102		106		103		103		104	
CCV 240-367649/206	20:05	99		105		100		102		104	
CCB 240-367649/207	20:07	104		108		103		104		104	
240-107796-4	20:10	102		107		103		103		104	
240-107796-5	20:12	99		104		101		102		105	
240-107796-6	20:14	102		106		104		103		104	
CCV 240-367649/211	20:17	98		103		100		101		102	
CCB 240-367649/212	20:19	104		107		104		102		104	
CCVL 240-367649/213	20:21	104		108		103		101		102	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/11/2019 End Date: 02/11/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-367649/3 IC	12:10	100									
STD2 240-367649/4 IC	12:13	99									
STD3 240-367649/5 IC	12:15	96									
STD4 240-367649/6 IC	12:17	101									
ICV 240-367649/7	12:20	100									
ICB 240-367649/8	12:22	104									
ICVL 240-367649/9	12:24	104									
ICSA 240-367649/10	12:27	99									
ICSAB 240-367649/11	12:29	100									
CCV 240-367649/182	19:09	95									
CCB 240-367649/183	19:11	98									
MB 240-367336/1-A	19:30	101									
LCS 240-367336/3-A	19:33	93									
CCV 240-367649/194	19:37	93									
CCB 240-367649/195	19:40	96									
240-107796-2	20:00	95									
240-107796-3	20:03	100									
CCV 240-367649/206	20:05	99									
CCB 240-367649/207	20:07	102									
240-107796-4	20:10	102									
240-107796-5	20:12	98									
240-107796-6	20:14	102									
CCV 240-367649/211	20:17	98									
CCB 240-367649/212	20:19	102									
CCVL 240-367649/213	20:21	101									

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-367649/7 02/11/2019 12:20				CCV 240-367649/182 02/11/2019 19:09				CCV 240-367649/194 02/11/2019 19:37			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	196		200	98	246		250	98	237		250	95
Antimony	40.9		40.0	102	51.8		50.0	104	52.9		50.0	106
Arsenic	40.5		40.0	101	49.9		50.0	100	49.3		50.0	99
Barium	39.4		40.0	99	50.5		50.0	101	51.2		50.0	102
Beryllium	40.4		40.0	101	52.6		50.0	105	54.3		50.0	109
Cadmium	40.0		40.0	100	50.5		50.0	101	51.0		50.0	102
Calcium	19700		20000	98	25000		25000	100	25000		25000	100
Chromium	40.3		40.0	101	51.3		50.0	103	51.2		50.0	102
Cobalt	40.2		40.0	100	48.4		50.0	97	48.9		50.0	98
Copper	40.6		40.0	101	50.1		50.0	100	50.0		50.0	100
Iron	9950		10000	100	12200		12500	98	12200		12500	98
Lead	40.8		40.0	102	49.2		50.0	98	49.6		50.0	99
Magnesium	19500		20000	97	24300		25000	97	23700		25000	95
Manganese	199		200	99	253		250	101	257		250	103
Potassium	19800		20000	99	25300		25000	101	25300		25000	101
Selenium	40.6		40.0	101	51.0		50.0	102	51.9		50.0	104
Silver	41.6		40.0	104	49.6		50.0	99	49.8		50.0	100
Sodium	20000		20000	100	24300		25000	97	23800		25000	95
Thallium	40.2		40.0	101	49.3		50.0	99	49.7		50.0	99
Vanadium	39.5		40.0	99	51.3		50.0	103	50.8		50.0	102
Zinc	39.8		40.0	100	49.3		50.0	99	49.7		50.0	99
Nickel	40.6		40.0	101	47.4		50.0	95	48.1		50.0	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	CCV 240-367649/206 02/11/2019 20:05											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	243		250	97								
Antimony	51.7		50.0	103								
Arsenic	50.0		50.0	100								
Barium	50.2		50.0	100								
Beryllium	53.9		50.0	108								
Cadmium	49.5		50.0	99								
Calcium	25500		25000	102								
Chromium	51.7		50.0	103								
Cobalt	49.8		50.0	100								
Copper	51.1		50.0	102								
Iron	12600		12500	101								
Lead	49.6		50.0	99								
Magnesium	25100		25000	100								
Manganese	258		250	103								
Potassium	26200		25000	105								
Selenium	50.6		50.0	101								
Silver	50.1		50.0	100								
Sodium	25100		25000	100								
Thallium	49.7		50.0	99								
Vanadium	51.5		50.0	103								
Zinc	49.7		50.0	99								
Nickel	48.4		50.0	97								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00230

Analyte	ICV 240-367649/7 02/11/2019 12:20				CCV 240-367649/211 02/11/2019 20:17							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	196		200	98	244		250	98				
Antimony	40.9		40.0	102	51.6		50.0	103				
Arsenic	40.5		40.0	101	50.6		50.0	101				
Barium	39.4		40.0	99	50.1		50.0	100				
Beryllium	40.4		40.0	101	53.7		50.0	107				
Cadmium	40.0		40.0	100	49.4		50.0	99				
Calcium	19700		20000	98	25400		25000	102				
Chromium	40.3		40.0	101	51.7		50.0	103				
Cobalt	40.2		40.0	100	50.2		50.0	100				
Copper	40.6		40.0	101	51.2		50.0	102				
Iron	9950		10000	100	12600		12500	101				
Lead	40.8		40.0	102	49.5		50.0	99				
Magnesium	19500		20000	97	24900		25000	100				
Manganese	199		200	99	258		250	103				
Potassium	19800		20000	99	26200		25000	105				
Selenium	40.6		40.0	101	51.7		50.0	103				
Silver	41.6		40.0	104	49.7		50.0	99				
Sodium	20000		20000	100	25100		25000	100				
Thallium	40.2		40.0	101	49.6		50.0	99				
Vanadium	39.5		40.0	99	51.8		50.0	104				
Zinc	39.8		40.0	100	50.8		50.0	102				
Nickel	40.6		40.0	101	48.9		50.0	98				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTMSCRI6020AW_00079 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00079

Analyte	ICVL 240-367649/9 02/11/2019 12:24				CCVL 240-367649/213 02/11/2019 20:21							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	47.1	J	50.0	94	45.6	J	50.0	91				
Antimony	2.08		2.00	104	2.12		2.00	106				
Arsenic	5.02		5.00	100	4.61	J	5.00	92				
Barium	5.37		5.00	107	5.24		5.00	105				
Beryllium	0.994	J	1.00	99	1.12		1.00	112				
Cadmium	1.02		1.00	102	1.01		1.00	101				
Calcium	1020		1000	102	1040		1000	104				
Chromium	1.99	J	2.00	99	2.02		2.00	101				
Cobalt	1.04		1.00	104	1.01		1.00	101				
Copper	2.07		2.00	104	2.04		2.00	102				
Iron	107		100	107	102		100	102				
Lead	1.09		1.00	109	1.12		1.00	112				
Magnesium	1030		1000	103	1000		1000	100				
Manganese	5.15		5.00	103	5.47		5.00	109				
Potassium	1080		1000	108	1100		1000	110				
Selenium	5.13		5.00	103	5.26		5.00	105				
Silver	1.07		1.00	107	1.03		1.00	103				
Sodium	1040		1000	104	1020		1000	102				
Thallium	1.07		1.00	107	1.08		1.00	108				
Vanadium	4.96	J	5.00	99	5.10		5.00	102				
Zinc	19.9	J	20.0	99	19.3	J	20.0	96				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367649/8 02/11/2019 12:22		CCB 240-367649/183 02/11/2019 19:11		CCB 240-367649/195 02/11/2019 19:40		CCB 240-367649/207 02/11/2019 20:07	
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-367649/212 02/11/2019 20:19							
		Found	C	Found	C	Found	C	Found	C
Aluminum	50	34	U						
Antimony	2.0	0.57	U						
Arsenic	5.0	0.75	U						
Barium	5.0	2.2	U						
Beryllium	1.0	0.31	U						
Cadmium	1.0	0.21	U						
Calcium	1000	580	U						
Chromium	2.0	0.98	U						
Cobalt	1.0	0.19	U						
Copper	2.0	1.7	U						
Iron	100	47	U						
Lead	1.0	0.45	U						
Magnesium	1000	200	U						
Manganese	5.0	2.1	U						
Potassium	1000	220	U						
Selenium	5.0	0.89	U						
Silver	1.0	0.053	U						
Sodium	1000	330	U						
Thallium	1.0	0.20	U						
Vanadium	5.0	0.82	U						
Zinc	20	15	U						
Nickel	2.0	1.5	U						

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICSA 240-367649/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**50000**	**49811**	**100**
Antimony		**0.0260**	
Arsenic		**0.0010**	
Barium		**0.0340**	
Beryllium		**-0.0370**	
Cadmium		**0.234**	
Calcium	**50000**	**50957**	**102**
Chromium		**0.131**	
Cobalt		**0.0030**	
Copper		**0.0880**	
Iron	**50000**	**50248**	**100**
Lead		**0.0330**	
Magnesium	**50000**	**50531**	**101**
Manganese		**0.180**	
Potassium	**50000**	**50715**	**101**
Selenium		**0.0760**	
Silver		**0.0120**	
Sodium	**50000**	**50487**	**101**
Thallium		**0.0060**	
Vanadium		**-0.151**	
Zinc		**0.114**	
Boron		*1.06*	
Lithium		*0.137*	
Molybdenum	*1000*	*1101*	*110*
Nickel		*-0.287*	
Strontium		*0.422*	
Tin		*-0.644*	
Titanium	*1000*	*1050*	*105*
Tungsten		*0.135*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICSAB 240-367649/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Aluminum	**50000**	**47683**	**95**
Antimony	**100**	**105**	**105**
Arsenic	**100**	**102**	**102**
Barium	**100**	**101**	**101**
Beryllium	**100**	**105**	**105**
Cadmium	**100**	**100**	**100**
Calcium	**50000**	**49151**	**98**
Chromium	**100**	**100**	**100**
Cobalt	**100**	**99.5**	**99**
Copper	**100**	**101**	**101**
Iron	**50000**	**49243**	**98**
Lead	**100**	**101**	**101**
Magnesium	**50000**	**48663**	**97**
Manganese	**100**	**101**	**101**
Potassium	**50000**	**49590**	**99**
Selenium	**100**	**105**	**105**
Silver	**100**	**105**	**105**
Sodium	**50000**	**48695**	**97**
Thallium	**100**	**98.6**	**99**
Vanadium	**100**	**100.0**	**100**
Zinc	**100**	**101**	**101**
Boron	*100*	*94.7*	*95*
Lithium	*100*	*104*	*104*
Molybdenum	*1100*	*1196*	*109*
Nickel	*100*	*99.4*	*99*
Strontium	*100*	*100*	*100*
Tin	*100*	*105*	*105*
Titanium	*1100*	*1125*	*102*
Tungsten	*100*	*102*	*102*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/12/2019 15:08 End Date: 02/12/2019 20:56

Lab Sample Id	D/F	Type	Time	Analytes
				Ni
RINSE 240-367822/1			15:08	
ICIS 240-367822/2			15:11	X
STD1 240-367822/3 IC	1		15:13	X
STD2 240-367822/4 IC	1		15:15	X
STD3 240-367822/5 IC	1		15:18	X
STD4 240-367822/6 IC	1		15:20	X
ICV 240-367822/7	1		15:22	X
ICB 240-367822/8	1		15:25	X
ICVL 240-367822/9	1		15:27	X
ICSA 240-367822/10	1		15:29	X
ICSAB 240-367822/11	1		15:32	X
CCV 240-367822/12			15:34	
CCB 240-367822/13			15:36	
ZZZZZZ			15:40	
ZZZZZZ			15:43	
ZZZZZZ			15:45	
ZZZZZZ			15:47	
ZZZZZZ			15:49	
ZZZZZZ			15:51	
ZZZZZZ			15:54	
ZZZZZZ			15:56	
ZZZZZZ			15:58	
ZZZZZZ			16:01	
CCV 240-367822/24			16:03	
CCB 240-367822/25			16:05	
ZZZZZZ			16:08	
ZZZZZZ			16:10	
ZZZZZZ			16:12	
ZZZZZZ			16:15	
ZZZZZZ			16:17	
ZZZZZZ			16:19	
ZZZZZZ			16:22	
ZZZZZZ			16:24	
ZZZZZZ			16:26	
ZZZZZZ			16:29	
CCV 240-367822/36			16:31	
CCB 240-367822/37			16:33	
ZZZZZZ			16:36	
ZZZZZZ			16:38	
ZZZZZZ			16:40	
ZZZZZZ			16:43	
ZZZZZZ			16:45	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/12/2019 15:08 End Date: 02/12/2019 20:56

Lab Sample Id	D/F	Type	Time	Analytes
				Ni
ZZZZZZ			16:48	
ZZZZZZ			16:50	
ZZZZZZ			16:52	
ZZZZZZ			16:55	
ZZZZZZ			16:57	
CCV 240-367822/48			16:59	
CCB 240-367822/49			17:01	
ZZZZZZ			17:04	
ZZZZZZ			17:06	
ZZZZZZ			17:08	
ZZZZZZ			17:11	
ZZZZZZ			17:13	
ZZZZZZ			17:15	
CCV 240-367822/56			17:18	
CCB 240-367822/57			17:20	
ZZZZZZ			17:22	
ZZZZZZ			17:25	
ZZZZZZ			17:27	
ZZZZZZ			17:29	
ZZZZZZ			17:31	
ZZZZZZ			17:34	
ZZZZZZ			17:36	
ZZZZZZ			17:38	
ZZZZZZ			17:41	
ZZZZZZ			17:43	
CCV 240-367822/68			17:45	
CCB 240-367822/69			17:48	
ZZZZZZ			17:50	
ZZZZZZ			17:52	
ZZZZZZ			17:55	
ZZZZZZ			17:57	
ZZZZZZ			17:59	
ZZZZZZ			18:02	
ZZZZZZ			18:04	
ZZZZZZ			18:06	
ZZZZZZ			18:08	
ZZZZZZ			18:11	
CCV 240-367822/80			18:13	
CCB 240-367822/81			18:15	
ZZZZZZ			18:18	
ZZZZZZ			18:20	
ZZZZZZ			18:22	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/12/2019 15:08 End Date: 02/12/2019 20:56

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ni																								
ZZZZZZ			18:24																									
ZZZZZZ			18:26																									
ZZZZZZ			18:28																									
ZZZZZZ			18:31																									
ZZZZZZ			18:33																									
ZZZZZZ			18:35																									
ZZZZZZ			18:37																									
CCV 240-367822/92			18:40																									
CCB 240-367822/93			18:42																									
ZZZZZZ			18:45																									
ZZZZZZ			18:47																									
CCV 240-367822/96	1		18:49	X																								
CCB 240-367822/97	1		18:51	X																								
CCVL 240-367822/98			18:54																									
ZZZZZZ			18:56																									
ZZZZZZ			18:58																									
ZZZZZZ			19:01																									
ZZZZZZ			19:03																									
ZZZZZZ			19:05																									
ZZZZZZ			19:08																									
MB 240-367336/1-A	1	R	19:10	X																								
LCS 240-367336/3-A	1	R	19:13	X																								
240-107796-2	1	R	19:15	X																								
CCV 240-367822/108	1		19:17	X																								
CCB 240-367822/109	1		19:19	X																								
240-107796-3	1	R	19:22	X																								
240-107796-4	1	R	19:24	X																								
240-107796-5	1	R	19:26	X																								
240-107796-6	1	R	19:29	X																								
CCV 240-367822/114	1		19:31	X																								
CCB 240-367822/115	1		19:33	X																								
CCVL 240-367822/116	1		19:36	X																								
ZZZZZZ			19:38																									
ZZZZZZ			19:40																									
ZZZZZZ			19:42																									
ZZZZZZ			19:45																									
ZZZZZZ			19:47																									
ZZZZZZ			19:49																									
ZZZZZZ			19:51																									
ZZZZZZ			19:54																									
ZZZZZZ			19:56																									
CCV 240-367822/126			19:58																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: I14 Analysis Method: 6020A

Start Date: 02/12/2019 15:08 End Date: 02/12/2019 20:56

Lab Sample Id	D/F	Type	Time	Analytes
				Ni
CCB 240-367822/127			20:00	
ZZZZZZ			20:03	
ZZZZZZ			20:05	
ZZZZZZ			20:07	
ZZZZZZ			20:10	
ZZZZZZ			20:12	
ZZZZZZ			20:14	
ZZZZZZ			20:17	
ZZZZZZ			20:19	
ZZZZZZ			20:21	
ZZZZZZ			20:24	
CCV 240-367822/138			20:26	
CCB 240-367822/139			20:28	
ZZZZZZ			20:31	
ZZZZZZ			20:33	
ZZZZZZ			20:35	
ZZZZZZ			20:38	
ZZZZZZ			20:40	
ZZZZZZ			20:42	
ZZZZZZ			20:45	
CCV 240-367822/147			20:47	
CCB 240-367822/148			20:49	
CCVL 240-367822/149			20:52	
CCV 240-367822/150			20:54	
CCB 240-367822/151			20:56	

Prep Types:
R = Total Recoverable

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/12/2019 End Date: 02/12/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q	Element Rh/2	Q
STD1 240-367822/3 IC	15:13	99		100		100		98		97	
STD2 240-367822/4 IC	15:15	97		98		98		97		95	
STD3 240-367822/5 IC	15:18	94		97		98		96		92	
STD4 240-367822/6 IC	15:20	100		99		100		99		101	
ICV 240-367822/7	15:22	97		100		101		99		97	
ICB 240-367822/8	15:25	97		101		104		100		101	
ICVL 240-367822/9	15:27	98		100		103		99		101	
ICSA 240-367822/10	15:29	94		98		99		95		91	
ICSAB 240-367822/11	15:32	90		98		99		95		92	
CCV 240-367822/96	18:49	85		99		106		98		98	
CCB 240-367822/97	18:51	88		102		109		101		104	
MB 240-367336/1-A	19:10	88		102		107		100		101	
LCS 240-367336/3-A	19:13	82		97		105		96		96	
240-107796-2	19:15	81		98		104		96		95	
CCV 240-367822/108	19:17	81		98		103		95		96	
CCB 240-367822/109	19:19	86		100		105		97		103	
240-107796-3	19:22	83		100		105		97		98	
240-107796-4	19:24	85		101		106		96		97	
240-107796-5	19:26	82		99		102		95		93	
240-107796-6	19:29	87		98		105		95		97	
CCV 240-367822/114	19:31	83		96		101		94		95	
CCB 240-367822/115	19:33	87		99		105		96		102	
CCVL 240-367822/116	19:36	84		97		103		96		100	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/12/2019 End Date: 02/12/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Rh/3	Q	Element In/2	Q	Element In/3	Q	Element Tb	Q	Element Ho	Q
STD1 240-367822/3 IC	15:13	99		98		100		99		101	
STD2 240-367822/4 IC	15:15	95		95		96		99		97	
STD3 240-367822/5 IC	15:18	92		93		93		97		97	
STD4 240-367822/6 IC	15:20	100		100		99		99		99	
ICV 240-367822/7	15:22	98		99		98		100		100	
ICB 240-367822/8	15:25	101		101		100		100		100	
ICVL 240-367822/9	15:27	100		102		101		102		101	
ICSA 240-367822/10	15:29	93		95		92		97		97	
ICSAB 240-367822/11	15:32	94		96		94		98		98	
CCV 240-367822/96	18:49	101		105		101		103		103	
CCB 240-367822/97	18:51	105		111		103		104		105	
MB 240-367336/1-A	19:10	107		110		105		107		108	
LCS 240-367336/3-A	19:13	99		108		97		102		102	
240-107796-2	19:15	96		104		98		101		102	
CCV 240-367822/108	19:17	98		103		98		100		100	
CCB 240-367822/109	19:19	103		106		101		103		103	
240-107796-3	19:22	99		106		101		102		103	
240-107796-4	19:24	101		106		101		102		103	
240-107796-5	19:26	95		100		96		100		101	
240-107796-6	19:29	98		105		100		101		102	
CCV 240-367822/114	19:31	97		102		97		100		101	
CCB 240-367822/115	19:33	102		108		101		102		102	
CCVL 240-367822/116	19:36	101		105		101		102		102	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICP-MS Instrument ID: I14 Start Date: 02/12/2019 End Date: 02/12/2019

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Bi	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD1 240-367822/3 IC	15:13	101									
STD2 240-367822/4 IC	15:15	96									
STD3 240-367822/5 IC	15:18	95									
STD4 240-367822/6 IC	15:20	101									
ICV 240-367822/7	15:22	99									
ICB 240-367822/8	15:25	101									
ICVL 240-367822/9	15:27	101									
ICSA 240-367822/10	15:29	95									
ICSAB 240-367822/11	15:32	95									
CCV 240-367822/96	18:49	101									
CCB 240-367822/97	18:51	105									
MB 240-367336/1-A	19:10	108									
LCS 240-367336/3-A	19:13	100									
240-107796-2	19:15	98									
CCV 240-367822/108	19:17	97									
CCB 240-367822/109	19:19	101									
240-107796-3	19:22	100									
240-107796-4	19:24	101									
240-107796-5	19:26	96									
240-107796-6	19:29	101									
CCV 240-367822/114	19:31	98									
CCB 240-367822/115	19:33	101									
CCVL 240-367822/116	19:36	102									

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00228

Analyte	ICV 240-367822/7 02/12/2019 15:22				CCV 240-367822/96 02/12/2019 18:49				CCV 240-367822/108 02/12/2019 19:17			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Nickel	38.2		40.0	95	49.4		50.0	99	49.1		50.0	98
Aluminum	188		200	94	237		250	95	240		250	96
Antimony	39.1		40.0	98	51.8		50.0	104	52.6		50.0	105
Arsenic	38.1		40.0	95	49.1		50.0	98	48.6		50.0	97
Barium	37.5		40.0	94	49.3		50.0	99	49.4		50.0	99
Beryllium	38.3		40.0	96	52.0		50.0	104	53.1		50.0	106
Cadmium	37.7		40.0	94	49.6		50.0	99	50.0		50.0	100
Calcium	19400		20000	97	25500		25000	102	25600		25000	102
Chromium	38.4		40.0	96	50.9		50.0	102	51.5		50.0	103
Cobalt	38.5		40.0	96	51.8		50.0	104	51.9		50.0	104
Copper	37.6		40.0	94	49.0		50.0	98	49.7		50.0	99
Iron	9290		10000	93	12100		12500	97	12000		12500	96
Lead	38.8		40.0	97	50.1		50.0	100	49.7		50.0	99
Magnesium	18700		20000	94	24300		25000	97	24300		25000	97
Manganese	188		200	94	246		250	99	248		250	99
Potassium	18700		20000	93	24300		25000	97	24500		25000	98
Selenium	37.2		40.0	93	49.5		50.0	99	49.1		50.0	98
Silver	39.1		40.0	98	49.4		50.0	99	49.4		50.0	99
Sodium	18900		20000	94	24600		25000	98	24500		25000	98
Thallium	37.7		40.0	94	49.4		50.0	99	49.7		50.0	99
Vanadium	37.7		40.0	94	51.1		50.0	102	51.1		50.0	102
Zinc	37.6		40.0	94	49.1		50.0	98	48.6		50.0	97

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTMSICVW_00089 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00230

Analyte	ICV 240-367822/7 02/12/2019 15:22				CCV 240-367822/114 02/12/2019 19:31							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Nickel	38.2		40.0	95	48.9		50.0	98				
Aluminum	188		200	94	240		250	96				
Antimony	39.1		40.0	98	53.0		50.0	106				
Arsenic	38.1		40.0	95	49.1		50.0	98				
Barium	37.5		40.0	94	49.7		50.0	99				
Beryllium	38.3		40.0	96	51.8		50.0	104				
Cadmium	37.7		40.0	94	50.1		50.0	100				
Calcium	19400		20000	97	25600		25000	102				
Chromium	38.4		40.0	96	50.9		50.0	102				
Cobalt	38.5		40.0	96	51.9		50.0	104				
Copper	37.6		40.0	94	49.0		50.0	98				
Iron	9290		10000	93	12100		12500	97				
Lead	38.8		40.0	97	49.4		50.0	99				
Magnesium	18700		20000	94	24200		25000	97				
Manganese	188		200	94	249		250	99				
Potassium	18700		20000	93	24300		25000	97				
Selenium	37.2		40.0	93	49.6		50.0	99				
Silver	39.1		40.0	98	49.4		50.0	99				
Sodium	18900		20000	94	24100		25000	96				
Thallium	37.7		40.0	94	49.3		50.0	99				
Vanadium	37.7		40.0	94	50.8		50.0	102				
Zinc	37.6		40.0	94	48.6		50.0	97				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

ICV Source: MTMSCRI6020AW_00079 Concentration Units: ug/L

CCV Source: MTMSCRI6020AW_00079

Analyte	ICVL 240-367822/9 02/12/2019 15:27				CCVL 240-367822/116 02/12/2019 19:36							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Nickel	2.03		2.00	102	2.01		2.00	100				
Aluminum	50.1		50.0	100	50.4		50.0	101				
Antimony	2.07		2.00	104	2.11		2.00	106				
Arsenic	4.70	J	5.00	94	5.00		5.00	100				
Barium	5.26		5.00	105	5.22		5.00	104				
Beryllium	0.989	J	1.00	99	1.07		1.00	107				
Cadmium	1.00		1.00	100	0.981	J	1.00	98				
Calcium	1060		1000	106	1030		1000	103				
Chromium	1.96	J	2.00	98	2.04		2.00	102				
Cobalt	1.07		1.00	107	1.12		1.00	112				
Copper	2.12		2.00	106	2.10		2.00	105				
Iron	106		100	106	103		100	103				
Lead	1.07		1.00	107	1.14		1.00	114				
Magnesium	1040		1000	104	1030		1000	103				
Manganese	4.76	J	5.00	95	4.92	J	5.00	98				
Potassium	1080		1000	108	1070		1000	107				
Selenium	5.04		5.00	101	5.11		5.00	102				
Silver	1.07		1.00	107	1.05		1.00	105				
Sodium	1050		1000	105	1040		1000	104				
Thallium	1.05		1.00	105	1.08		1.00	108				
Vanadium	5.02		5.00	100	5.03		5.00	101				
Zinc	20.1		20.0	101	20.0		20.0	100				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-367822/8 02/12/2019 15:25		CCB 240-367822/97 02/12/2019 18:51		CCB 240-367822/109 02/12/2019 19:19		CCB 240-367822/115 02/12/2019 19:33	
		Found	C	Found	C	Found	C	Found	C
Nickel	2.0	1.5	U	1.5	U	1.5	U	1.5	U
Aluminum	50	34	U	34	U	34	U	34	U
Antimony	2.0	0.57	U	0.57	U	0.57	U	0.57	U
Arsenic	5.0	0.75	U	0.75	U	0.75	U	0.75	U
Barium	5.0	2.2	U	2.2	U	2.2	U	2.2	U
Beryllium	1.0	0.31	U	0.31	U	0.31	U	0.31	U
Cadmium	1.0	0.21	U	0.21	U	0.21	U	0.21	U
Calcium	1000	580	U	580	U	580	U	580	U
Chromium	2.0	0.98	U	0.98	U	0.98	U	0.98	U
Cobalt	1.0	0.19	U	0.19	U	0.19	U	0.19	U
Copper	2.0	1.7	U	1.7	U	1.7	U	1.7	U
Iron	100	47	U	47	U	47	U	47	U
Lead	1.0	0.45	U	0.45	U	0.45	U	0.45	U
Magnesium	1000	200	U	200	U	200	U	200	U
Manganese	5.0	2.1	U	2.1	U	2.1	U	2.1	U
Potassium	1000	220	U	220	U	220	U	220	U
Selenium	5.0	0.89	U	0.89	U	0.89	U	0.89	U
Silver	1.0	0.053	U	0.053	U	0.053	U	0.053	U
Sodium	1000	330	U	330	U	330	U	330	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.82	U	0.82	U	0.82	U	0.82	U
Zinc	20	15	U	15	U	15	U	15	U

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICSA 240-367822/10 Instrument ID: I14

Lab File ID: 010ICSA.d ICS Source: MTMSICSAW_00088

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Nickel		**0.155**	
Aluminum	*50000*	*47551*	*95*
Antimony		*0.0300*	
Arsenic		*0.0200*	
Barium		*0.0370*	
Beryllium		*0.0000*	
Boron		*1.72*	
Cadmium		*0.219*	
Calcium	*50000*	*48423*	*97*
Chromium		*0.0910*	
Cobalt		*0.0030*	
Copper		*0.151*	
Iron	*50000*	*48553*	*97*
Lead		*0.0370*	
Lithium		*0.246*	
Magnesium	*50000*	*48553*	*97*
Manganese		*-0.0690*	
Molybdenum	*1000*	*1074*	*107*
Potassium	*50000*	*48657*	*97*
Selenium		*0.0330*	
Silver		*0.0120*	
Sodium	*50000*	*49212*	*98*
Strontium		*0.444*	
Thallium		*0.0000*	
Tin		*-0.0150*	
Titanium	*1000*	*1009*	*101*
Tungsten		*0.121*	
Vanadium		*0.0230*	
Zinc		*0.113*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Lab Sample ID: ICSAB 240-367822/11 Instrument ID: I14

Lab File ID: 011ICAB.d ICS Source: MTMSICSABW_00089

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Nickel	**100**	**94.6**	**95**
Aluminum	*50000*	*45036*	*90*
Antimony	*100*	*101*	*101*
Arsenic	*100*	*95.6*	*96*
Barium	*100*	*94.5*	*95*
Beryllium	*100*	*98.1*	*98*
Boron	*100*	*96.0*	*96*
Cadmium	*100*	*93.8*	*94*
Calcium	*50000*	*46769*	*94*
Chromium	*100*	*93.6*	*94*
Cobalt	*100*	*96.3*	*96*
Copper	*100*	*93.7*	*94*
Iron	*50000*	*46744*	*93*
Lead	*100*	*96.7*	*97*
Lithium	*100*	*103*	*103*
Magnesium	*50000*	*46140*	*92*
Manganese	*100*	*93.5*	*93*
Molybdenum	*1100*	*1112*	*101*
Potassium	*50000*	*46287*	*93*
Selenium	*100*	*94.4*	*94*
Silver	*100*	*97.5*	*97*
Sodium	*50000*	*46057*	*92*
Strontium	*100*	*93.9*	*94*
Thallium	*100*	*95.5*	*95*
Tin	*100*	*101*	*101*
Titanium	*1100*	*1058*	*96*
Tungsten	*100*	*98.3*	*98*
Vanadium	*100*	*94.6*	*95*
Zinc	*100*	*95.2*	*95*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367336/1-A	02/08/2019 14:00	367336		50	50
LCS 240-367336/2-A	02/08/2019 14:00	367336		50	50
240-107796-2	02/08/2019 14:00	367336		50	50
240-107796-3	02/08/2019 14:00	367336		50	50
240-107796-4	02/08/2019 14:00	367336		50	50
240-107796-5	02/08/2019 14:00	367336		50	50
240-107796-6	02/08/2019 14:00	367336		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367336/1-A

Instrument Code: I9 Batch No.: 367531

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron	28.7	J		6010C
7439-96-5	Manganese	2.1	U		6010C

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367336/2-A

Lab Name: TestAmerica Canton Job No.: 240-107796-1

Sample Matrix: Water LCS Source: MTICP1_00082

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Iron	1000	1030		103	80	120		6010C
Manganese	500	504		101	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-367336/1-A	02/08/2019 14:00	367336		50	50
LCS 240-367336/3-A	02/08/2019 14:00	367336		50	50
240-107796-2	02/08/2019 14:00	367336		50	50
240-107796-3	02/08/2019 14:00	367336		50	50
240-107796-4	02/08/2019 14:00	367336		50	50
240-107796-5	02/08/2019 14:00	367336		50	50
240-107796-6	02/08/2019 14:00	367336		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367336/1-A

Instrument Code: I14 Batch No.: 367649

CAS No.	Analyte	Concentration	C	Q	Method
7440-22-4	Silver	0.053	U		6020A
7429-90-5	Aluminum	34	U		6020A
7440-38-2	Arsenic	0.75	U		6020A
7440-39-3	Barium	2.2	U		6020A
7440-41-7	Beryllium	0.31	U		6020A
7440-43-9	Cadmium	0.21	U		6020A
7440-48-4	Cobalt	0.19	U		6020A
7440-47-3	Chromium	0.98	U		6020A
7440-50-8	Copper	1.7	U		6020A
7439-89-6	Iron	47	U		6020A
7439-96-5	Manganese	2.1	U		6020A
7439-92-1	Lead	0.45	U		6020A
7440-36-0	Antimony	0.57	U		6020A
7782-49-2	Selenium	0.89	U		6020A
7440-28-0	Thallium	0.20	U		6020A
7440-62-2	Vanadium	0.82	U		6020A
7440-66-6	Zinc	15	U		6020A
7440-70-2	Calcium	580	U		6020A
7440-09-7	Potassium	220	U		6020A
7439-95-4	Magnesium	200	U		6020A
7440-23-5	Sodium	330	U		6020A

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367336/3-A

Lab Name: TestAmerica Canton Job No.: 240-107796-1

Sample Matrix: Water LCS Source: MTICPMSB_00039

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Silver	100	99.9		100	80	120		6020A
Aluminum	10000	9750		98	80	120		6020A
Arsenic	1000	961		96	80	120		6020A
Barium	1000	975		98	80	120		6020A
Beryllium	1000	1030		103	80	120		6020A
Cadmium	1000	956		96	80	120		6020A
Cobalt	1000	979		98	80	120		6020A
Chromium	1000	1010		101	80	120		6020A
Copper	1000	979		98	80	120		6020A
Iron	10000	9490		95	80	120		6020A
Manganese	1000	1010		101	80	120		6020A
Lead	1000	990		99	80	120		6020A
Antimony	100	98.9		99	80	120		6020A
Selenium	1000	956		96	80	120		6020A
Thallium	250	242		97	80	120		6020A
Vanadium	1000	1010		101	80	120		6020A
Zinc	1000	972		97	80	120		6020A
Calcium	10000	9060		91	80	120		6020A
Potassium	10000	10100		101	80	120		6020A
Magnesium	10000	9650		96	80	120		6020A
Sodium	10000	9680		97	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-367336/1-A

Instrument Code: I14 Batch No.: 367822

CAS No.	Analyte	Concentration	C	Q	Method
7440-02-0	Nickel	1.5	U		6020A

FORM III-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-367336/3-A

Lab Name: TestAmerica Canton Job No.: 240-107796-1

Sample Matrix: Water LCS Source: MTICPMSA_00038

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Nickel	1000	936		94	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367336 Batch Start Date: 02/08/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/08/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00089	MTICP1 00082	MTICP2A 00090	MTTMHCL 00235
MB 240-367336/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-367336/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-107796-G-2	MRC-MW138B-020619	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107796-G-3	MRC-MW141B-020619	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107796-G-4	MRC-MW142B-020619	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107796-G-5	MRC-MW158A-020619	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-107796-G-6	MRC-DUP01-020619	3005A, 6010C	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180
MB 240-367336/1		3005A, 6010C		1 mL
LCS 240-367336/2		3005A, 6010C		1 mL
240-107796-G-2	MRC-MW138B-020619	3005A, 6010C	R	1 mL
240-107796-G-3	MRC-MW141B-020619	3005A, 6010C	R	1 mL
240-107796-G-4	MRC-MW142B-020619	3005A, 6010C	R	1 mL
240-107796-G-5	MRC-MW158A-020619	3005A, 6010C	R	1 mL
240-107796-G-6	MRC-DUP01-020619	3005A, 6010C	R	1 mL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367336 Batch Start Date: 02/08/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/08/19 22:00

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb2
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367336 Batch Start Date: 02/08/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/08/19 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTICPMS2 00036	MTICPMSA 00038	MTICPMSB 00039	MTTMHCL 00235
MB 240-367336/1		3005A, 6020A		50 mL	50 mL				2.5 mL
LCS 240-367336/3		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	2.5 mL
240-107796-G-2	MRC-MW138B-020619	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107796-G-3	MRC-MW141B-020619	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107796-G-4	MRC-MW142B-020619	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107796-G-5	MRC-MW158A-020619	3005A, 6020A	R	50 mL	50 mL				2.5 mL
240-107796-G-6	MRC-DUP01-020619	3005A, 6020A	R	50 mL	50 mL				2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00180					
MB 240-367336/1		3005A, 6020A		1 mL					
LCS 240-367336/3		3005A, 6020A		1 mL					
240-107796-G-2	MRC-MW138B-020619	3005A, 6020A	R	1 mL					
240-107796-G-3	MRC-MW141B-020619	3005A, 6020A	R	1 mL					
240-107796-G-4	MRC-MW142B-020619	3005A, 6020A	R	1 mL					
240-107796-G-5	MRC-MW158A-020619	3005A, 6020A	R	1 mL					
240-107796-G-6	MRC-DUP01-020619	3005A, 6020A	R	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367336 Batch Start Date: 02/08/19 14:00 Batch Analyst: Butke, Michael

Batch Method: 3005A Batch End Date: 02/08/19 22:00

Batch Notes	
Batch Comment	filter paper: 60824102
Temperature - Corrected - End	temp log Degrees C
Temperature - Corrected - Start	temp log Degrees C
Digestion Unit ID	hb2
Pipette/Syringe/Dispenser ID	mp1, mp3
Thermometer ID	temp log
Digestion Tube/Cup ID	1808349
Temperature - Uncorrected - End	temp log Degrees C
Temperature - Uncorrected - Start	temp log Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW138B-020619	240-107796-2
MRC-MW141B-020619	240-107796-3
MRC-MW142B-020619	240-107796-4
MRC-MW158A-020619	240-107796-5
MRC-DUP01-020619	240-107796-6

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107796-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW138B-020619	240-107796-2
MRC-MW141B-020619	240-107796-3
MRC-MW142B-020619	240-107796-4
MRC-MW158A-020619	240-107796-5
MRC-DUP01-020619	240-107796-6

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107796-1

SDG No.:

Project: MRC Block E/F Mass Discharge

Client Sample ID	Lab Sample ID
MRC-MW138B-020619	240-107796-2
MRC-MW141B-020619	240-107796-3
MRC-MW142B-020619	240-107796-4
MRC-MW158A-020619	240-107796-5
MRC-DUP01-020619	240-107796-6

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 MDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2340C-2011 XMDL Date: 04/25/2017 11:12

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Hardness as calcium carbonate		5	2.389

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 MDL Date: 08/21/2018 15:58

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.6

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: Severus

Method: 2320B-2011 XMDL Date: 04/25/2017 09:53

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.6

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 MDL Date: 04/25/2017 14:47

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 2540 C-2011 XMDL Date: 04/25/2017 14:48

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.795

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bromide		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 300.0 XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bromide		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A MDL Date: 05/02/2017 14:42

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.348

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: THOR

Method: 9056A XMDL Date: 05/02/2017 14:43

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.348

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F MDL Date: 06/30/2015 15:01

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: Lachat-3

Method: SM 4500 NO3 F XMDL Date: 06/30/2015 15:02

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate Nitrite as N		0.1	0.04

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B RL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	RL (No Unit)	
Salinity		2	

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 240-107796-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2520B XRL Date: 01/25/2011 12:16

Analyte	Wavelength/ Mass	XRL (No Unit)	
Salinity		2	

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2340C-2011

Start Date: 02/13/2019 13:29 End Date: 02/13/2019 16:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				HardCC																								
MB 240-367926/1	1	T	13:29	X																								
LCS 240-367926/2	1	T	13:34	X																								
ZZZZZZ			13:39																									
ZZZZZZ			13:44																									
ZZZZZZ			13:49																									
ZZZZZZ			13:55																									
ZZZZZZ			14:00																									
ZZZZZZ			14:05																									
ZZZZZZ			14:10																									
ZZZZZZ			14:16																									
ZZZZZZ			14:21																									
ZZZZZZ			14:26																									
ZZZZZZ			14:31																									
ZZZZZZ			14:37																									
ZZZZZZ			14:42																									
ZZZZZZ			14:47																									
ZZZZZZ			14:52																									
240-107796-2	1	T	14:57	X																								
240-107796-3	1	T	15:03	X																								
240-107796-4	1	T	15:08	X																								
240-107796-4 DU	1	T	15:13	X																								
240-107796-5	1	T	15:18	X																								
240-107796-6	1	T	15:24	X																								
ZZZZZZ			15:29																									
ZZZZZZ			15:34																									
ZZZZZZ			15:39																									
ZZZZZZ			15:45																									
ZZZZZZ			15:50																									
ZZZZZZ			15:55																									
ZZZZZZ			16:00																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/11/2019 16:47 End Date: 02/11/2019 20:34

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			16:47																									
LCS 240-367751/2	1	T	16:52	X																								
MB 240-367751/3	1	T	16:56	X																								
ZZZZZZ			17:01																									
ZZZZZZ			17:05																									
ZZZZZZ			17:10																									
ZZZZZZ			17:15																									
ZZZZZZ			17:19																									
ZZZZZZ			17:24																									
ZZZZZZ			17:28																									
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ZZZZZZ			17:58																									
ZZZZZZ			18:02																									
ZZZZZZ			18:07																									
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ZZZZZZ			18:35																									
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ZZZZZZ			18:46																									
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ZZZZZZ			19:17																									
ZZZZZZ			19:23																									
ZZZZZZ			19:27																									
ZZZZZZ			19:31																									
ZZZZZZ			19:36																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: Severus Analysis Method: 2320B-2011

Start Date: 02/11/2019 16:47 End Date: 02/11/2019 20:34

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			19:41																									
240-107796-2	1	T	19:45	X																								
240-107796-3	1	T	19:49	X																								
ZZZZZZ			19:51																									
LCS 240-367751/46	1	T	19:56	X																								
MB 240-367751/47	1	T	20:00	X																								
240-107796-4	1	T	20:04	X																								
240-107796-5	1	T	20:09	X																								
240-107796-6	1	T	20:13	X																								
ZZZZZZ			20:18																									
ZZZZZZ			20:22																									
ZZZZZZ			20:27																									
ZZZZZZ			20:32																									
ZZZZZZ			20:34																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 2540 C-2011

Start Date: 02/12/2019 10:15 End Date: 02/12/2019 10:15

Lab Sample Id	D/F	Type	Time	Analytes																								
				TDS																								
MB 240-367674/1	1	T	10:15	X																								
LCS 240-367674/2	1	T	10:15	X																								
ZZZZZZ			10:15																									
ZZZZZZ			10:15																									
ZZZZZZ			10:15																									
ZZZZZZ			10:15																									
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ZZZZZZ			10:15																									
ZZZZZZ			10:15																									
240-107796-2	1	T	10:15	X																								
240-107796-3	1	T	10:15	X																								
240-107796-4	1	T	10:15	X																								
240-107796-5	1	T	10:15	X																								
240-107796-6	1	T	10:15	X																								
ZZZZZZ			10:15																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 08/07/2018 12:13 End Date: 08/07/2018 15:41

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
STD1 240-339523/1 IC	1		12:13	X																								
STD2 240-339523/2 IC	1		12:34	X																								
STD3 240-339523/3 IC	1		12:55	X																								
STD4 240-339523/4 IC	1		13:16	X																								
STD5 240-339523/5 ICRT	1		13:36	X																								
STD6 240-339523/6 IC	1		13:57	X																								
STD7 240-339523/7 IC	1		14:18	X																								
STD8 240-339523/8 IC	1		14:39	X																								
STD9 240-339523/9 IC	1		14:59	X																								
ICV 240-339523/10	1		15:20	X																								
ICB 240-339523/11	1		15:41	X																								

Prep Types:
=

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Analyst: LKG Batch Start Date: 08/07/2018

Reporting Units: mg/L Analytical Batch No.: 339523

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	15:20	Sulfate	52.9	50.0	106	90-110		WCICLCS_00669
11	ICB	15:41	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: THOR Analysis Method: 300.0

Start Date: 02/12/2019 13:08 End Date: 02/13/2019 01:54

Lab Sample Id	D/F	Type	Time	Analytes																								
				Br	SO4																							
CCV 240-367774/1	1		13:08	X																								
CCB 240-367774/2	1		13:29	X																								
MB 240-367774/3	1	T	13:49	X																								
LCS 240-367774/4	1	T	14:10	X																								
ZZZZZZ			14:31																									
ZZZZZZ			14:52																									
ZZZZZZ			15:13																									
ZZZZZZ			15:33																									
ZZZZZZ			15:54																									
ZZZZZZ			16:15																									
ZZZZZZ			16:35																									
ZZZZZZ			16:56																									
CCV 240-367774/13	1		17:17	X																								
CCB 240-367774/14	1		17:38	X																								
ZZZZZZ			17:58																									
ZZZZZZ			18:19																									
ZZZZZZ			18:40																									
ZZZZZZ			19:00																									
ZZZZZZ			19:21																									
ZZZZZZ			19:42																									
ZZZZZZ			20:03																									
ZZZZZZ			20:23																									
240-107796-5	1	T	20:44	X																								
240-107796-2	1	T	21:05	X	X																							
CCV 240-367774/25	1		21:25	X																								
CCB 240-367774/26	1		21:46	X																								
ZZZZZZ			22:07																									
ZZZZZZ			22:27																									
ZZZZZZ			22:48																									
ZZZZZZ			23:09																									
ZZZZZZ			23:30																									
ZZZZZZ			23:50																									
ZZZZZZ			00:11																									
ZZZZZZ			00:32																									
ZZZZZZ			00:52																									
ZZZZZZ			01:13																									
CCV 240-367774/37			01:34																									
CCB 240-367774/38			01:54																									

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Analyst: JWW Batch Start Date: 02/12/2019

Reporting Units: mg/L Analytical Batch No.: 367774

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	13:08	Bromide	10.4	10.0	104	90-110		WCICCCV_00861
2	CCB	13:29	Bromide	0.044				U	
13	CCV	17:17	Bromide	9.39	10.0	94	90-110		WCICCCV_00861
14	CCB	17:38	Bromide	0.044				U	
25	CCV	21:25	Bromide	10.5	10.0	105	90-110		WCICCCV_00861
26	CCB	21:46	Bromide	0.044				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 02/11/2019 17:49 End Date: 02/12/2019 12:47

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
CCV 240-367585/1			17:49																										
CCB 240-367585/2			18:10																										
ZZZZZZ			18:30																										
ZZZZZZ			18:51																										
ZZZZZZ			19:12																										
ZZZZZZ			19:33																										
ZZZZZZ			19:53																										
ZZZZZZ			20:14																										
ZZZZZZ			20:35																										
ZZZZZZ			20:55																										
ZZZZZZ			21:16																										
ZZZZZZ			21:37																										
CCV 240-367585/13			21:57																										
CCB 240-367585/14			22:18																										
ZZZZZZ			22:39																										
ZZZZZZ			22:59																										
ZZZZZZ			23:20																										
ZZZZZZ			23:41																										
ZZZZZZ			00:01																										
ZZZZZZ			00:22																										
ZZZZZZ			00:43																										
ZZZZZZ			01:04																										
ZZZZZZ			01:24																										
ZZZZZZ			01:45																										
CCV 240-367585/25			02:06																										
CCB 240-367585/26			02:26																										
ZZZZZZ			02:47																										
ZZZZZZ			03:08																										
ZZZZZZ			03:28																										
ZZZZZZ			03:49																										
ZZZZZZ			04:10																										
ZZZZZZ			04:30																										
ZZZZZZ			04:51																										
ZZZZZZ			05:12																										
ZZZZZZ			05:32																										
ZZZZZZ			05:53																										
CCV 240-367585/37	1		06:14		X																								
CCB 240-367585/38	1		06:35		X																								
MB 240-367585/39	1	T	06:55		X																								
LCS 240-367585/40	1	T	07:16		X																								
ZZZZZZ			07:37																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Instrument ID: THOR Analysis Method: 9056A

Start Date: 02/11/2019 17:49 End Date: 02/12/2019 12:47

Lab Sample Id	D/F	Type	Time	Analytes																									
				Br	SO4																								
ZZZZZZ			07:57																										
ZZZZZZ			08:18																										
ZZZZZZ			08:39																										
ZZZZZZ			09:00																										
ZZZZZZ			09:20																										
240-107796-3	1	T	09:41	X	X																								
240-107796-3 MS	1	T	10:02	X	X																								
CCV 240-367585/49	1		10:22		X																								
CCB 240-367585/50	1		10:43		X																								
240-107796-3 MSD	1	T	11:04	X	X																								
240-107796-4	1	T	11:24	X	X																								
240-107796-5	5	T	11:45		X																								
240-107796-6	1	T	12:06	X	X																								
CCV 240-367585/55	1		12:26		X																								
CCB 240-367585/56	1		12:47		X																								

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Analyst: JWW Batch Start Date: 02/12/2019

Reporting Units: mg/L Analytical Batch No.: 367585

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
37	CCV	06:14	Sulfate	53.1	50.0	106	90-110		WCICCCV_00861
38	CCB	06:35	Sulfate	0.35				U	
49	CCV	10:22	Sulfate	52.9	50.0	106	90-110		WCICCCV_00861
50	CCB	10:43	Sulfate	0.35				U	
55	CCV	12:26	Sulfate	52.8	50.0	106	90-110		WCICCCV_00861
56	CCB	12:47	Sulfate	0.35				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Instrument ID: Lachat-3 Analysis Method: SM 4500 NO3 F

Start Date: 02/17/2019 12:50 End Date: 02/17/2019 13:27

Lab Sample Id	D/F	Type	Time	Analytes																								
				NNO32																								
ICV 490-575925/1	1		12:50	X																								
ICB 490-575925/2	1		12:51	X																								
CCV 490-575925/3	1		12:52	X																								
CCV 490-575925/4	1		12:53	X																								
CCB 490-575925/5	1		12:54	X																								
MB 490-575925/6	1	T	12:55	X																								
LCS 490-575925/7	1	T	12:57	X																								
ZZZZZZ			12:58																									
ZZZZZZ			12:59																									
ZZZZZZ			13:00																									
240-107796-2	1	T	13:01	X																								
240-107796-3	1	T	13:02	X																								
240-107796-3 MS	1	T	13:04	X																								
240-107796-3 MSD	1	T	13:05	X																								
240-107796-4	1	T	13:06	X																								
240-107796-5	1	T	13:07	X																								
240-107796-6	1	T	13:08	X																								
ZZZZZZ			13:10																									
ZZZZZZ			13:11																									
CCV 490-575925/20	1		13:12	X																								
CCB 490-575925/21	1		13:13	X																								
ZZZZZZ			13:14																									
ZZZZZZ			13:15																									
ZZZZZZ			13:17																									
ZZZZZZ			13:18																									
ZZZZZZ			13:19																									
ZZZZZZ			13:20																									
ZZZZZZ			13:21																									
ZZZZZZ			13:23																									
ZZZZZZ			13:24																									
ZZZZZZ			13:25																									
CCV 490-575925/32			13:26																									
CCB 490-575925/33			13:27																									

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Analyst: MSP Batch Start Date: 02/17/2019

Reporting Units: mg/L Analytical Batch No.: 575925

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	ICV	12:50	Nitrate Nitrite as N	3.26	3.00	109	90-110		W_ICAl_00027
2	ICB	12:51	Nitrate Nitrite as N	0.040				U	
3	CCV	12:52	Nitrate Nitrite as N	4.88	5.00	98	90-110		W_Nitrate_00020
4	CCV	12:53	Nitrate Nitrite as N	4.93	5.00	99	90-110		IC Primary_00012
5	CCB	12:54	Nitrate Nitrite as N	0.040				U	
20	CCV	13:12	Nitrate Nitrite as N	4.76	5.00	95	90-110		W_Nitrate_00020
21	CCB	13:13	Nitrate Nitrite as N	0.0463				J	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107796-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2520B

Start Date: 02/19/2019 06:40 End Date: 02/19/2019 06:40

Lab Sample Id	D/F	Type	Time	Analytes																								
				Salin																								
MB 180-270629/1	1	T	06:40	X																								
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
ZZZZZZ			06:40																									
240-107796-2	1	T	06:40	X																								
240-107796-3	1	T	06:40	X																								
240-107796-4	1	T	06:40	X																								
240-107796-5	1	T	06:40	X																								
240-107796-6	1	T	06:40	X																								

Prep Types:
T = Total/NA

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 367751 Date: 02/11/2019 16:56							
2320B-2011	MB 240-367751/3	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 367751 Date: 02/11/2019 20:00							
2320B-2011	MB 240-367751/47	Alkalinity	2.6	U	mg/L	5.0	1
Batch ID: 367926 Date: 02/13/2019 13:29							
2340C-2011	MB 240-367926/1	Hardness as calcium carbonate	2.4	U	mg/L	5.0	1
Batch ID: 367674 Date: 02/12/2019 10:15							
2540 C-2011	MB 240-367674/1	Total Dissolved Solids	7.8	U	mg/L	10	1
Batch ID: 367774 Date: 02/12/2019 13:49							
300.0	MB 240-367774/3	Sulfate	0.35	U	mg/L	1.0	1
300.0	MB 240-367774/3	Bromide	0.044	U	mg/L	0.50	1
Batch ID: 367585 Date: 02/12/2019 06:55							
9056A	MB 240-367585/39	Bromide	0.044	U	mg/L	0.50	1
9056A	MB 240-367585/39	Sulfate	0.35	U	mg/L	1.0	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 575925 Date: 02/17/2019 12:55							
SM 4500 NO3 F	MB 490-575925/6	Nitrate Nitrite as N	0.040	U	mg/L	0.10	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 240-107796-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 270629 Date: 02/19/2019 06:40							
SM 2520B	MB 180-270629/1	Salinity	2.0	U	No Unit	2.0	1

FORM III-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367751	Date: 02/11/2019 16:52										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-367751/2	Alkalinity	261		mg/L	271	96	86-123			
Batch ID: 367751	Date: 02/11/2019 19:56										
						LCS Source: WCPHENOMINER_00023					
2320B-2011	LCS 240-367751/46	Alkalinity	263		mg/L	271	97	86-123			
Batch ID: 367926	Date: 02/13/2019 13:34										
						LCS Source: WCHARDNESS_00031					
2340C-2011	LCS 240-367926/2	Hardness as calcium carbonate	264		mg/L	246	107	90-110			
Batch ID: 367674	Date: 02/12/2019 10:15										
						LCS Source: WCPHENOVSOLID_00039					
2540 C-2011	LCS 240-367674/2	Total Dissolved Solids	202		mg/L	202	100	80-120			
Batch ID: 367774	Date: 02/12/2019 14:10										
						LCS Source: WCICLCS_00696					
300.0	LCS 240-367774/4	Bromide	9.95		mg/L	10.0	100	90-110			
Batch ID: 367585	Date: 02/12/2019 07:16										
						LCS Source: WCICLCS_00696					
9056A	LCS 240-367585/40	Sulfate	52.4		mg/L	50.0	105	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925	Date: 02/17/2019 12:57										
						LCS Source: W_ICAl_00027					
SM 4500 NO3 F	LCS 490-575925/7	Nitrate Nitrite as N	3.23		mg/L	3.00	108	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367585 Date: 02/12/2019 10:02											
300.0	240-107796-3	Bromide	0.37	J	mg/L						
300.0	240-107796-3 MS	Bromide	11.2		mg/L	10.0	109	80-120			
Batch ID: 367585 Date: 02/12/2019 10:02											
9056A	240-107796-3	Sulfate	17		mg/L						
9056A	240-107796-3 MS	Sulfate	70.4		mg/L	50.0	106	80-120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 367585 Date: 02/12/2019 11:04											
300.0	240-107796-3 MSD	Bromide	11.4		mg/L	10.0	110	80-120	2	15	
Batch ID: 367585 Date: 02/12/2019 11:04											
9056A	240-107796-3 MSD	Sulfate	71.3		mg/L	50.0	108	80-120	1	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925 Date: 02/17/2019 13:04											
SM 4500 NO3 F	240-107796-3	Nitrate Nitrite as N	0.86		mg/L						
SM 4500 NO3 F	240-107796-3 MS	Nitrate Nitrite as N	3.96		mg/L	3.00	103	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 575925 Date: 02/17/2019 13:05											
SM 4500 NO3 F	240-107796-3 MSD	Nitrate Nitrite as N	4.15		mg/L	3.00	110	90-110	5	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 367926 Date: 02/13/2019 15:13								
2340C-2011	MRC-MW142B-020619	240-107796-4	Hardness as calcium carbonate	76	mg/L			
2340C-2011	MRC-MW142B-020619	240-107796-4 DU	Hardness as calcium carbonate	76.0	mg/L	0	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367926 Batch Start Date: 02/13/19 13:29 Batch Analyst: Burns, Jill

Batch Method: 2340C-2011 Batch End Date: 02/13/19 16:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	TitrantVolume1	WCHARDNESS 00031		
MB 240-367926/1		2340C-2011		25 mL	25 mL	0 mL			
LCS 240-367926/2		2340C-2011		25 mL	25 mL	6.60 mL	25 mL		
240-107796-I-2	MRC-MW138B-020619	2340C-2011	T	25 mL	25 mL	3.00 mL			
240-107796-G-3	MRC-MW141B-020619	2340C-2011	T	25 mL	25 mL	1.40 mL			
240-107796-I-4	MRC-MW142B-020619	2340C-2011	T	25 mL	25 mL	1.90 mL			
240-107796-I-4 DU	MRC-MW142B-020619	2340C-2011	T	25 mL	25 mL	1.90 mL			
240-107796-G-5	MRC-MW158A-020619	2340C-2011	T	5 mL	25 mL	3.60 mL			
240-107796-G-6	MRC-DUP01-020619	2340C-2011	T	25 mL	25 mL	1.90 mL			

Batch Notes	
Batch Comment	BEAKERS--4010980
Buffer Reagent ID	3741292
Buret ID	-
Indicator Reagent ID	3645370
Nominal Amount Used	25 mL
Pipette/Syringe/Dispenser ID	C9, E3
Normality of First Titrant	0.02 N
Titrant ID	3725312

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367751 Batch Start Date: 02/11/19 16:47 Batch Analyst: Carson, Monica

Batch Method: 2320B-2011 Batch End Date: 02/12/19 14:03

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	WCPHENOMINER 00023				
LCS 240-367751/2		2320B-2011		InitialAmount is blank	10 mL				
MB 240-367751/3		2320B-2011		InitialAmount is blank					
240-107796-D-2	MRC-MW138B-020619	2320B-2011	T	InitialAmount is blank					
240-107796-D-3	MRC-MW141B-020619	2320B-2011	T	InitialAmount is blank					
LCS 240-367751/46		2320B-2011		InitialAmount is blank	10 mL				
MB 240-367751/47		2320B-2011		InitialAmount is blank					
240-107796-D-4	MRC-MW142B-020619	2320B-2011	T	InitialAmount is blank					
240-107796-D-5	MRC-MW158A-020619	2320B-2011	T	InitialAmount is blank					
240-107796-D-6	MRC-DUP01-020619	2320B-2011	T	InitialAmount is blank					

Batch Notes	
Acid ID	3725314
pH Buffer 1 ID	4- 4005008
pH Buffer 2 ID	7- 4017506
pH Buffer 3 ID	10- 3892955
pH Buffer 4 ID	12- 3891579
Nominal Amount Used	10 mL
pH Meter ID	severus
Probe ID	WCP 137
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367674 Batch Start Date: 02/12/19 10:15 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date: 02/14/19 14:36

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	TareWeight	InitialAmount	Weight1	Weight2	Weight3
MB 240-367674/1		2540 C-2011			3.2783 g	100 mL	3.2781 g	3.2781 g	0 g
LCS 240-367674/2		2540 C-2011			3.2586 g	100 mL	3.2789 g	3.2788 g	0 g
240-107796-H-2	MRC-MW138B-020619	2540 C-2011	T	807 umhos/cm	3.7000 g	100 mL	3.7401 g	3.7400 g	0 g
240-107796-H-3	MRC-MW141B-020619	2540 C-2011	T	349 umhos/cm	3.7397 g	100 mL	3.7590 g	3.7585 g	0 g
240-107796-H-4	MRC-MW142B-020619	2540 C-2011	T	373 umhos/cm	3.6365 g	100 mL	3.6561 g	3.6557 g	0 g
240-107796-H-5	MRC-MW158A-020619	2540 C-2011	T	1407 umhos/cm	3.6692 g	100 mL	3.7675 g	3.7671 g	0 g
240-107796-H-6	MRC-DUP01-020619	2540 C-2011	T	354 umhos/cm	3.7363 g	100 mL	3.7564 g	3.7560 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	WeightTwo%Diff	Weight4OK	Residue	Residue2	Residue3
MB 240-367674/1		2540 C-2011		Pass No Unit	N/A No Unit	N/A	-0.0002 g	-0.0002 g	N/A g
LCS 240-367674/2		2540 C-2011		Pass No Unit	N/A No Unit	N/A	0.0203 g	0.0202 g	N/A g
240-107796-H-2	MRC-MW138B-020619	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0401 g	0.04 g	N/A g
240-107796-H-3	MRC-MW141B-020619	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0193 g	0.0188 g	N/A g
240-107796-H-4	MRC-MW142B-020619	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0196 g	0.0192 g	N/A g
240-107796-H-5	MRC-MW158A-020619	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0983 g	0.0979 g	N/A g
240-107796-H-6	MRC-DUP01-020619	2540 C-2011	T	Pass No Unit	N/A No Unit	N/A	0.0201 g	0.0197 g	N/A g

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00039		
MB 240-367674/1		2540 C-2011		N/A g	100 mL	OK			
LCS 240-367674/2		2540 C-2011		N/A g	100 mL	OK	100 mL		
240-107796-H-2	MRC-MW138B-020619	2540 C-2011	T	N/A g	100 mL	OK			
240-107796-H-3	MRC-MW141B-020619	2540 C-2011	T	N/A g	100 mL	OK			
240-107796-H-4	MRC-MW142B-020619	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367674 Batch Start Date: 02/12/19 10:15 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date: 02/14/19 14:36

Lab Sample ID	Client Sample ID	Method Chain	Basis	Residue4	FinalAmount	CalcMsg	WCPHENOVSOLID 00039		
240-107796-H-5	MRC-MW158A-020619	2540 C-2011	T	N/A g	100 mL	OK			
240-107796-H-6	MRC-DUP01-020619	2540 C-2011	T	N/A g	100 mL	OK			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367674 Batch Start Date: 02/12/19 10:15 Batch Analyst: Thabet, Ahmed

Batch Method: 2540 C-2011 Batch End Date: 02/14/19 14:36

Batch Notes	
Balance ID	B048
Conductivity Meter ID	MYRON
Date/Time - In - CW (WT2)	02/13/2019 14:57
Date/Time - Out - CW (WT2)	02/13/2019 16:38
Temperature - Start - CW (WT2) - Correct	180 Celsius
Temperature - End - CW (WT2) - Correct	181 Celsius
Temperature - Start-CW(WT2) -Uncorrected	180 Celsius
Temperature - End-CW(WT2) -Uncorrected	181 Celsius
Temperature - Start - Corrected	105 Celsius
Temperature - End - Corrected	105 Celsius
Date/Time - In	02/12/2019 11:42
Date/Time - Out	02/13/2019 11:01
Filter ID	60020-8347-CM
Nominal Amount Used	100 mL
Oven ID	O01
Oven ID - Low Temperature	O06
Thermometer ID - Low Temperature	84922
Thermometer ID	181417084
Temperature - Start - Uncorrected	105 Celsius
Temperature - End - Uncorrected	105 Celsius
Vessel Lot ID	RW0004801-8340-AG
Weight(WT1) Start Date/Time	02/13/2019 11:01 No Unit
Weight(WT1) Date/Time Out	02/13/2019 12:57
Weight(WT1) Start Temp	181 Celsius
Weight(WT1) Temp Out	179 Celsius
Uncorrected Weight(WT1) Start Temp	181 Celsius
Uncorrected Weight(WT1) Temp Out	179 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00292				
STD1 240-339523/1 IC		300.0		5 mL	0.025 mL				
STD2 240-339523/2 IC		300.0		5 mL	0.125 mL				
STD3 240-339523/3 IC		300.0		5 mL	0.25 mL				
STD4 240-339523/4 IC		300.0		5 mL	0.5 mL				
STD5 240-339523/5 ICRT		300.0		5 mL	1.25 mL				
STD6 240-339523/6 IC		300.0		5 mL	2 mL				
STD7 240-339523/7 IC		300.0		5 mL	2.5 mL				
STD8 240-339523/8 IC		300.0		5 mL	3.75 mL				
STD9 240-339523/9 IC		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367585 Batch Start Date: 02/11/19 17:49 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICSOLNA1 00018	WCICSOLNB1 00018			
240-107796-H-2	MRC-MW138B-020619	300.0 & 9056A	T	5 mL					
240-107796-H-3	MRC-MW141B-020619	300.0 & 9056A	T	5 mL					
240-107796-H-3 MS	MRC-MW141B-020619	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-107796-H-3 MSD	MRC-MW141B-020619	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-107796-H-4	MRC-MW142B-020619	300.0 & 9056A	T	5 mL					
240-107796-H-5	MRC-MW158A-020619	300.0 & 9056A	T	5 mL					
240-107796-H-6	MRC-DUP01-020619	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367774 Batch Start Date: 02/12/19 13:08 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00861	WCICLCS 00696			
CCV 240-367774/1		300.0		5 mL	5 mL				
CCB 240-367774/2		300.0		5 mL					
MB 240-367774/3		300.0		5 mL					
LCS 240-367774/4		300.0		5 mL		5 mL			
CCV 240-367774/13		300.0		5 mL	5 mL				
CCB 240-367774/14		300.0		5 mL					
240-107796-H-5	MRC-MW158A-020619	300.0	T	5 mL					
CCV 240-367774/25		300.0		5 mL	5 mL				
CCB 240-367774/26		300.0		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367774 Batch Start Date: 02/12/19 13:08 Batch Analyst: Weimer, Joshua W

Batch Method: 300.0 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107796-H-2	MRC-MW138B-020619	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 339523 Batch Start Date: 08/07/18 12:13 Batch Analyst: Grossman, Lucas

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICLCS 00669			
ICV 240-339523/10		9056A		5 mL	1.0 mL	5 mL			
ICB 240-339523/11		9056A		5 mL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367585 Batch Start Date: 02/11/19 17:49 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICSOLNA1 00018	WCICSOLNB1 00018			
240-107796-H-2	MRC-MW138B-020619	300.0 & 9056A	T	5 mL					
240-107796-H-3	MRC-MW141B-020619	300.0 & 9056A	T	5 mL					
240-107796-H-3 MS	MRC-MW141B-020619	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-107796-H-3 MSD	MRC-MW141B-020619	300.0 & 9056A	T	5 mL	0.1 mL	0.1 mL			
240-107796-H-4	MRC-MW142B-020619	300.0 & 9056A	T	5 mL					
240-107796-H-5	MRC-MW158A-020619	300.0 & 9056A	T	5 mL					
240-107796-H-6	MRC-DUP01-020619	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367585 Batch Start Date: 02/11/19 17:49 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00861	WCICLCS 00696			
CCV 240-367585/37		9056A		5 mL	5 mL				
CCB 240-367585/38		9056A		5 mL					
MB 240-367585/39		9056A		5 mL					
LCS 240-367585/40		9056A		5 mL		5 mL			
CCV 240-367585/49		9056A		5 mL	5 mL				
CCB 240-367585/50		9056A		5 mL					
CCV 240-367585/55		9056A		5 mL	5 mL				
CCB 240-367585/56		9056A		5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-107796-1

SDG No.:

Batch Number: 367774 Batch Start Date: 02/12/19 13:08 Batch Analyst: Weimer, Joshua W

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount					
240-107796-H-2	MRC-MW138B-020619	300.0 & 9056A	T	5 mL					

Batch Notes	
Eluent 1 ID	Water

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC Primary 00012	W_ICAl 00027	W_Nitrate 00020	AnalysisComment
ICV 490-575925/1		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
ICB 490-575925/2		SM 4500 NO3 F		50 mL	50 mL				
CCV 490-575925/3		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCV 490-575925/4		SM 4500 NO3 F		50 mL	50 mL	1.25 mL			
CCB 490-575925/5		SM 4500 NO3 F		50 mL	50 mL				
MB 490-575925/6		SM 4500 NO3 F		50 mL	50 mL				
LCS 490-575925/7		SM 4500 NO3 F		50 mL	50 mL		0.25 mL		
240-107796-F-2	MRC-MW138B-020619	SM 4500 NO3 F	T	50 mL	50 mL				8.8
240-107796-F-3	MRC-MW141B-020619	SM 4500 NO3 F	T	50 mL	50 mL				8.65
240-107796-F-3 MS	MRC-MW141B-020619	SM 4500 NO3 F	T	50 mL	50 mL		0.25 mL		8.65
240-107796-F-3 MSD	MRC-MW141B-020619	SM 4500 NO3 F	T	50 mL	50 mL		0.25 mL		8.65
240-107796-F-4	MRC-MW142B-020619	SM 4500 NO3 F	T	50 mL	50 mL				6.11
240-107796-F-5	MRC-MW158A-020619	SM 4500 NO3 F	T	50 mL	50 mL				5.87
240-107796-F-6	MRC-DUP01-020619	SM 4500 NO3 F	T	50 mL	50 mL				8.55
CCV 490-575925/20		SM 4500 NO3 F		50 mL	50 mL			0.25 mL	
CCB 490-575925/21		SM 4500 NO3 F		50 mL	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Nashville Job No.: 240-107796-1

SDG No.:

Batch Number: 575925 Batch Start Date: 02/17/19 12:50 Batch Analyst: Pasquerilla, Marisa S

Batch Method: SM 4500 NO3 F Batch End Date: 02/17/19 13:29

Batch Notes	
Acid used for pH adjustment	4547067
Base used for pH adjustment	4273883
Batch Comment	cent tubes 809161; pH probe VVZ10915; pH meter AB92340683
Buffer Reagent ID	4832283
Carrier Identification	DI water
Color Reagent ID	4832299
Filter ID	180611314
Pipette/Syringe/Dispenser ID	26061004, 26121028

Basis	Basis Description
T	Total/NA

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